PCRC Proposal Cover Sheet

Title of Study or Project:	Anesthetic management of transvaginal cervical cerclage in the Multicenter Perioperative Outcomes Group
Primary Institution:	Weill Cornell Medicine
Principal Investigator:	Jennifer L. Wagner, MD
Co-Investigators:	Robert S. White, MD, MS, Virginia Tangel, Sharon Abramovitz, MD
Type of Study:	Retrospective observational
IRB Number/Status:	The project has been approved by Weill Cornell Medicine's Institutional Review Board as non-human subjects research due to the de-identifiable data with no date/timestamps.
Hypothesis:	Our primary hypothesis is that transvaginal cervical cerclage procedures are more commonly performed with neuraxial anesthesia, with a considerably higher use of spinal anesthesia, than general anesthesia. Our secondary hypotheses are that the types and doses of anesthetics and opioid analgesics used in neuraxial cases vary widely, and that cases with general anesthesia are more likely to experience cardiovascular or pulmonary complications than cases with neuraxial anesthesia.
Number of Patients/Participants:	All cases with a transvaginal cervical cerclage listed on the record
Power Analysis:	None required, reporting incidence of procedure in MPOG database
Proposed statistical test/analysis:	Descriptive statistics, data visualization
Resources (Brief summary of resources for data collection, personnel, financial):	The MPOG database will be queried for the specified concept IDs with programmatic support. Statistical analyses and operational oversight will be funded from the Center for Perioperative Outcomes in the Department of Anesthesiology at Weill Cornell Medicine.

Introduction

What is the significance of the clinical problem being addressed?

Transvaginal cervical cerclage (TCC) is placement of a stich within the cervix to prevent preterm labor in patients with cervical insufficiency. (1) According to a 2015 population based study, TCC is used in the United States in 0.3-0.4% of all pregnancies. (2) A single-center study at Jefferson University found that the rate of cerclage placement has been decreasing over time from 1.4% to 0.6% at their center. (3)

Little is known about the effect of anesthetic choice on maternal or neonatal outcomes. General anesthesia (GA) may be riskier in the pregnant population due to the increased risk of a difficult airway and aspiration compared to non-pregnant patients. The patient may also have concerns about the effects of GA drugs on the neonate. (4) Risks associated with neuraxial anesthesia in general include postdural puncture headache and high spinal. There is also no consensus regarding the optimal dosing strategy for neuraxial anesthesia for TCC but pregnant patients tend to be more sensitive to local anesthetics. Cerclage is typically an outpatient procedure, and lower doses of local anesthetic may reduce length of stay in recovery. (4)

What current gaps exist in the understanding of this problem?

Currently there is no consensus regarding the best choice of anesthetic technique for TCC, and there are no randomized trials comparing neuraxial with GA for the procedure (1,4). Neuraxial may be preferred by clinicians for its safety profile in pregnant patients in comparison to general anesthesia, as is the case for anesthesia for cesarean delivery (4). However, no large scale studies have evaluated the prevalence of different anesthetic techniques used for TCC; current practice patterns are unknown.

One retrospective cohort study of 487 cases from 2 medical centers in Israel found that GA was used more commonly (82.5%) than neuraxial (12.7%), and there were no differences in anesthetic or perioperative outcomes between the two groups (6). One small study of 37 patients compared spinal with general anesthesia and found that systolic blood pressure was lower in the spinal group; however, there was no difference in preterm delivery rates (7). A randomized controlled trial compared low dose intrathecal bupivacaine and fentanyl with intrathecal lidocaine for CSE for cerclage and found bupivacaine to be a safe alternative to lidocaine (8).

How will this project address this gap and advance clinical care and/or research knowledge?

At the present time, little is known about the optimal type of anesthesia or optimal dosing for neuraxial anesthesia or the effect of the anesthetic management choice for TCC on outcomes. Anesthetic choice could affect uterine tone and risk of rupture of membranes or preterm labor, risk of airway management complications in a pregnant patient, and effect blood pressure changes which could have placental perfusion implications.

In light of the possible complications related to anesthetic management, understanding the optimal dosing and anesthetic choice for TCC may improve maternal and fetal outcomes. The use of MPOG data

to study both the number and type of centers using neuraxial vs general anesthesia will present the unique opportunity to better understand practice patterns, which in turn, would ideally lead to improvements in both clinical efficacy and patient safety.

The specific aims of our projects are therefore to:

1. Investigate the incidence of various anesthetic techniques used for TCC in the MPOG database: neuraxial (spinal, epidural, combined spinal-epidural) and general anesthesia.
2. Investigate the types and doses of local anesthetics and types of opioids used for neuraxial anesthesia for TCC
3. Investigate the incidence of complications/morbidity associated with anesthesia for TCC and their relationship to type of anesthesia

Primary Outcome

Our primary outcome is the incidence of anesthetic type use (neuraxial vs. general) for TCC.

Secondary Outcomes

Our secondary outcomes are the prevalence of chloroprocaine, bupiviaciane, and lidocaine usage for neuraxial anesthesia for TCC.

Exploratory Outcomes

Our exploratory outcomes include cardiovascular and pulmonary complications associated with anesthesia type for TCC. These complications include but are not limited to: acute respiratory failure, respiratory arrest, respiratory insufficiency, and need for supplemental oxygen.

Methods

We will utilize data from the Multicenter Perioperative Outcomes Group (MPOG), a non-profit academic consortium of more than 100 investigators representing more than 8.2 million anesthetic cases integrated across 50 hospitals across 18 states and two countries. MPOG uses electronic health record and administrative data to analyze relationships between patient comorbidities, surgical procedures, perioperative care, interventions, and postoperative outcomes.

Using an MPOG Public User File, we will conduct a retrospective cohort study to assess the incidence of anesthesia type used for TCC in participating medical centers in the United States. To calculate total case volume by hospital, all cases with a listed with a procedure code for TCC (CPT 59320; cerclage of cervix, during pregnancy; vaginal) from US institutions will be identified and included in the study population.

Within that population, all cases who received general and neuraxial anesthesia will be identified. Within the neuraxial anesthesia cohort we will identify the type of neuraxial anesthetic used (epidural, combined spinal epidural, spinal) and the type and dose of local anesthetics and type of opioids used for these neuraxial anesthesia techniques.

Exclusion criteria are TCC performed at a non-US hospital or performed in any patient aged <18.

Our primary hypothesis is that TCC procedures are more commonly performed with neuraxial anesthesia, with a considerably higher use of spinal anesthesia, than general anesthesia. Our secondary hypotheses are that the types and doses of anesthetics and opioid analgesics used in neuraxial cases vary widely, and that cases with general anesthesia are more likely to experience cardiovascular or pulmonary complications than cases with neuraxial anesthesia.

Variables and Preparation

We will use the following variables in our study: patient demographic characteristics (age, race, ASA status), comorbidities as defined by Bateman (9) and Elixhauser identified using International Classification of Disease (ICD) codes, hospital and provider characteristics (institution type – academic vs. community, institution size), case characteristics (case duration, anesthesia duration, emergency status, ASA status, oxygen saturation, blood pressure, pulse rate, end tidal carbon dioxide, type of anesthesia, type/doses of drugs administered), and cardiovascular and pulmonary complications defined by preexisting MPOG indicators or calculated based on intraoperative physiologic data (acute respiratory failure, respiratory arrest, respiratory insufficiency, cardiac arrest).

Statistical Analysis

Frequencies (percentages), means (95% confidence intervals), medians (interquartile ranges) will be used to characterize the data. Categorical measures will be compared by the Pearson's chi-square test or ANOVA, as appropriate. Linear measures will be compared by the two-sided t-test. Equivalent non-parametric tests will be used in cases where the data is non-normally distributed.

All relevant pre- and intraoperative measures listed above will be compared by anesthesia type group: general and neuraxial anesthesia. These analyses will be conducted at the case level only.

IRB statement

The project has been approved by Weill Cornell Medicine's Institutional Review Board as non-human subjects research due to the de-identifiable data.

Study type

Retrospective observational (cross-sectional of MPOG database). The STROBE guidelines have been referenced and our proposal is in accordance with the checklist.

Variables to be collected

See detailed query specification.

Handling of missing data

Missing data will be diagnosed with appropriate techniques and addressed using complete case analysis or multiple imputation, if necessary.

Areas for discussion/known limitations

- Anesthetic records may not be accurate, miscoding, missing code
- Validity and accuracy of the primary data collection for cervical cerclage records
- Missing data and resulting unknown selection bias
- MPOG population may differ from general population undergoing anesthesia for cervical cerclage in the US
- CPT/ICD code exclusions
- Effect of type of cerclage: Shirodkar vs McDonald
- Not including transabdominal cerclage

References

1. Berghella V, Ludmir J, Simonazzi G, and Owen J.: Transvaginal cervical cerclage: evidence for perioperative management strategies. Am J Obstet Gynecol 2013; 209,3: pp. 181-192
2. Friedman AM, Ananth CV, Siddiq Z, D'Alton ME, Wright JD. Trends and predictors of cerclage use in the United States from 2005 to 2012 Obstet Gynecol 2015; 126 (2)
3. Suhag A., Saccone G., Bisulli M., Seligman N., Berghella V. Trends in cerclage use. Acta Obstet. Gynecol. Scand. 2015;94:1188–1194.
4. Aaronson J, Goodman S. Obstetric anesthesia: not just for cesareans and labor. Semin Perinatol. 2014;38:378–85.
5. Algert, C.S., et al., Regional block versus general anaesthesia for caesarean section and neonatal outcomes: a population-based study. BMC Med, 2009. **7**: p. 20.
6. Ioscovich A, Popov A, Gimelfarb Y, Gozal Y, Orbach-Zinger S, Shapiro J, Ginosar Y. Anesthetic management of prophylactic cervical cerclage: a retrospective multicenter cohort study. Arch Gynecol Obstet. 2015;291:509–12.
7. Yoon H.J., Hong J.Y., and Kim S.M.: The effect of anesthetic method for prophylactic cervical cerclage on plasma oxytocin: a randomized trial. Int J Obstet Anesth 2008; 17: pp. 26-30
8. Beilin Y, Zahn J, Abramovitz S, Bernstein HH, Hossain S, Bodian C. Subarachnoid small-dose bupivacaine versus lidocaine for cervical cerclage. *Anesth Analg*. 2003;97(1):56–61, table of contents.
9. Bateman BT, Mhyre JM, Hernandez-Diaz S, et al. Development of a comorbidity index for use in obstetric patients. Obstet Gynecol 2013;122(05):957–965

Variable (description or requested name)	MPOG Source Table	Column Name	Data Type	DG Concept ID	Note for Programmers
Case ID	AIMS_IntraopCaseInfo	MPOG_Case_ID	string		
Anesthesia provider	AIMS_IntraopStaff	AIMS_Staff_Role	varchar(255)	6000-6999	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Institution ID	MPOG_Institutions	MPOG_institution_ID	numeric(18,0)		*do not include two Dutch institutions in the sample*
Institution Type (academic vs. community)	AHA Database				**For previous project, Shelley added this to dataset*
Institution Size (?)	AHA Database				**For previous project, Shelley added this to dataset*
Patient ID	AIMS_IntraopCaseInfo	MPOG_Patient_ID	string		
Age	Phenotype	Age (years)	numeric		
Weight_kg	Phenotype	Weight (kg)	numeric		
Race_raw	AIMS_Patients	AIMS_Race_Text	varchar(50)	4000-4050	
Race_phenotype	Phenotype	Race	Categorical		
Procedure type	AIMS_IntraopCaseInfo	AIMS_Actual_Procedure_Text	varchar(1024)		
Anesthesia CPT Code	AIMS_BillingProcedures	Charge_Capture_Primary_Anesthesia_Code			
Surgery CPT Code	AIMS_BillingProcedures	Charge_Capture_Primary_Surgery_Code			
ICD 9 or 10 Code	AIMS_BillingProcedures	Charge_Capture_Primary_Diagnosis_Code			ICD 9 or 10 depending on year
ICD 9 or 10 Code	AIMS_BillingDiagnoses	AIMS_Diagnosis_Code	varchar(16)		ICD 9 or 10 depending on year
Lexicon of diagnosis code	AIMS_BillingDiagnoses	MPOG_Lexicon_Type_CD	tinyint		
ASA Status	Phenotype	ASA Class (cleaned)	Categorical		
Emergency Status	Phenotype	Emergency Status (ASA Class) Yes/No	Categorical		Create flag for "is emergency" 1/0
Anesthesia Duration	Phenotype	Anesthesia Duration	numeric		
Case Duration	Phenotype	Case Duration	numeric		
Elixhauser comorbidities	Phenotype	Comorbidity -	Categorical		pull all Elixhauser comorbidity phenotypes as separate columns
Bateman comorbidities	See "ICD Codes" tab				pull all Bateman comorbidities as separate columns
Airway - Laryngeal Mask Airway placement note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50209]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Airway - Laryngeal Mask airway size	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50142]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Airway - Laryngeal mask airway removed deep or awake	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50145]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Airway - Laryngeal Mask airway type	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50141]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Airway - Laryngeal mask airway placement difficulty	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50143]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Airway - Laryngeal mask airway placement technique	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50144]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Laryngoscopy Blade Type and Size	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50115]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Size	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50122]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Number of Attempts	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50118]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Direct Laryngoscopy View	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50119]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Secured Distance	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50125]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Type	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50123]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - atraumatic	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50197]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Tube Note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50205]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - Approach	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50117]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Categorized note - Intubation	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50695]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation device and adjunct note -- oral	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50207]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - comment	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50688]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - Observed to be difficult	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50101]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation view note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50208]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Secured Mechanism	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50124]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Extubated Awake or Deep	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50127]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Stylet Used	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50121]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Endotracheal Tube Secured Reference Point	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50126]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - cricoid pressure applied	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50334]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Bougie Introducer Used	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50120]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Laryngocsopy Cricoid Pressure or BURP Applied	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50116]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Topicalization Type	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50131]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Emergence - ETT in place, patient manually ventilated	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50380]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Emergence - Patient spontaneously ventilating, ETT in place	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50634]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Number of Attempts	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50133]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - endotracheal tube in situ	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50671]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - Videolaryngoscopy View	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50100]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Asleep or Awake	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50129]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Difficult intubation	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[90310]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - Nasal approach note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50099]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Existing Airway Device	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50134]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Nasal or Oral	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50130]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation - performed awake	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50670]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Intubation Fiberoptic Transtracheal block	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50132]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - spinal performed	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50680]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal vertebral interspace final	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50147]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal needle diameter (gauge)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50150]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal placement CSF observed note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50351]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal needle length (cm)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50151]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal needle approach	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50148]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal placement Blood observed in spinal needle note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50353]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal dermatomal level achieved	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50153]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal placement CSF observed yes / no detail	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50352]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Spinal placement Blood observed yes / no detail	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50354]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural anesthesia catheter placement note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50154]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural catheter withdrawn to depth (cm)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50164]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural vertebral interspace final	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50155]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural needle approach	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50156]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural test dose administered - note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50349]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural loss of resistance (saline or air)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50161]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural needle diameter (gauge)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50158]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial - Epidural placed for postoperative pain control	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50643]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural needle length (cm)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50159]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural parasthesias during placement	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50166]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural test dose administered - number of ML detail	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50350]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural loss of resistance depth (cm)	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50162]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural catheter withdrawn to depth (cm) - detail	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50339]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural catheter secured	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50344]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural dermatomal level achieved	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50165]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural catheter type or brand	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50163]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Obstetrics - Labor epidural start	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50050]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural meniscus fall assessment - note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50347]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Epidural meniscus fall yes / no - detail	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50348]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Obstetrics - Labor epidural end	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50051]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Neuraxial technique - Combined Spinal / Epidural technique note	AIMS_IntraopNotes	MPOG_Note_Concept_ID	numeric(18,0)	[50614]	For each concept ID, create a 1/0 flag for whether concept ID present on case.
Anesthesia technique: Neuraxial	Phenotype	Anesthesia technique: Neuraxial	Categorical		
Anesthesia technique: Block	Phenotype	Anesthesia technique: Block	Categorical		
Anesthesia technique: General	Phenotype	Anesthesia technique: General	Categorical		
Primary Anesthesia CPT	Phenotype	Primary Anesthesia CPT	Categorical		
Non-Opioid Analgesics	Phenotype	Non-Opioid Analgesics	Categorical		
Morphine equivalency variable from ASPIRE dashboard	Phenotype	?			
CHLOROPROCAINE_3	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10122	If any dose given, then 1; otherwise 0.
CHLOROPROCAINE_3_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10122	if bolus, then 1; otherwise 0 (infusion).
CHLOROPROCAINE_3_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10122	provide dose amount
CHLOROPROCAINE_3_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10122	provide unit of measurement associated with administration
CHLOROPROCAINE_3_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10122	provide route of administration associated with administration
CHLOROPROCAINE_3_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10122	
CHLOROPROCAINE_3_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10122	
CHLOROPROCAINE_2	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10121	If any dose given, then 1; otherwise 0.
CHLOROPROCAINE_2_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10121	if bolus, then 1; otherwise 0.
CHLOROPROCAINE_2_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10121	provide dose amount
CHLOROPROCAINE_2_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10121	provide unit of measurement associated with administration
CHLOROPROCAINE_2_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10121	provide route of administration associated with administration
CHLOROPROCAINE_2_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10121	
CHLOROPROCAINE_2_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10121	
CHLOROPROCAINE_1	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10120	If any dose given, then 1; otherwise 0.
CHLOROPROCAINE_1_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10120	if bolus, then 1; otherwise 0.
CHLOROPROCAINE_1_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10120	provide dose amount
CHLOROPROCAINE_1_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10120	provide unit of measurement associated with administration
CHLOROPROCAINE_1_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10120	provide route of administration associated with administration
CHLOROPROCAINE_1_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10120	
CHLOROPROCAINE_1_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10120	
CHLOROPROCAINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10779	If any dose given, then 1; otherwise 0.
CHLOROPROCAINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10779	if bolus, then 1; otherwise 0.
CHLOROPROCAINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10779	provide dose amount
CHLOROPROCAINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10779	provide unit of measurement associated with administration
CHLOROPROCAINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10779	provide route of administration associated with administration
CHLOROPROCAINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10779	
CHLOROPROCAINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10779	
LIDOCAINE_05	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10247	If any dose given, then 1; otherwise 0.
LIDOCAINE_05_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10247	if bolus, then 1; otherwise 0.
LIDOCAINE_05_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10247	provide dose amount
LIDOCAINE_05_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10247	provide unit of measurement associated with administration
LIDOCAINE_05_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10247	provide route of administration associated with administration
LIDOCAINE_05_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10247	
LIDOCAINE_05_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10247	
LIDOCAINE_1	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10248	If any dose given, then 1; otherwise 0.
LIDOCAINE_1_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10248	if bolus, then 1; otherwise 0.
LIDOCAINE_1_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10248	provide dose amount

LIDOCAINE_1_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10248 provide unit of measurement associated with administration
LIDOCAINE_1_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10248 provide route of administration associated with administration
LIDOCAINE_1_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10248
LIDOCAINE_1_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10248
LIDOCAINE_15	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10249 If any dose given, then 1; otherwise 0.
LIDOCAINE_15_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10249 if bolus, then 1; otherwise 0.
LIDOCAINE_15_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10249 provide dose amount
LIDOCAINE_15_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10249 provide unit of measurement associated with administration
LIDOCAINE_15_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10249 provide route of administration associated with administration
LIDOCAINE_15_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10249
LIDOCAINE_15_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10249
LIDOCAINE_2	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10250 If any dose given, then 1; otherwise 0.
LIDOCAINE_2_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10250 if bolus, then 1; otherwise 0.
LIDOCAINE_2_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10250 provide dose amount
LIDOCAINE_2_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10250 provide unit of measurement associated with administration
LIDOCAINE_2_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10250 provide route of administration associated with administration
LIDOCAINE_2_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10250
LIDOCAINE_2_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10250
LIDOCAINE_3	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10251 If any dose given, then 1; otherwise 0.
LIDOCAINE_3_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10251 if bolus, then 1; otherwise 0.
LIDOCAINE_3_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10251 provide dose amount
LIDOCAINE_3_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10251 provide unit of measurement associated with administration
LIDOCAINE_3_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10251 provide route of administration associated with administration
LIDOCAINE_3_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10251
LIDOCAINE_3_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10251
LIDOCAINE_4	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10252 If any dose given, then 1; otherwise 0.
LIDOCAINE_4_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10252 if bolus, then 1; otherwise 0.
LIDOCAINE_4_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10252 provide dose amount
LIDOCAINE_4_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10252 provide unit of measurement associated with administration
LIDOCAINE_4_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10252 provide route of administration associated with administration
LIDOCAINE_4_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10252
LIDOCAINE_4_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10252
LIDOCAINE_5	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10253 If any dose given, then 1; otherwise 0.
LIDOCAINE_5_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10253 if bolus, then 1; otherwise 0.
LIDOCAINE_5_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10253 provide dose amount
LIDOCAINE_5_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10253 provide unit of measurement associated with administration
LIDOCAINE_5_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10253 provide route of administration associated with administration
LIDOCAINE_5_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10253
LIDOCAINE_5_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10253
LIDOCAINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10477 If any dose given, then 1; otherwise 0.
LIDOCAINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10477 if bolus, then 1; otherwise 0.
LIDOCAINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10477 provide dose amount
LIDOCAINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10477 provide unit of measurement associated with administration
LIDOCAINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10477 provide route of administration associated with administration
LIDOCAINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10477
LIDOCAINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10477
BUPIVACAINE_00625	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10068 If any dose given, then 1; otherwise 0.
BUPIVACAINE_00625_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10068 if bolus, then 1; otherwise 0.
BUPIVACAINE_00625_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10068 provide dose amount
BUPIVACAINE_00625_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10068 provide unit of measurement associated with administration
BUPIVACAINE_00625_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10068 provide route of administration associated with administration
BUPIVACAINE_00625_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10068
BUPIVACAINE_00625_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10068
BUPIVACAINE_0125	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10069 If any dose given, then 1; otherwise 0.
BUPIVACAINE_0125_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10069 if bolus, then 1; otherwise 0.
BUPIVACAINE_0125_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10069 provide dose amount
BUPIVACAINE_0125_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10069 provide unit of measurement associated with administration
BUPIVACAINE_0125_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10069 provide route of administration associated with administration
BUPIVACAINE_0125_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10069
BUPIVACAINE_0125_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10069
BUPIVACAINE_025	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10070 If any dose given, then 1; otherwise 0.
BUPIVACAINE_025_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10070 if bolus, then 1; otherwise 0.
BUPIVACAINE_025_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10070 provide dose amount
BUPIVACAINE_025_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10070 provide unit of measurement associated with administration
BUPIVACAINE_025_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10070 provide route of administration associated with administration
BUPIVACAINE_025_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10070
BUPIVACAINE_025_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10070
BUPIVACAINE_05	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10071 If any dose given, then 1; otherwise 0.
BUPIVACAINE_05_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10071 if bolus, then 1; otherwise 0.
BUPIVACAINE_05_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10071 provide dose amount
BUPIVACAINE_05_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10071 provide unit of measurement associated with administration
BUPIVACAINE_05_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10071 provide route of administration associated with administration
BUPIVACAINE_05_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10071
BUPIVACAINE_05_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10071
BUPIVACAINE_075	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10072 If any dose given, then 1; otherwise 0.
BUPIVACAINE_075_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10072 if bolus, then 1; otherwise 0.
BUPIVACAINE_075_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10072 provide dose amount
BUPIVACAINE_075_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10072 provide unit of measurement associated with administration
BUPIVACAINE_075_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10072 provide route of administration associated with administration
BUPIVACAINE_075_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10072
BUPIVACAINE_075_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10072
BUPIVACAINE_01	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10560 If any dose given, then 1; otherwise 0.
BUPIVACAINE_01_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10560 if bolus, then 1; otherwise 0.
BUPIVACAINE_01_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10560 provide dose amount
BUPIVACAINE_01_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10560 provide unit of measurement associated with administration
BUPIVACAINE_01_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10560 provide route of administration associated with administration
BUPIVACAINE_01_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10560
BUPIVACAINE_01_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10560
BUPIVACAINE_015	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10561 If any dose given, then 1; otherwise 0.
BUPIVACAINE_015_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10561 if bolus, then 1; otherwise 0.
BUPIVACAINE_015_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10561 provide dose amount
BUPIVACAINE_015_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10561 provide unit of measurement associated with administration
BUPIVACAINE_015_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10561 provide route of administration associated with administration
BUPIVACAINE_015_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10561
BUPIVACAINE_015_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10561
BUPIVACAINE_0175	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10562 If any dose given, then 1; otherwise 0.
BUPIVACAINE_0175_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10562 if bolus, then 1; otherwise 0.
BUPIVACAINE_0175_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10562 provide dose amount
BUPIVACAINE_0175_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10562 provide unit of measurement associated with administration
BUPIVACAINE_0175_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10562 provide route of administration associated with administration
BUPIVACAINE_0175_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10562
BUPIVACAINE_0175_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10562
BUPIVACAINE_02	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10563 If any dose given, then 1; otherwise 0.
BUPIVACAINE_02_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10563 if bolus, then 1; otherwise 0.
BUPIVACAINE_02_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10563 provide dose amount
BUPIVACAINE_02_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10563 provide unit of measurement associated with administration
BUPIVACAINE_02_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10563 provide route of administration associated with administration
BUPIVACAINE_02_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10563
BUPIVACAINE_02_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10563
BUPIVACAINE_005	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10564 If any dose given, then 1; otherwise 0.
BUPIVACAINE_005_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10564 if bolus, then 1; otherwise 0.
BUPIVACAINE_005_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10564 provide dose amount
BUPIVACAINE_005_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10564 provide unit of measurement associated with administration
BUPIVACAINE_005_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10564 provide route of administration associated with administration
BUPIVACAINE_005_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10564
BUPIVACAINE_005_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10564
BUPIVACAINE_008	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10565 If any dose given, then 1; otherwise 0.
BUPIVACAINE_008_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10565 if bolus, then 1; otherwise 0.
BUPIVACAINE_008_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10565 provide dose amount
BUPIVACAINE_008_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10565 provide unit of measurement associated with administration
BUPIVACAINE_008_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10565 provide route of administration associated with administration
BUPIVACAINE_008_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10565
BUPIVACAINE_008_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10565
BUPIVACAINE_0375	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10581 If any dose given, then 1; otherwise 0.
BUPIVACAINE_0375_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10581 if bolus, then 1; otherwise 0.
BUPIVACAINE_0375_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10581 provide dose amount
BUPIVACAINE_0375_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10581 provide unit of measurement associated with administration
BUPIVACAINE_0375_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10581 provide route of administration associated with administration
BUPIVACAINE_0375_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10581
BUPIVACAINE_0375_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10581
BUPIVACAINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10586 If any dose given, then 1; otherwise 0.
BUPIVACAINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10586 if bolus, then 1; otherwise 0.
BUPIVACAINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10586 provide dose amount
BUPIVACAINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10586 provide unit of measurement associated with administration
BUPIVACAINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10586 provide route of administration associated with administration
BUPIVACAINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10586
BUPIVACAINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10586
REMIFENTANIL	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10390 If any dose given, then 1; otherwise 0.
REMIFENTANIL_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10390 if bolus, then 1; otherwise 0.

REMIFENTANIL_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10390 provide dose amount
REMIFENTANIL_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10390 provide unit of measurement associated with administration
REMIFENTANIL_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10390 provide route of administration associated with administration
REMIFENTANIL_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10390
REMIFENTANIL_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10390
ALFENTANIL	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10020 If any dose given, then 1; otherwise 0.
ALFENTANIL_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10020 if bolus, then 1; otherwise 0.
ALFENTANIL_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10020 provide dose amount
ALFENTANIL_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10020 provide unit of measurement associated with administration
ALFENTANIL_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10020 provide route of administration associated with administration
ALFENTANIL_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10020
ALFENTANIL_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10020
SUFENTANIL	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10414 If any dose given, then 1; otherwise 0.
SUFENTANIL_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10414 if bolus, then 1; otherwise 0.
SUFENTANIL_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10414 provide dose amount
SUFENTANIL_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10414 provide unit of measurement associated with administration
SUFENTANIL_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10414 provide route of administration associated with administration
SUFENTANIL_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10414
SUFENTANIL_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10414
FENTANYL	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10186 If any dose given, then 1; otherwise 0.
FENTANYL_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10186 if bolus, then 1; otherwise 0.
FENTANYL_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10186 provide dose amount
FENTANYL_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10186 provide unit of measurement associated with administration
FENTANYL_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10186 provide route of administration associated with administration
FENTANYL_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10186
FENTANYL_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10186
NALOXONE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10312 If any dose given, then 1; otherwise 0.
NALOXONE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10312 if bolus, then 1; otherwise 0.
NALOXONE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10312 provide dose amount
NALOXONE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10312 provide unit of measurement associated with administration
NALOXONE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10312 provide route of administration associated with administration
NALOXONE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10312
NALOXONE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10312
MORPHINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10306 If any dose given, then 1; otherwise 0.
MORPHINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10306 if bolus, then 1; otherwise 0.
MORPHINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10306 provide dose amount
MORPHINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10306 provide unit of measurement associated with administration
MORPHINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10306 provide route of administration associated with administration
MORPHINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10306
MORPHINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10306
MEPERIDINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10279 If any dose given, then 1; otherwise 0.
MEPERIDINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10279 if bolus, then 1; otherwise 0.
MEPERIDINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10279 provide dose amount
MEPERIDINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10279 provide unit of measurement associated with administration
MEPERIDINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10279 provide route of administration associated with administration
MEPERIDINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10279
MEPERIDINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10279
NALBUPHINE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10311 If any dose given, then 1; otherwise 0.
NALBUPHINE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10311 if bolus, then 1; otherwise 0.
NALBUPHINE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10311 provide dose amount
NALBUPHINE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10311 provide unit of measurement associated with administration
NALBUPHINE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10311 provide route of administration associated with administration
NALBUPHINE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10311
NALBUPHINE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10311
HYDROMORPHONE	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10219 If any dose given, then 1; otherwise 0.
HYDROMORPHONE_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10219 if bolus, then 1; otherwise 0.
HYDROMORPHONE_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10219 provide dose amount
HYDROMORPHONE_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10219 provide unit of measurement associated with administration
HYDROMORPHONE_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10219 provide route of administration associated with administration
HYDROMORPHONE_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10219
HYDROMORPHONE_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10219
BUTORPHANOL	AIMS_IntraopMedications	MPOG_Med_Concept_ID	binary 0/1	10089 If any dose given, then 1; otherwise 0.
BUTORPHANOL_TYPE	AIMS_IntraopMedications	MPOG_Dose_Type_CD	binary 0/1	10089 if bolus, then 1; otherwise 0.
BUTORPHANOL_DOSE	AIMS_IntraopMedications	AIMS_Med_Dose	numeric(18,3)	10089 provide dose amount
BUTORPHANOL_UOM	AIMS_IntraopMedications	MPOG_UOM_Concept_ID	numeric(18,0)	10089 provide unit of measurement associated with administration
BUTORPHANOL_RT	AIMS_IntraopMedications	MPOG_Route_Concept_ID	numeric(18,0)	10089 provide route of administration associated with administration
BUTORPHANOL_C	AIMS_IntraopMedications	AIMS_Med_Comment	varchar(max)	10089
BUTORPHANOL_WT	AIMS_IntraopMedications	AIMS_Patient_Dosing_Weight	numeric(18,3)	10089
Complication - Pulmonary - Acute Respiratory Failure - Administrative	Phenotype	Complication - Pulmonary - Acute Respiratory F	Categorical	
Complication - Pulmonary - Respiratory Arrest - Administrative	Phenotype	Complication - Pulmonary - Respiratory Arrest -	Categorical	
Complication - Pulmonary - Respiratory Insufficiency - Administrative	Phenotype	Complication - Pulmonary - Respiratory Insuffici	Categorical	
SpO2 %	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3045
Pulmonary artery pressure Sys	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3120
Pulmonary artery pressure Dias	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3125
Pulmonary artery pressure Mean	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3130
EKG Pulse Rate	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3005
End Tidal CO2	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3235
Oxygen Insp %	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3240
Oxygen Exp %	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3245
Nitrous Insp %	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3250
Nitrous Exp %	AIMS_IntraopPhysiologic	MPOG_Physiologic_Concept_ID	numeric(18,0)	3255