22 October 2024

MHS GENESIS Encounter Episodic File BDE 3.0 for the MHS Data Repository (MDR) (Version 1.08)

Future Specification

Revision History

Version	Date	Originator	Para/Table/Fig	Description of Change
1.0	2/28/24	D. Juckett, C. Kangas	• Initial Document	• Initial Document
1.01	3/8/24	C. Kangas	• Table 3 • Appendix A.2	• Changed source of appt_stat field. • Incorporated the usage of BDE 2.4 data to fill in the missing BDE 3.0 Appointment data that was purged by Oracle Cerner from FY17-FY20.
1.02	4/10/24	C. Kangas, D. Juckett	• VI. Receiving Filters • Table 3	• Added a filter on Encounter Type • Updated logic for MTF field. • Added the PARC field. • Added the EVALVIS field. • Added Appointment Made Date.
1.03	5/30/24	C. Kangas, D. Juckett	• Table 1 • Table 3	• Added fields: PCM_NPI, PCM_NAME, PAT_ATTCH_UIC, PAT_ASSGN_UIC, PIP_PLAN_NAME, PIP_SPONSOR_STATUS, PIP_SPONSOR_RANK, PIP_SPONSOR_GRADE, PIP_SPONSOR_BRANCH, SPONSOR_PERSON_ID, MEMBER_NBR • Updated PROV_EDIPN_APPT, ATTENDING_PHYS_EDIPN, and ADMITTING_PROV_EDIPN logic
1.04	6/27/24	C. Kangas, D. Juckett	• Table 3	• Added Profile field
1.05	7/1/24	C. Kangas, D. Juckett	• Table 3	• Adjust logic for visit_dt_tm for dental encounters to use create_dt_tm.
1.06	7/3/24	C. Kangas, D. Juckett	• Table 3	• Added Financial_Class field
1.07	8/19/24	C. Kangas, D. Juckett	• Table 3	• Added DOD_Clinic_Group field
1.08	10/22/24	C. Kangas, D. Juckett	• Table 3	• DEERS Beneficiary Category update logic for no match to OTH, rather than UNK. • Added fields: PROVID_CREDITED, PROV_NPI_ CREDITED, PROV_EDIPN_ CREDITED, PROV_NAME_ CREDITED, PROV_HIPAA_ CREDITED, MEPRS1_MED_SVC, MEPRS2_MED_SVC , MEPRS3_MED_SVC • Update the transformation rules for DISPCODE_LEGACY • Add DX21-DX50 • Add CCE_DX21-CCE_DX50 • Add PC_DX21- PC_DX50 • Add CHRG_DX21- CHRG_DX50 • Rename Profile to PIP Profile

MDR GENESIS Encounter Table

I. BACKGROUND

This specification describes the transformation process required to create the Military Health System (MHS) Data Repository (MDR) GENESIS Encounter table based on data received from the Oracle Bulk Data Extract (BDE) 3.0 feeds.

II. SOURCE

The source system is the MHS GENESIS Oracle Millennium database.

III. RAW

All records in the Encounter table are based on data pulled from the raw MIP Redshift genesis_vw.encounter view. To increase the utility of the MDR Encounter table, variables from other MDR tables in the following subject areas have been added: CPT Charge, Person, Personnel, and Location. Additionally, variables from the DEERS LVM, CPT RVU Table, Omni CAD, DMHRSi, and DMISID Index tables have been added. The MDR Encounter records are processed by the TRICARE APC Grouper to add APC codes and weights. Table 1 provides a listing of raw Redshift views that are used during the creation of the MDR Encounter table.

Table 1: MIP Redshift Raw Source Views

Raw Source Table	View Name	Feed Description
Charge	genesis_vw.charge	Contains charge-level events, both CPTs and other types of charges.
Encounter	genesis_vw.encounter	Contains information related to the encounter including patient, provider, time, and location details.
Encounter Alias	genesis_vw.encntr_alias	Used to look up encounter identifiers such as the FIN.
Encounter Personnel Relationship	genesis_vw.encntr_prsnl_reltn	Contains personnel and their relationship (i.e., admitting physician, attending, etc.) to the encounter.
Schedule Appointment	genesis_vw.sch_appt	Contains appointment and scheduling information related to the encounter record.
Schedule Event Actions	genesis_vw.sch_event_action	Contains additional appointment and scheduling information related to the encounter record.
Person	genesis_vw.person	Contains person level demographic information (i.e, race).

Raw Source Table	View Name	Feed Description
Person Information	genesis_vw.person_info	Contains additional person level information (i.e., patcat).
Encounter Information	genesis_vw.encntr_info	Contains additional encounter level information.
Diagnosis	genesis_vw.diagnosis	Contains ICD-10-Dx diagnosis codes as assigned by the provider and coder.
Clinical Event	genesis_vw.clinical_event	Contains discrete events related to the medical record, including results, medications, documents, and many more.
Personnel	genesis_vw.prsnl	Contains information for all people identified within GENESIS as personnel (i.e., doctors, nurses).
Organization	genesis_vw.organization	Used to look up billing organization details (i.e., Coast Guard, DHP).
Personnel Alias	genesis_vw.prsnl_alias	Used to look up personnel identifiers such as the NPI.
Person Alias	genesis_vw.person_alias	Used to look up key person identifiers such as the EDIPI.
Code Value	genesis_vw.code_value	A reference table used to look up descriptions for many code values.
Billing Entity	genesis_vw.billing_entity	Contains descriptions of billing entities.
Health Plan	genesis_vw.health_plan	Contains descriptions of health plans such as TRICARE PRIME.
Time Zone	mdr_processing.vw_gen_mdr_time_zone	Used to identify the MTF time zone to convert UTC datetimes to local time.
Test Patients	mdr_processing.vw_gen_test_pats	Used to remove test patients from the final dataset.
Encounter Health Plan Relationship	genesis_vw.encntr_plan_reltn	Used to look up Patient Identification Process (PIP) fields
Person Organization Relationship	genesis_vw.person_org_reltn	Used to look up Patient Identification Process (PIP) fields
Health Plan	genesis_vw.health_plan	Used to look up Patient Identification Process (PIP) fields

IV. Transmission Frequency

The MDR GENESIS Encounter table is updated daily.

V. Organization

Output products: FY-based SAS datasets containing all Encounter records where the Visit Date is in a fiscal year. The Encounter tables are stored as fiscal year datasets located at: /mdr/pub/genesis3/encounter/m2/fy[##].sas7bdat.

VI. Receiving Filters

Encounter records are kept based on the following logic criteria:

- Only records with an active_ind = 1 are kept.
- Test patients are excluded.
- Records with an encounter type of 'Lifetime Pharmacy', 'History', 'Outside Documentation Only', 'Referral Tracking', or 'Care Not Rendered' are excluded.

VII. Update Process

Raw BDE feeds from Oracle are sent to MIP Redshift, and the Redshift tables and views (ex. genesis_vw.encounter) are updated daily. New and updated records are sent by Oracle each day. New records are added to the existing table. Updated records replace the original record in the table based on the ENCNTR_ID field, which is the primary key for the encounter view. Similar processes are applied to the other raw supporting views within Redshift.

Once the raw data has been updated, the MDR processes it into the analytic table as described in this specification and assigns many other internally derived variables as described in Table 3. Additional logic is necessary to get to the final level of granularity for an individual Encounter record, leading to the formation of the composite key of the MDR Encounter table: ENCNTR_ID + ENC_SFX (see Appendix B).

VIII. MDR Merges and Field Additions

This section of this functional specification describes data merges that are necessary to append fields into the MDR GENESIS Encounter table. Table 2 lists additional MDR tables that are used during ETL processing. Table 3 lists in detail all the fields added from these merges as well as any additional transformation rules.

Table 2: MDR Table Merges for MDR GENESIS Encounter Table

Merge	Date Matching	Additional Matching Methodology	Purpose
MDR CPT Charges	VISIT_DT, SERVICE_DT_TM	ENCOUNTER_SK	Adds CPT Charge fields to the Encounter, including CPT/HCPCS, modifiers, and RVUs.
MDR GENESIS Person Table	N/A	PERSON_SK	Adds patient-related fields from GENESIS such as the patient's name and other demographic fields (i.e., race, ethnicity)
MDR GENESIS Personnel Table	N/A	PERSON_SK	Adds provider-related fields from GENESIS such as the attending physician's name.
MDR GENESIS Location Table	N/A	CURRENT_LOC	Adds the MTF, MEPRS Code, time zone and other location related fields for the encounter.
DEERS Longitudinal VM (LVM)	Visit date between the begin and end dates associated with the segment	EDIPN, SPONSSN	Adds patient-related fields from DEERS such as enrollment, gender, race, date of birth, etc.
Omni Cad	Visit Date	PATZIP Sponsor Service	Adds patient-related geographic concepts such as catchment, PRISM, beneficiary region, etc.
DMHRSi	Visit Date	Provider EDIPN, Provider NPI	Adds provider-related DHA fields such as assigned MTF, provider military service, etc.
DMISID Index	Visit Date	MTF	Adds DMIS ID-related fields such as branch of service, network, TRICARE region, etc.
CPT RVU table	Calendar Year	CPT_[#], CPTMOD_[#]	Adds Work RVU and Practice Expense RVU related fields. See MDR CPT Charge table specification, Appendix A.

IX. FILE LAYOUT

The MDR GENESIS Encounter table is partitioned and stored as fiscal year SAS data sets. Table 3 provides the file layout and transformation rules.

Table 3: Fields in the MDR GENESIS Encounter Table

Field	Format	SAS Name	Source Element	Transformation Rule
Encounter Key	$100	ENCOUNTER_SK	encounter.encntr_id	Derive as character version of encntr_id using put function: encounter_sk = put(encntr_id, 21. -L);
Encounter Suffix	N(8)	ENC_SFX		Sort encounter records by encounter_sk, encounter_type, and visit_dt. Then set enc_sfx as follows: if first.encounter_sk then enc_sfx = 1; else enc_sfx + 1; See Appendix A for more detail on granularity.
Financial Information Number (FIN)	$40	FIN	encounter.encntr_id	Join to encntr_alias table where encntr_id matches and encntr_alias_type_cd = 1077 and active_ind = 1 and end_effective_dt_tm > sysdate and retrieve alias.
Encounter Type	$26	ENCOUNTER_TYPE	encounter.encntr_type_cd	Join to code_value table where encntr_type_cd matches the code_value and code_set = 71 and active_ind = 1 and retrieve display.
Visit Date & Time	N(8)	VISIT_DT_TM	reg_dt_tm, appt_dt_tm, arrive_dt_tm, inpatient_admit_dt_tm, create_dt_tm	if appt_dt_tm ne . then visit_dt_tm = appt_dt_tm else if reg_dt_tm ne . then visit_dt_tm = reg_dt_tm else visit_dt_tm = arrive_dt_tm else if encounter_type = 'Dental' then visit_dt_tm = create_dt_tm
Visit Date	N(8)	VISIT_DT	visit_dt_tm	visit_dt = datepart(visit_dt_tm)
Arrival Date & Time	N(8)	ARRIVE_DT_TM	encounter.arrive_dt_tm	Converted to local time.
Appointment Date & Time	N(8)	APPT_DT_TM	sch_appt.beg_dt_tm	Converted to local time.
Registration Date & Time	N(8)	REG_DT_TM	encounter.reg_dt_tm	Converted to local time.
Discharge Date & Time	N(8)	DISCHARGE_DT_TM	encounter.discharge_dt_tm	Converted to local time.
Military Treatment Facility (MTF)	$4	MTF	encounter.location_cd	Join to MDR Location table where the location_cd matches and return mtf. If ERSA = 1, then mtf = substr(place_of_svc_org,1,4).
Medical Service	$43	MEDICAL_SVC	encounter.med_service_cd	Join to code_value table where med_service_cd matches the code_value and code_set = 34 and active_ind = 1 and retrieve display.
Nursing Unit Location Code	$45	NURSELOC_ENC	encounter.location_cd	Join to MDR Location table where the location_cd matches and return loc_nurse_unit_disp.
Encounter ID	N(8)	ENCNTR_ID	encounter.encntr_id	No transformation.

Field	Format	SAS Name	Source Element	Transformation Rule
Encounter Class	$33	ENCOUNTER_CLASS	encounter.encntr_type_class_cd	Join to code_value table where encntr_type_class_cd matches the code_value and code_set = 69 and active_ind = 1 and retrieve display.
Encounter Status	$25	ENCOUNTER_STATUS	encounter.encntr_status_cd	Join to code_value table where encntr_status_cd matches the code_value and code_set = 261 and active_ind = 1 and retrieve display.
Admission Type	$32	ADMIT_TYPE	encounter.admit_type_cd	Join to code_value table where admit_type_cd matches the code_value and code_set = 3 and active_ind = 1 and retrieve display.
Admission Source	$43	ADMIT_SOURCE	encounter.admit_src_cd	Join to code_value table where admit_src_cd matches the code_value and code_set = 2 and active_ind = 1 and retrieve display.
Organization ID	N(8)	ORGANIZATION_ID	location.organization_id	Join to MDR Location table where the location_cd matches and return organization_id.
Billing Entity ID	N(8)	BILLING_ENTITY_ID	billing_entity.billing_entity_id	Join to billing entity table on organization_id and return billing_entity_id
Billing Entity Name	$50	BILLING_ENTITY_NAME	encounter.location_cd, location.organization_id, billing_entity.billing_entity_id	Join to billing_entity table where billing_entity_id matches and retrieve be_name, and inner join to the be_org_reltn table on billing_entity_id, and inner join to the organization table where organization_id matches and active_ind = 1.
Charged Flag	N(8)	IS_CHARGED	charge.encounter_id	Join to charge table where the encounter_id matches. If there is a match, then is_charged = 1, otherwise is_charged = 0.
Countable Flag	N(8)	IS_COUNTABLE	encounter.encntr_type_cd	If encounter_type is in (Absent Sick, Between Visit, Care Not Rendered, History, Lifetime Pharmacy, Outside Documentation Only, Pre Occupational Health, Pre Outpatient, PreRecurring, Preadmit, Preclinic, Prereg, Referral Tracking) then is_countable = 0, otherwise is_countable = 1.
Inpatient Admission Date & Time	N(8)	INPATIENT_ADMIT_DT_TM	encounter.inpatient_admit_dt_tm	Converted to local time.
Update Date & Time	N(8)	UPDT_DT_TM	encounter.updt_dt_tm	No transformation.
Last Clinic Note Date & Time	N(8)	LAST_CLINIC_NOTE_DT_TM	clinical_event.event_end_dt_tm	Join to Clinical_Event table on encntr_id, and return the end_dt_tm value on the most recent Inpatient record where the disch_dt_tm is missing.
Place of Service Organization	$150	PLACE_OF_SVC_ORG	encounter.place_of_svc_org_id organization.organization_id	Join to the organization table where e.place_of_svc_org_id = o.organization_id and return org_name.
Current Location	$40	CURRENT_LOC	encounter.location_cd	No transformation.
Discharge Disposition Code	$60	DISPCODE	encounter.disch_disposition_cd	Join to code_value table where discharge_disposition_cd matches the code_value and code_set = 19 and active_ind = 1 and retrieve display.

Field	Format	SAS Name	Source Element	Transformation Rule
Legacy Discharge Disposition Code	$2	DISPCODE_LEGACY	encounter.disch_disposition_cd	if dispcode in ('Home' 'Home or Self Care' 'Released Without Limitations' 'Returned to Duty') then dispcode_caper = '1'; else if dispcode = 'Released With Work Duty Limitations' then dispcode_caper = '2'; else if dispcode = 'Sick at Home/Quarters' then dispcode_caper = '3'; else if dispcode = 'Immediate Referral' then dispcode_caper = '4'; else if dispcode in ('Against Medical Advise' 'Elopement' 'Left Against Medical Advice') then dispcode_caper = '6'; else if dispcode = 'Admitted to Inpatient' then dispcode_caper = '7'; else if (dispcode = 'Patient has expired' or substr(dispcode,1,7) = 'Expired' or find(discharge_disposition,'CRO','i')) then dispcode_caper = '8'; else if dispcode in ('Discharged to Civilian Facility' 'Transfer to Civilian/Community Facility' 'Discharged to Joint MTF' 'Discharged to Other Federal Facility' 'Transfer to Air Force MTF' 'Transfer to Army MTF' 'Transfer to Navy MTF') then dispcode_caper = 'A'; else if dispcode = 'Transfer to SNF' then dispcode_caper = 'B'; else if dispcode = 'Transfer to Another Clinical Service' then dispcode_caper = 'C'; else if dispcode = 'Continued Stay' then dispcode_caper = 'D'; else if dispcode = 'Advice Assessment' then dispcode_caper = 'H'; else if dispcode = 'Medication Refill Forwarded' then dispcode_caper = 'M'; else if dispcode in ('Transfer to Other' 'Transfer to Short Term Facility' 'Discharged to ICF') then dispcode_caper = 'O'; else if dispcode = 'Referred for Appointment' then dispcode_caper = 'R'; else if dispcode = 'Referred to ER' then dispcode_caper = 'U';
DEERS Patient Identifier (EDIPN)	$10	EDIPN	encounter.person_id	Join to person_alias where person_id matches and person_alias_type_cd = 22 and active_ind = 1
Encounter Location (Numeric Code)	$40	ENCOUNTER_LOC_CODE	encounter.location_cd	No transformation.

Field	Format	SAS Name	Source Element	Transformation Rule
Encounter Location (Clinic Specialty)	$10	ENCOUNTER_LOC_COMPSPEC	nurseloc_enc	Capture the 2nd segment of the nurseloc_enc value using the scan function: scan(nurseloc_enc,2,'-')
Encounter Location (Location of Care)	$10	ENCOUNTER_LOC_COMPCARE	nurseloc_enc	Capture the 3rd segment of the nurseloc_enc value using the scan function: scan(nurseloc_enc,3,'-')
Encounter Key (Composite)	$100	ENCOUNTER_NK	encounter_sk	Concatenate the encounter_sk value and '18365' using the cat function: cat(encounter_sk, '18635')
Appointment ID	$10	APPTIDNO	encounter.encntr_id	Derive as character version of encntr_id using put function: encounter_sk = put(encntr_id, 21. -L);
Treatment MEPRS Code	$4	MEPRSCD	encounter.location_cd	Join to MDR Location table where location_cd matches and return MEPRS field.
Treatment MEPRS 1 Code	$1	MEPR1	meprscd	Use a substring function to take the first character of the meprscd: substr(meprscd,1,1)
Treatment MEPRS 2 Code	$2	MEPR2	meprscd	Use a substring function to take the first two characters of the meprscd: substr(meprscd,1,2)
Treatment MEPRS 3 Code	$3	MEPR3	meprscd	Use a substring function to take the three characters of the meprscd: substr(meprscd,1,3)
Patient Category (Encounter Table)	$40	PATCAT_E	encntr_info.value_cd	Join to the encntr_info table on encntr_id where the info_sub_type_cd = 109901051 and retrieve the value_cd. Then join to code_value table where value_cd matches the code_value and code_set = 100075 and active_ind = 1 and retrieve display.
Patient Category (Person Table)	$40	PATCAT_P	person_info.value_cd	Join to the person_info table on person_id where the info_sub_type_cd = 114540103 and retrieve the value_cd. Then join to code_value table where value_cd matches the code_value and code_set = 100075 and active_ind = 1 and retrieve display.
Patient Name	$74	PATNAME	person.name_full_formatted	Join to the person table on person_id and retrieve the name_full_formatted.
Person ID	$100	PERSON_SK	encounter.person_id	No transformation.
Admitting Diagnosis 1-3	$7	ADM_DX1 - ADM_DX3	diagnosis.nomenclature_id nomenclature.source_identifier	Join to the diagnosis table on encntr_id and return the first 3 values based on diag_dt_tm where the diag_type_cd = '87' to retrieve nomenclature_id. Then join to the nomenclature table where the nomenclature_id matches and retrieve the source_identifier.
Diagnosis 1-50 (Hybrid)	$7	DX1 – DX50	cce_dx[50] pc_dx[50] chrg_dx[50]	Populate up to 50 diagnosis values, based on the following hierarchy: 1. If CCE_Dx values are present, populate DX1-DX50 with them 2. If CHRG_Dx values are present, populate DX1-DX50 with them 3. If PC_Dx values are present, populate DX1-DX50 with them

Field	Format	SAS Name	Source Element	Transformation Rule
3M/CCE Diagnosis Code 1-50	$7	CCE_DX1 - CCE_DX50	diagnosis.nomenclature_id nomenclature.source_identifier	Join to the diagnosis table on encntr_id and return up to 50 records sorted by diag_priority with contributor_system_cd in (110586353,459) to retrieve the nomenclature_id. Then join to the nomenclature table where the nomenclature_id matches and retrieve the source_identifier.
PowerChart Diagnosis Code 1-50	$7	PC_DX1 - PC_DX50	diagnosis.nomenclature_id nomenclature.source_identifier	Join to the diagnosis table on encntr_id and return up to 50 records sorted by clinical_diag_priority with contributor_system_cd = 469 to retrieve the nomenclature_id. Then join to the nomenclature table where the nomenclature_id matches and retrieve the source_identifier.
Charges Diagnosis Code 1-50	$7	CHRG_DX1 - CHRG_DX50	charge_mod.field6	Join to charge table on enctr_id, then to the charge_mod table on charge_item_id to retrieve up to 50 field6 values (based on sorted field2_id) where the field1_id represents an ICD10-Dx code.
Provider EDIPN For Attending Provider	$10	PROV_EDIPN_ATT	provid_att, alias	Join to the prsnl table where provid_att = person_id. Then join to the prsnl_alias table on person_id where the alias_pool_cd = 106935631 and prsnl_alias_type_cd = 685806 and alias like '1%' and alias similar to '[0-9]{10}' and active_ind = 1 and retrieve the alias value.
Primary HIPAA Taxonomy For Attending Provider	$10	PROV_HIPAA_ATT	prov_npi_att, hipaa1	Join to MDR NPPES table on prov_npi_att and return the hipaa1 field.
Provider Name For Attending Provider	$100	PROV_NAME_ATT	provid_att, name_full_formatted	Join to the prsnl table where provid_att = person_id. Then return the name_full_formatted field.
Provider NPI For Attending Provider	$10	PROV_NPI_ATT	provid_att, alias	Join to the prsnl table where provid_att = person_id. Then join to the prsnl_alias table on provid_att where the alias_pool_cd = 4038127 and active_ind = 1 and return the alias value.
Provider ID For Attending Provider	$100	PROVID_ATT	encounter.encntr_id, encntr_prsnl_reltn.prsnl_person_id	Join to encntr_prsnl_reltn table where the encntr_prsnl_r_cd = 1119 and return the first prsnl_person_id value ordered by priority_seq.
Reason For Visit	$255	REASON_FOR_VISIT_TXT	encounter.reason_for_visit	No transformation.
Schedule Event ID	N(8)	SCH_EVENT_ID	sch_appt.sch_event_id	Join to sch_appt on encntr_id where sch_state_cd in (4536,4537) and sch_role_cd = 4572 and active_ind = 1 and retrieve sch_event_id.
Appointment Status	$20	APPT_STAT	sch_appt.sch_state_cd	Join to sch_appt on encntr_id and retrieve sch_state_cd. Then join to code_value table where sch_state_cd matches the code_value and code_set = 14233 and active_ind = 1 and retrieve display. Convert text to upper case.
Apppointment Type (full text)	$255	APPT_TYPE_TXT	sch_event.appt_synonym_free	Join to sch_appt on encntr_id, then join to sch_event on sch_event_id and retrieve appt_synonym_free.

Field	Format	SAS Name	Source Element	Transformation Rule
Assigned Appointment Duration	$3	ASSGNDUR	sch_appt.duration	Join to sch_appt on encntr_id where sch_state_cd in (4536,4537) and sch_role_cd = 4572 and active_ind = 1 and retrieve duration.
Appointment Provider ID	$100	PROVID_APPT	sch_appt.person_id	Join to sch_appt on encntr_id where role_meaning is not equal to 'PATIENT' and retrieve the person_id on the first record after sorting by the schedule_seq field.
Resource Code (scheduled)	$100	RESOURCE_CD	sch_appt.resource_cd	Join to sch_appt on encntr_id where role_meaning is not equal to 'PATIENT' and retrieve the resource_cd on the first record after sorting by the schedule_seq field.
Appointment Made Date & Time	N(8)	APPT_MADE_DT_TM	sch_event_action.action_dt_tm	Join to sch_event_action on sch_event_id where sch_action_cd = 4517 and active_ind = 1 and action_meaning = 'SCHEDULE' and retrieve the latest action_dt_tm value. If the value is missing, set to missing. If populated and earlier than the appt_dt_tm, set to action_dt_tm. Otherwise, set to the appt_dt_tm. Converted to local time.
Provider Name For Appointment Provider	$100	PROV_NAME_APPT	prsnl.name_full_formatted	Join to the prsnl table on provid_appt = prsnl.person_id and retrieve the name_full formatted.
Provider NPI For Appointment Provider	$10	PROV_NPI_APPT	prsnl_alias.alias	Join to the prsnl_alias table on prsnl.person_id = prsnl_alias.person_id where the prsnl_alias_type_cd = 4038127 and active_ind = 1 and retrieve the alias value
Provider EDIPN For Appointment Provider	$10	PROV_EDIPN_APPT	prsnl_alias.alias	Join to the prsnl_alias table on prsnl.person_id = prsnl_alias.person_id where the alias_pool_cd = 106935631 and prsnl_alias_type_cd = 685806 and alias like '1%' and alias similar to '[0-9]{10}' and active_ind = 1 and retrieve the alias value.
Provider HIPAA taxonomy for Appointment Provider	$10	PROV_HIPAA_APPT	nppes.hipaa1	Join to the MDR NPPES table on prov_npi_appt = nppes.npi and retrieve the hipaa1 value.
Attending Provider ID	N(8)	ATTENDING_PROV_ID	encounter.encntr_id encntr_prsnl_reltn.prsnl_person_id	Join to encntr_prsnl_reltn table where the encntr_prsnl_r_cd = 1119 and return the first prsnl_person_id value ordered by priority_seq.
Attending Provider HIPAA	$10	ATTENDING_PROV_HIPAA	prov_npi_att, hipaa1	Join to MDR NPPES table on prov_npi_att and return the hipaa1 field.
Attending Provider EDIPN	$10	ATTENDING_PROV_EDIPN	provid_att, alias	Join to the prsnl table where provid_att = person_id. Then join to the prsnl_alias table on person_id where the alias_pool_cd = 106935631 and prsnl_alias_type_cd = 685806 and alias like '1%' and alias similar to '[0-9]{10}' and active_ind = 1 and retrieve the alias value.
Attending Provider Name	$100	ATTENDING_PROV_NAME	provid_att, name_full_formatted	Join to the prsnl table where provid_att = person_id. Then return the name_full_formatted field.

Field	Format	SAS Name	Source Element	Transformation Rule
Attending Provider NPI	$10	ATTENDING_PROV_NPI	provid_att, alias	Join to the prsnl table where provid_att = person_id. Then join to the prsnl_alias table on provid_att where the alias_pool_cd = 4038127 and active_ind = 1 and return the alias value.
Attending Provider Skill Type	$2	ATTENDING_PROV_SKILL	prov_hipaa_att	Apply SKILLTYPE&fy.H format from /mdr/ref/caper.hskilltype.fy&fy..txt to PROV_HIPAA_ATT
Admitting Provider ID	N(8)	ADMITTING_PROV_ID	encounter.encntr_id encntr_prsnl_reltn.prsnl_person_id	Join to encntr_prsnl_reltn table where the encntr_prsnl_r_cd = 1116 and return the first prsnl_person_id value ordered by priority_seq.
Admitting Provider HIPAA	$10	ADMITTING_PROV_HIPAA	admitting_prov_id, hipaa1	Join to MDR NPPES table on admitting_prov_npi and return the hipaa1 field.
Admitting Provider EDIPN	$10	ADMITTING_PROV_EDIPN	admitting_prov_id, alias	Join to the prsnl table where admitting_prov_id = person_id. Then join to the prsnl_alias table on person_id where the alias_pool_cd = 106935631 and prsnl_alias_type_cd = 685806 and alias like '1%' and alias similar to '[0-9]{10}' and active_ind = 1 and retrieve the alias value.
Admitting Provider Name	$100	ADMITTING_PROV_NAME	admitting_prov_id, name_full_formatted	Join to the prsnl table where admitting_prov_id = person_id. Then return the name_full_formatted field.
Admitting Provider NPI	$10	ADMITTING_PROV_NPI	admitting_prov_id, alias	Join to the prsnl table where admitting_prov_id = person_id. Then join to the prsnl_alias table on admitting_prov_id where the alias_pool_cd = 4038127 and active_ind = 1 and return the alias value.
Admitting Provider Skill Type	$2	ADMITTING_PROV_SKILL	admitting_prov_hipaa	Apply SKILLTYPE&fy.H format from /mdr/ref/caper.hskilltype.fy&fy..txt to admitting_prov_hipaa
Provider Skill Type For Attending Provider	$2	PROV_SKILL_ATT	prov_hipaa_att	Apply SKILLTYPE&fy.H format from /mdr/ref/caper.hskilltype.fy&fy..txt to PROV_HIPAA_ATT
Provider Skill Type For Appointment Provider	$2	PROV_SKILL_APPT	prov_hipaa_appt	Apply SKILLTYPE&fy.H format from /mdr/ref/caper.hskilltype.fy&fy..txt to PROV_HIPAA_APPT
GENESIS Provider ID for Providers 1-6	$10	PROVID1 - PROVID6	encounter.encntr_id encntr_prsnl_reltn.prsnl_person_id	Join to encntr_prsnl_reltn table on encntr_id. Retrieve up to 6 additional providers associated with the encounter, ordered by skill_type. Populate the provid1-provid6 array with the prsnl_person_id values. If the Attending Physician is available, populate provid1 with PROVID_ATT unless the encounter_type = Recurring. If the encounter_type = Recurring, set provid1 = PROVID_APPT.

Field	Format	SAS Name	Source Element	Transformation Rule
Provider Role For Providers 1-6	$40	PROV_ROLE1 - PROV_ROLE6	encntr_prsnl_reltn. encntr_prsnl_r_cd	Join to the encntr_prsnl_reltn table on encntr_id to retrieve the encntr_prsnl_r_cd. Then join to code_value table where encntr_prsnl_r_cd matches the code_value and code_set = 333 and active_ind = 1 and retrieve display as prov_role. If the prov_role = 'Attending Provider', set prov_role1 = prov_role. Fill remaining open prov_role array values (up to 6) based on sorted skill_type.
CCE Completed Date and Time	N(8)	CCE_COMPLETED_DT_TM	coding.completed_dt_tm	Join to the coding table on encntr_id where contributor_system_cd = 459 or 110586353 and retrieve the completed_dt_tm.
CCE Encounter Status Flag	$1	CCESTAT	coding.encntr_id	Join to the coding table on encntr_id, setting ccestat = 4 for matching records where contributor_system_cd = 459 or 110586353.
PIP Plan Name	$150	PIP_PLAN_NAME	health_plan.plan_name	Join to enctr_plan_reltn table on encntr_id, then join to health plan table on health_plan_id where active_ind = 1 and return plan_name.
PIP Sponsor Status	$60	PIP_SPONSOR_STATUS	person_org_reltn. empl_occupation_cd	Join to enctr_plan_reltn table on encntr_id, then join to person_org_reltn where sponsor_person_org_reltn_id = person_org_reltn_id to obtain empl_occupation_cd. Join to code_value table where empl_occupation_cd matches the code_value and code_set = 374 and active_ind = 1 and retrieve display.
PIP Sponsor Rank	$60	PIP_SPONSOR_RANK	person_org_reltn.empl_title_cd	Join to enctr_plan_reltn table on encntr_id, then join to person_org_reltn where sponsor_person_org_reltn_id = person_org_reltn_id to obtain empl_title_cd. Join to code_value table where empl_title_cd matches the code_value and code_set = 376 and active_ind = 1 and retrieve display.
PIP Sponsor Grade	$60	PIP_SPONSOR_GRADE	person_org_reltn.empl_type_cd	Join to enctr_plan_reltn table on encntr_id, then join to person_org_reltn where sponsor_person_org_reltn_id = person_org_reltn_id to obtain empl_type_cd. Join to code_value table where empl_type_cd matches the code_value and code_set = 26 and active_ind = 1 and retrieve display.
PIP Sponsor Branch	$150	PIP_SPONSOR_BRANCH	organization.org_name	Join to enctr_plan_reltn table on encntr_id, then join to person_org_reltn where sponsor_person_org_reltn_id = person_org_reltn_id, then join to organization on organization_id and return org_name.
Sponsor Person ID	N(8)	SPONSOR_PERSON_ID	encntr_plan_reltn.person_id	Join to enctr_plan_reltn table on encntr_id and return person_id.
Member Number	$20	MEMBER_NBR	encntr_plan_reltn.member_nbr	Join to enctr_plan_reltn table on encntr_id and return member_nbr.

Field	Format	SAS Name	Source Element	Transformation Rule
PIP Profile	$40	PROFILE	encounter.person_plan_profile_type_cd	Join to code_value table where person_plan_profile_type_cd matches the code_value and code_set = 368 and active_ind = 1 and retrieve display.
Fields from MDR CPT Charge Table				
E&M Code 1 - 3, CPT/HCPCS Code 1 - 20	$5	CPT_1 - CPT_23	mdr_cpt_charge.proc	Up to 23 arrayed CPTs from MDR CPT Charge table. See Appendix B for logic.
Modifier 1; E&M Code 1–3, CPT/HCPCS Code 1 – 20	$2	CPTMOD1_1 - CPTMOD1_23	mdr_cpt_charge.cptmod1	Up to 23 arrayed CPT Modifier 1 values from MDR CPT Charge table. See Appendix B for logic.
Modifier 2; E&M Code 1–3, CPT/HCPCS Code 1 – 20	$2	CPTMOD2_1 - CPTMOD2_23	mdr_cpt_charge.cptmod2	Up to 23 arrayed CPT Modifier 2 values from MDR CPT Charge table. See Appendix B for logic.
Units of Service; E&M Code 1–3, CPT/HCPCS Code 1 - 20	N(8)	CPTUOS_1 - CPTUOS_23	mdr_cpt_charge.cptuos	Up to 23 arrayed CPT Units of Service from MDR CPT Charge table. See Appendix B for logic.
RVU, Raw Work; E&M Code 1 - 3, CPT/HCPCS Code 1 - 20	N(8)	RRVU1 – RRVU23	mdr_cpt_charge.rrvu	Up to 23 arrayed Raw Work RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
RVU, Raw Facility Practice; E&M Code 1 - 3, CPT/HCPCS Code 1 – 20	N(8)	FPRVU1 – FPRVU23	mdr_cpt_charge.fprvu	Up to 23 arrayed Raw Facility Practice Expense RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
RVU, Raw Non-Facility Practice; E&M Code 1 - 3, CPT/HCPCS Code 1 – 20	N(8)	NPRVU1 – NPRVU23	mdr_cpt_charge.nprvu	Up to 23 arrayed Raw Non-Facility Practice Expense RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
RVU, Raw Total (based on FAC_FLAG); E&M Code 1 - 3, CPT/HCPCS Code 1 – 20	N(8)	TRVU1 – TRVU23	mdr_cpt_charge.trvu	Up to 23 arrayed Raw Total RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
Non-Provider Affected Work RVU; E&M Code 1 - 3, CPT/HCPCS Code 1 – 20	N(8)	NWRVU1 – NWRVU23	mdr_cpt_charge.nwrvu	Up to 23 arrayed Enhanced Work RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
Non-Provider Affected PE RVU; E&M Code 1 - 3, CPT/HCPCS Code 1 – 20	N(8)	NPERVU1 – NPERVU23	mdr_cpt_charge.npervu	Up to 23 arrayed Enhanced Practice Expense RVU values per corresponding CPTs from MDR CPT Charge table. See Appendix B for logic.
Credited Provider ID	$100	PROVID_CREDITED	mdr_cpt_charge.provid_credited	From MDR CPT Charges, populate with the provid_credited associated with the highest sum of TRVU.

Field	Format	SAS Name	Source Element	Transformation Rule
Credited Provider NPI	$10	PROV_NPI_CREDITED	mdr_cpt_charge.prov_npi_credited	From MDR CPT Charges, populate with the prov_npi_credited associated with the highest sum of TRVU.
Credited Provider EDIPN	$10	PROV_EDIPN_CREDITED	mdr_cpt_charge.prov_edipn_credited	From MDR CPT Charges, populate with the prov_edipn_credited D associated with the highest sum of TRVU.
Credited Provider Name	$100	PROV_NAME_CREDITED	mdr_cpt_charge.prov_name_credited	From MDR CPT Charges, populate with the prov_name_credited associated with the highest sum of TRVU.
Credited Provider HIPAA Taxonomy	$10	PROV_HIPAA_CREDITED	mdr_cpt_charge.prov_hipaa_credited	From MDR CPT Charges, populate with the prov_hipaa_credited associated with the highest sum of TRVU.
Fields from MDR GENESIS Person Table				
Medical Record Number (Patient)	$40	MRN	mdr_person.mrn	Join to the MDR GENESIS Person table on person_sk and retrieve the mrn.
Test Record Indicator	N(8)	TEST_RECORD_IND	mdr_person.test_record_ind	Join to the MDR GENESIS Person table on person_sk and retrieve the test_record_ind.
Patient Social Security Number	$9	PATSSN	mdr_person.ssn	Join to the MDR GENESIS Person table on person_sk and retrieve the ssn.
Patient Gender	$1	PATSEX	mdr_person.gender	Join to the MDR GENESIS Person table on person_sk and retrieve the gender.
Patient Race	$41	RACE_GENESIS	mdr_person.race_cd	Join to the MDR GENESIS Person table on person_sk and retrieve the race value.
Patient Ethnicity Code	$1	ETHNIC	mdr_person.ethnic	Join to the MDR GENESIS Person table on person_sk and retrieve the ethnic value.
Patient Date of Birth	N(8)	PATDOB	mdr_person.birth_dt	Join to the MDR GENESIS Person table on person_sk and retrieve the birth_dt.
Sponsor Social Security Number	$9	SPONSSN	mdr_person.sponssn	Join to the MDR GENESIS Person table on person_sk and retrieve the sponssn.
Patient First Name	$20	FIRSTNAME	mdr_person.first_name	Join to the MDR GENESIS Person table on person_sk and retrieve the first_name.
Patient Last Name	$26	LASTNAME	mdr_person.last_name	Join to the MDR GENESIS Person table on person_sk and retrieve the last_name.
Person Association Reason Code	$2	PARC	mdr_person.parc	Join to the MDR GENESIS Person table on person_sk and retrieve the parc.
Fields from MDR GENESIS Personnel Table				
Provider NPI For Providers 1-6	$10	PROV_NPI1 - PROV_NPI6	mdr_personnel.npi	Join to the MDR GENESIS Personnel table where the provid[#] matches the prsnl_id and retrieve the NPI.
Provider EDIPN For Providers 1-6	$10	PROV_EDIPN1 - PROV_EDIPN6	mdr_personnel.prsnl_edipn	Join to the MDR GENESIS Personnel table where the provid[#] matches the prsnl_id and retrieve the prsnl_edipn.
HIPAA Based Skill Type for Providers 1-6	$2	SKILLH1 - SKILLH6	mdr_personnel.skill_type	Join to the MDR GENESIS Personnel table where the provid[#] matches the prsnl_id and retrieve the skill_type field.

Field	Format	SAS Name	Source Element	Transformation Rule
Provider HIPAA For Providers 1-6	$10	PROV_HIPAA1 - PROV_HIPAA6	mdr_personnel.hipaa1	Join to the MDR GENESIS Personnel table where the provid[#] matches the prsnl_id and retrieve the hipaa1 value.
Provider Name For Providers 1-6	$100	PROV_NAME1 - PROV_NAME6	mdr_personnel.full_name	Join to the MDR GENESIS Personnel table where the provid[#] matches the prsnl_id and retrieve the full_name.
Fields from the MDR GENESIS Location Table				
Clinic State	$50	CLINSTAT_R	mdr_location.state	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the state.
Clinic ZIP Code	$25	CLINZIP_R	mdr_location.postal_code	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the postal_code.
Nursing Unit Location Name	$100	UNIT_NAME	mdr_location.unit_name	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the unit_name.
Non MEPRS Reporting Site Flag	N(8)	NOMEPRS_FLAG	mdr_location.nomeprs_flag	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the nomeprs_flag.
Test Location Flag	N(8)	TEST_LOCATION_FLAG	mdr_location.test_location_flag	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the test_location_flag.
Treatment Parent MTF (GENESIS)	$4	MTF_PARENT_G	mdr_location.mtf_parent	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the mtf_parent.
Clinic Group	$17	DOD_CLINIC_GROUP	mdr_location.dod_clinic_group	Join to the MDR GENESIS Location table where the current_loc matches the location_sk and return the dod_clinic_group.
Fields from the LVM				
Patient Race Code (DEERS)	$1	RACE_DEERS	lvm.race	Fill with race associated with this EDIPN. If there is no match for this patient in the LVM, set to Z.
Patient Ethnicity (DEERS)	$1	ETHNIC_DEERS	lvm.ethnic	Fill with ethnicity associated with this EDIPN. If there is no match for this patient in the LVM, set to Z.
DEERS Beneficiary Category	$3	BENCAT	lvm.r_ben_cat_cd	Fill with bencat associated with this EDIPN. If there is no match for this patient in the LVM, set to OTH.
DEERS Patient Zip Code	$5	PATZIP	lvm.zip	Fill with ZIP Code if the visit date on the encounter record is between the begin and end date associated with the ZIP Code.
Sponsor Service from DEERS	$1	SSVCLVM	lvm.svc	Fill with Sponsor Service if the visit date on the encounter record is between the begin and end date associated with the Sponsor Service. If the visit 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.
DEERS Sponsor Service Aggregate	$1	SAGGLVM	lvm.aggsvc	Fill with Sponsor Service Aggregated if the visit date on the encounter record is between the begin and end date associated with the Sponsor Service Aggregated. If the visit 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.

Field	Format	SAS Name	Source Element	Transformation Rule
DEERS Marital Status	$1	MARITAL	lvm.ms	Fill with Marital Status if the visit date on the encounter record is between the begin and end date associated with the Marital Status.
Patient Privilege Code	$1	PRIVILEGE	lvm.priv	Fill with Medical Privilege Code if the visit date on the encounter record is between the begin and end date associated with the Medical Privilege Code.
Medicare Flag	$1	MEDICARE_FLAG	lvm.mf	Fill with Medicare Eligibility Code if the visit date on the encounter record is between the begin and end date associated with the Medicare Eligibility Code.
TRICARE Young Adult Flag	$1	TYAFLAG	lvm.tya	Fill with TRICARE Young Adult status if the visit date on the encounter record is between the begin and end date associated with the TYA status.
Alternate Care Value (ACV)	$1	ACV	lvm.acv	Fill with ACV if the visit date on the encounter record is between the begin and end date associated with the ACV.
Enrollment MTF	$4	ENR_MTF	lvm.enr	Fill with Enrollment MTF if the visit date on the encounter record is between the begin and end date associated with the enrollment of the patient to the MTF.
Health Care Delivery Program (HCDP) Code	$3	HCDPLVM	lvm.hcdp	Fill with enrollment HCDP code if the visit date of the encounter record is between the begin and end date associated with the enrollment HCDP code.
Primary Care Manager (PCM) Provider ID	$18	PCMIDLVM	lvm.pcm	Fill with PCM ID if the visit date on the encounter record is between the begin and end dates associated with the PCM ID.
DEERS Common Beneficiary Category	$1	COMBEN	lvm.cben	Derived from Beneficiary Category during LVM merge: 1 = Dep Active Duty / Guard 2 = Retired 3 = Dep of Retired / Survivor / Other / Unknown / IGR / IDG 4 = Active Duty / Guard
TRICARE Prime Remote (TPR) Eligibility Flag	$1	TPRELIG	lvm.tpr	Fill with TRICARE Prime Remote status if the visit date on the encounter record is between the begin and end date associated with the TPR status.
Primary Care Manager (PCM) Type	$1	PCM_TYPE	lvm.pcmtyp	Fill with Enrollment PCM Type if the visit date on the encounter record is between the begin and end date associated with the Enrollment PCM Type.
Assigned Health Care Delivery Program (HCDP)	$3	HCDP_ASSGN	lvm.asghcdp	Fill with assigned HCDP code if the visit date on the encounter record is between the begin and end date associated with the assigned HCDP code.
DEERS Eligibility Group	$1	ELG_GRP	lvm.elggrp	Fill with Eligibility Group if the visit date on the encounter record is between the begin and end date associated with the Eligibility Group.

Field	Format	SAS Name	Source Element	Transformation Rule
DEERS Enrollment Group	$1	ENR_GRP	lvm.enrgrp	Fill with Enrollment Group if the visit date on the encounter record is between the begin and end date associated with the Enrollment Group.
Alternate Care Value (ACV) Group	$2	ACVGROUP	lvm.acvgrp	Blank for all records after Jan 1, 2019. Derived from ACV and comben (before 1/1/18) or Enrollment Group, PCM type, Eligibility group, and comben (after 1/1/18).
PCM NPI	$10	PCM_NPI	lvm.npi	Fill with PCM NPI if the visit date on the encounter record is between the begin and end dates associated with the PCM NPI.
PCM Name	$100	PCM_NAME	lvm.pcmnm	Fill with PCM Name if the visit date on the encounter record is between the begin and end dates associated with the PCM Name.
Patient Attached UIC	$8	PAT_ATTCH_UIC	lvm.attch_uic	Fill with ATTCH_UIC if the visit date on the encounter record is between the begin and end dates associated with the ATTCH_UIC, else leave blank.
Patient Assigned UIC	$8	PAT_ASSGN_UIC	lvm.assgn_uic	Fill with ASSGN_UIC if the visit date on the encounter record is between the begin and end dates associated with the ASSGN_UIC, else leave blank.
PCM NPI Type	$1	PCM_NPI_TYPE	lvm.npitype	Fill with PCM NPI TYPE if the visit date on the encounter record is between the begin and end dates associated with the PCM NPI TYPE.
Fields from the Omni CAD				
Patient PRISM Area	$4	PRISM	patzip, sagglvm	Based on matching FY, FM and patzip; if sagglvm = A then set equal to APRISM, if sagglvm = F then set equal to FPRISM; if sagglvm in (M, N, V) then set equal to NPRISM, otherwise set equal to OPRISM.
Patient Catchment Area	$4	CATCH	patzip, sagglvm	Based on matching FY, FM and patzip; if sagglvm = A then set equal to AWORLD, if sagglvm = F then set equal to FWORLD; if sagglvm in (M, N, V) then set equal to NWORLD, otherwise set equal to OWORLD.
Patient MTF Service Area	$4	MTFSVCAREA	patzip, sagglvm	Based on matching FY, FM and patzip; if sagglvm = A then set equal to ABPA, if sagglvm = F then set equal to FBPA; if sagglvm in (M, N, V) then set equal to NBPA, otherwise set equal to OPRISM.
Beneficiary T3 Region	$2	BEN_T3_REG	patzip	Based on matching FY, FM and patzip; Set equal to T3_REG. If patzip not found in MDR Omni-CAD, leave blank.
Beneficiary T17 Region	$2	BEN_T17_REG	patzip	Based on matching FY, FM and patzip; Set equal to T17_REG. If patzip not found in MDR Omni-CAD, leave blank.

Field	Format	SAS Name	Source Element	Transformation Rule
Fields from the DMHRSi				
Personnel Category For Attending Provider	$22	PROV_CATD_ATT	dmhrsi.provcatnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Personnel Category if the visit date on the encounter record is between the begin and end date associated with the Personnel Category of the provider.
Assigned MTF For Attending Provider	$4	PROV_MTFD_ATT	dmhrsi.provmtfnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Assigned MTF if the visit date on the encounter record is between the begin and end date associated with the Assigned MTF of the provider.
Assigned Organization For Attending Provider	$8	PROV_ORGD_ATT	dmhrsi.orgnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Assigned Organization if the visit date on the encounter record is between the begin and end date associated with the Assigned Organization of the provider.
Provider Service For Attending Provider	$1	PROV_SVCD_ATT	dmhrsi.svcnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Provder Service if the visit date on the encounter record is between the begin and end date associated with the Provder Service of the provider.
Assigned Service For Attending Provider	$1	PROV_SVC_ASSGD_ATT	dmhrsi.provsvcassgnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Assigned Service if the visit date on the encounter record is between the begin and end date associated with the Assigned Service of the provider.
Assigned MEPRS Code For Attending Provider	$4	PROV_MEPRSD_ATT	dmhrsi.provmeprnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Assigned MEPRS if the visit date on the encounter record is between the begin and end date associated with the Assigned MEPRS of the provider.
Assigned UIC For Attending Provider	$8	PROV_UICD_ATT	dmhsri.provuicnm	Join to the MDR DMHRSi table on prov_edipn_att or prov_npi_att and return the Assigned UIC if the visit date on the encounter record is between the begin and end date associated with the Assigned UIC of the provider.
Personnel Category For Appointment Provider	$22	PROV_CATD_APPT	dmhrsi.provcatnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Personnel Category if the visit date on the encounter record is between the begin and end date associated with the Personnel Category of the provider.
Assigned MTF For Appointment Provider	$4	PROV_MTFD_APPT	dmhrsi.provmtfnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Assigned MTF if the visit date on the encounter record is between the begin and end date associated with the Assigned MTF of the provider.

Field	Format	SAS Name	Source Element	Transformation Rule
Assigned Organization For Appointment Provider	$8	PROV_ORGD_APPT	dmhrsi.orgnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Assigned Organization if the visit date on the encounter record is between the begin and end date associated with the Assigned Organization of the provider.
Provider Service For Appointment Provider	$1	PROV_SVCD_APPT	dmhrsi.svcnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Provider Service if the visit date on the encounter record is between the begin and end date associated with the Provider Service of the provider.
Assigned Service For Appointment Provider	$1	PROV_SVC_ASSGD_APPT	dmhrsi.provsvcassgnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Assigned Service if the visit date on the encounter record is between the begin and end date associated with the Assigned Service of the provider.
Assigned MEPRS Code For Appointment Provider	$4	PROV_MEPRSD_APPT	dmhrsi.provmeprnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Assigned MEPRS Code if the visit date on the encounter record is between the begin and end date associated with the Assigned MEPRS Code of the provider.
Assigned UIC For Appointment Provider	$8	PROV_UICD_APPT	dmhsri.provuicnm	Join to the MDR DMHRSi table on prov_edipn_appt or prov_npi_appt and return the Assigned UIC if the visit date on the encounter record is between the begin and end date associated with the Assigned UIC of the provider.
Personnel Category For Providers 1-6	$22	PROV_CATD1 - PROV_CATD6	dmhrsi.provcatnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Personnel Category if the visit date on the encounter record is between the begin and end date associated with the Personnel Category of the provider.
Assigned MTF For Providers 1-6	$4	PROV_MTFD1 - PROV_MTFD6	dmhrsi.provmtfnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Assigned MTF if the visit date on the encounter record is between the begin and end date associated with the Assigned MTF of the provider.
Assigned Organization For Providers 1-6	$8	PROV_ORGD1 - PROV_ORGD6	dmhrsi.orgnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Assigned Organization if the visit date on the encounter record is between the begin and end date associated with the Assigned Organization of the provider.
Provider Service For Providers 1-6	$1	PROV_SVCD1 - PROV_SVCD6	dmhrsi.svcnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Provider Service if the visit date on the encounter record is between the begin and end date associated with the Provider Service of the provider.
Assigned Service For Providers 1-6	$1	PROV_SVC_ASSGD1 - PROV_SVC_ASSGD6	dmhrsi.provsvcassgnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Assigned Service if the visit date on the encounter record is between the begin and end date associated with the Assigned Service of the provider.

Field	Format	SAS Name	Source Element	Transformation Rule
Assigned MEPRS Code For Providers 1-6	$4	PROV_MEPRSD1 - PROV_MEPRSD6	dmhrsi.provmeprnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Assigned MEPRS Code if the visit date on the encounter record is between the begin and end date associated with the Assigned MEPRS Code of the provider.
Assigned UIC For Providers 1-6	$8	PROV_UICD1 - PROV_UICD6	dmhsri.provuicnm	Join to the MDR DMHRSi table on prov_edipn[#] or prov_npi[#] and return the Assigned UIC if the visit date on the encounter record is between the begin and end date associated with the Assigned UIC of the provider.
Fields from the DMISID Index Table				
Base Market Code	$10	BASE_MKT_CODE	dmisid_index.base_mkt_code	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the base_mkt_code.
Treatment DMIS ID Name	$30	DMISNME	dmisid_index.dmisnme	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the dmisnme.
Expanded Market Code	$10	EXP_MKT_CODE	dmisid_index.exp_mkt_code	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the exp_mkt_code.
Facilty Type	$6	FACTYPE	dmisid_index.factype	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the factype.
Final Branch of Service	$1	FINSVC	dmisid_index.finsvc	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the finsvc.
Market Name (MTF)	$40	MKT_NAME	dmisid_index.mkt_name	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the mkt_name.
Readiness Parent MTF	$4	READINESS_PAR	dmisid_index.readiness_par	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the readiness_par.
Readiness MTF Service	$1	READINESS_SVC	dmisid_index.readiness_svc	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the readiness_svc.
Reporting Market Code	$10	REP_MKT_CODE	dmisid_index.rep_mkt_code	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the rep_mkt_code.
DHA Network	$40	REP_MKT_NAME	dmisid_index.rep_mkt_name	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the rep_mkt_name.
Market Code Type	$10	TYPE_MKT_CODE	dmisid_index.type_mkt_code	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the type_mkt_code.
Treatment MTF Branch of Service	$1	MTF_SVC	dmisid_index.ubu_svc	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the ubu_svc.
Treatment MTF Major Command	$8	MTF_CMND	dmisid_index.majcmnd	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the majcmnd.
Treatment MTF Readiness Command	$8	MTF_READINESS_CMND	dmisid_index.readiness_cmnd	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the readiness_cmnd.
Treatment MTF T17 Region	$2	MTF_T17_REG	dmisid_index.t17_reg	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the t17_reg.

Field	Format	SAS Name	Source Element	Transformation Rule
Treatment Parent MTF	$4	MTF_PARENT	dmisid_index.ubu_par	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the ubu_par.
Treatment MTF Multi-Service Market Area	$3	MTF_MSMA	dmisid_index.msm_id	Join to the DMISID Index table where the treatment mtf matches the dmisid and retrieve the msm_id.
Enrollment MTF Branch of Service	$1	ENR_SVC	dmisid_index.ubu_svc	Join to the DMISID Index table where the enrollment enr_mtf matches the dmisid and retrieve the ubu_svc.
Enrollment MTF T17 Region	$2	ENR_T17_REG	dmisid_index.t17_reg	Join to the DMISID Index table where the enrollment enr_mtf matches the dmisid and retrieve the t17_reg.
Enrollment MTF Parent	$4	ENR_PARENT	dmisid_index.ubu_par	Join to the DMISID Index table where the enrollment enr_mtf matches the dmisid and retrieve the ubu_par.
Internally Derived Fields				
Patient Age	N(8)	PATAGE	patdob, visit_dt	Derived age in years between the patdob and visit_dt.
Age Group	$1	AGEGRP	patage	If patage 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.
Ambulatory Surgery Flag	N(8)	AMBSURG	encounter_type	If encounter_type contains "Day Surgery" and MTF_SVC = A, F, N or P then ambsurg = 1, otherwise ambsurg = 0.
Source System Flag (Appointment Prefix)	$1	APPTPFIX		Set to ‘M’ for all records.
Calendar Year	$4	CY	visit_dt_tm	Extract the calendar year from visit_dt_tm.
Calendar Month	$2	CM	visit_dt_tm	Extract the calendar month from visit_dt_tm.
Fiscal Year	$4	FY	visit_dt_tm	Extract the fiscal year from visit_dt_tm.
Fiscal Month	$2	FM	visit_dt_tm	Extract the fiscal month from visit_dt_tm.
Encounter Key (PI-EDW)	N(8)	ENCOUNTER_KEY		Always missing; this is a deprecated field from PI-EDW (2.4).
GENESIS Flag	N(8)	GENESIS_FLAG		Set to 1 on all records.
Health System ID	N(8)	HEALTH_SYSTEM_ID		Set to 18635 on all records.
Inpatient Indicator of Record	$1	HOSPSTAT	encounter_type	If encounter_type = 'Inpatient' then set to 1, otherwise set to 0.
Visit Time (HH:MM)	$5	VISIT_TM	visit_dt_tm	Extract the time portion of the visit_dt_tm value using the timepart function: timepart(visit_dt_tm)
No Discharge Date Flag	N(8)	NO_DISCH_DT_FL	discharge_dt_tm	If there is no discharge_dt_tm value for the encounter, set the no_disch_dt_fl = 1, otherwise set to 0.

Field	Format	SAS Name	Source Element	Transformation Rule
Facility/Non-Facility Flag	$1	FAC_FLAG	meprs_cd mtf proc encounter_type	Apply formats from /mdr/ref/caper.facflag.IP.fy&fy2. to specific variables as follows (see MDR CPT Charge spec for details): Value Criteria R records from VA & External ERS sites F MEPR1 = A or encounter_Type = 'Inpatient' or MEPR3 = BIA or MEPRS_CD = B**5 or B**7 or MTF=0124 & MEPRS_CD = B**6 or Encounter_Type = 'Day Surgery' or at least 1 PROC is in the FCPT&fy.B informat N All other
Appointment Type	$16	APPT_TYPE	appt_type_txt	From the appointment_type_txt value, use regular expression pattern matching to derive the appt_type.
Legacy Appointment Status	$2	APPT_STAT_LEGACY	appt_stat	If appt_stat eq 'CANCELED' then appt_stat_legacy = '3'; else if appt_stat eq 'NO SHOW' then appt_stat_legacy = '4'; else if appt_stat in ('CHECKED OUT' 'CHECKED IN') then do; if walk_in_flag eq '1' then appt_stat_legacy = '5'; else if walk_in_flag eq '0' then appt_stat_legacy = '2'; end; else if appt_stat in ('CONFIRMED' 'SCHEDULED') then appt_stat_legacy = '12'; else appt_stat_legacy = '14';
Legacy Appointment Type	$6	APPT_TYPE_LEGACY	appt_type	Apply the $appttyplegacy. format to map the appt_type values to the appt_type_legacy_values.
Walk In Flag	$1	WALK_IN_FLAG	appt_type_txt	If substr(appt_type_txt,1,7) = 'Walk-In' then set the walk_in_flag = 1, otherwise set it to 0.
APC; E&M Code 1–3, CPT/HCPCS Code 1–20	$5	APC1 - APC23	TRICARE APC grouper	Derived by the TRICARE APC Grouper of CPT procedures 1 to 23. See Appendix A for more information about what records are sent to the grouper.
APC Payment Status Indicator (PSI); E&M Code 1–3, CPT/HCPCS Code 1–20	$2	APCPSI1 - APCPSI23	TRICARE APC grouper	Derived by the TRICARE APC Grouper of CPT procedures 1 to 23. See Appendix A for more information about on what records are sent to the grouper.
APC Weight (Discounted); E&M Code 1–3, CPT/HCPCS Code 1–20	N(8)	APC_WT1 - APC_WT23	TRICARE APC grouper	Derived by the TRICARE APC Grouper of CPT procedures 1 to 23. See Appendix A for more information about on what records are sent to the grouper.
APC Aggregate Weight	N(8)	APCAGGWT	apc_wt [J], J = 1 to 23	Derive as the sum of all APC_WT[#] values: ∑ APCWTJ , J=1 to 23
Overall Claim Disposition	$2	CLAIM_DISP	rt_clmdsp	Derived by the TRICARE APC Grouper.

Field	Format	SAS Name	Source Element	Transformation Rule
Claim Denial Disposition	$2	CLAIM_DEN	rt_clmdnl	Derived by the TRICARE APC Grouper.
Alternate Care Value (ACV) Group for M2	$15	ACVGRP	acvgroup	For 2018 to present, derived based on acvgroup as follows: if acvgroup = 'PR' then acvgrp='Prime' else if acvgroup = 'DP' then acvgrp='Desig Prov' else if acvgroup = 'OP' then acvgrp='Overseas Prime' else if acvgroup = 'PL' then acvgrp='Plus' else if acvgroup = 'R ' then acvgrp='Reliant' else if acvgroup = 'O ' then acvgrp='Other'
Diagnosis Group	$2	DXGRP	dx1	Use first three characters of Diagnosis 1 (DX1). See Table A1 for derivation rules.
Age Group Common	$1	EXPAGE	patage	Derived from PATAGE: A = 0-4, B = 5-14, C = 15-17, D = 18-24, E = 25-34, F = 35-44, G = 45-64, H = 65-69, I = 70-74, J = 75-79, K = 80-84, L = 85+, X = All others
Major Diagnostic Category	$2	MDC	dx1	Apply the MDC format from /mdr/ref/sadr.mdc.txt to DX1 as follows: put(substr(dx1,1,7),$mdc&fy2.z.)
Service Line	$5	SERVICE_LINE	mepr3	Apply the Service line format from /mdr/ref/slfmt to MEPR3 as follows: put(mepr3,$slfmt.);
Product Line	$7	PRODLINE	mepr3, mtf_svc	Derived based on Clinic (MEPRS3) and Treatment Service (mtf_svc). See Table A2 for derivation rules.
Patient Category	$3	PATCAT	patcat_e, patcat_p	Derive as the first 3 characters of patcat_e (if populated), otherwise derive as the first 3 characters of patcat_p.
Patient Race	$1	RACE	bencat race_genesis, race_deers	If the patient is Active Duty or Guard, use DEERS race value as primary over GENESIS race value, except for 'Other' and 'Unknown'. If the patient is not Active Duty or Guard, use GENESIS race value as primary over DEERS. See Table A3 for full derivation.
Encounter Workload Inferred Flag	N(8)	ENC_INFR_FLAG	cpt_1, cpt_4, encounter_type	Derive as 1 if cpt_1 and cpt_4 are both missing and the encounter_type is not 'Outpatient Message' or 'Between Visit', otherwise set to 0.
Recoded Sponsor Service	$1	RSPONSVC	patcat_e, patcat_p, ssvclvm	Derive from 1st character of PATCAT_E if available. Otherwise, use SSVCLVM. If A, C, F, M, N then retain value. Else if B then assign O. Else if P then assign H. Else if R then assign 4. Else if PATCAT is K71 or K78 then assign 4. Else assign X.
RVU, Enhanced Work	N(8)	RVU_EW	nwrvu1 - nwrvu23	The Enhanced Work RVUs, with modifiers, per code multiplied by the units of service; computed as: ∑ (RRVUJ*CPTUOS_J) for J=1 to 23 CPT Codes.

Field	Format	SAS Name	Source Element	Transformation Rule
RVU, Enhanced Practice Expense	N(8)	RVU_EPE	npervu1 - npervu23	The sum of Enhanced Practice Expense RVUs, with modifiers, chosen based on designation as facility or non-facility care, multiplied by the units of service, computed as: ∑ (PERVUJ*CPTUOS_J) for J=1 to 23 CPT Codes
RVU, Enhanced Total	N(8)	RVU_ET	rvu_ew, rvu_epe	Sum of RVU_EW and RVU_EPE.
Appointment Type of Record	$6	APPT_TYPE_REC	appt_type	Derive from appt_type value as standardized value. See Table A4 for full derivation.
External Resource Sharing Agreement (ERSA) Flag	N(8)	ERSA	place_of_svc_org	Set to 1 if the place_of_svc_org value contains the segment '-ERS', otherwise set to 0.
Evaluative Visit	N(8)	EVALVIS	cpt_1 – cpt_23	If at least one CPT_J (J=1-23) has an Evaluative Visit Indicator of 'Y' (put(CPT_J,$evalviscyb.) = 'Y'), then EVALVIS=1. If no CPT_J have an Evaluative Visit Indicator of 'Y' (all = 'N'), then EVALVIS=0.
MEPRS1 Medical Service Based	CHAR(1)	MEPRS1_MED_SVC	MEDICAL_SVC	MEPRS1_MED_SVC = substr(MEPRS3_MED_SVC,1,1)
MEPRS2 Medical Service Based	CHAR(2)	MEPRS2_MED_SVC	MEDICAL_SVC	MEPRS2_MED_SVC = substr(MEPRS3_MED_SVC,1,2)

MEPRS3 Medical Service Based	CHAR(3)	MEPRS3_MED_SVC	MEDICAL_SVC	if Encounter_Type = "Inpatient" then
				MEPRS3_MED_SVC=put(medical_svc,$meprmapA.);
				else
				MEPRS3_MED_SVC=put(medical_svc,$meprmap.);

Appendix A: Administrative Processing Steps and Field Additions

A.1 Granularity Overview

In order to obtain the correct level of granularity to represent professional encounter records (consistent with the legacy CAPER data model), the raw GENESIS encounter records often need to be expanded into multiple new records. Individual raw records with an encounter_type = 'Recurring' or 'Inpatient' need to be expanded into multiple records. In MHS GENESIS, a "recurring encounter" can span across many visits (ex. Physical Therapy visits). MDR ETL processing will split out each individual visit as its own MDR GENESIS Encounter record, and corresponding CPT procedures that occurred during each visit are joined to the correct visit record. Similarly, a single MHS GENESIS inpatient encounter record can span many days between admission and discharge; in MDR processing, each day of an inpatient stay is split out to its own encounter record and corresponding CPTs (ex. inpatient rounds and other inpatient professional services). Another common scenario in MHS GENESIS that requires individual 'Inpatient' encounter type records to be expanded is for Emergency Department visits that result in an inpatient stay. MDR processing will ensure that the visit to the Emergency Department is split out into a separate record with the appropriate MEPRS3 Code (ex. BIA). For this reason, the compound key required to identify a unique MDR GENESIS Encounter record is the encounter_sk + enc_sfx. The enc_sfx field is derived in processing as a simple counter that increments for these scenarios that can generate multiple visit records sourced from a single encounter_sk and/or a single FIN. The FIN is an 'alias' of the encounter_sk with MHS GENESIS that is commonly used as the encounter identifier by providers using MHS GENESIS.

A.2 Recurring Encounters

To expand 'recurring encounters' to individual visits, data from the genesis_vw.encounter view must be joined to Appointment data located within the genesis_vw.sch_appt view. Each individual appointment that was completed will generate an MDR encounter record via a merge on the encntr_id. Encounters with multiple sch_event_id records should each have their own appt_dt_tm to indicate distinct visits. Many other appointment related fields such as the Appointment Provider, Appt Type, and Appt Status can also be captured through this merge as described in Table 3. A simple fictitious example of a Recurring encounter with a single encntr_id and a single FIN that can result in multiple records with distinct sch_event_ids and incrementing enc_sfx values is shown below:

encounter_type	medical_svc	fin	encntr_id	enc_sfx	sch_event_id	visit_dt	reg_dt_tm
Recurring	Physical Therapy	5758	1049879	1	74679392	2023-08-16	2023-08-16 14:18:02
Recurring	Physical Therapy	5758	1049879	2	76302916	2023-08-23	2023-08-16 14:18:02
Recurring	Physical Therapy	5758	1049879	3	76302944	2023-08-30	2023-08-16 14:18:02
Recurring	Physical Therapy	5758	1049879	4	76302951	2023-09-07	2023-08-16 14:18:02
Recurring	Physical Therapy	5758	1049879	5	82112342	2023-09-14	2023-08-16 14:18:02

Oracle Cerner purged the MHS GENESIS Appointment data from FY17-FY20, and therefore the BDE 3.0 data surfaced in the genesis_vw.sch_appt is missing those appointment records. For the FY17-FY20

timeframe, MDR processing reverts back to using the BDE 2.4 Appointment data as the source feed in order to properly expand Recurring Encounters.

A.3 Inpatient Encounters

To expand inpatient encounters to multiple professional encounter records, the primary method will be to use the inpatient_admit_dt_tm and discharge_dt_tm values. For each date between (inclusive) those two datetime values, output one record per day of the inpatient stay and set the visit_dt to that value. A typical inpatient stay will generate one or more professional charges (ex. CPTs for rounds) per day since the inpatients are using hospital resources every day. If no discharge_dt_tm value exists, then either the patient is still in the hospital, or the encounter record was never closed and documented properly. In order to estimate inpatient encounters that were not closed properly, the clinical_event table is used, and the last_clinic_note_dt_tm value may be used as the last inpatient encounter date.

A.4 Emergency Department Admits to Inpatient

Within MHS GENESIS, encounters with an encounter_type = 'Inpatient' often start off as Emergency Department encounters. In order to not lose visibility of the Emergency Department visit, when this scenario occurs the MDR processor will create a separate encounter record with encounter_type = 'Emergency', set the MEPRS Code values to 'BIAA', and the enc_sfx value to 1. Subsequent days while the patient is in 'Inpatient' status will get their own MDR Encounter records beginning with an enc_sfx value of 2, while sharing the same encounter_sk and FIN values as the Emergency encounter record.

A.5 MDR CPT Charge join to Encounters

During daily MDR BDE 3.0 processing, the MDR CPT Charge table is built first before this MDR Encounter table is built (see MDR CPT Charge specification). All CPTs that are merged into the MDR Encounter table come from the MDR CPT Charge table, and are stored in the CPT_1-CPT_23 array. Additionally, the CPTUOS, RRVU, FPRVU, NPRVU, NWRVU, NPERVU and TRVU fields are all merged in and transposed into their 23 position arrays from the MDR CPT Charge table. For single encntr_id (single FIN) encounters (ex. not recurring), all CPTs for that FIN are merged on encntr_id, regardless of the service_dt_tm of the charge. For multi-day encounters (ex. recurring, inpatient), the merge of the CPT codes is on the encntr_id and where the visit_dt matches the service_dt of the charge. The first 3 CPT positions (CPT_1-CPT_3) are reserved for E&M codes. The remaining positions (CPT_4-CPT_23) are organized by descending total RVU (TRVU) values so that the CPT with the highest total RVU value is in position CPT_4.

A.6 LVM Merge

Append the Enrollment DMISID (MTF_ENR), Alternate Care Value (ACV), Alternate Care Value Group (ACVGROUP), Health Care Delivery Program Code (HCDP), Assigned HCDP (HCDP_ASSGN), Beneficiary Category (BENCAT), Common Beneficiary Category (COMBEN), PCM ID (PCMIDLVM), PCM Type (PCM_TYPE), Medicare Flag (MEDICARE_FLAG), Sponsor Service Aggregate (SAGGLVM), Sponsor Service (SSVCLVM), Patient Privilege Code (PRIVILEGE), Gender (GENDER), Date of Birth (PATDOB_CHAR), Race Code (RACE), Ethnic Group (ETHNIC), Marital Status (MARITAL), Eligibility Group (ELG_GRP), Enrollment Group (ENR_GRP), TPR Eligibility Flag (TPRELIG) and TRICARE Young Adult Flag (TYAFLAG) from the longitudinal LVM for Encounter data:

a. Merge to the LVM by EDIPN for the FM of the encounter date.
b. If a match is found, assign all variables as described in Table 2.

A.7 DMISID Index Merges

Merge to the MDR DMISID Index based on encounter date and Treatment MTF to append the T17 Region (MTF_T17_REG), T3 Region (MTF_T3_REG), Treatment Service (MTF_SVC), Multi-Service Market Area (MTF_MSMA), and Treatment Major Command (MTF_CMND).

Also Merge to the MDR DMIS ID Index based on encounter date and Enrollment DMIS ID (MTF_ENR) to append the Enrollment T17 Region (ENR_T17_REG), T3 Region (ENR_T3_REG), Enrollment Parent Site (ENR_PARENT) and Treatment Service (ENR_SVC).

A.8 MDR Omni CAD Merge

Merge to the MDR CAD based on Patient ZIP, Sponsor Service (after mapping to A, F, N and O), and the CAD matching the encounter date. (If Patient ZIP is not usable, the Treatment MTF Zip Code is used in its place.) The fields Patient Catchment Area (CATCH), Patient T17 Region (BEN_T17_REG), T3 Region (BEN_T3_REG), MTF Service Area (MTFSVCAREA) and PRISM Area MTF (PRISM) are added in this process.

A.9 MDR DMHRSi Basic HR Merge

Add provider information from the MDR DMHRSi Basic HR file by merging the Provider's DMHRSi extract records for the given encounter date and provider identifier. Note that only DMHRSi extract records that have both a defined start (ASSIG_START) and end (ASSIG_END) date should be considered.

A.10 Additional Derived Field Logic

Several other fields in Table 3 and their derivation rules are more completely described in the tables below.

Table A1: Diagnosis Group Derivation

ICD-10-Dx: First 3 digits	Category Number	Disease Category Name
A00-B99	1	Infections & Parasites
C00-D49	2	Neoplasms
E00-E89	3	Endocrine & Metabolism
D50-D89	4	Blood
F01-F99	5	Mental
G00-H95	6	Nerves and Senses
I00-I99	7	Circulatory System
J00-J99	8	Respiratory System
K00-K95	9	Digestive System
N00-N99	10	Genitourinary
O00-O9A	11	Pregnancy and Childbirth
L00-L99	12	Skin
M00-M99	13	Musculoskeletal
Q00-Q99	14	Congenital Anomalies
P00-P96	15	Perinatal
R00-R99	16	Ill-Defined
S00-T88	17	Injury & Poisoning
Z00-Z99	18	Supplementary Classifications
V00-Y99	19	Unknown (external causes)
Anything starting with "DOD"	20	DOD unique codes
All Others		blank

Table A2: Product Line Derivation

Product Line	Full Name Description	Service	Definition MEPRS
PC	Primary Care	A, N, P	BGA, BHA, BDA, BAA, BJA, BHB, BHI, BDC, BDB, BKA, BHZ, BGZ, BHH, BAZ, BDZ
PC	Primary Care	All except A, N, P	BGA, BHA, BDA, BAA, BJA, BHB, BHI, BDC, BDB, BKA, BHZ, BGZ, BHH
ORTHO	Orthopedics	All	BLA, BEA, BEF, BEZ, BEB, BEE, BEC, BED, BLB
MH	Mental Health	All	BFD, BFE, BFF, BFA, BFB, BFC
OBGYN	Obstetrics/Gynecology	All	BCC, BCB, BCD, BCA
OPTOM	Optometry	All	BHC, BBD
IMSUB	Internal Medicine Subspecialty	All	BAG, BAC, BAL, BAK, BAB, BAN, BAQ, BAS, BAM, BAF, BAJ, BAO, BAH, BAE, BAU, BAT, BAV
ER	Emergency Room	All	BIA
SURG	General Surgery	All	BBA
SURGSUB	Surgical Subspecialty	All	BBI, BBG, BBC, BBK, BBJ, BBH, BBB, BBZ, BBE
ENT	Otolaryngology	All	BBF
DERM	Dermatology	All	BAP
OTHER	Other	All	All other MEPRS Codes

Table A3: Race Derivation

```
* if active duty or active guard, use deers as primary over genesis, except
  for ‘other’ and ‘unknown’;

   if bencat in ('ACT','GRD') then do;
      if (race_deers='C' or race_deers='E') then race = 'E';
      else if (race_deers='N' or race_deers='G') then race = 'G';
      else if (race_deers='R' or race_deers='A') then race = 'A';
      else if ((race_deers='M' and ethnic_deers not in ('E','H','L','Q','W')) or
         race_deers = 'B') then race = 'B';
      else if ((race_deers='M' and ethnic_deers in ('E','H','L','Q','W')) or
         race_deers = 'D') then race='D';
      else if find(race_genesis,'alaska','i') then race = 'A';
      else if find(race_genesis,'asian','i') then race='B';
      else if find(race_genesis,'hawaiian','i') then race = 'D';
      else if find(race_genesis,'white','i') then race = 'E';
      else if find(race_genesis,'black','i') then race='G';
      else if race_deers='X' then race='X';
      else if race_genesis = 'Other Race' then race = 'X';
      else if race_deers='Z' then race='Z';
      else race='Z';
   end;
```

```
   * if not active duty or guard, use genesis as primary over deers;

   if bencat not in ('ACT','GRD') then do;
      if find(race_genesis,'alaska','i') then race = 'A';
      else if find(race_genesis,'asian','i') then race='B';
      else if find(race_genesis,'hawaiian','i') then race = 'D';
      else if find(race_genesis,'white','i') then race = 'E';
      else if find(race_genesis,'black','i') then race='G';
      else if (race_deers='C' or race_deers='E') then race = 'E';
      else if (race_deers='N' or race_deers='G') then race = 'G';
      else if (race_deers='R' or race_deers='A') then race = 'A';
      else if ((race_deers='M' and ethnic_deers not in ('E','H','L','Q','W')) or
         race_deers = 'B') then race = 'B';
      else if ((race_deers='M' and ethnic_deers in ('E','H','L','Q','W')) or
         race_deers = 'D') then race='D';
      else if race_genesis = 'Other Race' then race = 'X';
      else if race_deers='X' then race='X';
      else if race_deers='Z' then race='Z';
      else race='Z';
   end;
```

Table A4: Field APPT_TYPE_REC Derivation

```
* derive appt_type_rec;

if appt_type = 'Future Online' then appt_type_rec = 'FTRONL';
  else if appt_type = 'Dental' then appt_type_rec = 'DENTAL';
  else if appt_type in ('FTR','Future') then appt_type_rec = 'FTRG';
  else if appt_type = 'Group' then appt_type_rec = 'GROUP';
  else if appt_type = 'Procedure' then appt_type_rec = 'PROCG';
  else if appt_type = 'Routine' then appt_type_rec = 'ROUTG';
  else if appt_type = 'Same Day' then appt_type_rec = 'SD';
  else if appt_type = 'Same Day Online' then appt_type_rec = 'SDONL';
  else if appt_type in ('SPEC','Specialty') then appt_type_rec = 'SPECG';
  else if appt_type = 'Surgery' then appt_type_rec = 'SURGG';
  else if appt_type = 'Virtual' then appt_type_rec = 'VIRT';
  else if appt_type = 'Walk-In' then appt_type_rec = 'WALKIN';
  else appt_type_rec = appt_type;
```

Appendix B: Application of Ambulatory Grouper and Related Fields

Ambulatory Payment Classification (APC) codes and APC-related values will be added to the MDR GENESIS Encounter table. APC values are added by processing through the TRICARE APC Grouper, which assigns TRICARE 5-character APCs for every non-blank CPT position. After grouping, and after codes edits are applied, additional MHS-specific APC codes are applied by format to a select set of CPT codes for which there is no APC weight assigned by TRICARE. Only select Facility records are processed by the grouper and retain the APC and APC-related fields for all valid CPT positions. APC Payment Status Indicators (APCPSI*J*) are needed in the calculation of workload on all records.

Add grouper-related fields for all MDR GENESIS Encounters as follows:

1. Add UOSLIM_*J* and UOSSUB_*J* (not retained) and CPTUOS_*J* and PATAGE (retained).

2. Prepare input data for the APC Grouper.
   a. Modify CPT codes used to report Observation Stays only for input to the Grouper. For any CPT code converted to represent an Observation Stay, change the associated Units of Service value to 8. The modified codes and Units of Service will not be retained or used to overwrite the original fields on exit from the Grouper.
   b. Limit records sent to the APC Grouper based on the following logic:

```
if ((encounter_type in ("Observation", "Day Surgery"))
     or (encounter_type="Inpatient" and (cpt_4 in ('G0378','G0379') or
         cpt_5 in ('G0378','G0379')or cpt_6 in ('G0378','G0379') or
         cpt_7 in ('G0378','G0379') or cpt_8 in ('G0378','G0379')))
     or ((encounter_type in ("Emergency")) and
         (CPT_1 in ("99281","99282","99283","99284","99285") or
          CPT_2 in ("99281","99282","99283","99284","99285") or
          CPT_3 in ("99281","99282","99283","99284","99285"))));
```

3. Prepare and submit the input file to the 3M Grouper Plus System (GPS) TRICARE APC Grouper. The input to the APC Grouper is a flat text file based on a custom dictionary file created for the loaded production version of the TRICARE APC grouper. It allows for a total of 12 diagnoses (one Admitting Diagnosis, one Primary diagnosis and up to 9 more, one Reason for Visit diagnosis), 23 CPT codes and corresponding CPT code-related fields (e.g., modifiers). The input record has three main components:
   a. The Record Key comes from the Encounter data, is retained through the grouping process, and output on the output record with other output information. Checking the Record Key on the output information against the original Encounter ensures that APC output was, in fact, merged onto the correct Encounter.
   b. General information required by the grouper, e.g., User Key, and information describing the patient and patient condition, e.g., age, gender, diagnoses.
   c. A set of variables affiliated with each CPT code.
      - Every CPT code entering the Grouper must be accompanied by Revenue Code, Units of Service, Line Charge Procedure Date, Line Action Flag, and Professional Service Flag.
      - If any CPT code position is empty on entry to the Grouper, it will signal the Grouper to stop looking for additional CPT codes. Therefore, in the event of a blank CPT position prior to the last CPT position, non-blank CPT codes must be moved to the left-most empty position. Further, all other variables related to the CPT code must also be moved to the corresponding position among that field's values. The original positions of moved CPT codes must be tracked to enable all fields to be properly repositioned after grouping.

4. After the text file has been created, group the data with the MDR processing utilities **cgs** script, which will submit the text file to the 3M Grouper Plus System (GPS) TRICARE APC grouper.

5. The output from the APC Grouper is a flat text file read based on a custom dictionary file created for the loaded production version of the TRICARE APC grouper. It allows for a total of 12 diagnoses (one Admitting Diagnosis, one Primary diagnosis and up to 9 more, one Reason for Visit diagnosis), 23 CPT codes and corresponding CPT code-related fields. Retrieve APC Grouper output and using the APC Grouper output format, extract grouper generated APC codes (APC*J*, where *J* = 1 to 23) and associated variables and join them back to Encounter records.