**30 June 2021**

**M2 Direct Care**

**Laboratory Results**

**for the MHS Mart (M2)**

**(Version 1.00.02)**

**Future Specification**

**Revision History**

| Version | Date | Originator | Para/Tbl/Fig | Description of Change |
| --- | --- | --- | --- | --- |
| 1.00.00 | 04/28/2021 | S. Keane |  | Original. |
| 1.00.01 | 06/10/2021 | S. Keane | Entire Document | Update based on functional feedback. Remove Certifying Provider SSN (Pseudo) and Ordering Provider SSN (Pseudo). |
| 1.00.02 | 06/30/2021 | S. Keane | Table 3 and Section VII | Add descriptions for HIPAA Taxonomy Codes, Enrollment Groups, and Eligibility Groups.  Add Market Transition Date.  Update M2 Location. |

**M2 Direct Care Laboratory Results**

1. **Source:** The most recent MDR CADRE Laboratory Enhanced Results and MDR Genesis Laboratory Results files are the sources. The MDR will merge the two source files into a single feed for M2.
2. **File Format:** Regardless of the length specified, all fields are variable length and delimited by “|”.
3. **Record Selection:** Only FY2019 and forward will be sent to M2. Two files will be received by M2. The record key for both files is the Record ID (M2KEY) which is a sequentially assigned number, encoded to base 62 to save space, and continues across Fiscal Years.

The first file is the “Delete” file; it specifies which records (if any) to remove. The “Delete” file applies to all records with matching Record ID (M2KEY). For lab test with more than one result, the combination of Record ID (M2KEY) and Line Item Number (RECNO) will be used to distinguish individual results. M2 will concatenate these two fields to derive a unique key for the result/record/row. This combined field will be called Record ID/Line Item Number. Use the delete file to purge/remove existing records PRIOR to loading the Append file. The delete file contains only the record key, Record ID (M2KEY). See Table 1 in Section V below.

The second file is the “Append” file; it contains records to be added to the M2 Direct Care Laboratory Results Table. See Table 2 in Section V below.

1. **Refresh Batches:** Batches are by Fiscal Year. The Fiscal Year is included in the feed and can be determined by the Date of Service (SERVDATE) field.

Frequency of updates:

* + Current Fiscal Year: Monthly.
  + Prior Fiscal Year: Semi-annually.
  + All Years Prior to Prior Fiscal Year: Annually (October).

Any year refreshed in the MDR should automatically trigger a refresh of the same year’s table in the MHS Mart (M2).

1. **MDR Feed to M2:** Table 1 includes layout for the “Delete” file and Table 2 includes all fields received or derived in the MDR that are fed to M2.

**Table 1. “Delete” File Layout**

| **M2 Object** | **Format** | **MDR Element Name** | **Business Rule** |
| --- | --- | --- | --- |
| Record ID | Char(6) | M2KEY | None. |

**Table 2. “Append” File Layout and Content from MDR to M2**

Obtain from M2 CADRE Lab Orders when feasible. Otherwise, obtain from specified source. Sources: CLABE = CADRE LAB Enhanced, CLABR = CADRE Lab Results, GLABO = GENESIS LAB Orders, GLABR = GENESIS LAB Results

| **M2 Object** | **Format** | **MDR CADRE LAB SAS Name** | **MDR GENESIS SAS Name** | **Business Rule** | **In M2 CADRE LAB Orders** |
| --- | --- | --- | --- | --- | --- |
| Accession Number | Char(20) | ACCESSNO | ACCESSION | CLABE: Set length to 20. GLABR: Set Length to 20. | YES |
| Age | Num(8,0) | PATAGE | PATAGE | CLABE: none. GLABR: none. | YES |
| Age Common Group | Char(1) | AGEGROUP | AGEGRP | CLABE: none. GLABR: none. | YES |
| Appointment Record ID | Char(10) | APPTNO | ENCOUNTER\_SK | CHCS: Remove leading and trailing blanks. GENESIS: First 10 digits of ENCOUNTER\_SK where RECORD\_TYPE\_FLAG = "ENCOUNTER RAD". | YES |
| Ben Cat Common | Char(1) | COMBEN | COMBEN\_D | CLABE: none. GLABR: none. | YES |
| Beneficiary Category | Char(3) | BENCAT | BENCAT\_D | CLABE: none. GLABR: none. | YES |
| Beneficiary Zip Code | Char(5) | PATZIP | ZIP\_D | CLABE: none. GLABR: none. | YES |
| Certifying Provider EDIPN | Char(10) | CPEDIPN | PRSNL\_COMPL\_EDIPN | CLABE: none. GLABR: none. Only visible in the restricted universe. | YES |
| Certifying Provider HIPAA Taxonomy | Char(10) | CPHIPAA | PRSNL\_COMPL\_HIPAA | CLABE: none. GLABR: none. | YES |
| Certifying Provider Name | Char(61) | CPNAME | PRSNL\_COMPL\_NAME | CLABE: none. GLABR: none. | YES |
| Certifying Provider NPI | Char(10) | CPNPI | PRSNL\_COMPL\_NPI | CLABE: none. GLABR: none. | YES |
| Critical High GENESIS | Char(20) | N/A | CRITICAL\_HIGH | CLABR: Set to Null. GLABR: none. | NO |
| Critical Low GENESIS | Char(20) | N/A | CRITICAL\_LOW | CLABR: Set to Null. GLABR: none. | NO |
| Date of Collection/Exam | yyyymmdd | EXAMDATE | DATE\_COMPLETE | CLABE: none. GLABR: Convert to yymmddn8. | YES |
| Date of Order | yyyymmdd | ORDDATE | ORDER\_DT\_TM\_LOCAL | CLABE: none. GLABR: Convert to yymmddn8. | YES |
| Eligibility Group | Char(1) | ELG\_GRP | ELG\_GRP | CLABE: none. GLABR: none. | YES |
| Enrollment Group | Char(1) | ENR\_GRP | ENR\_GRP | CLABE: none. GLABR: none. | YES |
| FIN GENESIS | Char(40) | N/A | FIN\_E | CLABR: Set to Null. GLABR: Set length to 40. | YES |
| Fiscal Month | Char(2) | FM | FM | CLABE: none. GLABR: none. | YES |
| Fiscal Year | Char(4) | FY | FY | CLABE: none. GLABR: none. | YES |
| Inpatient Record ID | Char(10) | PRN | n/a | CHCS: Remove leading and trailing blanks. Length= 7. GENESIS: First 10 digits of ENCOUNTER\_SK where INPT = 'Y’. Length=10. | YES |
| Lab Test Name | Char(100) | LABTEST | ORDERABLE\_DISP | CLABR: Fill Down. GLABR: ORDERABLE\_DISP. | YES |
| Line Item Number | Num(8,0) | RECNO | N/A | CLABR: per m2key count row 1-n. GLABR: count row 1-n, per m2key. | NO |
| MHS GENESIS Flag | Char(3) | N/A | N/A | CLABR: "NO". GLABR: "YES". | YES |
| Millennium Encounter ID GENESIS | Char(22) | N/A | ENCOUNTER\_SK | CLABR: Set to Null. GLABR: Set length to 22. | YES |
| MRN GENESIS | Char(40) | N/A | MRN | CLABR: Set to Null. GLABR: Set length to 40. Only visible in the restricted universe. | YES |
| Normal High GENESIS | Char(20) | N/A | NORMAL\_HIGH | CLABR: Set to Null. GLABR: none. | NO |
| Normal Low GENESIS | Char(20) | N/A | NORMAL\_LOW | CLABR: Set to Null. GLABR: none. | NO |
| Order ID | Char(12) | ORDERID | ORDER\_SK | CLABE: none. GLABR: none. | YES |
| Ordering Provider EDIPN | Char(10) | OPEDIPN | PROV\_ORD\_EDIPN | CLABE: none. GLABR: none. Only visible in the restricted universe. | YES |
| Ordering Provider HIPAA Taxonomy | Char(10) | OPHIPAA | PROV\_ORD\_HIPAA | CLABE: none. GLABR: none. | YES |
| Ordering Provider Name | Char(61) | OPNAME | PROV\_ORD\_NAME | CLABE: none. GLABO: none. | YES |
| Ordering Provider NPI | Char(10) | OPNPI | PROV\_ORD\_NPI | CLABE: none. GLABR: none. | YES |
| Ordering Site of Record | Char(4) | ORDDMIS | MTF | CLABE: none. GLABR: none. | YES |
| Record ID | Char(6) | M2KEY | M2KEY | CLABE: none. GLABO: none. | YES |
| PATCAT Subcategory | Char(1) | PATCAT2 | N/A | CLABE: none. GLABR: none. | YES |
| Patient Code Category | Char(3) | PATCAT | PATCAT | CLABE: none. GLABR: none. | YES |
| Patient SSN | Char(9) | PATSSN | SSN | CLABE: none. GLABR: none. Only visible in the restricted universe. | YES |
| Person ID | Char(10) | EDIPN | EDIPN | CLABE: none. GLABR: none. Only visible in the restricted universe. | YES |
| PowerInsight Encounter ID GENESIS | Char (22) | N/A | ENCOUNTER\_KEY | CLABR: Set to Null. GLABR: Set length to 22. | YES |
| Result Abnormal | CHAR(80) | ABNORMAL | ABNORMAL\_FLAG  NRANGE  CRANGE  RESULTS\_UNITS | CLABR: None. GLABR:  IF ABNORMAL\_FLAG in ('Critical', 'High', 'Low') then ABNORMAL = substr(ABNORMAL\_FLAG, 1, 1)||"" ""||trim(NRANGE)||"" ""||trim(CRANGE)||"" ""||trim(RESULTS\_UNITS);  else ABNORMAL = ''; | NO |
| Result Abnormal Flag | Char(14) | ABNORMAL | EVENT\_NORMACY | CLABR: missing(abnormal) = "NORMAL";  if substr(abnormal, 1, 1) = "L" then "LOW";  else if substr(abnormal, 1, 1) = "H" then "HIGH";  else = "UNKNOWN";  GLABR: trim(upper(EVENT\_NORMACY)); | NO |
| Result LOINC Code | Char(10) | LOINC | LOINC\_CODE | CLABR: Set length to 10. GLABR: Set length to 10. | NO |
| Result LOINC Name GENESIS | Char(100) | N/A | LOINC\_DESCRIPTION | CLABR: Set to Null. GLABR: Set length to 100. | NO |
| Result Name | Char(60) | LABTESTR | EVENT\_CODE | CLABR: obtain LABTESTR when labtestr not missing, merge on chcsdmis, accessno, recno. If missing(labtestr) then delete. GLABR: Obtain EVENT\_CODE as labtestr, merge on encounter\_key, accession, order\_sk, orderable\_disp. | YES |
| Result Numeric | Num(8) | LABVALUE | RESULT\_VALUE | CLABR: if LABVALUE is numeric, else missing. GLABR: if RESULT\_VALUE is numeric, else blank. | YES |
| Result Text | Char(30) | LABVALUE | RESULT\_VALUE | CLABR: if LABVALUE is text, else blank. GLABR: if RESULT\_VALUE is text, else blank. | YES |
| Result Units of Measure GENESIS | Char(60) | N/A | RESULTS\_UNITS | CLABR: Set to Null. GLABR: none. | NO |
| Result Value | Char(30) | LABVALUE | RESULT\_VALUE | CLABR: none. GLABR: Set length to 30 | NO |
| Service Date | yyyymmdd | SERVDATE | SERVICE\_DT\_TM\_LOCAL | CLABE: none. GLABO: Convert to yymmddn8. | YES |
| Specimen GENESIS | Char(38) | N/A | SPECIMEN | CLABR: Set to Null. GLABR: none. | NO |
| Sponsor ID | Char(9) | SPONSSN | SPONSSN | CLABR: none. GLABR: none. Only visible in the restricted universe. | YES |
| Tmt DMIS ID | Char(4) | TMTDMIS | MTF\_RESULTED | CLABE: none. GLABO: none. | YES |
| Tmt Parent DMIS ID | Char(4) | PDMIS | MTF\_PARENT\_REC | CLABE: none. GLABR: none. | YES |
| Verified Date | yyyymmdd | CERTDATE | VERIFIED\_DT\_TM\_LOCAL | CLABR: None. GLABR: Convert to yymmddn8. | NO |

**M2 Derived Fields:** Table 3 includes M2 derived fields; these are fields that are not in the MDR feed but are visible in M2. These data fields are created in M2 by table joins or calculations made during loading of the data. Table 3 describes these elements and the rules to create them.

**Table 3. M2 Derived Fields**

| **M2 Object** | **Format** | **Business Rule** |
| --- | --- | --- |
| Ben Cat Common Des | Char(28) | Based on Ben Cat Common:  1 = AD/Guard Family Member  2 = Retirees  3 = Other  4 = AD/Guard |
| Beneficiary Category Desc | Char(30) | ACT=Active Duty  DA=Active Duty Family  DCO=Direct Care Only  DGR=Dep of Guard/Res on AD  DR=Retiree Family  DS=Survivor  GRD=Guard/Res on AD  IDG=Inactive Guard/Res Family  IGR=Inactive Guard/Res  NAT=NATO  OTH=Other  RET=Retirees  UNK=Unknown  Z=Unknown |
| Beneficiary First Name | Char(20) | M2 Derived: Join to MPI Table on UPID. Only visible in the restricted universe. |
| Beneficiary Last Name | Char(26) | M2 Derived: Join to MPI Table on UPID. Only visible in the restricted universe. |
| Beneficiary Name | Char(70) | M2 Derived: Join to MPI Table on UPID displayed as LAST, FIRST, MIDDLE, and CADENCY. Only visible in the restricted universe. |
| Certifying Provider HIPAA Taxonomy Desc | Char(50) | Lookup Certifying Provider HIPAA Taxonomy with the Health Care Provider Taxonomy Reference Table and return the Description, Short. |
| Eligibility Group Description | Char(45) | C = Continued Health Care Benefit Program (CHCBP)  D = Direct Care Only  E = TRICARE Eligible  L = TRICARE for Life (TFL)  R = TRICARE Retired Reserve (TRR)  S = TRICARE Reserve Select (TRS)  Y = TRICARE Young Adult (TYA)  Z = None |
| Enrollment Group Description | Char(27) | P = TRICARE Prime  D = Direct Care Only  L = TRICARE Plus  S = TRICARE Select  U = Designated Provider (USFHP)  Z = Not Enrolled  Blank = pre-2018 |
| Fiscal Quarter | Char(1) | M2 Derived: If FM in (1,2,3) then Fiscal Quarter=1; else if FM in (4,5,6) then Fiscal Quarter=2; else if FM in (7,8,9) then Fiscal Quarter = 3; else Fiscal Quarter = 4. 1 = FM 1-3 (Oct-Dec) 2 = FM 4-6 (Jan-Mar) 3 = FM 7-9 (Apr-Jun) 4 = FM 10-12 (Jul-Sep) |
| Market Area ID | Char(4) | Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| Market Transition Date | Char(8) | Joined to DMIS ID Table by FY and Tmt DMIS ID. |
| MTF Service Area | Char(4) | M2 Derived: Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| MTF Service Area Name | Char(40) | M2 Derived: Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| MTF Service Area Base Market Code | Char(8) | Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| MTF Service Area Expanded Market Code | Char(8) | Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| MTF Service Area Reporting Market Code | Char(8) | Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| MTF Service Area Type of Market Code | Char(8) | Join to the Market Table by FY, FM, Beneficiary Zip Code, and Sponsor Service. |
| Number of Records | Num(9,0) | M2 Derived: Count numbers requested by query. This will be a measure. |
| Number of Tests | Num(9,0) | M2 Derived: If Record ID equals 1, then 1, else 0. This will be a measure. |
| Number of Results Maximum | Num(9,0) | M2 Derived: Count number of rows per Record ID. In other words, return maximum Line Item Number per Record ID. |
| Ordering Provider HIPAA Taxonomy Desc | Char(50) | Lookup Ordering Provider HIPAA Taxonomy with the Health Care Provider Taxonomy Reference Table and return the Description, Short. |
| Ordering Site Financial Parent | Char(4) | See DMIS ID specification for rule. |
| Ordering Site Financial Parent Name | Char(40) | See DMIS ID specification for rule. |
| Ordering Site ID/Appoint Record ID | Char(14) | M2 User Defined Object (UDO) that is the concatenation of Ordering Site and Appointment Record ID. |
| Ordering Site ID/InPatient Record ID | Char(14) | M2 User Defined Object (UDO) that is the concatenation of Ordering Site and Inpatient Record ID. |
| Ordering Site of Record Base Market Code | Char(10) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Command | Char(6) | M2 Derived: Join to the DMIS Table by FY and Ordering Site. |
| Ordering Site of Record DHP Code | Char(1) | M2 Derived: Join to the DMIS Table by FY and Ordering Site of Record. |
| Ordering Site of Record Expanded Market Code | Char(10) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Market Name | Char(40) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Mil Svc | Char(1) | M2 Derived: Join to the DMIS Table by FY and Ordering Site of Record. |
| Ordering Site of Record MSMA | Char(3) | M2 Derived: Join to the DMIS Table by FY and Ordering Site of Record. |
| Ordering Site of Record Name | Char(40) | M2 Derived: Join to the DMIS Table by FY and Ordering Site of Record. |
| Ordering Site of Record Readiness CMD | Char(8) | See DMIS ID specification for rule. |
| Ordering Site of Record Readiness Service | Char(1) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Reporting Market Code | Char(10) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Reporting Market Name | Char(40) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Type of Market Code | Char(10) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site of Record Type of Market Name | Char(40) | Join to the DMIS ID Table by Ordering Site DMIS ID and FY. Populated FY18+. |
| Ordering Site Parent | Char(4) | M2 Derived: Join to the DMIS Table by FY and Ordering Site. ---Hide/Remove. |
| Ordering Site Parent Name | Char(40) | M2 Derived: Join to the DMIS Table by FY and Ordering Site Parent. (Hide/Remove). |
| Pseudo MRN GENESIS | Char(12) | Encryption algorithm applied to MRN GENESIS. |
| Pseudo Patient SSN | Char(9) | M2 Derived: Encryption algorithm applied to Patient SSN. |
| Pseudo Person ID | Char(10) | M2 Derived: Encryption algorithm applied to Person ID. |
| Pseudo Sponsor ID | Char(9) | M2 Derived: Encryption algorithm applied to Sponsor ID. |
| Record ID/Line Item Number | Char(9) | M2 Derived: Concatenate Record ID and Line Item Number. Format should be XXXXXXNNN. Change Line Item Number to add leading zeros, e.g. change 1 to 001, before concatenation. |
| Tmt DMIS ID Base Market Code | Char(10) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Command | Char(6) | M2 Derived: Join to the DMIS Table by FY and Tmt DMIS ID. |
| Tmt DMIS ID DHP Code | Char(1) | M2 Derived: Join to the DMIS Table by FY and Tmt DMIS ID. |
| Tmt DMIS ID Expanded Market Code | Char(10) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Financial Parent | Char(4) | See DMIS ID specification for rule. |
| Tmt DMIS ID Financial Parent Name | Char(40) | See DMIS ID specification for rule. |
| Tmt DMIS ID Market Name | Char(40) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID MSMA | Char(3) | M2 Derived: Join to the DMIS Table by FY and Tmt DMIS ID. |
| Tmt DMIS ID Name | Char(40) | M2 Derived: Join to the DMIS Table by FY and Tmt DMIS ID. |
| Tmt DMIS ID Readiness CMD | Char(8) | See DMIS ID specification for rule. |
| Tmt DMIS ID Readiness Parent | Char (4) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Readiness Service | Char (1) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Reporting Market Code | Char(10) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Reporting Market Name | Char(40) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Type of Market Code | Char(10) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt DMIS ID Type of Market Name | Char(40) | Join to DMIS ID Table by TMT DMIS ID and FY. Populated FY18+. |
| Tmt Parent DMIS ID Name | Char(40) | M2 Derived: Join to the DMIS Table by FY and Tmt DMIS Parent. |

1. **M2 Location:**

**Health Care Services / Direct Care / Laboratory and Radiology / Laboratory Detail – Lab Results.**