**2 February 2021**

**MHS GENESIS Radiology**

**for the**

**MHS Data Repository (MDR)**

**(Version 1.00.12)**

**Future Specification**

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. |

**MHS GENESIS Radiology Table**

**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.

**II. SOURCES**

The source data files used to create the MHS GENESIS Radiology tables are extracted from the MHS GENESIS PI-EDW. 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)**

Source files are provided weekly.

**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.

**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, 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'). 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\_KEY 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 1 describes the data merges that are necessary to append many of the fields in the MHS GENESIS Radiology file.

**Table 1: File Merges**

| **Merge** | **Date Matching** | **Key Matching** |
| --- | --- | --- |
| MHS GENESIS Order Detail |  |  |
| 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 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 = '110586353' |
| MHS GENESIS Procedure |  | ENCOUNTER\_KEY and CONTRIBUTOR\_SYSTEM\_REF = '110586353' |
| MHS GENESIS Person |  | PERSON\_SK |
| MHS GENESIS Personnel |  | PRSNL\_SK |
| MHS GENESIS Location |  | LOCATION\_SK |
| 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 |
| Omni-CAD | year and month of CAD in DATE\_COMPLETE | ZIP\_D and SPONSVC |

**VII. FILE LAYOUT**

| **Field** | **Format** | **SAS Name** | **Related Source Field** | **Business Rule** |
| --- | --- | --- | --- | --- |
| **MHS GENESIS: ORDER TABLE** | | | | |
| Exam Number | $100. | accession | ACCESSION | None. |
| Activity Type | $40. | activity\_type | ACTIVITY\_TYPE\_REF | Apply format $ord\_activity\_type (code set = 106). |
| Activity Type Code | $40. | activity\_type\_ref | ACTIVITY\_TYPE\_REF | Apply format $ord\_activity\_type (code set = 106). Keep if activity\_type\_ref in ('711', '254663283'). |
| Date Time Order Completed Local | E8601DT19. | completed\_dt\_tm\_local | COMPLETED\_DT\_TM | Convert to Local Time. Format e8601dt. |
| Departmental Status | $29. | dept\_status | DEPT\_STATUS\_REF | Apply format $dept\_status (code set = 14281). |
| Last Order Status | $20. | last\_order\_status | LAST\_ORDER\_STATUS\_REF | 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'). |
| Date Time Order Local | E8601DT19. | order\_dt\_tm\_local | ORDER\_DT\_TM | Convert to Local Time. Format e8601dt. |
| Order Location | $40. | order\_loc | ORDER\_LOC | None. |
| Orders File Primary Key | $100. | order\_sk | ORDER\_SK | None. |
| Order Submission | $27. | order\_submit | orig\_communication\_ref | Apply format $orig\_communication (code set = 6006). |
| MHS GENESIS Test Ordered Description | $100. | orderable\_disp | ORDERABLE\_DISP | None. |
| MHS GENESIS Person ID | $100. | person\_sk | PERSON\_SK | None. |
| **MHS GENESIS: RADIOLOGY ORDER TABLE** | | | | |
| Report Status | $40. | report\_status | REPORT\_STATUS\_REF | Apply format $ rad\_report\_status (code set = 14202). |
| Radiology Order Location | $40. | rad\_order\_loc | ORDER\_LOC | None. |
| **MHS GENESIS: RADIOLOGY EXAM TABLE** | | | | |
| MTF Resulted | $4. | mtf\_resulted | SVC\_RES\_DEPT\_HIER\_SK | 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 |
| **MHS GENESIS Service Resource Reference file[[1]](#footnote-1) (not part of BDE)** | | | | |
| MEPRS4 Code, Performing | $4. | sr\_meprs | LVL\_4\_MEPRS, LVL\_5\_MEPRS,MEPRS\_CD | 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. |
| Resource Facility | $5. | sr\_fac | FACILITY | 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. |
| Resource Location | $40. | sr\_loc | LVL\_4\_DESC, LVL\_5\_DESC, LVL\_DESC | 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. |
| Resource Organization | $60. | sr\_org | ORGANIZATION | 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 ORGANIZATION. |
| **MHS GENESIS: ENCOUNTER TABLE** | | | | |
| Admission Type | $40. | admit\_type | ADMIT\_TYPE\_REF | Apply format $admit\_type (code set = 3). |
| Discharge Disposition Code | $60. | dispcode | DISCHARGE\_DISPOSITION\_REF | Apply format $discharge\_disposition (code set = 19). |
| Encounter PI-EDW Key | N(8) | encounter\_key | ENCOUNTER\_KEY | None. |
| Encounter NK | $100. | encounter\_nk | ENCOUNTER\_NK | None. |
| Encounter Key Secondary | $100. | encounter\_sk | ENCOUNTER\_SK | None. |
| Encounter Status | $25. | encounter\_status | ENCOUNTER\_STATUS\_REF | Apply format $encounter\_status (code set = 261). |
| Encounter Type | $22. | encounter\_type | PATIENT\_TYPE\_REF | Apply format $patient\_type (code set =71). |
| Encounter Classification | $33. | encounter\_type\_class | ENCOUNTER\_TYPE\_CLASS\_REF | Apply format $encounter\_type\_class (code set = 69). |
| Financial Information Number (FIN) | $40. | fin\_e | FORMATTED\_FINANCIAL\_NBR | None. |
| Reason For Visit | $255. | reason\_for\_visit\_txt | REASON\_FOR\_VISIT\_TXT | None. |
| **MHS GENESIS: FINANCIAL CHARGES TABLE** | | | | |
| Charge Description | $255. | charge\_desc | CHARGE\_DESC | None. |
| Charge Type | $51. | charge\_type | CHARGE\_TYPE\_REF | None. |
| Financial Charges Primary Key | $100. | fin\_charges\_sk | FIN\_CHARGES\_SK | None. |
| Institution Name | $60. | institution\_type | INSTITUTION\_REF | Apply format $institution\_type (code set = 221). |
| Medical Service | $40. | medical\_service | MEDICAL\_SERVICE\_REF | Apply format $medical\_service (code set = 34). |
| Date Time Service Local | E8601DT19. | service\_dt\_tm\_local | SERVICE\_DT\_TM | Convert to Local Time. Format e8601dt. |
| **MHS GENESIS: CHARGE MOD TABLE** | | | | |
| Procedure Code Modifier | $2. | cptmod | FIELD6 | 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’)). |
| Procedure Code Modifier Description | $200. | cptmod\_desc | 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, J = 1-n, where maxN = 20 | $200. | dx\_chgs\_1 | FIELD6 | Transpose field 6 where (field1\_sk="3693"). Order by Field2\_SK. Keep first 20 result variables. |
| CHGS Diagnosis Code Description J, J = 1-n, where maxN = 20 | $200. | dx\_chgs\_desc\_1 | FIELD7 | Transpose field 7 where (field1\_sk="3693"). Order by Field2\_SK. Keep first 20 result variables. |
| Procedure Code Side | $200. | side | FIELD6 | Match on fin\_charges\_sk. Obtain field6. Apply code set 14002 and trim (desc\_meaning) = ('MODIFIER') AND field3\_sk in ('34935489', '34939105'). |
| **MHS GENESIS: PROCEDURE TABLE** | | | | |
| Date Time Procedure Local | DATETIME19. | proc\_dt\_tm\_local | PROC\_DT\_TM | Convert to Local Time. Format e8601dt. |
| Procedure File Primary Key | $100. | procedure\_sk | PROCEDURE\_SK | None. |
| **MHS GENESIS: DIAGNOSIS TABLE** | | | | |
| CCE Diagnosis Code 1 | $60. | dx\_cce\_1 | DIAG\_NOMEN | Merge to Diagnosis by Encounter key and CONTRIBUTOR\_SYSTEM\_REF = '110586353' aka CCE. 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. |
| CCE Diagnosis Code Description 1 | $255. | dx\_cce\_desc\_1 | DIAG\_NOMEN | Merge to Diagnosis by Encounter key and CONTRIBUTOR\_SYSTEM\_REF = '110586353' aka CCE. 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. |
| **MHS GENESIS: LOCATION TABLE** | | | | |
| GENESIS Go Live Date | MMDDYY10. | 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; Match loc\_merge = location\_sk. |
| MEPRS4 Code, Ordering | $4. | meprs\_cd | MEPRS\_CD | MEPRS\_CD; where loc\_merge = location\_sk. |
| MTF | $4. | mtf | MTF | MTF; where loc\_merge = location\_sk. . If missing MTF then mtf\_accession. |
| No MTF MEPRS Code Flag | N(8) | nomeprs\_flag | NOMEPRS\_FLAG | NOMEPRS\_FLAG; where loc\_merge = location\_sk |
| Parent MTF Name | $40. | 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; where loc\_merge = location\_sk. |
| MTF Display Name | $45. | unit\_display | UNIT\_DISPLAY | UNIT\_DISPLA; where loc\_merge = location\_sk. |
| MTF Name | $100. | unit\_name | UNIT\_NAME | UNIT\_NAME; where loc\_merge = location\_sk. |
| MTF Nurse Unit Location | $45. | nurse\_unit | LOC\_NURSE\_UNIT\_DISP | LOC\_NURSE\_UNIT\_DISP; where loc\_merge = location\_sk. |
| **MHS GENESIS: PERSON TABLE** | | | | |
| Patient Name | $61. | name | FULL\_NAME | FULL\_NAME; match on person\_sk. |
| Patient IPI | $10. | ipi | IPI | IPI; match on person\_sk. |
| Patient Test Flag | N(8) | patient\_test\_flag | TEST\_RECORD\_IND | TEST\_RECORD\_IND; match on person\_sk. |
| **MHS GENESIS: PERSONNEL TABLE** | | | | |
| Physician Ordering EDIPN | $10. | prov\_ord\_edipn | PRSNL\_EDIPN | EDIPN; Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Ordering Flag | $1. | prov\_ord\_flag | TEST\_RECORD\_IND | TEST\_RECORD\_IND; Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Ordering HIPAA Taxonomy | $10. | prov\_ord\_hipaa | HIPAA1 | HIPAA1 Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Ordering Name | $61. | prov\_ord\_name | FULL\_NAME | FULL\_NAME; Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Ordering MD Flag | N(8) | prov\_ord\_md\_flag | PHYSICIAN\_IND | PHYSICIAN\_IND; Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Ordering NPI | $100. | prov\_ord\_npi | NPI | NPI; Match on ORDER\_DOC\_PRSNL = PRSNL\_SK. |
| Physician Verifying EDIPN | $10. | prov\_verf\_edipn | PRSNL\_EDIPN | EDIPN; Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Physician Verifying Flag | $1. | prov\_verf\_flag | TEST\_RECORD\_IND | TEST\_RECORD\_IND; Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Physician Verifying HIPAA Taxonomy | $10. | prov\_verf\_hipaa | HIPAA1 | HIPAA1 Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Physician Verifying Name | $61. | prov\_verf\_name | FULL\_NAME | FULL\_NAME; Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Physician Verifying MD Flag | N(8) | prov\_verf\_md\_flag | PHYSICIAN\_IND | PHYSICIAN\_IND; Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Physician Verifying NPI | $100. | prov\_verf\_npi | NPI | NPI; Match on VERIFIED\_PHYSICIAN\_PRSNL = PRSNL\_SK. |
| Personnel Completing EDIPN | $10. | prsnl\_compl\_edipn | PRSNL\_EDIPN | EDIPN; Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Completing Flag | $1. | prsnl\_compl\_flag | TEST\_RECORD\_IND | TEST\_RECORD\_IND; Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Completing HIPAA Taxonomy | $10. | prsnl\_compl\_hipaa | HIPAA1 | HIPAA1 Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Completing Name | $61. | prsnl\_compl\_name | FULL\_NAME | FULL\_NAME; Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Completing MD Flag | N(8) | prsnl\_compl\_md\_flag | PHYSICIAN\_IND | PHYSICIAN\_IND; Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Completing NPI | $100. | prsnl\_compl\_npi | NPI | NPI; Match on COMPLETED\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Ordering EDIPN | $10. | prsnl\_ord\_edipn | PRSNL\_EDIPN | EDIPN; Match on ORDER\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Flag | $1. | prsnl\_ord\_flag | TEST\_RECORD\_IND | TEST\_RECORD\_IND; Match on ORDER\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Ordering HIPAA | $10. | prsnl\_ord\_hipaa | HIPAA1 | HIPAA1 Match on ORDER\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Ordering Name | $61. | prsnl\_ord\_name | FULL\_NAME | FULL\_NAME; Match on ORDER\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Ordering MD Flag | N(8) | prsnl\_ord\_md\_flag | PHYSICIAN\_IND | PHYSICIAN\_IND; Match on ORDER\_PRSNL = PRSNL\_SK. |
| Personnel Non-Physician Ordering NPI | $100. | prsnl\_ord\_npi | NPI | NPI; Match on ORDER\_PRSNL = PRSNL\_SK. |
| **MHS GENESIS Encounter subject area: RAW\_USER\_DEF\_HIST** | | | | |
| Beneficiary Category on Record | $40. | bencat\_e | BENCAT\_E | Match on encounter\_sk = .parent\_entity\_sk and parent\_entity\_name = 'ENCOUNTER' and user\_defined\_type\_REF = '109901057'; then apply BENCAT format. |
| PATCAT Encounter Code | $40. | patcat\_e | PATCAT\_E | Match on encounter\_sk = .parent\_entity\_sk and parent\_entity\_name = 'ENCOUNTER' and user\_defined\_type\_REF = '109901051'; then apply PATCAT format. |
| PATCAT Person Code | $40. | patcat\_p | PATCAT\_P | Match on person\_sk = parent\_entity\_sk and parent\_entity\_name = 'PERSON' and user\_defined\_type\_REF = '114540103'; then apply PATCAT format. |
| **MDR: Master Person Index (MPI)** | | | | |
| Person ID | $10. | edipn | EDIPN | None. |
| Person Association Reason Code | $2. | parc | PARC | None. |
| Sponsor ID | $9. | sponssn | SPSSN | None. |
| Patient SSN | $9. | ssn | PSSN | None. |
| **MDR: Longitudinal VM6 (LVM6)** | | | | |
| ACV | $1. | acv\_d | ACV | None. |
| ACV Group | $2. | acvgroup | ACVGRP | 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. | bencat\_d | BEN | None. |
| Ben Cat Common | $1. | comben\_d | CBEN | None. |
| Patient Date of Birth | N(8) | patdob | DOB | None. |
| Eligibility Group | $1. | elg\_grp | ELGGRP | None. |
| Enrollment Group | $1. | enr\_grp | ENRGRP | None. |
| Patient Ethnicity | $1. | ethnic | ETHNIC | None. |
| Patient Gender | $1. | gender\_d | SEX | None. |
| HCDP - Enrolled | $3. | hcdp | HCDP | None. |
| HCDP - Assigned | $3. | hcdp\_asgn | ASGHCDP | None. |
| LVM4 Match Indicator | N(8) | lvm\_match | MATCH | None. |
| DEERS Marital Status | $1. | marital | MS | None. |
| DEERS Medicare Flag | $11. | medicare\_flag | MF | None. |
| Enrollment MTF | $4. | mtf\_enr | ENR | None. |
| PCM ID | $18. | pcm\_id | PCM | None. |
| PCM Type | $1. | pcm\_type | PCMTYP | None. |
| Privilege Code | $1. | privilege | PRIV | None. |
| Patient Race | $1. | race | RACE | If RACE is blank, then RACE = 'Z'. |
| Relationship to Sponsor | $1. | rel | rel | None. |
| Sponsor Service | $1. | sponsvc | SVC | None. |
| Sponsor Service, Aggregate | $1. | svcagg | AGGSVC | None. |
| TPR Eligibility Flag | $1. | tpr | TPR | None. |
| Beneficiary Zip Code | $5. | zip\_d | ZIP | None. |
| **DEERS or PCM Table (tbd)** | | | | |
| Primary Care Manager Name | $40 | pcmid\_nm | D\_MI\_PCM\_NM | D\_MI\_PCM\_NM from DEERS merge. |
| Primary Care Manager NPI | $10 | pcmid\_npi | D\_PCM\_NP\_ID | D\_PCM\_NP\_ID from DEERS merge. |
| PCM NPI Type Code | $1 | pcmid\_npi\_typ | D\_PCM\_NP\_ID\_TYP\_CD | D\_PCM\_NP\_ID\_TYP\_CD from DEERS merge. |
| **MDR: DMISID INDEX** | | | | |
| Performing CMAC Locality Code | $3. | cmaccd | LOCALITY | Convert 2 digit "Locality" to 3 digit (e.g. add leading zero). |
| Treatment MTF Major Command | $8. | mtf\_cmd | MAJCMND | Derive using mtf\_resulted. |
| Enrollment Parent MTF | $4. | mtf\_enr\_parent | MTF\_PARENT\_REC | Derive using mtf\_enr. |
| Enrollment MTF Branch of Service | $1. | mtf\_enr\_svc | MTF\_SVC | Derive using mtf\_enr. |
| Enrollment MTF T17 Region | $2. | mtf\_enr\_t17\_reg | MTF\_T17\_REG | Derive using mtf\_enr. |
| Enrollment MTF T3 Region | $2. | mtf\_enr\_t3\_reg | MTF\_T3\_REG | Derive using mtf\_enr. |
| Treatment MTF MSMA | $3. | mtf\_msma | MSM\_ID | Derive using mtf\_resulted. |
| Treatment MTF Parent of Record | $4. | mtf\_parent\_rec | UBU\_PAR | Derive using mtf\_resulted. |
| Treatment MTF Branch of Service | $1. | mtf\_svc | UBU\_SVC | Derive using mtf\_resulted. |
| Treatment MTF T17 Region | $2. | mtf\_t17\_reg | T17\_REG | Derive using mtf\_resulted. |
| Treatment MTF T3 Region | $2. | mtf\_t3\_reg | T3\_REG | Derive using mtf\_resulted. |
| Ordering MTF Service | $1. | omtf\_svc | MTF\_SVC | Derive using mtf. |
| Ordering MTF T17 Region | $2. | omtf\_t17 | MTF\_T17\_REG | Derive using mtf. |
| Ordering MTF T3 Region | $2. | omtf\_t3 | MTF\_T3\_REG | Derive using mtf. |
| **MDR: OMNI-CAD** | | | | |
| Beneficiary T17 Region | $2. | ben\_t17\_reg | T17REG | None. |
| Beneficiary T3 Region | $2. | ben\_t3\_reg | REGION | None. |
| Catchment Area ID | $4. | catch | WORLD | None. |
| Beneficiary MTF Service Area | $4. | mtfsvcarea | BPA | None. |
| PRISM Area ID | $4. | prism | PRISM | None. |
| Tricare Prime Remote Flag | $1. | tprflag | TPRFLAG | TPRFLAG = Obtain from Omni-cad. TPR Flag (TPRFLAG), based on matching FY, FM, and Beneficiary Zip Code (PATZIP). |
| **INTERNALLY DERIVED** | | | | |
| Patient Age Group | $1. | agegrp | PATAGE | if 0 le patage2 le 4 then agegrp = 'A';  else if 5 le patage2 le 14 then agegrp = 'B';  else if 15 le patage2 le 17 then agegrp = 'C';  else if 18 le patage2 le 24 then agegrp = 'D';  else if 25 le patage2 le 34 then agegrp = 'E';  else if 35 le patage2 le 44 then agegrp = 'F';  else if 45 le patage2 le 64 then agegrp = 'G';  else if 65 le patage2 le 69 then agegrp = 'H';  else if 70 le patage2 le 74 then agegrp = 'I';  else if 75 le patage2 le 79 then agegrp = 'J';  else if 80 le patage2 le 84 then agegrp = 'K';  else if patage2 ge 85 then agegrp = 'L';  else agegrp = 'Z'; |
| Calendar Month | $2. | cm | DATE\_COMPELETE | CM of DATE\_COMPLETE. |
| Number of Services of Record | N(2) | count | N/A | equals 1. |
| Procedure Code | $5. | cpt | PROC\_CHGS, PROC\_FIN | if PROC\_CHGS not IN ('0', '') THEN CPT = PROC\_CHGS; ELSE CPT = PROC\_FINC. |
| Procedure Code Description | $255. | cpt\_desc | multiple | if cpt = proc\_pdx then CPT\_DESC = proc\_pdx\_desc;  else if proc\_chgs = proc\_finc then CPT\_DESC = proc\_finc\_desc;  else if (proc\_chgs ne proc\_finc) and (cpt = proc\_chgs) then   CPT\_DESC = proc\_chgs\_desc;  else if (proc\_chgs ne proc\_finc) and (cpt = proc\_finc) then   CPT\_DESC = proc\_finc\_desc;  else CPT\_DESC = proc\_chgs\_desc; |
| Calendar Year | $4. | cy | DATE\_COMPELETE | CY of DATE\_COMPLETE. |
| Date Completed | $8. | date\_complete | COMPLETED\_DT\_TM, ORDER\_DT\_TM | if completed\_dt\_tm not missing or blank; else order\_dt\_tm. |
| Number of Services | N(2) | drvcount | N/A | if (nactcpt = "I" or CPT = '') then 0 ; else 1. |
| CCE Diagnosis Code Count | N(8) | dx\_cce\_maxn | N/A | Count DX\_CCE per row. |
| FM | $2. | fm | DATE\_COMPELETE | FM of DATE\_COMPLETE. |
| RVU, Facility | N(6.2) | fprvu | CPTCOUNT, DRVCOUNT | 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. | fy | DATE\_COMPELETE | FY of DATE\_COMPLETE. |
| Inpatient Indicator | $1. | inpt | encounter\_type | if encounter\_type = 'Inpatient' then INPT="Y"; else INPT= "N". |
| Location | $40. | loc\_merge | RAD\_ORDER\_LOC, PATIENT\_LOC, ORDER\_LOC, CURRENT\_LOC, ADMIT\_LOC | Derive using first valid value (e.g. non-zero or not blank), in specified order, from rad\_order\_loc, patient\_loc, order\_loc, current\_loc, admit\_loc. |
| MEPRS 1-Level Code | $1. | mepr1 | MEPRS\_CD | MEPR1 = substr(MEPRS\_CD,1,1). |
| MEPRS 2-Level Code | $2. | mepr2 | MEPRS\_CD | MEPR2 = substr(MEPRS\_CD,1,2). |
| MEPRS 3-Level Code | $3. | mepr3 | MEPRS\_CD | MEPR3 = substr(MEPRS\_CD,1,3). |
| MHS GENESIS Flag | $1. | mhs\_genesis\_flag | N/A | equals 1. |
| Record Type Modifier | $2. | mod | CPT | if cptmod in ('50', '51', '99') then MOD = cptmod; ELSE MOD = ''; |
| Medical Record Number | $40. | mrn | formatted\_MRN | Use MRN\_P from Person unless missing. Else use MRN\_E from Encounter. |
| Inactive CPT Code Indicator | $1. | nactcpt | CPT | 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 | Lookup CPT by CY of Date of Service in CY CPT reference file, if CPT then NACTCPT = A; else NACTCPT = I. |
| M2 Key | $6. | m2key | n/a | Base 62 of MDR Key. |
| MDR Key | N(8) | mdrkey | n/a | Sequential counter of records. |
| MTF Accession | $4. | mtf\_accession | ACCESSION | Substring ACCESSION from 2 for 4.If 0 or 0000 or blank then blank. Do Not keep in the final table. |
| Number of Orders | N(8) | ordcount | ORDER\_SK | if first order\_sk then 1 else 0. |
| Patient Age | N(8) | patage | DOB\_P, PATDOB | Use DOB\_P, PATDOB to calculate age. |
| PATCAT Code | $40. | patcat | PATCAT | if patcat\_p not in ('', '0') then PATCAT = patcat\_p;  else if patcat\_p in ('', '0') then PATCAT = patcat\_e;  else PATCAT = ''; |
| Record Type Flag | $13. | record\_type\_flag | ENCOUNTER\_TYPE, ECOUNT | if encounter\_type = 'Inpatient' then INPATIENT RAD'; else if encounter\_type = 'Clinic' then 'ENCOUNTER RAD';  else if ecount > 2 then RECORD\_TYPE\_FLAG then 'ENCOUNTER RAD'; else if substr(cpt,1,1) = ('7') then 'RADIOLOGY'; else RECORD\_TYPE\_FLAG = 'OTHER RAD'. |
| RVU, Total | N(6.2) | rvu | CPTCOUNT, DRVCOUNT | Sum the values of Work RVU and Non-facility practice RVUs. |
| RVU, Work | N(6.2) | rvuwork | CPTCOUNT, DRVCOUNT | 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 | mepr3 | Apply format from service line map. svclineo = put(mepr3, $slfmt) |
| Service Line Performing | $5 | svclinep | sr\_meprs | Apply format from service line map. svclinep = put(substr(sr\_meprs,1,3), $slfmt) |

**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.

If MTF is missing and MTF\_resulted is missing or NONE.

If MTF\_resulted equal to TEST or VA.

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.

1. Convert /mdr/aref/genesis/svcres/dYYMMDD/svc\_res.sas7bdat from wide to long. Keep Organization, Facility, LVL\_x\_DESC, LVL\_x\_MEPRS, LVL\_x\_CODE\_VALUE, where x in (4-5). Obtain four character MEPRS\_CD from LVL\_x\_MEPRS. Remove duplicates on LVL\_x\_CODE\_VALUE. Create character version of LVL\_x\_CODE\_VALUE for merging, name it LVL\_CODE\_VALUEC. [↑](#footnote-ref-1)