



**User Guide for the 2017
ACS NSQIP Pediatric
Participant Use Data File (PUF)**

**American College of Surgeons National Surgical
Quality Improvement Program - Pediatric**

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AMERICAN COLLEGE OF SURGEONS
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1. Introduction

This document is designed to accompany the 2017 Pediatric Participant Use Data File (PUF) available for download on the American College of Surgeons National Surgical Quality Improvement Program Pediatric (ACS NSQIP Pediatric) website (www.facs.org/quality-programs/childrens-surgery/pediatric). The sections contained herein will provide the user with information on how to request the Pediatric PUF, the contents of the data files, the data collection background, the inclusion and exclusion criteria for cases and hospitals, the data limitations, and the data point definitions and descriptions.

This user guide applies specifically to the 2017 Pediatric PUF. Hospitals utilizing the Pediatric PUF from a different year should refer to the user guide specifically tailored to that particular data set.

2. Data Request Process

An individual who has an official appointment at a fully enrolled Pediatric site and wants to obtain a copy of the Pediatric PUF can do so by visiting www.facs.org/quality-programs/childrens-surgery/pediatric and following the steps listed below:

1. From the ACS NSQIP Pediatric main page the requestor can click on “Request Participant Use Data File” link under Quality Support Tools.
2. Following a brief introduction, the requestor can click on “Request Data Set.”
3. This will take the requestor to the Data Use Agreement. This is a 3-page document that implements the data protections of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the ACS NSQIP Hospital Participation Agreement. Delivery of the PUF is contingent on agreement to the terms and conditions specified within the Data Use Agreement. The requestor can read the Data Use Agreement from this page or download the 3-page document. The requestor is then required to type in their first and last name and click on “Request Data File.” By clicking on “Request Data File” the requestor agrees to the terms and conditions of the Data Use Agreement.
4. Requestors will then be required to complete a brief online form to provide ACS with basic information about themselves, including the participating hospital in which they are currently employed and in what capacity, as well as how the requestor plans on using the Pediatric PUF data. Once all of the required fields are completed, the requestor clicks “Submit.”
5. ACS NSQIP staff will review the request in a timely manner. Program contacts at participating sites will be contacted at this time to confirm the requestor’s affiliation with the hospital and confirm internal approval of the PUF request.

6. Following receipt and confirmation of the information submitted, an email will be sent to the requestor containing a username and password along with the URL to download the data. The web link will be active from the time of the email for 10 full days (240 hours).
7. The file will be available in 3 different formats (Text, SAS, SPSS) and depending on the connection speed should take between 5 and 30 minutes to download.
8. The requestor may be contacted to confirm receipt of the data file and allow for feedback on the delivery mechanism, data points contained, and data file format.

3. File Description

Each fall a Pediatric PUF will be made available for the previous calendar year's data. The Pediatric PUF is available in one of three different formats – Text, SAS, and SPSS. The 2017 file contains 369 variables for each case, and a variable-by-variable description is provided starting on page 11. A brief description of the different formats follows:

File Name	Type	Uncompressed File Size	Description
ACS_PEDS_PUF_2017.txt	tab delimited TXT file	253 MB	Contains 369 HIPAA compliant variables on 113,922 cases submitted from 109 sites in 2017.
ACS_PEDS_PUF_2017.sas7bdat	SAS 9.4 data file	748 MB	Same information as stated above in SAS data format.
ACS_PEDS_PUF_2017.sav	SPSS 16.0 data file	492 MB	Same information as stated above in SPSS data format.

4. Data Collection Background and Data Quality

The ACS NSQIP Pediatric collects data on approximately 120 variables, including preoperative risk factors, intraoperative variables, and 30-day postoperative mortality and morbidity outcomes for patients undergoing major surgical procedures in both the inpatient and outpatient setting. A site's trained and certified Surgical Clinical Reviewer (SCR) captures these data using a variety of methods including medical chart abstraction.

Required data variables are entered via web-based data collection to the ACS NSQIP Pediatric website. Portions of the data may be automatically populated by a software program that was developed to extract data from the participating hospital's existing information systems.

Requestors should contact the SCR(s) at their hospital for detailed information on how the hospital collects its ACS NSQIP Pediatric data.

To ensure the data collected are of the highest quality, the ACS NSQIP Pediatric has developed a host of different training mechanisms for the SCRs and conducts an Inter-Rater Reliability (IRR) Audit of selected participating sites. In addition to an initial web-based training program, the ACS NSQIP Pediatric requires SCRs to complete a series of web-based training modules followed by a certification exam that must be taken annually. The modules and certification exam focus on the program, processes, and analysis; preoperative, intraoperative, and postoperative definitions; and case studies. These modules are complemented by a growing online decision support system that ensures the SCRs have the knowledge and resources available to collect high-quality data.

The IRR Audit is a fundamental tool of ACS NSQIP Pediatric to assess the quality of the data collected at participating sites. The process involves the review of multiple charts, some of which are selected randomly and others selected based on criteria designed to identify potential reporting errors. For example, cases with five or more preoperative risk factors and no reported mortality or morbidity or cases with two or fewer preoperative risk factors and reported mortality or morbidity will be selected for chart review. Operating room logs are also audited to ensure correct sampling of cases.

The combined results of the audits completed to date revealed an overall disagreement rate of approximately 2% for all assessed program variables. The ACS NSQIP Pediatric has determined that an IRR Audit disagreement rate of 5% or less is acceptable. Sites that have higher than a 5% disagreement rate are not provided a hospital odds ratio in the ACS NSQIP Pediatric Semiannual Report and may be required to undergo an additional audit following recommendations from the ACS NSQIP Pediatric.

5. Sampling Process and Case Inclusion/Exclusion Criteria

Systematic Sampling Process

Large surgical services normally experience a significant volume of surgical cases. This presents the SCRs with the problem of managing an overwhelming workload. Therefore, a systematic sampling system called the 8-day cycle was developed to prevent bias in choosing cases for assessment. The SCR uses the 8-day cycle to select completed cases from the hospital's operative log. The schedule works as follows: If the first cycle begins on a Monday, it continues through to the following Monday (an 8-day period of time). The next cycle begins on Tuesday and continues through to the following Tuesday, and so on. There are 46 8-day cycles in one year, and the program recommends that data be submitted for 40 of those cycles. The process ensures that cases have an equal chance of being selected from each day of the week.

Hospitals capture the first 35 consecutive cases meeting the inclusion/exclusion criteria in the 8-day cycle.

Case Inclusion Criteria

The following inclusion criteria were applied to cases collected in 2017. For the current inclusion/exclusion criteria please contact the ACS NSQIP Pediatric Clinical Support Team at clinicalsupport@pediatric.acsnsqip.org.

- The ACS NSQIP Pediatric includes all cases with CPT codes that are listed on the CPT inclusion list.

Case Exclusion Criteria

The following exclusion criteria were applied to cases collected in 2017. For the current inclusion/exclusion criteria please contact the ACS NSQIP Pediatric Clinical Support Team at clinicalsupport@pediatric.acsnsqip.org.

- Patients 18 years of age, or older.
- Cases involving Hyperthermic Intraperitoneal Chemotherapy (HIPEC), regardless of if the procedure performed has an included CPT code(s).
- ASA 6- (Declared brain-dead patient whose organs are being removed for donor purposes).
- Concurrent Case – An additional operative procedure performed by a **different surgical team** (e.g., a different specialty/service) **under the same anesthetic**. An additional operative procedure with a CPT code different from that of the Principal Operative Procedure performed by a different surgical team under the same anesthetic is listed as a concurrent procedure. A concurrent procedure is not included.
- Multiple cases within 30 days – Multiple cases for the same patient within 30 days are excluded. (Only one case, per patient, per 30 day time frame can be abstracted for NSQIP-PEDs).
- Exclude a return to the operating room/ICU setting as the principal operative procedure, if it is related to an occurrence or complication from any procedure (surgical or otherwise) regardless of where the procedure was performed, within 30 days or within the same admission.
- Exclude a procedure performed by a surgical service not reviewed in Pediatric NSQIP.
- Trauma Cases -Any injury with a principal ICD-10 diagnostic code within the ranges of S00-T14 and T20-T79 and T83-T85 is excluded from sampling as a trauma. *Exception: Cases with an ICD-10 code in the range of T83-T85 can be abstracted in NSQIP if a trauma (e.g. motor vehicle accident, blunt force injury) did not cause the injury/malfunction.

- Exclude any surgical procedure related to the index trauma procedure(s), which occur during the same hospitalization. Any operation performed after the patient has been discharged from the trauma stay will be included; if they meet NSQIP-PEDs program inclusion criteria. *Exception to Trauma criteria: Include cases where there is an isolated limb section fracture and included CPT code.
- Abuse Cases Any ICD 10 code within the range of V00-Y99 is excluded. Additionally, any subsequent surgical procedure that is a direct cause of child abuse is excluded.
- Transplant Cases - Specifically: A patient who is admitted to the hospital for organ transplant surgery, and has additional surgical procedures performed during the same hospital stay, is excluded. Any operation performed after the patient has been discharged from the transplant stay is included.

Hospital Exclusion Criteria

In addition to the case inclusion/exclusion criteria, hospital inclusion/exclusion criteria are also imposed. To maintain the highest level of data quality, only cases included in the odds ratio analysis are included in the Pediatric PUF. These cases go through an additional level of scrutiny as they are passed from data collection to statistical analysis. Sites that exhibit issues with either data quality or 30-day follow-up are reviewed for exclusion to ensure the integrity of PUF data.

Case Selection

Step 1: “Essential 10” cases: ACS NSQIP Pediatric Full CPT code inclusion list.

- The first 10 “Essentials” cases are collected per 8-day cycle by applying all inclusion/exclusion criteria and collecting cases in consecutive order utilizing the ACS NSQIP Pediatric Full CPT Code inclusion list.
- If a targeted procedure (a CPT code that is on the Subspecialty inclusion list) comes up naturally in the “Essentials 10” systematic sampling process, it is counted as an “Essentials” case.

Step 2: Procedure Targeted Cases: Procedure Targeted (subspecialty) CPT Code Inclusion List

- Sampling numbers for each subspecialty area are based on each site’s total annual volume in each subspecialty area and are provided by ACS in a worksheet.
- Hospitals use the volumes designated for each subspecialty area in their worksheet to collect the 25 procedure targeted cases.
- Hospitals must sample from all the CPT Codes for the subspecialty areas. A hospital cannot pick and choose a procedure or certain codes within a selected subspecialty.
- For each subspecialty, cases are selected in consecutive order by utilizing systematic sampling.

Step 3: Rounding Out to Achieve 35 Cases per Cycle

- If less than 35 cases are abstracted for a cycle, a hospital may opt to collect additional cases to round up to 35 cases utilizing the following process or they may choose to identify the cycle as “Max cases.”
 - Start back where they left off on the operative log with the first “10 Essential” cases and collect additional cases from the Procedure Targeted CPT Code inclusion list using systematic sampling.
 - If 35 cases are not collected utilizing additional subspecialty procedures, additional cases may be collected by starting back where they left off with their first “10 Essential” cases and abstracting additional cases from the full CPT Code list using systematic sampling.
 - If 35 cases have not been collected after following the two previous steps, cases of the “limited procedures” (Appendectomy, Laparoscopic Cholecystectomy, and Gastrostomy) may be captured using the current sampling methodology.

6. Data Limitations

While every effort has been made to make the Pediatric PUF as complete as possible, the data do have certain limitations. Some of these limitations have been deliberately introduced to safeguard the privacy of patients (such as removal of absolute dates). Other limitations are due to resource constraints (such as the collection of generic surgical variables only). The following items represent the most salient limitations of the data:

- Because such a wide variety of operations are tracked, the variables are necessarily generic in nature. This limitation may pose difficulties for researchers attempting in-depth research on specific conditions or operations. However, surgical Targeted PUF datasets are now available which address target-specific predictors and outcomes for many types of operations.
- Patients are followed after surgery for a maximum of 30 days. Complications or death after that period are not included.
- In order to comply with HIPAA requirements, all absolute dates have been removed. The most critical of these is the date of surgery, which has been reduced to year of surgery only. Some dates (hospital entry, dates of laboratory tests, and so on) have been recoded into durations e.g. Date of Admission and Date of Discharge is recoded into Hospital Length of Stay.

- In order to comply with the Hospital Participation Agreement (HPA) that is agreed to between the ACS and participating sites, facility identifiers as well as geographic information regarding the case have been removed. The HPA stipulates that the ACS does not identify participating sites. Site identification could be possible even with blinded identifiers through advanced statistics. A stipulation of access to the Pediatric PUF is completion of the Data Use Agreement that strictly prohibits attempts to identify hospitals, health care providers, or patients.
- While many risk factors are tracked, preventative measures are not recorded which can lead to an overestimation of the risk of certain conditions when such measures are routinely taken before surgery.
- The data are submitted from hospitals that are participating in the ACS NSQIP Pediatric and do not represent a statistically valid nationally representative sample.
- Most patients do not receive all possible preoperative laboratory tests, so some of these variables have a high percentage of missing values (57% to 89%, depending on the tests). This high percentage of missing data can make it problematic to use these variables in a traditional logistic regression model as well as in many other types of analysis.

This list may not include all data limitations and additional limitations may apply in future versions of the data.

7. Contact Information

All questions about the Pediatric User Guide or Pediatric PUF, as well as comments and suggestions for improvements are welcome and may be directed to Brian Matel, ACS NSQIP Statistical Reports Manager via email at bmatel@facs.org.

8. Frequently Asked Questions

Request Process

Q: Who has access to this file?

A: Any individual with an official appointment at a fully participating pediatric site will be given access to the file following completion of the Data Use Agreement and a short set of questions that are available on the website.

- Q: Is the file available to individuals from nonparticipating sites?
 A: At this time the data files are only available to individuals with official appointments at fully participating pediatric sites.
- Q: I am at a pediatric NSQIP-participating site and would like to work on a research project with others from a different site that is not participating. Will I be allowed to do that?
 A: Yes, however, the NSQIP affiliated researcher must be the lead investigator on all PUF-based research projects and is responsible for the PUF dataset, even if forwarded to someone else. The non-participating collaborator must also sign the DUA.
- Q: How do I obtain a copy of this file?
 A: Please see the “Data Request Process” on page 1 of this document for a step-by-step approach on how to do so.

Contents of the Files

- Q: What is in this file?
 A: The file contains Health Insurance Portability and Accountability Act (HIPAA) de-identified data from sites participating in the ACS NSQIP Pediatric that received risk-adjusted reports in 2017. The variable name, variable label, data definition, and other pertinent information are provided in Section 9: Data Variables and Definitions.
- Q: Are other Pediatric PUF data sets available?
 A: There are nine other Pediatric PUFs available for request / download:

PUF Year	PUF Type	Cases	Sites
2012	Pediatrics	51,008	50
2013	Pediatrics	63,387	56
2014	Pediatrics	68,838	64
2015	Pediatrics	84,056	80
2015	Appendectomy	10,570	20
2016	Pediatrics	101,887	101
2016	Appendectomy	13,114	101
2016	Spinal Fusion	3,728	93
2016	CSF Shunt	1,452	96

- Q: Are site identifiers included in the database?
 A: At this time we do not provide any geographic or site-specific identification. We took this approach to ensure the privacy of both the participating sites and surgeons.

Q: Are there surgeon-specific identifiers included in the database?
A: At this time we do not provide any surgeon-specific information. We took this approach to ensure the privacy of both the participating sites and surgeons.

Q: Why does the Pediatric PUF exclude specific dates?
A: In order to release the Pediatric PUF, certain adjustments to the data are required to ensure proper protection of patient information. To meet these requirements, we remove all elements of dates (except admission year) for dates directly related to an individual. For more information on the 18 data elements that are required for removal, please visit <https://privacyruleandresearch.nih.gov/> or https://privacyruleandresearch.nih.gov/pdf/HIPAA_Booklet_4-14-2003.pdf.

Q: The ACS NSQIP Pediatric program collects approximately 120 variables, but the database contains 369 variables. What are the additional variables?
A: The additional variables contained in the Pediatric PUF relate to computed durations. For example, the admission and discharge dates are used to calculate hospital length of stay. In addition, each complication in the ACS NSQIP Pediatric requires the use of three different variables in the database. There are a few other data elements collected in the ACS NSQIP Pediatric that require multiple variables in the database.

Values in the Data

Q: Why do some cases have complications that do not have a known duration from operation to complication?
A: In each of these cases, the date of the complication was invalid, which inhibited the calculation of duration. The number of days from operation to complication variable is coded as -99 for these cases.

Q: Why do some of the preoperative lab values have duration from lab to operation, but a value of -99 for the lab value?
A: The results of the lab tests can be entered manually and thus are susceptible to data entry error. Depending on the preoperative lab variable roughly 1% of the cases had invalid values and these invalid values were set to -99 to simplify analysis. It is also possible that some cases have valid lab values, but are missing duration from lab to operation variable. This discrepancy is also related to a data entry error and the program continues to improve the data collection software to minimize the potential for data entry errors.

Q: When performing analysis on the five digit CPT codes in the Other and Concurrent variables, how should I interpret those cases with a valid five digit CPT code but a CPT description set to NULL?

A: If the case has a valid five digit CPT code that procedure occurred and should be evaluated as such. The CPT description is a secondary variable and provided for convenience. In the processing of large amounts of data some descriptions are purposefully or inadvertently removed.

File Formats

Q: In what file formats are the data available?

A: The data files are made available in a tab delimited TXT, SAS, and SPSS formats.

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Advisement: When a change in definitions across PUF years is noted, users should attend to this if they merge files. It is suggested that they evaluate variable categories across years and combine them in a manner appropriate to their research objectives.

Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
1	PUFYEAR	Num	Year of PUF		
2	CaseID	Num	Case Identification Number		
3	AGE_DAYS	Num	Age of Patient at Time of Surgery (days)		
4	SEX	Char	Gender	Male Female	
5	RACE	Char	Race	American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander Unknown/Not Reported White	
6	ETHNICITY_HISPANIC	Char	Hispanic Ethnicity	Yes No NULL	
7	CPT	Char	CPT		
8	PRNCPTX	Char	Principal Operative Procedure CPT Code Description		
9	WORKRVU	Num	Work Relative Value Unit		
10	LAPTHOR	Char	Laparoscopic/MIS Procedure	Laparoscopic/MIS only Laparoscopic/MIS and Open Open only or N/A NULL	
11	LAPTHOR_MIS	Char	Laparoscopic/MIS Code	43659 Other N/A NULL	
12	INOUT	Char	Inpatient/Outpatient	Inpatient Outpatient	
13	ADMYR	Num	Year of Admission		
14	TRANST	Char	Transfer status	Admitted from home/clinic/doctor's office Admitted through ER, including outside ER with direct hospital admission Chronic care/Rehab/Intermediate Care/Spinal Cord Transferred from outside hospital (NICU, PICU, Inpatient on General floor, Adult Other	
15	OPERYR	Num	Year of Operation		
16	HtoODay	Num	Days from Hospital Admission to Operation		
17	ANESTECH	Char	Principal Anesthesia Technique	General Caudal Epidural Local None Other Regional Spinal Unknown	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
18	SURGSPEC	Char	Surgical Specialty	Cardiovascular-Thoracic General Surgery Gynecology Neurosurgery Orthopedics Otolaryngology (ENT) Pediatric Cardiovascular-Thoracic Pediatric Neurosurgery Pediatric Orthopedic Surgery Pediatric Otolaryngology (ENT) Pediatric Plastics Pediatric Surgery Pediatric Urology Plastics Urology	
19	HEIGHT	Num	Height/Length at Surgery (in)		-99 = No Response Units converted to inches
20	WEIGHT	Num	Weight at Surgery (lbs)		-99 = No Response Units converted to lbs
21	DNR	Char	Do Not Resuscitate (DNR) Status	Yes No	
22	PREM_BIRTH	Char	Premature Birth	24 completed weeks gestation 25-26 completed weeks gestation 27-28 completed weeks gestation 29-30 completed weeks gestation 31-32 completed weeks gestation 33-34 completed weeks gestation 35-36 completed weeks gestation Less than 24 completed weeks gestation NULL No Unknown	
23	VENTILAT	Char	Ventilator Dependence	Yes No	
24	ASTHMA	Char	History of Asthma	Yes No	
25	HXCLD	Char	Bronchopulmonary Dysplasia/Chronic Lung Disease	Yes No	
26	OXYGEN_SUP	Char	Oxygen Support	Yes No	
27	TRACHEOSTOMY	Char	Tracheostomy	Yes No	
28	STRUCT_PULM_AB	Char	Structural Pulmonary/Airway Abnormalities	Yes No	
29	ESOVAR	Char	Esophageal/Gastric/Intestinal Disease	Yes No	
30	PRVPCS	Char	Previous Cardiac Surgery	Yes No	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
31	CRF	Char	Cardiac Risk Factors	Major cardiac risk factors Minor cardiac risk factors No cardiac risk factors Severe cardiac risk factors	
32	CRD_ICD9_1	Char	Cardiac ICD9 - 1		NULL = No Response
33	CRD_ICD9_2	Char	Cardiac ICD9 - 2		NULL = No Response
34	CRD_ICD9_3	Char	Cardiac ICD9 - 3		NULL = No Response
35	CRD_ICD9_4	Char	Cardiac ICD9 - 4		NULL = No Response
36	CRD_ICD9_5	Char	Cardiac ICD9 - 5		NULL = No Response
37	CRD_ICD9_6	Char	Cardiac ICD9 - 6		NULL = No Response
38	CRD_ICD9_7	Char	Cardiac ICD9 - 7		NULL = No Response
39	CRD_ICD9_8	Char	Cardiac ICD9 - 8		NULL = No Response
40	CRD_ICD9_9	Char	Cardiac ICD9 - 9		NULL = No Response
41	CRD_ICD9_10	Char	Cardiac ICD9 - 10		NULL = No Response
42	CRD_ICD10_1	Char	Cardiac ICD10 - 1		NULL = No Response
43	CRD_ICD10_2	Char	Cardiac ICD10 - 2		NULL = No Response
44	CRD_ICD10_3	Char	Cardiac ICD10 - 3		NULL = No Response
45	CRD_ICD10_4	Char	Cardiac ICD10 - 4		NULL = No Response
46	CRD_ICD10_5	Char	Cardiac ICD10 - 5		NULL = No Response
47	CRD_ICD10_6	Char	Cardiac ICD10 - 6		NULL = No Response
48	CRD_ICD10_7	Char	Cardiac ICD10 - 7		NULL = No Response
49	CRD_ICD10_8	Char	Cardiac ICD10 - 8		NULL = No Response
50	CRD_ICD10_9	Char	Cardiac ICD10 - 9		NULL = No Response
51	CRD_ICD10_10	Char	Cardiac ICD10 - 10		NULL = No Response
52	IMPCOGSTAT	Char	Developmental Delay/Impaired Cognitive Status	Yes No	
53	SEIZURE	Char	Seizure Disorder	Yes No	
54	CEREBRAL_PALSY	Char	Cerebral Palsy	Yes No	
55	ACQ_ABNORMALITY	Char	Structural CNS Abnormality	Yes No	
56	NEUROMUSCDIS	Char	Neuromuscular Disorder	Yes No	
57	IVH_GRADE	Char	Intraventricular Hemorrhage (IVH) Grade	No IVH reported Grade 1 Grade 2 Grade 3 Grade 4 IVH reported but no grade assigned NULL	
58	STEROID	Char	Steroid Use (within 30 days)	Yes No	
59	OSTOMY	Char	Ostomy	Yes No NULL	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
60	OSTOMY_TYPE	Char	Ostomy Type	Central Nervous System Thorax Upper Gastrointestinal Tract Lower Gastrointestinal Tract Urinary Tract Central Nervous System Central Nervous System,Lower Gastrointestinal Tract Central Nervous System,Lower Gastrointestinal Tract Central Nervous System,Upper Gastrointestinal Tract Central Nervous System,Upper Gastrointestinal Tract Central Nervous System,Urinary Tract Lower Gastrointestinal Tract Lower Gastrointestinal Tract,Urinary Tract Thorax Thorax,Lower Gastrointestinal Tract,Urinary Tract Thorax,Upper Gastrointestinal Tract Thorax,Upper Gastrointestinal Tract,Lower Gastrointestinal Tract Upper Gastrointestinal Tract Upper Gastrointestinal Tract,Lower Gastrointestinal Tract Upper Gastrointestinal Tract,Lower Gastrointestinal Tract, Urinary Tract Upper Gastrointestinal Tract,Urinary Tract Urinary Tract NULL	
61	WNDINF	Char	Open Wound/Wound Infection	Yes No	
62	NUTR_SUPPORT	Char	Nutritional Support	Yes No	
63	HEMODISORDER	Char	Hematologic Disorder	Yes No	
64	PRSEPIS	Char	SIRS/Sepsis/Septic Shock Within 48 Hours Prior to Surgery	SIRS Sepsis Septic Shock None NULL	
65	INOTR_SUPPORT	Char	Inotropic Support at Time of Surgery	Yes No	
66	CPR_PRIOR_SURG	Char	Previous CPR Within 7 Days Prior to Surgery	Yes No	
67	CONG_MALFORM	Char	Congenital Malformation	Yes, Neonate < 1500 grams at the time of surgery Yes, Neonate > 1500 grams at the time of surgery or infant/child/teenager with a history of a congenital defect at the time of surgery No	
68	CM_ICD9_1	Char	Congenital Malformation ICD9 - 1		NULL = No Response
69	CM_ICD9_2	Char	Congenital Malformation ICD9 - 2		NULL = No Response
70	CM_ICD9_3	Char	Congenital Malformation ICD9 - 3		NULL = No Response
71	CM_ICD9_4	Char	Congenital Malformation ICD9 - 4		NULL = No Response
72	CM_ICD9_5	Char	Congenital Malformation ICD9 - 5		NULL = No Response
73	CM_ICD9_6	Char	Congenital Malformation ICD9 - 6		NULL = No Response
74	CM_ICD9_7	Char	Congenital Malformation ICD9 - 7		NULL = No Response

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
75	CM_ICD9_8	Char	Congenital Malformation ICD9 - 8		NULL = No Response
76	CM_ICD9_9	Char	Congenital Malformation ICD9 - 9		NULL = No Response
77	CM_ICD9_10	Char	Congenital Malformation ICD9 - 10		NULL = No Response
78	CM_ICD10_1	Char	Congenital Malformation ICD10 - 1		NULL = No Response
79	CM_ICD10_2	Char	Congenital Malformation ICD10 - 2		NULL = No Response
80	CM_ICD10_3	Char	Congenital Malformation ICD10 - 3		NULL = No Response
81	CM_ICD10_4	Char	Congenital Malformation ICD10 - 4		NULL = No Response
82	CM_ICD10_5	Char	Congenital Malformation ICD10 - 5		NULL = No Response
83	CM_ICD10_6	Char	Congenital Malformation ICD10 - 6		NULL = No Response
84	CM_ICD10_7	Char	Congenital Malformation ICD10 - 7		NULL = No Response
85	CM_ICD10_8	Char	Congenital Malformation ICD10 - 8		NULL = No Response
86	CM_ICD10_9	Char	Congenital Malformation ICD10 - 9		NULL = No Response
87	CM_ICD10_10	Char	Congenital Malformation ICD10 - 10		NULL = No Response
88	TRANSFUS	Char	Blood transfusions Within 48 Hours Prior to Surgery	Yes No	
89	MALIGNANCY	Char	Childhood Malignancy	Past history of cancer Current cancer or active treatment of cancer No current or prior history of cancer	
90	NEONATE_TYPE	Char	Neonate Type	Term Neonate Premature Neonate N/A NULL	
91	GESTATIONALAGE_BIRTH	Num	Gestational Age at Birth (weeks)		-99 = No Response
92	GESTATIONALAGE_SURGERY	Num	Gestational Age at Surgery (weeks)		-99 = No Response
93	NEONATE	Char	Neonate at Time of Surgery	Yes No NULL	
94	SM_GESTATIONALAGE	Char	Small for Gestational Age	Yes No NULL	
95	BIRTH_WGT_UNIT	Char	Birth Weight Unit	lbs kg Unknown NULL	
96	BIRTH_WGT_LB	Num	Birth Weight in Pounds (lbs)		-99 = No Response
97	BIRTH_WGT_OZ	Num	Birth Weight in Ounces (oz)		-99 = No Response
98	BIRTH_WGT_KG	Num	Birth Weight in Kilograms (kgs)		-99 = No Response
99	BIRTH_HGT	Num	Birth Height/Length Value		-99 = No Response
100	BIRTH_HGT_UNIT	Char	Birth Height/Length Unit	cm in Unknown NULL	
101	HEAD_CIRC	Num	Head Circumference Value		-99 = No Response
102	HEAD_CIRC_UNIT	Char	Head Circumference Unit	cm in Unknown NULL	
103	BIRTH_LOCATION	Char	Location of Birth	Inborn Outborn NULL	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
104	DELIVERY_MODE	Char	Mode of Delivery	Vaginal Delivery Scheduled C-Section Unscheduled C-Section Unknown/Not Documented NULL	
105	APGAR_1MIN	Char	APGAR Score 1 Minute	0-10 Unknown NULL	
106	APGAR_5MIN	Char	APGAR Score 5 Minutes	0-10 Unknown NULL	
107	DPRNA	Num	Days from Na Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
108	DPRBUN	Num	Days from BUN Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
109	DPRCREAT	Num	Days from Creatinine Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
110	DPRALBUM	Num	Days from Albumin Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
111	DPRBILI	Num	Days from Bilirubin Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
112	DPRSGOT	Num	Days from SGOT Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
113	DPRALKPH	Num	Days from ALKPHOS Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
114	DPRWBC	Num	Days from WBC Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
115	DPRHCT	Num	Days from HCT Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
116	DPRPLATE	Num	Days from PlateCount Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
117	DPRPT	Num	Days from PT Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
118	DPRINR	Num	Days from INR Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
119	DPRPTT	Num	Days from PTT Preoperative Labs to Operation		-99 = Lab value not obtained or Unknown
120	PRSODM	Num	Preoperative Serum Sodium		-99 = Lab value not obtained or Unknown
121	PRBUN	Num	Preoperative BUN		-99 = Lab value not obtained or Unknown
122	PRCREAT	Num	Preoperative Serum Creatinine		-99 = Lab value not obtained or Unknown
123	PRALBUM	Num	Preoperative Serum Albumin		-99 = Lab value not obtained or Unknown
124	PRBILI	Num	Preoperative Total Bilirubin		-99 = Lab value not obtained or Unknown
125	PRSGOT	Num	Preoperative SGOT		-99 = Lab value not obtained or Unknown
126	PRALKPH	Num	Preoperative Alkaline Phosphatase		-99 = Lab value not obtained or Unknown

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
127	PRWBC	Num	Preoperative WBC		-99 = Lab value not obtained or Unknown
128	PRHCT	Num	Preoperative Hematocrit		-99 = Lab value not obtained or Unknown
129	PRPLATE	Num	Preoperative Platelet Count		-99 = Lab value not obtained or Unknown
130	PRPT	Num	Preoperative PT		-99 = Lab value not obtained or Unknown
131	PRINR	Num	Preoperative International Normalized Ratio (INR) of PT Values		-99 = Lab value not obtained or Unknown
132	PRPTT	Num	Preoperative PTT		-99 = Lab value not obtained or Unknown
133	CASETYPE	Char	Case Status	Elective Emergent Urgent	
134	WNDCLAS	Char	Wound Classification	Clean Clean/Contaminated Contaminated Dirty/Infected	
135	ASACLAS	Char	ASA Classification	ASA 1 - No Disturb ASA 2 - Mild Disturb ASA 3 - Severe Disturb ASA 4 - Life Threat ASA 5 - Moribund None assigned	
136	ANESURG	Num	Duration from Anesthesia Start to Surgery Start (min)		-99 = No Response
137	SURGANE	Num	Duration from Surgery Stop to Anesthesia Stop (min)		-99 = No Response
138	DPATRM	Num	Duration Patient is in Operating Room (min)		-99 = No Response
139	ANETIME	Num	Duration of Anesthesia (min)		-99 = No Response
140	OPTIME	Num	Total Operation Time (min)		-99 = No Response
141	OTHERCPT1	Char	Other CPT Code 1		NULL = No Procedure/No Response
142	OTHERPROC1	Char	Other Procedure Description - 1		NULL = No Procedure/No Response
143	OTHERWRVU1	Num	Other Work Relative Value Unit 1		-99 = No Procedure/No Response
144	OTHERCPT2	Char	Other CPT Code 2		NULL = No Procedure/No Response
145	OTHERPROC2	Char	Other Procedure Description - 2		NULL = No Procedure/No Response
146	OTHERWRVU2	Num	Other Work Relative Value Unit 2		-99 = No Procedure/No Response
147	OTHERCPT3	Char	Other CPT Code 3		NULL = No Procedure/No Response
148	OTHERPROC3	Char	Other Procedure Description - 3		NULL = No Procedure/No Response
149	OTHERWRVU3	Num	Other Work Relative Value Unit 3		-99 = No Procedure/No Response
150	OTHERCPT4	Char	Other CPT Code 4		NULL = No Procedure/No Response
151	OTHERPROC4	Char	Other Procedure Description - 4		NULL = No Procedure/No Response
152	OTHERWRVU4	Num	Other Work Relative Value Unit 4		-99 = No Procedure/No Response
153	OTHERCPT5	Char	Other CPT Code 5		NULL = No Procedure/No Response
154	OTHERPROC5	Char	Other Procedure Description - 5		NULL = No Procedure/No Response
155	OTHERWRVU5	Num	Other Work Relative Value Unit 5		-99 = No Procedure/No Response
156	OTHERCPT6	Char	Other CPT Code 6		NULL = No Procedure/No Response
157	OTHERPROC6	Char	Other Procedure Description - 6		NULL = No Procedure/No Response
158	OTHERWRVU6	Num	Other Work Relative Value Unit 6		-99 = No Procedure/No Response
159	OTHERCPT7	Char	Other CPT Code 7		NULL = No Procedure/No Response
160	OTHERPROC7	Char	Other Procedure Description - 7		NULL = No Procedure/No Response
161	OTHERWRVU7	Num	Other Work Relative Value Unit 7		-99 = No Procedure/No Response

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
162	OTHERCPT8	Char	Other CPT Code 8		NULL = No Procedure/No Response
163	OTHERPROC8	Char	Other Procedure Description - 8		NULL = No Procedure/No Response
164	OTHERWRVU8	Num	Other Work Relative Value Unit 8		-99 = No Procedure/No Response
165	OTHERCPT9	Char	Other CPT Code 9		NULL = No Procedure/No Response
166	OTHERPROC9	Char	Other Procedure Description - 9		NULL = No Procedure/No Response
167	OTHERWRVU9	Num	Other Work Relative Value Unit 9		-99 = No Procedure/No Response
168	OTHERCPT10	Char	Other CPT Code 10		NULL = No Procedure/No Response
169	OTHERPROC10	Char	Other Procedure Description - 10		NULL = No Procedure/No Response
170	OTHERWRVU10	Num	Other Work Relative Value Unit 10		-99 = No Procedure/No Response
171	CONCPT1	Char	Concurrent CPT 1		NULL = No Procedure/No Response
172	CONCURR1	Char	Concurrent Procedure Description - 1		NULL = No Procedure/No Response
173	CONWRVU1	Num	Concurrent Work Relative Value Unit 1		-99 = No Procedure/No Response
174	CONCPT2	Char	Concurrent CPT 2		NULL = No Procedure/No Response
175	CONCURR2	Char	Concurrent Procedure Description - 2		NULL = No Procedure/No Response
176	CONWRVU2	Num	Concurrent Work Relative Value Unit 2		-99 = No Procedure/No Response
177	CONCPT3	Char	Concurrent CPT 3		NULL = No Procedure/No Response
178	CONCURR3	Char	Concurrent Procedure Description - 3		NULL = No Procedure/No Response
179	CONWRVU3	Num	Concurrent Work Relative Value Unit 3		-99 = No Procedure/No Response
180	CONCPT4	Char	Concurrent CPT 4		NULL = No Procedure/No Response
181	CONCURR4	Char	Concurrent Procedure Description - 4		NULL = No Procedure/No Response
182	CONWRVU4	Num	Concurrent Work Relative Value Unit 4		-99 = No Procedure/No Response
183	CONCPT5	Char	Concurrent CPT 5		NULL = No Procedure/No Response
184	CONCURR5	Char	Concurrent Procedure Description - 5		NULL = No Procedure/No Response
185	CONWRVU5	Num	Concurrent Work Relative Value Unit 5		-99 = No Procedure/No Response
186	CONCPT6	Char	Concurrent CPT 6		NULL = No Procedure/No Response
187	CONCURR6	Char	Concurrent Procedure Description - 6		NULL = No Procedure/No Response
188	CONWRVU6	Num	Concurrent Work Relative Value Unit 6		-99 = No Procedure/No Response
189	CONCPT7	Char	Concurrent CPT 7		NULL = No Procedure/No Response
190	CONCURR7	Char	Concurrent Procedure Description - 7		NULL = No Procedure/No Response
191	CONWRVU7	Num	Concurrent Work Relative Value Unit 7		-99 = No Procedure/No Response
192	CONCPT8	Char	Concurrent CPT 8		NULL = No Procedure/No Response
193	CONCURR8	Char	Concurrent Procedure Description - 8		NULL = No Procedure/No Response
194	CONWRVU8	Num	Concurrent Work Relative Value Unit 8		-99 = No Procedure/No Response
195	CONCPT9	Char	Concurrent CPT 9		NULL = No Procedure/No Response
196	CONCURR9	Char	Concurrent Procedure Description - 9		NULL = No Procedure/No Response
197	CONWRVU9	Num	Concurrent Work Relative Value Unit 9		-99 = No Procedure/No Response
198	CONCPT10	Char	Concurrent CPT 10		NULL = No Procedure/No Response
199	CONCURR10	Char	Concurrent Procedure Description - 10		NULL = No Procedure/No Response
200	CONWRVU10	Num	Concurrent Work Relative Value Unit 10		-99 = No Procedure/No Response
201	PODIAG	Char	Postoperative Diagnosis (ICD 9)		NULL = No Response
202	PODIAGTX	Char	Postoperative Diagnosis Text (ICD 9)		NULL = No Response
203	PODIAG10	Char	Postoperative Diagnosis (ICD 10)		NULL = No Response
204	PODIAGTX10	Char	Postoperative Diagnosis Text (ICD 10)		NULL = No Response
205	HDISDT	Char	Hospital Discharge Year		NULL = No Response
206	DOptoDis	Num	Days from Operation to Discharge		-99 = No Response

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
207	DISCHDEST	Char	Discharge Destination	Expired Facility Which was Home Home Rehab Separate Acute Care Skilled Care, Not Home Unknown Unskilled Facility Not Home NULL	
208	TOTHLOS	Num	Length of Total Hospital Stay		-99 = No Response
209	STILLINHOSP	Char	Still in Hospital > 30 Days	Yes NULL	
210	OXYGEN_AT_DISCHARGE	Char	Oxygen at Discharge or at 30 Days if Still in Hospital	Yes NULL	
211	NUTRITION_AT_DISCHARGE	Char	Nutritional Requirement at Discharge or at 30 Days if Still in Hospital	Yes NULL	
212	DAYS_VENTILATION	Char	Total Days Mechanical Ventilation	0-30 > 30	
213	DEATH30YN	Char	Death in 30 Days	Yes No	
214	YRDEATH	Char	Year of Death	2017, 2018	NULL = No Response
215	DEATH30DTUNK	Char	Date of Death is Unknown	Yes NULL	
216	DOperToD	Num	Days from Operation to Death		-99 = Unknown or Patient did not die at or before lock date post operation
217	SUPINFEC	Char	Occurrences Superficial Incisional SSI	Superficial Incisional SSI No Complication	
218	NSUPINFEC	Num	Number of Superficial Incisional SSI Occurrences		
219	DSUPINFEC	Num	Days from Operation until Superficial Incisional SSI Complication		-99 = Unknown or Patient did not
220	WNDINFD	Char	Occurrences Deep Incisional SSI	Deep Incisional SSI No Complication	
221	NWNDINFD	Num	Number of Deep Incisional SSI Occurrences		
222	DWNDINFD	Num	Days from Operation until Deep Incisional SSI Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
223	ORGSPCSSI	Char	Occurrences Organ/Space SSI	Organ/Space SSI No Complication	
224	NORGSPCSSI	Num	Number of Organ/Space SSI Occurrences		
225	DORGSPCSSI	Num	Days from Operation until Organ/Space SSI Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
226	SDEHIS	Char	Occurrences Superficial Wound Disruption/Dehiscence	Superficial Wound Disruption/Dehiscence No complication	
227	NSDEHIS	Num	Number of Superficial Wound Disruption/Dehiscence Occurrences		
228	DSDEHIS	Num	Days from Operation until Superficial Wound Disruption/Dehiscence Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
229	DEHIS	Char	Occurrences Deep Wound Disruption/Dehiscence	Wound Disruption No complication	
230	NDEHIS	Num	Number of Deep Wound Disruption/Dehiscence Occurrences		

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
231	DDEHIS	Num	Days from Operation until Deep Wound Disruption/Dehiscence Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
232	OUPNEUMO	Char	Occurrences Pneumonia	Pneumonia No complication	
233	NOUPNEUMO	Num	Number of Pneumonia Occurrences		
234	DOUPNEUMO	Num	Days from Operation until Pneumonia Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
235	REINTUB	Char	Occurrences Unplanned Intubation	Unplanned Intubation No Complication	
236	NREINTUB	Num	Number of Unplanned Intubation Occurrences		
237	DREINTUB	Num	Days from Operation until Unplanned Intubation Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
238	PULEMBOL	Char	Occurrences Pulmonary Embolism	Pulmonary Embolism No Complication	
239	NPULEMBOL	Num	Number of Pulmonary Embolism Occurrences		
240	DPULEMBOL	Num	Days from Operation until Pulmonary Embolism Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
241	RENAINSF	Char	Occurrences Progressive Renal Insufficiency	Progressive Renal Insufficiency No Complication	
242	NRENAINSF	Num	Number of Progressive Renal Insufficiency Occurrences		
243	DRENAINSF	Num	Days from Operation until Progressive Renal Insufficiency Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
244	OPRENAFL	Char	Occurrences Acute Renal Failure	Acute Renal Failure No Complication	
245	NOPRENAFL	Num	Number of Acute Renal Failure Occurrences		
246	DOPRENAFL	Num	Days from Operation until Acute Renal Failure Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
247	URNINFEC	Char	Occurrences Urinary Tract Infection	Urinary Tract Infection No Complication	
248	NURNINFEC	Num	Number of Urinary Tract Infection Occurrences		
249	DURNINFEC	Num	Days from Operation until Urinary Tract Infection Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
250	CNSCOMA	Char	Coma > 24 Hours	Coma >24 hours No Complication	
251	NCNSCOMA	Num	Number of Coma > 24 Hours Occurrences		
252	DCNSCOMA	Num	Days from Operation until Coma > 24 Hours Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
253	CNSCVA	Char	CVA/Stroke or Intracranial Hemorrhage	Stroke/CVA with neurological deficit No Complication	
254	NCNSCVA	Num	Number of CVA/Stroke or Intracranial Hemorrhage Occurrences		
255	DCNSCVA	Num	Days from Operation until CVA/Stroke or Intracranial Hemorrhage Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
256	CSZRE	Char	Seizure Disorder	Seizure No Complication	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
257	NSZRE	Num	Number of Seizure Occurrences		
258	DSZRE	Num	Days from Operation until Seizure Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
259	NEURODEF	Char	Nerve Injury	Nerve injury No Complication	
260	NNEURODEF	Num	Number of Nerve Injury Occurrences		
261	DNEURODEF	Num	Days from Operation until Nerve Injury Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
262	CIVHG1	Char	Occurrences IVH Grade 1	IVH Grade 1 No Complication	
263	NIVHG1	Num	Number of IVH Grade 1 Occurrences		
264	DIVHG1	Num	Days from Operation until IVH Grade 1 Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
265	CIVHG2	Char	Occurrences IVH Grade 2	IVH Grade 2 No Complication	
266	NIVHG2	Num	Number of IVH Grade 2 occurrences		
267	DIVHG2	Num	Days from Operation until IVH Grade 2 Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
268	CIVHG3	Char	Occurrences IVH Grade 3	IVH Grade 3 No Complication	
269	NIVHG3	Num	Number of IVH Grade 3 Occurrences		
270	DIVHG3	Num	Days from Operation until IVH Grade 3 Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
271	CIVHG4	Char	Occurrences IVH Grade 4	IVH Grade 4 No Complication	
272	NIVHG4	Num	Number of IVH Grade 4 Occurrences		
273	DIVHG4	Num	Days from Operation until IVH Grade 4 Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
274	CIVHUNK	Char	Occurrences IVH Grade Unknown	Unknown/Specific Grade No Complication	
275	NIVHUNK	Num	Number of IVH Grade Unknown Occurrences		
276	DIVHUNK	Num	Days from Operation until IVH Grade Unknown Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
277	CDARREST	Char	Occurrences Cardiac Arrest Requiring CPR	Cardiac Arrest Requiring CPR No Complication	
278	NCDARREST	Num	Number of Cardiac Arrest Requiring CPR Occurrences		
279	DCDARREST	Num	Days from Operation until Cardiac Arrest Requiring CPR Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
280	OTHBLEED	Char	Occurrences Bleeding/Transfusion	Bleeding/Transfusions No Complication	
281	NOTHBLEED	Num	Number of Bleeding/Transfusion Occurrences		

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
282	DOTHBLEED	Num	Days from Operation until Bleeding/Transfusion Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
283	BLEED_ML_TOT	Num	Total Blood Transfused (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
284	BLEEDING_ML1	Num	Blood Used in Transfusion 1 (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
285	BLEEDING_ML2	Num	Blood Used in Transfusion 2 (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
286	BLEEDING_ML3	Num	Blood Used in Transfusion 3 (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
287	BLEEDING_ML4	Num	Blood Used in Transfusion 4 (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
288	BLEEDING_ML5	Num	Blood Used in Transfusion 5 (mL)		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
289	OTHGRAFL	Char	Occurrences Graft/Prosthesis/Flap Failure	Graft/Prosthesis/FF No Complication	
290	NOTHGRAFL	Num	Number of Graft/Prosthesis/Flap Failure Occurrences		
291	DOTHGRAFL	Num	Days from Operation until Graft/Prosthesis/Flap Failure Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
292	OTHVT	Char	Occurrences VT	VT Requiring Therapy No Complication	
293	NOTHVT	Num	Number of VT Occurrences		
294	DOTHVT	Num	Days from Operation until VT Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
295	OTHCDIFF	Char	Occurrence of Postoperative Clostridium difficile (C.diff) Colitis	C. diff No Complication	
296	NOTHCDIFF	Num	Number of Postoperative Clostridium difficile (C.diff) Colitis Occurrences		
297	DOTHCDIFF	Num	Days from Operation until Postoperative Clostridium difficile (C.diff) Colitis Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
298	OTHSYSEP	Char	Occurrences Sepsis	Systemic Sepsis No Complication	
299	NOTHSYSEP	Num	Number of Sepsis Occurrences		
300	DOTHSYSEP	Num	Days from Operation until Sepsis Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
301	OTHSESHOCK	Char	Occurrences Septic Shock	Septic Shock No Complication	
302	NOTHSESHOCK	Num	Number of Septic Shock Occurrences		
303	DOTHSESHOCK	Num	Days from Operation until Septic Shock Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
304	OTHCLAB	Char	Occurrences CL Associated Blood Stream Infection	CL Associated Bloodstream Infection No Complication	
305	NOTHCLAB	Num	Number of CL Associated Blood Stream Infection Occurrences		
306	DOTHCLAB	Num	Days from Operation until CL Associated Blood Stream Infection Complication		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
307	READMISSION1	Char	Any Readmission 1	Yes No	
308	READMPODAYS1	Num	Days from Operation to Any Readmission 1		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
309	UNPLANNEDREADMISSION1	Char	Unplanned Readmission 1	Yes No NULL	
310	READMRELATED1	Char	Related Readmission 1	Yes No NULL	
311	READMSUSPREASON1	Char	Readmission Related Suspected Reason 1	Acute Renal Failure Bleeding Requiring Transfusion (72h of surgery sta C. diff Cardiac Arrest Requiring CPR Central-Line Associated Bloodstream Infection Cerebral Vascular Accident (CVA)/Stroke or Intracr Deep Incisional SSI Graft/Prosthesis/Flap Failure Nerve Injury Organ/Space SSI Other (list ICD 10 code) Other (list ICD 9 code) Pneumonia Postoperative Systemic Sepsis Progressive Renal Insufficiency Pulmonary Embolism Seizure Septic Shock Superficial Incisional SSI Unknown/Specific grade not documented Urinary Tract Infection Venous Thrombosis requiring Therapy Wound Disruption NULL	

Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
312	READMUNRELATEDSUS1	Char	Readmission Unrelated Suspected Reason 1	C. diff Cardiac Arrest Requiring CPR Central-Line Associated Bloodstream Infection Cerebral Vascular Accident (CVA)/Stroke or Intrac Coma > 24 hours Deep Incisional SSI Graft/Prosthesis/Flap Failure Nerve Injury Organ/Space SSI Other (list ICD10 code) Other (list ICD9 code) Pneumonia Postoperative Systemic Sepsis Progressive Renal Insufficiency Pulmonary Embolism Seizure Septic Shock Superficial Incisional SSI Unplanned Intubation Urinary Tract Infection Venous Thrombosis requiring Therapy Wound Disruption NULL	
313	READMRELICD91	Char	Readmission Related ICD-9 Code 1		NULL = No Response
314	READMUNRELICD91	Char	Readmission Unrelated ICD-9 Code 1		NULL = No Response
315	READMRELICD101	Char	Readmission Related ICD-10 Code 1		NULL = No Response
316	READMUNRELICD101	Char	Readmission Unrelated ICD-10 Code 1		NULL = No Response
317	READMISSION2	Char	Any Readmission 2	Yes No NULL	
318	READMPODAYS2	Num	Days from Operation to Any Readmission 2		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
319	UNPLANNEDREADMISSION2	Char	Unplanned Readmission 2	Yes No NULL	
320	READMRELATED2	Char	Related Readmission 2	Yes No NULL	
321	READMSUSPREASON2	Char	Readmission Related Suspected Reason 2	See 'Readmission Related Suspected Reason 1'	NULL = No Response
322	READMUNRELATEDSUS2	Char	Readmission Unrelated Suspected Reason 2	See 'Readmission Unrelated Suspected Reason 1'	NULL = No Response
323	READMRELICD92	Char	Readmission Related ICD-9 Code 2		NULL = No Response
324	READMUNRELICD92	Char	Readmission Unrelated ICD-9 Code 2		NULL = No Response
325	READMRELICD102	Char	Readmission Related ICD-10 Code 2		NULL = No Response
326	READMUNRELICD102	Char	Readmission Unrelated ICD-10 Code 2		NULL = No Response
327	READMISSION3	Char	Any Readmission 3	Yes No NULL	

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
328	READMPODAYS3	Num	Days from Operation to Any Readmission 3		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
329	UNPLANNEDREADMISSION3	Char	Unplanned Readmission 3	Yes No NULL	
330	READMRELATED3	Char	Related Readmission 3	Yes No NULL	
331	READMSUSPREASON3	Char	Readmission Suspected Reason 3	See 'Readmission Related Suspected Reason 1'	NULL = No Response
332	READMUNRELATEDSUS3	Char	Readmission Unrelated Suspected Reason 3	See 'Readmission Unrelated Suspected Reason 1'	NULL = No Response
333	READMRELICD93	Char	Readmission Related ICD-9 Code 3		NULL = No Response
334	READMUNRELICD93	Char	Readmission Unrelated ICD-9 Code 3		NULL = No Response
335	READMRELICD103	Char	Readmission Related ICD-10 Code 3		NULL = No Response
336	READMUNRELICD103	Char	Readmission Unrelated ICD-10 Code 3		NULL = No Response
337	READMISSION4	Char	Any Readmission 4	Yes No NULL	
338	READMPODAYS4	Num	Days from Operation to Any Readmission 4		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
339	UNPLANNEDREADMISSION4	Char	Unplanned Readmission 4	Yes No NULL	
340	READMRELATED4	Char	Related Readmission 4	Yes No NULL	
341	READMSUSPREASON4	Char	Readmission Suspected Reason 4	See 'Readmission Related Suspected Reason 1'	NULL = No Response
342	READMUNRELATEDSUS4	Char	Readmission Unrelated Suspected Reason 4	See 'Readmission Unrelated Suspected Reason 1'	NULL = No Response
343	READMRELICD94	Char	Readmission Related ICD-9 Code 4		NULL = No Response
344	READMUNRELICD94	Char	Readmission Unrelated ICD-9 Code 4		NULL = No Response
345	READMRELICD104	Char	Readmission Related ICD-10 Code 4		NULL = No Response
346	READMUNRELICD104	Char	Readmission Unrelated ICD-10 Code 4		NULL = No Response
347	READMISSION5	Char	Any Readmission 5	Yes No NULL	
348	READMPODAYS5	Num	Days from Operation to Any Readmission 5		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
349	UNPLANNEDREADMISSION5	Char	Unplanned Readmission 5	Yes No NULL	
350	READMRELATED5	Char	Related Readmission 5	Yes No NULL	
351	READMSUSPREASON5	Char	Readmission Suspected Reason 5	See 'Readmission Related Suspected Reason 1'	NULL = No Response
352	READMUNRELATEDSUS5	Char	Readmission Unrelated Suspected Reason 5	See 'Readmission Unrelated Suspected Reason 1'	NULL = No Response
353	READMRELICD95	Char	Readmission Related ICD-9 Code 5		NULL = No Response
354	READMUNRELICD95	Char	Readmission Unrelated ICD-9 Code 5		NULL = No Response
355	READMRELICD105	Char	Readmission Related ICD-10 Code 5		NULL = No Response
356	READMUNRELICD105	Char	Readmission Unrelated ICD-10 Code 5		NULL = No Response

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Position #	Variable Name	Data Type	Variable Label	Variable Options	Comments
357	REOPERATION	Char	Unplanned Reoperation 1	Yes No NULL	
358	RETORPODAYS	Num	Days from Operation to Unplanned Reoperation 1		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
359	REOPORCPT1	Char	Unplanned Reoperation 1 CPT		NULL = No Response
360	RETORRELATED	Char	Related Unplanned Reoperation 1	Yes No Unkown NULL	
361	REOPORICD91	Char	Unplanned Reoperation 1 ICD-9 Code		NULL = No Response
362	REOPORICD101	Char	Unplanned Reoperation 1 ICD-10 Code		NULL = No Response
363	REOPERATION2	Char	Unplanned Reoperation 2	Yes No NULL	
364	RETOR2PODAYS	Num	Days from Operation to Unplanned Reoperation 2		-99 = Unknown or Patient did not experience this complication at or before 30 days post operation
365	REOPOR2CPT1	Char	Unplanned Reoperation 2 CPT		NULL = No Response
366	RETOR2RELATED	Char	Related Unplanned Reoperation 2	Yes No Unkown NULL	
367	REOPOR2ICD91	Char	Unplanned Reoperation 2 ICD-9 Code		NULL = No Response
368	REOPOR2ICD101	Char	Unplanned Reoperation 2 ICD-10 Code		NULL = No Response
369	REOPERATION3	Char	More than 2 Unplanned Reoperations	Yes No NULL	

