**M2 HEALTH CARE SERVICE RECORD NON-INSTITUTIONAL (HCSR - NI)**

**AND TRICARE ENCOUNTER DATA (TED - NI)[[1]](#footnote-1)**

This specification covers two M2 tables. Each table has the same file layout and fields available, but the record selection criteria are different. See Section III for more information.

1. **Source**

Source: Non-Institutional (HCSRs, TED-derived HCSRs and TEDs) are provided to the M2 by the MDR, which receives its claims data from TMA-Aurora’s claims acceptance system.

1. **Input Feeds**

File format: Regardless of the length specified, all fields are variable length and delimited by “!”. A null field will simply have an end of field delimiter “!” immediately following the previous field’s end of field delimiter (unless it is the last field).

File content: Three source files are provided to the M2 each month for each fiscal year of data being processed. For each non-institutional M2 file (DHP and MERHCF), there is an “add file” (total of two files per FY), and there is one “delete file that is used to remove denied, cancelled or changed records from both the DHP and the MERHCF files.

**Organization and Batching**

Time slicing: Batches are by fiscal year for the current fiscal year and two previous fiscal years. Each file consists of all records with an end-date-of-care in the same fiscal year.

Frequency of processing: Monthly refreshes.

1. **Filters**

Original batches include all net non-institutional line items that were accepted, and not cancelled or denied, with an end-date of care later than 30 September 1998.

Monthly refresh batches include all net non-institutional records accepted by the TMA-Aurora Claims Acceptance System in the preceding month or any record that has changed as a result of MDR processing. Whenever a record is updated, cancelled, or changed via application of LVM4 or other method, the record key (HCSR or TED Number) is added to the delete file and ALL line items associated with that key are included in the add file, regardless of which particular line item changed.

Splitting the “ADD” files: Due to the size of the M2 Non-Institutional Data Files, it is required that the M2 data feeds be split to secure better response times for users. This is accomplished by the MDR during the feed preparation process. The splitting rules don’t result in mutually exclusive data sets. Some records are present in both files! Include records in the MERHCF if the value of the TFL flag is U or T. Include records in the DHP file if the value of the TFL flag is A, N or U. Note that the MERHCF (TFL) flag will need to be derived prior to splitting the files. Furthermore, the update process will need to allow for the possibility that adjustment records may switch an individual record from one file to the other.

 **Appended Fields**

The non-institutional table as viewed in the M2 contains some inferred fields that are results from “joins” to other tables or other inference or some additional math. The following bullets describe these fields.

* The Reservist Status Code and Special Operations Code are made available to M2 users in the non- institutional table via a join to the FY specific M2 reservist tables. The basis for the join is the sponsor social security number and the non-institutional begin date of care between the begin and end dates of the Reservist Status Code. See the M2 Reservist Specification for more information.
* The Special HCDP is made available to M2 users in the non-institutional table via a join to the M2 special HCDP tables. The basis for the join is the DEERS Person ID and the non-institutional begin date of care between the begin and end dates of the Special HCDP. See the M2 Special HDCP Specification for more information.
* Market area attributes are made available as described in the M2 Market Area Specification. The particular fields added based on this specification include:
* MTF Service Area for FY06+ (replaces BPA catchment area ID column), BPA Catchment Area for FY05 and earlier, prism area ID, catchment area ID, market area ID, HSSC region, Prime Service Area, TPR Flag, Beneficiary HSSC Region
* provider prism area ID, provider catchment area ID, provider market area ID, and Provider Prime Service Area.
* DMIS ID Attributes, applied according to the M2 DMIS ID Index Table Specification. The particular fields that are made available include:
* Enr site of record name, Enr site of record command, Enr site of record DHP Code, Enr Site of record military service, Enr Site of record MSMA, enr site of record parent, PPS enr site, enr site of record parent name[[2]](#footnote-2)
* Enrollment site name, enrollment site command, enrollment site military service, enrollment site region, enrollment site parent, enrollment site parent name, enrollment site MSMA, enrollment site DHP Code, Enrollment Site HSSC Region,
* MTF Service Area Name and/or BPA Catchment Area name, where applicable
* catchment area name, catchment area command, catchment area military service, catchment area MSMA
* prism area name, prism area command, prism area military service, prism area MSMA
* provider catchment area name, provider catchment area MSMA, provider catchment HSSC Region
* provider prism area name, provider PRISM Area MSMA
* DEERS Enr site name, DEERS enr site command, DEERS enr site DHP Code, DEERS ENr Site Military service, DEERS Enr Site MSMA, DEERS enr site parent, DEERS enr site parent name
* Pseudo Sponsor ID is made available, based on a confidential scrambling algorithm.
* Sponsor Rank (Pay Grade) is collapsed into summary groups for level 4 users, as specified in Levels of Access Specification
* Number of Line Items is calculated as a count of unique Record IDs/Line Item Numbers, which represents a count of records.
* Age Group Code and Age Group Common are derived according to the following table (brackets indicate inclusive ranges):

| Beneficiary Age | Age Group Common | Age Group Code |
| --- | --- | --- |
| [0-4] | A | A |
| [5-14] | B | B |
| [15-17] | C | C |
| [18-24] | D | D |
| [25-34] | E | E |
| [35-44] | F | F |
| [45-64] | G | G |
| [65-69] | H | H |
| [70-74] | I | H |
| [75-79] | J | H |
| [80-84] | K | H |
| 85+ | L | H |
| Any Other/Blank | Z | Z |

* The “overall patient paid” measure is calculated by adding the patient cost share to the patient deductible.
* PPS product line is appended according to the rules in Appendix A.
* Beneficiary First Name, Beneficiary Last Name and Beneficiary Name are made available via a join to the master peson index file, *IF it is determined that response time requirements are not derailed as a result.*
* ACV Group is prepared in M2 according to the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **FY** | **ACV** | **Ben Cat Common**  | **ACV Group** |
| 04 & before | A,D,E | Any  | Prime |
| G,L | Any | Plus |
| U | Any | Designated provider |
| All others, including blank | 4 | Reliant |
| All others, including blank | Other |
| 05 & After | A,E,H,J | Any | Prime |
| B,F | Any | Overseas remote |
| G,L | Any | Plus |
| U | Any | Designated provider |
| M,Q | Any | Reliant |
| All others, including blank | 4 | Reliant |
| All others, including blank | Other |

* For all measures, fields are added that estimate the measure to completion. Measures that have been estimated to completion will use the same name as the original measure, but instead of ending in “,raw”, the label for each completed filed will end in “,total”. The methods used to make these estimations are described in Appendix B.
1. **Updating the Master Tables**

M2 tables are updated on a monthly basis. M2 tables are updated on a monthly basis using a two-step process. In the first step, records in the M2 non-institutional database are purged by applying the monthly delete file, deleting records with matching record IDs. Once that step is complete, the non-institutional records in the appropriate “addition” file are appended[[3]](#footnote-3) to the existing M2 non-institutional table being updated.

1. **Record Layout and Content**

**M2 HCSR (Non-Institutional) Feed Layout**

| M2 Name | Format | SAS name from MDR  | Processing Rule/Comments |
| --- | --- | --- | --- |
| Record ID | $24 | tedno | In MDR: If TED Indicator is “T”, fill with content from positions 87-110; otherwise, fill with positions 87-107 |
| TED Indicator | $1 | tedind | No transformation |
| Program Ind Code | $1 | pic | No transformation. |
| Sponsor ID | $9 | sponssn | No transformation. |
| Sponsor Pay Grade | $2 | pay grade and pay plan | Use pay plan if available in source data, otherwise: If payplan= 'ZZ' then paygr = '90';else if ((payplan = 'ME') and (paygrd in '01','02','03','04','05', '06',’07','08','09'))) then no transformation;else if ((payplan eq 'MW') and (paygrd in ('01','02','03','04','05'))) then paygr = paygrd + 10;else if ((payplan eq 'MC') and (paygrd eq '01')) then paygr ='19';else if ((payplan = 'MO') and (paygrd in '01','02','03','04','05', '06','07','08','09','10','11'))) thenpaygr = paygrd + 20;else if ((payplan = 'GS') and (paygrd in ('01','02','03','04','05', '06','07','08','09','10','11','12', '13', '14','15','16','17','18'))) then paygr = paygrd + 40;else if (paygrd in ('00','90')) then paygr = '99'; |
| Sponsor Service | $1 | sponsvc | No transformation. |
| Beneficiary Name of Record | $27 | lastname, frstname, midlname | In MDR: Concatenate last name, first name and middle name |
| Date of Birth | Date (8) (YYYYDDMM) | patdob | No transformation. |
| DDS | $2 | dds | No transformation  |
| Gender | $1 | patsex | No transformation. |
| Beneficiary Zip Code | $5 | patzip | No transformation. |
| Enrollment Status | $2 | enrstat | No transformation. |
| Amount Allowed, Raw | 10.2 | allow | No transformation. |
| Amount Paid, Raw | 10.2 | paid | No transformation |
| Provider Tax ID | $9 | taxid | No transformation. |
| Multiple Provider ID | $4 | multprov | No transformation. |
| Provider Zip | $5 | provzip | No transformation. |
| Primary Diagnosis | $6 | dx1 | No transformation. |
| Sec Diagnosis 1 | $6 | dx2 | No transformation. |
| Sec Diagnosis 2 | $6 | dx3 | No transformation. |
| Enrollment Site of Record | $4 | enrsite | No transformation. |
| Age | N (3) | patage | No transformation. |
| Beneficiary Region | $2 | resreg | No transformation. |
| Provider Specialty | $2 | provspec | No transformation. |
| Begin Date of Care | Date (YYYYMMDD) | begdate | No transformation. |
| End Date of Care | Date (YYYYMMDD) | enddate | No transformation. |
| Procedure Code | $5 | cpt | No transformation. |
| Type of Sub Code | $1 | subcode | No transformation. |
| Ben Cat Common | $1 | comben | No transformation. |
| Number of Visits, Raw | N (3) | visits | No transformation. |
| Service Type Code | $1 | typsvc1 | No transformation.  |
| Line Item No | $3 | linum | Left-pad with 0s, to be of length 3. |
| Serv Nature | $1 | typsvc2 | No transformation.  |
| Place of Serv | $2 | place | No transformation. |
| Sec Diagnosis 3 | $6 | dx4 | No transformation. |
| Sec Diagnosis 4 | $6 | dx5 | No transformation. |
| Catchment Area ID of Record | $4 | catch | No transformation in M2. Derived at source, by inserting a “0” before the three digit DMIS ID code. Hidden field. |
| CM | N (2) | cm | No transformation. |
| CY | N (4) | cy | No transformation. |
| FM | N (2) | fm | No transformation  |
| FY | N (4) | fy | No transformation. |
| Spec Processing Code 1 | $2 | sprocd1 | No transformation. |
| Spec Processing Code 2 | $2 | sprocd2 | No transformation. |
| Spec Processing Code 3 | $2 | sprocd3 | No transformation. |
| Number Services, Raw | N (3) | svcs | No transformation. |
| Number Scripts, Raw | N (3) |  | In MDR: Set to number of services where program indicator code is “D” |
| Person ID | $10 | edi\_pn | No transformation |
| RVU, Simple, Raw | 5.2 | simprvu | No transformation |
| Amt OHI, Raw | 10.2 | ohi | No transformation  |
| Amt Patient Cost Share, Raw | 8.2 | patcost | No transformation |
| Amt Patient Deductible, Raw | 8.2 | deduc | No transformation |
| Acceptance Date | Date (YYYYMM) | accptdt | In MDR: Convert SAS Date to YYYYMMDD and then set to the first 6 characters of the converted date. |
| Processing Date | YYYYMMDD | procdate | No transformation |
| Amount Billed, Raw | 9.2 | bill | No transformation. Only populated for FY04+ |
| Cycle Year | $4 | cycle | 4 character year of cycle date. |
| Cycle Month | $2 | cycle | 2 character month of cycle date. |
| Sponsor Status | $1 | memcat | No transformation |
| CPT Modifier 1 | $2 | cptmod1 | No transformation |
| CPT modifier 2 | $2 | cptmod2 | No transformation |
| MDC | $2 | mdc | No transformation |
| MERHCF Flag | $1 | tflflag | No transformation |
| DEERS Enr Site | $4 | denrsite | Based on LVM4 merge. See MDR specification for rules. FY04+ |
| DEERS ACV | $1 | acv | No transformation |
| DEERS Beneficiary Category | $3 | bencat | No transformation |
| Admitting TED Number | $24 | admtedno | No transformation |
| Filler | 10 | N/A | No transformation |
| HCDP Code | $3 | dhcdp | Based on LVM4 merge. See MDR specification for rules. FY04+ |
| Filler | $3 | N/A | Filler |
| NDC | $11 | ndc | No transformation  |
| Work RVU, Raw | 14.2 | workrvu | No transformation. FY04+  |
| Practice Expense RVU, Raw | 14.2 | pervu | No transformation. FY04+ |
| Malpractice RVU, Raw | 14.2 | malprvu | No transformation. FY04+ |
| Administrative Tail, Raw | 14.2 | admtail | No transformation. Hidden field. |
| Contractor Number | $2 | konum | No transformation |
| Provider State/Country Code | $3 | provloc | No transformation |
| Referral Number | $15 | authnum | Future release (hidden). FY06+ |
| Medicare Pharmacy Indicator | $1 | medrx | No transformation. FY06+ |
| Enrollment Site | $4 | hybenr | No transformation. FY04+ |
| Overall RVU, Raw | 14.2 | totrvu | No transformation. FY04+ |
| Space Available Flag | $1 | spacea | No transformation. |
| Network Indicator | $1 | network | No transformation. FY04+ |
| Underwritten Region | $1 | undflag | No transformation. FY04+ |
| Provisional Acceptance Indicator | $1 | provaccp | Only populated for FY04 and later |
| Person Association Reason Code | $2 | parc | No transformation |

1. **Special Outputs**

NA

#### **Appendix A: PPS Product Line Definition**

PPS product lines are appended to the M2 non-institutional records. The mapping to use for the PPS product line field is contained in the table below.

| PPS Product Line | Place of Service | Provider Specialty Code |
| --- | --- | --- |
| ER | 23 | Any |
| MH | Not 23 | 62, 85, 26, 94, 93, 91, 95 |
| Facility | Not 23 | 99 |
| PC | Not 23 | 01 , 11 , 37 , 08 , 90 , 84 , 70 |
| IM Sub | Not 23 | 10, 06, 13, 34, 29, 03, 47, 39, 40, 38, ON |
| Optom | Not 23 | 98, 18 |
| Ortho | Not 23 | 20, 65, 48, 25 |
| Rad | Not 23 | 30 |
| ENT | Not 23 | 04 |
| OB | Not 23 | 16, 92 |
| Surg | Not 23 | 02 |
| Derm | Not 23 | 07 |
| Surg Sub | Not 23 | 24, 14, 33, 28, 50 |
| Anesth | Not 23 | 05, 80 |
| None | Not 23 | 69, 49, 42, 43, 51, 59, 88, 82, 97, 60, 81, 35, 83, BC |
| Home | Not 23 | HA, HH |
| Path | Not 23 | 22 |
| Other | All else | All else |

#### **Appendix B: Estimating M2 non-institutional measures to Completion**

Because it takes many years for all claims for a given period of service to be received, adjudicated and posted, most management questions require “completion” of the existing claims to form an estimate of the total claims that occurred for a period. (Those claims already processed can be called “raw”, while those expected to be received are usually termed “incurred but not reported” (IBNR), which summed together make “total”.)

This means that every quantitative element (number of visits, services, or scripts, amounts allowed, paid, OHI, cost share, deductible, overall patient paid) in a claim exists as measure (raw) but can also be used to estimate a total. Consequently, each of these variables, though fed only once, appears twice, once as “raw” and once as “total”.

The method used by the M2 to do this is to use a lookup to an IBNR factor table. An IBNR factor is a numeric value between 0 and 1, used to compute total measures by dividing the corresponding raw measure by the factor. There will be a set of 10 IBNR factors for the Non-Institutional M2 tables, each corresponding to a different type of care (e.g., drugs, outpatient professional, inpatient professional) and/or measurement type (e.g., cost or workload). The types of care, represented by IBNR categories, are described in Table A-1.

## Table A-1: M2 Non-Institutional IBNR Categories

| Category Number | Category | Program Indicator Code | Service Type Code | Enrollment Status |
| --- | --- | --- | --- | --- |
| 1 | Drugs | D | Not I or M | Not Applicable |
| 2 | Non-TFL Inpatient | Any | I or M | Not FE or FS |
| 3 | TFL Inpatient | Any | I or M | FE or FS |
| 4 | Non-TFL Ambulatory | Not D | Not I or M | Not FE or FS |
| 5 | TFL Ambulatory | Not D | Not I or M | FE or FS |

This method will join the non-institutional table to the IBNR factor table on the IBNR category and lag value columns. The IBNR factor table will contain 60 months of IBNR factors, where lag value is the age of a claim in number of months from end date of care (EDOC) to the current reported as of date plus one month (e.g., non-institutional records reported from the source system on Aug 1st with EDOC in July 2002 the lag value is 1, with EDOC in June lag value is 2, etc). Completion factors will only be applied when the lag value is less than 37. For cases where the lag is greater or equal to 37, the data is considered 100% complete. The M2 Non-Institutional IBNR file layout is described in Table A-2.

## Table A-2: M2 Non-Institutional IBNR Fields

| Name | Format | Processing Rules/ Comments |
| --- | --- | --- |
| IBNR Category | Integer (1) | See table below |
| IBNR Lag | Integer (2) | Age of a claim in number of months from end date of care (EDOC) to the current reported as of date plus one month |
| IBNR Cost Factor | Decimal (7,6) | See above |
| IBNR Work Factor | Decimal (7,6) | See above |

**Appendix C: MERHCF Flag**

The MERHCF flag has 4 values. The logic is described in the table below. Values should be assigned in order of this table, using “else” conditions to assure exclusivity when required. If the ACV is blank or not available in any year’s data, simply create a blank ACV value to use to implement the logic, and then delete the ACV field prior to posting the final datasets.

| **TFL Flag** | **Enrollment Status** | **Order of Assignment** | **Bencat** | **Any Special Processing Code** | **Date of Birth** | **Program Indicator Code** | **ACV** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| N | Any | 1 | Any | R |
| T  | Any | 2 | Not 1 or 4 | FF, FG, FS | Any |   |
| T | Any | 3 | Not 1 or 4 | Any | Age 65 or older on April 1, 2001 | D | Any |
| T | PS | 4 | Not 1 or 4 | Any | Any | D | Any |
| U | Any | 5 | Not 1 or 4 | R,T | Any |
| A | Any | 6 | 1 or 4 | Any | Any | Not R |
| N | Any | 7 | Any | Any | Any | Any | Any |

1. The Health Care Service Record changed names to “TRICARE Encounter Data”, or TED, upon the implementation of the new Managed Care Support Contracts. [↑](#footnote-ref-1)
2. The names of these fields may change. [↑](#footnote-ref-2)
3. Processing may occur prior to appending records, if it is part of the process of adding fields to M2 records, as described in Section V. [↑](#footnote-ref-3)