

19 April 2023

**MHS Genesis Surgery Tables  
for the  
MHS Data Repository (MDR)  
(Version 1.01.00)**

**Current Specification**

## Revision History

1.00.00	9/1/2019	Casey Kangas	• Initial Document	• Initial Document
1.00.01	4/7/2020	Casey Kangas	• Table 6	• Added the Case Complete Indicator field
1.00.02	2/22/2021	Casey Kangas	• Table 8	• Added the CPT field
1.01.00	4/19/2023	Casey Kangas	• Table 6	• Added BDE 3.0 feed logic

## MDR Genesis Surgery Tables

### I. BACKGROUND

This specification describes the process required to create the Military Health System (MHS) Data Repository (MDR) GENESIS Surgery tables based on data received from the Cerner PowerInsight Enterprise Data Warehouse (PI-EDW) feeds to the MDR and the BDE 3.0 feeds to Redshift.

### II. SOURCES

The source data files used to create the MDR Surgery files are extracted from the MHS GENESIS PI-EDW and MIP Redshift. The transfer of the raw source extracts is handled by the Solution Delivery Division (SDD) for loading into the MDR for further processing according to routine MDR operations. The primary source files used to build the tables are identified in Table 1. The format of the raw MHS GENESIS feeds to the MDR is described in the DHMSM Interface Control Document (ICD) #####-#####. In order to increase the utility of these files for analysts, they are merged against other tables from Cerner Millennium as well as other files on the MDR, as described below in Section VI.

**Table 1: PI-EDW Source Tables**

Raw Source Table	Raw Data Feed	Feed Description
Surgical Cases	wh_cln_surgical_case.txt	Contains surgical case level data.
Surgical Procedures	wh_cln_surg_case_proc.txt	Contains surgical procedure level data. There can be multiple procedures that occur during a given case.
Case Attendance	wh_cln_case_attendance.txt	Contains information on all case attendees, such as surgeons, residents, etc.
Perioperative Documentation	wh_cln_perioperative_doc.txt	Contains all the information documented in the perioperative document.
Surgical Delays	wh_cln_surgical_delay.txt	Contains information when a surgical delay has occurred during a case.
Case Cart Pick List	wh_cln_case_cart_pick_lst.txt	Contains information about case cart items for each surgical case.

**Table 2: MIP Redshift Source Views**

Raw Source Table	View Name	Feed Description
Surgical Cases	genesis_vw.surgical_case	Contains surgical case level data.
Surgical Procedures	genesis_vw.surg_case_procedure	Contains surgical procedure level data. There can be multiple procedures that occur during a given case.

**III. TRANSMISSION (FILES AND FREQUENCY)**

Source files are provided according to the frequency described in Table 3 below.

**Table 3: Frequency of Source Files**

Source File	Frequency
MHS GENESIS BDE 2.4 PI-EDW feeds	Weekly
MHS GENESIS BDE 3.0 feeds (Redshift)	Daily

**IV. ORGANIZATION AND BATCHING**

Source Data: The first step in MDR processing is to batch records received from MHS Genesis. Raw data batches are stored in /mdr/raw/genesis according to routine MDR operating procedures. Raw data feeds to Redshift are processed daily.

Output Products: The MDR Genesis Surgery processor outputs several SAS data sets containing all years of surgical cases recorded in MHS GENESIS. The processor performs merges and field derivations and must incorporate updates to surgical case records across raw data extracts. Table 4 contains the location and name of the output products. The preparation of the output is described in subsequent sections of this document.

**Table 4: MDR Genesis Surgery Processor Output Products**

MDR Surgery Processor Outputs	MDR Location	Table Name
MDR Surgery	/mdr/pub/genesis/surgery/	surgery.sas7bdat
MDR Surgery Case Attendance	/mdr/pub/genesis/surgery/	case_attendance.sas7bdat
MDR Perioperative Documentation	/mdr/pub/genesis/surgery/	perioperative_doc.sas7bdat
MDR Surgery Cancels	/mdr/pub/genesis/surgery/	cancels.sas7bdat
MDR Surgery Delays	/mdr/pub/genesis/surgery/	delays.sas7bdat
MDR Surgical Case Cart Pick List	/mdr/pub/genesis/surgery/	case_cart.sas7bdat

Archival of files is also required, so that corresponding “apub” and other processing files (i.e. log, apro, etc) are also loaded into the MDR according to routine operating procedures.

**V. RECEIVING FILTERS**

Remove any surgical records for test patients.

## VI. UPDATE PROCESS

The primary key for the main MDR Surgery table is the SURG\_CASE\_PROC\_SK field, which is at the procedure level. There can be multiple procedures performed during a single surgical “case”. During the extraction of the raw surgical case and procedure records, de-duplication of records, or anytime a key collision occurs between incoming data and existing master data, the processor de-duplicates data by selecting the record with the most recent value of the update date/time (UPDT\_DT\_TM) for any multiple of records with the same primary key. Similar update processes are applied to the other raw data sets. All of the supporting tables (Case Attendance, Perioperative Documentation, Delays, Case Cart) can be joined to the main Surgery table by the SURG\_CASE\_SK field. For raw data originating from PI-EDW BDE 2.4, surgical records are only kept through 3/31/2022. Surgical records from 4/1/2022 to present are based on the Redshift BDE 3.0 views.

Once the raw data has been updated, the processor combines them as described and assigns many other internally-derived variables as described in Table 5.

## VII. FIELD TRANSFORMATIONS AND DELETIONS FOR MDR CORE DATABASE

This section of this functional specification describes the data merges that are necessary to append fields in the MDR Genesis Surgery Table. Table 5 describes the reference files that are used in processing.

**Table 5: Data Merges for MDR Genesis Surgery Table**

Merge	Date Matching	Additional Matching
MDR Surgical Cases (Basic)	N/A	SURGICAL_CASE_SK
MDR Genesis Person File	N/A	PERSON_SK
MDR Genesis Personnel File	N/A	PRIMARY_SURGEON_PRSNL = PRSNL_SK; ANESTHESIA_PRSNL = PRSNL_SK
MDR Genesis Encounter File (Basic)	N/A	ENCOUNTER_SK
MDR Genesis Encounter File (Enhanced)	N/A	ENCOUNTER_SK
Master Person Index (MPI)	N/A	EDIPN
Longitudinal VM6 (LVM6)	Encounter date between the begin and end dates associated with the segment	EDIPN, SSN, GENDER_R, DOB_R, LAST_NAME, FIRST_NAME
Omni-CAD	FY	SPONSV and PATZIP
DMISID Index Table	FY	MTF and DEERS Enrollment Site

Upon matching to the MDR Genesis Person file, MDR Genesis Personnel file, and MDR Genesis Location file, records that meet the following criteria are deleted:

- Records where the test\_person\_ind=1 in the MDR Genesis Person File.
- Records where any of the test\_personnel\_ind fields = 1 in the MDR Genesis Personnel File.
- Records where the encounter date is before the go-live date for the location for the MTF.

## VIII. FILE LAYOUT

The MDR Genesis Surgery table is stored in a SAS data set. Table 6 provides the file layout and processing rules for the primary Surgery table. Tables 6-10 provide the file layouts for the related supporting tables that can be joined back to the Surgery table on the Surgical Case key.

**Table 6: File Layout for MDR Genesis Surgery Table**

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
<b>Surgical Procedures View</b>					
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	surg_case_id	No transformation
Surgical Procedure Key	\$100	surg_case_proc_sk	surg_case_proc_sk	surg_case_proc_id	No transformation
Scheduled Procedure	\$100	sched_procedure	sched_procedure_ref	sched_surg_proc_cd	Match to code_value_ref table where sched_procedure_ref matches the code_value_ref and code_set = 200 and health_system_id=18635 and retrieve desc_display.
Procedure	\$100	procedure	procedure_ref	surg_proc_cd	Match to code_value_ref table where procedure_ref matches the code_value_ref and code_set = 200 and health_system_id=18635 and retrieve desc_display.
Order ID	\$100	order_sk	order_sk	order_id	No transformation.
Scheduled Primary Procedure Indicator	N(8)	sched_primary_proc_ind	sched_primary_proc_ind	sched_primary_ind	No transformation.
Primary Procedure Indicator	N(8)	primary_proc_ind	primary_proc_ind	primary_proc_ind	No transformation.
Scheduled Anesthesia Type	\$40	sched_anesthesia_type	sched_anesthesia_type_ref	sched_anesth_type_cd	Match to code_value_ref table where sched_anesthesia_type_ref matches the code_value_ref and code_set = 10050 and health_system_id=18635 and retrieve desc_display.
Anesthesia Type	\$40	anesthesia_type	anesthesia_type_ref	anesth_type_cd	Match to code_value_ref table where anesthesia_type_ref matches the code_value_ref and code_set = 10050

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					and health_system_id=18635 and retrieve desc_display.
Surgeon Specialty of Procedure	\$100	proc_surgeon_specialty	proc_surgeon_specialty_ref	surg_specialty_id	Match to code_value_ref table where proc_surgeon_specialty_ref matches the code_value_ref and code_set = EDW_6 and health_system_id=18635 and retrieve desc_description.
Procedure Start Datetime	N(8)	proc_start_dt_tm	proc_start_dt_tm	proc_start_dt_tm	Converted to local time.
Procedure Stop Datetime	N(8)	proc_stop_dt_tm	proc_stop_dt_tm	proc_end_dt_tm	Converted to local time.
Wound Class Procedure Level	\$22	wound_class_proc	wound_class_ref	wound_class_cd	Match to code_value_ref table where wound_class_ref matches the code_value_ref and code_set = 10038 and health_system_id=18635 and retrieve desc_display.
Scheduled Procedure Count	N(8)	sched_proc_cnt	sched_proc_cnt	sched_proc_cnt	No transformation.
Scheduled Primary Surgeon Personnel	\$100	sched_prim_surgeon_prsnl	sched_prim_surgeon_prsnl	sched_primary_surgeon_id	No transformation.
Scheduled Blood Product Required Indicator	N(8)	sched_blood_product_req_ind	sched_blood_product_req_ind	sched_blood_product_req_ind	No transformation.
Scheduled Frozen Section Required Indicator	N(8)	sched_frozen_section_req_ind	sched_frozen_section_req_ind	sched_frozen_section_req_ind	No transformation.
Scheduled Specimen Required Indicator	N(8)	sched_specimen_req_ind	sched_specimen_req_ind	sched_spec_req_ind	No transformation.
Scheduled Xray Req Indicator	N(8)	sched_xray_req_ind	sched_xray_req_ind	sched_xray_ind	No transformation.
Scheduled Xray Tech Required Indicator	N(8)	sched_xray_tech_req_ind	sched_xray_tech_req_ind	sched_xray_tech_ind	No transformation.
Scheduled Implant	N(8)	sched_implant_req_ind	sched_implant_req_ind	sched_implant_ind	No transformation.

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Required Indicator					
Scheduled Procedure Duration	N(8)	sched_proc_duration	sched_proc_duration	sched_dur	No transformation.
Procedure Text	\$255	proc_txt	proc_txt	proc_text	No transformation.
Scheduled Modifier Text	\$255	sched_modifier_txt	sched_modifier_txt	sched_modifier	No transformation.
Modifier Text	\$255	modifier_txt	modifier_txt	modifier	No transformation.
Codified Modifier Text	\$255	codified_modifier_txt	codified_modifier_txt	surg_case_proc_modifier .modifier_cd	No transformation.
Procedure Complete Indicator	N(8)	complete_ind	complete_ind	proc_complete_qty	No transformation.
Perioperative Document Type	\$40	perioperative_doc_type	perioperative_doc_type_ref	doc_type_cd	Match to code_value_ref table where perioperative_doc_type_ref matches the code_value_ref and code_set = 14258 and health_system_id=18635 and retrieve desc_description.
Primary Surgeon ID – Procedure	\$100	prim_surgeon_prsnl	prim_surgeon_prsnl	primary_surgeon_id	No transformation.
Concurrent Indicator	N(8)	concurrent_ind	concurrent_ind	concurrent_ind	No transformation.
<b>Surgical Cases View</b>					
Surgical Case Number	\$100	surgical_case_nbr_formatted	surgical_case_nbr_formatted	surg_case_nbr_formatted	No transformation
Encounter Key	\$100.	encounter_sk	encounter_nk	encntr_id	Substring encounter_nk from the 1 <sup>st</sup> character to the 6 <sup>th</sup> from the last character.
Case Complete Indicator	N(8)	case_complete_ind	complete_ind	surg_complete_qty	No transformation.
MHS Genesis Person ID	\$100	person_sk	person_sk	person_id	No transformation
Scheduled Priority	\$40	sched_priority	sched_priority_ref	sched_type_cd	Match to code_value_ref table where sched_priority_ref matches the code_value_ref and code_set = 1304 and health_system_id=18635 and retrieve desc_display.
Case Level	\$20	case_level	case_level_ref	case_level_cd	Match to code_value_ref table where case_level_ref matches the



Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					code_value_ref and code_set = 10036 and health_system_id=18635 and retrieve desc_display.
Department	\$40	dept	dept_ref	dept_cd	Match to code_value_ref table where dept_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Scheduled Surgical Area	\$40	sched_surgical_area	sched_surgical_area_ref	sched_surg_area_cd	Match to code_value_ref table where sched_surgical_area_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Surgical Area	\$40	surgical_area	surgical_area_ref	surg_area_cd	Match to code_value_ref table where surgical_area_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Scheduled Operating Room (OR)	\$40	sched_or	sched_or_ref	sched_op_loc_cd	Match to code_value_ref table where sched_or_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Operating Room (OR)	\$40	or	or_ref	surg_op_loc_cd	Match to code_value_ref table where or_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
MHS GENESIS Primary Surgeon ID	\$100	primary_surgeon_prsnl	primary_surgeon_prsnl	primary_surgeon_id	No transformation.
MHS GENESIS Anesthesiologist ID	\$100	anesthesia_prsnl	anesthesia_prsnl	anesth_prsnl_id	No transformation.
Surgeon Specialty of Case	\$100	case_surgeon_specialty	case_surgeon_specialty_ref	prsnl_group_name	Match to code_value_ref table where case_surgeon_specialty_ref matches the code_value_ref and code_set = EDW_6 and health_system_id=18635 and retrieve desc_display.
ASA Class	\$20	asa_class	asa_class_ref	asa_class_cd	Match to code_value_ref table where asa_class_ref matches the

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					code_value_ref and code_set = 10051 and health_system_id=18635 and retrieve desc_display.
Add On Indicator	N(8)	add_on_ind	add_on_ind	add_on_ind	No transformation.
Wound Class Case Level	\$22	wound_class_case	wound_class_ref	wound_class_cd	Match to code_value_ref table where wound_class_ref matches the code_value_ref and code_set = 10038 and health_system_id=18635 and retrieve desc_display.
Institution	\$40	institution	institution_ref	inst_cd	Match to code_value_ref table where institution_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Health System Source ID	N(8)	health_system_source_id	health_system_source_id	Hard-coded as: 18635	No transformation.
Patient In O.R. Datetime	N(8)	patient_in_or_dt_tm	patient_in_or_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667192 and converted to local time.
Patient Out O.R. Datetime	N(8)	patient_out_or_dt_tm	patient_out_or_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667193 and converted to local time.
Scheduled Start Datetime	N(8)	sched_start_dt_tm	sched_start_dt_tm	sched_start_dt_tm	Converted to local time.
Actual Start Datetime	N(8)	start_dt_tm	start_dt_tm	surg_start_dt_tm	Converted to local time.
Patient In PACU Datetime	N(8)	patient_in_pacu_dt_tm	patient_in_pacu_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683707 and converted to local time.
Patient Out of PACU Datetime	N(8)	patient_out_pacu_dt_tm	patient_out_pacu_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 684130 and converted to local time.
Patient In SDS Recovery Unit Datetime	N(8)	patient_in_pacu_ii_dt_tm	patient_in_pacu_ii_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683713 and converted to local time.
Patient Out of SDS Recovery Unit Datetime	N(8)	patient_out_pacu_ii_dt_tm	patient_out_pacu_ii_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683711 and converted to local time.
Check In Datetime	N(8)	check_in_dt_tm	check_in_dt_tm	checkin_dt_tm	Converted to local time.

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Case Cancellation Datetime	N(8)	cancel_dt_tm	cancel_dt_tm	cancel_dt_tm	Converted to local time.
Scheduled Stop Datetime	N(8)	sched_stop_dt_tm	sched_stop_dt_tm	case_time_dt_tm	Add sched_duration (in minutes) to sched_start_dt_tm.
Actual Stop Datetime	N(8)	stop_dt_tm	stop_dt_tm	surg_stop_dt_tm	Converted to local time.
Request Transport Datetime	N(8)	request_transport_dt_tm	request_transport_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667194 and converted to local time.
Patient In Preop Area Datetime	N(8)	in_preop_holding_dt_tm	in_preop_holding_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683697 and converted to local time.
Patient Out of Preop Area Datetime	N(8)	out_preop_holding_dt_tm	out_preop_holding_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683699 and converted to local time.
Anesthesia Prep Start Datetime	N(8)	anesthesia_start_dt_tm	anesthesia_start_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667195 and converted to local time.
O.R. Setup Datetime	N(8)	or_setup_dt_tm	or_setup_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667189 and converted to local time.
O.R. Ready Datetime	N(8)	or_ready_dt_tm	or_ready_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667190 and converted to local time.
Anesthesia Begin Datetime	N(8)	anesth_induction_dt_tm	anesth_induction_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667195 and converted to local time.
Surgeon Arrival Datetime	N(8)	surgeon_in_room_dt_tm	surgeon_in_room_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667484 and converted to local time.
Patient Ready Datetime	N(8)	ready_for_surgeon_dt_tm	ready_for_surgeon_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 684127 and converted to local time.
Closing Start Datetime	N(8)	closing_start_dt_tm	closing_start_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 683692 and converted to local time.
Anesthesia End Datetime	N(8)	anesthesia_stop_dt_tm	anesthesia_stop_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667196 and converted to local time.

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Anesthesia Provider Stop Datetime	N(8)	anesth_prov_stop_dt_tm	anesth_prov_stop_dt_tm	case_time_dt_tm	genesis_vw.case_times where task_assay_cd = 667194 and converted to local time.
Preop Antibiotic Datetime	N(8)	preop_antibio_admin_dt_tm	preop_antibio_admin_dt_tm	N/A	Converted to local time.
Time Out Datetime	N(8)	surgical_time_out_dt_tm	surgical_time_out_dt_tm	N/A	Converted to local time.
<b>MDR GENESIS Person Table</b>					
EDIPN	\$10.	edipn	N/A	alias	genesis_vw.person_alias where person_alias_type_cd = 22
Patient SSN	\$9.	patssn	N/A	alias	genesis_vw.person_alias where person_alias_type_cd = 18
MRN	\$40.	mrn	N/A	alias	genesis_vw.person_alias where person_alias_type_cd = 10
Gender of Record	\$10.	gender_r	N/A	display	genesis_vw.code_value where genesis_vw.person.sex_cd = code_value and code_set = 57
Date and Time of Birth of Record	N(8)	dob_r	N/A	genesis_vw.person.birth_dt_tm	No transformation.
Race of Record	\$41.	race_r	N/A	display	genesis_vw.code_value where genesis_vw.person.race_cd = code_value and code_set = 282
Ethnic Group of Record	\$1.	ethnic_r	N/A	display	genesis_vw.code_value where genesis_vw.person.ethnic_grp_cd = code_value and code_set = 27
Marital Status of Record	\$20.	marital_r	N/A	display	genesis_vw.code_value where genesis_vw.person.marital_type_cd = code_value and code_set = 38
<b>MDR GENESIS Location Table</b>					
Treatment MTF	\$4	mtf	N/A	institution	substring(institution,1,4)
MEPRS Code	\$4	meprs_cd	N/A	code_value	genesis_vw.code_value_outbound where code_set = 220 and contributor_source_cd = 108418263
Clinic ZIP Code	\$5	clinzip	N/A	N/A	No transformation.
Unit Description	\$100	unit_name	N/A	description	Join to genesis_vw.code_value on loc_nurse_unit_cd = code_value and code_set = 220

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Nurse Unit Location Code (NULC)	\$45	unit_display	N/A	display	Join to genesis_vw.code_value on loc_nurse_unit_cd = code_value and code_set = 220
<b>MDR GENESIS Encounter (Basic) Table</b>					
Encounter Type	\$40.	encounter_type	patient_type_ref		Match to code_value_ref table where patient_type_ref matches the code_value_ref and code_set = 71 and health_system_id=18635 and retrieve desc_display.
Financial Number (FIN)	\$40.	fin	formatted_financial_nbr		No transformation.
Discharge Disposition	\$40.	discharge_disposition	discharge_disposition_ref		Match to code_value_ref table where discharge_disposition_ref matches the code_value_ref and code_set = 19 and health_system_id=18635 and retrieve desc_display.
Medical Service	\$40.	medical_service	medical_service_ref		Match to code_value_ref table where medical_service_ref matches the code_value_ref and code_set = 34 and health_system_id=18635 and retrieve desc_display.
Discharge Datetime	N(8)	discharge_dt_tm	discharge_dt_tm		Converted to local time.
<b>MDR GENESIS Encounter (Episodic) Table</b>					
Diagnosis Code 1-5	\$7	dx1-dx10	N/A	N/A	No transformation.
Procedure Code 1-5	\$5	cpt_1-cpt_13	N/A	N/A	No transformation.
Major Diagnostic Category (MDC)	\$2	mdc	N/A	N/A	No transformation.
Diagnosis Group	\$2	dxgrp	N/A	N/A	No transformation.
<b>MDR GENESIS Personnel Table</b>					
Primary Surgeon Name	\$100	primary_surgeon	full_name	full_name	No transformation; merge to Personnel on primary_surgeon_prsnl
Primary Surgeon NPI	\$10	surgeon_npi	npi	npi	No transformation; merge to Personnel on primary_surgeon_prsnl
Primary Surgeon EDIPN	\$10	surgeon_edipn	prsnl_edipn	prsnl_edipn	No transformation; merge to Personnel on primary_surgeon_prsnl

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Primary Surgeon Skill Type	\$1	surgeon_skill_type	skill_type	skill_type	No transformation; merge to Personnel on primary_surgeon_prsnl
Primary Surgeon Primary HIPAA Taxonomy	\$10	surgeon_hipaa_taxonomy	hipaa1	hipaa1	No transformation; merge to Personnel on primary_surgeon_prsnl
Anesthesiologist Name	\$100	anesfthesiologist	full_name	full_name	No transformation; merge to Personnel on anesthesia_prsnl
Anesthesiologist NPI	\$10	anesthesiologist_npi	npi	npi	No transformation; merge to Personnel on anesthesia_prsnl
Anesthesiologist EDIPN	\$10	anesthesiologist_edipn	prsnl_edipn	prsnl_edipn	No transformation; merge to Personnel on anesthesia_prsnl
Anesthesiologist Primary HIPAA Taxonomy	\$10	anesthesiologist_hipaa_taxonomy	hipaa1	hipaa1	No transformation; merge to Personnel on anesthesia_prsnl
<b>Fields from the MPI</b>					
Sponsor SSN	\$9.	sponssn	N/A	N/A	If a record is found in the MPI with matching EDIPN or Patient SSN, fill with the Sponsor SSN from the MPI.
Person Association Reason Code	\$2.	parc	N/A	N/A	If a record is found in the MPI with matching EDIPN or Patient SSN, fill with the PARC for the relationship between this patient and the sponsor on that record.
<b>Fields from the LVM6</b>					
Gender	\$1.	gender	N/A	N/A	Fill with gender associated with this EDIPN. If not found and gender_r = F or M, set to gender_r.
Date of Birth	SAS Date	patdob	N/A	N/A	Fill with date of birth associated with this EDIPN
Race	\$1.	race	N/A	N/A	Fill with race associated with this EDIPN. If there is no match for this patient in the LVM, set to Z.
Ethnic Group	\$1.	ethnic	N/A	N/A	Fill with ethnicity associated with this EDIPN. . If there is no match for this patient in the LVM, set to Z.
DEERS ZIP Code	\$5.	deerszip	N/A	N/A	Fill with ZIP Code if the begin date on the appointment record is between the begin and end date associated with the ZIP Code. See VM6 Specification,

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					Exhibits G-18 and 19 for segment and field positions.
Marital Status	\$1.	marital	N/A	N/A	Fill with Marital Status if the begin date on the appointment record is between the begin and end date associated with the Marital Status. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
DEERS Beneficiary Category	\$3.	bencat	N/A	N/A	Fill with Beneficiary Category if the begin date on the appointment record is between the begin and end date associated with the Beneficiary Category. If the appointment date is outside of the dates associated with the Beneficiary Category, or there is no match for this patient in the LVM, or if the LVM segment returns "Z", set to UNK. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
DEERS Common Beneficiary Category	\$1.	comben	N/A	N/A	Derived from Beneficiary Category during LVM merge. See VM6 Specification, section A.1.12 for derivation.
DEERS Sponsor Service	\$1.	dsponsvc	N/A	N/A	Fill with Sponsor Service Aggregated if the begin date on the appointment record is between the begin and end date associated with the Sponsor Service Aggregated. If the appointment date is outside of the dates associated with the Sponsor Service, or there is no match for this patient in the LVM, set to Z. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
DEERS Sponsor Service Aggregate	\$1.	dsvcagg	N/A	N/A	Fill with Sponsor Service Aggregated if the begin date on the appointment record is between the begin and end date associated with the Sponsor Service Aggregated. If the appointment date is outside of the dates associated with the Sponsor Service, or there is no

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					match for this patient in the LVM, set to Z. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
Privilege Code	\$1.	privilege	N/A	N/A	Fill with Medical Privilege Code if the begin date on the appointment record is between the begin and end date associated with the Medical Privilege Code. If the appointment date is outside of the dates associated with the Privilege Code, or there is no match for this patient in the LVM, set to 9. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
Medicare Eligibility Flag	\$1.	medicare_flag	N/A	N/A	Fill with Medicare Eligibility Code if the begin date on the appointment record is between the begin and end date associated with the Medicare Eligibility Code. If the appointment date is outside of the dates associated with the Medicare Flag, or there is no match for this patient in the LVM, set to N. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
DEERS Alternate Care Value	\$1.	acv	N/A	N/A	Fill with ACV if the begin date on the appointment record is between the begin and end date associated with the ACV. If the appointment date is before 1/1/18 and the appointment date is outside of the dates associated with the ACV, or there is no match for this patient in the LVM, set to Z. If the appointment date is on or after 1/1/18, set to blank. See VM6 Specification, Exhibit G-18 for segment and field positions. Note that the ACV will be blank filled starting in CY18.
ACV Group	\$2.	acvgroup	N/A	N/A	Derived from ACV and comben (before 1/1/18) or enrollment group, PCM type, eligibility group, and comben (after 1/1/18). If there is no match for this



Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					patient in the LVM, set to O. See VM6 Specification, section G.3 for derivation.
PCM ID	\$18.	pcm_id	N/A	N/A	Fill with PCM ID if the begin date on the appointment record is between the begin and end dates associated with the PCM ID. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
PCM Type	\$1.	pcm_type	N/A	N/A	Fill with Enrollment PCM Type if the begin date on the appointment record is between the begin and end date associated with the Enrollment PCM Type. If the appointment date is on or after 1/1/18 and the appointment date is outside of the dates associated with the Enrollment Group, or there is no match for this patient in the LVM, set to Z. If the appointment date is before 1/1/18, set to blank. See VM6 Specification, Exhibit G-19 for segment and field positions.
DEERS Enrollment DMIS ID	\$4.	denrsite	N/A	N/A	Fill with enrollment DMIS ID, if the begin date on the appointment record is between the begin and end date associated with the enrollment DMIS ID. If the appointment date is outside of the dates associated with the enrollment site, or there is no match for this patient in the LVM, set to "NONE". See VM6 specification, Exhibits G-18 and 19 for segment and field position.
DEERS Health Care Delivery Program Code – Enrolled	\$3.	hcdp_enr	N/A	N/A	Fill with enrollment HCDP code if the begin date of the appt is between the begin and end date associated with the enrollment HCDP code. See VM6 Specification, Exhibits G-18 and 19 for segment and field positions.
Eligibility Group	\$1.	elg_grp	N/A	N/A	Fill with Eligibility Group if the begin date on the appointment record is between the begin and end date

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					associated with the Eligibility Group. If the appointment date is on or after 1/1/18 and the appointment date is outside of the dates associated with the Eligibility Group, or there is no match for this patient in the LVM, set to Z. If the appointment date is before 1/1/18, set to blank. See VM6 Specification, Exhibit G-19 for segment and field positions.
Enrollment Group	\$1.	enr_grp	N/A	N/A	Fill with Enrollment Group if the begin date on the appointment record is between the begin and end date associated with the Enrollment Group. If the appointment date is on or after 1/1/18 and the appointment date is outside of the dates associated with the Enrollment Group, or there is no match for this patient in the LVM, set to Z. If the appointment date is before 1/1/18, set to blank. See VM6 Specification, Exhibit G-19 for segment and field positions.
DEERS Health Care Delivery Program Code - Assigned	\$3.	hcdp_asgn	N/A	N/A	Fill with assigned HCDP code if the begin date on the appointment record is between the begin and end date associated with the assigned HCDP code. See VM6 Specification, Exhibit G-19 for segment and field positions.
<b>Fields from the DMIS ID Index</b>					
Treatment Service	\$1.	txsvc	N/A	N/A	After matching on FY and mtf, set to ubu_svc
Treatment Parent DMIS ID	\$4.	mtf_parent	N/A	N/A	After matching on FY and mtf, set to ubu_par
Treatment T3 Region	\$2.	mtf_t3_reg	N/A	N/A	After matching on FY and mtf, set to t3_reg
Treatment T17 Region	\$2.	mtf_t17_reg	N/A	N/A	After matching on FY and mtf, set to t17_reg
Treatment Major Command	\$8.	txcmnd	N/A	N/A	After matching on FY and mtf, set to majcmnd

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Treatment MSM Area ID	\$3.	txmsma	N/A	N/A	After matching on FY and mtf, set to msm_id
Enrollment Service	\$1.	enrsvc	N/A	N/A	After matching on FY and denrsite, set to ubu_svc
Enrollment Site Parent DMIS ID	\$4.	enr_parent	N/A	N/A	After matching on FY and denrsite, set to ubu_par
Enrollment T3 Region	\$2.	enr_t3_reg	N/A	N/A	After matching on FY and denrsite, set to t3_reg
Enrollment T17 Region	\$2.	enr_t17_reg	N/A	N/A	After matching on FY and denrsite, set to t17_reg
<b>Fields from the Omni-CAD</b>					
Catchment Area ID	\$4.	catch	N/A	N/A	Based on matching FY, FM and patzip; if sponsvc = A then set equal to AWORLD, if sponsvc = F then set equal to FWORLD; if sponsvc in (M, N, V) then set equal to NWORLD, otherwise set equal to OWORLD. If zip code not found in MDR Omni-CAD, set equal to '0999'
PRISM Area ID	\$4.	prism	N/A	N/A	Based on matching FY, FM and patzip; if sponsvc = A then set equal to APRISM, if sponsvc = F then set equal to FPRISM; if sponsvc in (M, N, V) then set equal to NPRISM, otherwise set equal to OPRISM. If zip code not found in MDR Omni-CAD, set equal to '0999'
MTF Service Area ID	\$4.	mtfsvcarea	N/A	N/A	Based on matching FY, FM and patzip; if sponsvc = A then set equal to ABPA, if sponsvc = F then set equal to FBPA; if sponsvc in (M, N, V) then set equal to NBPA, otherwise set equal to OPRISM. If zip code not found in MDR Omni-CAD, set equal to '0999'
T3 Residence Region	\$2.	ben_t3_reg	N/A	N/A	Based on matching FY, FM and patzip; Set equal to T3_REG. If zip code not found in MDR Omni-CAD, leave blank.
T17 Residence Region	\$2.	ben_t17_reg	N/A	N/A	Based on matching FY, FM and patzip; Set equal to T17_REG. If zip code not found in MDR Omni-CAD, leave blank.
<b>Internally Derived Fields</b>					

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
Encounter Date	N(8)	encdate	START_DT_TM	datepart(surg_start_dt_tm)	Derived from the Surgery Start Date.
Encounter Date – Character	\$8.	encdate_c	encdate	encdate	Character format (YYYYMMDD) of the Encounter Date
Calendar Year	\$4.	cy	N/A	N/A	CY of the Encounter date
Calendar Month	\$2.	cm	N/A	N/A	CM of the Encounter date
Fiscal Year	\$4.	fy	N/A	N/A	FY of the Encounter date
Fiscal Month	\$2.	fm	N/A	N/A	FM of the Encounter date
Patient Age	8.	patage	N/A	N/A	Age in years from date of birth (from DEERS) to appointment date. If date of birth from DEERS is not available, use dob_r.
Age Group	\$1.	agegrp	N/A	N/A	If Patient Age is 0-4, set to A; if 5-14, B; if 18-24, C; if 25-34, D; if 35-44, F; if 45-64, G; if 65+, H; else X.
Primary Record Indicator	N(8)	d_primary_rec	N/A	N/A	Set to 1 for first procedure record for each case, based on sorting by SURGICAL_CASE_SK, PRIMARY_PROC_IND, and SCHED_PRIMARY_PROC_IND.
Scheduled Start to Patient in OR Time (in minutes)	N(8)	sched_start_to_patient_in	PATIENT_IN_OR_DT_TM SCHED_START_DT_TM	PATIENT_IN_OR_DT_TM SCHED_START_DT_TM	Calculate as (PATIENT_IN_OR_DT_TM - SCHED_START_DT_TM) / 60. Result is in minutes. If resulting value more than 24 hours in advance (-1,440 minutes), then cap result at -1,440. If resulting value is more than 48 hours behind (2,880 minutes) schedule, cap the result at 2,880.
Patient in OR to Surgery Start Time (in minutes)	N(8)	patient_in_to_surg_start	START_DT_TM PATIENT_IN_OR_DT_TM	START_DT_TM PATIENT_IN_OR_DT_TM	Calculate as (START_DT_TM - PATIENT_IN_OR_DT_TM) / 60. Result is in minutes. If resulting value is less than zero, then derive result as 0.
Surgery Start to PACU Time (minutes)	N(8)	surg_start_to_pacu	PATIENT_IN_PACU_DT_TM START_DT_TM	PATIENT_IN_PACU_DT_TM START_DT_TM	Calculate as (PATIENT_IN_PACU_DT_TM - START_DT_TM) / 60. Result is in minutes. If resulting value is less than zero, then derive result as null. If resulting value is more than 48 hours, cap the result at 2,880.
Time in PACU	N(8)	time_in_pacu	PATIENT_OUT_PACU_II_DT_TM PATIENT_IN_PACU_DT_TM	PATIENT_OUT_PACU_II_DT_TM PATIENT_IN_PACU_DT_TM	Calculate as PATIENT_OUT_PACU_II_DT_TM - PATIENT_IN_PACU_DT_TM) / 60. Result is in minutes.

Field	Format	SAS Field Name	Source Element 2.4	Source Element 3.0	Transformation
					<p>If resulting value is less than zero, then derive result as 0.</p> <p>If resulting value is more than 48 hours, then set to null.</p> <p>If resulting value is null and time_in_pacu_1 is not null, then set to time_in_pacu_1.</p> <p>If resulting value is null and time_in_pacu_2 is not null, then set to time_in_pacu_2.</p>
Time in PACU 1	N(8)	time_in_pacu_1	PATIENT_OUT_PACU_DT_TM PATIENT_IN_PACU_DT_TM	PATIENT_OUT_PACU_DT_TM PATIENT_IN_PACU_DT_TM	<p>Calculate as (PATIENT_OUT_PACU_DT_TM - PATIENT_IN_PACU_DT_TM) / 60.</p> <p>Result is in minutes.</p> <p>If resulting value is less than zero, then derive result as 0.</p> <p>If resulting value is more than 48 hours, then set to null.</p>
Time in PACU 2	N(8)	time_in_pacu_2	PATIENT_OUT_PACU_II_DT_TM PATIENT_IN_PACU_II_DT_TM	PATIENT_OUT_PACU_II_DT_TM PATIENT_IN_PACU_II_DT_TM	<p>Calculate as (PATIENT_OUT_PACU_II_DT_TM - PATIENT_IN_PACU_II_DT_TM) / 60.</p> <p>Result is in minutes.</p> <p>If resulting value is less than zero, then derive result as 0.</p> <p>If resulting value is more than 48 hours, then set to null.</p>
Patient In to PACU Out Time (in minutes)	N(8)	patient_in_to_pacu_out	PATIENT_OUT_PACU_II_DT_TM PATIENT_OUT_PACU_DT_TM PATIENT_IN_OR_DT_TM	PATIENT_OUT_PACU_II_DT_TM PATIENT_OUT_PACU_DT_TM PATIENT_IN_OR_DT_TM	<p>Calculate as (PATIENT_OUT_PACU_II_DT_TM - PATIENT_IN_OR_DT_TM) / 60.</p> <p>If null, then calculate as (PATIENT_OUT_PACU_DT_TM - PATIENT_IN_OR_DT_TM) / 60.</p> <p>Result is in minutes.</p> <p>If resulting value is less than zero, then derive result as null.</p> <p>If resulting value is more than 48 hours, then set to null.</p>
Anesthesia Duration	N(8)	anesthesia_duration	ANESTHESIA_INDUCTION_DT_TM ANESTHESIA_STOP_DT_TM	ANESTHESIA_INDUCTION_DT_TM ANESTHESIA_STOP_DT_TM	<p>Calculate as (anesthesia_stop_dt_tm - anesth_induction_dt_tm) / 60</p>
Time in OR	N(8)	time_in_or	PATIENT_IN_OR_DT_TM PATIENT_OUT_OR_DT_TM	PATIENT_IN_OR_DT_TM PATIENT_OUT_OR_DT_TM	<p>Calculate as (patient_out_or_dt_tm - patient_in_or_dt_tm) / 60</p>

**Table 7: File Layout for MDR Genesis Surgery Case Attendance Table**

Field	Format	SAS Name	Source Element	Transformation
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	No transformation.
Surgical Procedure Key	\$100	surg_case_proc_sk	surg_case_proc_sk	No transformation.
Case Attendance Key	\$100	case_attendance_sk	case_attendance_sk	No transformation.
Attendee Key	\$100	attendee_prsnl	attendee_prsnl	No transformation.
Role Performed	\$40	role_performed	role_perform_ref	Match to code_value_ref table where role_perform_ref matches the code_value_ref and code_set = 10170 and health_system_id=18635 and retrieve desc_description.
Perioperative Document Type	\$40	perioperative_doc_type	perioperative_doc_type_ref	Match to code_value_ref table where perioperative_doc_type_ref matches the code_value_ref and code_set = 14258 and health_system_id=18635 and retrieve desc_description.
Document Terminated Reason	\$40	doc_terminated_reason	doc_terminated_reason_ref	Match to code_value_ref table where doc_terminated_reason_ref matches the code_value_ref and code_set = 10031 and health_system_id=18635 and retrieve desc_description.
Segment	\$40	segment	segment_ref	Match to code_value_ref table where segment_ref matches the code_value_ref and code_set = 10003 and health_system_id=18635 and retrieve desc_description.
Free Text Attendee	\$100	ft_attendee	ft_attendee	No transformation.
In OR Datetime	N(8)	in_or_dt_tm	in_or_dt_tm	Converted to local time.
Out OR Datetime	N(8)	out_or_dt_tm	out_or_dt_tm	Converted to local time.
Reason for Relief	\$40	reason_for_relief	reason_for_relief_ref	Match to code_value_ref table where reason_for_relief_ref matches the code_value_ref and code_set = 100004 and health_system_id=18635 and retrieve desc_description.
Signing Attendee Indicator	N(8)	signing_attendee_ind	signing_attendee_ind	No transformation.

Field	Format	SAS Name	Source Element	Transformation
<b>Fields from MDR GENESIS Personnel</b>				
Personnel Name	\$100	personnel_name	full_name	No transformation.
Personnel NPI	\$10	personnel_npi	npi	No transformation.
Personnel EDIPN	\$10	personnel_edipn	prsnl_edipn	No transformation.
Personnel Skill Type	\$1	personnel_skill_type	skill_type	No transformation.

**Table 8: File Layout for MDR Perioperative Documentation Table**

Field	Format	SAS Name	Source Element	Transformation
Perioperative Document Key	N(8)	perioperative_doc_key	perioperative_doc_key	No transformation.
Perioperative Document Type	\$50	perioperative_doc_type	perioperative_doc_type_ref	Match to code_value_ref table where perioperative_doc_type_ref matches the code_value_ref and code_set = 14258 and health_system_id=18635 and retrieve desc_description.
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	No transformation.
Form Title	\$255	form_title_txt	form_title_txt	No transformation.
Result Title	\$255	result_title_txt	result_title_txt	No transformation.
Response	\$255	response	result_value_form_atted	No transformation.
Result Value (Text)	\$255	result_value_txt	result_value_txt	No transformation.
Specialty	\$50	specialty	specialty_ref	Match to code_value_ref table where specialty_ref matches the code_value_ref and code_set = EDW_6 and health_system_id=18635 and retrieve desc_description.
Event Key	\$100	event_sk	event_sk	No transformation.
Perioperative Document Key (Source)	\$100	src_periop_doc_sk	src_periop_doc_sk	No transformation.
Perioperative Document Surrogate Key (SK)	\$100	perioperative_doc_sk	perioperative_doc_sk	No transformation.
Group Sequence	N(8)	group_seq	group_seq	No transformation.
Segment	\$40	segment_ref	segment_ref	No transformation.

Field	Format	SAS Name	Source Element	Transformation
Stage	\$50	stage	stage_ref	Match to code_value_ref table where stage_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_description.
Perioperative Document Reference Key	\$100	periop_doc_ref_sk	periop_doc_ref_sk	No transformation.
Form Event Key	\$100	form_event_sk	form_event_sk	No transformation.
Result Nomenclature Code	\$40	codified_result_nomen	codified_result_nomen	No transformation.
Result Reference Code	\$40	codified_result_ref	codified_result_ref	No transformation.
Result Code Set	N(8)	codified_result_code_set	codified_result_code_set	No transformation.
Result Item	\$40	result_item	result_item	No transformation.
Result Personnel ID	\$100	result_prsnl	result_prsnl	No transformation.
Result Value Datetime	N(8)	result_value_dt_tm	result_value_dt_tm	Converted to local time.
Result Value (Numeric)	N(8)	result_value_numeric	result_value_numeric	No transformation.
Result (Free Text)	\$255	result_ft_item_txt	result_ft_item_txt	No transformation.
Perioperative Document Type Flag	N(8)	periop_doc_type_flg	periop_doc_type_flg	No transformation.
CPT	\$5	cpt	codified_result_nomen	if result_title_txt = 'SN - Proc - Procedure Code' then match codified_result_nomen to the Nomenclature_Ref table where vocabulary_ref in ('637890','1217','1222','654470','19350056','19350130','1231','4326105','17377005') and retrieve 'Value' as CPT.
<b>Fields from MDR GENESIS Personnel</b>				
Personnel Name	\$100	personnel_name	full_name	No transformation.
Personnel NPI	\$10	personnel_npi	npi	No transformation.
Personnel EDIPN	\$10	personnel_edipn	prsnl_edipn	No transformation.
Personnel Skill Type	\$1	personnel_skill_type	skill_type	No transformation.



**Table 9: File Layout for MDR Surgery Cancels Table**

Field	Format	SAS Name	Source Element	Transformation
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	No transformation.
Surgical Case Number	\$100	surgical_case_nbr_formatted	surgical_case_nbr_formatted	No transformation.
Financial Number (FIN)	\$40	fin	fin	No transformation.
Cancelled Reason	\$37	cancel_reason	cancel_reason_ref	Match to code_value_ref table where cancel_reason_ref matches the code_value_ref and code_set in '10035','14229', or '14774' and health_system_id=18635 and retrieve desc_description.
Cancelled Datetime	N(8)	cancel_dt_tm	cancel_dt_tm	Converted to local time.
Scheduled Surgical Area	\$40	sched_surgical_area	sched_surgical_area_ref	Match to code_value_ref table where sched_surgical_area_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Scheduled Priority	\$40	sched_priority	sched_priority_ref	Match to code_value_ref table where sched_priority_ref matches the code_value_ref and code_set = 1304 and health_system_id=18635 and retrieve desc_display.
Scheduled Patient Type	\$26	sched_patient_type	sched_patient_type_ref	Match to code_value_ref table where sched_patient_type_ref matches the code_value_ref and code_set = 71 and health_system_id=18635 and retrieve desc_display.
Encounter Date	N(8)	encdate	encdate	No transformation.
Encounter Datetime	N(8)	enc_dt_tm	enc_dt_tm	Converted to local time.
Medical Service	\$40	medical_service	medical_service	No transformation.
Calendar Year	\$4	cy	cy	No transformation.
Calendar Month	\$2	cm	cm	No transformation.
Fiscal Year	\$4	fy	fy	No transformation.

Field	Format	SAS Name	Source Element	Transformation
Fiscal Month	\$2	fm	fm	No transformation.
Case Level	\$20	case_level	case_level	No transformation.
Department	\$40	dept	dept	No transformation.
Scheduled Operating Room	\$40	sched_or	sched_or	No transformation.
Primary Surgeon	\$100	primary_surgeon	primary_surgeon	No transformation.
Surgeon Specialty	\$100	case_surgeon_specialty	case_surgeon_specialty	No transformation.
Anesthesiologist	\$100	anesthesiologist	anesthesiologist	No transformation.
Surgical Area	\$40	surgical_area	surgical_area	No transformation.
Would Class	\$40	wound_class_case	wound_class_case	No transformation.
Institution	\$40	institution	institution	No transformation.
Primary Surgeon Key	\$100	primary_surgeon_prsnl	primary_surgeon_prsnl	No transformation.
Operating Room	\$40	or	or	No transformation.
Patient EDIPN	\$10	edipn	edipn	No transformation.
Encounter Key	\$40	encounter_sk	encounter_sk	No transformation.
Scheduled Start Datetime	N(8)	sched_start_dt_tm	sched_start_dt_tm	Converted to local time.
Scheduled End Datetime	N(8)	sched_stop_dt_tm	sched_stop_dt_tm	Converted to local time.
Gender	\$10	gender_r	gender_r	No transformation.
Treatment MTF	\$4	mtf	mtf	No transformation.
Treatment Parent MTF	\$4	mtf_parent	mtf_parent	No transformation.
Unit Description	\$100	unit_name	unit_name	No transformation.
Nurse Unit Location Code (NULC)	\$45	unit_display	unit_display	No transformation.
Surgeon NPI	\$100	surgeon_npi	surgeon_npi	No transformation.
Surgeon HIPAA Taxonomy	\$10	surgeon_hipaa_taxonomy	surgeon_hipaa_taxonomy	No transformation.
Anesthesiologist NPI	\$100	anesthesiologist_npi	anesthesiologist_npi	No transformation.
Encounter Type	\$40	encounter_type	encounter_type	No transformation.

**Table 10: File Layout for MDR Surgery Delays Table**

Field	Format	SAS Name	Source Element	Transformation
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	No transformation.
Surgical Delay Key	\$100	surgical_delay_sk	surgical_delay_sk	No transformation.
Perioperative Document Type	\$50	perioperative_doc_type	perioperative_doc_type_ref	Match to code_value_ref table where perioperative_doc_type_ref matches the code_value_ref and code_set = 14258 and health_system_id=18635 and retrieve desc_description.
Segment Code	\$40	segment_ref	segment_ref	No transformation.
Delay Reason	\$50	delay_reason	delay_reason_ref	Match to code_value_ref table where delay_reason_ref matches the code_value_ref and code_set = 10033 and health_system_id=18635 and retrieve desc_description.
Sequence	N(8)	display_seq	display_seq	No transformation.
Delay Description	\$255	delay_desc	delay_desc	No transformation.
Delay Duration (minutes)	N(8)	delay_duration	delay_duration	No transformation.

**Table 11: File Layout for MDR Surgical Case Cart Pick List Table**

Field	Format	SAS Name	Source Element	Transformation
Surgical Case Key	\$100	surgical_case_sk	surgical_case_sk	No transformation.
Item Description	\$255	item_desc	description	Match to table WH_CLN_ITEM on pick_list_item = item_sk and return description.
Perioperative Document Type	\$40	perioperative_doc_type	document_type_ref	Match to code_value_ref table where document_type_ref matches the code_value_ref and code_set = 14258 and health_system_id=18635 and retrieve desc_description.
Surgical Area	\$40	surgical_area	surgical_area_ref	Match to code_value_ref table where surgical_area_ref matches the code_value_ref and code_set = 221 and health_system_id=18635 and retrieve desc_display.
Fill Location	\$40	fill_location	fill_loc	Match to code_value_ref table where fill_loc matches the code_value_ref and code_set = 220 and

Field	Format	SAS Name	Source Element	Transformation
				health_system_id=18635 and retrieve desc_display.
Return Location	\$40	return_location	return_loc	Match to code_value_ref table where return_loc matches the code_value_ref and code_set = 220 and health_system_id=18635 and retrieve desc_display.
Filled Quantity	N(8)	fill_qty	fill_qty	No transformation.
Hold Quantity	N(8)	hold_qty	hold_qty	No transformation.
Opened Quantity	N(8)	open_qty	open_qty	No transformation.
Used Quantity	N(8)	used_qty	used_qty	No transformation.
Requested Quantity	N(8)	requested_qty	requested_qty	No transformation.
Returned Quantity	N(8)	return_qty	return_qty	No transformation.
Wasted Quantity	N(8)	wasted_qty	wasted_qty	No transformation.
Case Cart Pick List Key	\$100	case_cart_pick_lst_sk	case_cart_pick_lst_sk	No transformation.
Finalized Datetime	N(8)	case_cart_finalized_dt_tm	case_cart_finalized_dt_tm	Converted to local time.
Verified Datetime	N(8)	case_cart_verfd_dt_tm	case_cart_verfd_dt_tm	Converted to local time.
Case Cart Verified By Personnel	\$100	case_cart_verfd_by_prsnl	case_cart_verfd_by_prsnl	No transformation.
Pick List Item	\$40	pick_list_item	pick_list_item	No transformation.
Item Description (free text)	\$200	ft_item_desc	ft_item_desc	No transformation.
Wasted Reason	\$40	wasted_reason_ref	wasted_reason_ref	No transformation.
Item Type Flag	N(8)	item_type_flg	item_type_flg	No transformation.
Parent Cart Pick List Key	\$100	parent_case_cart_pick_lst_sk	parent_case_cart_pick_lst_sk	No transformation.

## IX. REFRESH FREQUENCY

Weekly