



Variable Mapping Tips

Epic sites

*See the [Getting Started – Import Manager Variable Mapping](#) presentation first



Pre-Mapping

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

ID	Org	Name	Times Used	Mapped As	Type
FLO-4010000	OHSU	Airway Resp Rate	9,472	Respiratory Rate Actual from EtC	Physiolog
FLO-4010000	OHSU	ETCO2	9,405	End Tidal CO2 (mmHg)	Physiolog
FLO-4010000	OHSU	SpO2	9,335	SpO2 %	Physiolog
FLO-4010000	OHSU	Pulse - Plethysmograph	9,333	Physical Exam - Pulse Rate	Preop
FLO-4010000	OHSU	Pmean/PAW	9,262	Mean Inspiratory Pressure	Physiolog
FLO-4010000	OHSU	max Pos Airway P	9,229	Unknown Concept	Meta
FLO-4010000	OHSU	ETO2	9,216	Oxygen Exp %	Physiolog
FLO-4010000	OHSU	FIO2	9,216	Oxygen Insp %	Physiolog
FLO-4010000	OHSU	Heart Rate	9,047	Unknown Concept	Meta
FLO-4010000	OHSU	PeeP	8,910	Unknown Concept	Meta
FLO-1120016	OHSU	O2 FR Avance (Total Liters	8,263	Flows Oxygen (L/Min)	Physiolog
FLO-4010000	OHSU	Circuit O2	8,048	Unknown Concept	Meta
FLO-4010000	OHSU	Vent Mode	8,048	Ventilator Mode	Physiolog
FLO-4010000	OHSU	RR freq/Min	7,541	Ventilator Respiratory Rate Actu	Physiolog
FLO-4010000	OHSU	MV (L/min)	7,519	Minute ventilation	Physiolog
FLO-4010000	OHSU	Vte	7,496	Tidal Volume actual	Physiolog
FLO-4010000	OHSU	ST-II	7,357	ST Lead II	Physiolog
FLO-4010000	OHSU	Vt	6,946	Tidal Volume Set	Physiolog

Reviewing Pre-Mapped Variables

- Choose the 'Pre-Mappings Only' Display Mode to review those variables that have already been pre-mapped
- Pre-mapped variables will appear in green
 - Review these mappings, use the 'Examine' button for clarification if needed
 - Update any variables that whose pre-mapping does not match your institution's variable/documentation

MPOG Variable Mapping

Mapping Type: Observation Detail Type (Event Details)

Instance: MPOG_MAS_Epic Organization: All Assigned Organizations (7)

Display Mode: All Variables

Concept Type: **Pre-Mapped Variables Only**

Search Filter: Mapped Variables Only, Unmapped Variables Only, Excluded Variables Only, Skipped Variables Only

ID	Org	Name	Times Used	Mapped As	MPOG ID	Type
ERX-60	Multipl	First Databar	343	General - Medications Detail - F. 71160		Preop
FLO-700	Multipl	Placement D.	174	Unknown Concept	0	Meta
ERX-2	Multipl	Medication P	164	General - Medications Detail - N. 71130		Preop
FLO-701	Multipl	Placement Ti	160	Unknown Concept	0	Meta
ORD-7025	Multipl	Medication F	131	Unknown Concept	0	Meta
EPQ-155	Multipl	Medication S	126	General - Medications Detail - S. 71084		Preop
ORD-34010	Multipl	Medication F	126	General - Medications Detail - F. 71083		Preop
ORD-7060	Multipl	Medication T	121	General - Medications Detail - T. 71140		Preop
ORD-34017	Multipl	Medication E	119	General - Medications Detail - D. 71081		Preop
ORD-34015	Multipl	Medication E	119	General - Medications Detail - D. 71080		Preop
FLO-702	Multipl	Removal Dat	94	Unknown Concept	0	Meta
FLO-703	Multipl	Removal Tim	90	Unknown Concept	0	Meta
HLX-UMHS#2	VONV	Neuraxial - L	63	Unknown Concept	0	Meta
HLX-EPIC#31C	VONV	sterile barrier	50	Unknown Concept	0	Meta
LPL-3008	Multipl	Allergic Reac	46	General - Allergies Detail - Reac. 71200		Preop
FLO-3040110	Multipl	Location	44	Categorized note - Lines, tubes, 50694		Intraop h

Reviewing Pre-Mapped Variables

- Once per year, MPOG will review the common Epic AIMS IDs and update the pre-mapping for these variables.
- Click on the 'Pre-mappings' button at the bottom middle of the Variable Mapping tool
 - A list of variables that do not match the current MPOG mapping recommendations will populate
 - Review the variables and either accept or reject the updates
 - Can click on 'Select All' or 'Unselect All' buttons in bottom left corner
 - Can check/uncheck individual variables
 - Choose 'Apply Selected' in lower right corner to apply the mapping updates

Review Pre-mappings

The following are variable mappings that don't match with MPOG's packaged recommended mappings. Please review if any of the following changes should be applied.

Mapping Type	Organization	Variable ID	Variable Name	Count	Mapped As	Recommended Mapping	Apply Change?
Observation Type (Events/Phy)	university of michigan ann arb	16011803	FI02 (%)	67040	Airway- Supplemental Oxygen	Oxygen Insp %	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	16011802	O2 Device	3540648	Airway- Supplemental Oxygen	Physical Exam - Oxygen Suppl	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40841932	ALBUMIN 25G IN 0.45% SODI	30	ALBUMIN 25%	ALBUMIN 5%	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	16011784	Arterial Line MAP 1	623441	BP Mean Invasive Unspecified	BP Mean Arterial Line (Invasi	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	306270	Arterial Line MAP 2	40086	BP Mean Invasive Unspecified	BP Mean Arterial Line (Invasi	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	665747	Activity	262648	Braden Score- Activity	Aldrete Score- Activity	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40843440	FENTANYL_3 MCG/ML + BUPR	1	BUPIVACAINE W/ FENTANYL O	FENTANYL	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40843187	FENTANYL_2 MCG/ML + BUPR	61	BUPIVACAINE W/ FENTANYL O	FENTANYL	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40843994	FENTANYL_3 MCG/ML + BUPR	6	BUPIVACAINE W/ FENTANYL O	FENTANYL	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40840965	FENTANYL_3 MCG/ML + BUPR	281	BUPIVACAINE W/ FENTANYL O	FENTANYL	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	660863	Cognitive/Perceptual/Neuro V	23369	Clock-Drawing Test - Score	Physical exam - neurologic sta	<input type="checkbox"/>
Administration Route	cardiovascular center	65	CRRT	5	CRRT	IV	<input type="checkbox"/>
Administration Route	university of michigan ann arb	65	CRRT	6750	CRRT	IV	<input type="checkbox"/>
Administration Route	university hospital	65	CRRT	3	CRRT	IV	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40830456	dextrose 5 % in water (DSW) =	107	DEXTROSE 50%	DEXTROSE / WATER 5%	<input type="checkbox"/>
Administration Type (Inputs/O	cardiovascular center	FLO-1072500081	EBL	2	ESTIMATED BLOOD LOSS	Variable Excluded from Import	<input type="checkbox"/>
Administration Type (Inputs/O	university hospital	FLO-1072500081	EBL	13	ESTIMATED BLOOD LOSS	Variable Excluded from Import	<input type="checkbox"/>
Administration Type (Inputs/O	mott children's hospital	FLO-1072500081	EBL	1	ESTIMATED BLOOD LOSS	Variable Excluded from Import	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB3021-4356	HCT	1382	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB293-4356	HCT	53482897	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB10077-4356	HCT	826	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB289-4356	HCT	66523	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB294-4356	HCT	34222560	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB3133-4970	HCT	25872	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Lab Type	university of michigan ann arb	LAB3133-4970	HCT	2302700	Formal lab - Blood gas - Hct n	Formal lab - Hematocrit	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	661894	Substance Use Comment	235	History - Social History - Tobac	History - Social History - Gene	<input type="checkbox"/>
Administration Type (Inputs/O	university of michigan ann arb	40821850	INSULIN ASPART PUMP BASAL	22	INSULIN REGULAR	INSULIN ASPART	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	662960	Level Of Consciousness	1312551	Level Of Consciousness	Physical exam - Level of Consc	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	30401900076	Level Of Consciousness	118635	Level Of Consciousness	Physical exam - Level of Consc	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	3040150392	Level Of Consciousness	3009	Level Of Consciousness	Physical exam - Level of Consc	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	62	Ereosis	14470	Misc - Patient vomiting	Postoperative Nausea and/or v	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	3040031007	Insertion Attempts	445	Number of Attempts	Indubation Number of Attempt	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	3040030998	Insertion Attempts	7953	Number of Attempts	Indubation Number of Attempt	<input type="checkbox"/>
Lab Type	university of michigan ann arb	POC313-12007718	HCT	318212	POC - Blood gas - Hct measur	Formal lab - Hematocrit	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	1070100097	Pain	580672	Postoperative visit patient par	Pain Score (Generic)	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	1072040012	Site of Block	10903	Regional - Block performed	Regional - Block location	<input type="checkbox"/>
Observation Type (Events/Phy)	university of michigan ann arb	1072040013	Site of Block	5632	Regional - Block performed	Regional - Block location	<input type="checkbox"/>

Select All Unselect All Apply Selected Cancel

Pre-mappings Mapping History Examine

Variable Prefix Descriptions

Variable Type	Description	Notes
LEV-* variables	Timed Event Notes	Most reliable when looking for timing of events (i.e. intubation/extubation)
EAP/HLX-* variables	Procedure Note Documentation	Provides the details associated with a procedure: size, number of attempts etc. Observed time is not always populated. If no time associated with EAP/HLX note, map related LEV note as well.
ERX-* variables	Electronic Medication Record – Administered and Home Medications only. Medication Orders are not included.	Administered medications can be found under Administration Type. Home medications can be located under Observation Type.

Variable Prefix Descriptions

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

Variable Mapping Tips

- For key anesthesia events such as ETT/LMA placement, extubation, arterial/central line placement, regional and neuraxial block notes:
Prioritize LEV/HLX/EAP variables for mapping
 - Exclude FLO variables associated with these concepts ***if*** both an HLX/EAP and LEV variable exists.
- If duplicate variables exist for critical times such as anesthesia start/end, surgery start/end, In room times, etc.:
 - Consider excluding CT variables (typically nursing documentation). If there are only nursing (CT) variables, keep them and map (Phase I, Phase II in/out times, etc.).
 - Bottom line: Anesthesia documentation is preferred but adopt nursing documentation if anesthesia documentation is not available for critical times/events.

Additional Notes

- When a procedure variable has multiple uses (lines, CT, etc.) map to 50665 Procedures - Other unlisted procedure.
- Map Non-Invasive Blood Pressure location to 3266 Noninvasive blood pressure cuff location
- Map patient position to 3096 'Positioning'
- PONV assessment: If the values listed under 'Examine' are y/n, map to 90010 PONV Assessment. If the values are text, i.e. vomiting, diarrhea, etc., map to 50227 GI symptoms
- Cardiopulmonary Bypass Start should be mapped to 50410 - Cardiopulmonary bypass initiated (full/partial/left-heart) and Cardiopulmonary Bypass End should be mapped to 50409 - Cardiopulmonary bypass (full/partial/left-heart) terminated. The concepts that have 'Perfusion Start' and 'Perfusion End' are used when documented by a Perfusionist
- OB Frequency of Contractions should be mapped to 3181 Frequency of Contractions
- OB Duration of Contractions should be mapped to 3188 Duration of Contractions

Additional Notes continued

- Injection – Epic has a generic Injection route used for multiple types of injections (IV, IM, etc.). Map this variable to 2042 INJECTION - NOT SPECIFIED
- Surgical Admission Type – Inpatient (500): should be used for a patient that was admitted prior to the procedure (i.e. inpatient who went to OR)
- Surgical Admission Type – Admit (502): should be used for patients that were admitted after the procedure (i.e. c-sections)
- Variables with the prefix HLX-EPIC#RS are usually Review of Systems and should be mapped as available. This will show up in the H&P section of Case Viewer.
- Variables with the prefix HLX-EPIC#HPI are usually H&P documentation and should be mapped as available. This will show up in the H&P section of Case Viewer.
- Check that Anesthesia start/end, Patient in room/out of room, in PACU/out of PACU, uterine incision, etc. are all mapped to LEV concept when available and CT concept is excluded/unmapped (unless no LEV concept available then map CT concept)