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# MHS Future GENESIS Radiology

# for the

# MHS Data Repository (MDR)

**Version 1.00.31**
**Service Now Number**
**DHAINC05669941**

# MHS GENESIS Radiology
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**Revision History**

| Version | Date | Originator | Para/Tbl/Fig | Description of Change |
|---|---|---|---|---|
| 1.00.00 | 10/12/2018 | S. Keane | Initial Document | Baseline. |
| 1.00.01 | 10/24/2018 | S. Keane | VII File Layout | Updated. |
| 1.00.02 | 01/18/2019 | S. Keane | VI-IX | Updated. |
| 1.00.03 | 05/31/2019 | S. Keane | Table 2 | Update Table 2 and Remove Table 3. |
| 1.00.04 | 12/10/2019 | S. Keane | Entire Document | Change Record Key, Change Logic for records to keep, add fields from General Radiology Orders, Omit Bill Type and Revenue fields, Remove OMTF Fields, Remove FMP and Space Available Flag. Derive new fields. |
| 1.00.05 | 02/13/2020 | S. Keane | Table 2 and Section VIII | Added MTF Nurse Unit Location (nurse_unit) and updated Exclusions. |
| 1.00.06 | 02/25/2020 | S. Keane | Tables 1 and 2 and Section VIII | Add merge to MHS GENESIS Radiology Exam table. Cleanup derivation of MTF, MTF_resulted and subsequent fields. Update exclusions. |
| 1.00.07 | 03/31/2020 | S. Keane | Section V and Table 2 | Update record duplication. Update MTF derivation. Update exclusions. |
| 1.00.08 | 05/21/2020 | S. Keane | Sections VI, VII | Remove variables from MHS GENESIS Radiology Exam table. Derive MEPRS4 Code, Performing and related fields. |
| 1.00.09 | 05/29/2020 | S. Keane | Section VII | Updated derivation of CPTMOD and CPTMOD_DESC. |
| 1.00.10 | 06/19/2020 | S. Keane | Section VII | Add personnel first names, Primary Care Manager Name, Primary Care Manager NPI, PCM NPI Type Code, Service Line Ordering, and Service Line Performing. |
| 1.00.11 | 11/20/2020 | S. Keane | Section VII | Remove first/last name fields. Replace with Full Name Patient, Physician Ordering, Physician Verifying, Personnel Completing, and Personnel Non-Physician Ordering variables. |
| 1.00.12 | 02/02/2021 | S. Keane | Section VII | Updated derivation of CPTMOD, CPTMOD_DESC and SIDE. |
| 1.00.13 | 02/17/2022 | S. Keane | Section IV | Add Time Slicing, Frequency of processing, and Frequency of updates. |
| 1.00.14 | 08/19/2022 | S. Keane | Section VII | Remove decimals from diagnosis code fields. |
| 1.00.15 | 09/18/2023 | S. Keane | Entire Document | Add Bulk Data Extract (BDE) Redshift 3.0 feed logic. |
| 1.00.16 | 10/25/2024 | S. Keane | Table 2 | Update complete date logic. |
| 1.00.17 | 12/06/2024 | S. Keane | Table 2 | Replace loc_nurse_unit_display with unit_display in 3.0. |

| Version | Date | Originator | Para/Tbl/Fig | Description of Change |
|---------|------|------------|--------------|------------------------|
| 1.00.18 | 03/06/2025 | S. Keane | Section VII and X | Update join logic to Procedure table and apply format file to keep only labrad cpt codes.<br>Hide T3 fields.<br>Add T5 fields.<br>Add Section IX Special Outputs section. |
| 1.00.19 | 04/25/2025 | S. Keane | Section IV, VI, VII | Apply filter to keep only completed exams<br>Update derivation of complete_dt_tm_local<br>Include derivation of reason_for_test |
| 1.00.20 | 04/29/2025 | S. Keane | Section VII | Update T5 regions. |
| 1.00.21 | 05/05/2025 | S. Keane | Section VII | Remove Reason For Test. |
| 1.00.22 | 05/13/2025 | S. Keane | Section VII | Update Personnel ID related fields. |
| 1.00.23 | 05/21/2025 | S. Keane | Section VII | Update PATCAT derivation rules. |
| 1.00.24 | 5/22/2025 | S. Keane | Section VII | Update cptmod derivation rules. |
| 1.00.25 | 09/03/2025 | S. Keane | Section VII | Add MEPRDMIS.<br>Add FULLCOST and VARCOST.<br>Update MEPR3, MEPR1.<br>Remove MEPR2. |
| 1.00.26 | 10/07/2025 | S. Keane | Section VIII | Add Certifying Provider, Assigned DMIS.<br>Restore MEPR2. |
| 1.00.27 | 12/17/2025 | S. Keane | Section VIII | Replace  verify_phys_id with verified_prsnl_id as verified_physician_prsnl |
| 1.00.28 | 1/22/2026 | S, Keane | Section VIII | Update MEPRS Parent.<br>Update contributor system.<br>Remove VA exclusion. |
| 1.00.29 | 02/17/2026 | S. Keane | Section VII and Section VIII | • Update location derivation and exclusion rule<br>• Update mepr2, dept_status, mtf_name, unit_name, unit_display |
| 1.00.30 | 03/10/2026 | S. Keane | Section VII | • Update Primary Key Encounter_key (2.4) Encounter_sk (3.0)<br>• Update meprs_cd, mepr3<br>• Upate mtf_resulted, mtf_accesssion<br>• Relabel Service Resource Fields, MTF_resulted, MTF, SIDE. |
| 1.00.31 | 3/13/2026 | S. Keane | Section VII | • Update sr_fac |

# I. BACKGROUND

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

# II. SOURCES

The source data files used to create the MHS GENESIS Radiology tables are extracted from the MHS GENESIS PI-EDW and MIP Redshift 3.0. 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 format of the raw MHS GENESIS feeds to the MDR is described in the Department of Defense Healthcare Management System Modernization (DHMSM®) Program DRAFT Interface Control Document (ICD) for Bulk Data Extract (BDE).

# III. TRANSMISSION (FILES AND FREQUENCY)

MHS GENESIS BDE PI-EDW feeds are provided weekly and MIP Redshift 3.0 feeds are updated 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.

Output Products: The processor outputs separate SAS data sets containing all years of radiology data. The processor performs merges and field derivations and must incorporate updates to records across raw data extracts. Table 2 lists the output data sets: fyXX.sas7bdat will be stored in /mdr/pub/genesis/radiology/fyXX.sas7bdat.

Time slicing: Data are organized into fiscal year files. The Fiscal Year is determined by DATE_COMPELETE.

Frequency of processing: Data are harvested weekly. Raw data batches are harvested, processed, and appended/updated to the master file. If data are received from a fiscal year not being processed that month, they will be held to batch with all other data received prior to that fiscal year's next update batch.

Frequency of updates:
Current FY: Weekly.
Prior FY: Weekly for one quarter (October, November, and December) then semiannually (April, October).
All years prior to prior FY: Annually (October) or on an as needed basis when data corrections or updates are required.

Archiving (APUB): Use routine archiving rules and procedures of the MDR.
Receiving Filters: There are no receiving filters.

Radiology records are identified from the Financial Charges, Charge Mod, Procedure, Radiology Order, and Orders tables where HEALTH_SYSTEM_ID=18635 (PI-EDW feed only), ACTIVITY_TYPE_REF in (711 Radiology, and 254663283 Radiology) or CPT/HCPCS code begins with 7 and the Last_order_status not in ('Canceled',

'Discontinued', 'Future', 'Incomplete', 'On Hold, Med Student', 'Suspended', 'Transfer/Canceled', 'Unscheduled', 'Voided With Results', 'Voided Without Results') ) (PI-EDW feed only). We apply filter to include only completed records. All records were provided with the initial batch of data. Thereafter, new and changed records are sent each week.

## V. UPDATE PROCESSES

New raw feeds contain either insert or update records. These records shall be used to update the master MHS GENESIS radiology datasets. The primary key consists of ENCOUNTER_SK and ACCESSION AND ORDER_SK and CPT and CPTMOD. The processor shall delete duplicates before updating the table. Duplicate records, defined as those with the same primary key. When choosing among duplicate records, e.g. multiple records with the same primary key, the processor shall select the record with the most recent value for the variable: COMPLETED_DT_TM_LOCAL.

## VI. FILE MERGES

Table 1a and Table 1b describe the various datasets that are necessary to append many of the fields in the MHS GENESIS Radiology file.

### Table 1a: File Merges from PI-EDW Source Tables

| Merge | Date Matching | Key Matching |
|---|---|---|
| MHS GENESIS Orders | | |
| MHS GENESIS Radiology Order | | ORDER_SK |
| MHS GENESIS Radiology Exam | | RAD_ORDER_SK, SVC_RES_DEPT_HIER_SK |
| Service Resource Reference File | | LVL_CODE_VALUEC with RESOURCE_REF from refe.csrdhref |
| MHS GENESIS Clinical Events | | ORDER_SK |
| MHS GENESIS Encounter | | ENCOUNTER_KEY |
| MHS GENESIS Financial Charges | | ORDER_SK |
| MHS GENESIS Charges Mod | | FIN_CHARGES_SK |
| MHS GENESIS Diagnosis | | ENCOUNTER_KEY and CONTRIBUTOR_SYSTEM_REF in (459, 469, 470, 110586353, 43266689) (3M, PowerChart, PROFILE, CCE, HCPCS/CPT Dx) |
| MHS GENESIS Procedure | | ENCOUNTER_KEY and CONTRIBUTOR_SYSTEM_REF in (459, 469, 470, 110586353) (3M, PowerChart, PROFILE, CCE) |

| Merge | Date Matching | Key Matching |
|---|---|---|
| MHS GENESIS Person | | PERSON_SK |
| MHS GENESIS Personnel | | PRSNL_SK |
| MHS GENESIS Location | | LOCATION_SK |
| | | |
| Merge | Date Matching | Key Matching |
| Longitudinal VM6 (LVM6) | DATE_COMPLETE between the begin and end dates associated with the segment | EDIPN |
| Master Person Index (MPI) | | EDIPN |
| DEERS | DATE_COMPLETE | EDIPN or SSN |
| DMIS ID Index | | MTF, MTF_ENR, MTF_RESULTED |

Table 1b: File Merges from MIP Redshift 3.0 Source Views

| Source Table Name | View Name | Date Matching | Key Matching |
|---|---|---|---|
| MHS GENESIS Orders | genesis_vw.orders | | order_id |
| MHS GENESIS Order Radiology | genesis_vw.order_radiology | | order_id |
| MHS GENESIS Order Action | genesis_vw.order_action | | order_id |
| MHS GENESIS Clinical Event | | | order_id |
| MHS GENESIS Encounter | genesis_vw.encounter | | encntr_id |
| MHS GENESIS Encounter Alias | genesis_vw.encntr_alias | | encntr_id |
| MHS GENESIS Encounter Info | genesis_vw.encntr_info | | encntr_id |
| MHS GENESIS Resource Group | genesis_vw.resource_group | | resource_cd |
| MHS GENESIS Financial Charges | genesis_vw.charge | | charge_item_id |
| MHS GENESIS Charges Mod | genesis_vw.charge_mod | | charge_item_id |
| MHS GENESIS Diagnosis | genesis_vw.diagnosis | | encntr_id |
| MHS GENESIS Procedure | genesis_vw.procedure | | encntr_id |
| MHS GENESIS Clinical Event | genesis_vw.clinical_event | | event_id |
| MHS GENESIS Code Value | genesis_vw.code_value | | code_value |
| MHS GENESIS Nomenclature | genesis_vw.nomenclature | | nomenclature_id |
| MDR GENESIS Person | | | person_id |
| MDR GENESIS Personnel | | | person_id |
| MDR GENESIS Location | | | location_cd |
| MDR Longitudinal VM6 (LVM6) | | date_complete | edipn |
| MDR Master Person Index (MPI) | | | edipn |
| MDR DEERS | | date_complete | edipn or ssn |
| MDR DMIS ID Index | | | mtf,mtf_enr, mtf_resulted |
| MDR Omni-CAD | | year and month of date_complete | zip_d and sponsvc |

## VII. FILE LAYOUT

The file layout of the MHS GENESIS Radiology Table is described in Table 2. Unless specified, business rules apply to both source tables. Listed by Source table then by SAS Name.

### Table 2 File Layout for MHS GENESIS Radiology Table

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| MHS GENESIS: ORDER TABLE | | | | | |
| Exam Number | $100.00 | accession | accession | accession | None. |
| Activity Type | $40.00 | activity_type | activity_type_ref | activity_type_cd | Apply format $ord_activity_type (code set = 106). |
| Activity Type Code | $40.00 | activity_type_ref | activity_type_ref | activity_type_cd | 2.4 Apply format $ord_activity_type (code set = 106). Keep if activity_type_ref in ('711', '254663283'). 3.0 Keep if active_ind = 1 and activity_type_cd in (711, 254663283). |
| Date Time Order Completed Local | E8601DT19. | completed_dt_tm_local | completed_dt_tm | service_dt_tm, clin_relevant_updt_dt_tm | 2.4/3.0. Convert to Local Time. Format e8601dt. 3.0 Coalesce(service_dt_tm, clin_relevant_updt_dt_tm). |
| Department Status | $29.00 | dept_status | dept_status_ref | dept_status_cd | Apply format $dept_status (code set = 14281). |
| Last Order Status | $20.00 | last_order_status | last_order_status_ref | order_status_cd | 2.4 Apply format $last_order_status (code set = 6004). Keep if last_order_status_ref not in ('2542', '2544', '2545', '2546', '2547', '2549', '2552', '2553', '614538', '643467'). 3.0 keep if order_status_cd in (2543, 2548, 2550) and dept_status_cd in (0, 9312, 9316, 9321, 9332). If order_status_cd = 2550 and dept_status_cd = 0 then delete. |
| Date Time Order Local | E8601DT19. | order_dt_tm_local | order_dt_tm | orig_order_dt_tm | Convert to Local Time. Format e8601dt. |
| Order Location | $40.00 | order_loc | order_loc | future_location_faciilty_cd | None. |
| Orders File Primary Key | $100.00 | order_sk | order_sk | order_id | None. |
| Order Submission | $27.00 | order_submit | orig_communication_ref | latest_communication_type_cd | Apply format $orig_communication (code set = 6006). |
| MHS GENESIS Test Ordered Description | $100.00 | orderable_disp | orderable_disp | order_mnemonic | None. |
| MHS GENESIS Person ID | $100.00 | person_sk | person_sk | person_id | None. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| MHS GENESIS: RADIOLOGY ORDER TABLE | | | | | |
| Report Status | $40.00 | report_status | report_status_ref | report_status_cd | Apply format $ rad_report_status (code set = 14202). |
| Radiology Order Location | $40.00 | rad_order_loc | order_loc | ord_loc_cd | None. |
| MHS GENESIS: RADIOLOGY EXAM TABLE | | | | | |
| Treatment MTF | $4.00 | mtf_resulted | svc_res_dept_hier_sk | | 2.4. Match to refe_csrdhref on SVC_RES_DEPT_HIER_SK =SVC_RES_DEPT_HIER_SK. Apply format $MTF_REF to INST_REF. coalesce MTF_RESULTED, MTF_ACCESSION 3.0 Map loc_merge to code_set (220,221) If missing or invalid then mtf_accession. Use clean algorithm to remove ZZZ. |
| MHS GENESIS Service Resource Reference file (not part of BDE) | | | | | |
| MEPRS4 Code, Performing | $4.00 | sr_meprs | lvl_4_meprs, lvl_5_meprs, meprs_cd | child_resource_cd | 2.4 Match to refe_csrdhref on SVC_RES_DEPT_HIER_SK =SVC_RES_DEPT_HIER_SK. Obtain RESOURCE_REF. Next match RESOURCE_REF to LVL_CODE_VALUEC. Obtain MEPRS_CD. 3.0 use CHILD_RESOURCE_CD as RESOURCE_REF. |
| Service Resource Facility | $5.00 | sr_fac | facility | child_resource_cd | 2.4 Match to refe_csrdhref on SVC_RES_DEPT_HIER_SK =SVC_RES_DEPT_HIER_SK. Obtain RESOURCE_REF. Next match RESOURCE_REF to LVL_CODE_VALUEC. Obtain FACILITY. 3.0 substring(regexp_replace(unit_display, '^ZZDONOTUSE \*', ''), 1, 5) |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Service Resource Nurse Unit Location | $40.00 | sr_loc | lvl_4_desc, lvl_5_desc, lvl_desc | child_resource_cd | 2.4 Match to refe_csrdhref on SVC_RES_DEPT_HIER_SK =SVC_RES_DEPT_HIER_SK. Obtain RESOURCE_REF. Next match RESOURCE_REF to LVL_CODE_VALUEC. Obtain LVL_DESC. 3.0 use CHILD_RESOURCE_CD as RESOURCE_REF. |
| MHS GENESIS: ENCOUNTER TABLE | | | | | |
| Admission Type | $40.00 | admit_type | admit_type_ref | admit_type_cd | 2.4 Apply format $admit_type (code set = 3). 3.0 Apply code set 71. |
| Discharge Disposition Code | $60.00 | dispcode | discharge_disposition_ref | disch_disposition_cd | Apply format $discharge_disposition (code set = 19). |
| Encounter PI-EDW Key | N(8) | encounter_key | encounter_key | n/a | None. |
| Encounter NK | $100.00 | encounter_nk | encounter_nk | n/a | None. |
| Encounter Key Secondary | $100.00 | encounter_sk | encounter_sk | encntr_id | None. |
| Encounter Status | $25.00 | encounter_status | encounter_status_ref | encntr_status_cd | Apply format $encounter_status (code set = 261). |
| Encounter Type | $22.00 | encounter_type | patient_type_ref | encntr_type_cd | Apply format $patient_type (code set =71). |
| Encounter Classification | $33.00 | encounter_type_class | encounter_type_class_ref | encntr_type_class_cd | Apply format $encounter_type_class (code set = 69). |
| Financial Information Number (FIN) | $40.00 | fin_e | formatted_financial_nbr | alias | 2.4 No transformation. 3.0 from encntr_alias, get ALIAS as FIN_E where encntr_alias_type_cd = 1077 and active_ind = 1 and beg_effective_dt_tm < sysdate and end_effective_dt_tm > sysdate. |
| Reason For Visit | $255.00 | reason_for_visit_txt | reason_for_visit_txt | reason_for_visit | None. |
| MHS GENESIS: FINANCIAL CHARGES TABLE | | | | | |
| Charge Description | $255.00 | charge_desc | charge_desc | charge_description | None. |
| Charge Type | $51.00 | charge_type | charge_type_ref | charge_type_cd | None. |
| Financial Charges Primary Key | $100.00 | fin_charges_sk | fin_charges_sk | charge_item_id | None. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|-------|--------|----------|--------------------|-----------------------|---------------|
| Institution Name | $60.00 | institution_type | institution_ref | institution_cd | Apply format $institution_type (code set = 221). |
| Medical Service | $40.00 | medical_service | medical_service_ref | med_service_cd | Apply format $medical_service (code set = 34). |
| Date Time Service Local | E8601DT19. | service_dt_tm_local | service_dt_tm | service_dt_tm | Convert to Local Time. Format e8601dt. |
| **MHS GENESIS: CHARGE MOD TABLE** | | | | | |
| Procedure Code Modifier | $2.00 | cptmod | field6 | field6 | 2.4/3.0 Match on fin_charges_sk. Obtain field6. Apply code set 14002 and trim (desc_meaning) = ('MODIFIER') OR   (field3_sk in apply format $cptmods (code set = 17769) and field3_sk not in ('34935489', '34939105')).  if substr(cpt, 1, 1) not in ('7', '8') and missing(cptmod) then     cptmod = 'TC'. |
| Procedure Code  Modifier Description | $200.00 | cptmod_desc | field7 | field7 | Match on fin_charges_sk. Obtain field7. Apply code set 14002 and trim (desc_meaning) = ('MODIFIER') OR   (field3_sk in apply format $cptmods (code set = 17769) and field3_sk not in ('34935489', '34939105')). |
| CHGS Diagnosis Code J, where J = 1-n, and maxN = 20 | $200.00 | dx_chgs_1 | field6 | field6 | Transpose field 6 where (field1_sk="3693"). Order by Field2_SK.  Keep first 20 result variables. Remove decimal point where applicable. |
| CHGS Diagnosis Code Description J, where J = 1-n, and maxN = 20 | $200.00 | dx_chgs_desc_1 | field7 | field7 | Transpose field 7 where (field1_sk="3693"). Order by Field2_SK.  Keep first 20 result variables. |
| Procedure Code Side | $200.00 | side | field 6 | field 6 | Match on fin_charges_sk. Obtain field6. Apply code set 14002 and trim (desc_meaning) = ('MODIFIER') AND field3_sk in ('34935489', '34939105'). |
| **MHS GENESIS Clinical Event** | | | | | |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| ~~Reason for Test~~ | ~~$100.00~~ | ~~reason_for_test~~ | ~~N/A~~ | ~~event_tag~~ | ~~2.4 None. 3.0 Get event_tag as Reason_For_Test from clinical_event matching on order_sk where event_cd in ((106540105, 111861135, 113187987, 114608481, 114608487, 114608505, 114608511, 114608547, 116199235, 116301939, 15447104407, 25999705, 319307317, 3346969, 4161291, 423974387, 4257739, 45331173, 427781,5763654399, 5763657291, 5763958477, 5763958981, 709469, 818343149, 8259064531, 9755155559).~~ |
| **MHS GENESIS: PROCEDURE TABLE** | | | | | |
| Date Time Procedure Local | DATETIME19. | proc_dt_tm_local | proc_dt_tm_local | proc_dt_tm | Convert to Local Time. Format e8601dt. |
| Procedure File Primary Key | $100.00 | procedure_sk | procedure_sk | procedure_id | 2.4 None. 3.0 Merge to Procedure Table by encounter Key where active_ind = 1 and end_effective_dt_tm > sysdate. Merge to Nomenclature using nomenclature_id and principle_type_cd = 1263 and .source_vocabulary_cd = 1217 and n2.contributor_system_cd in (459, 469, 470, 110586353). Apply labrad format file to keep only labrad cpt codes. |
| **MHS GENESIS: DIAGNOSIS TABLE** | | | | | |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| CCE Diagnosis Code K, where K = 1-n, and maxN = 20 | $60.00 | dx_cce_1 | diag_nomen | source_identifier | 2.4 Merge to Diagnosis by Encounter key and CONTRIBUTOR_SYSTEM_REF in (459, 469, 470, 110586353, 43266689).  Merge to Nomenclature on DIAG_NOMEN = nomenclature_sk and vocabulary_ref ='19350056'  and active_ind = 1 and health_system_id=18635. Obtain "Value".  Order by PRIORITY_SEQ. Remove decimal point where applicable. 3.0 From nomenclature, obtain source_identifier as  dx_cce, where source_vocabulary_cd = 19350056 and active_ind = 1. Remove decimal point where applicable. |
| CCE Diagnosis Code Description K, where K = 1-n, and maxN = 20 | $255.00 | dx_cce_desc_1 | diag_nomen | source_string | 2.4 Merge to Diagnosis by Encounter key and CONTRIBUTOR_SYSTEM_REF in (459, 469, 470, 110586353, 43266689).  Merge to Nomenclature on DIAG_NOMEN = nomenclature_sk and vocabulary_ref ='19350056'  and active_ind = 1 and health_system_id=18635. Obtain "Description".  Order by PRIORITY_SEQ. 3.0 From nomenclature, obtain source_string as  dx_cce_desc, where source_vocabulary_cd = 19350056 and active_ind = 1. |
| MHS GENESIS: LOCATION TABLE | | | | | |
| GENESIS Go Live Date | MMDDYY10. | gen_begin_dt | gen_begin_dt | gen_begin_dt | GEN_BEGIN_DT; Match loc_merge = location_sk. |
| Location Facility Patient Care Node Indicator | N(8) | loc_facility_patcare_node_ind | loc_facility_patcare_node_ind | loc_facility_patcare_node_ind | LOC_FACILITY_PATCARE_NODE_IND; Match loc_merge = location_sk. |
| Ordering MTF | $4.00 | mtf | mtf | mtf | MTF; where loc_merge = location_sk. . If missing MTF then mtf_accession. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| MEPRS4 Code, Ordering | $4.00 | meprs_cd | meprs_cd | meprs_cd | MEPRS_CD; where loc_merge = location_sk, if missing(meprs_cd) then do; meprs_cd = ifc(if not missing(mepr3), cats(mepr3, 'A'), 'UNK'); end. |
| No MTF MEPRS Code Flag | N(8) | nomeprs_flag | nomeprs_flag | nomeprs_flag | NOMEPRS_FLAG; where loc_merge = location_sk |
| Parent MTF Name | $40.00 | organization_name | organization_name | organization_name | ORGANIZATION_NAME; where loc_merge = location_sk. |
| Test Location Flag | N(8) | test_location_flag | test_location_flag | test_location_flag | TEST_LOCATION_FLAG; where loc_merge = location_sk. |
| Nurse Unit Display | $45.00 | unit_display | unit_display | unit_name | 2.4 UNIT_DISPLAY; where loc_merge = location_sk.  3.0 display for loc_nurse_unit_cd; apply code_set 220. |
| Nurse Unit Name | $100.00 | unit_name | unit_name | unit_name | 2.4 UNIT_NAME; where loc_merge = location_sk.. 3.0 display for loc_nurse_unit_cd; apply code_set 220. |
| ~~MTF Nurse Unit Location~~ | ~~$45.00~~ | ~~nurse_unit~~ | ~~loc_nurse_unit_disp~~ | ~~unit_display~~ | ~~2.4 LOC_NURSE_UNIT_DISP; where loc_merge = location_sk.3.0 unit_display where loc_merge = location_sk.~~ |
| **MHS GENESIS: PERSON TABLE** | | | | | |
| Patient Name | $61.00 | name | full_name | full_name | FULL_NAME; match on person_sk. |
| Patient IPI | $10.00 | ipi | ipi | ipi | IPI; match on person_sk. |
| Patient Test Flag | N(8) | patient_test_flag | test_record_ind | test_record_ind | TEST_RECORD_IND;  match on person_sk. |
| **MHS GENESIS: PERSONNEL TABLE** | | | | | |
| Ordering Physician | $100 | order_doc_prsnl | order_doc_prsnl | order_physician_id | 2.4 None. 3.0 Use order_physician_id as order_doc_prsnl. |
| Physician Ordering EDIPN | $10.00 | prov_ord_edipn | prsnl_edipn | prsnl_edipn | 2.4 EDIPN; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |
| Physician Ordering Flag | $1.00 | prov_ord_flag | test_record_ind | test_record_ind | 2.4 TEST_RECORD_IND; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Physician Ordering HIPAA Taxonomy | $10.00 | prov_ord_hipaa | hipaa1 | hipaa1 | 2.4 HIPAA1; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |
| Physician Ordering Name | $61.00 | prov_ord_name | full_name | full_name | 2.4 FULL_NAME; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |
| Physician Ordering MD Flag | N(8) | prov_ord_md_flag | physician_ind | physician_ind | 2.4 PHYSICIAN_IND; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |
| Physician Ordering NPI | $100.00 | prov_ord_npi | npi | npi | 2.4 NPI; Match on order_doc_prsnl = prsnl_sk. 3.0 Use order_physician_id as order_doc_prsnl. |
| Verifying Physician | $100 | verified_physician_prsnl | verified_physician_prsnl | verified_physician_prsnl | 2.4 None. 3.0 Use clinical event verified_prsnl_id and not charge verify_phys_id as verified_physician_prsnl.Match on verified_physician_prsnl = prsnl. |
| Physician Verifying EDIPN | $10.00 | prov_verf_edipn | prsnl_edipn | prsnl_edipn | EDIPN; Match on verified_physician_prsnl = prsnl. |
| Physician Verifying Flag | $1.00 | prov_verf_flag | test_record_ind | test_record_ind | TEST_RECORD_IND; Match on verified_physician_prsnl = prsnl. |
| Physician Verifying HIPAA Taxonomy | $10.00 | prov_verf_hipaa | hipaa1 | hipaa1 | HIPAA1; Match on verified_physician_prsnl = prsnl. |
| Physician Verifying Name | $61.00 | prov_verf_name | full_name | full_name | FULL_NAME; Match on verified_physician_prsnl = prsnl. |
| Physician Verifying MD Flag | N(8) | prov_verf_md_flag | physician_ind | physician_ind | PHYSICIAN_IND; Match on verified_physician_prsnl = prsnl. |
| Physician Verifying NPI | $100.00 | prov_verf_npi | npi | npi | NPI; Match on verified_physician_prsnl = prsnl. |
| Completed Personnel | $100 | completed_prsnl | completed_prsnl | action_personnel_id | 2.4 None. 3.0 Use action_personnel_id as completed_prsnl. |
| Personnel Completing EDIPN | $10.00 | prsnl_compl_edipn | prsnl_edipn | prsnl_edipn | 2.4 EDIPN; Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |
| Personnel Completing Flag | $1.00 | prsnl_compl_flag | test_record_ind | test_record_ind | 2.4 TEST_RECORD_IND; Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Personnel Completing HIPAA Taxonomy | $10.00 | prsnl_compl_hipaa | hipaa1 | hipaa1 | 2.4 HIPAA1; Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |
| Personnel Completing Name | $61.00 | prsnl_compl_name | full_name | full_name | 2.4 FULL_NAME; Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |
| Personnel Completing MD Flag | N(8) | prsnl_compl_md_flag | physician_ind | physician_ind | 2.4 PHYSICIAN_IND; Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |
| Personnel Completing NPI | $100.00 | prsnl_compl_npi | npi | npi | 2.4 NPI Match on completed_prsnl = prsnl_sk. 3.0 Use action_personnel_id as completed_prsnl. |
| Order Personnel | $100 | order_prsnl | order_prsnl | order_provider_id | 2.4 None. 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering EDIPN | $10.00 | prsnl_ord_edipn | prsnl_edipn | prsnl_edipn | 2.4 EDIPN; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering Flag | $1.00 | prsnl_ord_flag | test_record_ind | test_record_ind | TEST_RECORD_IND; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering HIPAA | $10.00 | prsnl_ord_hipaa | hipaa1 | hipaa1 | HIPAA1; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering Name | $61.00 | prsnl_ord_name | full_name | full_name | FULL_NAME; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering MD Flag | N(8) | prsnl_ord_md_flag | physician_ind | physician_ind | PHYSICIAN_IND; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| Personnel Ordering NPI | $100.00 | prsnl_ord_npi | npi | npi | NPI; Match on order_prsnl = prsnl_sk 3.0 Use order_provider_id as order_prsnl. |
| MHS GENESIS Encounter subject area: RAW_USER_DEF_HIST | | | | | |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|-------|--------|----------|--------------------|------------------------|---------------|
| Beneficiary Category on Record | $40.00 | bencat_e | bencat_e | display | 2.4 Match on encounter_sk = parent_entity_sk and parent_entity_name = 'ENCOUNTER' and user_defined_type_REF = '109901057'; then apply BENCAT format. 3.0 From encntr_info, match on encntr_id where info_sub_type_cd = 109901057 and active_ind = 1 beg_effective_dt_tm < sysdate and end_effective_dt_tm > sysdate; Apply code set 100070. |
| PATCAT Encounter Code | $40.00 | patcat_e | patcat_e | display | 2.4 Match on encounter_sk = .parent_entity_sk and parent_entity_name = 'ENCOUNTER' and user_defined_type_REF = '109901051'; then apply PATCAT format. 3.0   ei as (SELECT encntr_id, value_cd, row_number() over (PARTITION BY encntr_id ORDER BY beg_effective_dt_tm desc, updt_dt_tm desc) as rn        FROM genesis_vw.encntr_info        WHERE active_ind = 1 AND info_sub_type_cd = 109901051) LEFT JOIN ei  ON e.encntr_id = ei.encntr_id AND ei.rn = 1 LEFT JOIN genesis_vw.code_value cvei        ON ei.value_cd = cvei.code_value AND cvei.code_set = 100075 AND cvei.active_ind = 1. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| PATCAT Person Code | $40.00 | patcat_p | patcat_p | display | 2.4 Match on person_sk = parent_entity_sk and parent_entity_name = 'PERSON' and user_defined_type_REF = '114540103'; then apply PATCAT format. 3.0 pi as (SELECT person_id, value_cd, row_number() over (PARTITION BY person_id ORDER BY beg_effective_dt_tm desc, updt_dt_tm desc) as rn FROM genesis_vw.person_info WHERE active_ind = 1 AND info_sub_type_cd = 114540103) LEFT JOIN pi ON e.person_id = pi.person_id AND pi.rn = 1 LEFT JOIN genesis_vw.code_value cvpi ON pi.value_cd = cvpi.code_value AND cvpi.code_set = 100075 AND cvpi.active_ind = 1. |
| **MDR: Master Person Index (MPI)** | | | | | |
| Person ID | $10.00 | edipn | edipn | n/a | None. |
| Person Association Reason Code | $2.00 | parc | parc | n/a | None. |
| Sponsor ID | $9.00 | sponssn | spssn | n/a | None. |
| Patient SSN | $9.00 | ssn | pssn | n/a | None. |
| **MDR: Longitudinal VM6 (LVM6)** | | | | | |
| ACV | $1.00 | acv_d | acv | n/a | None. |
| ACV Group | $2.00 | acvgroup | acvgrp | n/a | In MDR, when preparing the M2 feed map "PR" to "Prime" "DP" to "Designated Provider" "OP" to "Overseas Prime" "PL" to "Plus" "O" to "Other" "R" to "Reliant". |
| Beneficiary Category | $3.00 | bencat_d | ben | n/a | None. |
| Ben Cat Common | $1.00 | comben_d | cben | n/a | None. |
| Patient Date of Birth | N(8) | patdob | dob | n/a | None. |
| Eligibility Group | $1.00 | elg_grp | elggrp | n/a | None. |
| Enrollment Group | $1.00 | enr_grp | enrgrp | n/a | None. |
| Patient Ethnicity | $1.00 | ethnic | ethnic | n/a | None. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Patient Gender | $1.00 | gender_d | sex | n/a | None. |
| HCDP - Enrolled | $3.00 | hcdp | hcdp | n/a | None. |
| HCDP - Assigned | $3.00 | hcdp_asgn | asghcdp | n/a | None. |
| LVM4 Match Indicator | N(8) | lvm_match | match | n/a | None. |
| DEERS Marital Status | $1.00 | marital | ms | n/a | None. |
| DEERS Medicare Flag | $11.00 | medicare_flag | mf | n/a | None. |
| Enrollment MTF | $4.00 | mtf_enr | enr | n/a | None. |
| PCM ID | $18.00 | pcm_id | pcm | n/a | None. |
| PCM Type | $1.00 | pcm_type | pcmtyp | n/a | None. |
| Privilege Code | $1.00 | privilege | priv | n/a | None. |
| Patient Race | $1.00 | race | race | n/a | If RACE is blank, then RACE = 'Z'. |
| Relationship to Sponsor | $1.00 | rel | rel | n/a | None. |
| Sponsor Service | $1.00 | sponsvc | svc | n/a | None. |
| Sponsor Service, Aggregate | $1.00 | svcagg | aggsvc | n/a | None. |
| TPR Eligibility Flag | $1.00 | tpr | tpr | n/a | None. |
| Beneficiary Zip Code | $5.00 | zip_d | zip | n/a | None. |
| **DEERS or PCM Table (tbd)** | | | | | |
| Primary Care Manager Name | $40 | pcmid_nm | d_mi_pcm_nm | n/a | D_MI_PCM_NM from DEERS merge. |
| Primary Care Manager NPI | $10 | pcmid_npi | d_pcm_np_id | n/a | D_PCM_NP_ID from DEERS merge. |
| PCM NPI Type Code | $1 | pcmid_npi_typ | d_pcm_np_id_typ_cd | n/a | D_PCM_NP_ID_TYP_CD from DEERS merge. |
| **MDR: DMISID INDEX** | | | | | |
| Performing CMAC Locality Code | $3.00 | cmaccd | locality | n/a | Convert 2 digit "Locality" to 3 digit (e.g. add leading zero). |
| MEPRS Parent | $4.00 | meprdmis | n/a | n/a | MEPRS Parent (MEPR_PAR) of the MEPRS4 Code, Performing (sr_meprs). |
| Treatment MTF Major Command | $8.00 | mtf_cmd | majcmnd | n/a | Derive using mtf_resulted. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Enrollment Parent MTF | $4.00 | mtf_enr_parent | mtf_parent_rec | n/a | Derive using mtf_enr. |
| Enrollment MTF Branch of Service | $1.00 | mtf_enr_svc | mtf_svc | n/a | Derive using mtf_enr. |
| Enrollment MTF T17 Region | $2.00 | mtf_enr_t17_reg | mtf_t17_reg | n/a | Derive using mtf_enr. |
| Enrollment MTF T3 Region | $2.00 | enr_t3_reg | mtf_t3_reg | n/a | Hide. Derive using mtf_enr. Not populated as of Jan 2025. |
| Treatment MTF  MSMA | $3.00 | mtf_msma | msm_id | n/a | Derive using mtf_resulted. |
| Treatment MTF Parent of Record | $4.00 | mtf_parent_rec | ubu_par | n/a | Derive using mtf_resulted. |
| Treatment MTF Branch of Service | $1.00 | mtf_svc | ubu_svc | n/a | Derive using mtf_resulted. |
| Treatment MTF T3 Region | $2.00 | mtf_t3_reg | t3_reg | n/a | Hide. Derive using mtf_resulted. Not populated as of Jan 2025. |
| Ordering MTF Service | $1.00 | omtf_svc | mtf_svc | n/a | Derive using mtf. |
| Ordering MTF T17 Region | $2.00 | omtf_t17 | mtf_t17_reg | n/a | Derive using mtf. |
| Ordering MTF T3 Region | $2.00 | omtf_t3 | mtf_t3_reg | n/a | Hide. Derive using MTF. Not populated as of Jan 2025. |
| Beneficiary Site T5 Region | $2 | ben_t5_reg | N/A | N/A | T5_REG from DMIS ID Index OR OMNI-Cad based on matching FY and appropriated field.  Populated FY23+. |
| Enrollment Site T5 Region | $2 | mtf_enr_t5_reg | N/A | N/A | T5_REG from DMIS ID Index, based on matching FY and ENRDMIS Populated FY23+. |
| Ordering Site T5 Region | $2 | omtf_t5 | N/A | N/A | T5_REG from DMIS ID Index, based FY and ORDDMIS Populated FY23+. |
| Treatment DMIS ID T5 Region | $2 | mtf_t5_reg | N/A | N/A | T5_REG from DMIS ID Index, based FY and TXDMIS Populate FY23+. |
| Treatment MTF Name | $45 | mtf_name | N/A | N.A | Derive using mtf_resulted. |
| MDR: OMNI-CAD | | | | | |
| Beneficiary T17 Region | $2.00 | ben_t17_reg | t17reg | n/a | None. |
| Beneficiary T3 Region | $2.00 | ben_t3_reg | region | n/a | None. |
| Beneficiary MTF Service Area | $4.00 | mtfsvcarea | bpa | n/a | None. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| PRISM Area ID | $4.00 | prism | prism | n/a | None. |
| Tricare Prime Remote Flag | $1.00 | tprflag | tprflag | n/a | TPRFLAG = Obtain from Omni-cad. TPR Flag (TPRFLAG), based on matching FY, FM, and Beneficiary Zip Code (PATZIP). |
| **INTERNALLY DERIVED** | | | | | |
| Patient Age Group | $1.00 | agegrp | patage | n/a | if 0 le patage2 le 4 then agegrp = 'A';<br>else if 5 le patage2 le 14 then agegrp = 'B';<br>else if 15 le patage2 le 17 then agegrp = 'C';<br>else if 18 le patage2 le 24 then agegrp = 'D';<br>else if 25 le patage2 le 34 then agegrp = 'E';<br>else if 35 le patage2 le 44 then agegrp = 'F';<br>else if 45 le patage2 le 64 then agegrp = 'G';<br>else if 65 le patage2 le 69 then agegrp = 'H';<br>else if 70 le patage2 le 74 then agegrp = 'I';<br>else if 75 le patage2 le 79 then agegrp = 'J';<br>else if 80 le patage2 le 84 then agegrp = 'K';<br>else if patage2 ge 85 then agegrp = 'L';<br>else agegrp = 'Z'; |
| Calendar Month | $2.00 | cm | date_complete | n/a | CM of DATE_COMPLETE. |
| Number of Services of Record | N(2) | count | n/a | n/a | equals 1. |
| Procedure Code | $5.00 | cpt | proc_chgs, proc_fin | n/a | if PROC_CHGS not IN ('0', '') THEN CPT = PROC_CHGS; ELSE CPT = PROC_FINC. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|-------|--------|----------|--------------------|------------------------|---------------|
| Procedure Code Description | $255.00 | cpt_desc | multiple | n/a | if cpt = proc_pdx then CPT_DESC = proc_pdx_desc;<br>    else if proc_chgs = proc_finc then CPT_DESC = proc_finc_desc;<br>    else if (proc_chgs ne proc_finc) and (cpt = proc_chgs) then<br>    CPT_DESC = proc_chgs_desc;<br>    else if (proc_chgs ne proc_finc) and (cpt = proc_finc) then CPT_DESC = proc_finc_desc;<br>    else CPT_DESC = proc_chgs_desc; |
| Calendar Year | $4.00 | cy | date_complete | n/a | CY of DATE_COMPLETE. |
| Date Completed | $8.00 | date_complete | completed_dt_tm, order_dt_tm | n/a | if completed_dt_tm not missing or blank; else order_dt_tm. |
| Number of Services | N(2) | drvcount | n/a | n/a | if (nactcpt = "I" or CPT = '') then 0 ; else 1. |
| CCE Diagnosis Code Count | N(8) | dx_cce_maxn | n/a | n/a | Count DX_CCE per row. |
| FM | $2.00 | fm | date_compelete | n/a | FM of DATE_COMPLETE. |
| RVU, Facility | N(6.2) | fprvu | cptcount, drvcount | n/a | Using CPT Weight Table: obtain Raw MHS updated Facility Practice Expense RVU of CPT Code (pexpfadc) for the CPT Code and Modifier combination  by corresponding calendar year; , multiply by derived number of services. |
| FY | $4.00 | fy | date_compelete | n/a | FY of DATE_COMPLETE. |
| Inpatient Indicator | $1.00 | inpt | encounter_type | n/a | if encounter_type = 'Inpatient' then INPT="Y"; else INPT= "N". |
| Location | $40.00 | loc_merge | encounter_type | n/a | 2.4 Derive using first valid value (e.g. non-zero or not blank), in specified order, from patient_loc, order_loc, current_loc, admit_loc. 3.0 Derive location identifiers (loc_merge, sr_merge, fac_merge). Use loc_facility_cd as loc_merge. Coalesce level5_cd, loc_nurse_unit_cd as sr_merge. Coalesce institution_cd, loc_facility_cd as fac_merge. Then apply an algorithm to clean values such as mamc, nhb, nhoh, theater, ZZZ. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|-------|--------|----------|-------------------|------------------------|---------------|
| MEPRS 1-Level Code, Ordering | $1.00 | mepr1 | patient_loc, order_loc, current_loc, admit_loc | n/a | 2.4 MEPR1 = substr(MEPRS_CD,1,1). 3.0 MEPR1 = substr(MEPR3,1,1). If MEPR3 = 'UNK' then set MEPR1 to 'Z'. |
| MEPRS 2-Level Code | $2.00 | mepr2 | meprs_cd | n/a | 2.4 MEPR3 = substr(MEPRS_CD,1,3). 3.0 MEPR2 = substr(MEPR3,1,2). If MEPR3 = 'UNK' then set MEPR2 to 'ZZ'. |
| MEPRS 3-Level Code, Ordering | $3.00 | mepr3 | meprs_cd | n/a | 2.4 MEPR3 = substr(MEPRS_CD,1,3). 3.0 substr(MEPRS_CD,1,3) Otherwise, Derive MEPR3 by mapping the value of medical_service using the appropriate format: Use $meprmapA. if inpt = 'Y'. Use $meprmap. if inpt= 'N'. if missing(medical_service) or mepr3 in ('','NOM') then do; mepr3 = 'UNK'; If missing(meprs_cd) then meprs_cd = cats(mepr3, 'A'); if missing(meprs_cd) then meprs_cd = 'UNK'. |
| MHS GENESIS Flag | $1.00 | mhs_genesis_flag | n/a | n/a | equals 1. |
| Record Type Modifier | $2.00 | mod | n/a | n/a | if cptmod in ('50', '51', '99') then MOD = cptmod; ELSE MOD = ''; |
| Medical Record Number | $40.00 | mrn | formatted_mrn | n/a | Use MRN_P from Person unless missing. Else use MRN_E from Encounter. |
| Inactive CPT Code Indicator | $1.00 | nactcpt | cpt | n/a | Lookup CPT by CY of Date of Service in CY CPT reference file, if CPT then NACTCPT = A; else NACTCPT = I. |
| RVU, Non-Facility | N(6.2) | nprvu | cptcode, drvcount | n/a | Lookup CPT by CY of Date of Service in CY CPT reference file, if CPT then NACTCPT = A; else NACTCPT = I. |
| M2 Key | $6.00 | m2key | n/a | n/a | Base 62 of MDR Key. |
| MDR Key | N(8) | mdrkey | n/a | n/a | Sequential counter of records. |
| MTF Accession | $4.00 | mtf_accession | accession | n/a | For VA sites, mtf_accession = substr(accession,1,3); else mtf_accession = substr(accession,2,4); If 0 or 0000 or blank then blank. Do Not keep in the final table. |
| Number of Orders | N(8) | ordcount | order_sk | n/a | if first order_sk then 1 else 0. |
| Patient Age | N(8) | patage | dob_p, patdob | n/a | Use DOB_P, PATDOB to calculate age. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| PATCAT Code | 40 | patcat | patcat | n/a | if patcat_p not in ('', 'O') then PATCAT = patcat_p;<br>        else if patcat_p in ('', 'O') then PATCAT = patcat_e;<br>        else PATCAT = ''; |
| Record Type Flag | 13 | record_type_flag | encounter_type, ecount | n/a | if encounter_type = 'Inpatient' then INPATIENT RAD';<br>else if encounter_type = 'Clinic' then 'ENCOUNTER RAD';<br>else if ecount > 2 then RECORD_TYPE_FLAG  then 'ENCOUNTER RAD';<br>else if substr(cpt,1,1) = ('7') then 'RADIOLOGY';<br>else RECORD_TYPE_FLAG = 'OTHER RAD'. |
| RVU, Total | N(6.2) | rvu | orderable_disp | n/a | Sum the values of Work RVU and Non-facility practice RVUs. |
| RVU, Work | N(6.2) | rvuwork | cptcount, drvcount | n/a | Using CPT Weight Table: obtain Raw MHS updated Work RVU of CPT code (workdc) for the CPT Code and Modifier combination  by corresponding calendar year; multiply by derived number of services. |
| Service Line Ordering | $5 | svclineo | cptcount, drvcount | n/a | Apply format from service line map. svclineo = put(mepr3, $slfmt) |
| Service Line Performing | $5 | svclinep | mepr3 | n/a | Apply format from service line map. svclinep = put(substr(sr_meprs,1,3), $slfmt) |
| Certifying Provider, Assigned DMIS | $4 | Prov_verf_dmis | n/a | n/a | Join prov_verf_npi to NPPES reference table and bring back the assigned DMIS.  FY23+ |
| Cost Fields (FY23+ BDE3.0) | | | | | |
| Full Cost | 8.2 | fullcost | n/a | n/a | Total radiology full cost = Applied Work RVU + Non-facility Practice RVU. In SAS: fullcost = sum(r_fcostw, r_fcostp). |
| Rad Full Cost / Practice (Non-facility) RVU | 10.6 | r_fcostp  (not stored) | n/a | n/a | Calculated as: FY Full Cost × Non-facility Practice RVU. Represents MEPRS Parent's unit cost for Radiology in the matching year. Not stored on the final table. |
| Rad Full Cost / Work RVU | 10.6 | r_fcostw  (not stored) | n/a | n/a | Calculated as: FY Full Cost × Work RVU. Represents MEPRS Parent's unit cost for Radiology in the matching year. Not stored on the final table. |

| Field | Format | SAS Name | PI-EDW (2.4) Field | MIP Redshift 3.0 Field | Business Rule |
|---|---|---|---|---|---|
| Rad Variable Cost / Practice (Non-facility) RVU | 10.6 | r_vcostp (not stored) | n/a | n/a | Calculated as: FY Variable Cost × Non-facility Practice RVU. Represents MEPRS Parent's unit cost for Radiology in the matching year. Not stored on the final table. |
| Rad Variable Cost / Work RVU | 10.6 | r_vcostw (not stored) | n/a | n/a | Calculated as: FY Variable Cost × Work RVU. Represents MEPRS Parent's unit cost for Radiology in the matching year. Not stored on the final table. |
| Variable Cost | 8.2 | varcost | n/a | n/a | Total radiology variable cost = Applied Work RVU + Non-facility Practice RVU. In SAS: varcost = sum(r_vcostw, r_vcostp). |

## VIII. EXCLUSIONS

Remove any column that contains all null or blank values.  If any of the following conditions are met, either delete the record or output to an error file.

If CY less than 2017.

If datepart (coalesce (COMPLETED_DT_TM, ORDER_DT_TM)) less than gen_begin_dt.

If (PROC_DT_TM ne . and datepart (PROC_DT_TM) < gen_begin_dt).

If ENCOUNTER_KEY is missing and ORDER_SK is missing or zero both ENCOUNTER_KEY and ORDER_SK are zero or null.

If MTF is missing and MTF_resulted is missing or NONE or TEST.

If PATIENT_TEST_FLAG is  equal to 1.

If TEST_LOCATION_FLAG is equal to 1.

If CPT is missing and CHARGE_DESC = "PORTABLE".

## IX. MDR FEED TO M2

The processor should create a dataset that can be joined with or appended with MDR CADRE Radiology which then feeds a combined dataset to M2.

## X. SPECIAL OUTPUTS

This file serves as the input to the MIP Core MHS GENESIS Radiology Orders table. In accordance with Technical Data Standards, the data should be made available to users with the same file names, field names and formats as the source data, with underscores replacing spaces in the names, if desired. The MIP core MHS GENESIS Radiology Orders table should be updated at the same cadency of the M2 file and row counts should be validated against the MDR Export transmittals.