

# MPOG Suite Training Manual

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# Chapter 1: Downloading and Accessing the MPOG Application Suite

1. Obtain administrative rights from site's IT department. You will need this level of access to download the MPOG application to your workstation.

- 2. Go to the MPOG website <a href="https://mpog.org/">https://mpog.org/</a>
- 3. Click 'Join' at the upper right side of the page.



5. Click on: "Download the MPOG Application Suite."

MPOG Suite

MPOG Application Suite

- 6. Follow steps to download the suite to your computer.
- 7. The MPOG Application Suite should automatically open:



8. In the top right corner, please click: 'Edit Connections'



9. Choose the appropriate connection- 'LOCAL,' 'Whichever site you plan to map for...' Click Edit Selected:

Connection Pr	ofile Manager	
You can use this databases.	window to adjust how the MPOG application suit	e connects to the various MPOG
Selected Profile:	Local	•
Actions:	Edit Selected Delete Selected	Add New Add Existing
		Apply and Restart Cancel

10. Please fill in the server with the appropriate server name 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.

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ſ	Bdit Connection Profile					
1	Profile Name	Local				
1	Main Connection (Required)					
1	Server					
	Database	MPOG_MAS				
	Trusted Authentication	(Uses your Windows credientials)				
	Username					
	Password					
	c 🔽 Config Connection (Optional)					
	Choose your configuration	type:				
	Import Manager (Reco	ommended for new hospitals)				
а	Legacy Epic					
e	Legacy					
s	Server					
		MPOG_Import_Manager				
	Irusted Authentication	(Uses your windows credientials)				
	Osername					
	Password					
	Research Connection (O	ptional)				
	Server					
	Database	MPOG_Research				
	Trusted Authentication	(Uses your Windows credientials)				
	O Username					
	Password					
Last Updated: 5,		OK Cancel				

11. The 'Connection Profile Manager' form will repopulate as follows. Click "Apply and Restart."

🚭 Connection Pr	rofile Manager	Contractor States	
You can use this databases.	window to adjust how the MPOG application s	uite connects to the var	ious MPOG
Selected Profile:	Local		•
Actions:	Edit Selected Delete Selected	Add New	Add Existing
		Apply and Restart	Cancel

12. The MPOG Application should run again and open as follows.



13. Click on 'Variable Mapping.' A utility that looks like this should open up:

				MPOG Configu	ration			_ <b>D</b> X
Variable Mappin	g Administration Totaling	Observation Entry						
Mapping Type:	Administration Type				-			
Organization:	All Assigned Organizations (Merged)					Direction:	Normal	•
Display Mode:	All Variables					Ontions	Auto Search On	Auto Salart On
	Phil Foliobics						Auto Starth On	Auto Select on
Search Filter:						Search Filter:	white	
ID	Org	Name	Times Used	Mapped As	Туре	Map	Name	ID Type
FLO-1120100( /	Multiple	FiO2	11,305,175	Variable Excluded from Import	Meta ^			
FLO-1121000( /	Multiple	SpO2	10,815,067	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	ETCO2	10,105,037	Variable Excluded from Import	Meta	Unmap		
FLO-1120100( /	Multiple	02	8,803,598	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	Tidal Volume Exp	7,160,671	Variable Excluded from Import	Meta	Exclude		
FLO-1121000( /	Multiple	PIP Observed	7,141,726	Variable Excluded from Import	Meta			
FLO-1121000( /	Multiple	PEEP	3.886.678	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	Sevoflurane	3.830.019	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	Air	2,835,786	Variable Excluded from Import	Meta			
FLO-1121000( /	Multiple	Arterial Line MAP	1.967.259	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	Desflurane	1.864.289	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	Isoflurane	1,613,381	Variable Excluded from Import	Meta			
FLO-10444 /	Multiple	Press Support	1 401 688	Variable Excluded from Import	Meta			
FLO-10 /	Multiple	SnO2	1,280,006	Variable Excluded from Import	Meta			
FLO-1121000( /	Multiple	FT N2O	681 928	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	CVP	522.897	Variable Excluded from Import	Meta			
FLO-1120100( /	Multiple	N2O	454 710	Variable Excluded from Import	Meta			
FLO-1121000( /	Multiple	PAD (Mean)	339,991	Variable Excluded from Import	Meto			
FLO-1121820 /	Multiple	((0)	337 234	Variable Excluded from Import	Meta			
FRX-11150	Multiple	propofal (DIPRIVAN) 10ma/ml injection	311 232	PROPOSOL	Medicatio			
ERX-4318 /	Multiple	lactated ringers infusion	281.023	LACTATED RINGERS	Eluide In			
ELO-250026	Multiple	O2 Flow Rate (L/min)	255,456	Variable Excluded from Import	Meta			
ERX-2037	Multiple	fantaNVL (DE) (SUBLIMAZE) 50 mcg/mL injection	199.945	EENTANVI	Madicati			
ERX-27838	Multiple	0.9% NaClinfusion 1.000 ml	181.085	SALINE 0.0%	Eluide In			
ELO-1121000( /	Multiple	Auxillanc O2	144 648	Variable Excluded from Import	Meta			
FLO-61	Multiple	Urina	128.845	URINE OUTPUT	Fluide Ou			
FLO-1120100( /	Multiple	FIO2	113.864	Unknown Concent	Meta			
FLO-11210007	Multiple	\$oO2	112 608	Unknown Concept	Meta			
FLO-1120100( H	HEWY BROWNSTOWN	FTCO2	110,880	Variable Excluded from Import	Meta			
FLO-1120100(/	Multiple	02	110,000	Unknown Concent	Meta			
FLO-1120100(7	Multiple	ETCO2	107.426	Unknown Concept	Meta	Examina		
ELO 1121000	An data ta	0000	107,420	Unknown concept	Make V	cxamine		

14. Please contact an MPOG QI Coordinator or MPOG technical support team member if the Application Suite does not download or open as indicated.

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# **Chapter 2: Concept Browser**

## **MPOG Concept Browser Overview**

The 'Concept Browser' utility allows you to search the dictionary of MPOG concepts to identify an appropriate MPOG concept for mapping purposes. This allows data matching from a source (your institutional AIMS variable) to a target (MPOG Concept ID). For more information on variable mapping, please refer to Chapter 3 of this training manual.

1. Access Concept Browser in the MPOG Suite:



2. The MPOG Application Suite will open to the 'Concept Browser' webpage, where you can select specific search criteria.

Please select a	i concept type and query string
Concept type	[All concept types]
Query string	e.g. id:concept ID# or any text
Count Mode	Concept occurrences
Hide inactive     Submit	e concepts

3. To search the dictionary of all MPOG concepts, use the 'Query String' field and maintain default settings in all other fields (i.e. concept type and count mode).

- a. Type in the source term (AIMS variable) to find the correlating MPOG Concept (i.e. interscalene, epidural, intubation). Click 'Submit.' A list of potential MPOG Concepts will display.
  - i. Each MPOG Concept ID includes:
    - 1. Concept ID Number: The MPOG Concept ID number associated with each particular concept.
    - 2. Concept Name: Names associated with the concept (including ICD-9 & ICD-10 Codes)
    - 3. Concept Type: Indicates the location details associated with the concept (i.e. Access Location, Intraoperative Events, Interventions, and Observations).
    - 4. Concept Mode: Displays the number of concept occurrences, 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.

4. Based on your source concept (AIMS variable) search criteria, scan the results for the most appropriate MPOG concept for mapping purposes.

5. 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.

Please sel	ect a concept type and query string								
Concept type [All concept types]									
Query stri	Query string interscalene								
Count Mo	Count Mode Concept occurrences								
✓ Hide in	active concepts								
Submit									
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						

6. 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:

a. Select an MPOG concept type from the dropdown menu. For the example below, 'Intraoperative Fluids In (Excluding Blood Products)' was selected.

-Please select a	concept type and query string		
	concept type and query sumg		
Concept type	[All concept types]		
	[All concept types]	•	
Ouery string	Access Location		
	Access Side		
г	Access Size		
Count Mode	Access Type		
L	Administrative Admission Type		
🖉 L Valas ima anti-	Charge capture		
🕑 Hide Inactiv	Extraction Preferences		
Submit	Intraoperative Events Interventions, and Observations		
Submit	Intraoperative Fluids In (Excluding Blood Products)		
	Intraoperative Medications (Administered Mixtures)		
	Intraoperative Outputs		
	Laboratory or Testing Observations		
	Laboratory Testing Abnormal Flags		
	Outcome Observations		
	PHI Dictionary Type - Do NOT Remove		
	PHI Dictionary Type - Do Rémove		
	Physiologic Observations Preservative Observations		
	Preoperative Observations	•	

- b. Next, type 'dextrose' into the query string and select 'submit.'
- c. A group of intraoperative fluids will display in the menu below.

Please se	lect a concept type and query string									
Concept	oncept type Intraoperative Fluids In (Excluding Blood Products)									
Query string dextrose										
Count Mo	Count Mode Concept occurrences									
✓ Hide in	active concepts									
Submit										
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							

7. 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.

# Chapter 3: Variable Mapping Utility

# Variable Mapping Overview

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. For example, one organization may document 'Handoff Performed in PACU,' another site may document 'PACU Handoff,' and a third site may document 'PACU Handover Complete.' All of these concepts would be mapped to the MPOG Concept: Compliance- PACU/ICU Handoff of Care Performed, Report Given' as these concepts are all indicative of a PACU transfer of care conversation. 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.

**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.

## **Getting Started**

#### 1. Open the MPOG Application Suite.



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2. Next, click Edit Connections in the top right corner of the MPOG Application Suite.



3. Within the Connection Profile Manager, choose the appropriate profile (location) by clicking within the 'Selected Profile' field from the dropdown menu.

databases.	-						
Selected Profile: Local							
Actions:	Edit Selected	Delete Selected	Add New	Add Exist			
			Apply and Restart	Cancel			

5. From the 'Edit Connection Profile,' select the 'Server' field with the appropriate server name in both the top and the middle sections of this menu. The MPOG technical lead at your site will provide the server connection. In the 'Config Connection (Optional)' section, select the 'Import Manager' radio dial and make sure the database name is displayed as 'MPOG\_Import\_Manager.

X 😼 Edit Connection Profile Profile Name Local Main Connection (Required) Server Database MPOG\_MAS Trusted Authentication (Uses your Windows credientials) Username Password Config Connection (Optional) Choose your configuration type: Import Manager (Recommended for new hospitals) Legacy Epic Legacy Server MPOG\_Import\_Manager Database Trusted Authentication (Uses your Windows credientials) Username Password Research Connection (Optional) Server Database MPOG\_Research Trusted Authentication (Uses your Windows credientials) Username Password OK Cancel

OK

Click

6. Last, click Apply and Restart

ổ Connection Pr	rofile Manager
You can use this databases.	window to adjust how the MPOG application suite connects to the various MPOG
Selected Profile:	Local
Actions:	Edit Selected         Delete Selected         Add New         Add Existing
	Apply and Restart Cancel

7. Click on the 'Variable Mapping' icon in the MPOG Application Suite.



8. The 'Variable Mapping' utility should open and look similar to the image below. The left side of the utility will represent your institution's variables and the right side will reflect MPOG concepts.

Config Manping Type:	guration								- 8 %
Organization: Display Mode: Search Filter:	No Organiz All Variable	ations Found s			• •	Direction: Options: Search Filter:	Normal Auto Search On	Auto	▼ o Select On
ID	Org	Name	Times Used	Mapped As	Type	Map Unmap Exclude	Name	ID	Туре
						Examine			

9. 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.

- a. **Mapping Type:** This is a general mapping category that can be further filtered to the following subcategories.
- b. **Organization:** This field will be populated with your institutional name. 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). This allows you to map separately. For further direction on mapping for multi-site institutions, please contact the MPOG Coordinating Center.
- c. **Display Mode:** This feature allows you to filter by 'All Mapped Variables,' 'Unmapped Variables,' or 'Mapped Variables.'
- d. Search Filter: This function allows you to search for a specific Epic variable.

B MPOG Configuration								
Mapping Type:								
Organization:	No Organizations Found 👻							
Display Mode:	All Variables 🔹							
Search Filter:								

10. 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:

•	MPOG Configurati	ion				_ 0 X
Mapping Type:	•	1				
Organization:	Administration Route	1	C	Normal		
	Administration Type		Directions	Normal		
Display Mode:	Admission Type		Options:	Auto Search On	Auto Selec	t On
farmer Direct	Ethnicity					
Search Fitter:	Gender List 7		Search Filter:			
	Lao type Observation Datail Turce					
	Diservation Decar type					
D	Procedure Service	Туре	Map	Name	0	Type
	Race					
	Room Type		Linean			
	Staff Type					
	Units of Measurement (Administration)		Endude			
	Units of Measurement (Lab)		LACADE			
			Examine			

11. Select from the desired category from the 'Mapping Type' dropdown menu, as shown below.

	•
Administration Route	
Administration Type	
Admission Type	
Ethnicity	
Gender	
Lab Type	
Observation Detail Type	
Observation Type	
Procedure Service	
Race	
Room Type	
Staff Type	
Units of Measurement (Administration)	
Units of Measurement (Lab)	

12. In the example below, we have filtered 'Mapping Type' by 'Race.'

		MPOG Configuration
Mapping Type:	Race	•
Organization:	All Assigned Organizations (Merged)	•
Display Mode:	All Variables	•
Search Filter:		

13. Once the desired '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.

14. By clicking within the row, select the desired 'Race' variable you wish to map. In this example, we have selected 'American Indian/Alaska Native.' Once the row has been selected, it will turn grey and a corresponding MPOG concept will appear in the 'Description' field on the right side. The corresponding MPOG concept will be highlighted in blue. 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 field to modify your search.

•			MPOG Configuration						_ 0 X
Mapping Type:	Race								
Organization:	All Assigned Organization	is (Merged)	•	Direction:	Normal				•
Display Mode:	All Variables		-	Options:		Auto Search On		Auto Sele	t On
Search Filter:				Search Filter:	native alaska indi	an .			
				_	Annalase India	- / -	ath a		
					Amerikan Inas	n / Alaska r	Native		
0	Org	Name	Times Used Mapped As Type	Мар	Name	or Alaska Matian		ID 204	Туре
2	Multiple	Black	44,374 Black Race		And a here in the time			300	1000
8	Multiple	Do Not Know	6,098 Unknown Race	Unmap					
6	Multiple	Other	4,914 Other Race						
7	Multiple	Dedine	3,153 Unknown Concept Meta	Exclude					
4	Multiple	Asian	2,872 Asian or Pacific Islander Race						
	Muttple	Dedine	2,575 Unknown Race						
1	Multiple	American Indian/Marka Native	2011 Unknown Concept Meta 454 American Indian or Abrile Meth. Dava						
45	Multiple	Historic	328 Other Race						
5	Multiple	Native Hawaiian/Pacific Islander	244 Asian or Pacific Islander Race						
9	Multiple	Middle Eastern	206 Middle Eastern Race						
10	Multiple	Oriental	203 Staff Level - Anesthesia Attendir Staff Typ =						
2	Multiple	Black	105 Unknown Concept Meta						
20	Multiple	Black/White	80 Other Race						
15	Multiple	American Indian/White	55 ORAL Routes						
3	Multiple	American Indian/Alaska Native	55 Unknown Concept Meta						
13	Multiple	American Indian/Black	53 American Indian or Alatka Nativ Race						
11	HEWH WYANDOTTE HOSH	Multi-Recial	32 Bracial of Multiracial Kace						
45	Multicle	History	36 Lisknown Concept Meta						
4	Multiple	Asian	31 Unknown Concept Meta						
8	Multiple	Do Not Know	28 Unknown Concept Meta						
6	Multiple	Other	21 Unknown Concept Meta						
20	Multiple	Black/White	17 Unknown Concept Meta						
5	Multiple	Native Hawaiian/Pacific Islander	16 Unknown Concept Meta						
10	HEHN LAKESIDE	Oriental	14 Unknown Concept Meta						
13	Multiple	American Indian/Black	11 Unknown Concept Meta						
9	Muthple	Middle Lattern	11 Unknown Concept Meta						
16	Multiple	Asian (Flack	8 Universit Meta	Examine					
10	M. Sec.	Received Indian Million	E Usbaue Faceat Main	clamine					
· · · · · ·				-	-				
							1		
Mapping Typ	pe: Race					-			
Organization	All Assigned Or	anizations (Merged)					Direction	Normal	
	Au Assigned Org	yunizutions (mergeu)					Direction:	Normai	
Display Mod	e: All Variables					-	Options:	A	uto Search On
Search Filter							Search Filter	native alaska india	1
							Concernatel.		
								American Indian	/ Alaska Native
	Ora	Name	Times Used Mane	ed As		Туре		Name	
	Ulg I	INGINE 1	miles used mapp	CU PD		o ype	Map	reame	AL 1. AL 2.
1	Multiple	White	155,022 White			Kace ^		American Indian o	Alaska Native
2	Multiple	Black	44,374 Black			Race			
8	Multiple	Do Not Know	6,098 Unkno	own		Race	Unmap		
6	Multiple	Other	4.914 Other			Race			
7	Multiple	Decline	2 152 Heles	wn Concer		Meta	Evelude		
	maniple	Decime	3,135 Unkno	win concep		Pieto	Exclude		
4	multiple	Asian	2,872 Asian	or Pacific Is	lander	касе			
7	Multiple	Decline	2,575 Unkno	own		Race	1		

15. Click the button in the center of the screen. Congratulations! You have successfully mapped!

## Additional Functions within Variable Mapping <u>'EXAMINE'</u>

1. The 'Examine' function allows you to view the Epic variable in greater detail by displaying cases using the concept in your AIMS Dictionary. This is beneficial when you desire additional context related to the variable you wish to map.

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

MPOG Configuration											
		•				Variable D	Details				
oservation Type											
ll Assigned Organiza	anizations (Merged) Please note the data below may not be a representative sample.										
II Variables		of Care Name	ObsType ID	ObsType Name	ObservationTime	EnteredTime	WasDeleted	Wasliser Entered	Wasliser Entry Expected	ObsValue	ObsValue Code
		Given	60.11	LIEIGHT	12/14/2015 1/20/00 PM	12/14/2015 1/20/00 PM				69.000	
		Gineral	FLO-11	HEIGHT	12/14/2015 2:04:00 PM	12/14/2015 2:07:00 PM	H			72.000	
		Givena	FIO-11	HEIGHT	12/14/2015 2:08:00 PM	12/14/2015 2:08:00 PM			<u> </u>	72,000	
		Givena	FLO-11	HEIGHT	12/14/2015 2-38:00 PM	12/14/2015 2:38:00 PM	ň		<u> </u>	62,000	
		Given>	FIO-11	HEIGHT	12/14/2015 3:06:00 PM	12/14/2015 3:08:00 PM	- n		<u> </u>	63,500	
9	Name	Given>	FLO-11	HEIGHT	12/16/2015 8/29/00 AM	12/16/2015 8:30:00 AM	П		<u> </u>	73,000	
tiple	PIP Observed	Given	FLO-11	HEIGHT	12/17/2015 10:35:00 AM	12/17/2015 10:36:00 AM	n		<u> </u>	71.500	
tiple	Vent Mode	Given>	FLO-11	HEIGHT	12/17/2015 10:51:00 AM	12/17/2015 10:53:00 AM	0		N N	71.000	
hpie	Temp (C)	Given>	FLO-11	HEIGHT	12/18/2015 1:25:00 PM	12/18/2015 1:26:00 PM	П			65	
tiple	PEEP	Given>	FLO-11	HEIGHT	12/17/2015 11:36:00 AM	12/17/2015 11:37:00 AM			<b>V</b>	66	
tiple	Sevoflurane	Given>	FLO-11	HEIGHT	3/30/2016 11:14:00 AM	3/30/2016 11:17:00 AM			<b>I</b>	69.000	
tiple	WEIGHT/SCALE	Given>	FLO-11	HEIGHT	3/30/2016 11:01:00 AM	3/30/2016 11:01:00 AM				65.750	
tiple	NIBP (Diastolic)	Given>	FLO-11	HEIGHT	3/30/2016 2:07:00 PM	3/30/2016 2:08:00 PM				61	
tiple	NIBP (Systolic)	Given>	FLO-11	HEIGHT	3/30/2016 3:23:00 PM	3/30/2016 10:18:00 PM			<b>V</b>	63.000	
tiple	NIBP MAP (mmHg)	Given>	FLO-11	HEIGHT	3/29/2016 6:23:00 AM	3/29/2016 6:23:00 AM			<b>N</b>	72	
tiple	Air	Given>	FLO-11	HEIGHT	5/12/2017 10:21:00 AM	5/12/2017 10:22:00 AM				71	
hple	HEIGHT	Given≻	FLO-11	HEIGHT	2/17/2016 11:19:00 AM	2/17/2016 11:19:00 AM		V	2	57.992	
hpie	Arterial Line MAP	Given>	FLO-11	HEIGHT	5/2/2017 4:08:00 PM	5/2/2017 4:34:00 PM			<b>V</b>	60	
tiple	ART BP (Diastolic)	Given>	FLO-11	HEIGHT	8/18/2015 1:16:00 PM	8/18/2015 1:18:00 PM				71.000	
tiple	ART BP (Systolic)	Given>	FLO-11	HEIGHT	6/2/2017 1:52:00 PM	6/2/2017 1:54:00 PM		V	<b>V</b>	62.000	
hpie	Destlurane	Given>	FLO-11	HEIGHT	11/16/2015 2:19:00 PM	11/16/2015 2:19:00 PM			<b>N</b>	72,000	
tiple	Isoflurane	Given>	FLO-11	HEIGHT	11/30/2016 9:59:00 AM	11/30/2016 9:59:00 AM		×	2	60.000	
hple	MEWS Score	Given>	FLO-11	HEIGHT	9/13/2016 12:16:00 PM	9/13/2016 12:19:00 PM				65	
hpie	Pulse	Given>	FLO-11	HEIGHT	1/28/2016 2:01:00 PM	1/28/2016 2:04:00 PM				68.000	
tiple	Press Support	Given>	FLO-11	HEIGHT	7/19/2016 10:47:00 AM	7/19/2016 10:47:00 AM		X	2	63.000	
hple	EKG	Given>	FLO-11	HEIGHT	10/18/2016 9:54:00 AM	10/18/2016 9:54:00 AM			N	67.000	
nple	SpO2	Given>	FLO-11	HEIGHT	4/14/2016 9:48:00 AM	4/14/2016 9:51:00 AM		7		65.000	
hple	BP (Systolic)	Given>	FLO-11	HEIGHT	5/23/2017 6:01:00 PM	5/23/2017 6:02:00 PM				66	
hpie	BP (Diastolic)	Given>	FLO-11	HEIGHT	1/9/2015 11:25:00 AM	1/9/2015 11:27:00 AM				67.992	
tiple	Resp	Given>	FLO-11	HEIGHT	1/22/2015 11:06:00 AM	1/22/2015 11:07:00 AM		V	2	68.000	
hpie	Position/Eye Check	Gines	810.11	UCICUT	2/12/2015 12:25:00 DM	2/12/2015 12/26/00 884				67.002	
npie	ETCO2 Check										>
hple	State Entropy										
hpie	Kesponse Entropy			950,813 Entropy	(Kesponse Entropy) PI	tysiolog					
npie	Convection Warmer Temp (C)			57,677 Warming	attempts convective in	traop N					
hple	Supplemental Oxygen Delivery	Method		940,802 Airway -	Supplemental oxygen c In	traop N					
hpie	K WEIGHT NEEDED FOR BMI O	- 25		28,138 Unknows	n Concept M	Examine					
ala la	01 De / 44			Alarman Alarman	Constant and a second a second						

#### '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

#### **'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.

Highlight the variable(s) you wish to exclude from mapping and click

Exclude

#### **Tips for Mapping Success**

1. 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
Unknown Rou	Multiple	Unknown Route	210,838	Unknown Concept
11	Multiple	Intravenous	5,762	Unknown Concept
50	Multiple	Epidural	99	Unknown Concept
<no given<="" id="" td=""><td>Multiple</td><td>Unknown Route</td><td>88</td><td>Unknown Concept</td></no>	Multiple	Unknown Route	88	Unknown Concept
193	Multiple	Peri-neural	36	Unknown Concept
9	Multiple	Intrathecal	26	Unknown Concept
69	Multiple	Infiltration	18	Unknown Concept
7	Multiple	Inhalation	9	Unknown Concept

2. 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.

				MPOG Configurat	ion				
Mapping Type:				-					
Organization:	All Assigned Organizations	(Merged)		-					
Display Mode:	All Variables	All Variables							
Search Filter	All Variables				)				
Search Filter.	Unmapped Variables Only				1				
	Mapped Variables Only								
ID	Org	Name	Times Used	Mapped As	Type				

3. Mapping Type

- a. EAP/HLX = Procedure Notes
  - i. If HLX intubation/extubation notes are available, exclude FLO variables associated with intubation/extubation.
- b. FLO = Data from Flowsheet (i.e. LDA)
- c. LEV = Event Note
- d. CT = Case Tracking variables (i.e. anes start/end)
  - i. Exclude CT variables if multiple variables show for event times. CT variables come from nursing documentation and we are more concerned with anesthesia documentation.

#### 4. Exclusions

a. **\*\***DO NOT exclude any Units of Measurement (Administration). This will prevent all data with a unit of measurement from pulling over to MPOG.\*\*

## How Mapping Translates to MPOG Case Viewer

1. After you continue mapping, you will notice a growing number of pink, green, and white rows on the left side of the screen.

- a. Pink rows represent variables excluded from Import.
- b. Green rows represent variables mapped.
- c. White rows represent unmapped variables.

•				MPOG Configu	ration				
Mapping Type:	Administration Type								
Organization:	All Assigned Organizations	s (Merged)				Direction:	Normal		•
Display Mode:	All Variables				•	Options:	Auto Search On	Auto Select O	n
Search Filter:						Search Filter:	white		
D	Org	Name	Times Used	Mapped As	Туре	Map	Name	ID	Туре
FLO-11201000	Multiple	Fi02	11,305,175	Variable Excluded from Import	Meta 🗠				
FLO-11210000	Multiple	SpO2	10,815,067	Variable Excluded from Import	Meto	themas			
FLO-11201000	Multiple	ETCO2	10,105,037	Variable Excluded from Import	Meta	unmap			
FLO-11201000	Multiple	02	8,803,598	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	Tidal Volume Exp	7,160,671	Variable Excluded from Import	Meta	Exclude			
FLO-11210000	Multiple	PIP Observed	7,141,726	Variable Excluded from Import	Meta				
FLO-11210000	Multiple	PEEP	3,886,678	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	Sevoflutane	3,830,019	Variable Excluded from Import	Meta				
FLO-11201000	Muttiple	Air	2,835,786	Variable Excluded from Import	Meto				
FLO-11210000	Multiple	Arterial Line MAP	1,967,259	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	Desflurane	1,864,289	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	Isoflurane	1,613,381	Variable Excluded from Import	Meto				
FLO-10444	Multiple	Press Support	1,401,688	Variable Excluded from Import	Meta				
FLO-10	Multiple	SpO2	1,280,006	Variable Excluded from Import	Meta				
FLO-11210000	Multiple	ET N2O	681,928	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	CVP	522,897	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	N20	454,719	Variable Excluded from Import	Meta				
FLO-1121000C	Multiple	PAP (Mean)	338,881	Variable Excluded from Import	Meta				
FLO-1121820	Multiple	cco	337,234	Variable Excluded from Import	Meto				
ERX-11150	Multiple	propofol (DIPRIVAN) 10mg/ml injection	311,232	PROPOFOL	Medicatio				
ERX-4318	Multiple	lactated ringers infusion	281,923	LACTATED RINGERS	Fluids In				
FLO-250026	Multiple	O2 Flow Rate (L/min)	255,456	Variable Excluded from Import	Meta				
ERX-3037	Multiple	fentaNYL (PF) (SUBLIMAZE) 50 mog/mL injection	189,945	FENTANYL	Medicatik				
ERX-27838	Multiple	0.9% NaCl infusion 1,000 ml	181,085	SALINE 0.9%	Fluids In				
FLO-11210000	Multiple	Auxillary O2	144,648	Variable Excluded from Import	Meta				
FLO-61	Multiple	Urine	138,845	URINE OUTPUT	Fluids Ou				
FLO-11201000	Multiple	Fi02	113,864	Unknown Concept	Meta				
FLO-11210000	Multiple	SpO2	112,698	Unknown Concept	Meta				
FLO-11201000	HFWY BROWNSTOWN	ETCO2	110,880	Variable Excluded from Import	Meta				
FLO-11201000	Multiple	02	110,794	Unknown Concept	Meto				
FLO-11201000	Multiple	ETCO2	107.426	Unknown Concept	Meta	Pramine			
FLO. 11310004	M. Mark	arra	107.310	Habaana Pasasat	Main V	LAND THE			
L									

2. Mapped variables within the 'Observation Type' and 'Observation Detail Type' section of Variable Mapping utility will become visible in the Notes, Preoperative, or Physiologic sections of Case Viewer:

	07:01 Ar	esthesia Start			
	Anesthes	a Start			
	07:01 Pa	tient Identified			
	Patient id evaluatio	entified, chart reviewed, n	, status unchanged from	preoperative	
	07:01 IV	Access (Misc)		Details	
	New Site	- Left Hand			
	07:01 N	PO Verification		Details	
	NPO state	us confirmed to be solid	ls > 8 hours and clear lic	uids > 3 hours	
	07:30 Ad	lministrative Note (Mi	sc)		
	Outpatier	nt			
	07:33 Pr	eoxygenation/Denitro	genation	Details	
	Patient p	reoxygenated using 5 L/	min O2 by mask		
	07:33 Pr	e-Induction Verificatio	on		
	Patient, P	rocedure, and site / side	es confirmed		
	07:34 Pa	tient in Room			
	Patient In	Room			
	07:42 La	ryngeal Mask Placeme	nt		
_	#5 LMA p	laced			
ổ Preop					
MPOG Concept		Value			Time
General - History -	Pediatrics - C	B/Gyn (5 Items)			
Uncategorized (7 /	tems)				
Cardiovascular (7 /	tems)				
<ul> <li>Respiratory - Hem</li> </ul>	atologic - ID -	Misc (9 Items)			
Monitor					
Readings	07:30	07:45	08:00	08:15	08:30
EKG Pulse Rate	118	136	124.5	114	107
BP Sys Non-invasive	100	74	64	66	66

EKG Pulse Rate	118	136	124.5	114	107
BP Sys Non-invasive	100	74	64	66	66
BP Dias Non-invasive	62	34	32.5	32	32
Cardiac Rhythm			Sinus Tachy	Sinus Tachy	Sinus Tachy
Peak inspiratory pressure	16	18	18	19	19
Tidal Volume actual	0.2	0.34	0.335	0.29	0.31
Ventilator Respiratory Rate	26	14	14	14	14
Ventilator Respiratory Rate	29	15	14	14	14
Ventilator FiO2 % Measure	40	97	73	73	73
Positive End Expiratory Pres	2	2	2	2	2
Inspired CO2 %	1	1	1	1	1
End Tidal CO2 (mmHg)	32	38	32.5	31	31
Oxygen Exp %	35	82	67	69	69
Isoflurane Exp %	0	2.2	1.8	1.7	1.8
T (1 T 0/	0	27	1.0	1.0	2

🚭 Preop

Monitor Readings 3. Mapped variables within the 'Administration Type' section of the Variable Mapping utility will populate to the Medication and Fluids sections of MPOG Case Viewer.

<ul> <li>Medications</li> </ul>			
Medications	08:45	09:00	09:15
MIDAZOLAM MG IV (AIN	2	0	0
VANCOMYCIN GM IV (AI	1	0	0
ATRACURIUM MG IV (AIM	0	70	0
FENTANYL MCG IV (AIMS	0	150	0
PROPOFOL MG IV (AIMS:	0	200	0
DOLASETRON MG IV (AII	0	0	0
GLYCOPYRROLATE MG I	0	0	0
NEOSTIGMINE MG IV (AI	0	0	0
<ul> <li>Fluids</li> </ul>			
Fluids	08:45	09:00	09:15
LACTATED RINGERS ML (	0	0	1000

4. Unmapped variables within Observation Type and Observation Details appear as a black line in MPOG Case Viewer intraoperative note details as an 'Unmapped Variable' and are not associated with a time.

NoTin Unmapped Variable
Pancreatic CA
NoTin Unmapped Variable
- 01/16/17; 1533; Pre Oxygenated, Cricoid Pressure, Atraumatic; 7; 21; Cuffed tube; Macintosch; 4; DVL 1; Bilateral Breath Sounds Confirmed, End Tidal Carbon Dioxide Confirmed-Waveform; 1 attempt; OETT; 01/16/17; 1634
NoTin Unmapped Variable
No
NoTin Induction Start
intravenous

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

Please select a concept type and query string	
Concept type	
[All concept types]	
Query string	
propofol	
Count Mode	
Hide inactive concepts	
Submit	

#### **Concept Browser**

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

# Chapter 4: Location Mapping

# **Location Mapping Overview**

The Location Mapping utility provides sites the ability to establish a hierarchy of procedure rooms and facilities as they exist within the health system. Building the location hierarchy allows providers to filter performance data by operating locations. Assigning location tags provides the opportunity to filter and group locations that may have similar case types, though not physically located in the same building. For example, a site may have several outpatient surgery centers and would want to "group" the data from these locations to examine performance at outpatient facilities. Location mapping is also used to exclude certain case types for ASPIRE measures when CPT codes are not available, i.e. rooms tagged as labor and delivery rooms can be excluded as a means of excluding labor epidural cases. Mapping of locations is usually completed when a site initially joins MPOG but should be maintained as new rooms are added. The following education module explains how to access and utilize the Location Mapping application.

- \_ x MPOG Application Suite Edit Connections About Connection: MPOG Local COMES GROUP Case Viewer Concept Browser Variable Mapping TS Import SQIP Import PHI Scrubber Data Diagnostics Case Validation Transfer to MPOG Central Transfer to AQI **Content Synchronization** search Data Cleaning Location Mapping Provider Contacts
- 1. Access 'Location Mapping' on the MPOG Suite.

2. Select 'Add Location' from the bottom of the display box.



3. 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."

Mew Location	
Please enter a name for	the new location:
University of Michigan	Health System
	OK Cancel

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

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
U-OFFS MPU U-OFFS RA2 U-OFFS RAD U-OR 01 U-OR 02 U-OR 03 U-OR 03 U-OR 05 U-OR 05 U-OR 05 U-OR 07 U-OR 08 U-OR 10 U-OR 11 U-OR 112 U-OR 12 U-OR 13 U-OR 15 U-OR 15 U-OR 15 U-OR 16 U-OR 17 U-OR 16	University of Michigan Health System	Location Tags
Map to No location selected	Add Location Rename Location Delete Location Unmap Location	View Tag Members

5. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
(Room Name Not Available)         ANAISYS-01         ANAISYS-02         ANAISYS-03         ANAISYS-05         ANAISYS-05         ANAISYS-05         ANAISYS-05         ANAISYS-04         ANAISYS-05         ANAISYS-05         ANAISYS-05         ANMOB-01         ANMOB-02         ANMOB-03         ANMOB-06         ANMOB-07         ANTIRO-01         ANTIRO-02         ANTIRO-03         ANTIRO-05         ANTIRO-06	Ann Arbor Main Campus University of Michigan Health System	Location Tags Facility type - Acute care hospital Facility type - Attached ambulatory surgery center Facility type - freestanding ambulatory surgery center Facility type - Office-based anesthesia OB-GYN - Labor and delivery OB-GYN - Obstetric operating room Other - Hybrid operating room Other - Minor procedure room Other - Minor procedure room Other - Outpatient surgery room Other - Outpatient surgery room Other - Outpatient surgery room Other - Pediatric Hadiology - Interventional radiology Radiology - MRI Recovery - ICU Service specific room - Cardiac operating room Service specific room - Electrophysiology/Cardiac cath Service specific room - Endoscopy
Map to Ann Arbor Main Campus	Add Location Rename Location Delete Location Unmap Location	View Tag Members

6. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
(Room Name Nat Available) ANAISYS-01 ANAISYS-02 ANAISYS-03 ANAISYS-05 ANAISYS-05 ANAISYS-05 ANAISYS-05 ANAISYS-05 ANAISYS-05 ANAISYS-05 ANAISYS-04 ANMO8-01 ANMO8-04 ANMO8-05 ANMO8-05 ANMO8-07 ANTIRO-02 ANTIRO-02 ANTIRO-04 ANTIRO-05 ANTIRO-05 ANTIRO-06 *	<ul> <li>✓ University of Michigan Health System Ann Arbor Main Campus</li> </ul>	Location Tags Facility type - Acute care hospital Facility type - Attached ambulatory surgery center Facility type - freestanding ambulatory surgery center Facility type - Office-based anesthesia OB-GYN - Obstetric operating room Other - Hybrid operating room Other - Nixed use operating room Other - Nixed use operating room Other - Nixed use operating room Other - Ottpatient surgery room Other - Ottpatient surgery room Other - Pediatric Radiology - Interventional radiology Radiology - Interventional radiology Recovery - PACU Service specific room - Cardiac operating room Service specific room - Enctophysiology/Cardiac cath Service specific room - Enctophysiology/Cardiac cath
Map to University of Michigan Healt	Add Location Rename Location Delete Location Unmap Location	View Tag Members

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

Mapping		
Unmapped Rooms	Room Hierarchy	
(Room Name Not Available)         ANAISYS-01         ANAISYS-02         ANAISYS-03         ANAISYS-04         ANAISYS-05         ANAISYS-05         ANAISYS-064         ANAISYS-07         ANAISYS-07         ANAISYS-05         ANAISYS-05         ANAISYS-05         ANMOB-01         ANMOB-02         ANMOB-03         ANMOB-04         ANMOB-05         ANMOB-07         ANTRO-01         ANTRO-02         ANTRO-03         ANTRO-05         ANTRO-05         ANTRO-05         ANTRO-06	University of Michigan Health System     Ann Arbor Main Campus     C.S. Mott Children's Hospital     Cancer Center     CVC     Main Hospital     Women's Hospital     East Ann Arbor Ambulatory Surgery Center     Kellogg Eye Center     Northville Surgery Center	Location Tags  Facility type - Acute care hospital Facility type - Attached ambulatory surgery center Facility type - Office-based anesthesia OB-GYN - Lobart or poreating room Other - Hybrid operating room Other - Ninor procedure room Other - Ninor procedure room Other - Office anesthesia Cother - Office anesthesia Cothe
Map to No location selected	Add Location Rename Location Delete Location Unmap Location	View Tag Members

8. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
CVC OS EP3         ←           CVC COS EP4         □           CVC-CTH 01         □           CVC-CTH 03         □           CVC-CTH 04         □           CVC-CTH 05         □           CVC-CTH W1         □           CVC-CTH W2         □           CVC-CTH W2         □           CVC-EP 03         □           CVC-EP 04         □           CVC-EP 05CR         □           CVC-EP 06         □           CVC-EP 07         □           CVC-EP 08         □           CVC-EP 09         □           CVC-EP 05CR         □           CVC-EP 06         □           CVC-EP 501         □           CVCOFFS 02         ■	University of Michigan Health System     Ann Arbor Main Campus     C.S. Mott Children's Hospital     Cancer Center     OVC     Main Hospital     Women's Hospital     East Ann Arbor Ambulatory Surgery Center     Kellogg Eye Center     Northville Surgery Center	Location Tags  Facility type - Acute care hospital  facility type - Attached ambulatory surgery center  facility type - freestanding ambulatory surgery center  facility type - Office-based anesthesia  OB-GYN - Labor and delivery  OB-GYN - Obstetric operating room  Other - Ninor procedure room  Other - Ninor procedure room  Other - Ottpatient surgery room  Other - Outpatient surgery room  Other - Pediatric  Radiology - Interventional radiology  Radiology - Interventional radiology  Radiology - Interventional radiology  Radiology - Interventional radiology  Recovery - PACU  Service specific room - Cardiac operating room  Service specific room - Electrophysiology/Cardiac cath  Eservice specific room - Endoscopy
Map to CVC	Add Location Rename Location Delete Location Unmap Location	View Tag Members

9. 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.

Location Mapping	Room Hierarchy	
C-B2A C-B2B C-OR 01 CVC 05 EP1 CVC 05 EP2 CVC 05 EP3 CVC 05 EP3 CVC 05 EP4 CVC-CTH 01 CVC-CTH 02 CVC-CTH 02 CVC-CTH 04 CVC-CTH 05 CVC-EP 02 CVC-EP 05 CVC-EP 05 CV	<ul> <li>University of Michigan Health System         <ul> <li>Ann Arbor Main Campus</li> <li>C.S. Mott Children's Hospital</li> <li>Cancer Center</li> <li>CVC</li> <li>Main Hospital</li> <li>Women's Hospital</li> <li>East Ann Arbor Ambulatory Surgery Center</li> <li>Kellogg Eye Center</li> <li>Northville Surgery Center</li> </ul> </li> </ul>	Location Tags Facility type - Acute care hospital Facility type - Attached ambulatory surgery center Facility type - Office-based anesthesia OB-GYN - Labor and delivery OB-GYN - Obstetric operating room Other - Hybrid operating room Other - Mixed use operating room Other - Mixed use operating room Other - Offsite anesthesia Other - Offsite anesthesia Other - Outpatient surgery room Other - Pediatric Radiology - Interventional radiology Recovery - ICU Recovery - PACU Service specific room - Cardiac operating room Service specific room - Endetrophysiology/Cardiac cath Service specific room - Endoscopy
Map to CVC	Add Location Rename Location Delete Location Unmap Location	View Tag Members

10. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
C-82A C-82B C-0R 01 CVC 05 EP1 CVC 05 EP2 CVC 05 EP4 CVC-CTH 01 CVC-CTH 02 CVC-CTH 03 CVC-CTH 03 CVC-CTH 03 CVC-CTH 04 CVC-CTH 04 CVC-CTH 05 CVC-CTH 04 CVC-CTH 04 CVC-CTH 05 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTH 04 CVC-CTP 05 CVC-EP 04 CVC-EP 05	<ul> <li>✓ University of Michigan Health System</li> <li>✓ Ann Arbor Main Campus</li> <li>C.S. Mott Children's Hospital</li> <li>Cancer Center</li> <li>QVC</li> <li>Main Hospital</li> <li>Women's Hospital</li> <li>East Ann Arbor Ambulatory Surgery Center</li> <li>Kellogg Eye Center</li> <li>Northville Surgery Center</li> </ul>	Location Tags  Location Tags  Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Tags Location Locatio
Map to CVC	Add Location Rename Location Delete Location Unmap Location	View Tag Members
<u>(</u>		100

11. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
C-B2A C-B2A C-DR 01 C-OR 01 CVC-EP 01 CVC-EP 03 CVC-EP 03 CVC-EP 05 CVC-EP 05 CVC-EP 05 CVC-EP 05 CVC-EP 05 CVC-EP 07 CVC-EP 07	University of Michigan Health System     Ann Arbor Main Campus     C.S. Mott Children's Hospital     Cancer Center     OVC     CVC OS EP1     CVC OS EP2     CVC OS EP3     CVC OS EP3     CVC OS EP3     CVC-CTH 02     CVC-CTH 02     CVC-CTH 04     CVC-CTH 04     CVC-CTH 04     CVC-CTH W2     Main Hospital     East Ann Arbor Ambulatory Surgery Center     Kellogg Eye Center	Location Tags  Facility type - Acute care hospital Facility type - Attached ambulatory surgery center Facility type - Attached ambulatory surgery center Facility type - forestanding ambulatory surgery center Bacility type - Office-based anesthesia BOB-GYN - Labor and delivery BB-GYN - Obstetric operating room Chter - Hybrid operating room Chter - Mixed use operating room Chter - Mixed use operating room Chter - Offiste anesthesia Dother - Offiste anesthesia Chter - Outpatient surgery room Chter - Pediatric Radiology - Interventional radiology Radiology - MRI Recovery - ICU Recovery - PACU Service specific room - Cardiac operating room Eservice specific room - Endoscopy
Map to CVC	Add Location Rename Location Delete Location Unmap Location	View Tag Members

12. 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.

M Location Mapping		
Unmapped Rooms	Room Hie	erarchy
C-B2A C-B2B C-OR 01 CVC-FP 01 CVC-FP 03 CVC-FP 03 CVC-FP 03 CVC-FP 05 CVC-FP 05 CVC-FP 05 CVC-FP 05 CVC-FP 05 CVC-FP PRO CVC-FP PRO CVC-FP 70 CVCOFFS 01 CVCOFFS 01 CVCOFFS 03 CVC-OR 01 CVC-OR 03 CVC-OR 03 CVC-OR 05 VCVC-R 05 CVC-R 05	University of Michigan Health System     Ann Arbor Main Campus     C.S. Mot Children's Hospital     Cancer Center     CVC 05 EP1     CVC 05 EP2     CVC 05 EP3     CVC 05 EP4     CVC-CTH 01     CVC-CTH 02     CVC-CTH 04     CVC-CTH 04     CVC-CTH 04     CVC-CTH W1     CVC-CTH W2     Main Hospital     East Ann Arbor Ambulatory Surgery Center     Kellogg Eye Center	Location Tags     Iracility type - Acute care hospital     Facility type - Attached ambulatory surgery center     Facility type - Treestanding ambulatory surgery center     Facility type - Office-based anesthesia     Ob-GYN - Lobsteric operating room     Other - Nindo yeneting room     Other - Mixed use operating room     Other - Mixed use operating room     Other - Outpatient surgery room     Other - Pediatric     Radiology - Interventional radiology     Radiology - MRI     Recovery - ICU     Service specific room - Cardiac operating room     Service specific room - Cardiac operating room     Service specific room - Cardiac operating room     Service specific room - Electrophysiology/Cardiac cath     Service specific room - Endoscopy
Map to CVC	Add Location Rename Location Delete Location Unmap	View Tag Members

13. 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.

M Location Mapping		
Unmapped Rooms	Room Hierarchy	
C-B2A         ←           C-B2B         ←           C-OR 01         □           CVC-EP 01         ⊂           CVC-EP 03         ⊂           CVC-EP 03         ⊂           CVC-EP 03         ⊂           CVC-EP 05         ⊂           CVC-FF 01         ⊂           CVCOFFS 02         ⊂           CVCOFFS 03         ⊂           CVC-OR 01         ⊂           CVC-OR 03         ⊂           CVC-OR 04         ⊂           CVC-OR 05         ▼		Location Tags
Map to CVC	Add Location Rename Location Delete Location Unmap Location	View Tag Members

14. 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.

15. 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.

16. <u>Note:</u> 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.

# Chapter 5: Case Viewer

## **Case Viewer Overview**

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

1. Open the MPOG Application Suite.



2. Click on "Case Viewer."



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

Read MPOG Case Viewer			
File Tools Case Details M	ode		
		Case ID: 00000000-0000-0000-000000000000000000	Procedure: ???
(Patient Name Hidden) ( MRN H	lidden Copy)	??? - ??? to ??? ( hours, minutes)	Diagnosis: ???
Unknown Age, Unknown Sex, I	Jnknown Weight, Unknown Height	(Room Name Unknown)	_
(Unknown Race)		ASA Status: ???	
Mode: Intraop	0 note(s) hidden		
	A		

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

APOG Case Viewer	Contraction of the American State of the Ame	the second s
File Fools Case Details Mode		
	Case ID: 0000000-0000-0000-0000-00000000000000	Procedure: ???
(Patient Name Hidden) ( MRN Hidden Copy)	??? - ??? to ??? ( hours, minutes)	Diagnosis: ???
Unknown Age, Unknown Sex, Unknown Weight, Unknown Heigh	t (Room Name Unknown)	
(Unknown Race)	ASA Status: ???	
Mode: Intraop 0 note(s)	hidden	
	*	

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



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

👪 Open Case			
Patient or Case ID			
Institution	Any		
Service	Any		•
Date Range	Select a date		To Select a date
Procedure			
Time	Service	Age	Procedure
01/02/2004 04:00	) Urology		·
01/02/2004 02:00	) Orthopedics		-
01/02/2004 08:00	) Psychiatry		
01/05/2004 10:30	Orthopedics		
01/04/2004 07:00	Orthopedics		
01/02/2004 07:30	) Vascular		
01/05/2004 07:30	Orthopedics	-	
01/02/2004 09:00	) Urology		
01/04/2004 12:00	Obstetrics / Gynecology		
01/02/2004 07:30	) General		· · · · · · · · · · · · · · · · · · ·
Your search was li	imited to the first 500 results		Get Selected Case

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

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

University of Michigan	Health System		
University of Michigan	Health System		
Cardiac			-
3/1/2016		15 To 3/1/2016	15
Service	Age	Procedure	
Cardiac			
			Set Selected Case
3	V1/2016 Service Cardiac Cardiac Cardiac Cardiac Cardiac Cardiac	V1/2016 Service Age Cardiac Cardiac Cardiac Cardiac Cardiac Cardiac	V1/2016 IS To 3/1/2016 Service Age Procedure Cardiac Cardiac Cardiac Cardiac Cardiac Cardiac
8. The Case Viewer will open with the case information for the case selected. PHI has been removed and labels replaced to indicate the type of information available in the Case Viewer header.



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

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



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

Light purple line: BP Sys Arterial Line (Invasive, Peripheral) Light purple dot: BP Sys Noninvasive Dark purple line: BP Dias Arterial Line (Invasive, Peripheral) Dark purple dot: BP Dias Noninvasive Green: CVP Black: End Tidal CO<sub>2</sub> Red: EKG Pulse Rate 10. To view individual physiologic readings at specific times during the case, clicking on the "Monitor" section below the graph will open all physiologic readings during the case on the hour.



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

👪 Data Details	M Data Details										
BP Sys Arterio	al Lin	e (Invasi	ve, Periph	eral)							
· ·											
Time	Value	Comments	Artifact Code	Entry Code	Time Entered						
05/21/2013 07:20	159		Normal	Machine Captured	05/21/2013 07:20						
05/21/2013 07:21	104		Normal	Machine Captured	05/21/2013 07:21						
05/21/2013 07:22	99		Normal	Machine Captured	05/21/2013 07:22						
05/21/2013 07:23	106		Normal	Machine Captured	05/21/2013 07:23						
05/21/2013 07:24	83		Normal	Machine Captured	05/21/2013 07:24						
05/21/2013 07:25	81		Normal	Machine Captured	05/21/2013 07:25						
05/21/2013 07:26	81		Normal	Machine Captured	05/21/2013 07:26						

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

Fluids     Monitor	<ul> <li>Medications</li> </ul>	
Monitor	✓ Fluids	
A Interconcertive Labo	<ul> <li>Monitor</li> </ul>	
	<ul> <li>Intraoperative Labs</li> </ul>	

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

Medications         07:00         08:00         09:00         10:00         11:00         12:00         13:00           PHENYLEPHRINE MCG/MIN         20         20         80         60         80        >         XX           TRANEXAMIC ACID MG/KC         4        >        >        >        >        >        >           INSULIN REGULAR UNITS/F         3        >        >         4         6           NOREPINEPHRINE MCG/KC         1         1         1         0.05         0.05           MILRINONE MCG/KG/MIN         1         1         1         0.25         0.25           PROPOFOL MCG/KG/MIN (         1         1         1         1         0.05           SODIUM CITRATE ML ORAI 0         0         0         0         0         0         0	<ul> <li>Medications</li> </ul>							
PHENYLEPHRINE MCG/MIN         20         20         80         60         80        >         XX           TRANEXAMIC ACID MG/KC         4        >        >        >        >        >        >           INSULIN REGULAR UNITS/I         3        >         4         6           NOREPINEPHRINE MCG/KC         >         4         6           MILRINONE MCG/KG/MIN         >         0.05           SODIUM CITRATE ML ORAI         0         0         0         0           UDOCGNIE ME ML ORAI         0         0         0         0         0	Medications	07:00	08:00	09:00	10:00	11:00	12:00	13:00
TRANEXAMIC ACID MG/KC         4        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        >        > <td>PHENYLEPHRINE MCG/MIN</td> <td>20</td> <td>20</td> <td>80</td> <td>60</td> <td>80</td> <td>&gt;</td> <td>XX</td>	PHENYLEPHRINE MCG/MIN	20	20	80	60	80	>	XX
INSULIN REGULAR UNITS/F         3        >         4         6           NOREPINEPHRINE MCG/KC            0.05           MILRINONE MCG/KG/MIN            0.05           PROPOFOL MCG/KG/MIN (            0.25           SODIUM CITRATE ML ORAI 0         0         0         0         0         0           UNDCCAINE MC ML MASTLE FO            200	TRANEXAMIC ACID MG/KC		4	>	>	>	>	>
NOREPINEPHRINE MCG/KC         0.05           MILRINONE MCG/KG/MIN         0.05           PROPOFOL MCG/KG/MIN (         0.05           SODIUM CITRATE ML ORAI         0         0         0         0           UDDCG/INE ME IV/AIMS1         0.00         0         0         0         0	INSULIN REGULAR UNITS/F			3	>	>	4	6
MILRINONE MCG/KG/MIN         0.25           PROPOFOL MCG/KG/MIN (            0.25           SODIUM CITRATE ML ORAI 0         0         0         0         0         0           UDOCAINE MR M/ ADMS: L 50         0         0         0         0         0         0	NOREPINEPHRINE MCG/KC							0.05
PROPOFOL MCG/KG/MIN (         Image: Constraint of the second	MILRINONE MCG/KG/MIN							0.25
SODIUM CITRATE ML ORAL         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	PROPOFOL MCG/KG/MIN (							
	SODIUM CITRATE ML ORAI	0	0	0	0	0	0	0
	LIDOCAINE MG IV (AIMS: L	60	0	0	0	0	0	200
SUCCINYLCHOLINE MG IV 120 0 0 0 0 0 0 0	SUCCINYLCHOLINE MG IV	120	0	0	0	0	0	0

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

ase id test.txt - Notepad
File Edit Format View Help
79861982-9ad5-e211-a079-0022191d9ed3 33e61c9c-dae3-e211-a079-0022191d9ed3 67909067-bfe3-e211-a079-0022191d9ed3 2d08afbe-c2e3-e211-a079-0022191d9ed3 0c0fbf65-f5cc-e211-a079-0022191d9ed3 c2e51c9c-dae3-e211-a079-0022191d9ed3

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



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

						23
aries 🕨	Documents + My Documents + MPOG			<b>- 4-−</b> Si	earch MPOG	Q
/ folder					!≡ ▼	
Î	Documents library MPOG				Arrange by: F	Folder 🔻
	Name	Date modified	Туре	Size		
	ase id test.txt	3/29/2016 3:41 PM	Text Document	1 KB		
ns io 						
File nam	ne: case id test.bxt			• Te	kt documents (.txt) ( Open	*.txt)

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



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

MPOG Case Viewer							
File	Tools Case Details						
	Case Search						
Open Case List							
	Previous Case						
	Next Case						

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



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

🐱 Search	
	Find Next
<ul> <li>Search Options</li> </ul>	

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



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

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

POG	POG Case Viewer							
То	ols	Case Details						
5	Т	ext Search	n					
2	V	iews 🕨						
	P	references	י					
- 100 B								

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

Mereferences
Default Zoom (Minutes - 0 for Entire Case)
0
Display at Startup
Medications
Fluids
Monitor Data
Lab Values
Other Options
Display seconds in intraoperative notes list (requires restart)
Display AIMS Note Desc in notes list
☑ Display Patient PHI
Use median value for monitor data (otherwise, use first value)
Show audit trail / deleted documentation
OK Cancel

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



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

	Profes	sional Fee				Hospital (Within one m	Discharg	Je	
Procedures				Procedures					
Code	Туре	Start Time	End Time		Code	Start Time		End Time	
00400	Unspecified Professional Fee	06/25/13 00:00:00		Â					
11402	Unspecified Professional Fee	06/25/13 00:00:00		E					
12031	Unspecified Professional Fee	06/25/13 00:00:00							
00400	Anesthesia Professional Fee	06/25/13 16:49:00	06/25/13 17:33:00	•					
					Diagnoses				
iagnoses —					Contra	Present on Admit	Start Time	End Time	
iagnoses Code	Туре	Start Time	End Time		Lode	These in the second second			
iagnoses Code	Туре	Start Time	End Time		706.2	True	05/30/13	05/30/13	
iagnoses Code	Туре	Start Time	End Time		706.2 706.2	True	05/30/13 05/30/13	05/30/13	
iagnoses Code	Туре	Start Time	End Time		706.2 706.2 300.00	True True True	05/30/13 05/30/13 06/03/13	05/30/13 05/30/13 06/03/13	
iagnoses Code	Туре	Start Time	End Time		706.2 706.2 300.00 780.52	True True True True True	05/30/13 05/30/13 06/03/13 06/03/13	05/30/13 05/30/13 06/03/13 06/03/13	
iagnoses	Туре	Start Time	End Time		706.2           706.2           300.00           780.52           724.5	True True True True True True	05/30/13 05/30/13 06/03/13 06/03/13 06/03/13	05/30/13 05/30/13 06/03/13 06/03/13 06/03/13	
iagnoses Code	Туре	Start Time	End Time		Code           706.2           300.00           780.52           724.5           311	True True True True True True True	05/30/13 05/30/13 06/03/13 06/03/13 06/03/13 06/03/13	05/30/13 05/30/13 06/03/13 06/03/13 06/03/13 06/03/13	

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

Case and Patient			
MPOG Case ID	c2e51c9c-dae3-e211-a079-0022191d9ed3	MPOG Patient ID	d9938579-d597-e111-8ea6-0022191d9ed
AIMS Case ID		AIMS reg num	PHI
AIMS Encounter ID		AIMS Patient ID	
MPOG Procedure Room Concept	Freestanding ambulatory surgery center - outpatient	AIMS first name	PHI
	operating room	AIMS last name	PHI
AIMS Procedure Room Name		AIMS middle name	PHI
MPOG Admission Concept	Surgical Admission Type - Outpatient	AIMS sex	F
AIMS Admission Type	S	AIMS dob	PHI
MPOG Primary Procedural Service Concept	t General	MPOG Patient Race Concept	
AIMS Primary Procedural Service	SON	AIMS Race Text	
Patient Age		AIMS Address Street 1	PHI
AIMS Scheduled Duration Minutes	45	AIMS Address Street 2	PHI
AIMS Scheduled DT		AIMS Address City	PHI
AIMS Preoperative Diagnosis Text	sebaceous cyst 21555 21556	AIMS Address State Province	PHI
AIMS Scheduled Procedure Text	LUMPECTOMY, EXCISION OF SEBACEOUS CYST IN CENTER	AIMS Address Postal Code	PHI
	OF CHEST BETWEEN BREASTS	AIMS Phone Number	PHI
AIMS Actual Procedure Text	LUMPECTOMY, EXCISION OF SEBACEOUS CYST IN CENTER OF CHEST BETWEEN BREASTS	AIMS Medicaid Identifier	PHI
AIMS Documentation Template Text	MAC		
AIMS Documentation Template CD	5129		

28. Returning to the Case Details dropdown menu, selecting "IV sites and staff" from the list displays all IV sites documented intraoperatively and all staff who signed into the case.

IV Sites and Staff       Image: Staff		·····			P		<i>y</i> and an sea				
V Sites       MPOG Site Side, Location, Size       AIMS Site Type and Label       AIMS Site Side, Location, Size       AIMSSite_Comment       MPOGPreExisting_Site_CD       MPOGDiscontinu         Peripheral       Right, Hand, 18 g       Peripheral, Right Hand 18 g       Right, Hand, 18 g       1       0	M	IV Sites and Staff									
MPOG Site Type       MPOG Site Side, Location, Size       AIMS Site Type and Label       AIMS Site Side, Location, Size       AIMSSite_Comment       MPOGPreExisting_Site_CD       MPOGDiscontinu         Peripheral       Right, Hand, 18 g       Peripheral, Right Hand 18 g       Right, Hand, 18 g       1       0         Image: Staff       Image: Staff_role_concept_id       Imagestaff_role_concept_id       Imagestaff_role_concept_id       Imagestaff_physically_present_c	ſ	V Sites									
Peripheral       Right, Hand, 18 g       1       0 <ul> <li>Right, Hand, 18 g</li> <li>Ringht, Hand, 18 g</li> <li>Right, Han</li></ul>		MPOG Site Type	MPOG Site Side, Locati	ion, Size AIMS	Site Type and	Label AIMS	Site Side, Location, Size	AIMSSite_Comment	MPOGPreExis	ting_Site_CD	MPOGDiscontinue
staff         conceptdesc       aimsstaff_role_aimsstaff_id_aimscase_in_dt_aimscase_out_dt_mpogStaff_role_concept_id_mpogstaff_physically_present_c         Staff       conceptdesc         torreptdesc       torreptdesc         torreptdesc       torreptdesc <td></td> <td>Peripheral</td> <td>Right, Hand, 18 g</td> <td>Perip</td> <td>heral, Right Ha</td> <td>nd 18 g Right,</td> <td>Hand, 18 g</td> <td></td> <td>1</td> <td></td> <td>0</td>		Peripheral	Right, Hand, 18 g	Perip	heral, Right Ha	nd 18 g Right,	Hand, 18 g		1		0
Staff       conceptdesc     aimsstaff_role_aimsstaff_id       staff     aimscase_in_dt       aimscase_out_dt     mpogStaff_role_concept_id       mpogStaff_role_concept_id     mpogStaff_physically_present_concept_id											
Staff       conceptdesc     aimsstaff_role_aimsstaff_id       staff     aimscase_in_dt       aimscase_out_dt     mpogStaff_role_concept_id       mpogStaff_role_concept_id     mpogStaff_physically_present_c											
<											
Staff       conceptdesc     aimsstaff_role_aimsstaff_id       staff     aimscase_in_dt       aimscase_out_dt     mpogStaff_role_concept_id       mpogStaff_role_concept_id     mpogstaff_physically_present_concept_id											
Staff Conceptdesc insstaff_role_aimsstaff_role_aimsstaff_role_concept_id mpogstaff_physically_present_c											
Staff conceptdesc aimsstaff_role_aimsstaff_id_aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id_mpogstaff_physically_present_c totif t_met_Sumpired Attending (primera) 1977											
Staff Conceptdesc aimsstaff_role_aimsstaff_id aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id mpogstaff_physically_present_c											
Staff       conceptdesc     aimsstaff_role_aimsstaff_id_aimscase_in_dt     aimscase_out_dt     mpogStaff_role_concept_id     mpogstaff_physically_present_c       Staff     aimscase_in_dt     aimscase_out_dt     mpogStaff_role_concept_id     mpogstaff_physically_present_c											
Staff     Conceptdesc aimsstaff_role_aimsstaff_id_aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id_mpogstaff_physically_present_c     Staff aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id_mpogstaff_physically_present_c											
Staff       conceptdesc     aimsstaff_role_aimsstaff_id_aimscase_in_dt     aimscase_out_dt     mpogStaff_role_concept_id     mpogstaff_physically_present_c       Chiff Level     Support     1											
Staff     Conceptdesc aimsstaff_role_aimsstaff_id_aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id_mpogstaff_physically_present_c     Staff and Support 2022											
Staff conceptdesc aimsstaff_role_aimsstaff_id_aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id_mpogstaff_physically_present_c Staff	l	•		m							•
conceptdesc aimsstaff_role aimsstaff_id aimscase_in_dt aimscase_out_dt mpogStaff_role_concept_id mpogstaff_physically_present_c	Ş	Staff									
Staff Laud - Surgical Attanting (ariman) 7972		conceptdesc		aimsstaff_role	aimsstaff_id	aimscase_in_d	t aimscase_out_c	it mpogStaff_ro	le_concept_id	mpogstaff_p	
Stan Level - Surgical Attending (primary) 7072	1.1	Staff Louis . Curnin						6006			hysically_present_cd
Staff Level - Anesthesia Attending 7874 6000 1		Starr Lever - Surgio	cal Attending (primary)	7872						1	hysically_present_cd
Staff Level - Anesthesia Resident CA2 7876 6002 1		Staff Level - Anest	cal Attending (primary) thesia Attending	7872 7874				6000		1	hysically_present_cd
Staff Level - Postop Nurse 70000579 6009 1		Staff Level - Anest Staff Level - Anest	cal Attending (primary) thesia Attending thesia Resident CA2	7872 7874 7876				6000 6002		1 1 1	hysically_present_cd

29. Returning to the Case Details dropdown menu, selecting "Preoperative" from the list displays all categories for the preoperative information present in the MPOG database. History and Physical, the Anesthesia Assessment and Plan will populate here. Click on any of the categories to display specific patient information.

M	Preop					
м	POG Concept	Value	Time	Value Code		
$\bigcirc$	Airway - Physical Exam (27 Items)					
$\bigcirc$	General - History - Pediatrics - OB/Gyn (13)	(tems)				
•	Uncategorized (41 Items)					
•	Cardiovascular (8 Items)					
•	Respiratory - Hematologic - ID - Misc (12 Items)					
•	GI - Endocrine - Renal and Urologic - Rheur	natologic (8 Items)				
•	Neuro - Musculoskeletal - Pain (8 Items)					
V	Assessment and Plan - Studies - Testing (12	(tems)				

30. Returning to the Case Details dropdown menu, selecting "Outcomes" will display postoperative information, if present in the MPOG database.

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

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

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

M	Medication and Fluid Tota	ls						23
r!	Medication Totals							
	MPOG Med Name	AIMS Med Na	me	Total	Unit	Route		
	CEFAZOLIN	Cefazolin		2	GM	IV		
	LIDOCAINE	Lidocaine MG	IV	40	MG	IV		
	LIDOCAINE/EPINEPHRINE	1% Lidocaine 1% v	w/ epi surgeon	32	MG	IV		
	MIDAZOLAM	Midazolam (IV	P)	2	MG	IV		
	PROPOFOL	Propofol Bolus	;	20	MG	IV		
	luids, Inputs, and Outputs T	lotal .						
	MPOG IO Name AIMS	S IO Name Total	Unit					
	LACTATED RINGERS LR	200	ML					

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

🖁 MPOG C	ase Viewer			
File Tools	Case Details	Mod	e	
University o	f Michigan Healt	$\checkmark$	Intraop (Default)	
r	Ī		PACU	
	)		All	
Unknown C	oncept	_		1

# Chapter 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. 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 complete before each upload to MPOG Central. If submission is on a monthly basis, then attestation should also occur 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.



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.



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

10.00% -							
0.00% - 2004 Percentage of Case Prioribe Diagnostic Executed Of	2005 es with Hospital D Required	2006 ischarge Procedure	2007 e Codes	2008	2009	2010	2011
Description	4142010						
• Attestation							
SQL Query (Advar	nced Users)						

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



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



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 have been successfully imported. If this percentage is low, check your extract.				
Attestation Current Attestation	Comment	Previous Attestations		
Data Accurately Represented The results of this diagnostic accurately represents the data from our documentation systems.		04/11/16 Data Accurately Represented 03/02/16 Data Accurately Represented 02/10/16 Data Net Accurately Represented		
Data Not Accurately Represented The results of this diagnostic are not representative of data from our documentation and needs to be		01/18/16 Data Not Accurately Represented 12/14/15 Data Not Accurately Represented		
Not Contributing Data We are unable to contribute data for this content area.		10/21/15 Data Accurately Represented 09/23/15 Data Not Accurately Represented		

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.

Attestation		
Current Attestation	Comment	Previous Attestations
Data Accurately Represented The results of this diagnostic accurately represents the data from our documentation systems.		04/11/16 Data Accurately Represented 03/02/16 Data Accurately Represented 02/19/16 Data Not Accurately Represented
Data Not Accurately Represented The results of this diagnostic are not representative of data from our documentation and needs to be		01/18/16 Data Not Accurately Represented 12/14/15 Data Not Accurately Represented
Not Contributing Data We are unable to contribute data for this content area.		10/21/15 Data Accurately Represented 09/23/15 Data Not Accurately Represented

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.



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.

ADOG Casa ID	Hac Pace?	
APOG Case ID	nas nace:	
	Yes	Ê
	Yes	
	Yes	Step 1: Highlight row for case to review.
	Yes	
	No	
	Yes	
	Yes	
	Yes	
	No	
	Yes	
	Yes	
	Yes	
	No	Step 2: Select "Open Case" to open in
	Yes	Case Viewer.
	Yes	
	Yes	

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:	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:	Medium priority dia	gnostics must be attested to and generally should	
Diagnostic Executed On:       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			
Attachation		Step 2: A definition window will present with the priority definition.	e

### **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.



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.



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.

# Chapter 7.1 Case Validation: Case Selection Options

## **Case Validation Overview**

As mentioned in Chapter 6: Data Diagnostics, ASPIRE sites contribute information from various sections of the electronic health record to obtain preoperative, intraoperative, and postoperative data. 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. Second, clinicians at each site are required to manually validate between 5 and 20 cases per month to ensure that the data extracted into MPOG matches the original EHR documentation utilizing the MPOG Case Validation application. This micro-level view of the data allows for detection of data issues at an individual case level that may not be visible using data diagnostics. A series of 32 standard questions are used to validate case information in MPOG is accurate. The first section of this chapter (7.1) outlines the options for how to select a case. The second section of this chapter (7.2) summarizes the steps for performing case validation.

For the purpose of the monthly required case validation, it is suggested that a variety of case types are included in the sample for case validation. 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. It is also recommended that emergent cases 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. 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.

**BCBS Funded sites**: MPOG requires review of 20 cases per month for at least 6 months prior to MPOG Central. All historical data should be validated with a minimum of 5 case validations completed per 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.

1. Open the MPOG Application Suite and Open Case Validation.

(For instructions on how to download, see 'Chapter 1: Downloading and Accessing the MPOG Suite.')



2. 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 at least 20 cases per month have been reviewed.

M Pick a case for review				x
Use the following options	to pick a case to review	Overall Progress		_
Pick case by MRN and	l date	2016-03	0 / 20	* 
Detient MDN		2016-02	20 / 20	=
Patient WiKiN		2016-01	21 / 20	
Date of Operation	3/24/2016 15	2015-12	20 / 20	
Pick case by case ID		2015-11	20 / 20	
- ,		2015-10	20 / 20	
MPOG Case ID	0000000-0000-0000-000000000000000000000	2015-09	20 / 20	
Pick random unreview	ved case	2015-08	20 / 20	
Time Period		2015-07	20 / 20	
		2015-06	20 / 20	
Service Type	(Any) -	2015-05	20 / 20	
		2015-04	20 / 20	
Pick already reviewed	case	2015-03	20 / 20	
Reviewed Cases	-	2015-02	20 / 20	
		2015-01	20 / 20	
	Review Case	2014-12	0 / 20	

- 3. Pick a Case for Review: There are 4 options to select from.
  - a. Pick case by MRN and date
  - b. Pick case by case ID
  - c. Pick random unreviewed case
  - d. Pick already reviewed case

## **Case Selection Options**

### 1. Pick case by MRN and date:

a. 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.

M Pick a case for review	take in concerning the second			x
Use the following options	to pick a case to review	Overall Progress		
Pick case by MRN and	l date	2016-03	0 / 20	
Detient MDN		2016-02	20 / 20	Ξ
Patient WiKiN		2016-01	21 / 20	
Date of Operation	3/29/2016	2015-12	20 / 20	
Pick case by case ID		2015-11	20 / 20	
		2015-10	20 / 20	
MPOG Case ID	0000000-0000-0000-000000000000000000000	2015-09	20 / 20	
Pick random unreview	red case	2015-08	20 / 20	
Time Period	-	2015-07	20 / 20	
		2015-06	20 / 20	
Service Type	(Any) -	2015-05	20 / 20	
Distribution de continue de		2015-04	20 / 20	
Pick already reviewed	case	2015-03	20 / 20	
Reviewed Cases	~	2015-02	20 / 20	
		2015-01	20 / 20	
	Review Case	2014-12	0 / 20	-

b. The Case Validation screen should display. For the purpose of this training, all Protected Health Information (PHI) has been removed. 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. Refer to Section 7.2 for how to begin the case validation.

MPOG Case Validation Utility		
Case Lookup Information		
Patient MRN:		Open Case in
Date of Operation:		MPOG Case Viewer
MPOG Case ID:		
Questions for Validation		Enter Comments Below Here
Patient Information		
Was the patient's name ?	🔲 Yes 🔲 No	
Was the patient's age at the time of operation -	🔲 Yes 📃 No	
Case Information		
Is the admission type correctly mapped as 'Admit'?	🔲 Yes 📃 No	
Was this procedure performed in procedure room	Yes 🕅 No	
Is the procedure room correctly mapped as a 'Acute care hospital - mixed use operating room'?	Yes No	
Is the primary procedure service correctly mapped as 'Obstetrics / Gynecology'?	🔲 Yes 🗐 No	
Is the following procedure description correct?		
	Yes No	
Medications		
(Alphabetically First) Did the patient receive a bolus total of 3 GM of CEFAZOLIN?	Yes No	
(Alabahatianlis, Last) Did the estimatematics a balls tated of 10 MC of MC UDONIUB42	I Vac I Na	
Save As Image		Save Answers Cancel

- 2. Pick case by case ID:
  - a. Click the dial next to "Pick case by case ID."

Pick a case for revie	2W	-	
Jse the following opti	ons to pick a case to review	Overall Progress	
Pick case by MRN	and date	2016-03	0 / 20
Dationt MPN		2016-02	20 / 20
Patient WRN		2016-01	21 / 20
Date of Operatio	3/29/2016	2015-12	20 / 20
Pick case by case I	D	2015-11	20 / 20
MDOC Creation		2015-10	20 / 20
MPOG Case ID	000000-000-0000-0000-000000000000000000	2015-09	20 / 20
Pick random unrev	viewed case	2015-08	20 / 20
Time Period		2015-07	20 / 20
		2015-06	20 / 20
Service Type	(Any)	- 2015-05	20 / 20
Dick already review	ved case	2015-04	20 / 20
		2015-03	20 / 20
Reviewed Cases		× 2015-02	20 / 20
		2015-01	20 / 20
	Review Case	2014-12	0 / 20

- b. The Case Validation screen should display. For the purpose of this training, all PHI has been removed. 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. Refer to Section 7.2 for how to begin case validation.
- 3. Pick random un-reviewed case:
  - a. Click the dial next to "Pick random un-reviewed case."

M Pick a case for review			
Use the following option	s to pick a case to review	Overall Progress	
Pick case by MRN and	d date	2016-03	0 / 20
		2016-02	20 / 20 🗏
Patient MKN		2016-01	21 / 20
Date of Operation	3/29/2016	2015-12	20 / 20
Pick case by case ID		2015-11	20 / 20
10000 0 10	00000000 0000 0000 0000 000000000000	2015-10	20 / 20
MPOG Case ID	0000000-0000-0000-0000000000000	2015-09	20 / 20
Pick random unreview	ved case	2015-08	20 / 20
Time Period		2015-07	20 / 20
		2015-06	20 / 20
Service Type	(Any)	2015-05	20 / 20
Disk slass du su isus		2015-04	20 / 20
Pick already reviewed	i case	2015-03	20 / 20
Reviewed Cases	-	2015-02	20 / 20
		2015-01	20 / 20
	Review Case	2014-12	0 / 20

b. Choose the date range.

se the following options	to pick a case to revie	w		Overall Progress	
Pick case by MRN and	l date			2016-03	0 / 20
o rick case by minit and				2016-02	20 / 20
Patient MRN				2016-01	21/20
Date of Operation	3/24/2016		15	2015-12	20 / 20
Bick care by care ID	I.			2015-11	20 / 20
I let case by case ib				2015-10	20/20
MPOG Case ID	0000000-0000-0000	0-0000-000000000	000	2015-09	20 / 20
Pick random unreview	ved case			2015-08	20 / 20
Time Period	03/01/2016	0 / 20	•	2015-07	20 / 20
	03/01/2016	0 / 20	-	2015-06	20 / 20
Service Type	02/01/2016	20 / 20		2015-05	20 / 20
	01/01/2016	21 / 20	=	2015-04	20 / 20
Pick already reviewed	12/01/2015	20 / 20		2015-03	20 / 20
Device and Course	11/01/2015	20 / 20		2015 05	20720
Reviewed Cases	10/01/2015	20 / 20		2015-02	20/20
	09/01/2015	20 / 20		2015-01	20 / 20
	08/01/2015	20 / 20		2014-12	0 / 20
	07/01/2015	20 / 20		2014 11	0 ( 20
	06/01/2015	20 / 20		2014-11	0720
	05/01/2015	20 / 20		2014-10	0 / 20
	04/01/2015	20 / 20		2014-09	0 / 20
	03/01/2015	20 / 20		3014.09	0 ( 20
	02/01/2015	20 / 20		· · · · · · · · · · · · · · · · · · ·	
	01/01/2015	20 / 20			
	12/01/2014	0 / 20			
	11/01/2014	0 / 20			
	10/01/2014	0 / 20			
	09/01/2014	0 / 20			
	08/01/2014	0 / 20	Ŧ		

Jse the following options	to pick a case to review		Overall Prog	ress					
Pick case by MRN and	l date		2016-03					0 / 20	_
D.C. AMDN		_	2016-02					20 / 20	
Patient MKN			2016-01					21 / 20	
Date of Operation	3/24/2016	15	2015-12					20 / 20	
Pick case by case ID			2015-11					20 / 20	
MPOC Core ID		000	2015-10					20 / 20	
MPOG Case ID	0000000-0000-0000-00000000000	000	2015-09					20 / 20	
Pick random unreview	red case		2015-08					20 / 20	
Time Period	03/01/2016 0 / 20	•	2015-07					20 / 20	
nine r chou	0720		2015-06					20 / 20	
Service Type	(Any)	-	2015-05					20 / 20	
	(Any)		Reviewed:	0	Total:	5126	*	20 / 20	
Pick already reviewed	Anesthesiology		Reviewed:	0	Total:	106		20 / 20	
Reviewed Cases	Dentistry		Reviewed:	0	Total: Total:	24		20 / 20	
	Dermatology		Reviewed:	0	Total:	7		20720	
	General		Reviewed:	0	Total:	460		20/20	
	Medical - cardiology		Reviewed:	0	Total:	21/	_	0 / 20	
	Medical - gastioenterology Medical - hematology/oncology		Reviewed:	ő	Total:	15	=	0 / 20	
	Medical - nephrology		Reviewed:	0	Total:	2			
	Medical - other		Reviewed:	0	Total:	18		0 / 20	
	Medical - pulmonology		Reviewed:	0	Total:	6		0 / 20	
	Obstatzics (Gunacology)		Reviewed:	0	Total:	279		0 / 20	
	Ophthalmology		Reviewed:	ő	Total:	562			
	Oral / Maxillofacial		Reviewed:	ŏ	Total:	86			
	Orthopedics		Reviewed:	0	Total:	413			
	Otolaryngology		Reviewed:	0	Total:	554			
	Plastics		Reviewed:	0	Total:	212			
	Podiatry		Reviewed:	0	Total:	8			
	Psychiatry		Reviewed:	0	Total:	129			
	Radiology - Unspecified		Reviewed:	0	Total:	148			
	Translant		Reviewed:	0	Total:	/2			
	manspiant		neviewed:	0	rotali	48			

c. Select a service from the dropdown menu (optional).

## d. Select "Review Case" at the bottom of the screen.

👪 Pick a case for review			
Use the following option:	s to pick a case to review	Overall Progress	
© Pick case by MRN and	d date	2016-03	0 / 20
Patient MRN		2016-02	20 / 20
- dicite where		2016-01	21 / 20
Date of Operation	3/24/2016	2015-12	20 / 20
Pick case by case ID		2015-11	20 / 20
MPOG Case ID	0000000-0000-0000-0000-0000000000000000	2015-10	20 / 20
		2015-09	20 / 20
Pick random unreview	ved case	2015-08	20 / 20
Time Period	03/01/2016 0 / 20 🗸	2015-07	20 / 20
		2015-06	20 / 20
Service Type	Obstetrics / Gynecology 🔹	2015-05	20 / 20
Pick already reviewed	case	2015-04	20 / 20
,,		2015-03	20 / 20
Reviewed Cases	· · · · · · · · · · · · · · · · · · ·	2015-02	20 / 20
		2015-01	20 / 20
	Review Case	2014-12	0 / 20
		2014-11	0 / 20
		2014-10	0 / 20
		2014-09	0 / 20
		2014.00	0 ( ) 0

- e. The Case Validation screen should display. For the purpose of this training, all PHI has been removed. At this point, you could begin case validation. Refer to Section 7.2 for how to begin case validation.
- 4. Picking an Already Reviewed Case:
  - a. Click the dial next to "Pick an already reviewed case."

e the following option:	to pick a case to review	Overall Progress	
Pick case by MRN and	l date	2016-03	0 / 20
		2016-02	20 / 20
Patient MRN		2016-01	21 / 20
Date of Operation	3/29/2016	15 2015-12	20 / 20
Pick case by case ID		2015-11	20 / 20
, 1000 C 10		2015-10	20 / 20
MPOG Case ID	000000-0000-0000-0000-0000-00000000	2015-09	20 / 20
Pick random unreviev	ved case	2015-08	20 / 20
Time Period		_ 2015-07	20 / 20
		2015-06	20 / 20
Service Type	(Any)	- 2015-05	20 / 20
Diels also also aviation		2015-04	20 / 20
Pick already reviewed	Case	2015-03	20 / 20
Reviewed Cases		▼ 2015-02	20 / 20
		2015-01	20 / 20
	Review Case	2014-12	0/20

b. Select a case from the dropdown menu. The date of operation and procedure type will display.

Pick a case for review			
Use the following options	to pick a case to review	Overall Progress	
Pick case by MRN and	l date	2016-03	0/20
Detires MDN		2016-02	20 / 20
Patient WIKIN		2016-01	21 / 20
Date of Operation	3/29/2016	2015-12	20 / 20
Pick case by case ID		2015-11	20 / 20
- ,	0000000 0000 0000 0000 0000000000	2015-10	20 / 20
MPOG Case ID	000000-0000-0000-0000000000000000000000	2015-09	20 / 20
Pick random unreview	ved case	2015-08	20 / 20
Time Period	~	2015-07	20 / 20
		2015-06	20 / 20
Service Type	(Any) -	2015-05	20 / 20
		2015-04	20 / 20
Pick already reviewed	case	2015-03	20 / 20
Reviewed Cases	-	2015-02	20 / 20
	03/20/2012 ABDOMINAL WASHOUT/CLOS	URE	
	06/08/2012 HYSTEROSCOPY		
	01/09/2013 PEDCATH PACEMAKER/ICD GE LEAD REVISION	NERATOR CHANGE, PEDCATH	PACEMAKER/ICD

se the following options	to pick a case to review	Overall Progress		
Pick case by MRN and	date	2016-03	0/20	
J new case by mining and		2016-02	20 / 20	Ξ
Patient MRN		2016-01	21 / 20	
Date of Operation	3/29/2016	2015-12	20 / 20	
Pick case by case ID		2015-11	20 / 20	
		2015-10	20 / 20	
MPOG Case ID	0000000-0000-0000-0000-0000000000000000	2015-09	20 / 20	
Pick random unreview	ed case	2015-08	20 / 20	
Time Period		2015-07	20 / 20	
		2015-06	20 / 20	
Service Type	(Any)	2015-05	20 / 20	
Disk store do serience d		2015-04	20 / 20	
Pick already reviewed	case	2015-03	20 / 20	
Reviewed Cases	06/08/2012 HYSTEROSCOPY	2015-02	20 / 20	
	· · · · · · · · · · · · · · · · · · ·	2015-01	20 / 20	
	Review Case	2014-12	0/20	

c. Select "Review Case" at the bottom of the screen.

d. The Case Validation screen should display. For the purpose of this training, all PHI has been removed. At this point, you would verify that the case selected matches the case type that displays in the validator and begin case validation. Refer to Section 7.2 for how to begin case validation.

# Chapter 7.2 Case Review & Validation

## **Case Validation Overview: See Chapter 7.1**

#### Validation Requirements:

**BCBS Funded sites**: MPOG requires review of 20 cases per month for at least 6 months prior to MPOG Central. All historical data should be validated with a minimum of 5 case validations completed per 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.

1. Select a case using one of the options discussed in Section 7.1. For the purpose of this training, random case selection will be utilized as this is the most common method applied for case validation.

M Pick a case for review			x
Use the following options to pick a case to review	Overall Progress		_
Pick case by MRN and date	2016-03	0 / 20	
Defined MDN	2016-02	20 / 20	Ξ
	2016-01	21 / 20	
Date of Operation 3/24/2016	2015-12	20 / 20	
Pick case by case ID	2015-11	20 / 20	
	2015-10	20 / 20	
MPOG Case ID	2015-09	20 / 20	
Pick random unreviewed case	2015-08	20 / 20	
Time Period 🗸	2015-07	20 / 20	
	2015-06	20 / 20	
Service Type (Any) 🔻	2015-05	20 / 20	
	2015-04	20 / 20	
	2015-03	20 / 20	
Reviewed Cases 👻	2015-02	20 / 20	
	2015-01	20 / 20	
Review Case	2014-12	0 / 20	Ŧ

2. Choose the date range for the month of data requiring validation.

Pick a case for review				
Jse the following options	to pick a case to revie	w	Overall Progress	
Pick case by MRN and	date		2016-03	0 / 20
,			2016-02	20 / 20
Patient MRN			2016-01	21/20
Date of Operation	3/24/2016	15	2015-12	20 / 20
Pick case by case ID			2015-11	20 / 20
			2015-10	20 / 20
MPOG Case ID	0000000-0000-000	0-0000-00000000000000000000000000000000	2015-09	20 / 20
Pick random unreviewe	ed case		2015-08	20 / 20
Time Period	03/01/2016	0 / 20 🔻	2015-07	20 / 20
	02/01/2016	0 / 20	2015-06	20 / 20
Service Type	02/01/2016	20 / 20	2015-05	20 / 20
	01/01/2016	21 / 20	2015-04	20 / 20
Pick already reviewed of the second secon	12/01/2015	20 / 20	2015 02	20 ( 20
	11/01/2015	20 / 20	2013-05	20720
Reviewed Cases	10/01/2015	20 / 20	2015-02	20 / 20
	09/01/2015	20 / 20	2015-01	20 / 20
	08/01/2015	20 / 20	2014-12	0 / 20
	07/01/2015	20 / 20	2014 11	0 ( 20
	06/01/2015	20 / 20	2014-11	0720
	05/01/2015	20 / 20	2014-10	0 / 20
	04/01/2015	20 / 20	2014-09	0 / 20
	03/01/2015	20 / 20	3014.00	0 ( 30
	02/01/2015	20 / 20		
	01/01/2015	20 / 20		
	12/01/2014	0 / 20		
	11/01/2014	0 / 20		
	10/01/2014	0 / 20		
	09/01/2014	0 / 20		
	08/01/2014	0 / 20 -		

3. (Optional) Select a service from the drop down menu.

Pick a case for review						X
Jse the following options	to pick a case to review	Overall Prog	gress			
Pick case by MRN and	date	2016-03			0 / 20	1
,		2016-02			20 / 20	
Patient MRN		2016-01			21/20	
	2/24/2015	2010-01			21/20	L
Date of Operation	3/24/2016	2015-12			20 / 20	
Pick case by case ID		2015-11			20 / 20	
,, <b>,</b>		2015-10			20 / 20	
MPOG Case ID	0000000-0000-0000-0000-000000000000	2015-00			20 / 20	
. D' I I		2013-09			20/20	
Pick random unreviewe	ed case	2015-08			20 / 20	
Time Period	03/01/2016 0 / 20 -	2015-07			20 / 20	
nine renou	0720 0	2015-06			20/20	
		2015 00			20,20	
Service Type	(Any)	2015-05			20/20	
Dick already reviewed (	(Any)	Reviewed:	0 Total:	5126	20 / 20	
Prick alleady reviewed t	Anesthesiology	Reviewed:	0 Total: 0 Total:	106	20 / 20	
Reviewed Cases	Dentistry	Reviewed:	0 Total:	24	20 / 20	
	Dermatology	Reviewed:	0 Total:	7	20720	
	General	Reviewed:	0 Total:	460	20 / 20	
	Medical - cardiology	Reviewed:	0 Total:	217	0 / 20	
	Medical - gastroenterology Medical - hematology/oncology	Reviewed:	0 Total:	15	0/20	
	Medical - nephrology	Reviewed:	0 Total:	2	0,20	
	Medical - other	Reviewed:	0 Total:	18	0 / 20	
	Medical - pulmonology	Reviewed:	0 Total:	6	0 / 20	
	Obstetrics / Gynecology	Reviewed:	0 Total:	278	0 / 20	
	Ophthalmology	Reviewed:	0 Total:	562		
	Oral / Maxillofacial	Reviewed:	0 Total:	86		
	Orthopedics	Reviewed:	0 Total:	413		

## 4. Select 'Review Case.'

M Pick a case for review			
Use the following option	s to pick a case to review	Overall Progress	
Pick case by MRN and date		2016-03	0 / 20
Patient MRN		2016-02	20 / 20 🗧
		2016-01	21 / 20
Date of Operation	3/24/2016	2015-12	20 / 20
Pick case by case ID		2015-11	20 / 20
MPOG Case ID	0000000-0000-0000-0000-0000000000000000	2015-10	20 / 20
		2015-09	20 / 20
Pick random unreview	Pick random unreviewed case		20 / 20
Time Period	03/01/2016 0 / 20 👻	2015-07	20 / 20
		2015-06	20 / 20
Service Type	Obstetrics / Gynecology 🔹	2015-05	20 / 20
Pick already reviewed	Pick already reviewed case		20 / 20
		2015-03	20 / 20
Reviewed Cases	· · · · · · · · · · · · · · · · · · ·	2015-02	20 / 20
		2015-01	20 / 20
	Review Case		0 / 20
		2014-11	0 / 20
		2014-10	0 / 20
		2014-09	0 / 20
		2014 00	0 ( 30

5. The Case Validation questionnaire will display. For the purpose of this training exercise, the PHI was removed.

M MPOG Case Validation Utility	
Case Lookup Information Patern MNk Date of Operation MOSG See D.	Open Case in MPOG Case Viewer
Questions for Validation	Enter Comments Below Here
Patient Information	
Was the patient's name	Yes No
Was the patient's age at the time of operation	Yes No
Case Information	
Is the admission type correctly mapped as 'Inpatient'?	Yes No
Was this procedure performed in procedure room	Yes No
Is the procedure room correctly mapped as a 'Obstetrics - labor and delivery room'?	Yes No
Is the primary procedure service correctly mapped as 'Obstetrics / Gynecology'?	Yes No
Is the following procedure description correct? CERCLAGE	🛛 Yes 🔲 No
O Medications	
(Alphabetically First) Did the patient receive a bolus total of 3 GM of AMPICILLIN/SULBACTAM?	Ves No
(Alphabetically Last) Did the patient receive a bolus total of 130 MG of SUCCINVLCHOLINE?	Ves No
(Largest Bolus Total, Units of Mass Only) Did the patient receive a bolus total of 3 GM of AMPICILLIN/SULBACTAM?	Yes No
(Smallest Bolus Total, Units of Mass Only) Did the patient receive a bolus total of 600 MCG of PHENVLEPHRINE?	Ves No
Did the patient receive the first bolus of DIPHENHYDRAMINE at	Yes No
From From PPM, did the patient receive an infusion of PROPOROL at a rate of 150 MCG/KG/MIN?	Yes No
Did the patient recions all of Michaing medications (and only these) as a bolus: AMPTCLUTU/SUBACTAM DEDAAGHT-MACON DEPAHENINFORAMAE PRENILTIANINE PRENILTIANINE PRENILTIANINE SUCCEVICE-COUNE	∏ Yes ∏ No
Did the patient recieve all of following medications (and only these) as a infusion: PRDMCP. REMOTENTAND.	🗆 Yes 🖾 No
Did the patient receive the last bolus of DIPHENHYDRAMINE at	Yes No
Did the patient receive a total of 12.5 MG of DIPHENHYDRAMINE (bolus only)?	Yes No
⊖ Notes	
Did this patient receive a general anesthetic?	🖾 Yes 🖾 No
Was anesthesia start at	Yes No
Was surgical incision at	Yes No
Was anesthesia end at	TYes No
Physiologic	
Was the highest value for a non-invasive blood pressure (systolic) 133?	🖾 Yes 🖾 No
Was the lowest value for a non-invasive blood pressure (systolic) 77?	🗄 Yes 🗍 No
Save As Image	Save Answers Cancel

6. On this screen, 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 (see step 11 below). 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 now available to save a screenshot of the case. PHI will automatically be eliminated from the screenshot.

7. 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.'

File name:	MPOG CASE ID WILL POPULATE HERE.png	
Save as type:	: Image files (*.png)	
e Folders	Save	Cancel

8. You can now email and attach the saved screenshot to communicate any issues to the site technical team or member of the ASPIRE coordinating center.

9. As you answer each question, you may need 3-4 programs open at a time to verify the information in the MPOG case validator "matches" the information present in the hospital Anesthesia Information Management System (AIMS). For this reason, it is recommended that you have at least 2 monitors/screens available for use. Most likely, you will need the intra-op record open on one screen and the MPOG case validator on the other. However, the source of truth varies per institution depending on the electronic documentation system.

For example: At the University of Michigan Health System, multiple systems are used for case validation:

- a. Centricity contains the Intra-op record, Anesthesia H&P, Case details.
- b. Epic: Inpatient record, used for validation preop medications and admission status
- c. Carelink: Previous EHR used for validating cases pre-dating Epic implementation.

10. 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 Chapter 3 of the ACQR User Manual.

M MPOG Case Validation Utility	The Area and a start and the South Month and			
Case Lookup Information Patent MNk Due of Operation MMOS Case ID:	Open Case in MPOG Case Viewer			
Questions for Validation				
Prifert Information				
Was the patient's name	🖾 Yes 🖾 No			
Was the patient's age at the time of operation	Tyes No			
Is the admission type correctly mapped as Inpatient?	🗍 Yes 🗍 No			
Was this procedure performed in procedure room	Ves No			
	pers, gars,			

11. 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.

⊖ Physiologic			
Did the patient have an invasive arterial line in place?			
Was the highest value for a non-invasive blood pressure (apstolic) 86?			
Was the lowest value for a non-invasive blood pressure (systolic) 52?			
Did the patient recieve all of following volatile gases: Isoflurane Sevoflurane			
⊖ Preop			
Was the patient's preoperative weight NOT FOUND kg (rounded to the nearest kg)?			
Was the patient's preoperative height NOT FOUND cm (rounded to the nearest cm)?			
Was the ASA physical status of the patient 'ASA 4?			
Was the patient's preoperative baseline blood pressure 71 / 52?			
Was the patient on all of following medications (and only these) prior to the case:			

12. 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 to review the form at this time. Also, once the case is open, you must complete it as the information will not be saved if the case is closed before submitting.

Dd the parient recive all of following medications (and only these) as a infusion: PRO/OFCN, RAUPENTAND,	Ves No		
Did the patient receive the last boilus of DDHENHYDRAMINE at	Yes No		
Did the patient receive a total of 12.5 MG of DIPHENHYDRAMINE (bolus only)?	Yes No		
O Notes			
Did this patient receive a general anesthetic?	Yes No		
Was anesthesia start at	Yes No		
Was surgical incision at	🖾 Yes 🔝 No		
Was anesthesia end at 1	Yes No		
Was the highest value for a non-investive blood pressure (systolic) 133?	Yes No		
Was the lowest value for a non-invasive blood pressure (systolic) 777 🔤 Ves 🗐 No			
See Adrage			

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

M Pick a case for review				X	
Use the following options to pick a case to review		٢	Overall Progress		
Pick case by MRN and date			2016-03	0 / 20	
Patient MRN			2016-02	20 / 20	Ξ
			2016-01	21 / 20	
Date of Operation	3/24/2016		2015-12	20 / 20	
Pick case by case ID			2015-11	20 / 20	
			2015-10	20 / 20	
MPOG Case ID	0000000-0000-0000-000000000000000000000		2015-09	20 / 20	
Pick random unreviewed case			2015-08	20 / 20	

14. MPOG QI Coordinators are available via web conference or email for any questions regarding case validation.
# Chapter 8: PHI Scrubber

### **PHI Scrubbing Overview**

The PHI Scrubber application allows sites to remove staff and patient identifiers before transferring data to the MPOG Central database. Scrubbing should be executed before each transfer. 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.



1. Access PHI Scrubber on the MPOG Suite:

#### 2. PHI Scrubbing Options

Three options exist within the PHI Scrubber application for selecting cases to be scrubbed.

Note: One of these options must be selected before selecting a date range.

- a. **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.
- b. **Cases Waiting for PHI scrub:** Allows users to scrub only those cases marked as needing to be scrubbed.
- c. **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.
- d. **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.

#### 3. Initiating PHI Scrubber

a. 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 Scrubber	Configuration	PHI Scrubber Sample Testing	
Case Set:	<ul> <li>PHI scrub all</li> <li>Cases Waitin</li> </ul>	cases (Including previous case g for PHI scrub	s already PHI scrubbed)
	Specific Case	Enter MPOG_Case_ID here	
Date Range: (optional)	<ul> <li>✓ From: 1/1</li> <li>✓ To: 1/7</li> </ul>	/2017 15 /2017 15	
Start PHI S	crubbing	use PHI Scrubber Proce	top PHI Scrubbing

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

M PHI Scrubbe	er	only these cases the user winter to transfer Apain, a Vasa let' no
PHI Scrubber	Configuration	PHI Scrubber Sample Testing
Case Set:	<ul> <li>PHI scrub all</li> </ul>	cases (Including previous cases already PHI scrubbed)
	Cases Waitin	g for PHI scrub
	O Specific Case	Enter MPOG_Case_ID here
Date Range: (optional)	<ul> <li>✓ From: 1/1</li> <li>✓ To: 1/1</li> </ul>	/2017 15 7/2017 15
Start PHI S	crubbing	Pause PHI Scrubbing Stop PHI Scrubbing
Progress: 2%	5 (36 of 1240 ca	ses completed) Estimated Time Remaining: 1 minutes

4. AIMS Dictionary Configuration

The Configuration tab provides access to the AIMS PHI Dictionary and allows you to search through several dictionaries to establish what strings should be considered PHI and removed, and which strings 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). a. 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.)

PHI Scrubber			
PHI Scrubber Configuration PHI Scrubbe	er Sample Testing		
AIMS PHI Dictionary Search			
Search strings: Site Common Words ( First Names Last Names Identifiers (provider #,	words to not remove) user IDs)		Compare provider strings to common words
Search String:		Type:	Select Type  Add to AIMS Dictionary
Results			Remove from AIMS Dictionary
String	String Type		String Type Description
Aaron	19017		PHI Dictionary - Staff First Names
Abbey	19018		PHI Dictionary - Staff Last Names
Abbondanza 4	10018		DHT Dictionary - Staff Last Names
MPOG PHI Dictionary Search			
Search strings: All patient and provide All Medical Terms Search String:	er name strings		
Search			
Results			
String	String Type		String Type Description
			۸ ۲
•			÷

**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.

- b. 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.
- c. 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.

PHI Scrubber										23
PHI Scrubber	Configuration	PHI S	crubber San	nple Testing						
AIMS PHI Dict	ionary Search									
Search strings:	<ul> <li>All Search</li> <li>Site Comr</li> <li>First Nam</li> <li>Last Name</li> <li>Identifiers</li> <li>Initials</li> <li>✓ Search Str</li> </ul>	String non W es es (prov ing:	gs /ords (words ider #, user i nirav	s to not remove) IDs)	Туре:	Fire	Compare provide st Names [19017] 🔹	Add to	ommon words	y
<b>D</b> 11	Search				 			Remove fre	om AIMS Dictio	nary
Kesults										
String				String Type			String Type De	escription		
Nirav				19017			PHI Dictionary	- Staff First I	Names	_ 1
•										P P
										ノ
MPOG PHI Die	ctionary Search	1								
Search strings:	All patient	t and j al Terr ing:	orovider nan ns	ne strings						
	Search									
Results										
String			5	String Type			String Type Des	scription		
										*
										*
4						_				•

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).

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)

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			
HI Scrubber Configuration PH	I Scrubber Sample Testing		
AIMS PHI Dictionary Search Search strings: All Search St Site Common First Names Last Names Identifiers (p Initials Search String Search	ings rovider #, user IDs)	Compare prov Type: Select Type	vider strings to common words  Add to AIMS Dictionary  Remove from AIMS Dictionary
String	String Type	String Type	e Description
Bassin	19018	19018 PHI Dictionary - Staff Last Names	
Bassionv	19018	19018 PHI Dictionary - Staff Last Names	
4			•
MPOG PHI Dictionary Search Search strings: All patient ar All Medical T Search String Search	id provider name strings erms ្រ		
String	String Type	String Type	e Description
5	sting type	Dut Disting	Common Natas
167	19003	PHI DICTION	arv - Common Notes
167 170	19003	PHI Diction PHI Diction	ary - Common Notes

#### 5. 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.

To run a test string, type the phrase "Dr. Reed is a good doctor" in the test string window and select 'Test.'

🖶 PHI Scrubber	Allow - Marcel - Contraction - Contraction	1110 MICL 10702-10						
PHI Scrubber Configuration	PHI Scrubber Sample Testing							
Runs PHI scrubber logic for a given sample string and explains what was done with each word in the string								
Test String: Dr. Reed is a good doctor Test								
If you do not associate the tes	st string with an MPOG case, no patient-specific data will b	be removed.						
Associate with an MPOO	G case: Enter MPOG_Case_ID here							
Show whitespace and dependence of the second dependence of the secon	elimiters							
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						
Resulting String: Dr. [PHI] i	s a good doctor		, •					

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.

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. To run a 'Test String,' enter the MPOG Case ID from a specific case in the test string window, select 'Associate with an MPOG case' then click 'Test.' The MPOG case ID can be obtained from the MPOG case viewer application. 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.

🐱 PHI Scrubber				
PHI Scrubber Configuration PHI Scrubb	er Sample Testing			
Runs PHI scrubber logic for a given sample	e string and explain	s what was done with each word in t	he string	
Test String:				Test
If you do not associate the test string with	an MPOG case, no	patient-specific data will be removed	d.	
Associate with an MPOG case: Enter Enter	er MPOG_Case_ID h	ere		
Show whitespace and delimiters				

**'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.

Runs PHI scrubber logic f	or a given sample string and explains what was done with eac	h word in the string		
est String: Dr. miller u	ised propofol for sedation.		Test	
f you do not associate th	e test string with an MPOG case, no patient-specific data will b	oe removed.		
Accoriate with an M	APOG case: Enter MPOG Case ID here			
✓ Show whitespace a	nd delimiters			
PLIT Consideration				
Thi Scrubber Logic				
Source Word	Rule Triggered	Resulting Word		
Dr	Keep because word is commonly found in medical notes	Dr		
	Whitespace/Delimiter			_
	Whitespace/Delimiter			
miller	Keep because word is commonly found in medical notes	miller		
	Whitespace/Delimiter			=
used	Keep because word is commonly found in medical notes	used		
	Whitespace/Delimiter			
propofol	Keep because word is commonly found in medical notes	propofol		-
	Whitespace/Delimiter			_
for	Keep because word is commonly found in medical notes	for		_
	M/hitornaco/Dalimitar			
•			,	•

# Chapter 9: Transfer to MPOG Central

### **Transfer to MPOG Overview**

The MPOG Transfer to Central utility exports cases from your Local MPOG database and sends them to the MPOG Central Repository. It is important to note that 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. Before transferring data to MPOG Central, PHI Scrubbing must first be executed. Refer to Chapter 8 for more details on how to complete the scrubbing process.

To begin, open the MPOG Application Suite. (For instructions on how to download, see 'Chapter 1: Downloading and Accessing the MPOG Suite.')



#### **Transferring to MPOG Central- TEST Environment**

MPOG provides a test environment for 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.

1. To transfer to the MPOG test environment, open the 'Database Selection' dropdown window and select the 'Developer (Use for testing)' option.

86	IPOG Uploader	
- I	Database Selection	
	Production 🗸	
	Production	
	Developer (Use for testing)	
	There are 28848 cases that need to be PHI scrubbed.	

2. Next, ensure the following selections have been made prior to beginning the transfer process (The MPOG QI Coordinator will advise on the date range to transfer for initial upload):

M MPOG Uploader		Σĭ
Database Selection		
Developer (Lise for testing)		
Developer (use for testing)		
Case Selection		
There are 8683 cases that need to be PHI scrubbed		
Cases awaiting upload	7589	
Cases awaiting initial upload	7042	
Cases awaiting re-upload	547	
All cases (including those already uploaded	7802	
Specify Date Range		
From 7/1/2017 57 To 7/31/2017 57	1	
	J	
Note: You must be running a BRI service in order to Create/update the blinded record index for this Update BRI only (Do not upload case data) Table Selection (conficulte to create being to upload	use this. patient	
Find the selection (applicable to cases being re-upload	aed only) –	
Billing Lab Values Physiologic		
Case Info V Medications V Preop	-	
Input Outputs Montality Registry Da	la	
Intraop Notes V Outcomes V Sites		
Use Sterred Madulatite Orde		
Use Stored Modularity Only		
Chait Transfer		
Start Transfer		

3. You have completed the transfer to MPOG Central TEST. Once cases have processed in Central, a QI Coordinator will review your data and contact you with how to proceed.

#### **Uploading cases 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.

1. Open 'Transfer to MPOG Central' in the MPOG Suite.

2. In the Database Selection window, check that the default selection for 'Production' is highlighted in the dropdown menu.

-

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

M MPOG Uploader	<b>I I X</b>
C Database Selection	
Production	•
Case Selection	
There are 8683 cases that need to be PHI scrubbed.	
Ocases awaiting upload	780077
Cases awaiting initial upload	7042
Cases awaiting re-upload	773035
O All cases (including those already uploaded)	791674
Specify Date Range	_
From Select a date 15 To Select a date	15
Blinded Record Index	
Note: You must be running a BRI service in order to u	ise this.
Create/update the blinded record index for this p	atient
Update BRI only (Do not upload case data)	
Table Selection (applicable to cases being re-uploade	ed only)
Select All	
	-
Case Info Medications Preop	
Input Outputs Mortality Registry D	ata
Intraop Notes Outcomes Sites	
Intraop Staff Patients	
Use Stored Modularity Only	
Start Transfer	

#### **Resubmitting data for transfer to MPOG Central:**

Occasionally, data may need to be resubmitted to MPOG Central. A subset of data, such as 'Billing' or 'Intraop Notes' may need to be updated in MPOG Central due to changes made in the local environment. If the entire dataset is not affected, a user can transfer only a subset of the data and decrease processing time. The example below shows the appropriate method. 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:

🥵 MPOG Uploader 🧼 —		$\times$					
Database Selection							
Production		~					
Case Selection							
There are 21506 cases that need to be PHI scrubbed.							
Cases awaiting upload	649						
<ul> <li>Cases awaiting initial upload</li> </ul>	0						
<ul> <li>Cases awaiting re-upload</li> </ul>	649						
<ul> <li>All cases (including those already uploaded)</li> </ul>	808						
✓ Specify Date Range From 3/1/2018 15 To 3/31/2018 15							
Blinded Record Index Note: You must be running a BRI service in order to use Create/update the blinded record index for this pati Update BRI only (Do not upload case data)	this. ent						
Table Selection (applicable to energy being a surface of a sub-							
	(11y)						
Case Info Medications Preop							
Input Outputs Mortality Registry Data							
Intraop Notes Outcomes Sites Intraop Staff Patients							
Use Stored Modularity Only							
Start Transfer							

# **Chapter 10: Content Synchronization**

### **MPOG Content Synchronization Overview**

Occasionally, MPOG will update content, such as new concepts and PHI terminology. The 'Concept Synchronization' utility allows you to synchronize or apply these changes within your local database. MPOG recommends performing 'Content Synchronization' on a monthly basis. However, 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.

1. Access Content Synchronization in the MPOG Suite:



2. The following window will open in 'Content Synchronization.' Using the default settings as seen below, select 'Synchronize Content.'

🔊 MPOG Ap	plication Suite	
	MULTICENTER PERIOPER OUTCOMES GROUP	Edit Connections  About  Connection: MPOG Local
	Content Synchronization	
	MPOG Content	
Disabled c	MPOG will occasionally update t new concepts and PHI terms. To database is up to date, click on t Items to retrieve:	the content it provides, such as make sure the content of your the button below.
	<ul> <li>MPOG Diagnostic Metadata</li> <li>MPOG Concepts</li> <li>MPOG Enumerations</li> </ul>	<ul> <li>MPOG Lab Variables</li> <li>MPOG Location Tags</li> <li>MPOG PHI Dictionary</li> </ul>
Trai	Synchron	ize Content
Cont	ent Synchronization	Research Data Cleaning Disabled due to insufficient rights or missing connection.
L	ocation Mapping	Provider Contacts

3. Once you have selected 'Synchronize Content,' retrieving content will begin and systematic downloading of new content will occur.

M Retrieving Co	intent		X				
Please wait until this process completes.							
Concepts	Downloading						
Lab Variables	Downloading						
PHI Dictionary	Downloading						
Enumerations	Downloading						
Diagnostics	Downloading						
	Close						

4. Once the content retrieval process has completed, you will notice a 'finished' comment in the 'Retrieving Content' window, indicating 'Content Synchronization' was successful.

M Retrieving Co	intent	_	X				
Please wait until this process completes.							
Concepts	Finished!						
Lab Variables	Finished						
PHI Dictionary	Finished						
Enumerations	Finished						
Diagnostics	Finished						
	Close						

5. Congratulations! Content Synchronization is now complete.

# Chapter 11: Provider Contacts

### **Provider Contacts Overview**

The Provider Contacts Tool allows ASPIRE sites to update provider information for the purpose of sending feedback emails. For those sites participating with the MPOG QCDR, this tool is also used to send consents to providers for submitting data to CMS. If opting out of ASPIRE and the feedback emails, the Provider Contacts tool does not need to be populated. It is important to note that 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.

1. Access Provider Contacts via the MPOG Suite or via the link: https://www.aspirecqi.org/AppSuite//UserManagement/Index/



2. 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 Katie Buehler (<u>kjbucrek@med.umich.edu</u>), Chris Ladd (<u>laddchri@med.umich.edu</u>) or Genevieve Bell (<u>gkbell@med.umich.edu</u>) to obtain access.

MULTICENTER PERIOPERATIVE OUTCOMES GROUP							
Login to ASPIRE Hello Welcome to ASPIRE. Log in with your username and password below.							
User Name Password  Login Forgot your password?							
An audit trail of all user activity is maintained for this system as it provides access to protected health information. Authorized access is limited only to those with a need to know for the purposes of patient care, billing, medical records review, or quality assurance. Copyright 2004-2017 CareEvolution, Inc. All rights reserved.							

3. Upon login, the web application will display as follows:

Institution:												Excel / CSV Imp
v 10 ¥ entries	at a time Expo	ert <del>-</del>							Search Statu	s All • Staff Ro	ile: All = 🛛 Ac	thre: All +
Il Status II	AIMS Staff ID	Staff Role	First Case Date	11 Last Case Date	Case Count	17 First Name	11 Last Name	IT Email	11 NPI	ITIN (Opt.)	1 Active	17 Account Status
Incomplete	-	CRNA	11/1/2017	11/2/2017	6	Click to Edit	Yes	Account does not exist 🕹				
Incomplete		CRNA	11/1/2017	11/2/2017	7	Click to Edit	Yes	Account does not exist 🍰				
Incomplete		CRNA	11/1/2017	11/2/2017	4	Click to Edit	Yes	Account does not exist 🌡				
Incomplete		CRNA	11/1/2017	11/2/2017	7	Click to Edit	Ves	Account does not exist 🕹				
Incomplete		Attending	11/2/2017	11/2/2017	4	Click to Edit	Yes	Account does not exist				
Incomplete		CRNA	10/17/2017	10/17/2017	1	Click to Edit	Yes	Account does not exist				
Complete		CRNA	1/5/2015	11/2/2017	3026	1				Click to Edit	Yes	Activated
Complete		CRNA	6/25/2017	11/2/2017	360					Click to Edit	Yes	Activation email expired
Complete		CRNA	1/2/2015	11/2/2017	1828					Click to Edit	Yes	Activated
Complete		Attending	1/9/2015	10/11/2017	4433					Click to Edit	Yes	Activation email expired

4. The first 6 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. To send the technical lead a list of the AIMS Staff IDs, it may be useful to export the current list from the Provider Contacts tool. To do so, click on 'Export,' and select 'Excel' or 'CSV,' whichever format you prefer. The list will then export to an Excel or CSV document that you can send on to retrieve additional provider information such as first names, last names, and NPIs. **Please note**: this export cannot be imported in the same format. There is an option to import an Excel document using the template found under 'Excel/CSV Import.' See instructions in Step 8 for more information.



5. Once the AIMS Staff ID has been linked to an individual, please update the remaining 4 columns (shown below) with the appropriate information- First Name, Last Name, Email, National Provider Identification (NPI) number. Those sites planning to participate with the ASPIRE QCDR program need to also populate the TIN column with the appropriate Tax Identification Number for each provider. Only rows with active provider information need to be completed- i.e. providers who have left the organization (inactive) do not need to populate the historical data.

👫 First Name	👫 Last Name	Ĵ↑ Email	J↑ NPI	↓↑ TIN (Opt.)	↓↑ Active	↓↑ Account Status	
Click to Edit	Yes	Account does not exist 💑	6 To				
Click to Edit	Yes	Account does not exist 💑	0.10				
Click to Edit	Yes	Account does not exist 💑					
Click to Edit	Yes	Account does not exist 💑					
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Click to Edit	Yes	Account does not exist 💑					
Click to Edit	Yes	Account does not exist 💑					
Click to Edit	Yes	Account does not exist 💑					
Click to Edit	Yes	Account does not exist 💑					
Click to Edit	Yes	Account does not exist 💑					

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 Active or Inactive. See image below.

			I	Excel / CSV Import
Search:	Status: All 🗸	Staff Role: All 🗸	Active: All -	
1 Email		J↑ NPI	J↑ TIN (	Opt.) It Active

You can change the status for multiple providers by selecting multiple rows.

w 10 v entries al a time g	Export +						Search	Status All + St	aff Role, All +	Active Alt •
E II Status II AIMS Staff II	Account Status	11 Last Case Date	Case Count	1 First Name	IT Last Name	17 Email	IT NPI	TIN (Opt.)	IT Active	17 Account Statue
hearrysicie	Account does not exist 💑	11/0/2017		Chie to East	Class in Tall	Children East	Child In Edit	Claim in Easy	Yes.	
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	Account does not exist									
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provider	Activation email expired 🔀	, in the	last co	lumn	: Activ	ated, Not /	Activated	, Activ	vatio	n Email Sent
-	Activated	Activa	tion e	mail e	vnirec	To resent	d an activ	ation	ema	il click
	Activation email expired 🔀									
			www.asp	irecqi.or	rg says:					
			Are you su	re you war	nt to resen	d an activation ema	il to			
							ОК Са	ncel		

8. To update information for a large group of providers, importing using the provided templates may be the best option. To access the templates, click on the 'Excel/CSV Import' button in the right corner of the web page.

9. The Excel/CSV import page will open. Templates can be found in the left corner of the new page. 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**.

Excel / CSV Import							
Template files: 🗐 📾		Please select .xlsx or .csv file			Q Browse		
AIMS Staff ID	First Name	Last Name	Email	NPI	TIN (Opt.)	Status	
No data available in table							

10. Update the template with the provider information and save to your computer. 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.'

# Chapter 12: ASPIRE Dashboards

### **ASPIRE Dashboards Overview**

1. Access your institution's ASPIRE dashboard through the MPOG website https://mpog.org/



b. 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 <u>'Forgot your password?'</u> located below the login button near the bottom of the screen and follow the prompts.

	MULTICENTER PERIOPERATIVE OUTCOMES GROUP						
Login to As	Login to ASPIRE						
below.							
Password							
	🚔 Login						
	Forgot your password?						

2. Once you have logged into your account, you will be directed to your ASPIRE Institutional dashboard. Your institution name will be visible in upper the right hand corner of the dashboard.



- a. You will notice an overview of measures, similar to an index located in the left hand column of the ASPIRE dashboard. Performance for these measures is further displayed by measure group. For example, 'Neuromuscular Monitoring' is comprised of two measures, 'NMB-0'1 and 'NMB-02.'
- b. Each measure shows institutional performance and the targeted performance threshold.

## Neuromuscular Monitoring



3. A detailed view of each measure is available by clicking the specific measure title (i.e. 'NMB-01, NMB-02') located in the left hand column or anywhere with the specific measure box.

Overview					
Neuromuscular	Neuromuscular Monitoring				
Monitoring					
NMB-01	NMB-01	NMB-02			
		Target 90%			
NMB-02	✓ 97%	✓ 99%			

a. Clicking on the measure will result in the specific measure overview, which will include overall performance, case counts, trend graph, and a detailed breakdown of primary cause.

NMB-01: Train of Fo	ur Checked: Ove	erview			Image: Image
The percentage of cases receiving locumented. For more details, plea	a non-depolarizing neuromu	uscular blocker that have a TOF mor	nitor		
Overview	Overview Provide	ers Case Lists			
Neuromuscular Monitoring	Overall Performance		Counts	<b>±</b>	Trend
NMB-01	✓ 97	7% Target 90%	Passed	Count 19,895	Your Institution All Institutions
NMB-02			Excluded	52,983	
Glucose Management				73,414	60 /0% - 60% - 50% -
GLU-01	Breakdown of Primary	Cause		*	8 40% - 8 30% - 20% -
GLU-02	NMB-01 Result	NMB-01 Result Reason		Case Count	10%-
	Passed	Train of Four Taken		19,895	9/1/16 10/1/16 11/1/16 12/1/16 1/1/17 2/1/17 3/1/17 4/1/17 5/1/17 6/1/17 7/1/17 Month
Transfusion Management	Failed	Train of Four Taken		536	
TRAN-01	Excluded	Extubation		39,920	
	Excluded	NMBs Administered		10,189	
TRAN-02	Excluded	Cardiac Case		2,651	
	Excluded	ASA Class		147	
Blood Pressure	Excluded	Provider Signed in at Extubation		71	
BP-01	Excluded	Valid Anesthesia Duration		5 73.414	
BP-02				.,	
Pulmonary			See Instit	utional Rar	nking (Institution #-999)

b. By selecting 'Providers,' you can see individual performance for all anesthesia providers within your institution.

VMB-01: Train of Four Checked: Providers						≡ ⊕ @ ☆	Dependencies (15) -	
The percentage of cases receiving documented. For more details, plea	a non-depolarizin ase see the one p	g neuromuscular ager.	blocker that have a	TOF monitor				
Overview	Overview	Providers	Case Lists					
Neuromuscular Monitoring	NMB-01 By F	Provider						Ł
	Provider		Role	* Passed	Cases Passed	Cases Failed	Cases Included	% of Institution Fails
NMB-01	37353		Resident	0%	0	1	1	0%
NIME 02	49256		Resident	50%	3	3	6	0%
NMB-02	48655		CRNA	50%	1	1	2	0%
Glucose Management	49260		Resident	57%	4	3	7	0%
	49177		Resident	67%	2	1	3	0%
GLU-01	9247		CRNA	72%	33	13	46	1%
0111.00	22222		CRNA	72%	28	11	39	1%
GLU-02	2305		Attending	75%	12	4	16	0%
Transfusion Management	47427		Resident	77%	17	5	22	0%
	40306		Resident	78%	39	11	50	1%
TRAN-01	38282		Resident	78%	25	7	32	1%
75411.00	2301		Attending	78%	47	13	60	1%
TRAN-02	31686		Attending	78%	47	13	60	1%

c. You may also sort by Provider, Role, % Passed, Cases Passed, Cases Failed, Cases Included, and % Institutional Fails by clicking the one of these titles below the measure header.

GLU-01 By Pro	ovider					1 4 t <>
Provider	Role	% Passed	Cases Passed	Cases Failed	Cases Included	% of Institution Fails

4. By selecting the 'Case Lists' tab, all failed, passed, and excluded will appear for the specific measure. Once again, you have the ability to sort by clicking on any of the titles below the measure header.

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Luna Dena (we Dena (we Dena (we Dena (we Dena (we Dena (we Dena	Anatoria dobute hand principal and adobute hand principal and adobute hand principal boots and adobute hand boots and and and boots and adobute hand boots and and and ULER information constructions. These informa- tions consecutions and adobute hand boots additional principal and additional principal additional principal and additional principal additional principal and additional principal additional additional additional additional additional additional additional additionad additional additional ad		Altiguer Christmann	64703 Cele D 51705476-4776-4711-6505-002-5660 2405476-6778-6711-6505-002-5660
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5. To reference an abbreviated version of the measure specification, click on one pager link located in the upper left hand corner of the screen.

NMB-01: Train of Fo	our Checked: Overview					
The percentage of cases receiving more details, please see the <mark>one</mark>	g a non-depolarizing neuromuscular blocker that have a TOF monitor doppager.	cumented. For				
Overview	Overview Providers Case Lists					
Neuromuscular Monitoring	Neuromuscular Monitoring					
	Overall Performance	Counts	*			
NMB-01		NMB-01 Result	Count			
NMB-02		Passed	18,342			
	Failed					
Glucose Management		Excluded 48				
GLU-01			67,076			

The one-pager will display in a separate tab in pdf form:

Example of Measure One Pager:



6. To review specific case details and facilitate failed case review, you may select for the desired case.



View Details

- a. You may also utilize the filter option when searching for a specific case. For example, you may search for a failed case related to a particular measure by entering the MPOG Case ID.
  - i. To accomplish this, select Filters in the upper left hand corner.
  - ii. Select **t** and type in MPOG.Case.ID in the 'Variable' field or search for MPOG.Case.ID in the dropdown menu.
  - iii. Select 'Equal (=)' from the Operator dropdown menu and click

Data Sets Repo	rts Variables	Filters			
MPOG.Patient Vi	iews			<ul> <li>Departmental Dashboa</li> </ul>	nrd NMB-01: Train of Four Checked: Overview
⊊ Filters			0 <b>2</b> +	New Runtime Filter	· · · · · -
AimsStaffld	=	(Case as Provider)	•	Variable	MPOG.Case.ID
Location	=		-		
Age	>=			Operator	Equal (=)
Emergent	=		•	Create	Cancel
BMI Classification	=		-		

Create

iv. The added 'MPOG Case ID' filter will display at the bottom of the filter menu. You may paste the desired MPOG Case ID into the empty field

Data Sets Report	s Variable	es Filters
MPOG.Patient Vie	WS	
Filters		O C Apply F
AimsStaffld	=	(Case as Provider)
Location	=	
Age	>=	
Emergent	=	
BMI Classification	=	
Height (cm)	<=	
ASA Status	=	
Surgical Service	=	
Sex	=	
Surgery Start	>=	
Date of Service	<=	
Month	=	
Quarter	=	

v. Utilizing the filter to search for a specific MPOG Case ID will result in an independent display of the desired case.

Data Sets Report	ta Variables	Filters		🖷 Data Set Test Dataset 🔺 Indo	
h MPOG Patient Vie	145		Departmental Dashboard No.	(6.01. Tran of Four Checked, Overview	
DI Filters		00+	NMB-01: Train of	Four Checked: Case Lists III A 🗞 🔅 🔅 Dependences (16) -	
AmsSlaffid		(Case as Provide)	The percentage of cases recei	eving a non-deposision neuromuscular blocker that have a TDF	
Location		•	monitor documented. For more	e defails, piease see the one pager.	
Apr			Overview	Overview Providers Case Lists	
Emergent		· ·	Neuromuscular		
JM Case/Cabin		· · ·	Monitoring	N Failed Cases	
A Solution			NMB-01		
iurgical Service			NM8-02	Case List 👗	
-		•	Glucose Management	Link to Data of Detroits Operating Room Procedure Well 21 Result Reson Aldinatable Alternations Aldinatable MPOG Case D CHILDREADON	
Surgery Start	24		0LU-01	Vee Details Touri of Four Saren No 7 Touri of	
Date of Service			01.0-02		
Month		•	Transfusion Management	Passed Cases	
buener		•	TRAN-01		
IPOG Callel ID	•	6723e45-9776-e711-0580-002	TRAN-02	Case Ust	
			Blood Pressure	No results found	
			82-01		
			89-02	Excluded Cases	
			Pulmonary		
			PUL-01	Case List 🔺	
			Medication Overdose	No results found	
				<u></u>	

vi. Click on View Details to display details of a case from any of the case lists (failed, passed, excluded), as shown below.

Months NMB-01	since case occurred <= 12 Result = Falled		0			
Detail	;					<u>ل</u> ا
	Link to Cese	Orđer	Condition	Condition Value	Result	
	View Case	0	Valid Anesthesia Duration	Yes	Included	
2	Vew Case	1	ASA Class	0	Included	
	View Case	2	Cardiac Case	No	Included	
	View Case	3	Extubation	Earliest extubation at 4.03 PM	Included	
	View Case	4	NMBs Administered	Yes	Included	
	View Case	5	Provider Signed in at Extubation	Yes	Included	
	View Case	6	Train of Four Taken	No Train of Fours Taken	Failed	
	View Case	7	NMB Administration	Cisatracurium administered at 1:24 PM	Info	
	View Case	8	Extubation	Extubation at 4:03 PM	info	

vii. Click on View Case from the grid above to display intraoperative case information and details in 'Case Viewer.'



7. 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.



8. 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.

MPOG Case Viewer				
File Tools Case Details Mode				
Crewin Cepyin 63 years old, Female, 55 kg, 65 m Unknown Concept		Case ROO ASA	ID: fda30f9f-a390-e111-bc80-0022191di (3 hours, 45 min M 22 Status: ASA 2	9ed3 <u>Copy</u> utes)
Mode: Intraop	0 note(s) hidden			
10:19 Anesthesia Start	<u>*</u>	250	4	
Anesthesia Start				
10:19 Anesthesia Machine Checked				
Anesthesia machine checked in ROOM 22		200		
10:19 Patient Identified				
Patient identified, chart reviewed, status unchanged from preop evaluation	erative	150		

# Chapter 13: Measure Case Report

### **Measure Case Report**

The Measure Case Report application 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. This application can be accessed through the following link: <a href="https://www.aspirecqi.org/appsuite/report">https://www.aspirecqi.org/appsuite/report</a>.

1. Login using your ASPIRE account information:

	MULTICENTER PERIOPERATIVE OUTCOMES GROUP			
Login to As Hello Welcome to	Login to ASPIRE Hello Welcome to ASPIRE. Log in with your username and password			
User Name				
Password	Login			
	Forgot your password?			

2. Select your institution from the dropdown menu:

Measure Case Report		
Institution:	University of Michigan Health System -	

3. Select the date range you would like the application to pull cases from:

	Date Range:	From	03/01/2018	То	03/31/2018
--	-------------	------	------------	----	------------

4. 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")

Measure:

Check All Measures	Passed	E Failed	Excluded
AKI01: Acute Kidney Injury	Passed	Failed	Excluded
BP01: Low MAP Prevention	Passed	Failed	Excluded 🖉
BP02: Avoiding Monitoring Gaps	Passed	Failed	Excluded
CARD01: Avoiding Myocardial Infarction	Passed	Failed	Excluded
CARD01QCDR: Avoiding Myocardial Infarction	Passed	Failed	Excluded
■ CARD02: Avoiding Myocardial Infarction (Trop. ≤ 0.6)	Passed	Failed	Excluded
FLUID01C: Minimizing Colloid Use (Cardiac)	Passed	Failed	Excluded
FLUID01NC: Minimizing Colloid Use (Non-Cardiac)	Passed	Failed	Excluded
GLU01: High Glucose Treated	Passed	Failed	Excluded
GLU02: Low Glucose Treated	Passed	Failed	Excluded
MED01: Avoiding Medication Overdose	Passed	Failed	Excluded
NMB01: Train of Four Taken	Passed	Failed	Excluded
NMB02: Reversal Administered	Passed	Failed	Excluded
PONV01: Avoiding PONV	Passed	Failed	Excluded
PONV02: Avoiding PONV (Peds)	Passed	Failed	Excluded
PUL01: Tidal Volume Under 10 mL/kg	Passed	Failed	Excluded
PUL02: Tidal Volume Under 8 mL/kg	Passed	Failed	Excluded
TEMP01: Thermoregulation Vigilance - Active Warming	Passed	Failed	Excluded
TEMP02: Thermoregulation Monitoring - Core Temperature	Passed	Failed	Excluded
TEMP03: Perioperative Temperature Management	Passed	Failed	Excluded
TOC02: Postoperative Transfer of Care to PACU	Passed	Failed	Excluded
TOC03: Postoperative Transfer of Care to ICU	Passed	Failed	Excluded
TRAN01: Transfusion Management Vigilance	Passed	Failed	Excluded
TRAN02: Post Transfusion Monitoring	Passed	Failed	Excluded

5. Once you have selected the measures of interest, click "Generate Report" located at the bottom:

Generate Report

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

Report is ready!	
Measure Case Rep the download butto	port is ready to download. Please click on below.

7. 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 **Chapter 16: Batch MRN Lookup Tool** 

# Chapter 14: Batch MRN Lookup

### **Batch MRN Lookup Overview**

- 1. The MPOG Batch MRN Lookup Tool is used to retrieve the MRN associated with an MPOG Case ID for multiple cases at a time. There are two methods for adding the MRN column to the existing Failed Case Grid for each measure:
  - a. Load the saved Case Grids into the Batch MRN Lookup Tool. If using this method, save the Case Grid Excel document first before loading into the MRN Lookup Tool. For more information about how to access the <u>Measure Case Report</u>, see Chapter 15 of the MPOG Training Manual.

#### OR

- b. Copy MPOG IDs and paste them into the designated field in the Batch MRN Lookup Tool.
- 2. Access the Batch MRN Lookup utility in the MPOG Suite:



- 3. If using the Case Grid method, this step will guide you through loading the saved Case Grid file into the Batch MRN Lookup Tool. This will automatically add a column of MRNs to the saved Case Grid file that was exported and saved from step 1a. If using the second method, skip to step 4 of this user guide.
  - a. First, locate the file by selecting 'Browse' in the Batch MRN Lookup Tool.
  - b. Once you locate the desired Case Grid, simply double click on the file to load it into the 'Spreadsheet location field.' Click 'Start.'\*\*Note the spreadsheet you are uploading cannot be opened on your computer during upload.

🚭 Batch MRN Lookup	-		×
Batch MRN Lookup Use MPOG provided spreadsheet Spreadsheet location		Brov	vse
O Provide list of MPOG case IDs			
Save to location		Brov	vse

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



d. Once the MRN column has been successfully added to that file you will receive a notification. Click 'OK'

Process Complete	×
MRNs added to spreadsheet located at H:\U of M Docs\UniversityofMichigan1_BP02.xlsx	
ОК	

e. 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.'

⊟	5· č· ;	;								Excel
File	Home	Insert	Page Layo	ut Formulas	Data	Review	View 🛛 🖓 Tell me	what you	want to do	
Paste	X Cut E⊡ Copy → ∛ Format Pair	nter B	I <u>U</u> →	- A A A - A - A - A - A - A - A - A - A		=   ॐ • ≡   •≣ •≣	🔐 Wrap Text	er • \$	- % • 👯	- -00 -00
	Clipboard	5	F	ont r	5	Aligr	nment	5	Number	G.
	$\bullet$ : $\times$ $\checkmark$ $f_{\mathcal{K}}$									
							_			
				Password		?	×			
	'UniversityofMichigan1_BP02.xlsx' is protected.									
		Password:								
				(	ОК	Cance	el			

f. 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.
- 4. If opting to use the second method to load MPOG Case IDs into the Batch MRN Lookup Tool, this step will guide you through this process.
  - a. Select the second radio dial: 'Provide list of MPOG case IDs'
  - b. 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'

Use MPOG provided spreadsheet	
Spreadsheet location	
	Brows
Provide list of MPOG case IDs	
MPOG case IDs	
57bd11b9-daee-e711-bece-00215a9b0a	8c
d027ade5-a3ef-e711-bece-00215a9b0a8	Bc
ba27ade5-a3ef-e711-bece-00215a9b0a8	Be
59bd11b9-daee-e711-bece-00215a9b0a	8c
5dbd11b9-daee-e711-bece-00215a9b0a	8c
63bd11b9-daee-e711-bece-00215a9b0a	8c
41bd11b9-daee-e711-bece-00215a9b0a	8c
47bd11b9-daee-e711-bece-00215a9b0a	8c
c227ade5-a3ef-e711-bece-00215a9b0a8	c
Save to location	
H:\U of M Docs\New.xlsx	Brows

c. You will be prompted to enter a password.



d. After clicking 'Go' you will receive a message saying the process is complete. Go to the saved file and open.

Process Complete	×
MRNs added to spreadsheet located at H:\U of N	1 Docs\New.xlsx
	ОК

e. 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.

## Appendix A: NSQIP Import Tool

### **NSQIP Import Tool**

The NSQIP Import Tool allows the site to merge the surgical data abstracted for NSQIP with the MPOG anesthesia data.

- 1. Log into the NSQIP website at https://registry.acsnsqip.org/
- 2. In the upper right corner, select "Data Portal" then "Online Data Reports".



3. Scroll down to near the bottom of the page. Select "Data Download" underneath the "Data Analysis" heading.

DATA ANALYSIS
Measures This tool allows users to run pre-defined Quality Measures against their data.
Data Download This tool allows users to download text files for analysis in spreadsheet applications.
ACS REPORTS
ACS Semiannual Reports

- 4. In the form pictured below, use the following options:
  - a. Select Forms: Choose "All Forms"
  - b. Complete records: Check "Include Complete Records Only"
  - c. Date range:
    - i. Choose your desired date range
    - ii. Check "Include Patients without Core Dates"
  - d. Format Download File:
    - i. Coded fields format: Choose "As Codes"
    - ii. Multiselect fields format: Choose "Split Fields"
  - e. Link Name: As this option will not affect the data in the files, any label can be entered.
  - f. Select: 'Generate Download File'

CHOOSE FIELDS AND TIME PERIOD FOR	DOWNLOAD
Select Forms	All Forms V
Complete records	☑ Include Complete Records Only
Date range	From:       2016       Jan         To:       2016       Feb         Include Patients without Core Dates         Please select a date range of 5 years or less.
Format Download File	Coded fields format: O As Descriptives O As Qodes ( <u>Help</u> ) Multiselect fields format: O Split Fields O Single Field ( <u>Help</u> )
Link Name (Optional)	

#### Generate Download File

5. After the download is complete, you will receive an email to notify the file is ready. Return to the Data Download page and click on the download link that appears underneath the Data Download form:

Please be patient after making your selection, as it may take the server a few minutes to compile your data.



6. 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 for step 8.

			_			
	Do you want to open or save nsqipcl.zip from registry.acsnsqip.org?	Open	Save	Ŀ	Cancel	×
II A				,		

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



8. Under the Import tab, click the 'Browse' button. Select the zip file downloaded in step 6. If this is an older NSQIP download with scrambled patient IDs, check the "Unshuffle Patient IDs" checkbox and enter the PIN. Click 'OK.'

M NSQIP Import	-		3
Status Import			
NSQIP zip file:		Browse	)
	Unshuffle Patient IDs		
	PIN Number:		
		ОК	

9. 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.

M NSQIP Imp	ort					Ŀ		X
Status Imp	ort							
Import Statu	s							
Month NSC	)IP Case Coun	t % P	Patient Ma	tched	Last Importe	d		
Import Histo								
Import Histo	ry Ch		Manage	Ella La				
5/22/2016 A	25,22 DM Sur	tus	Message	File Lo	lat\Deckton\C	aco Form		
5/25/2010 4.	20.20 FIVE SUC	cess		Divaled	at (Desktop (C	ase_ronn	.csv	

### **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 schedules listed below.

### **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 same year
June	February of the same 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– Sept 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)

# Appendix B: QCDR Audit Tool

### MPOG QCDR Audit Tool

The QCDR Audit Tool is only accessible to QCDR Champions and ACQRs at participating sites via the following link: <u>https://www.aspirecqi.org/AppSuite/QCDR/MeasureAudit/2017</u>. For more information about the MPOG QCDR program, please see the MPOG website: https://mpog.org/quality/qcdr/

Sites participating in the QCDR program are required to audit a minimum of 5 cases per month or 60 cases per year for each group (TIN). Cases and providers are randomly sampled. Only participating providers are included in the sampling. For example, if a site has opted for ASPIRE to report for attendings only, residents and CRNAs will not be sampled. All cases must be reviewed by the time MPOG submits data to CMS. Any documentation entered into the audit tool is subject to further audit by CMS. **Please do NOT include Protected Health Information (PHI) in any comments submitted via the tool.** 

1. Access the QCDR Audit Tool: https://www.aspirecqi.org/AppSuite/QCDR/MeasureAudit/2017

2. Log into the application using your ASPIRE username and password:

MULTICENTER PERIOPERATIVE OUTCOMES GROUP
Login to ASPIRE Hello Welcome to ASPIRE. Log in with your username and password below.
User Name Password  Login
Forgot your password?

3. The audit tool will display and defaults to opening the current month. Select the month from the tabs on the left side of the screen to begin case review. All QCDR measures for all cases (5) must be reviewed for each month (60 cases in total) before the tool is considered complete.

ASPIRE	QCDR 20	017 Mea	sure Audit Tool	
Insti				
	Case #1 Ca	ase #2 Ca	se #3 Case #4 Case #5	
1 / 2017				
2 / 2017	77 years old, ASA Status: 3	Female }		
3 / 2017	77.56 kg, 167 Admission Ty Operating Ro	.64 cm (IBW:5 pe: Admit om: FH OR 02	9.37)	
4 / 2017	- p			
5 / 2017	* Provider: Mic	hael Neun	ann [1710087994]	
6 / 2017	Measure	Result	Reason	
7 / 2017	AKI01	Excluded	Highest Postop Creatinine within 7 d	lays
8 / 2017	BP01	Passed	Minutes below 55: 0	
9 / 2017	CARD01QCDR	Excluded	Troponin value <= 1: No troponin is	mea
10 / 2017	GLU01	Excluded	High glucose labs taken: 0 high gluc	ose
11 / 2017	MED01	Excluded	Naloxone/flumazenil usage excluded	d:
12 / 2017	NMB01	Excluded	Extubation: No Extubation	

4. After selecting a month to begin review, the tool will default to opening Case #1. Begin review by copying the MPOG Case ID from the right side of the banner.

MPOG Case ID: f157f448-03b0-139a-e053-6f02400ab765					
MPOG Patient ID: 1e523508-388f-e611-abfa-005056bc7717	Сору				
AIMS Case ID: AIMS Patient ID					

5. Paste the MPOG Case ID into Case Viewer in the MPOG Application Suite:

MPOG Application Suite	
MULTICENTER PERIOPER OUTCOMES GROUP	Edit Connections About Connection: Local
Case Viewer	Concept Browser
Variable Mapping	STS Import
NSQIP Import	PHI Scrubber
Data Diagnostics	Case Validation
Transfer to MPOG Central	Transfer to AQI
Content Synchronization	Research Data Cleaning Disabled due to insufficient rights or missing connection.
Location Mapping	Provider Contacts



🥵 Open Case			
Patient or Case ID	97423446-3da4-ba7c-	e053-6f02400a4f08	
OR			
Institution	Any		
Service	Any		
Date Range	Select a date		To Select a date
Procedure			
Time	Service	Age	Procedure

6. Open the case to retrieve the MRN from the banner in MPOG Case Viewer. Click copy.

🖏 MI	POG Cas	e Viewer		_
File	Tools	Case Details	Mode	
Unive	ersity of	Michigan Healt	h System	
69 ye White	ars old, e, not of	Male, 100 kg, Hispanic Origir	73 in n	

7. Paste the MRN into your site's anesthesia information management system (AIMS) or electronic health record to begin case review. To expedite review, the use of two monitors is recommended. Open the electronic health record on one screen and the QCDR Audit tool on the second monitor.

8. During case review, please note that the review of each measure is specific to the provider listed. For example, the case may have been excluded specifically for the selected provider due to staff attribution rules. See measure specifications for details related to provider attribution.

	* Provider:		
	Measure	Result	Reason
	AKI01	Excluded	Case Duration: 20
	BP01	Passed	Minutes below 55: 0
	CARD01QCDR	Excluded	Outpatient: Outpatient
	GLU01	Excluded	Short Outpatient Case: Outpatient, 39 minutes
	MED01	Excluded	Opioids or benzodiazepines administered intraoperatively: Yes
I	NMB01	Excluded	Extubation: No Extubation
	NMB02	Excluded	NMBs Administered: No
	PUL01	Excluded	Admission Type: Outpatient
	TEMP02	Excluded	Case Duration: 20
	TEMP03	Excluded	General or Neuraxial?: Neither
	TOC02	Excluded	Staff Attributed: Attending supervising anesthetist
	TRAN02	Excluded	Transfusion Case: No

9. For this provider, the case was excluded for AKI01 because the case duration was less than 30 minutes. To confirm this, compare the case duration noted in the OCDR Audit Tool (20 minutes) to the case duration listed in the electronic health record. If the case duration is confirmed, click 'Yes' on the right side of the tool. See step 10 if a discrepancy was noted.

Measure	Result	Reason	Confirm
AKI01	Excluded	Case Duration: 20	Yes No

10. If a discrepancy is noted between the audit tool and the electronic health record, select 'No' and enter a comment to describe what was found in the EHR documentation. Upon clicking 'Submit,' this comment will be sent to the Coordinating Center for further review. Please do not include any Protected Health Information (PHI), including MRN, in the comments section. When the MPOG QI coordinators have reviewed the case, they will enter a comment in response to the discrepancy. The reviewer who originally placed the comment will receive an email notifying them that a comment was added. Click on the link within the email to open the case and review the comment. If additional action is needed, please submit an additional comment or take steps to address the data quality issue. When all data accuracy issues have been remedied, the site reviewer will be asked to 'Mark as Resolved.' Any data accuracy issues must be resolved before submission of performance data to CMS. - ...

AKI01       Excluded       Case Duration: 20       IX No         [Katie Buehler commented at 10/10/2017 12:19]:       Anse start: 1400.	Measure	Result	Reason	Comm
	AKI01	Excluded	Case Duration: 20	X No [Katie Buehler commented at 10/10/2017 12:19]: Anes start: 1400. Anes end: 1450. Case was greater than 30 minutes Add Comment Mark as Resolved

. .

## Appendix C: DataDirect User Guide

DataDirect is an application that allows users to create queries using data that has been submitted to MPOG for quality improvement and research purposes. It contains multiple filters that can help easily identify a cohort of patients. For example: Before a researcher begins work on a proposal, they can use DataDirect to identify patient, case, and institution counts for the cohort they are interested in studying. For QI purposes, providers can generate a count of how many patients received reversal for neuromuscular blockade during a specific timeframe and compare that to institution reintubation rates to identify if any correlation exists.

#### **Gaining DataDirect Access**

DataDirect contains a limited dataset: Protected Health Information is excluded except for date of service. However, because DataDirect may contain information regarding hospital level quality indicators (i.e. hospital mortality), we ask that approval from the appropriate hospital department (i.e. Quality or Health Information Management) is obtained. In order to obtain access to DataDirect, an authorization form must be completed and sent to the MPOG coordinating center. This form can be found on our website <a href="https://mpog.org/">https://mpog.org/</a> under the "Join" tab in the top right corner.

			y 🗓 Da	shboard Login	\rm Website Login
About	Join	Research	Quality	Apps	Events/News

Next click "Downloads" from the menu on the left side:



To download the form click "MPOG DataDirect Security Checklist and Authorization Form" located under Research at the top

Research

MPOG DataDirect Security Checklist and Authorization Form

Please scan and email the completed form to Chris Ladd (<u>laddchri@med.umich.edu</u>) or Meridith Bailey (<u>meridith@med.umich.edu</u>). You will be contacted once login permissions have been updated.

### **Generating a Query**

When creating a query, there are two modes you can choose from. **Cohort Mode** allows you to view case counts across all MPOG sites while **Data Download mode** allows you to only download cases from your site. Although DataDirect will display final case counts, institution's will remain unidentified. The following guide walks through the filters available and steps needed to create a query.

### **Cohort Query Mode**

Upon logging in, select **Create a new blank query** to proceed. To use a previously created query, click **Select an existing query**. In cohort mode, you are able to view case counts across all MPOG sites.

Welcome
Please choose an option below
Create a new blank query
Select an existing query
Recent Queries
Test

Enter a name, description, and reason for your query. Select **Cohort** under Query Mode and then click **Create New Query**.

Create	a New Query
Please provide	a name and a brief description for your new query:
Name	
Lupus - Cohor	t
Description	(optional)
demo	
Reason for Research	Query (optional)
Query Mod	e
Cohor	Data Download
Create New (	Query Cancel

Next begin defining criteria for your query. Choose from the filters listed in the left panel, for example, select **Demographics**.

Tool Logged in as nipescat Logo Current Query (cohort) Lupus - Cohort Cohort Discovery Results Initial Counts - 4,871,788 patient (1449,189 case
Current Query (cohort) Lupus - Cohort Cohort Discovery Results Initial Count: 4,871,788 patien (,849,189 case
Lupus - Cohort Cohort Discovery Results Initial Count: 4,871,788 patien (,949,189 case
Cohort Discovery Results Initial Countr 4,871,788 patien (,949,189 case
Initial Counts 4,971,765 patien 7,949,169 case
40 instruction
Final Counts 4,971,788 patien 7,949,169 case 49 institution

Demographics are *patient-level* characteristics available from the administrative registration systems (**not** case-level data, in other words, they do not change from one case to another).

**Select** the checkboxes beside the characteristics to *include* them in your query. De-select items you do **not** wish to include. For example, to find only Female patients, de-select Male and Unknown under Gender. \*You can include any institution in cohort mode.

Click **Add** to *add* these criteria to your query.

Cohort Discovery Tool	Demog	raphic	s			
🛃 Oemographies	Patient chara case-level and	cteristics fr d reflects t	om administ he most rece	rative registi nt value for	ration systems. Da a given patient (e	ita is mostly .g. smoking
Cases	status), regar	dless of tin	ne period spe	ecified in Ca	ses.	
Comorbidities	Gender	🗷 Fem	ale 🗟 Male	🗹 Unkno	wn	
Diagnoses	Age	0	year(s)	to 150	year(s) ·	
Procedures	BMI	0	to 100			
Medication Administratio	Institution	any ir	nstitution			
/ Intraoperative Notes	Race	any r	ace			•
Physiologic				- 1.04		
Laboratory	Smoking Stat	tus: 🖤	10	Current 🧒	Former # Neve	r 🕫 Unknowr
Outcomes	Cancel	bd				

<u>Cohort Results</u>: As DataDirect retrieves data to match the selected criteria, the right panel of the screen will display final counts. Note: Your query is also saved to your individual profile in DataDirect.

Cohort Discovery Tool	Changes SavedNext Steps	Logged in as nipesc	at Logo
. Demographics	Your changes have been saved. Processing of your query will begin in the	Current Query (coh	ort) 📃
<u>.</u>	background. As your results come in, you will see the them appear on the right side of the screen.	Lupus - Cohort	
Cases		Cohort Discovery Re	sults
Comorbidities	You may continue to make changes to your query even while it is processing.	Initial Counts	
Diagnoses	If you have no more changes to make, then you can leave your query to process in the background. You may go work on a different query (choose "create a new query" from the right side of the screen) or green close your browser completely.		
Procedures	You can return to this query at any time to see the progress or get the final results once it is complete.	Demographics Age: 0 years - 150 years	0.0
Medication Administration		BMI: 0.0 - 100.0	4 312 883 natie
/ Intraoperative Notes		Final Counts	0.312/895/patien
Physiologic		10/11/0017	
		1	

Cohort Discovery Results include 1) *initial patient, case, and institution counts,* 2) *saved query criteria,* and 3) *final count of patient data matching your query.* As you build your query, check the right panel to verify that your criteria have been added. At any time, you may enable/disable, edit or remove an individual filter from your query.



<u>Cases:</u> To continue building your query, select an additional filter category, for example, Cases. Check boxes you wish to select per each field. Click "Add" to finalize.



Review the updated result panel on the right side of the screen each time you click "**Add**" to note the additional criteria have been *saved* to your query. In this example, both Demographics and Cases criteria have been added to the query, and a final count has been generated:

Logged in as nipesca	at Logout
Current Query (coho	ort) 🔳 🔹
Lupus - Cohort	
Cohort Discovery Re	sults
Initial Count:	
Demographics Age: 0 years - 150 years BMI: 0.0 - 100.0	
	4,312,883 patients
Cases Procedure Date: 01/01/2 Anesthesia time: 1 minu	2000 - 10/31/2017 ^ ute - 1440 minutes
	4,286,324 patients 6.918,250 cases
Final Count: ac of 4.10 PM 10/51/2017	4,286,324 patients 6,918,250 cases 33 institutions

<u>**Comorbidities**</u>: Next, Select **Comorbidities**, and continue to check the boxes of from the dropdown menu of comorbidities you want to include in your query.

Cohort Discovery Tool Dem Cyhics Cases Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control	bmorbidities hauser comorbidity measu elation to a higher risk of 9/10 data. ICD-10 coding ing October 1. 2015.	ures are pre-defined collections of ICD-9 and ICD-10 in-hospital mortality. The comorbidities are only ava was initially developed by the World Health Organiz	codes which assess for 31 patient c lable for centers contributing Prob tion in 1992, and the United States	omorbidities, commonly used for em Summary List ICD9/10 or Discharg began requiring the use of ICD-10
🔾 comorbidibles 🌶 🔝 Elix	hauser comorbidities	any comorbidities		
Diagnoses	Inclusion /Federation	Check all Uncheck all		
11 marsha	Inclusion/Exclusion	Aids HIV		
Ca Processing	ncel Add	Alcohol Abuse		
Addication Administration	760	Blood Loss Anemia		
Intrancerative Notes		E Cardiuc Arrhythmias		
		E Chronic Pulmonary Disease		
Physiologic		E Coagulopathy		
1 Laboratory		Congestive Heart Failure		
11		Deficiency Anemia		
🔮 Outcomes		E Depression		
Output View Selection		Diabetes Complicated		
		Diabetes Uncomplicated		
💥 Individual Data		🛢 Drug Abuse		
A Groups		Eluid Electrolyte Disorders		
0		E Hypertension Complicated		

**Diagnoses:** Begin typing the desired diagnosis name (or associated ICD-9 and ICD-10 codes) into the Diagnosis Code field. IDC-10 codes were required as of October 1, 2015, therefore historical data may not include ICD-10 codes. If you are interested in capturing diagnosis data for a case before that occurred before this date, please choose both ICD-9 and ICE-10 codes. Select the codes you desire, then click "Add Selected".

MPOG DA	TADIRECT_		
Cohort Discovery Tool Demographics	Diagnoses Perioperative patient diagnoses are derived from billing sources (administrative or professional billing) or the clinician-entered problem summary list. Clinician-entered problem lists use problems linked to ICD-9 and ICD-10 codes. ICD-10 coding was initially developed by the World Health Organization in 1992, and the United States began requiring the use of ICD-10 coding October 1, 2015.		
Comorbidities	Diagnosis source [Search all sources]  # ICD-9 # ICD-10 # Include related ICD-9/ICD10 Diagnosis code or description		
Medication Administration     Intraoperative Notes     Physiologic	Present on admission 0 item(s) selected  Add Selected  Top Result  Top Results - most fr  T		
International Laboratory	No diagnous nave     Systemic lupus erythematosus, unspecified <m32.9>     Lupus erythematosus (695.4)       Cancel Add     Giomerular disease in systemic lupus erythematosus     &lt;801 mm</m32.9>		
	ICD9 Discharge Diagnoses ICD-9 Codes  Systemic lupus erythematosus [710.0] Lupus erythematosus [695.4]		
	Discold lupus erythematosus of eyelid [373.34]     Discold lupus erythematosus of eyelid [373.34]     ICD10 Discharge Diagnoses     Systemic lupus erythematosus, unspecified <     Systemic lupus erythematosus, unspecified <     Systemic lupus erythematosus, unspecified <     Systemic lupus erythematosus, unspecified      Systemic lupus erythematosus, unspecified		
	Glomerular disease in systemic lupus erythematosus     Al32.14>     Discoid lupus erythematosus <l93.0>     Lupus anticoagulant syndrome <d68.62>     Lupus anticoagulant syndrome <d68.62>     Zi more</d68.62></d68.62></l93.0>		

As you select a diagnosis code, the 'parent' ICD-9 and ICD-10 codes and its associated 'child' ICD-9 and ICD-10 codes will be displayed and automatically **included**. De-select (click the red X) any individual code you wish to remove from the suggested list. "Inclusion" is the default selection. Click "Add" when finished.

Systemic lupus erythematosus	/ 🖉 \
ICD-9	/ 🖉 /
[/10.0] Systemic lupus erythematosus	
[710.1] Systemic sclerosis	
[/10.2] Sicca syndrome	
[710.3] Dermatomyositis	
[710.4] Polymyositis	8 I I
[710.5] Eosinophilia myalgia syndrome	8
[710.8] Other specified diffuse diseases of connective tissue	
[710.9] Unspecified diffuse connective tissue disease	8
ICD-10	8
<m32.10> Systemic lupus erythematosus, organ or system involvement unspecified</m32.10>	8
<m32.9> Systemic lupus erythematosus, unspecified</m32.9>	8
<m34.0> Progressive systemic sclerosis</m34.0>	8
<m34.1> CR(E)ST syndrome</m34.1>	8
<m34.9> Systemic sclerosis, unspecified</m34.9>	8
<m34.89> Other systemic sclerosis</m34.89>	8
<m35.00> Sicca syndrome, unspecified</m35.00>	8
<m35.01> Sicca syndrome with keratoconjunctivitis</m35.01>	8
<m33.09> Juvenile dermatopolymyositis with other organ involvement</m33.09>	8
<m33.10> Other dermatopolymyositis, organ involvement unspecified</m33.10>	8
<m33.90> Dermatopolymyositis, unspecified, organ involvement unspecified</m33.90>	8
<m33.00> Juvenile dermatopolymyositis, organ involvement unspecified</m33.00>	8
<m36.0> Dermato(poly)myositis in neoplastic disease</m36.0>	8
<m33.19> Other dermatopolymyositis with other organ involvement</m33.19>	8
<m33.99> Dermatopolymyositis, unspecified with other organ involvement</m33.99>	8
<m21.80> Other specified acquired deformities of unspecified limb</m21.80>	8
<m33.20> Polymyositis, organ involvement unspecified</m33.20>	8
<m33.29> Polymyositis with other organ involvement</m33.29>	8
<m35.8> Other specified systemic involvement of connective tissue</m35.8>	8
<m35.5> Multifocal fibrosclerosis</m35.5>	8
<l87.1> Reactive perforating collagenosis</l87.1>	8
<m35.1> Other overlap syndromes</m35.1>	8
<m35.9> Systemic involvement of connective tissue, unspecified</m35.9>	8
<m36.8> Systemic disorders of connective tissue in other diseases classified elsewhere</m36.8>	\ 🛛
	——————————————————————————————————————
Cancel ( Add )	

<u>NOTE</u>: To **Exclude** a characteristic in your query (e.g., run a query to retrieve patients who do NOT have Lupus), you must "UNCHECK" the Inclusion / Exclusion checkbox. When the box is **unchecked**, the indicator "Exclusion" appears in bold print.



<u>Adding "OR" Logic</u>: You may be interested in patients who have *either* one condition *or* a second condition. For example, if you were interested in patients with Lupus **OR** patients with Diabetes, use "OR" logic. To achieve this, include the Diabetes criteria in the "same criteria box" as the Lupus diagnoses. Open the existing Diagnoses query Lupus. Click the **Edit** icon is to edit the Diagnoses filter.



Enter the second criteria, e.g., Diabetes. Select the desired code(s) by clicking Add Selected

inician-entered problem lists u 1992, and the United States b	se problems linked to ICD-9 and ICD-10 codes. ICD-10 coding was initi egan requiring the use of ICD-10 coding October 1, 2015.	ally developed b	y the World Health Organizati
iagnosis Source	[Search all sources]		
	✓ ICD-9 Ø ICD-10 Ø Include related ICD-9/ICD10		
iagnosis code	diabetes		0
description	1 item(s) selected	Add Selected	D
resent on admission	Top Result		
Inclusion/Exclusion Include selected diagnoses	☑ Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled [250.00]	1998017 times	·
ICD-10 <m32.10> Systemic lupus <m32.9> Systemic lupus</m32.9></m32.10>	<ul> <li>Type 2 diabetes mellitus without complications <e11.9></e11.9></li> <li>Diabetes mellitus without mention of complication, type I or unspecified type, uncontrolled [250.02]</li> </ul>	939400 times [ 211274 times	
<m34.0> Progressive syst <m34.1> CR(E)ST syndroi</m34.1></m34.0>	Type 2 diabetes mellitus with hyperglycemia <e11.65></e11.65>		
<m34.9> Systemic sclero: <m34.89> Other systemic <m35.00> Sicca syndrom</m35.00></m34.89></m34.9>	ICD9 Discharge Diagnoses	96 more	
<m35.01> Sicca syndrom <m33.09> Juvenile derma</m33.09></m35.01>	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled [250.00]		
<m33.10> Other dermato <m33.90> Dermatopolyn</m33.90></m33.10>	Diabetes mellitus without mention of complication, type I or unspecified type, uncontrolled [250.02]	211274 times	
<m35.00> Dermato(poly)n <m83.19> Other dermato</m83.19></m35.00>	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled [250.60]		
<m83.99> Dermatopolyn</m83.99>	Polyneuropathy in diabetes [357.2]		
<m21.80> Other specifier</m21.80>			

Remove any "child" ICD-9 and ICD-10 codes that you do not wish to keep (by clicking the red X for each). Click **Update** (both conditions will be listed).



Adding "AND" Logic: In contrast, if you are interested in patients who have BOTH Lupus AND Diabetes diagnoses, use "AND" logic. To find these patients, build two separate filters (i.e. one for Lupus, and a separate one for Diabetes). Start with an initial Diagnosis filter including Lupus.



Build an additional Data Source (Diagnosis) by *returning* to the main filter list. Click **Diagnoses**, enter Diabetes into the Diagnosis code field, and click **Add Selected** to create new, separate criteria.

	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			
Cohort Discovery Tool	Diagnoses Perioperative patient diagnoses a Clinician-entered problem lists us 1992, and the United States bega	are derived from billing sources (administrative or professional billing) or problems linked to ICD-9 and ICD-10 codes. ICD-10 coding was initia in requiring the use of ICD-10 coding October 1, 2015.	or the clinician-en ally developed by	tered problem summary list. the World Health Organization i
Comorbid:tles	Diagnosis source	[Search all sources]		
A Procedures	or description	dabetes		0
Medication Administration	Present on admission	1 item(s) selected Top Result	Add Selected	
intraoperative Notes Physiologic	<ul> <li>Inclusion/Exclusion</li> <li>Include selected disperses</li> <li>No diagnoses have been select</li> </ul>	Ø Diabetes mellitus without mention of complication, type     II or unspecified type, not stated as uncontrolled [250.00]	1998017 times	
H Laboratory	Cancel Add	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled [250.02]		
2 concours		Type 2 diabetes mellitus with hyperglycemia <e11.65></e11.65>		
		ICD9 Discharge Diagnoses		
		Diabetes mellitus without mention of complication, type     If or unspecified type, not stated as uncontrolled [250.00]	1000017 times	
		Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled [250.02]		
		Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled (250.60)		
		Polyneuropethy in diabetes (357.2)	162040 terms	
			91 more	

After specifying the details (refining your ICD-9 and ICD-10 codes if desired), click **Add**. Each time you click **Add**, you are adding a new criteria panel (i.e. an 'AND' statement to the query).



The additional required criteria appear as a separate criteria box in the right hand panel, and the narrowed query results show a far more limited population of patients – only those patients who possess BOTH of the listed diagnosis codes.



Each of the displayed criteria boxes in the right-hand panel represents an "AND" statement – in other words, all retrieved patients must possess ALL of these criteria:



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In addition to the Procedures, Medication Administration, Intraoperative Notes, and Laboratory filters, you may select **Physiologic** data.

Cohort Discovery Tool	Physiologic			
🐏 Demographics	Intraoperative physiologic da Search by MPOG concept ID	ta acquired from automated device interfaces (blood pressure, SpO2) or concept name.	) or manually entered (Tr	ain-of-four ratio, EKG rhythm,
🛄 Cases	Name of Physiologic Data	okg		0
Comorbidities	R Industry Column	1 item(s) selected	Add Selected	1
Diagnoses	Include selected physiolo	pic Physiologic		
17 Procedures	No physiologic has been se	ect, 📽 EKG Pulse Rate (3005)		
W Processing		Respiratory Rate by EKG BioImpedence [3180]		
Medication Administratio	Minimum number of values	per case 1		
🖌 Intraoperative Notes	Cancel Add			
Physiologic	Constantio Librario			
Laboratory				
1) mathematic				

Continue to build and refine your query using Data Sources on the left-hand panel. Refer to the instructions inside each filter panel to determine the source and details for the information available.

Cohort Discovery Tool	Laboratory Perioperative laboratory cohort identification criteria which includes lab results. This is patient-level data, but can be connected to specific cases using result datas and case time linkances
Cases	Name of Laboratory Value           Item(s) selected         Add Selected
Diagnoses     Procedures     Medication Administration	Inclusion/Exclusion     Laboratory     Inclusion/Exclusion     Pormal lab - Creatinine, Serum/Plasma [5002]     Y2:kikolit.venues
Intraoperative Notes	Date of Lab Test   Any time  days before Anesthesia Start   During Intraoperative Period (Anesthesia Start to End)
Laboratory	Cancel Add

### **Share Your Query**

Users have the ability to share queries that create. For example, researchers may explore ideas in DataDirect to identify a viable research topic and then share their query to the Coordinating Center programmer assigned to their PCRC project to have them run the query on the database before submitting to the PCRC committee. For Quality Improvement, a QI champion may generate a query that they share with their administration. An ACQR may want to share a query to track a certain subset of patients before or after QI project implementation

To share your query, select the dropdown menu icon **I** and select **Share Your Query**.



Enter the name or UserId of the DataDirect user you wish to share your query with, and click **Share**.

Share Your Cohort		
You can share your cohort search criteria with another DataDirect user. $oldsymbol{0}$		
Please enter the name or userid of the person below.		
Search by name or userid:		
Share with:		
Share Cancel		

### **Toggling Between Query Modes**

To switch from Cohort Mode to Data Download Mode (or vice versa), click on the dropdown menu icon  $\blacksquare$  and select **Change the Query Mode**.



Select the desired mode for your query, then click **Change the Query Mode**.

Change Query Mode
Select the mode you would like for your query
Query Mode
Cohort Data Download
Change Query Mode Cancel

#### **Data Download Mode**

Creating a New Query: After logging in, select **Create a new blank query** to proceed (or **Select an existing query** to use a previously created query). Note: In data download mode, you are ONLY able to download cases from your site.

Welcome
Please choose an option below
Create a new blank query Select an existing query
Recent Queries
Test

Enter a name, description, and reason for your query and select Data Download, then click **Create New Query**. You may also download an existing Cohort query by editing your query and toggling the Query Mode to Data Download.

Create a New Query
Please provide a name and a brief description for your new query:
Name
Sample
Description (optional)
Reason for Query (ontional)
Research •
Query Mode
Cohort Data Download
Create New Query Cancel

Continue to add criteria from the left panel to your query as you would in Cohort mode.

	TADIRECT .	
Cohort Sister Syn Tool  Cases Cases Comorbidities Cases Case	Changes SavedNext Steps Your changes have been saved. Processing of your query will begin in the background. As your results come in, you will see the them appear on the right side of the screen. You may continue to make changes to your query even while it is processing. If you have no more changes to make, then you can leave your query to process in the background. You may go work on a different query (choose "create a new query" from the right side of the screen), or even close your browser completely. You can return the sign start of the screen is the progress or get the final results once it is complete.	Logged in as nipescat Current Query (phi) Sample Cohort Discovery Results Initial Count: 4.972,127 patients 7.959,159 cases 4.5 institutions Demographics Click the arrow for more details Click the arrow for more details S18,601 patients S18,601 patients S18,
	Email Support/Feedback	

**NOTE**: Since you may only download cases from your own site, you will receive an error message if you attempt to run a query with a filter that includes multiple sites. Verify that you have selected your institution in the **Demographics** section.

<u>MPOG DATADIRECT</u>		
Cohort Discovery Tool	Demographics	
Semographics	Patient characteristics from administrative registration systems. Data is mostly case-level and reflects the most recent value for a given patient (e.g. smoking status), regardless of time period specified in Cases.	
Cases	Gender	🖉 Female 🖉 Male 🐨 Unknown
Comorbidities	Age	0 year(s) • to 150 year(s) •
Diagnoses	ВМІ	<del>8</del> 10 100
Vrocedures	Institution	say institution •
Medication Administration	Para	
Intraoperative Notes	Nate	any race
Physiologic	Smoking Status: 🙆	🗷 Current 🚿 Former 🚿 Never 🚿 Unknown
Laboratory	Cancel Add	
Dutcomes		
Output View Selection		
📉 Individual Data		
Groups		

To select the data elements, you want included in your dataset, click on **Individual Data** under the Output View Selection.



In this section, you may select individual data elements that describe the *patient* or *case overall*. Begin typing the name of the item, and check the appropriate boxes to save these data elements.

Individual Data Search or select individual reflect one value per case of	Elements data elements that or patient. For exam	describe the patient or case overall. Typ ple, ASA status is an individual data eler	ically, these are observations that are only recorded or calcunent.	ulated to
All	▼ asa			
	<ul> <li>As</li> <li>As</li> <li>As</li> <li>As</li> </ul>	aClass aClass_Cleaned aNotes SANotes_Cleaned		
Patient/Case Case_Gene	eral Case_Physiolog	gic		
MpogPatientId		MPOG_Patient_ID		
MpogCaseId		MPOG_Case_ID		
AsaClass		AsaClass	≥×	
AsaClass_Cleaned		AsaClass_Cleaned	≥×	
AsaNotes		AsaNotes	≥×	
ASANotes_Cleaned		ASANotes_Cleaned	≥×	

Select the **Case\_General** tab or click on **Groups** under the Output View Selection section to choose case specific data elements such as admission type and procedural services. Check the box next to **Case\_General** to begin selecting the items you desire.

	TADIRECT	
Cohort Discovery Tool		
Lemographics	Case_General General information about a case, admission type, procedural services, room, date and charge capture codes	~
Comorbidities	Case_Medications     All medications for a case, including medication, route, and unit of measure names	~
Diagnoses	Case_Physiologic	~
Medication Administration	All monitor data for a case	
Intraoperative Notes	Patient/Case_General Dase_Medications Case_Physiologic	
Laboratory	MPOG_Case_ID MPOG_Case_ID MPOG_Patient_ID MPOG_Patient_ID	
Outcomes		
Individual Data		
Groups		

Click on the arrow to view the items associated with general case information. The green plus sign signifies that the item will be included. The red X items display in "strike-through" to indicate that they will NOT be included.

æ	Case_General		$( \land )$
	General information about a case, admissio	in type, procedural services, room, date and charge capture codes	
	Column Description		-
	+ MPOG_Case_ID: MPOG_Case_ID		
	* MPOG_Patient_ID: MPOG_Patient_ID		
	* MPOG_Institution_ID: MPOG_Institution_ID		
	* MPOG_Admission_Type_Concept_ID: Concept Identifier for MPOG Admission Type		
	<ul> <li>MPOG_Admission_Type_Desc: Concept Description from identifier for MPOG Admission Type</li> <li>AIMS_Admission_Type: Admission Type From AIMS Text</li> <li>MPOG_Primary_Procedural_Service_Concept_ID: Concept Identifier for MPOG Primary Procedural Service</li> </ul>		
	* MPOG_Primary_Procedural_Service	e_Desc: Concept Description from Identifier for MPOG Primary Procedural Service	
	* AIMS_Primary_Procedural_Service: AIMS Primary Procedural Service Text		
* MPOG_Procedure_Room_Type_Concept_ID: Cocenpt Identifier for MPOG Procedure Room			
	* MPOG_Procedure_Room_Type_Desc: Cocenpt Description from Identifier for MPOG Procedure Room		
	* AIMS_Procedure_Room_Name: AIMS Procedure Room Name		
	* AIMS_Scheduled_DT: AIMS-Scheduled-Datetime for the Procedure		
	* AIMS_Scheduled_Procedure_Text_AIMS_Scheduled_Procedure_Description		
	* AIMS Actual Procedure Text: AIMS Actual Procedure Description		
		• • • • • • • • • • • • • • • • • • •	
٩	ent/Case Case General Case Medications	Case_Physiologic	
Pat			
Pat	OG_Case_ID	MPOG_Case_ID	

Click on the red X to change the symbol to a green plus sign



If desired, proceed to check the boxes next to **Case\_Medications** and **Case\_Physiologic**, and select the items you wish to be included in your dataset as previously described.

MPOG DATADIRECT					
Cohort Discovery Tool	Cohort Discovery Tool				
Demographics	Case_General General information about a case, admission type, procedural services, room, date and charge capture codes	~			
Comorbidities	Case_Medications           All medications for a case, including medication, route, and unit of measure names	~			
Diagnoses	Case_Physiologic	~			
Medication Administration	All monitor data for a case				
Intraoperative Notes	Patient/Case General Case_Medications Case_Physiologic	÷			
Physiologic	MPOG_Case_ID MPOG_Case_ID				
Laboratory	MPOG_Patient_ID MPOG_Patient_ID				
🛓 Outcomes					
Output View Selection					
🔆 Individual Data					
Grups					



**<u>Running your Query:</u>** When you are ready to build your query, click the **Run Query** button.

Enter a password that will be used to protect the Excel file containing your data and select **Run Query**.

Run Query	
Before your query can be run, please provide the following:	
Password         you must provide a password that will be used to protect the generated Excel file         Password Strength         retype password	
Email Send an email to jayjeong@umich.edu when the Excel file is ready to be downloade	d.

Click **Return to current query (read only)** to view the status of your request. To create a copy of your query, select **Create a new query based on the current one**. Otherwise, choose from any of the other options presented. NOTE: You cannot modify your query once you have submitted it. You must create a new query based on the current one.

Query Submitted
Your query has been submitted. What would you like to do next:
Return to the current query (read only)
Create a new query based on the current one
Create a new blank query
Select a different existing query

A progress bar will appear at the top to indicate the status of your query. Once you have submitted your query you can no longer edit it. You can either cancel your submission or create a copy of your query.

