

HHA PPS Grouper Version 02.03: Logic & Pseudocode

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Introduction

In 2007, CMS has announced refinements to the Medicare Home Health Prospective Payment -System (HH PPS) to improve the accuracy of payments to home health agencies for services they furnish to Medicare beneficiaries. A Notice of Proposed Rulemaking (NPRM), CMS-1541-P, was published in the Federal Register on May 4, 2007, and the Final Rule, CMS-1541-FC, was published on August 29, 2007. This Rule included a number of refinements that updated the casemix model to reflect more accurately the resources associated with certain types of episodes. This document presents detailed logic of the classification algorithm to help software vendors who may wish to develop their own classification software.

VERSION NOTES: Version 02.03

ICD-9-CM UPDATES: Grouper Version 02.03 is being issued in 2008 mainly to accommodate changes to the ICD-9-CM diagnosis codes that are effective October 1, 2008. Certain diagnosis codes used by the grouper become invalid as of October 1, 2008, and are “dropped” from the logic used to generate HIPPS codes from OASIS assessments with completion dates (M0090) as of that date. If these codes are encountered on an assessment with a later completion date, they will not be scored. In a situation where a 4-digit code is being replaced with one or more 5-digit codes, the use of the outdated 4-digit code after October 1, 2008 could possibly trigger an “incomplete code” error and turn on the data validity flag. If a diagnosis code that is recognized by the grouper only as of October 1, 2008 is encountered at that level on an assessment before its effective date, it will not be recognized for scoring and will be treated as an irrelevant diagnosis (and the data validity flag will not be turned on).

In addition to changes involving the October 1, 2008 updates, some additional changes in the use of other (existing) ICD-9-CM codes used for scoring cases have been made by CMS. These are mainly changes in the recognition of specific codes in the 078 category as allowable etiologies for specific secondary-only/manifestation casemix diagnoses. These changes are shown in Pseudocode Appendix Table 3, Part 1, and will also be effective for assessments dated October 1, 2008 or later.

There are too many ICD-9-CM code changes to list them individually here. In the Appendix Tables that deal with diagnosis codes (Tables 1, 2, 3, 4, 6, and 7), codes that become effective and/or part of the Grouper as of October 1, 2008 are marked with an asterisk (*); those that become INVALID and/or not part of the Grouper as of that date are indicated with a pound sign (#). Note that both sets of codes are retained in the tables because this pseudocode and the tables must provide guidance on dealing with OASIS assessments completed on any date.

OTHER CHANGES: A few bugs identified in the Version 02.02 of the Grouper .DLL software and the pseudocode have been addressed in this version. These include the following:

1. Treatment of invalid values of M0826: If the previous version of the grouper encountered invalid data in M0826 that included numbers, it sometimes calculated an incorrect grouping step (initial digit of the HIPPS code) and/or clinical or functional scores. Version 02.03 does not do this. (As before, the service domain validity flag is turned on to indicate the presence of a problem.)
2. Scoring of diabetic ulcers coded in M0246 following a V code in M0230: Previously the Grouper .DLL would score points for diabetic ulcers coded in M0246 without the presence of an allowable V-code (from Appendix Table 4) in M0230. If the V-code in M0230 was a payment V-code, the DLL would still score the diabetic ulcers rather than (correctly) scoring the V-code and not scoring the ulcers. Version 02.03 does not do this.
3. Manifestation data validity flag for manifestation codes in M0246 without V-code in M0230/M0240: Previously, the grouper .DLL would “turn on” the data validity flag to indicate a manifestation code sequencing problem when it encountered a manifestation code in M0246 without an etiology, even without

an allowable V-code in the M0230/M0240 of the same row to indicate that codes in M0246 should be evaluated. Version 02.03 does not do this.

4. Scoring NRS points for M0476 on followup/recert assessments though M0470 is blank: Previously, the Grouper .DLL would award NRS points for M0476 = 02 or 03 even though M0470 was blank or 00. Version 02.03 does not do this.

CHANGES IN THE DOCUMENTATION: The documents accompanying the grouper, such as this pseudocode, have also been updated. In addition to the editorial changes required to accommodate the change in version number from 02.02 to 02.03, and documenting the changes in the Grouper .DLL, some changes and corrections have been made. These are noted in the “changes” document, “PSEUR203.pdf”.

1. The most notable logic change includes the addition of logic for scoring of diabetic ulcers coded in M0246. Previously, the pseudocode did not address the scoring of diabetic ulcers coded in M0246 following an allowable V-code in M0230/M0240.
2. Some of the NRS variables incorrectly had “SE” included in their names in the pseudocode. Since there are no separate scoring equations for the NRS variables, there is no need for separate versions of NRS variables for separate equations.

Note that the actual .DLL software, as well as this pseudocode, is “backward-compatible;” both incorporate the classification logic of all previous versions of the Grouper. However, as with the previous version (02.02), Version 02.03 outputs 4 parameters (rather than 3) for all assessments, including those from 2007 and earlier.

Version 02.03: Grouper Outputs

(1) HIPPS code:

The format and composition of the HIPPS code is the same as Version 02.02. The HIPPS code still does NOT include the “data validity flag” that appeared in Grouper 1.06 and earlier versions, because all five characters of the code are now used for the HHRG (4 characters) and the nonroutine supplies (NRS) group (1 character). However, the Grouper will still be applying certain range and logic checks to the data used for grouping, and a separate data validity flag will alert the user to problems and situations where points are potentially being lost – see below.)

(2) Data Validity Flag:

In Grouper version 1.06 and earlier, the data validity flag was the final character of the HIPPS code. Since there is no room in the Version 02.x HIPPS code for the flag, it is output as a separate parameter. In addition, it has been expanded from 8 values to 16 in order to alert providers separately to problems in the sequencing of diagnosis codes (causing them to go unrecognized for scoring) – see Appendix Table 9. The way in which the validity flag will appear and be stored may vary from software package to package. HAVEN will screen-display the flag upon producing the HIPPS code for each record input, but the flag will not be stored in the local data base.

(3) Treatment Authorization (Claim-OASIS Matching String):

The format of the 18-character claim-OASIS matching string (entered in the “Treatment Authorization” field on HHA claims) is the same as Version 02.02. This string is used on the Medicare claim not only (a) to identify the specific OASIS assessment used to generate the HIPPS code, but also (b) to store OASIS information needed to generate a corrected HIPPS code as required based on corrections to certain classification variables during claims processing. In order to fit all the required information into the same 18 characters, many of the variables are transformed into alphanumeric codes (letters) in order to use the fewest possible characters. Note that the letter codes used for dates do not vary depending on whether the year is a leap year or not. (For example, the code for March 2 is “CJ” in every year, and the code for February 29 (“CH”) is used only in leap years.) Because the information contained in this string may be needed for calculating payment, its presence on the claim in a valid format will now be required for claims to be paid.

(4) Grouper Version – updated:

The new version is 02.03. This is output for all assessments, including those completed before 10/1/2008, which are classified using older versions of the grouping algorithm.

Version 02.03: The OASIS Protocol

Version 02.03 classifies 2008 assessments based on the OASIS data collection protocol Version 1.60. This version of the OASIS protocol added/modified items used for casemix classification:

M0110 - Episode Timing (item added)

M0246 - Casemix diagnoses (optional) (expands and replaces M0245)

M0826 - Number of therapy visits (replaces M0825)

and changed data collection points for several others:

M0175 – NOT collected on followup and recertification assessments (M0100=04 or 05)

M0470 - REQUIRED on followup and recertification assessments (M0100=04 or 05)

M0474 - REQUIRED on followup and recertification assessments (M0100=04 or 05)

M0520 - REQUIRED on followup and recertification assessments (M0100=04 or 05)

M0610 - NOT collected on followup and recertification assessments (M0100=04 or 05)

M0800 - REQUIRED on followup and recertification assessments (M0100=04 or 05)

Version 02.03: Treatment of Diagnoses

Data checks on diagnoses: The checks applied to the diagnosis-related OASIS items are different from those in the OASIS Data Specifications. The screens applied to these variables require:

(a) that a primary diagnosis code is entered;

Range checks:

(b) that the primary diagnosis is not an E-code and that none of the characters to the left of the decimal point is non-numeric other than a V in a valid V-code in M0230_PRIMARY_DIAG_ICD and/or a V or an E in valid V- or E- codes in M0240_OTH_DIAGn_ICD)

(c) that all the necessary digits are entered for any code which falls in a three-digit code family where, for Grouper purposes, CMS requires the 4th and/or 5th digit (e.g., 4th and/or 5th digit may be required to determine whether certain codes can be used for assigning the primary diagnosis – see Appendix Table 2);

(d) that the diagnosis code used for casemix classification is a valid diagnosis code for the time period in which the assessment was completed (according to M0090_INFO_COMPLETED_DT [Date Assessment Completed]).

VERSION NOTE: Version 02.03

Version 02.03 incorporates additions and deletions to the list of valid ICD-9-CM codes that are effective 10/1/2008. In addition, there are changes to the treatment of a few other diagnosis codes. In the Appendix Tables, codes that are invalid and/or not recognized for scoring by the grouper as of 10/1/2008 are indicated with the pound sign (#); those that are effective and/or recognized for scoring as of 10/1/2008 are indicated with an asterisk (*).

Sequencing checks:

- (e) that a casemix diagnosis code which can only be entered as a secondary diagnosis according to ICD-9-CM coding guidelines is not entered as the primary diagnosis;
- (f) that a “secondary-only” or manifestation code casemix diagnosis (i.e., a diagnosis code that requires multiple coding under ICD-9-CM coding rules) follows an appropriate etiology or underlying condition code, NOT another secondary-only casemix code or a V- or E-code. (For purposes of Grouper logic checks, “secondary-only” or manifestation codes are those that appear flagged with an “M” in Tables 1 and 6 in the Appendix, and “appropriate etiology or underlying conditions” are defined for each manifestation code in Table 3 (parts 1 and 2) in the Appendix. The etiology codes must also have all required digits – see Appendix Table 2, Part 3.¹)

The Grouper software and this pseudocode cannot check the responses on these items against *all* possible ICD-9-CM diagnosis codes to assure that they are valid ICD-9-CM diagnosis codes; rather, they check for code validity against lists of the codes used for casemix assignment.

V-codes and casemix diagnosis fields: In the fields for casemix diagnosis (M0246):

- (g) The Grouper will ignore E-codes and V-codes.
- (h) The Grouper will acknowledge a diagnosis in column 3 in a given row ONLY if there is a V-code which potentially replaces a casemix diagnosis in the second column of that same row. (For the list of V-codes subject to the Grouper logic, see Table 4 in the Appendix. For a list of which V-codes require entry of 4th and 5th digits to be recognized by the Grouper, see Appendix Table 2, Part 2.)
- (i) The Grouper will acknowledge a diagnosis in column 4 of a given row ONLY if (1) there is a Table 4 V-code in the second column of that same row AND (2) the code in column 4 is a secondary-only code or other code that requires a preceding etiology or other “code first” situation (as defined in “Table 1: Diagnosis Codes, “Secondary-only” Diagnosis Codes, Diagnosis Groups, and Diagnosis Group Variable Numbers” in the Appendix) AND (3) the code in column 3 is defined as a complete and appropriate etiology for the manifestation code entered in column 4. (Criteria for completeness are shown in Appendix Table 2, part 3; appropriate etiologies are listed in Table 3 in the Appendix.)

Special treatment of certain V-codes: As in Version 02.02, three V-codes (V55.0, V55.5 and V55.6) are casemix diagnoses in Version 02.03, that is, they can earn points for an episode (see Tables 1 and 5 in the Appendix). These codes are treated specially for sequencing and scoring purposes: If one of these three V-codes appears in M0230a or M0240x, the Grouper will not consider or score any entries in M0246x3 and M0246x4 on the same row.

Note that columns 3 and 4 (M0246x3 and M0246x4) in item M0246 are optional; entering of a V-code in M0230/M0240 does *not* require that columns 3 and 4 be completed on that row.

Scoring multiple diagnoses: Diagnoses are treated differently for scoring purposes in Grouper version 02.x than in earlier versions. Every valid casemix diagnosis code that is reported has the opportunity to earn points for classification purposes. (In Grouper version 1.0x, an episode could earn points for the primary diagnosis only.) However, the episode can earn the points for a diagnostic group only once (even if several of its diagnoses fall in the same group). If the primary diagnosis and one of the “other” diagnoses fall into a diagnostic group where there are separate numbers of points to be earned for primary and other diagnosis (e.g., diabetes), the episode will receive only the points due for a primary diagnosis.

Scoring when a manifestation code and its etiology each potentially earn points in different diagnosis groups: Finally, if a manifestation and its appropriate etiology both potentially earn points (in different diagnostic

¹ Note that under the Grouper logic, if a potential etiology is also a potential casemix code (Table 1), it is evaluated according to the specificity requirements for casemix codes (Table 2, Part 1). If it fails to meet those criteria, it will be flagged as incomplete for all purposes, and any manifestation code that follows it will not be recognized for scoring purposes. Codes in this situation are marked with a plus sign (+) in Table 2, Part 3.

categories), only the code earning the higher number of points for the episode is recognized and scored. This “contention” will be decided based on the total number of points earned by each diagnosis, including points earned based on the presence of coexisting conditions within the episode. (In cases of a tie, the etiology will be recognized and scored.) As noted above, if an episode has earned points in a diagnosis group once, it cannot earn them again via another lower-listed diagnosis. However, if the first occurrence of the diagnosis did not earn the points in its diagnosis group because it was the “losing” contender in etiology/manifestation contention, any lower occurrence of another diagnosis code in the same (losing) diagnosis group COULD potentially earn those points for the episode.

Version 02.03: Scoring

The refined casemix model classifies each assessment into one of four scoring equations, based on whether it is an “early” or “later” episode in a series of adjacent episodes, and whether the care plan indicates a need for at least 14 therapy visits. (The items M0110 and M0826 were added to the OASIS data set to capture the information needed for this classification.)

Assignment to Scoring Equation				
Episode Timing (M0110)	01 or UK ("Early")		02 ("Later")	
Therapy visits (M0826)	0-13	14+	0-13	14+
SCORING EQUATION:	1	2	3	4

The OASIS responses are scored differently under each scoring equation, i.e., the very same set of OASIS responses will generate different point scores (and a different HIPPS code) depending on the equation.

There are 51 casemix scoring variables (see Appendix Table 5). An individual case can receive the points from each row only once, even if it has multiple instances of conditions meeting the criteria for a given row (for example, several diagnoses in the same group.) For some of the casemix variables, the score can be earned with one of two or more alternative diagnoses (e.g., Appendix Table 5, row 11, “Primary or Other Diagnosis = Heart Disease OR Hypertension”). A case with both of the qualifying diagnoses will still earn those points only once. Please review the pseudocode for the specific logic used by the Grouper in these situations.

Although the Medicare claim will be submitted to Medicare with the HIPPS code based on the submitted values for M0110 and M0826, it is possible that changes to casemix information could occur during claims processing. For example, the CWF may re-classify an episode submitted as “later” to be an “early” one, or medical review may deny some therapy visits – changes that could move the episode to a different scoring equation. In these cases, the Pricer needs to be able to assign an updated HIPPS code, but it does not have the OASIS assessment available to use for rescoring. To avoid having to send the claim back to the provider (RTP), the Grouper will generate four sets of OASIS scores, one set using the algorithm for each scoring equation. These values will be output by the Grouper in the modified Claim-OASIS Matching String and stored on the claim in the “Treatment Authorization” field (FL63) in case they are needed during claims processing.

In order to generate these four sets of scores, certain parts of the scoring logic must be repeated four times, once for each equation. These sections are not shown four times in the pseudocode, but are indicated by variables which include “SE” (for scoring equation) in their names. These variables will actually need to be created four times, once for each equation.

Version 02.03: Nonroutine Medical Supplies (NRS)

As under Version 02.02, a separate classification algorithm is used to classify episodes (other than LUPA episodes) for separate payments for nonroutine medical supplies (NRS) under Version 02.03. The NRS model uses diagnoses and clinical information from the OASIS assessment to assign points to the episode, which can then be placed into one of 6 NRS severity levels; the fifth character of the HIPPS code is the NRS severity level. While the process is similar to that used in the main casemix model, the variables are used differently. Also, the NRS model is applied to all episodes in the same way; there are no separate scoring equations based on episode timing or receipt of therapy visits as in the main model.

In order to promote more accurate billing of supplies, CMS has established a separate set of codes (numbers 1 to 6) for the fifth position of the HIPPS code that is to be submitted on claims for episodes where no supplies were provided. The Grouper software has no information on provision of supplies and always outputs the HIPPS code with the final character that is to be used when supplies WERE provided (letters S to X). For episodes where supplies were not provided, the HHA must edit the HIPPS code and enter the correct final digit before submitting the claim for payment. (See MLN Matters 5746 on <http://cms.hhs.gov> for further details.)

Version 02.03: Transition Issues

The Grouper Version 02.*n* applies to Medicare home health payment episodes starting January 1, 2008, or later. Since episode start date is not recorded on the OASIS, the effective date of Grouper 02.03 is based on assessment completion date (M0090_INFO_COMPLETED_DATE).

If reason for assessment (M0100_ASSMT_REASON) = 01 or 03 (start/resumption of care), Grouper 02.03 will be effective for assessments with M0090_INFO_COMPLETED_DATE on or after 2008-01-01.

To allow for completion of recertification assessments during the 5-day window before the next episode begins, if reason for assessment (M0100_ASSMT_REASON) = 04 or 05 (recertification/other followup), Grouper 02.03 will be effective for assessments with M0090_INFO_COMPLETED_DATE on or after 2007-12-27.

NB: The effective date of the Final Rule, CMS-1541-FC, is January 1, 2008. Therefore, the logic above does not cover ALL situations, and in some cases it is anticipated that providers or RHHIs may need to develop workarounds.

For example, an assessment with M0100_ASSMT_REASON=04 or 05, M0090 assessment completed date = 12/27/2007, and episode start date = 12/31/2007 would need to use Grouper Version 01.06, but the software will produce a Grouper 02.03 classification because the assessment date is on/after 12/27/2007. In these cases, a workaround will be necessary. Guidance has been posted on the CMS Web site, <http://www.cms.hhs.gov/HomeHealthPPS/>.

Questions about the Grouper software and classification logic may be directed via email to grouper0203@homehealthgrouper.info.

SECTION I: Grouper Logic for Medicare Payment Episodes Starting on or after 1/1/2008

Define Input Variables:

LOCATION	FIELD NAME
177-178	M0030_START_CARE_YR12
179-180	M0030_START_CARE_YR34
181-184	M0030_START_CARE_MMDD
302-309	M0090_INFO_COMPLETED
302-303	M0090_INFO_COMPLETED_YR12
304-305	M0090_INFO_COMPLETED_YR34
306-309	M0090_INFO_COMPLETED_MMDD
310-311	M0100_ASSMT_REASON
310-310	M0100_ASSMT_REASON1
311-311	M0100_ASSMT_REASON2
404-410	M0230_PRIMARY_DIAG_ICD
413-419	M0240_OTH_DIAG1_ICD
422-428	M0240_OTH_DIAG2_ICD
431-437	M0240_OTH_DIAG3_ICD
440-446	M0240_OTH_DIAG4_ICD
449-455	M0240_OTH_DIAG5_ICD
458-458	M0250_THH_IV_INFUSION
459-459	M0250_THH_PAR_NUTRITION
460-460	M0250_THH_ENT_NUTRITION
461-461	M0250_THH_NONE_ABOVE
529-530	M0390_VISION
535-536	M0420_FREQ_PAIN
538-538	M0440_LESION_OPEN_WND
539-539	M0445_PRESS_ULCER
540-541	M0450_NBR_PRSULC_STG1
542-543	M0450_NBR_PRSULC_STG2
544-545	M0450_NBR_PRSULC_STG3
546-547	M0450_NBR_PRSULC_STG4
548-548	M0450_UNOBS_PRSULC
549-550	M0460_STG_PRBLM_ULCER
553-553	M0468_STASIS_ULCER
554-555	M0470_NBR_STASULC
556-556	M0474_UNOBS_STASULC
557-558	M0476_STAT_PRB_STASULC
559-559	M0482_SURG_WOUND
560-561	M0484_NBR_SURGWND
563-564	M0488_STAT_PRB_SURGWND
565-566	M0490_WHEN_DYSPNEIC
573-574	M0520_UR_INCONT
577-578	M0540_BWL_INCONT
579-580	M0550_OSTOMY
616-617	M0650_CUR_DRESS_UPPER
620-621	M0660_CUR_DRESS_LOWER
624-625	M0670_CUR_BATHING
628-629	M0680_CUR_TOILETING

335 632-633 M0690_CUR_TRANSFERRING
336 636-637 M0700_CUR_AMBULATION
337 676-677 M0800_CUR_INJECT_MEDS
338 779-780 M0110_EPISODE_TIMING
339 781-787 M0246_PMT_DIAG_ICD_A3
340 788-794 M0246_PMT_DIAG_ICD_B3
341 795-801 M0246_PMT_DIAG_ICD_C3
342 802-808 M0246_PMT_DIAG_ICD_D3
343 809-815 M0246_PMT_DIAG_ICD_E3
344 816-822 M0246_PMT_DIAG_ICD_F3
345 823-829 M0246_PMT_DIAG_ICD_A4
346 830-836 M0246_PMT_DIAG_ICD_B4
347 837-843 M0246_PMT_DIAG_ICD_C4
348 844-850 M0246_PMT_DIAG_ICD_D4
349 851-857 M0246_PMT_DIAG_ICD_E4
350 858-864 M0246_PMT_DIAG_ICD_F4
351 865-867 M0826_THER_NEED_NUM
352 868-868 M0826_THER_NEED_NA
353

354 Initialize Working and Output Variables, Assign Values:

355
356 Set GROUPER0203 = BLANK
357
358 Set THERAPY_SCORE = M0826_THER_NEED_NUM
359 Set HIPPS_SCORING_EQUATION = BLANK
360 Set GROUPING_STEP = BLANK
361

362 [Data Validity Flags]

363
364 Set M0090_INFO_COMPLETED_DT_INVLD= 0
365 Set M0250_THERAPIES_INVLD =0
366 Set M0250_INTERNAL_LOGIC_INVLD= 0
367 Set M0390_VISION_INVLD = 0
368 Set M0420_PAIN_INVLD = 0
369 Set M0440_LESION_INVLD = 0
370 Set M0450_NPRSULC1_INVLD = 0
371 Set M0450_NPRSULC2_INVLD = 0
372 Set M0450_NPRSULC3_INVLD = 0
373 Set M0450_NPRSULC4_INVLD = 0
374 Set M0450_UNOBS_PRSULC_INVLD = 0
375 Set M0460_STGPRSUL_INVLD = 0
376 Set M0470_NBR_STASULC_INVLD=0
377 Set M0474_UNOBS_STASULC_INVLD=0
378 Set M0476_STATSTASIS_INVLD = 0
379 Set M0488_STATSURG_INVLD = 0
380 Set M0490_DYSPNEIC_INVLD = 0
381 Set M0520_UR_INCONT_INVLD = 0
382 Set M0540_BWLINCONT_INVLD = 0
383 Set M0550_OSTOMY_INVLD = 0
384 Set M0650_660_CUR_DRESS_INVLD = 0
385 Set M0670_CUR_BATHING_INVLD = 0

Set M0680_CUR_TOILETING_INVLD = 0
Set M0690_CUR_TRANSFER_INVLD = 0
Set M0700_CUR_AMBULATION_INVLD = 0
Set M0800_CUR_INJECT_MEDS_INVLD=0

Set MANIFESTATION_SEQUENCING_FLAG=0
Set CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 0
Set FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG = 0
Set SERVICE_DOMAIN_DATA_ISSUE_FLAG = 0

[Diagnosis and scoring variables – main model]

Create a series of 18-member arrays, with each member representing one of the 18 OASIS diagnosis code fields in this order:

1	M0230a: M0230_PRIMARY_DIAG_ICD	7	M0246a3: M0246_PMT_DIAG_ICD_A3	13	M0246a4: M0246_PMT_DIAG_ICD_A4
2	M0240b" M0240_OTH_DIAG1_ICD	8	M0246b3: M0246_PMT_DIAG_ICD_B3	14	M0246b4: M0246_PMT_DIAG_ICD_B4
3	M0240c" M0240_OTH_DIAG2_ICD	9	M0246c3: M0246_PMT_DIAG_ICD_C3	15	M0246c4: M0246_PMT_DIAG_ICD_C4
4	M0240d: M0240_OTH_DIAG3_ICD	10	M0246d3: M0246_PMT_DIAG_ICD_D3	16	M0246d4: M0246_PMT_DIAG_ICD_D4
5	M0240e: M0240_OTH_DIAG4_ICD	11	M0246e3: M0246_PMT_DIAG_ICD_E3	17	M0246e4: M0246_PMT_DIAG_ICD_E4
6	M0240f: M0240_OTH_DIAG5_ICD	12	M0246f3: M0246_PMT_DIAG_ICD_F3	18	M0246f4: M0246_PMT_DIAG_ICD_F4

The first 4 arrays are independent of the scoring equations used to assign points:

Array A: ICD9_Start(1-18) (the field's starting position on the OASIS record)
Array B: ICD9_Skip(1-18) (binary field indicating field will not contribute points)
Array C: ICD9_Manifest(1-18) (binary field indicating a manifestation ICD-9 code)
Array D: ICD9_DG(1-18) (the number, 1-22, of the diagnosis group of this ICD-9)

Then there are two array capturing point score and primary/other status of each of the 18 diagnoses under each of the 4 scoring equations (SE):

Arrays E1-E4: ICD9_PointsSE[1-4](1-18) (number of clinical points generated by this ICD-9 code, given the scoring equation used (SE) and the other diagnosis codes and OASIS responses present)

Arrays F1-F4: ICD9_PDXSE[1-4](1-18)² (binary field indicating this is the primary diagnosis under this scoring equation)

Initialize ICD9_Start(1-18) to the values { 404,413,422,431,440,449,781,788,795,802,809,816,823,830,837,844,851,858 }.
Initialize the remaining arrays to zero.

² Note that only 4 members of these arrays can potentially be the primary diagnosis: 1, 2, 7, and 13 (see below.)

Create and initialize to zero:

Array G: Diag_GrpsSE(1-22), a 22-member array of binary fields representing the diagnosis groups under this scoring equation (SE) in this order:

DG No.	Diagnosis Group
1	Blindness and low vision
2	Blood disorders
3	Cancer and selected benign neoplasms
4	Diabetes
5	Dysphagia
6	Gait Abnormality
7	Gastrointestinal disorders
8	Heart Disease
9	Hypertension
10	Neuro 1 – Brain disorders and paralysis
11	Neuro 2 – Peripheral neurological disorders
12	Neuro 3 – Stroke
13	Neuro 4 – Multiple Sclerosis
14	Ortho 1 – Leg Disorders
15	Ortho 2 –Other Orthopedic disorders
16	Psych 1 – Affective and other psychoses, depression
17	Psych 2 – Degenerative and other organic psychiatric disorders
18	Pulmonary disorders
19	Skin 1 – Traumatic wounds, burns and post-operative complications
20	Skin 2 – Ulcers and other skin conditions
21	Tracheostomy care
22	Urostomy/Cystostomy Care

[Create, and initialize to zero, flags and arrays for scoring conditions which can be triggered by multiple diagnosis groups (to avoid awarding points twice for the same conditions).]

Set Row11C8Flag_SE = 0
Set Row14C10Flag_SE = 0
Set Row19C6Flag_SE = 0
Set Row20C14Flag_SE = 0
Set Row27C19Flag_SE = 0
Set Row11C9Flag_SE = 0
Set Row14C11Flag_SE = 0
Set Row19C14Flag_SE = 0
Set Row20C15Flag_SE = 0
Set Row27C20Flag_SE = 0

[Create one set of these 18-member arrays for each scoring equation:]

Array H1-H4: Dual_DG_SE(1-18) = 0
Array I1-I4: Points_Redund_SE (1-18) = 0

[Create score variables for each scoring equation.]

Create Clin_Score1 = 0
Create Clin_Score2 = 0
Create Clin_Score3 = 0
Create Clin_Score4 = 0
Create Func_Score1 = 0
Create Func_Score2 = 0
Create Func_Score3 = 0
Create Func_Score4 = 0

[Diagnosis and scoring variables – NRS model]

For scoring the diagnoses for the NRS model, create an additional series of 6, 18-member arrays representing the 18 OASIS diagnosis code fields in this order:

1	M0230a: M0230_PRIMARY_DIAG_ICD	7	M0246a3: M0246_PMT_DIAG_ICD_A3	13	M0246a4: M0246_PMT_DIAG_ICD_A4
2	M0240b: M0240_OTH_DIAG1_ICD	8	M0246b3: M0246_PMT_DIAG_ICD_B3	14	M0246b4: M0246_PMT_DIAG_ICD_B4
3	M0240c: M0240_OTH_DIAG2_ICD	9	M0246c3: M0246_PMT_DIAG_ICD_C3	15	M0246c4: M0246_PMT_DIAG_ICD_C4
4	M0240d: M0240_OTH_DIAG3_ICD	10	M0246d3: M0246_PMT_DIAG_ICD_D3	16	M0246d4: M0246_PMT_DIAG_ICD_D4
5	M0240e: M0240_OTH_DIAG4_ICD	11	M0246e3: M0246_PMT_DIAG_ICD_E3	17	M0246e4: M0246_PMT_DIAG_ICD_E4
6	M0240f: M0240_OTH_DIAG5_ICD	12	M0246f3: M0246_PMT_DIAG_ICD_F3	18	M0246f4: M0246_PMT_DIAG_ICD_F4

Array NRS-A: NRS-ICD9_Start(1-18) (the field's starting position on the OASIS record)
Array NRS-B: NRS-ICD9_Skip(1-18) (binary field indicating field will not contribute points)
Array NRS-C: NRS-ICD9_Manifest(1-18) (binary field indicating a manifestation ICD-9 code)
Array NRS-D: NRS-ICD9_DG(1-18) (the number, 1-12, of the diagnosis group of this ICD-9)
Array NRS-E: NRS-ICD9_Points(1-18) (number of points generated by this ICD-9 code, given the diagnosis code and OASIS responses)
Array NRS-F: NRS-ICD9_PDX(1-18) (binary field indicating this is the primary diagnosis)³

Initialize NRS-ICD9_Start to the values { 404,413,422,431,440,449,781,788,795,802,809,816,823,830,837,844,851,858 }.

Initialize the remaining arrays to zero.

In addition, create and initialize to zero:

Array NRS-G: NRS-Diag_Grps(1-12), a 12-member array of binary fields representing the NRS diagnosis groups in this order:

³Note that only 4 members of these arrays can potentially be the primary diagnosis: 1, 2, 7, and 13 (see below.)

NRS DG No.	NRS Diagnosis Group
1	Anal fissure, fistula and abscess
2	Cellulitis and abscess
3	Diabetic Ulcers
4	Gangrene
5	Malignant neoplasms of skin
6	Non-pressure and non-stasis ulcers (other than diabetic)
7	Other infections of skin and subcutaneous tissue
8	Post-operative Complications
9	Traumatic wounds, burns and post-operative complications
10	V-code, Cystostomy Care
11	V-code, Tracheostomy Care
12	V-code, Urostomy Care

Create NRS_Selected_Skin_Conditions_Score=0
Create NRS_Score = 0

[Initializing Grouper 02.03 Outputs]

[Constructing the HIPPS code:]

Set HIPPS_1= BLANK
Set HIPPS_2= BLANK
Set HIPPS_3= BLANK
Set HIPPS_4= BLANK
Set HIPPS_5= BLANK

Set HIPPS = BLANK

[Data Validity Flag, Grouper Version:]

Set DATA_VALIDITY_FLAG = BLANK
Set GROUPER_VERSION = BLANK

[Claim-OASIS Matching String:]

Set CLAIM_OASIS_STRING = BLANK
Set M0030_YY = BLANK
Set M0030_DATE_CODE = BLANK
Set M0090_YY = BLANK
Set M0090_DATE_CODE = BLANK
Set M0100_1 = BLANK
Set M0110_1_2 = BLANK
Set CLIN_SCORE1_CD = BLANK
Set FUNC_SCORE1_CD = BLANK
Set CLIN_SCORE2_CD = BLANK
Set FUNC_SCORE2_CD = BLANK
Set CLIN_SCORE3_CD = BLANK
Set FUNC_SCORE3_CD = BLANK
Set CLIN_SCORE4_CD = BLANK
Set FUNC_SCORE4_CD = BLANK

Checking Data for Validity/Usability for Classification:

3.1 [Dates]

[Testing validity of M0090]

IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "199*****" AND "201*****", THEN
M0090_INFO_COMPLETED_DT_INVLD = 1;
else IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "****01*" AND "****12*", THEN
M0090_INFO_COMPLETED_DT_INVLD = 1;
else IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "*****01" AND "*****31", THEN
M0090_INFO_COMPLETED_DT_INVLD = 1;
else IF M0090_INFO_COMPLETED_DT < "19990719", THEN M0090_INFO_COMPLETED_DT_INVLD= 1.

[Grouper 2.03 used]

IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN GROUPER0203 = BLANK;

else IF M0090_INFO_COMPLETED_DT IS > "20071231" and M0100_ASSMT_REASON=01 or 03, THEN
GROUPER0203 = 1;

else IF M0090_INFO_COMPLETED_DT is >= "20071227" and M0100_ASSMT_REASON=04 or 05, THEN
GROUPER0203 = 1;
*[presumed to be recertification assessments for payment episodes starting 1/1/2008 or later
which are being conducted in the "5-day window" at the conclusion of the previous episode]*

else SEE SECTION 2 (for payment episodes starting on or before 12/31/2007)

*[NB: This logic does not cover ALL situations, and in some cases it is anticipated that providers or RHHIs
may need to implement workarounds - e.g., assessment with M0100_ASSMT_REASON=04 or 05,
assessment completed date = 12/27/2007, and episode start date = 12/31/2007. For further information, see:
<http://www.cms.hhs.gov/HomeHealthPPS/>]*

3.2 [Identify valid and scorable diagnosis codes for casemix classification and assign to diagnosis groups-
main model]

M0230/M0240/246:

[Validate M0230a range]

If ICD9_Start(1) + 1 is not 0-9 or "V", ICD9_Skip(1)=1 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

If ICD9_Start(1) + 2-3 is not 00-99, ICD9_Skip(1)=1 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

[Validate that M0230a is not a manifestation/secondary-only code]

Search Table 1 with ICD9_Start(1) + 1-6. If manifestation, ICD9_Skip(1)=1 AND
MANIFESTATION_SEQUENCING_FLAG = 1

[Check diagnoses for inappropriate E-codes]

If ICD9_Start(1,7-18) + 0 is "E", ICD9_Skip(n)=1 AND
CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

[E-codes are valid for M0240x but not scored]

If ICD9_Start(2-6) + 0 is "E", ICD9_Skip(n)=1

569
570 *[Check all diagnoses for missing decimal point:]*
571 If ICD9_Start(1-18) + 1-6 is not blank and ICD9_Start(1-18) + 4 is not ".", ICD9_Skip(1-18)=1 AND
572 CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
573
574 *[Check all diagnoses for missing 4th or 5th digits for use as casemix diagnoses:]*
575 Search Table 2, Part 1, Columns B and C, with ICD9_Start(1-18) + 1-6; if found, then 4th/5th digits are missing,
576 ICD9_Skip(n)=1 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
577
578 *[Check V-codes in M0230/M0240 which could potentially replace a casemix diagnosis for missing 4th or 5th*
579 *digits:]*
580 Search Table 2, Part 2, Columns B and C, with ICD9_Start(1-6) + 1-6; if found, then 4th/5th digits are missing,
581 ICD9_Skip(n)=1 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
582
583 *[Validate M0240x range [blanks are valid but don't score points]]*
584 If ICD9_Start(2-6) + 1 is not 0-9 or "V", ICD9_Skip(n)=1
585 If ICD9_Start(2-6) + 2-3 is not 00-99, ICD9_Skip(n)=1
586
587 *[Validate M0246x3 and M0246x4 range [blanks are valid but don't score points]]*
588 If ICD9_Start(7-18) + 1-3 is not 000-999, ICD9_Skip(n)=1
589
590 *[Turn on the clinical data issue flag if M0240-246 contain invalid values]*
591 If ICD9_Start(2-6) + 1 is not 0-9 or "V" or " ", CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
592 If ICD9_Start(7-18) + 1 is not 0-9 or " ", CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
593 If ICD9_Start(2-18) + 2-3 is not 00-99 or " ", CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
594
595 *[Screening rows that contain V-codes: use the M0230/40 diagnosis or the M0246x3 / M0246x4 pair on the*
596 *same row? Disqualify one or the other.]*
597 *[First, if no V-code in M0230/M0240, M0246x3 and M0246x4 are not used]*
598 IF ICD9_Start(1-6) + 1 <> "V", { ICD9_Skip(n+6)=1 and ICD9_Skip(n+12)=1 }
599 ELSE
600 IF ICD9_Start(1-6) + 1 = "V":
601 *[Second, look for V-codes in M0230/M0240 that are casemix diagnoses; if found, use them and*
602 *disqualify the M0246 variables on that row; else, disqualify the V-code from scoring.]*
603 Search Table 1 with ICD9_Start(n) + 1-6.
604 If found, ICD9_Skip(n)=0 and ICD9_Skip(n+6)=1 and ICD9_Skip(n+12)=1;
605 Else, ICD9_Skip(n)=1.
606 *[Third, determine if the V-code in M0230/M0240 can replace a casemix diagnosis; if not,*
607 *disqualify the entire row]*
608 Search Table 4 with ICD9_Start(1-6) + 1-6.
609 If not found: ICD9_Skip(n+6)=1 and ICD9_Skip(n+12)=1;
610 *[Fourth, screen M0246x4 for non-manifestation codes; if found, disqualify]*
611 Else search Table 1 with ICD9_Start(n+12) + 1-6.
612 If not manifestation, ICD9_Skip(n+12)=1
613 *[Fifth, check M0246x3 for manifestation codes; if found, disqualify]*
614 Search Table 1 with ICD9_Start(7-12) + 1-6.
615 If manifestation, ICD9_Skip(n)=1 and ICD9_Skip(n+6)=1
616 AND MANIFESTATION_SEQUENCING_FLAG=1
617 *[see below for check on acceptable etiology pairing in the M0246x3 / M0246x4 pair.]*
618
619

619 *[Flag acceptable pairing of manifestation diagnoses in M0240 with etiologies; disqualify others]*
620 Search Table 1 with ICD9_Start(2-6) + 1-6. If manifestation/secondary-only code:
621 *[Check for invalid etiologies]*
622 If ICD9_Start(n-1) + 1-6 = [V-code, E-code, or another manifestation code], then ICD9_Skip(n)=1 and
623 ICD9_Manifest (n)=0 AND MANIFESTATION_SEQUENCING_FLAG = 1;
624 *[Check potential etiologies for missing 4th or 5th digits⁴.]*
625 Else, search Table 2, Pt. 3 (sections 3.1&3.2), with code pair [ICD9_Start(n)+1-6:ICD9_Start(n-1)+1-6];
626 if found (i.e., 4th/5th digits missing in ICD9_Start(n-1) + 1-6), then ICD9_Skip(n)=1 and
627 ICD9_Manifest (n)=0 AND MANIFESTATION_SEQUENCING_FLAG = 1;
628 *[Identify acceptable etiology/manifestation pairs in Table 3:]*
629 Else, search Table 3, Part 1: "Allowable Etiology Codes for "Secondary-only" Diagnosis Codes,"
630 columns 1 & 3, with code pair [ICD9_Start(n) + 1-6:ICD9_Start(n-1) + 1-6];
631 If found and ICD9_Skip(n)=0 and ICD9_Skip(n-1)=0⁵, then ICD9_Manifest (n)=1;
632 *[Diagnosis of 785.4 with an excluded etiology (Table 3, Part 2) is not used for scoring:]*
633 Else, if ICD9_Start(n) + 1-6 = "785.4 ", search Table 3, Part 2: "EXCLUDED Etiology
634 Codes for "Secondary-only" Diagnosis code = 785.4" columns 1 & 3 with code pair
635 [ICD9_Start(n) + 1-6:ICD9_Start(n-1) + 1-6];
636 If NOT found and ICD9_Skip(n)=0 and ICD9_Skip(n-1)=0, then ICD9_Manifest (n)=1;
637 *[(1) Diagnosis of 785.4 with an excluded etiology - and*
638 *(2) ALL OTHER manifestation/secondary-only casemix codes without an*
639 *acceptable etiology - are not used for scoring:]*
640 Else ICD9_Skip(n)=1 and ICD9_Manifest (n)=0 AND
641 MANIFESTATION_SEQUENCING_FLAG = 1
642
643 *[Flag acceptable pairing of manifestation diagnoses in M0246x4 with etiologies; disqualify others]*
644 Search Table 1 with ICD9_Start(13-18) + 1-6. If manifestation/secondary-only code:
645 *[Check for invalid etiologies]*
646 If ICD9_Start(n-6) + 1-6 = [V-code, E-code, or another manifestation code], then ICD9_Skip(n)=1 and
647 ICD9_Manifest (n)=0 AND MANIFESTATION_SEQUENCING_FLAG = 1;
648 *[Check potential etiologies for missing 4th or 5th digits⁶.]*
649 Else, search Table 2, Pt. 3 (sections 3.1 & 3.2) with code pair [ICD9_Start(n)+1-6:ICD9_Start(n-6)+1-6];
650 if 4th/5th digits missing in ICD9_Start(n-6) + 1-6, ICD9_Manifest (n)=0 AND
651 MANIFESTATION_SEQUENCING_FLAG = 1;
652 *[Identify acceptable etiology/manifestation pairs in Table 3:]*
653 Else, search Table 3, Part 1: "Allowable Etiology Codes for "Secondary-only" Diagnosis Codes,"
654 columns 1 & 3, with code pair [ICD9_Start(n) + 1-6:ICD9_Start(n-6) + 1-6];
655 If found and ICD9_Skip(n)=0 and ICD9_Skip(n-6)=0⁷, then ICD9_Manifest (n)=1;
656 *[Diagnosis of 785.4 with an excluded etiology (Table 3, Part 2) is not used for scoring:]*
657 Else if ICD9_Start(n) + 1-6 = "785.4 ", search Table 3, Part 2: "EXCLUDED Etiology
658 Codes for "Secondary-only" Diagnosis code = 785.4" columns 1 & 3 with code pair
659 [ICD9_Start(n) + 1-6:ICD9_Start(n-6) + 1-6];
660 If NOT found and ICD9_Skip(n)=0 and ICD9_Skip(n-6)=0, then ICD9_Manifest (n)=1;
661 *[(1) Diagnosis of 785.4 with an excluded etiology - and*

⁴ Acceptable etiologies are defined for each manifestation/secondary-only casemix code – see Table 3. In terms of specificity required by the Grouper, a particular ICD-9-CM diagnosis may be acceptable at the 3-digit category level as a casemix diagnosis itself (see Table 1) but it may require further specification as an etiology for a particular casemix code – but not for others (see Table 3).

⁵ If the etiology code as submitted is a potential casemix code that is considered incomplete (based on Table 2, Part 1), it will already have the ICD9_Skip variable set to 1 by earlier screening logic. In such a case, even if the etiology is found in Table 3 at the 3-digit level, the etiology is not considered acceptable, the manifestation code will not be recognized for scoring, and the data validity and manifestation sequencing flags will be set.

⁶ See Footnote 3.

⁷ See Footnote 4.

662 (2) ALL OTHER manifestation/secondary-only casemix codes without an
663 acceptable etiology - are not used for scoring:]
664 Else ICD9_Skip(n)=1 and ICD9_Manifest (n)=0 AND
665 MANIFESTATION_SEQUENCING_FLAG = 1
666
667 3.3 [Identify valid and scorable diagnosis codes for NRS casemix classification and assign to NRS diagnosis
668 groups]
669
670 [Validate M0230a range]
671 If NRS-ICD9_Start(1) + 1 is not 0-9 or "V", NRS-ICD9_Skip(1)=1
672
673 If NRS-ICD9_Start(1) + 2-3 is not 00-99, NRS-ICD9_Skip(1)=1
674
675 [Validate that M0230a is not a manifestation/secondary-only code⁸)
676 Search Table 6 with NRS-ICD9_Start(1) + 1-6. If manifestation, NRS-ICD9_Skip(1)=1
677
678 [Check diagnoses for inappropriate E-codes]
679 If NRS-ICD9_Start(1,7-18) + 0 is "E", NRS-ICD9_Skip(n)=1
680
681 [E-codes are valid for M0240x but not scored]
682 If NRS-ICD9_Start(2-6) + 0 is "E", NRS-ICD9_Skip(n)=1
683
684 [Check all NRS diagnoses for missing decimal point:]
685 If NRS-ICD9_Start(1-18) + 1-6 is not blank and NRS-ICD9_Start(1-18) + 4 is not ".", NRS-ICD9_Skip(1-18)=1
686
687 [Check all diagnoses for missing 4th or 5th digits]
688 Search Table 2, Part 1, Columns B and C, with NRS-ICD9_Start(1-18) + 1-6; if 4th/5th digits missing, NRS-
689 ICD9_Skip(n)=1
690
691 [Check V-codes in M0230/M0240 which could potentially replace a casemix diagnosis for missing 4th or 5th
692 digits:]
693 Search Table 2, Part 2, Columns B and C, with NRS-ICD9_Start(1-6) + 1-6; if found, then 4th/5th digits are
694 missing, NRS-ICD9_Skip(n)=1
695
696 [Validate M0240x range [blanks are valid but don't score points]]
697 If NRS-ICD9_Start(2-6) + 1 is not 0-9 or "V", NRS-ICD9_Skip(n)=1
698 If NRS-ICD9_Start(2-6) + 2-3 is not 00-99, NRS-ICD9_Skip(n)=1
699
700 [Validate M0246x3 and M0246x4 range [blanks are valid but don't score points]]
701 If NRS-ICD9_Start(7-18) + 1-3 is not 000-999, NRS-ICD9_Skip(n)=1
702
703 [Screening rows that contain V-codes: use the M0230/40 diagnosis or the M0246x3 / M0246x4 pair on the
704 same row? Disqualify one or the other.]
705 [First, if no V-code in M0230/M0240, M0246x3 and M0246x4 are not used]
706 IF NRS-ICD9_Start(1-6) + 1 <> "V", { NRS-ICD9_Skip(n+6)=1 and NRS-ICD9_Skip(n+12)=1 }
707 ELSE, IF NRS-ICD9_Start(1-6) + 1 = "V":
708 [Second, look for V-codes in M0230/M0240 that are NRS casemix diagnoses; if found, use them and
709 disqualify the M0246 variables on that row; else, disqualify the V-code from scoring.]
710 Search Table 6 with NRS-ICD9_Start(n) + 1-6.
711 If found, NRS-ICD9_Skip(n)=0 and NRS-ICD9_Skip(n+6)=1 and NRS-ICD9_Skip(n+12)=1;

⁸ Secondary-only/manifestation codes for NRS scoring are only those identified with an "M" in Table 6, column 2.

Else, NRS-ICD9_Skip(n)=1.

[Third, determine if the V-code in M0230/M0240 can replace a casemix diagnosis; if not, disqualify the entire row.]

Search Table 4 (V-codes Potentially Replacing Casemix Diagnosis) with NRS-ICD9_Start(1-6) + 1-6.

If not found: NRS-ICD9_Skip(n+6)=1 and NRS-ICD9_Skip(n+12)=1;

[Fourth, screen M0246x4 for non-manifestation codes⁹; if found, disqualify]

Else search Table 6 with NRS-ICD9_Start(n+12) + 1-6.

If not manifestation, NRS-ICD9_Skip(n+12)=1

[Fifth, check M0246x3 for manifestation codes¹⁰; if found, disqualify]

Search Table 6 with NRS-ICD9_Start(7-12) + 1-6.

If manifestation, NRS-ICD9_Skip(n)=1 and NRS-ICD9_Skip(n+6)=1

AND MANIFESTATION_SEQUENCING_FLAG=1

[see below for check on acceptable etiology pairing in the M0246x3 / M0246x4 pair.]

[Flag acceptable pairing of manifestation diagnoses in M0240 with etiologies; disqualify others]

Search Table 6 with NRS-ICD9_Start(2-6) + 1-6. If manifestation:

[Check for invalid etiologies]

If NRS-ICD9_Start(n-1) + 1-6 = [V-code, E-code, or another manifestation code¹¹], then NRS-ICD9_Skip(n)=1 and NRS-ICD9_Manifest (n)=0 AND MANIFESTATION_SEQUENCING_FLAG = 1;

[Check potential etiologies for missing 4th or 5th digits¹².]

Else, search Tbl 2,Pt 3 (Sec.3.1&3.2) with pair [NRS-ICD9_Start(n)+1-6:NRS-ICD9_Start(n-1)+1-6];

if 4th/5th digits missing in NRS-ICD9_Start(n-1) + 1-6, ICD9_Manifest (n)=0 AND

MANIFESTATION_SEQUENCING_FLAG = 1;

[Identify acceptable etiology/manifestation pairs in Table 3:]

Else, search Table 3, Part 1: "Allowable Etiology Codes for "Secondary-only" Diagnosis Codes," columns 1 & 3, with code pair [NRS-ICD9_Start(n) + 1-6:NRS-ICD9_Start(n-1) + 1-6];

If found and NRS-ICD9_Skip(n)=0 and NRS-ICD9_Skip(n-1)=0¹³, then NRS-ICD9_Manifest (n)=1;

[Diagnosis of 785.4 with an excluded etiology (Table 3, Part 2) is not used for scoring:]

Else, if NRS-ICD9_Start(n) + 1-6 = "785.4 ", search Table 3, Part 2: "EXCLUDED

Etiology Codes for "Secondary-only" Diagnosis code = 785.4" columns 1 & 3 with code pair [NRS-ICD9_Start(n) + 1-6:NRS-ICD9_Start(n-1) + 1-6];

If NOT found and NRS-ICD9_Skip(n)=0 and NRS-ICD9_Skip(n-1)=0,

then NRS-ICD9_Manifest (n)=1;

[(1) Diagnosis of 785.4 with an excluded etiology - and

(2) ALL OTHER manifestation/secondary-only casemix codes without an acceptable etiology - are not used for scoring:]

Else NRS-ICD9_Skip(n)=1 and NRS-ICD9_Manifest (n)=0 AND

MANIFESTATION_SEQUENCING_FLAG = 1

[Flag acceptable pairing of manifestation diagnoses in M0246x4 with etiologies; disqualify others]

Search Table 6 with NRS-ICD9_Start(13-18) + 1-6. If manifestation:

[Check for invalid etiologies]

If NRS-ICD9_Start(n-6) + 1-6 = [V-code, E-code, or another manifestation code¹⁴], then NRS-ICD9_Skip(n)=1 and NRS-ICD9_Manifest (n)=0 AND MANIFESTATION_SEQUENCING_FLAG = 1;

⁹ See Footnote 7.

¹⁰ See Footnote 7.

¹¹ See Footnote 7.

¹² See Footnote 3.

¹³ See Footnote 4.

[Check potential etiologies for missing 4th or 5th digits¹⁵.]

Else, search Tbl 2, Pt 3 (Sec. 3.1&3.2) with pair [NRS-ICD9_Start(n)+1-6:NRS-ICD9_Start(n-6)+1-6];
if 4th/5th digits missing in NRS-ICD9_Start(n-6) + 1-6, ICD9_Manifest (n)=0 AND
MANIFESTATION_SEQUENCING_FLAG = 1;

[Identify acceptable etiology/manifestation pairs in Table 3:] Else, search Table 3, Part 1:
"Allowable Etiology Codes for "Secondary-only" Diagnosis Codes," columns 1 & 3, with code
pair [NRS-ICD9_Start(n) + 1-6:NRS-ICD9_Start(n-6) + 1-6];
If found and NRS-ICD9_Skip(n)=0 and NRS-ICD9_Skip(n-6)=0¹⁶, then NRS-ICD9_Manifest
(n)=1;

[Diagnosis of 785.4 with an excluded etiology (Table 3, Part 2) is not used for scoring:]
Else if NRS-ICD9_Start(n) + 1-6 = "785.4 ", search Table 3, Part 2: "EXCLUDED
Etiology Codes for "Secondary-only" Diagnosis code = 785.4" columns 1 & 3 with code
pair [NRS-ICD9_Start(n) + 1-6:NRS-ICD9_Start(n-6) + 1-6];
If NOT found and NRS-ICD9_Skip(n)=0 and NRS-ICD9_Skip(n-6)=0,
then NRS-ICD9_Manifest (n)=1;

[(1) Diagnosis of 785.4 with an excluded etiology - and
(2) ALL OTHER manifestation/secondary-only casemix codes without an
acceptable etiology - are not used for scoring:]

Else NRS-ICD9_Skip(n)=1 and NRS-ICD9_Manifest (n)=0 AND
MANIFESTATION_SEQUENCING_FLAG = 1

3.4 [Identify problems with other variables]

M0250:

IF M0250_THH_IV_INFUSION <> 0 OR 1 THEN M0250_THERAPIES_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1

IF M0250_THH_PAR_NUTRITION <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1

IF M0250_THH_ENT_NUTRITION <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1

IF M0250_THH_NONE_ABOVE <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1

IF M0250_THH_NONE_ABOVE = 1 AND
[M0250_THH_IV_INFUSION = 1 OR
M0250_THH_PAR_NUTRITION = 1 OR
M0250_THH_ENT_NUTRITION = 1],
THEN M0250_INTERNAL_LOGIC_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1

IF [M0250_THH_IV_INFUSION = 0 AND
M0250_THH_PAR_NUTRITION = 0 AND
M0250_THH_ENT_NUTRITION = 0 AND
M0250_THH_NONE_ABOVE = 0]
THEN M0250_INTERNAL_LOGIC_INVLD = 1

¹⁴ See Footnote 7.

¹⁵ See Footnote 3.

¹⁶ See Footnote 4.

806 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
807
808 M0390:
809 IF M0390_VISION <> 00 OR 01 OR 02, THEN M0390_VISION_INVLD = 1
810 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
811
812 M0420:
813 IF M0420_FREQ_PAIN <> 00 OR 01 OR 02 OR 03, THEN M0420_PAIN_INVLD = 1
814 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
815
816 M0440:
817 IF M0440_LESION_OPEN_WND <> 0 OR 1, THEN M0440_LESION_INVLD = 1
818 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
819
820 M0450:
821 M0450a:
822 IF M0100_ASSMT_REASON <> [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
823 M0445_PRESS_ULCER = 1 AND M0450_NBR_PRSULC_STG1 <> 00 OR 01 OR 02 OR 03 OR 04,
824 THEN M0450_NPRSULC1_INVLD = 1
825 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
826
827 IF M0100_ASSMT_REASON <> [04 or 05] AND [M0440_LESION_OPEN_WND <> 1 OR
828 M0445_PRESS_ULCER <> 1] AND M0450_NBR_PRSULC_STG1 = 00 OR 01 OR 02 OR 03 OR 04,
829 THEN M0450_NPRSULC1_INVLD = 1
830 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
831
832 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
833 M0450_NBR_PRSULC_STG1 <> 00 OR 01 OR 02 OR 03 OR 04 OR BLANK,
834 THEN M0450_NPRSULC1_INVLD = 1
835 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
836
837 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND <> 1 AND
838 M0450_NBR_PRSULC_STG1 = 00 OR 01 OR 02 OR 03 OR 04,
839 THEN M0450_NPRSULC1_INVLD = 1
840 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
841
842 M0450b:
843 IF M0100_ASSMT_REASON <> [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
844 M0445_PRESS_ULCER = 1 AND M0450_NBR_PRSULC_STG2 <> 00 OR 01 OR 02 OR 03 OR 04,
845 THEN M0450_NPRSULC2_INVLD = 1
846 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
847
848 IF M0100_ASSMT_REASON <> [04 or 05] AND [M0440_LESION_OPEN_WND <> 1 OR
849 M0445_PRESS_ULCER <> 1] AND M0450_NBR_PRSULC_STG2 = 00 OR 01 OR 02 OR 03 OR 04,
850 THEN M0450_NPRSULC2_INVLD = 1
851 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
852
853 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
854 M0450_NBR_PRSULC_STG2 <> 00 OR 01 OR 02 OR 03 OR 04 OR BLANK,
855 THEN M0450_NPRSULC2_INVLD = 1
856 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

857
858 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND <> 1 AND
859 M0450_NBR_PRSULC_STG2 = 00 OR 01 OR 02 OR 03 OR 04,
860 THEN M0450_NPRSULC2_INVLD = 1
861 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
862
863 M0450c:
864 IF M0100_ASSMT_REASON <> [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
865 M0445_PRESS_ULCER = 1 AND M0450_NBR_PRSULC_STG3 <> 00 OR 01 OR 02 OR 03 OR 04,
866 THEN M0450_NPRSULC3_INVLD = 1
867 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
868
869 IF M0100_ASSMT_REASON <> [04 or 05] AND [M0440_LESION_OPEN_WND <> 1 OR
870 M0445_PRESS_ULCER <> 1] AND M0450_NBR_PRSULC_STG3 = 00 OR 01 OR 02 OR 03 OR 04,
871 THEN M0450_NPRSULC3_INVLD = 1
872 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
873
874 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
875 M0450_NBR_PRSULC_STG3 <> 00 OR 01 OR 02 OR 03 OR 04 OR BLANK,
876 THEN M0450_NPRSULC3_INVLD = 1
877 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
878
879 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND <> 1 AND
880 M0450_NBR_PRSULC_STG3 = 00 OR 01 OR 02 OR 03 OR 04,
881 THEN M0450_NPRSULC3_INVLD = 1
882 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
883
884 M0450d:
885 IF M0100_ASSMT_REASON <> [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
886 M0445_PRESS_ULCER = 1 AND M0450_NBR_PRSULC_STG4 <> 00 OR 01 OR 02 OR 03 OR 04,
887 THEN M0450_NPRSULC4_INVLD = 1
888 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
889
890 IF M0100_ASSMT_REASON <> [04 or 05] AND [M0440_LESION_OPEN_WND <> 1 OR
891 M0445_PRESS_ULCER <> 1] AND M0450_NBR_PRSULC_STG4 = 00 OR 01 OR 02 OR 03 OR 04,
892 THEN M0450_NPRSULC4_INVLD = 1
893 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
894
895 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
896 M0450_NBR_PRSULC_STG4 <> 00 OR 01 OR 02 OR 03 OR 04 OR BLANK,
897 THEN M0450_NPRSULC4_INVLD = 1
898 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
899
900 IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND <> 1 AND
901 M0450_NBR_PRSULC_STG4 = 00 OR 01 OR 02 OR 03 OR 04,
902 THEN M0450_NPRSULC4_INVLD = 1
903 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
904

M0450e:

IF M0100_ASSMT_REASON <> [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
M0445_PRESS_ULCER = 1 AND M0450_UNOBS_PRSULC <> 0 OR 1,
THEN M0450_UNOBS_PRSULC_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON <> [04 or 05] AND [M0440_LESION_OPEN_WND <> 1 OR
M0445_PRESS_ULCER <> 1] AND M0450_UNOBS_PRSULC = 0 OR 1,
THEN M0450_UNOBS_PRSULC_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND = 1 AND
M0450_UNOBS_PRSULC <> 0 OR 1 OR BLANK,
THEN M0450_UNOBS_PRSULC_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON = [04 or 05] AND M0440_LESION_OPEN_WND <> 1 AND
M0450_UNOBS_PRSULC = 0 OR 1,
THEN M0450_UNOBS_PRSULC_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

M0460:

IF M0100_ASSMT_REASON <> [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
M0445_PRESS_ULCER = 1 AND M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04 OR NA,
THEN M0460_STGPRSUL_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
M0445_PRESS_ULCER <> 1] AND M0460_STG_PRBLM_ULCER = 01 OR 02 OR 03 OR 04 OR NA,
THEN M0460_STGPRSUL_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04 OR NA OR BLANK,
THEN M0460_STGPRSUL_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND <> 1 AND
M0460_STG_PRBLM_ULCER = 01 OR 02 OR 03 OR 04 OR NA,
THEN M0460_STGPRSUL_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

IF M0100_ASSMT_REASON <> [04 OR 05] AND
M0440_LESION_OPEN_WND = 1 AND
M0445_PRESS_ULCER = 1 AND
[M0450_NBR_PRSULC_STG1 = 01 OR 02 OR 03 OR 04 or
M0450_NBR_PRSULC_STG2 = 01 OR 02 OR 03 OR 04 or
M0450_NBR_PRSULC_STG3 = 01 OR 02 OR 03 OR 04 or
M0450_NBR_PRSULC_STG4 = 01 OR 02 OR 03 OR 04] and
M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04,
THEN M0460_STGPRSUL_INVLD = 1
AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

956
957 IF M0100_ASSMT_REASON = [04 OR 05] AND
958 M0440_LESION_OPEN_WND = 1 AND
959 [M0450_NBR_PRSULC_STG1 = 01 OR 02 OR 03 OR 04 or
960 M0450_NBR_PRSULC_STG2 = 01 OR 02 OR 03 OR 04 or
961 M0450_NBR_PRSULC_STG3 = 01 OR 02 OR 03 OR 04 or
962 M0450_NBR_PRSULC_STG4 = 01 OR 02 OR 03 OR 04] AND
963 M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04,
964 THEN M0460_STGPRSUL_INVLD = 1
965 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
966

967 M0470:

968 IF M0100_ASSMT_REASON <> [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
969 M0468_STASIS_ULCER = 1 AND
970 M0470_NBR_STASULC <> 00 OR 01 OR 02 OR 03 OR 04,
971 THEN M0470_NBR_STASULC_INVLD = 1
972 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
973

974 IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
975 M0468_STASIS_ULCER <> 1] AND M0470_NBR_STASULC = 00 OR 01 OR 02 OR 03 OR 04,
976 THEN M0470_NBR_STASULC_INVLD = 1
977 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
978

979 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
980 M0470_NBR_STASULC <> 00 OR 01 OR 02 OR 03 OR 04 OR BLANK,
981 THEN M0470_NBR_STASULC_INVLD = 1
982 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
983

984 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND <> 1 AND
985 M0470_NBR_STASULC = 00 OR 01 OR 02 OR 03 OR 04,
986 THEN M0470_NBR_STASULC_INVLD = 1
987 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
988

989 M0474:

990 IF M0100_ASSMT_REASON <> [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
991 M0468_STASIS_ULCER = 1 AND
992 M0474_UNOBS_STASULC <> 0 OR 1,
993 THEN M0474_UNOBS_STASULC_INVLD = 1
994 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
995

996 IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
997 M0468_STASIS_ULCER <> 1] AND M0474_UNOBS_STASULC = 0 OR 1,
998 THEN M0474_UNOBS_STASULC_INVLD = 1
999 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1000

1001 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
1002 M0474_UNOBS_STASULC <> 0 OR 1 OR BLANK,
1003 THEN M0474_UNOBS_STASULC_INVLD = 1
1004 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1005
1006

1007 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND <> 1 AND
1008 M0474_UNOBS_STASULC = 0 or 1,
1009 THEN M0474_UNOBS_STASULC_INVLD = 1
1010 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1011
1012 M0476:
1013 IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND = 1 AND
1014 M0468_STASIS_ULCER = 1 AND M0470_NBR_STASULC = 01 OR 02 OR 03 OR 04] AND
1015 M0476_STAT_PRB_STASULC <> 01 OR 02 OR 03 OR 04,
1016 THEN M0476_STATSTASIS_INVLD = 1
1017 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1018
1019 IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
1020 M0468_STASIS_ULCER <> 1 OR M0470_NBR_STASULC <> 01 OR 02 OR 03 OR 04] AND
1021 M0476_STAT_PRB_STASULC = 01 OR 02 OR 03,
1022 THEN M0476_STATSTASIS_INVLD = 1
1023 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1024
1025 IF M0100_ASSMT_REASON = [04 OR 05] AND [M0440_LESION_OPEN_WND = 1 AND
1026 M0470_NBR_STASULC = 01 OR 02 OR 03 OR 04] AND
1027 M0476_STAT_PRB_STASULC <> 01 OR 02 OR 03,
1028 THEN M0476_STATSTASIS_INVLD = 1
1029 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1030
1031 IF M0100_ASSMT_REASON = [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
1032 M0470_NBR_STASULC <> 01 OR 02 OR 03 OR 04] AND
1033 M0476_STAT_PRB_STASULC = 01 OR 02 OR 03,
1034 THEN M0476_STATSTASIS_INVLD = 1
1035 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1036
1037 M0488:
1038 IF M0100_ASSMT_REASON <> [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
1039 M0482_SURG_WOUND = 1 AND M0484_NBR_SURGWND = 01 OR 02 OR 03 OR 04] AND
1040 M0488_STAT_PRB_SURGWND <> 01 OR 02 OR 03,
1041 THEN M0488_STATSURG_INVLD = 1
1042 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1043
1044 IF M0100_ASSMT_REASON <> [04 OR 05] AND [M0440_LESION_OPEN_WND <> 1 OR
1045 M0482_SURG_WOUND <> 1] AND M0488_STAT_PRB_SURGWND = 01 OR 02 OR 03 OR NA,
1046 THEN M0488_STATSURG_INVLD = 1
1047 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1048
1049 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND = 1 AND
1050 M0488_STAT_PRB_SURGWND <> 01 OR 02 OR 03 OR NA OR BLANK,
1051 THEN M0488_STATSURG_INVLD = 1
1052 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1
1053
1054 IF M0100_ASSMT_REASON = [04 OR 05] AND M0440_LESION_OPEN_WND <> 1 AND
1055 M0488_STAT_PRB_SURGWND = 01 OR 02 OR 03 OR NA,
1056 THEN M0488_STATSURG_INVLD = 1
1057 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG =1

1058
1059 M0490:
1060 IF M0490_WHEN_DYSPNEIC <> 00 OR 01 OR 02 OR 03 OR 04,
1061 THEN M0490_DYSPNEIC_INVLD = 1
1062 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1063
1064 M0520:
1065 IF M0520_UR_INCONT <> 00 OR 01 OR 02,
1066 THEN M0520_UR_INCONT_INVLD = 1
1067 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1068
1069 M0540:
1070 IF M0100_ASSMT_REASON = 01 OR 03 AND
1071 M0540_BWL_INCONT <> 00 OR 01 OR 02 OR 03 OR 04 OR 05 OR NA OR UK,
1072 THEN M0540_BWLINCONT_INVLD = 1
1073 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1074
1075 IF M0100_ASSMT_REASON = 04 OR 05 AND
1076 M0540_BWL_INCONT <> 00 OR 01 OR 02 OR 03 OR 04 OR 05 OR NA,
1077 THEN M0540_BWLINCONT_INVLD = 1
1078 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1079
1080 M0550:
1081 IF M0540_BWL_INCONT = [00 OR 01 OR 02 OR 03 OR 04 OR 05 OR UK] AND M0550_OSTOMY <> 00,
1082 THEN M0550_OSTOMY_INVLD = 1
1083 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1084
1085 IF M0540_BWL_INCONT = NA AND M0550_OSTOMY <> 01 OR 02,
1086 THEN M0550_OSTOMY_INVLD = 1
1087 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1088
1089 IF M0550_OSTOMY <> 00 OR 01 OR 02,
1090 THEN M0550_OSTOMY_INVLD = 1
1091 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1092
1093 M0800
1094 IF M0800_CUR_INJECT_MEDS <> 00 OR 01 OR 02 OR NA,
1095 THEN M0800_CUR_INJECT_MEDS_INVLD = 1
1096 AND CLINICAL_DOMAIN_DATA_ISSUE_FLAG = 1
1097
1098 [Functional Domain]
1099 M0650/M0660:
1100 IF [M0650_CUR_DRESS_UPPER <> 00 OR 01 OR 02 OR 03] AND [M0660_CUR_DRESS_LOWER = 00],
1101 THEN M0650_660_CUR_DRESS_INVLD = 1
1102 [M0660 is valid but does not earn points, M0650 is invalid
1103 – domain score could potentially increase if M0650 were
1104 corrected]
AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG = 1

1105
1106 IF [M0650_CUR_DRESS_UPPER =00 AND [M0660_CUR_DRESS_LOWER <>00 OR 01 OR 02 OR 03],
1107 THEN M0650_660_CUR_DRESS_INVLD = 1
1108 [M0660 is invalid, M0650 is not earning points – domain
1109 score could potentially increase if M0660 were corrected]
1110 AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG =1
1111

1112
1113 M0670:

1114 IF M0670_CUR_BATHING <>00 OR 01 OR 02 OR 03 OR 04 OR 05,
1115 THEN M0670_CUR_BATHING_INVLD = 1
1116 AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG =1
1117

1118 M0680:

1119 IF M0680_CUR_TOILETING <>00 OR 01 OR 02 OR 03 OR 04,
1120 THEN M0680_CUR_TOILETING_INVLD = 1
1121 AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG =1
1122

1123 M0690:

1124 IF M0690_CUR_TRANSFERRING <>00 OR 01 OR 02 OR 03 OR 04 OR 05,
1125 THEN M0690_CUR_TRANSFER_INVLD = 1
1126 AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG =1
1127

1128 M0700:

1129 IF M0700_CUR_AMBULATION <>00 OR 01 OR 02 OR 03 OR 04 OR 05,
1130 THEN M0700_CUR_AMBULATION_INVLD = 1
1131 AND FUNCTIONAL_DOMAIN_DATA_ISSUE_FLAG =1
1132

1133 [Service Domain]

1134
1135 M0826:

1136 IF M0826_THER_NEED_NA = 1 AND M0826_THER_NEED_NUM <> BLANK,
1137 THEN THERAPY_SCORE = 0
1138 AND SERVICE_DOMAIN_DATA_ISSUE_FLAG =1
1139
1140 IF M0826_THER_NEED_NA = 0 AND M0826_THER_NEED_NUM <> [number 000 thru 999],
1141 THEN THERAPY_SCORE = 0
1142 AND SERVICE_DOMAIN_DATA_ISSUE_FLAG =1
1143
1144 IF M0826_THER_NEED_NA <> [0 or 1],
1145 THEN THERAPY_SCORE = 0
1146 AND SERVICE_DOMAIN_DATA_ISSUE_FLAG =1
1147

Calculating and Scoring Casemix Variables

[Scoring the Clinical domain]

[Scoring diagnosis variables – main model (performed 4 times – once for each scoring equation)]

[When scoring for each equation, be sure to use the appropriate scoring array:]

[Assign to diagnosis groups and set diagnosis group flags]

If ICD9_Skip(n)=0, search Table 1 with ICD9_Start(n) + 1-6.

If found, retrieve corresponding DG number (1 to 22).

Set ICD9_DG(n) = DG No.

Set Diag_GrpsSE(DG No) = 1

[Calculate maximum possible score for each diagnosis to support choice of scoring variable when an etiology and a manifestation are both casemix variables. (Score each diagnosis as primary diagnosis for now; those that are “other” diagnoses will have points recalculated below.)]

Look up the diagnostic group for each ICD9_DG variable(1-18) in “Table 5: Casemix Adjustment Variables and Scores.” Based on diagnosis group and other OASIS items, assign points for the current scoring equation “SE” (1-4) to each diagnosis position from the indicated row(s).

IF ICD9_DG(1-18) = 1, add Table 5, row 1 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 2, add Table 5, row 2 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 3, add Table 5, row 3 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 4, add Table 5, row 4 scoring equation (SE) points to ICD9_PointsSE(n)

[see below for diabetes as secondary diagnosis, clinical variable, Table 5, row 5]

[Note that the points for row 6 are assigned only to positions with DG=5 (Dysphagia) to avoid double counting of the points.]

IF ICD9_DG(1-18) = 5 and Diag_GrpsSE (12) = 1,

add Table 5, row 6 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 5 and M0250_THH_ENT_NUTRITION = 1 AND

M0250_THERAPIES_INVLD = 0 AND M0250_INTERNAL_LOGIC_INVLD = 0,

add Table 5, row 7 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 6 and M0460_STG_PRBLM_ULCER = 1-4 AND

M0460_STGPRSUL_INVLD = 0 AND Row19C14Flag = 0,

add Table 5, row 19 scoring equation (SE) points to ICD9_PointsSE(n), set Row19C6Flag=1,

and add 19 to DUAL_DG_SE(1-18)

IF ICD9_DG(1-18) = 7, add Table 5, row 8 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 7 and M0550_OSTOMY = 1-2 AND M0550_OSTOMY_INVLD = 0,

add Table 5, row 9 scoring equation (SE) points to ICD9_PointsSE(n)

[Note that the points for row 10 are assigned only to positions with DG=7 (GI) to avoid double counting of the points.]

IF ICD9_DG(1-18) = 7 and Diag_GrpsSE (10 or 11 or 12 or 13) = 1,

add Table 5, row 10 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 8 and Row11C9Flag = 0, add Table 5, row 11 scoring equation (SE) points to ICD9_PointsSE(n), set Row11C8Flag = 1, and add 11 to DUAL_DG_SE(1-18)

IF ICD9_DG(1-18) = 9 and Row11C8Flag = 0, add Table 5, row 11 scoring equation (SE) points to ICD9_PointsSE(n), set Row11C9Flag = 1, and add 11 to DUAL_DG_SE(1-18)

IF ICD9_DG(1-18) = 10, add Table 5, row 12 scoring equation (SE) points to ICD9_PointsSE(n)

IF ICD9_DG(1-18) = 10 and M0680_CUR_TOILETING = 02-04 AND

1198 M0680_CUR_TOILETING_INVLD = 0,
1199 add Table 5, row 13 scoring equation (SE) points to ICD9_PointsSE(n)
1200
1201 IF ICD9_DG(1-18) = 10 and Row14C11Flag = 0 and
1202 (M0650_CUR_DRESS_UPPER = 01-03 or M0660_CUR_DRESS_LOWER = 01-03) AND
1203 M0650_660_CUR_DRESS_INVLD = 0,
1204 add Table 5, row 14 scoring equation (SE) points to ICD9_PointsSE(n), set Row14C10Flag = 1,
1205 and add 14 to DUAL_DG_SE(1-18)
1206 IF ICD9_DG(1-18) = 11 and Row14C10Flag = 0 and
1207 (M0650_CUR_DRESS_UPPER = 01-03 or M0660_CUR_DRESS_LOWER = 01-03) AND
1208 M0650_660_CUR_DRESS_INVLD = 0,
1209 add Table 5, row 14 scoring equation (SE) points to ICD9_PointsSE(n), set Row14C11Flag = 1,
1210 and add 14 to DUAL_DG_SE(1-18)
1211 IF ICD9_DG(1-18) = 12, add Table 5, row 15 scoring equation (SE) points to ICD9_PointsSE(n)
1212 IF ICD9_DG(1-18) = 12 and
1213 (M0650_CUR_DRESS_UPPER = 01-03 or M0660_CUR_DRESS_LOWER = 01-03) AND
1214 M0650_660_CUR_DRESS_INVLD = 0,
1215 add Table 5, row 16 scoring equation (SE) points to ICD9_PointsSE(n)
1216 IF ICD9_DG(1-18) = 12 and M0700_CUR_AMBULATION = 03-05 AND
1217 M0700_CUR_AMBULATION_INVLD = 0,
1218 add Table 5, row 17 scoring equation (SE) points to ICD9_PointsSE(n)
1219 IF ICD9_DG(1-18) = 13 and
1220 [(M0670_CUR_BATHING = 02-05 and M0670_CUR_BATHING_INVLD = 0) or
1221 (M0680_CUR_TOILETING = 02-04 and M0680_CUR_TOILETING_INVLD = 0) or
1222 (M0690_CUR_TRANSFERRING = 02-05 and M0690_CUR_TRANSFER_INVLD = 0) or
1223 (M0700_CUR_AMBULATION = 03-05 and M0700_CUR_AMBULATION_INVLD = 0)]
1224 add Table 5, row 18 scoring equation (SE) points to ICD9_PointsSE(n)
1225
1226 IF ICD9_DG(1-18) = 14 and M0460_STG_PRBLM_ULCER = 1-4 AND
1227 M0460_STGPRSUL_INVLD = 0 AND Row19C6Flag = 0,
1228 add Table 5, row 19 scoring equation (SE) points to ICD9_PointsSE(n), set Row19C14Flag=1,
1229 and add 19 to DUAL_DG_SE(1-18)
1230 IF ICD9_DG(1-18) = 14 and Row20C15Flag = 0 and
1231 (M0250_THH_IV_INFUSION = 1 or M0250_THH_PAR_NUTRITION = 1) AND
1232 (M0250_THERAPIES_INVLD=0 and M0250_INTERNAL_LOGIC_INVLD= 0),
1233 add Table 5, row 20 scoring equation (SE) points to ICD9_PointsSE(n), set Row20C14Flag = 1,
1234 and add 20 to DUAL_DG_SE(1-18)
1235 IF ICD9_DG(1-18) = 15 and Row20C14Flag = 0 and
1236 (M0250_THH_IV_INFUSION = 1 or M0250_THH_PAR_NUTRITION = 1) AND
1237 (M0250_THERAPIES_INVLD=0 and M0250_INTERNAL_LOGIC_INVLD= 0),
1238 add Table 5, row 20 scoring equation (SE) points to ICD9_PointsSE(n), set Row20C15Flag = 1,
1239 and add 20 to DUAL_DG_SE(1-18)
1240 IF ICD9_DG(1-18) = 16, add Table 5, row 21 scoring equation (SE) points to ICD9_PointsSE(n)
1241 IF ICD9_DG(1-18) = 17, add Table 5, row 22 scoring equation (SE) points to ICD9_PointsSE(n)
1242 IF ICD9_DG(1-18) = 18, add Table 5, row 23 scoring equation (SE) points to ICD9_PointsSE(n)
1243 IF ICD9_DG(1-18) = 18 and M0700_CUR_AMBULATION = 01-05 AND
1244 M0700_CUR_AMBULATION_INVLD = 0,
1245 add Table 5, row 24 scoring equation (SE) points to ICD9_PointsSE(n)
1246 IF ICD9_DG(1-18) = 19, add Table 5, row 25 scoring equation (SE) points to ICD9_PointsSE(n)
1247
1248 *[see below for Skin 1 as a secondary diagnosis, clinical variable, Table 5, row 26]*

1249
1250 IF ICD9_DG(1-18) = 19 and Row27C20Flag = 0 and
1251 (M0250_THH_IV_INFUSION = 1 or M0250_THH_PAR_NUTRITION = 1) AND
1252 (M0250_THERAPIES_INVLD = 0 and M0250_INTERNAL_LOGIC_INVLD = 0),
1253 add Table 5, row 27 scoring equation (SE) points to ICD9_PointsSE(n) , set Row27C19Flag = 1,
1254 and add 27 to DUAL_DG_SE(1-18)
1255 IF ICD9_DG(1-18) = 20 and Row27C19Flag = 0 and
1256 (M0250_THH_IV_INFUSION = 1 or M0250_THH_PAR_NUTRITION = 1) AND
1257 (M0250_THERAPIES_INVLD = 0 and M0250_INTERNAL_LOGIC_INVLD = 0),
1258 add Table 5, row 27 scoring equation (SE) points to ICD9_PointsSE(n) , set Row27C20Flag = 1,
1259 and add 27 to DUAL_DG_SE(1-18)
1260 IF ICD9_DG(1-18) = 20, add Table 5, row 28 scoring equation (SE) points to ICD9_PointsSE(n)
1261 IF ICD9_DG(1-18) = 21, add Table 5, row 29 scoring equation (SE) points to ICD9_PointsSE(n)
1262 IF ICD9_DG(1-18) = 22, add Table 5, row 30 scoring equation (SE) points to ICD9_PointsSE(n)
1263
1264 *[Determining the primary diagnosis between the two pairs M0230a/240b or M0246a3/M0246a4. This must be*
1265 *done separately for each equation, because of differences in which codes earn points under each equation,*
1266 *which can determine which diagnoses are recognized for scoring and how many points they earn.]*
1267
1268 *[If M0246a4 was flagged as a manifestation (which means M0230a was an appropriate V-code and M0246a3*
1269 *was an appropriate etiology), and M0246a3 is not a casemix diagnosis, M0246a4 is primary diagnosis.]*
1270 If ICD9_Manifest(13)=1 and ICD9_DG(7)=0, ICD9_PDXSE(13)=1
1271
1272 *[Else, if M0246a4 was flagged as a manifestation (which means M0230a was an appropriate V-code and*
1273 *M0246a3 was an appropriate etiology), and M0246a3 is a casemix diagnosis in the same DG as M0246a4,*
1274 *M0246a3 is primary diagnosis.]*
1275 Else If ICD9_Manifest(13)=1 and ICD9_DG(13)=ICD9_DG(7), ICD9_PDXSE(7)=1
1276
1277 *[Else, if M0246a4 was flagged as a manifestation (which means M0230a was an appropriate V-code and*
1278 *M0246a3 was an appropriate etiology), and M0246a3 is a casemix diagnosis in different DG from M0246a4,*
1279 *M0246a3 and M0246a4 contend to be primary diagnosis based on points earned.]*
1280 Else If ICD9_Manifest(13)=1 and ICD9_DG(7) > 0 and ICD9_DG(13) <> ICD9_DG(7), then:
1281 If ICD9_PointsSE(13) > ICD9_PointsSE(7), ICD9_PDXSE(13)=1; Else ICD9_PDXSE(7)=1
1282
1283 *[Else, if M0246a4 is not manifestation and M0246a3 was scored as a casemix diagnosis, M0246a3 is primary*
1284 *diagnosis.]*
1285 Else If ICD9_Manifest(13)=0 and ICD9_DG(7) > 0, ICD9_PDXSE(7)=1;
1286
1287 *[Else, if M0246a4 is not manifestation and M0246a3 was not scored as a casemix diagnosis, evaluate*
1288 *M0230a/M0240b.]*
1289 Else If ICD9_Manifest(13)=0 and ICD9_DG(7)=0:
1290
1291 *[If M0240b was flagged as a manifestation and M0230a was not scored as a casemix*
1292 *diagnosis, M0240b is the primary diagnosis.]*
1293 If ICD9_Manifest(2)=1 and ICD9_DG(1)=0, ICD9_PDXSE(2)=1
1294
1295 *[Else if M0240b was flagged as a manifestation and M0230a was scored in the same casemix group,*
1296 *M0230a is the primary diagnosis.]*
1297 Else If ICD9_Manifest(2)=1 and ICD9_DG(2)=ICD9_DG(1), ICD9_PDXSE(1)=1
1298
1299 *[Else if M0240b was flagged as a manifestation and M0230a was scored in a different*

1300 *casemix group, M0230a and M0240b contend to be primary diagnosis based on points*
1301 *earned.]*
1302 Else If ICD9_Manifest(2)=1 and ICD9_DG(1)>0 and
1303 ICD9_DG(2)<>ICD9_DG(1), then:
1304 If ICD9_PointsSE(2) > ICD9_PointsSE(1),ICD9_PDXSE(2)=1;
1305 Else ICD9_PDXSE(1)=1
1306
1307 *[Else, if M0240b is not a manifestation code, M0230a is the primary diagnosis (even if not*
1308 *a casemix diagnosis).]*
1309 Else If ICD9_Manifest(2)=0, ICD9_PDXSE(1)=1;
1310
1311 *[Recalculate the score of each non-primary diagnosis in casemix variables with different scores for primary vs.*
1312 *other diagnosis by setting that diagnosis' score to zero and rescoring, giving only the points that are based on*
1313 *being an "other" diagnosis.]*
1314 *[Diabetes]*
1315 IF ICD9_DG(1-18) = 4 and ICD9_PDXSE(n)=0,
1316 set ICD9_PointsSE(n) = 0, then add Table 5, row 5 scoring equation (SE) points to ICD9_PointsSE(n)
1317 *[Neuro 1]*
1318 IF ICD9_DG(1-18) = 10 and ICD9_PDXSE(n)=0,
1319 set ICD9_PointsSE(n) = 0
1320 IF ICD9_DG(1-18) = 10 and ICD9_PDXSE(n)=0,
1321 and (M0680_CUR_TOILETING = 02-04 and M0680_CUR_TOILETING_INVLD = 0),
1322 add Table 5, row 13 scoring equation (SE) points to ICD9_PointsSE(n)
1323 IF ICD9_DG(1-18) = 10 and ICD9_PDXSE(n)=0, and
1324 (M0650_CUR_DRESS_UPPER = 01-03 or M0660_CUR_DRESS_LOWER = 01-03) AND
1325 M0650_660_CUR_DRESS_INVLD = 0, and DUAL_DG_SE (1-18) = 14,
1326 add Table 5, row 14 scoring equation (SE) points to ICD9_PointsSE(n)
1327 *[Skin 1]*
1328 IF ICD9_DG(1-18) = 19 and ICD9_PDXSE(n)=0,
1329 set ICD9_PointsSE(n)= 0 then
1330 add Table 5, row 26 scoring equation (SE) points to ICD9_PointsSE(n)
1331 IF ICD9_DG(1-18) = [19 or 20] and ICD9_PDXSE(n)=0 and
1332 (M0250_THH_IV_INFUSION = 1 or M0250_THH_PAR_NUTRITION = 1) AND
1333 (M0250_THERAPIES_INVLD=0 and M0250_INTERNAL_LOGIC_INVLD= 0)
1334 and DUAL_DG_SE (1-18) = 27,
1335
1336 add Table 5, row 27 scoring equation (SE) points to ICD9_PointsSE(n)
1337
1338 *[Re-initialize the Diag_GrpsSE array to zero; it will now be used to indicate when a DG has received points*
1339 *from an earlier ICD-9-CM code.]*
1340
1341 Set Diag_GrpsSE(1-22) = 0
1342
1343 *[Cycle through all diagnosis positions with points. Drop points for non-initial occurrences of any diagnosis*
1344 *groups. Resolve contention within etiology/manifestation pairs when both are casemix diagnoses in different*
1345 *diagnosis groups by retaining the DG with higher score unless that DG has already earned points via a*
1346 *previous occurrence.]*
1347
1348
1349 if ICD9_DG(1) > 0 and ICD9_PointsSE(1) > 0 then
1350 {

```
1351     Diag_GrpsSE (ICD9_DG(1)) = 1
1352 }
1353
1354 if ICD9_DG(7) > 0 and ICD9_PointsSE(7) > 0 then
1355 {
1356     If Diag_GrpsSE (ICD9_DG(7)) = 1 then ICD9_PointsSE(7) = 0
1357     Else if ICD9_PointsSE(7) > 0 then Diag_GrpsSE (ICD9_DG(7)) = 1
1358 }
1359
1360 if ICD9_DG(13) > 0 and ICD9_PointsSE(13) > 0 then
1361     If Diag_GrpsSE (ICD9_DG(13)) = 1 then ICD9_PointsSE(13) = 0
1362     else
1363     {
1364         if ( (ICD9_Manifest(13)=1) and (ICD9_PointsSE(7) > 0) then
1365         {
1366             if ICD9_PointsSE(13) > ICD9_PointsSE(7) then
1367             {
1368                 ICD9_PointsSE(7) = 0 and Diag_GrpsSE (ICD9_DG(7)) = 0
1369                 and POINTS_REDUND_SE (7) = 1
1370             }
1371             else ICD9_PointsSE(13) = 0 and POINTS_REDUND_SE (13) = 1
1372         }
1373         if ICD9_PointsSE(13) > 0 then Diag_GrpsSE (ICD9_DG(13)) = 1
1374     }
1375
1376 if ICD9_DG(2-6) > 0 and ICD9_PointsSE(2-6) > 0 then
1377     If Diag_GrpsSE (ICD9_DG(n)) = 1 then ICD9_PointsSE(n) = 0
1378     else
1379     {
1380         if ( 2 <= n <= 6 ) and (ICD9_Manifest(n)=1) and (ICD9_PointsSE(n-1) > 0) then
1381         {
1382             if ICD9_PointsSE(n) > ICD9_PointsSE(n-1) then
1383             {
1384                 ICD9_PointsSE(n-1) = 0 and Diag_GrpsSE (ICD9_DG(n-1)) = 0
1385                 and POINTS_REDUND_SE (n-1) = 1
1386             }
1387             else ICD9_PointsSE(n) = 0 and POINTS_REDUND_SE (n) = 1
1388         }
1389         if ICD9_PointsSE(n) > 0 then Diag_GrpsSE (ICD9_DG(n)) = 1
1390     }
1391
1392 if ICD9_DG(8-12) > 0 and ICD9_PointsSE(8-12) > 0 then
1393 {
1394     If Diag_GrpsSE (ICD9_DG(n)) = 1 then ICD9_PointsSE(n) = 0
1395     Else if ICD9_PointsSE(n) > 0 then Diag_GrpsSE (ICD9_DG(n)) = 1
1396 }
1397
1398 if ICD9_DG(14-18) > 0 and ICD9_PointsSE(14-18) > 0 then
1399     If Diag_GrpsSE (ICD9_DG(n)) = 1 then ICD9_PointsSE(n) = 0
1400     else
1401     {
1402         if ( 13 <= n <= 18 ) and (ICD9_Manifest(n)=1) and (ICD9_PointsSE(n-6) > 0) then
```

```
1403     {
1404         if ICD9_PointsSE(n) > ICD9_PointsSE(n-6) then
1405             {
1406                 ICD9_PointsSE(n-6) = 0 and Diag_GrpsSE (ICD9_DG(n-6)) = 0
1407                 and POINTS_REDUND_SE (n-6) = 1
1408             }
1409             else ICD9_PointsSE(n) = 0 and POINTS_REDUND_SE (n) = 1
1410         }
1411     if ICD9_PointsSE(n) > 0 then Diag_GrpsSE (ICD9_DG(n)) = 1
1412 }
1413
```

1414 *[Sum all the remaining diagnosis points into the clinical score.]*

1415
1416 If ICD9_PointsSE(1-18) > 0 then Clin_Score(SE) = Clin_Score(SE) + ICD9_PointsSE(n)

1417
1418 *[Recapture the points for any dual-diagnosis casemix variables where the diagnosis originally awarded the points was "lost" through etiology/manifestation contention.]*

1419
1420 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 11 and
1421 Diag_GrpsSE(8) = 1 or Diag_GrpsSE(9) = 1, then ADD Table 5, Row 11 points to Clin_Score(SE)
1422 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 14 and
1423 Diag_GrpsSE(10) = 1 or Diag_GrpsSE(11) = 1, then ADD Table 5, Row 14 points to Clin_Score(SE)
1424 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 19 and
1425 Diag_GrpsSE(6) = 1 or Diag_GrpsSE(14) = 1, then ADD Table 5, Row 19 points to Clin_Score(SE)
1426 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 20 and
1427 Diag_GrpsSE(14) = 1 or Diag_GrpsSE(15) = 1, then ADD Table 5, Row 20 points to Clin_Score(SE)
1428 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 27 and
1429 Diag_GrpsSE(19) = 1 or Diag_GrpsSE(20) = 1, then ADD Table 5, Row 27 points to Clin_Score(SE)
1430 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 39 and
1431 Diag_GrpsSE(6) = 1 or Diag_GrpsSE(14) = 1, then ADD Table 5, Row 19 points to Clin_Score(SE)
1432 If POINTS_REDUND_SE(1-18) = 1 and DUAL_DG_SE(1-18) = 39 and
1433 Diag_GrpsSE(14) = 1 or Diag_GrpsSE(15) = 1, then ADD Table 5, Row 20 points to Clin_Score(SE)

1434
1435 *[Scoring remaining clinical variables – main model (performed 4 times – once for each scoring equation)]*

1436
1437 IF [M0250_THH_IV_INFUSION = 1 OR M0250_THH_PAR_NUTRITION = 1] AND
1438 M0250_INTERNAL_LOGIC_INVLD = 0, THEN
1439 add Table 5, row 31 scoring equation (SE) points to Clin_Score(SE)
1440
1441 IF M0250_THH_ENT_NUTRITION = 1 AND M0250_INTERNAL_LOGIC_INVLD = 0,
1442 add Table 5, row 32 scoring equation (SE) points to Clin_Score(SE)
1443
1444 IF M0390_VISION = [01 OR 02],
1445 add Table 5, row 33 scoring equation (SE) points to Clin_Score(SE)
1446
1447 IF M0420_FREQ_PAIN = [02 OR 03],
1448 add Table 5, row 34 scoring equation (SE) points to Clin_Score(SE)
1449
1450 IF [M0450_NBR_PRSULC_STG3 + M0450_NBR_PRSULC_STG4] >=2 AND
1451 [M0450_NPRSULC3_INVLD + M0450_NPRSULC4_INVLD] = 0, THEN
1452 add Table 5, row 35 scoring equation (SE) points to Clin_Score(SE)
1453

1454 IF M0460_STG_PRBLM_ULCER = [01 OR 02] AND
1455 M0460_STGPRSUL_INVLD = 0,
1456 add Table 5, row 36 scoring equation (SE) points to Clin_Score(SE)
1457
1458 IF M0460_STG_PRBLM_ULCER = [03 OR 04] AND
1459 M0460_STGPRSUL_INVLD = 0,
1460 add Table 5, row 37 scoring equation (SE) points to Clin_Score(SE)
1461
1462 IF M0476_STAT_PRB_STASULC = 02 AND
1463 M0476_STATSTASIS_INVLD = 0,
1464 add Table 5, row 38 scoring equation (SE) points to Clin_Score(SE)
1465
1466 IF M0476_STAT_PRB_STASULC = 03 AND
1467 M0476_STATSTASIS_INVLD = 0,
1468 add Table 5, row 39 scoring equation (SE) points to Clin_Score(SE)
1469
1470 IF M0488_STAT_PRB_SURGWND = 02 AND
1471 M0488_STATSURG_INVLD = 0,
1472 add Table 5, row 40 scoring equation (SE) points to Clin_Score(SE)
1473
1474 IF M0488_STAT_PRB_SURGWND = 03 AND
1475 M0488_STATSURG_INVLD = 0,
1476 add Table 5, row 41 scoring equation (SE) points to Clin_Score(SE)
1477
1478 IF M0490_WHEN_DYSPNEIC = [02 OR 03 OR 04] AND M0490_DYSPNEIC_INVLD=0,
1479 add Table 5, row 42 scoring equation (SE) points to Clin_Score(SE)
1480
1481 IF M0540_BWL_INCONT = [02 OR 03 OR 04 OR 05] AND
1482 M0540_BWLINCONT_INVLD = 0,
1483 add Table 5, row 43 scoring equation (SE) points to Clin_Score(SE)
1484
1485 IF M0550_OSTOMY = [1 or 2] AND M0550_OSTOMY_INVLD = 0,
1486 add Table 5, row 44 scoring equation (SE) points to Clin_Score(SE)
1487
1488 IF M0800_CUR_INJECT_MEDS = [00 OR 01 OR 02] AND
1489 M0800_CUR_INJECT_MEDS_INVLD = 0,
1490 add Table 5, row 45 scoring equation (SE) points to Clin_Score(SE)
1491
1492 *[Scoring functional variables – main model (performed 4 times – once for each scoring equation)]*
1493
1494 IF [M0650_CUR_DRESS_UPPER = [01 OR 02 OR 03] OR
1495 M0660_CUR_DRESS_LOWER = [01 OR 02 OR 03] AND
1496 M0650_660_CUR_DRESS_INVLD = <>1,
1497 add Table 5, row 46 scoring equation (SE) points to Func_ScoreSE
1498
1499 IF M0670_CUR_BATHING = [02 OR 03 OR 04 OR 05] and
1500 M0670_CUR_BATHING_INVLD <> 1,
1501 add Table 5, row 47 scoring equation (SE) points to Func_ScoreSE
1502
1503 IF M0680_CUR_TOILETING = [02 OR 03 OR 04] and
1504 M0680_CUR_TOILETING_INVLD <> 1,

1505 add Table 5, row 48 scoring equation (SE) points to Func_ScoreSE
1506
1507 IF M0690_CUR_TRANSFERRING = [02 OR 03 OR 04 OR 05] and
1508 M0690_CUR_TRANSFER_INVLD <> 1,
1509 add Table 5, row 49 scoring equation (SE) points to Func_ScoreSE
1510
1511 IF M0700_CUR_AMBULATION = [01 OR 02] and
1512 M0700_CUR_AMBULATION_INVLD <> 1,
1513 add Table 5, row 50 scoring equation (SE) points to Func_ScoreSE
1514
1515 IF M0700_CUR_AMBULATION = [03 OR 04 OR 05] and
1516 M0700_CUR_AMBULATION_INVLD <> 1,
1517 add Table 5, row 51 scoring equation (SE) points to Func_ScoreSE
1518
1519 *[Scoring diagnosis variables – NRS model]*
1520
1521 *[Assign to NRS diagnosis groups and set NRS diagnosis group flags]*
1522 If NRS-ICD9_Skip(n)=0, search Table 6 with NRS-ICD9_Start(n) + 1-6.
1523 If found, retrieve corresponding DG number (1 to 12) and
1524 set NRS-ICD9_DG(n) = DG No. AND
1525 set NRS-Diag_Grps (DG No) = 1
1526
1527 *[Note: NRS Diagnosis Group #3, Diabetic Ulcers, is a special case defined with two separate diagnosis entries;*
1528 *this is addressed separately below.]*
1529
1530 *[Setting the NRS diagnosis group flag for Diabetic Ulcers, identified by primary diagnosis and first “other”*
1531 *diagnosis and “turning off” the other non-pressure, non-stasis ulcer flag:]*
1532 IF ([M0230_PRIMARY_DIAG_ICD = [250.80-250.89 or
1533 [249.80-249.81 if M0090_INFO_COMPLETED_DT > “20080930”]
1534 and NRS-ICD9_Skip(1) = 0]
1535 AND
1536 [M0240_OTH_DIAG1_ICD = 707.10-707.9 and NRS-ICD9_Skip(2)=0]), then
1537
1538 set NRS-ICD9_DG(1) = 3 AND
1539 set NRS-ICD9_DG(2) = 0 AND
1540 set NRS-Diag_Grps (3) = 1 AND
1541 set NRS-Diag_Grps (6) = 0
1542
1543 IF ([M0230_PRIMARY_DIAG_ICD = [250.80-250.89 or
1544 [249.80-249.81 if M0090_INFO_COMPLETED_DT > “20080930”]
1545 and NRS-ICD9_Skip(1) = 0]
1546 AND
1547 [M0246_PMT_DIAG_ICD_B3 = 707.10-707.9 and NRS-ICD9_Skip(8)=0]), then
1548
1549 set NRS-ICD9_DG(1) = 3 AND
1550 set NRS-ICD9_DG(8) = 0 AND
1551 set NRS-Diag_Grps (3) = 1 AND
1552 set NRS-Diag_Grps (6) = 0
1553
1554 IF ([M0246_PMT_DIAG_ICD_A3 = [250.80-250.89 or
1555 [249.80-249.81 if M0090_INFO_COMPLETED_DT > “20080930”]

1556 and NRS-ICD9_Skip(7) = 0]
1557 AND
1558 [M0240_OTH_DIAG1_ICD = 707.10-707.9 and NRS-ICD9_Skip(2)=0]), then
1559
1560 set NRS-ICD9_DG(7) = 3 AND
1561 set NRS-ICD9_DG(2) = 0 AND
1562 set NRS-Diag_Grps (3) = 1 AND
1563 set NRS-Diag_Grps (6) = 0)
1564
1565 IF ([M0246_PMT_DIAG_ICD_A3 = [250.80-250.89 or
1566 [249.80-249.81 if M0090_INFO_COMPLETED_DT > "20080930"]
1567 and NRS-ICD9_Skip(7) = 0]
1568 AND
1569 [M0246_PMT_DIAG_ICD_B3 = 707.10-707.9 and NRS-ICD9_Skip(8)=0]), then
1570
1571 set NRS-ICD9_DG(7) = 3 AND
1572 set NRS-ICD9_DG(8) = 0 AND
1573 set NRS-Diag_Grps (3) = 1 AND
1574 set NRS-Diag_Grps (6) = 0)
1575

1576 *[Calculate maximum possible score for each of the 18 diagnoses to support choice of scoring variable when an*
1577 *etiology and a manifestation are both NRS casemix variables. (Score each diagnosis as primary diagnosis for*
1578 *now; those that are "other" diagnoses will have points recalculated below.)]*
1579

1580 Set NRS_Score = 0

1581
1582 Look up the diagnostic group for each NRS-ICD9_DG variable in "Table 7: NRS Casemix Adjustment
1583 Variables and Point Scores" and assign points to each diagnosis position.
1584

1585 IF NRS-ICD9_DG(1-18) = 1, assign Table 7, row 1 points to NRS-ICD9_Points(n)
1586 IF NRS-ICD9_DG(1-18) = 2, assign Table 7, row 3 points to NRS-ICD9_Points(n)
1587 IF NRS-ICD9_DG(1) = 3, assign Table 7, row 5 points to NRS-ICD9_Points(1)
1588 IF NRS-ICD9_DG(7) = 3, assign Table 7, row 5 points to NRS-ICD9_Points(7)
1589 IF NRS-ICD9_DG(1-18) = 4, assign Table 7, row 6 points to NRS-ICD9_Points(n)
1590 IF NRS-ICD9_DG(1-18) = 5, assign Table 7, row 8 points to NRS-ICD9_Points(n)
1591 IF NRS-ICD9_DG(1-18) = 6 AND NRS-Diag_Grps (3) <> 1,
1592 assign Table 7, row 10 points to NRS-ICD9_Points(n)
1593 IF NRS-ICD9_DG(1-18) = 7, assign Table 7, row 11 points to NRS-ICD9_Points(n)
1594 IF NRS-ICD9_DG(1-18) = 8, assign Table 7, row 13 points to NRS-ICD9_Points(n)
1595 IF NRS-ICD9_DG(1-18) = 9, assign Table 7, row 15 points to NRS-ICD9_Points(n)
1596 IF NRS-ICD9_DG(1-18) = 10, assign Table 7, row 17 points to NRS-ICD9_Points(n)
1597 IF NRS-ICD9_DG(1-18) = 11, assign Table 7, row 18 points to NRS-ICD9_Points(n)
1598 IF NRS-ICD9_DG(1-18) = 12, assign Table 7, row 19 points to NRS-ICD9_Points(n)
1599

1600 *[Determining the primary NRS diagnosis between the two pairs M0230a/240b or M0246x3/M0246x4.]*
1601

1602 *[If M0246a4 was flagged as a manifestation¹⁷ (which means M0230a was an appropriate V-code and M0246a3*
1603 *was an appropriate etiology), and M0246a3 is NOT a casemix diagnosis, M0246a4 is primary diagnosis.]*
1604

1604 If NRS-ICD9_Manifest(13)=1 and NRS-ICD9_DG(7)=0, NRS-ICD9_PDX(13)=1
1605

¹⁷ See Footnote 7.

[Else, if M0246a4 was flagged as a manifestation (which means M0230a was an appropriate V-code and M0246a3 was an appropriate etiology), and M0246a3 IS a casemix diagnosis in the same DG as M0246a4, M0246a3 is primary diagnosis.]
Else If NRS-ICD9_Manifest(13)=1 and NRS-ICD9_DG(13)=NRS-ICD9_DG(7), NRS-ICD9_PDX(7)=1
[Else, if M0246a4 was flagged as a manifestation (which means M0230a was an appropriate V-code and M0246a3 was an appropriate etiology), and M0246a3 is a casemix diagnosis in a DIFFERENT DG from M0246a4, M0246a3 and M0246a4 contend to be primary diagnosis based on points earned.]
Else If NRS-ICD9_Manifest(13)=1 and NRS-ICD9_DG(7) >0 and NRS-ICD9_DG(13) <>
NRS-ICD9_DG(7), then:
If NRS-ICD9_Points(13)>NRS-ICD9_Points(7),NRS-ICD9_PDX(13)=1;Else NRS-ICD9_PDX(7)=1
[Else, if M0246a4 is not manifestation and M0246a3 was scored as a casemix diagnosis, M0246a3 is primary diagnosis.
Else If NRS-ICD9_Manifest(13)=0 and NRS-ICD9_DG(7)>0, NRS-ICD9_PDX(7)=1;
[Else, if M0246a4 is not manifestation and M0246a3 was not scored as a casemix diagnosis, evaluate M0230a/M0240b]
Else If NRS-ICD9_Manifest(13)=0 and NRS-ICD9_DG(7)=0:
[If M0240b was flagged as a manifestation and M0230a was not scored as a casemix diagnosis, M0240b is the primary diagnosis.]
If NRS-ICD9_Manifest(2)=1 and NRS-ICD9_DG(1)=0, NRS-ICD9_PDX(2)=1
[Else if M0240b was flagged as a manifestation and M0230a was scored in the same casemix group, M0230a is the primary diagnosis.]
Else If NRS-ICD9_Manifest(2)=1 and NRS-ICD9_DG(2)=NRS-ICD9_DG(1),
NRS-ICD9_PDX(1)=1
[Else if M0240b was flagged as a manifestation and M0230a was scored in a different casemix group, M0230a and M0240b contend to be primary diagnosis based on points earned.]
Else If NRS-ICD9_Manifest(2)=1 and NRS-ICD9_DG(1)>0 and
NRS-ICD9_DG(2)<>NRS-ICD9_DG(1), then:
If NRS-ICD9_Points(2) > NRS-ICD9_Points(1),NRS-ICD9_PDX(2)=1;
Else NRS-ICD9_PDX(1)=1
[Else, if M0240b is not a manifestation code, M0230a is the primary diagnosis (even if not a casemix diagnosis)]
Else If NRS-ICD9_Manifest(2)=0, NRS-ICD9_PDX(1)=1;
[Recalculate the scores of non-primary diagnoses in NRS casemix variables with different scores for primary vs. other diagnosis by setting that diagnosis' score to zero and rescore, giving only the NRS points that are based on being an "other" diagnosis.]
[Anal fissure, fistula]
IF NRS-ICD9_DG(1-18) = 1 and NRS-ICD9_PDX(n)=0,
set NRS-ICD9_Points(n) = 0 then
add Table 7, row 2 points to NRS-ICD9_Points(n)
[Cellulitis, abscess]
IF NRS-ICD9_DG(1-18) = 2 and NRS-ICD9_PDX(n)=0,
set NRS-ICD9_Points(n) = 0 then
add Table 7, row 4 points to NRS-ICD9_Points(n)

```
1657 [Gangrene]
1658 IF NRS-ICD9_DG(1-18) = 4 and NRS-ICD9_PDX(n)=0,
1659     set NRS-ICD9_Points(n) = 0 then
1660     add Table 7, row 7 points to NRS-ICD9_Points(n)
1661 [Malignant neoplasms skin]
1662 IF NRS-ICD9_DG(1-18) = 5 and NRS-ICD9_PDX(n)=0,
1663     set NRS-ICD9_Points(n) = 0 then
1664     add Table 7, row 9 points to NRS-ICD9_Points(n)
1665 [Other infections of skin]
1666 IF NRS-ICD9_DG(1-18) = 7 and NRS-ICD9_PDX(n)=0,
1667     set NRS-ICD9_Points(n) = 0 then
1668     add Table 7, row 12 points to NRS-ICD9_Points(n)
1669 [Post-op complications]
1670 IF NRS-ICD9_DG(1-18) = 8 and NRS-ICD9_PDX(n)=0,
1671     set NRS-ICD9_Points(n) = 0 then
1672     add Table 7, row 14 points to NRS-ICD9_Points(n)
1673 [Trauma]
1674 IF NRS-ICD9_DG(1-18) = 9 and NRS-ICD9_PDX(n)=0,
1675     set NRS-ICD9_Points(n) = 0 then
1676     add Table 7, row 16 points to NRS-ICD9_Points(n)
1677
1678 [Re-initialize the NRS-Diag_Grps array to zero; it will now be used to indicate when a DG has received points
1679 from an earlier NRS-ICD-9.]
1680
1681 Set NRS-Diag_Grps (1-12) = 0
1682
1683 [Cycle through all diagnosis positions with points. Drop points for non-initial occurrences of any NRS diagnosis
1684 groups. Resolve contention within etiology/manifestation pairs when both are casemix diagnoses in different
1685 diagnosis groups by retaining the DG with higher score unless that DG has already earned points via a
1686 previous occurrence.]
1687
1688 if NRS-ICD9_DG(1) > 0 and NRS-ICD9_Points(1) > 0 then
1689     {
1690         NRS-Diag_Grps(NRS-ICD9_DG(n)) = 1
1691     }
1692
1693 if NRS-ICD9_DG(7) > 0 and NRS-ICD9_Points(7) > 0 then
1694     {
1695         If NRS-Diag_Grps(NRS-ICD9_DG(7)) = 1 then NRS-ICD9_Points(7) = 0
1696         Else if NRS-ICD9_Points(7) > 0 then NRS-Diag_Grps (NRS-ICD9_DG(7)) = 1
1697     }
1698
1699 if NRS-ICD9_DG(13) > 0 and NRS-ICD9_Points(13) > 0 then
1700     If NRS-Diag_Grps(NRS-ICD9_DG(13)) = 1 then NRS-ICD9_Points(13) = 0
1701     else
1702     {
1703         if ((NRS-ICD9_Manifest(13)=1) and (NRS-ICD9_Points(7) > 0) then
1704             {
1705                 if NRS-ICD9_Points(13) > NRS-ICD9_Points(7) then
1706                     {
1707                         NRS-ICD9_Points(7) = 0 and
1708                         NRS-Diag_Grps(NRS-ICD9_DG (13)) = 0 and
```

```
1709             NRS-POINTS_REDUND(7) = 1
1710         }
1711         else NRS-ICD9_Points (13) = 0 and
1712             NRS-POINTS_REDUND (13) = 1
1713     }
1714     if NRS-ICD9_Points (13) > 0 then NRS-Diag_Grps (ICD9_DG(13)) = 1
1715 }
1716
1717 if NRS-ICD9_DG(2-6) > 0 and NRS-ICD9_Points(2-6) > 0 then
1718     If NRS-Diag_Grps (NRS-ICD9_DG(n)) = 1 then
1719         NRS-ICD9_Points(n) = 0
1720     else
1721     {
1722         if ( 2 <= n <= 6 ) and (NRS-ICD9_Manifest(n)=1) and
1723             (NRS-ICD9_Points(n-1) > 0) then
1724         {
1725             if NRS-ICD9_Points(n) > NRS-ICD9_Points(n-1) then
1726             {
1727                 NRS-ICD9_Points(n-1) = 0 and
1728                 NRS- Diag_Grps(NRS-ICD9_DG(n-1)) = 0 and
1729                 NRS-POINTS_REDUND(n-1) = 1
1730             }
1731             else NRS-ICD9_Points(n) = 0 and
1732                 NRS-POINTS_REDUND(n) = 1
1733         }
1734         if NRS-ICD9_Points(n) > 0 then NRS-Diag_Grps(ICD9_DG(n)) = 1
1735     }
1736
1737 if NRS-ICD9_DG(8-12) > 0 and NRS-ICD9_Points(8-12) > 0 then
1738 {
1739     If NRS-Diag_Grps (ICD9_DG(n)) = 1 then NRS-ICD9_Points(n) = 0
1740     Else if NRS-ICD9_Points(n) > 0 then NRS-Diag_Grps(ICD9_DG(n)) = 1
1741 }
1742
1743 if NRS-ICD9_DG(14-18) > 0 and NRS-ICD9_Points(14-18) > 0 then
1744     If NRS-Diag_Grps(NRS-ICD9_DG(n)) = 1 then
1745         NRS-ICD9_Points(n) = 0
1746     else
1747     {
1748         if ( 13 <= n <= 18 ) and (NRS-ICD9_Manifest(n)=1) and
1749             (NRS-ICD9_Points(n-6) > 0) then
1750         {
1751             if NRS-ICD9_Points(n) > NRS-ICD9_Points(n-6) then
1752             {
1753                 NRS-ICD9_Points(n-6) = 0 and
1754                 NRS-Diag_Grps(ICD9_DG(n-6)) = 0 and
1755                 NRS-POINTS_REDUND (n-6) = 1
1756             }
1757             else NRS-ICD9_Points(n) = 0 and
1758                 NRS-POINTS_REDUND (n) = 1
1759         }
1760         if NRS-ICD9_Points(n) > 0 then
```

```
1761         NRS-Diag_Grps(NRS-ICD9_DG(n)) = 1
1762     }
1763
1764     [Scoring remaining "Selected Skin Conditions" variables – NRS model]
1765
1766     IF M0450_NBR_PRSULC_STG1 = [01 OR 02] AND M0450_NPRSULC1_INVLD=0,
1767         add Table 7, row 20 points to NRS_Score.
1768     IF M0450_NBR_PRSULC_STG1 = [03 OR 04] AND M0450_NPRSULC1_INVLD=0,
1769         add Table 7, row 21 points to NRS_Score.
1770     IF M0450_NBR_PRSULC_STG2 = 01 AND M0450_NPRSULC2_INVLD=0,
1771         add Table 7, row 22 points to NRS_Score.
1772     IF M0450_NBR_PRSULC_STG2 = 02 AND M0450_NPRSULC2_INVLD=0,
1773         add Table 7, row 23 points to NRS_Score.
1774     IF M0450_NBR_PRSULC_STG2 = 03 AND M0450_NPRSULC2_INVLD=0,
1775         add Table 7, row 24 points to NRS_Score.
1776     IF M0450_NBR_PRSULC_STG2 = 04 AND M0450_NPRSULC2_INVLD=0,
1777         add Table 7, row 25 points to NRS_Score.
1778     IF M0450_NBR_PRSULC_STG3 = 01 AND M0450_NPRSULC3_INVLD=0,
1779         add Table 7, row 26 points to NRS_Score.
1780     IF M0450_NBR_PRSULC_STG3 = 02 AND M0450_NPRSULC3_INVLD=0,
1781         add Table 7, row 27 points to NRS_Score.
1782     IF M0450_NBR_PRSULC_STG3 = 03 AND M0450_NPRSULC3_INVLD=0,
1783         add Table 7, row 28 points to NRS_Score.
1784     IF M0450_NBR_PRSULC_STG3 = 04 AND M0450_NPRSULC3_INVLD=0,
1785         add Table 7, row 29 points to NRS_Score.
1786     IF M0450_NBR_PRSULC_STG4 = 01 AND M0450_NPRSULC4_INVLD=0,
1787         add Table 7, row 30 points to NRS_Score.
1788     IF M0450_NBR_PRSULC_STG4 = 02 AND M0450_NPRSULC4_INVLD=0,
1789         add Table 7, row 31 points to NRS_Score.
1790     IF M0450_NBR_PRSULC_STG4 = [03 OR 04] AND M0450_NPRSULC4_INVLD=0,
1791         add Table 7, row 32 points to NRS_Score.
1792     IF M0450_UNOBS_PRSULC = 1 AND M0450_UNOBS_PRSULC_INVLD =0,
1793         add Table 7, row 33 points to NRS_Score.
1794     IF M0470_NBR_STASULC = 02 AND M0470_NBR_STASULC_INVLD =0,
1795         add Table 7, row 34 points to NRS_Score.
1796     IF M0470_NBR_STASULC = 03 AND M0470_NBR_STASULC_INVLD =0,
1797         add Table 7, row 35 points to NRS_Score.
1798     IF M0470_NBR_STASULC = 04 AND M0470_NBR_STASULC_INVLD =0,
1799         add Table 7, row 36 points to NRS_Score.
1800     IF M0474_UNOBS_STASULC = 1 AND M0474_UNOBS_STASULC_INVLD = 0,
1801         add Table 7, row 37 points to NRS_Score.
1802     IF M0476_STAT_PRB_STASULC = 01 AND M0476_STATSTASIS_INVLD = 0,
1803         add Table 7, row 38 points to NRS_Score.
1804     IF M0476_STAT_PRB_STASULC = 02 AND M0476_STATSTASIS_INVLD = 0,
1805         add Table 7, row 39 points to NRS_Score.
1806     IF M0476_STAT_PRB_STASULC = 03 AND M0476_STATSTASIS_INVLD = 0,
1807         add Table 7, row 40 points to NRS_Score.
1808     IF M0488_STAT_PRB_SURGWND = 02 AND M0488_STATSURG_INVLD = 0,
1809         add Table 7, row 41 points to NRS_Score
1810     IF M0488_STAT_PRB_SURGWND = 03 AND M0488_STATSURG_INVLD = 0,
1811         add Table 7, row 42 points to NRS_Score
```

NRS_Selected_Skin_Conditions_Score = NRS_Score +NRS-ICD9_Points(1-18)

if M0550_OSTOMY = 01 AND M0550_OSTOMY_INVLD = 0,
add Table 7, row 43 points to NRS_Score.

if M0550_OSTOMY = 02 AND M0550_OSTOMY_INVLD = 0,
add Table 7, row 44 points to NRS_Score.

if NRS_Selected_Skin_Conditions_Score > 0 and M0550_OSTOMY = 01 AND
M0550_OSTOMY_INVLD = 0,
add Table 7, row 45 points to NRS_Score.

if NRS_Selected_Skin_Conditions_Score > 0 and M0550_OSTOMY = 02 AND
M0550_OSTOMY_INVLD = 0,
add Table 7, row 46 points to NRS_Score.

if M0250_THH_IV_INFUSION = 1 AND M0250_THERAPIES_INVLD=0 AND
M0250_INTERNAL_LOGIC_INVLD= 0,
add Table 7, row 47 points to NRS_Score.

if M0520_UR_INCONT = 02 AND M0520_UR_INCONT_INVLD = 0,
add Table 7, row 48 points to NRS_Score.

if M0540_BWL_INCONT = 04 OR 05 AND M0540_BWLINCONT_INVLD = 0,
add Table 7, row 49 points to NRS_Score

[Sum all the remaining diagnosis points into the NRS score]

NRS_Score = NRS_Score +sum (NRS-ICD9_Points(1-18))

Computation of HIPPS Code, by Position:

[Compute Scoring Equation for Defining HIPPS Code]

If M0110_EPISODE_TIMING = [01 or UK] and THERAPY_SCORE <=13,
THEN HIPPS_SCORING_EQUATION = 1
If M0110_EPISODE_TIMING = [01 or UK] and THERAPY_SCORE>=14,
THEN HIPPS_SCORING_EQUATION = 2
If M0110_EPISODE_TIMING = 02 and THERAPY_SCORE <=13,
THEN HIPPS_SCORING_EQUATION = 3
If M0110_EPISODE_TIMING = 02 and THERAPY_SCORE>=14
THEN HIPPS_SCORING_EQUATION = 4

[Compute Grouping Step]

If M0110_EPISODE_TIMING = [01 or UK] and THERAPY_SCORE <=13,
THEN GROUPING_STEP = 1
If M0110_EPISODE_TIMING = [01 or UK] and 14<= THERAPY_SCORE <=19,
THEN GROUPING_STEP = 2
If M0110_EPISODE_TIMING = 02 and THERAPY_SCORE <=13,
THEN GROUPING_STEP = 3
If M0110_EPISODE_TIMING = 02 and 14<= THERAPY_SCORE <=19,
THEN GROUPING_STEP = 4
If M0110_EPISODE_TIMING = [01 or 02 or UK] and THERAPY_SCORE >=20,
THEN GROUPING_STEP = 5

HIPPS 1 (Grouping Step):

1863 SET HIPPS_1 = GROUPING_STEP

1864
1865 HIPPS_2 (Clinical Domain):

1866
1867 IF GROUPING_STEP = 1 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) <=4,
1868 THEN HIPPS_2 = A

1869 IF GROUPING_STEP = 1 AND 5 <= CLIN_SCORE(HIPPS_SCORING_EQUATION) <= 8,
1870 THEN HIPPS_2 = B

1871 IF GROUPING_STEP = 1 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) >=9,
1872 THEN HIPPS_2 = C

1873
1874 IF GROUPING_STEP = 2 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) <=6,
1875 THEN HIPPS_2 = A

1876 IF GROUPING_STEP = 2 AND 7 <= CLIN_SCORE(HIPPS_SCORING_EQUATION) <= 14,
1877 THEN HIPPS_2 = B

1878 IF GROUPING_STEP = 2 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) >=15,
1879 THEN HIPPS_2 = C

1880
1881 IF GROUPING_STEP = 3 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) <=2
1882 THEN HIPPS_2 = A

1883 IF GROUPING_STEP = 3 AND 3 <= CLIN_SCORE(HIPPS_SCORING_EQUATION) <= 5,
1884 THEN HIPPS_2 = B

1885 IF GROUPING_STEP = 3 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) >=6,
1886 THEN HIPPS_2 = C

1887
1888 IF GROUPING_STEP = 4 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) <=8,
1889 THEN HIPPS_2 = A

1890 IF GROUPING_STEP = 4 AND 9 <= CLIN_SCORE(HIPPS_SCORING_EQUATION) <=16,
1891 THEN HIPPS_2 = B

1892 IF GROUPING_STEP = 4 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) >=17,
1893 THEN HIPPS_2 = C

1894
1895 IF GROUPING_STEP = 5 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) <=7,
1896 THEN HIPPS_2 = A

1897 IF GROUPING_STEP = 5 AND 8 <= CLIN_SCORE(HIPPS_SCORING_EQUATION) <=14,
1898 THEN HIPPS_2 = B

1899 IF GROUPING_STEP = 5 AND CLIN_SCORE(HIPPS_SCORING_EQUATION) >=15,
1900 THEN HIPPS_2 = C

1901
1902 HIPPS_3 (Functional Domain):

1903
1904 IF GROUPING_STEP = 1 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) <=5,
1905 THEN HIPPS_3 = F

1906 IF GROUPING_STEP = 1 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) =6,
1907 THEN HIPPS_3 = G

1908 IF GROUPING_STEP = 1 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) >=7,
1909 THEN HIPPS_3 = H

1910
1911 IF GROUPING_STEP = 2 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) <=6,
1912 THEN HIPPS_3 = F

1913 IF GROUPING_STEP = 2 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) =7,

```
1914 THEN HIPPS_3 = G
1915 IF GROUPING STEP = 2 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) >=8,
1916 THEN HIPPS_3 = H
1917
1918 IF GROUPING STEP = 3 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) <=8,
1919 THEN HIPPS_3 = F
1920 IF GROUPING STEP = 3 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) = 9,
1921 THEN HIPPS_3 = G
1922 IF GROUPING STEP = 3 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) >=10,
1923 THEN HIPPS_3 = H
1924
1925 IF GROUPING STEP = 4 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) <=7,
1926 THEN HIPPS_3 = F
1927 IF GROUPING STEP = 4 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) =8,
1928 THEN HIPPS_3 = G
1929 IF GROUPING STEP = 4 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) >=9,
1930 THEN HIPPS_3 = H
1931
1932 IF GROUPING STEP = 5 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) <=6,
1933 THEN HIPPS_3 = F
1934 IF GROUPING STEP = 5 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) =7,
1935 THEN HIPPS_3 = G
1936 IF GROUPING STEP = 5 AND FUNC_SCORE(HIPPS_SCORING_EQUATION) >=8,
1937 THEN HIPPS_3 = H
1938
```

HIPPS_4 (Service Domain):

```
1939
1940
1941 IF GROUPING STEP = 1 AND THERAPY_SCORE <=5, THEN HIPPS_4 = K
1942 IF GROUPING STEP = 1 AND THERAPY_SCORE =6, THEN HIPPS_4 = L
1943 IF GROUPING STEP = 1 AND 7<= THERAPY_SCORE<=9, THEN HIPPS_4 = M
1944 IF GROUPING STEP = 1 AND THERAPY_SCORE =10, THEN HIPPS_4 = N
1945 IF GROUPING STEP = 1 AND 11<= THERAPY_SCORE <=13, THEN HIPPS_4 = P
1946
1947 IF GROUPING STEP = 2 AND 14<= THERAPY_SCORE <=15, THEN HIPPS_4 = K
1948 IF GROUPING STEP = 2 AND 16<= THERAPY_SCORE <=17, THEN HIPPS_4 = L
1949 IF GROUPING STEP = 2 AND 18<= THERAPY_SCORE<=19, THEN HIPPS_4 = M
1950
1951 IF GROUPING STEP = 3 AND THERAPY_SCORE <=5, THEN HIPPS_4 = K
1952 IF GROUPING STEP = 3 AND THERAPY_SCORE =6, THEN HIPPS_4 = L
1953 IF GROUPING STEP = 3 AND 7<= THERAPY_SCORE <=9, THEN HIPPS_4 = M
1954 IF GROUPING STEP = 3 AND THERAPY_SCORE =10, THEN HIPPS_4 = N
1955 IF GROUPING STEP = 3 AND 11<= THERAPY_SCORE <=13, THEN HIPPS_4 = P
1956
1957 IF GROUPING STEP = 4 AND 14<= THERAPY_SCORE <=15, THEN HIPPS_4 = K
1958 IF GROUPING STEP = 4 AND 16<= THERAPY_SCORE <=17, THEN HIPPS_4 = L
1959 IF GROUPING STEP = 4 AND 18<= THERAPY_SCORE <=19, THEN HIPPS_4 = M
1960
1961 IF GROUPING STEP = 5, THEN HIPPS_4 = K
```

HIPPS 5 (Non-routine Supplies (NRS) Group):

IF NRS_SCORE = 0, THEN HIPPS_5 = S
IF 1 <= NRS_SCORE <= 14, THEN HIPPS_5 = T
IF 15 <= NRS_SCORE <= 27, THEN HIPPS_5 = U
IF 28 <= NRS_SCORE <= 48, THEN HIPPS_5 = V
IF 49 <= NRS_SCORE <= 98, THEN HIPPS_5 = W
IF NRS_SCORE >= 99, THEN HIPPS_5 = X¹⁸

Assembling the HIPPS Code:

SET HIPPS = CONCATENATE (HIPPS_1, HIPPS_2, HIPPS_3, HIPPS_4, HIPPS_5)

Screening out Ineligible Cases

Invalid dates:

IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN HIPPS = BLANK

Assessment not from period covered by Grouper 2.03, use earlier Grouper:

ELSE, IF GROUPER0203 = 0, THEN HIPPS = BLANK AND GO TO GROUPER 1.06

Invalid reasons for assessment:

ELSE, IF M0100_ASSMT_REASON <> 01 or 03 or 04 or 05, THEN HIPPS = BLANK

Invalid episode timing:

ELSE, IF M0110_EPISODE_TIMING <> [01 or 02 or UK], THEN HIPPS = BLANK

Non-casemix assessments:

ELSE, IF M0826_THERAPY_NEED_NA = 1, THEN HIPPS = BLANK

Create Data Validity Flag

In Grouper version 02.x, the data validity flag (formerly last character of the HIPPS code) has been converted to a separate output variable. (This was done to continue to alert providers of data problems that cost casemix points.) In addition, a dimension has been added to the validity flag to alert providers specifically when there is a problem with sequencing of manifestation codes. The values of the data validity flag and their derivation is shown below.

¹⁸ In order to promote more accurate billing of supplies, CMS has established a separate set of codes (numbers 1 to 6) to be used in the fifth position of the HIPPS code on claims for episodes where no supplies were provided. The Grouper software has no information on provision of supplies and always outputs the HIPPS code with the final character that is to be used when supplies WERE provided (letters S to X). For episodes where supplies were not provided, the HHA must edit the HIPPS code and enter the correct final digit before submitting the claim for payment.

DERIVATION OF THE DATA VALIDITY FLAG				
IF:				THEN:
MANIFESTATION_ SEQUENCING_ FLAG =	AND CLINICAL_ DOMAIN_ DATA_ ISSUE_ FLAG =	AND FUNCTIONAL_ DOMAIN_ DATA_ ISSUE_ FLAG=	AND SERVICE_ DOMAIN_ DATA_ ISSUE_ FLAG=	DATA_ VALIDITY_ FLAG =
0	0	0	0	1
0	1	0	0	2
0	0	1	0	3
0	0	0	1	4
0	1	1	0	5
0	0	1	1	6
0	1	0	1	7
0	1	1	1	8
1	0	0	0	A
1	1	0	0	B
1	0	1	0	C
1	0	0	1	D
1	1	1	0	E
1	0	1	1	F
1	1	0	1	G
1	1	1	1	H

Create Claim-OASIS Matching String/Treatment Authorization Code

As noted in the introduction above, the claim-OASIS matching string is utilized to carry information needed to recategorize the claim in the event that changes during adjudication of the claim result in the episode needing to be scored and priced under a different Scoring Equation. Since the Pricer software will not have the OASIS assessment information with which to rescore the clinical and functional domains, the Grouper will store the clinical and functional points earned under each equation (in addition to the OASIS-claim matching information.) In order to store all of this information in an 18-byte field, the dates and points are converted to letter codes.

1. Set M0030_YY = M0030_START_CARE_YR34
2. Set M0030_DATE_CODE = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 1 – DATES" in the Appendix with value of M0030_START_CARE_MMDD¹⁹
3. Set M0090_YY = M0090_INFO_COMPLETED_YR34
4. Set M0090_DATE_CODE = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 1 – DATES" in the Appendix with value of M0090_INFO_COMPLETED_MMDD
5. Set M0100_1 = M0100_ASSMT_REASON2
6. If M0110_EPISODE_TIMING = UK or 01, M0110_1_2 = 1
Else, If M0110_EPISODE_TIMING = 02, M0110_1_2 = 2

¹⁹ Note that these codes do not vary depending on whether the year is a leap year or not. For example, the code for March 2 is "CJ" in every year, and the code for February 29 ("CH") is used only in leap years.

7. Set CLIN_SCORE1_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of CLIN_SCORE1
8. Set FUNC_SCORE1_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of FUNC_SCORE1
9. Set CLIN_SCORE2_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of CLIN_SCORE2
10. Set FUNC_SCORE2_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of FUNC_SCORE2
11. Set CLIN_SCORE3_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of CLIN_SCORE3
12. Set FUNC_SCORE3_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of FUNC_SCORE3
13. Set CLIN_SCORE4_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of CLIN_SCORE4
14. Set FUNC_SCORE4_CD = value returned from searching Table 8: "Hexavigesimal Code Tables (converting dates and point values to letter codes) - Part 2 – POINTS" in the Appendix with value of FUNC_SCORE4

This general logic for this conversion is illustrated by the example below, the conversion values are shown in Table 8 in the Appendix.

#	Position	Definition	Format
1	1-2	M0030_YY (<i>digit year from M0030</i>)	99
2	3-4	M0030_DATE_CODE (<i>alpha code for date MMDD from M0030</i>)	XX
3	5-6	M0090_YY (<i>2 digit year from M0090</i>)	99
4	7-8	M0090_DATE_CODE (<i>alpha code for date MMDD from M0090</i>)	XX
5	9	M0100_1 (<i>1-digit format: 1, 3, 4, or 5</i>)	9
6	10	M0110_1_2 (<i>Episode timing: 1[early or UK] or 2 [late]</i>)	9
7	11	CLIN_SCORE1_CD (<i>Alpha code for clinical severity points under Equation 1</i>)	X
8	12	FUNC_SCORE1_CD (<i>Alpha code for functional severity points under Equation 1</i>)	X
9	13	CLIN_SCORE2_CD (<i>Alpha code for Clinical severity points under Equation 2</i>)	X
10	14	FUNC_SCORE2_CD (<i>Alpha code for Functional severity points under Equation 2</i>)	X
11	15	CLIN_SCORE3_CD (<i>Alpha code for Clinical severity points under Equation 3</i>)	X
12	16	FUNC_SCORE3_CD (<i>Alpha code for Functional severity points under Equation 3</i>)	X
13	17	CLIN_SCORE4_CD - (<i>Alpha code for Clinical severity points – under Equation 4</i>)	X
14	18	FUNC_SCORE4_CD (<i>Alpha code for Functional severity points – under Equation 4</i>)	X

An example of the treatment authorization code that would appear on the claim would be:
07JK08AA41GBMDCDLG.

CLAIM_OASIS_STRING = CONCATENATE:
(M0030_YY,
M0030_DATE_CODE,
M0090_YY,

2061 M0090_DATE_CODE,
2062 M0100_1,
2063 M0110_1_2,
2064 CLIN_SCORE1_CD,
2065 FUNC_SCORE1_CD,
2066 CLIN_SCORE2_CD,
2067 FUNC_SCORE2_CD,
2068 CLIN_SCORE3_CD,
2069 FUNC_SCORE3_CD,
2070 CLIN_SCORE4_CD,
2071 FUNC_SCORE4_CD)
2072

2073 Grouper Output

2074		
2075	OUTPUT HIPPS =	9XXXX (or BLANK)
2076	IF HIPPS <> BLANK, OUTPUT GROUPER_VERSION =	02.03
2077	ELSE, OUTPUT GROUPER_VERSION =	BLANK
2078	OUTPUT CLAIM_OASIS_STRING =	99XX99XX99XXXXXXXXXX (or BLANK)
2079	OUTPUT DATA_VALIDITY_FLAG =	X (or BLANK)

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

This section presents the logic for the classification of home health payment episodes beginning on or before 12/31/2007. Because the classification logic and many of the key variables used are very different from those used for episodes starting on or after 1/1/2008, this logic starts from the raw record 1448-byte OASIS record. The logic presented is the same as that for Grouper Version 1.06.

1. Define Input Variables – payment episodes starting before 1/1/2008:

LOCATION	FIELD NAME
177-184	M0030_START_CARE_DT
302-309	M0090_INFO_COMPLETED_DT
310-311	M0100_ASSMT_REASON
404-410	M0230_PRIMARY_DIAG_ICD
404-404	M0230_PRIM_DX_COL_404
405-405	M0230_PRIM_DX_COL_405
406-407	M0230_PRIM_DX_COL_406_407
405-407	M0230_PRIM_DX_COL_405_407
413-419	M0240_OTH_DIAG1_ICD
458-458	M0250_THH_IV_INFUSION
459-459	M0250_THH_PAR_NUTRITION
460-460	M0250_THH_ENT_NUTRITION
461-461	M0250_THH_NONE_ABOVE
529-530	M0390_VISION
535-536	M0420_FREQ_PAIN
538-538	M0440_LESION_OPEN_WND
539-539	M0445_PRESS_ULCER
544-545	M0450_NBR_PRSULC_STG3
546-547	M0450_NBR_PRSULC_STG4
549-550	M0460_STG_PRBLM_ULCER
553-553	M0468_STASIS_ULCER
554-555	M0470_NBR_STASULC
557-558	M0476_STAT_PRB_STASULC
559-559	M0482_SURG_WOUND
560-561	M0484_NBR_SURGWND
563-564	M0488_STAT_PRB_SURGWND
565-566	M0490_WHEN_DYSPNEIC
573-574	M0520_UR_INCONT
575-576	M0530_UR_INCONT_OCCURS
577-578	M0540_BWL_INCONT
579-580	M0550_OSTOMY
600-600	M0610_BD_MEM_DEFICIT
601-601	M0610_BD_IMP_DECISN
602-602	M0610_BD_VERBAL
603-603	M0610_BD_PHYSICAL
604-604	M0610_BD_SOC_INAPPRO
605-605	M0610_BD_DELUSIONS
606-606	M0610_BD_NONE
616-617	M0650_CUR_DRESS_UPPER

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2130	620-621	M0660_CUR_DRESS_LOWER
2131	624-625	M0670_CUR_BATHING
2132	628-629	M0680_CUR_TOILETING
2133	632-633	M0690_CUR_TRANSFERRING
2134	636-637	M0700_CUR_AMBULATION
2135	747-748	M0825_THERAPY_NEED
2136	749-749	M0175_DC_HOSP_14_DAYS
2137	750-750	M0175_DC_REHAB_14_DAYS
2138	751-751	M0175_DC_SNF_14_DAYS
2139	752-752	M0175_DC_NH_14_DAYS
2140	753-753	M0175_DC_OTHER
2141	754-754	M0175_NONE_14_DAYS
2142	755-761	M0245_PMT_ICD1
2143	755-755	M0245_PMT_PRIM_DX_COL_755
2144	756-756	M0245_PMT_PRIM_DX_COL_756
2145	757-758	M0245_PMT_PRIM_DX_COL_757-758
2146	762-768	M0245_PMT_ICD2

2. Initialize Working and Output Variables, Assign Values – payment episodes starting before 1/1/2008:

2149	
2150	Set CLIN_SCORE = 0
2151	Set FUNC_SCORE = 0
2152	Set SERV_SCORE = 0
2153	Set ORB_PERIOD = 0
2154	Set REDUCED = 0
2155	Set OASISV150_OR_LATER = 0
2156	Set FFY03_OR_LATER = 0
2157	Set FFY04_OR_LATER = 0
2158	Set FFY07_OR_LATER = 0
2159	Set M0230_V-CODE_PRIM_DX = 0
2160	Set PRIM_DX_IN_USE = BLANK
2161	Set SEC_DX_IN_USE = BLANK
2162	
2163	Set M0090_INFO_COMPLETED_DT_INVLD= 0
2164	Set M0230_PRIMARY_DIAG_ICD_INVLD= 0
2165	Set M0245_PMT_ICD1_INVLD= 0
2166	Set M0245_PMT_ICD2_INVLD= 0
2167	Set PRIM_DX_IN_USE_INVLD= 0
2168	Set SEC_DX_IN_USE_INVLD= 0
2169	Set M0250_THERAPIES_INVLD=0
2170	Set M0250_INTERNAL_LOGIC_INVLD= 0
2171	Set M0390_VISION_INVLD = 0
2172	Set M0420_PAIN_INVLD = 0
2173	Set M0440_LESION_INVLD = 0
2174	Set M0450_NPRSULC3_INVLD = 0
2175	Set M0450_NPRSULC4_INVLD = 0
2176	Set M0460_STGPRSUL_INVLD = 0
2177	Set M0476_STATSTASIS_INVLD = 0
2178	Set M0488_STATSURG_INVLD = 0
2179	Set M0490_DYSPNEIC_INVLD = 0

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2180 Set M0530_URINCONT_INVLD = 0
2181 Set M0540_BWLINCONT_INVLD = 0
2182 Set M0550_OSTOMY_INVLD = 0
2183 Set M0610_BEHAV_INVLD = 0
2184 Set M0610_INTERNAL_LOGIC_INVLD= 0
2185 Set M0650_660_CUR_DRESS_INVLD = 0
2186 Set M0670_CUR_BATHING_INVLD = 0
2187 Set M0680_CUR_TOILETING_INVLD = 0
2188 Set M0690_CUR_TRANSFER_INVLD = 0
2189 Set M0700_CUR_AMBULATION_INVLD = 0
2190 Set M0825_THERAPY_NEED_INVLD = 0
2191 Set M0175_DC_HOSP_INVLD = 0
2192 Set M0175_DC_REHAB_INVLD = 0
2193 Set M0175_DC_SNF_INVLD = 0
2194 Set M0175_DC_REHAB_INVLD = 0
2195 Set M0175_DC_OTH_NH_INVLD = 0
2196 Set M0175_DC_OTHER_INVLD = 0
2197 Set M0175_DC_NONE_INVLD = 0
2198 Set M0175_INTERNAL_LOGIC_INVLD= 0
2199
2200 Set CLIN_DERIVED = 0
2201 Set FUNC_DERIVED = 0
2202 Set SERV_DERIVED = 0
2203
2204 Set NEURO_DG = 0
2205 Set DIABETES_DG = 0
2206 Set ORTHO_DG = 0
2207 Set BURNTRAUM_DG = 0
2208
2209 Set NEURO_DG_PTS = 0
2210 Set DIABETES_DG_PTS = 0
2211 Set ORTHO_DG_PTS = 0
2212 Set M0250_TREATMT_PTS = 0
2213 Set M0390_VISION_PTS = 0
2214 Set M0420_PAIN_PTS = 0
2215 Set M0440_LESION_PTS = 0
2216 Set M0450_NPRSULC34_PTS = 0
2217 Set M0460_STGPRSUL_PTS = 0
2218 Set M0476_STATSTASIS_PTS = 0
2219 Set M0488_STATSURG_PTS = 0
2220 Set M0490_DYSPNEIC_PTS = 0
2221 Set M0530_URINCONT_PTS = 0
2222 Set M0540_BWLINCONT_PTS = 0
2223 Set M0550_OSTOMY_PTS = 0
2224 Set M0610_BEHAV_PTS = 0
2225 Set M0650_660_DRESS_PTS = 0
2226 Set M0670_BATH_PTS = 0
2227 Set M0680_TOILET_PTS = 0
2228 Set M0690_TRANSFER_PTS = 0
2229 Set M0700_AMBULATN_PTS = 0

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
2230      Set M0825_THERAPY_PTS = 0
2231      Set M0175_DC_HOSP_PTS = 0
2232      Set M0175_DC_REHAB_SNF_PTS = 0
2233
2234      Set M02501_PTS = 0
2235      Set M02502_PTS = 0
2236      Set M02503_PTS = 0
2237
2238      Set HIPPS_1= 0
2239      Set HIPPS_2= 0
2240      Set HIPPS_3= 0
2241      Set HIPPS_4= 0
2242      Set HIPPS_5= 0
2243
2244      Set HIPPS = BLANK
2245
2246      Set GROUPER_VERSION =      02.03
2247
2248      Set CLAIM_OASIS_MATCH =      BLANK
2249
2250 Define values:
2251
2252      IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "199*****" AND 201"*****", THEN
2253      M0090_INFO_COMPLETED_DT_INVLD = 1;
2254      else IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "****01**" AND "****12**", THEN
2255      M0090_INFO_COMPLETED_DT_INVLD = 1;
2256      else IF M0090_INFO_COMPLETED_DT IS NOT BETWEEN "*****00" AND "*****99", THEN
2257      M0090_INFO_COMPLETED_DT_INVLD = 1;
2258      else IF M0090_INFO_COMPLETED_DT < "19990719", THEN M0090_INFO_COMPLETED_DT_INVLD=
2259      1.
2260
2261      IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN ORB_PERIOD = BLANK;
2262      else IF M0090_INFO_COMPLETED_DT IS BETWEEN "19990719" AND "20021215",
2263      THEN ORB_PERIOD = 0;
2264      else IF M0090_INFO_COMPLETED_DT >= "20021216", THEN ORB_PERIOD = 1
2265
2266      IF ORB_PERIOD = 1 and M0100_ASSMT_REASON = [4 or 5], THEN REDUCED = 1
2267
2268      IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN OASISV150_OR_LATER = BLANK;
2269      else IF M0090_INFO_COMPLETED_DT > "20060621", THEN OASISV150_OR_LATER = 1
2270
2271      IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN FFY03_OR_LATER = BLANK;
2272      else IF M0090_INFO_COMPLETED_DT > "20020930", THEN FFY03_OR_LATER = 1
2273
2274      IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN FFY04_OR_LATER = BLANK;
2275      else IF M0090_INFO_COMPLETED_DT IS > "20030930", THEN FFY04_OR_LATER = 1
2276
2277      IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN FFY07_OR_LATER = BLANK;
2278      else IF M0090_INFO_COMPLETED_DT IS > "20060930", THEN FFY07_OR_LATER = 1
2279
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3. Checking for Invalid Data – payment episodes starting before 1/1/2008:

M0230/M0240:

```
2280 IF M0230_PRIMARY_DIAG_ICD = BLANK,          THEN M0230_PRIMARY_DIAG_ICD_INVLD= 1 AND
2281 CLIN_DERIVED = 1
2282
2283 IF M0230_PRIM_DX_COL_404 = "E",              THEN M0230_PRIMARY_DIAG_ICD_INVLD= 1 AND
2284 CLIN_DERIVED = 1 [E-codes not permitted as primary
2285 diagnosis]
2286
2287 IF FFY04_OR_LATER <>1 and M0230_PRIM_DX_COL_405-407 IS NOT BETWEEN 000 AND 999,
2288 THEN M0230_PRIMARY_DIAG_ICD_INVLD= 1 AND
2289 CLIN_DERIVED = 1 [V-codes and any other alpha codes not permitted before
2290 FFY04]
2291
2292 IF FFY04_OR_LATER =1 and M0230_PRIM_DX_COL_405 IS NOT [(BETWEEN 0 AND 9) or "V"],
2293 THEN M0230_PRIMARY_DIAG_ICD_INVLD= 1 AND
2294 CLIN_DERIVED = 1 [V-codes are the only alpha codes
2295 permitted starting in FFY04]
2296
2297 IF FFY04_OR_LATER =1 and M0230_PRIM_DX_COL_406-407 IS NOT BETWEEN 00 AND 99,
2298 THEN M0230_PRIMARY_DIAG_ICD_INVLD= 1 AND
2299 CLIN_DERIVED = 1 [V-codes are the only alpha codes
2300 permitted starting in FFY04]
2301
2302 IF M0230_PRIMARY_DIAG_ICD_INVLD <> 1 AND M0230_PRIM_DX_COL_405 = "V" and
2303 M0230_PRIM_DX_COL_406_407 IS BETWEEN "00" and "99",
2304 THEN M0230_V-CODE_PRIM_DX = 1
2305
2306 IF FFY04_OR_LATER = 1 and M0230_V-CODE_PRIM_DX = 1 THEN:
2307     PRIM_DX_IN_USE = M0245_PMT_ICD1
2308     SEC_DX_IN_USE = M0245_PMT_ICD2
2309
2310 ELSE:
2311     PRIM_DX_IN_USE = M0230_PRIMARY_DIAG_ICD
2312     SEC_DX_IN_USE = M0240_OTH_DIAG1_ICD
2313
2314 IF PRIM_DX_IN_USE =
2315     "320.7" OR (Secondary-only dx in primary dx field]
2316     "321.0" OR
2317     "321.1" OR
2318     "321.2" OR
2319     "321.3" OR
2320     "321.4" OR
2321     "321.8" OR
2322     "323.0" OR
2323     "323.1" OR
2324     "323.2" OR
2325     "323.4" OR
2326     "323.6" OR
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2330	"323.7" OR
2331	"330.2" OR
2332	"330.3" OR
2333	"331.7" OR
2334	"334.4" OR
2335	"336.2" OR
2336	"336.3" OR
2337	"337.1" OR
2338	"357.1" OR
2339	"357.2" OR
2340	"357.3" OR
2341	"357.4" OR
2342	"358.1" OR
2343	"711.10" OR
2344	"711.11" OR
2345	"711.12" OR
2346	"711.13" OR
2347	"711.14" OR
2348	"711.15" OR
2349	"711.16" OR
2350	"711.17" OR
2351	"711.18" OR
2352	"711.19" OR
2353	"711.20" OR
2354	"711.21" OR
2355	"711.22" OR
2356	"711.23" OR
2357	"711.24" OR
2358	"711.25" OR
2359	"711.26" OR
2360	"711.27" OR
2361	"711.28" OR
2362	"711.29" OR
2363	"711.30" OR
2364	"711.31" OR
2365	"711.32" OR
2366	"711.33" OR
2367	"711.34" OR
2368	"711.35" OR
2369	"711.36" OR
2370	"711.37" OR
2371	"711.38" OR
2372	"711.39" OR
2373	"711.40" OR
2374	"711.41" OR
2375	"711.42" OR
2376	"711.43" OR
2377	"711.44" OR
2378	"711.45" OR
2379	"711.46" OR

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2380	"711.47"	OR
2381	"711.48"	OR
2382	"711.49"	OR
2383	"711.50"	OR
2384	"711.51"	OR
2385	"711.52"	OR
2386	"711.53"	OR
2387	"711.54"	OR
2388	"711.55"	OR
2389	"711.56"	OR
2390	"711.57"	OR
2391	"711.58"	OR
2392	"711.59"	OR
2393	"711.60"	OR
2394	"711.61"	OR
2395	"711.62"	OR
2396	"711.63"	OR
2397	"711.64"	OR
2398	"711.65"	OR
2399	"711.66"	OR
2400	"711.67"	OR
2401	"711.68"	OR
2402	"711.69"	OR
2403	"711.70"	OR
2404	"711.71"	OR
2405	"711.72"	OR
2406	"711.73"	OR
2407	"711.74"	OR
2408	"711.75"	OR
2409	"711.76"	OR
2410	"711.77"	OR
2411	"711.78"	OR
2412	"711.79"	OR
2413	"711.80"	OR
2414	"711.81"	OR
2415	"711.82"	OR
2416	"711.83"	OR
2417	"711.84"	OR
2418	"711.85"	OR
2419	"711.86"	OR
2420	"711.87"	OR
2421	"711.88"	OR
2422	"711.89"	OR
2423	"712.10"	OR
2424	"712.11"	OR
2425	"712.12"	OR
2426	"712.13"	OR
2427	"712.14"	OR
2428	"712.15"	OR
2429	"712.16"	OR

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2430	"712.17"	OR
2431	"712.18"	OR
2432	"712.19"	OR
2433	"712.20"	OR
2434	"712.21"	OR
2435	"712.22"	OR
2436	"712.23"	OR
2437	"712.24"	OR
2438	"712.25"	OR
2439	"712.26"	OR
2440	"712.27"	OR
2441	"712.28"	OR
2442	"712.29"	OR
2443	"712.30"	OR
2444	"712.31"	OR
2445	"712.32"	OR
2446	"712.33"	OR
2447	"712.34"	OR
2448	"712.35"	OR
2449	"712.36"	OR
2450	"712.37"	OR
2451	"712.38"	OR
2452	"712.39"	OR
2453	"713.0"	OR
2454	"713.1"	OR
2455	"713.2"	OR
2456	"713.3"	OR
2457	"713.4"	OR
2458	"713.5"	OR
2459	"713.6"	OR
2460	"713.7"	OR
2461	"713.8"	OR
2462	"720.81"	OR
2463	"730.70"	OR
2464	"730.71"	OR
2465	"730.72"	OR
2466	"730.73"	OR
2467	"730.74"	OR
2468	"730.75"	OR
2469	"730.76"	OR
2470	"730.77"	OR
2471	"730.78"	OR
2472	"730.79"	OR
2473	"730.80"	OR
2474	"730.81"	OR
2475	"730.82"	OR
2476	"730.83"	OR
2477	"730.84"	OR
2478	"730.85"	OR
2479	"730.86"	OR

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```
2480         "730.87" OR
2481         "730.88" OR
2482         "730.89" OR
2483         "731.1" OR
2484         "731.8",
2485     THEN PRIM_DX_IN_USE _INVLD= 1 AND
2486         CLIN_DERIVED = 1
2487
2488 IF FFY07_OR_LATER = 1 and PRIM_DX_IN_USE = "323.01" OR
2489     "323.02" OR
2490     "323.41" OR
2491     "323.42" OR
2492     "323.61" OR
2493     "323.62" OR
2494     "323.63" OR
2495     "323.71" OR
2496     "323.72",
2497 THEN PRIM_DX_IN_USE _INVLD= 1 AND
2498     CLIN_DERIVED = 1
2499     [Secondary-only dx in primary dx field starting in FFY07]
2500
2501 IF PRIM_DX_IN_USE =
2502     "320" OR      [3-digit dx code when 4th or 5th digit required]
2503     "323" OR
2504     "330" OR
2505     "331" OR
2506     "334" OR
2507     "336" OR
2508     "337" OR
2509     "357" OR
2510     "358" OR
2511     "711" OR
2512     "712" OR
2513     "713" OR
2514     "720" OR
2515     "730" OR
2516     "731" OR
2517     "320.8" OR   [4-digit dx code when 5th digit required]
2518     "331.8" OR
2519     "337.2" OR
2520     "711.0" OR
2521     "711.9" OR
2522     "712.8" OR
2523     "712.9" OR
2524     "730.0" OR
2525     "730.1" OR
2526     "730.2" OR
2527     "730.3" OR
2528     "730.9",
2529 THEN PRIM_DX_IN_USE _INVLD= 1 AND
        CLIN_DERIVED = 1
```

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2530
2531 IF PRIM_DX_IN_USE ="321" incomplete secondary-only code in primary dx field (3- or 4-digit code when 4th
2532 or 5th digit "711.1" OR
2533 "711.2" OR
2534 "711.3" OR
2535 "711.4" OR
2536 "711.5" OR
2537 "711.6" OR
2538 "711.7" OR
2539 "711.8" OR
2540 "712.1" OR
2541 "712.2" OR
2542 "712.3" OR
2543 "720.8" OR
2544 "730.7" OR
2545 "730.8",
2546 THEN PRIM_DX_IN_USE_INVLD= 1 AND
2547 CLIN_DERIVED = 1
2548
2549 IF FFY03_OR_LATER = 1 and PRIM_DX_IN_USE = "357.8",
2550 THEN PRIM_DX_IN_USE_INVLD= 1 AND CLIN_DERIVED = 1
2551 *[4-digit dx code when 5th digit required starting in FFY03]*
2552
2553 IF FFY04_OR_LATER = 1 and PRIM_DX_IN_USE = "331.1" or "358.0",
2554 THEN PRIM_DX_IN_USE_INVLD= 1 AND CLIN_DERIVED = 1
2555 *[4-digit dx code when 5th digit required starting in FFY04]*
2556
2557 IF FFY07_OR_LATER = 1 and PRIM_DX_IN_USE = "323.5" or "323.8",
2558 THEN PRIM_DX_IN_USE_INVLD= 1 AND CLIN_DERIVED = 1
2559 *[4-digit dx code when 5th digit required starting in FFY07]*
2560
2561 IF SEC_DX_IN_USE = "320" OR *[3-digit dx code when 4th or 5th digit required]*
2562 "321" OR
2563 "323" OR
2564 "330" OR
2565 "331" OR
2566 "334" OR
2567 "336" OR
2568 "337" OR
2569 "357" OR
2570 "358" OR
2571 "711" OR
2572 "712" OR
2573 "713" OR
2574 "720" OR
2575 "730" OR
2576 "731" OR
2577 "711.1" OR *[4-digit dx code when 5th digit required]*

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2578 "711.2" OR
2579 "711.3" OR
2580 "711.4" OR
2581 "711.5" OR
2582 "711.6" OR
2583 "711.7" OR
2584 "711.8" OR
2585 "712.1" OR
2586 "712.2" OR
2587 "712.3" OR
2588 "720.8" OR
2589 "730.7" OR
2590 "730.8",
2591 THEN SEC_DX_IN_USE_INVLD= 1 AND
2592 CLIN_DERIVED = 1
2593
2594 IF FFY07_OR_LATER = 1 and SEC_DX_IN_USE = "323.0" or "323.4" or "323.6" or "323.8",
2595 THEN SEC_DX_IN_USE_INVLD= 1 AND
2596 CLIN_DERIVED = 1 *[4-digit dx code when 5th digit*
2597 *required starting in FFY07]*
2598
2599 M0245a/b:
2600 IF FFY04_OR_LATER = 1 and M0230_V-CODE_PRIM_DX = 1 and M0245_PMT_PRIM_DX_COL_755= "E",
2601 THEN M0245_PMT_ICD1_INVLD = 1 AND
2602 CLIN_DERIVED = 1 *[E-codes not permitted as*
2603 *primary diagnosis]*
2604
2605 IF FFY04_OR_LATER =1 and M0230_V-CODE_PRIM_DX = 1 and M0245_PMT_PRIM_DX_COL_756 IS
2606 NOT BETWEEN 0 AND 9,
2607 THEN M0245_PMT_ICD1_INVLD = 1 AND
2608 CLIN_DERIVED = 1 *[V-codes not permitted as payment*
2609 *diagnosis, M0245a]*
2610
2611 IF FFY04_OR_LATER =1 and M0230_V-CODE_PRIM_DX = 1 and M0245_PMT_PRIM_DX_COL_757-758
2612 IS NOT BETWEEN 00 AND 99,
2613 THEN M0245_PMT_ICD1_INVLD = 1 AND
2614 CLIN_DERIVED = 1 *[No alpha codes permitted as*
2615 *payment diagnosis, M0245a]*
2616
2617 IF FFY04_OR_LATER =1 and M0230_V-CODE_PRIM_DX = 1 and M0245_PMT_ICD1 = BLANK and
2618 M0245_PMT_ICD2 <> BLANK,
2619 THEN M0245_PMT_ICD2_INVLD = 1 AND
2620 CLIN_DERIVED = 1 *[If M0245a is blank, M0245b must*
2621 *be blank]*
2622 M0250:
2623 IF M0250_THH_IV_INFUSION <> 0 OR 1 THEN M0250_THERAPIES_INVLD = 1 AND
2624 CLIN_DERIVED = 1
2625
2626 IF M0250_THH_PAR_NUTRITION <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1 AND
2627 CLIN_DERIVED = 1

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2628
2629 IF M0250_THH_ENT_NUTRITION <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1 AND
2630 CLIN_DERIVED = 1
2631
2632 IF M0250_THH_NONE_ABOVE <> 0 OR 1, THEN M0250_THERAPIES_INVLD = 1 AND
2633 CLIN_DERIVED = 1
2634
2635 IF M0250_THH_NONE_ABOVE = 1 AND
2636 [M0250_THH_IV_INFUSION = 1 OR
2637 M0250_THH_PAR_NUTRITION = 1 OR
2638 M0250_THH_ENT_NUTRITION = 1],
2639 THEN M0250_INTERNAL_LOGIC_INVLD = 1 AND
2640 CLIN_DERIVED = 1
2641
2642 IF FFY04_OR_LATER = 1 AND
2643 [M0250_THH_IV_INFUSION = 0 AND
2644 M0250_THH_PAR_NUTRITION = 0 AND
2645 M0250_THH_ENT_NUTRITION = 0 AND
2646 M0250_THH_NONE_ABOVE = 0]
2647 THEN M0250_INTERNAL_LOGIC_INVLD = 1 AND
2648 CLIN_DERIVED = 1
2649 M0390:
2650 IF M0390_VISION <> 00 OR 01 OR 02, THEN M0390_VISION_INVLD = 1 AND
2651 CLIN_DERIVED = 1
2652
2653 M0420:
2654 IF M0420_FREQ_PAIN <> 00 OR 01 OR 02 OR 03, THEN M0420_PAIN_INVLD = 1 AND
2655 CLIN_DERIVED = 1
2656
2657 M0440:
2658 IF M0440_LESION_OPEN_WND <> 0 OR 1, THEN M0440_LESION_INVLD = 1 AND
2659 CLIN_DERIVED = 1
2660
2661 M0450:
2662 IF REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND M0445_PRESS_ULCER = 1 AND
2663 M0450_NBR_PRSULC_STG3 <> 00 OR 01 OR 02 OR 03 OR 04,
2664 THEN M0450_NPRSULC3_INVLD = 1 AND
2665 CLIN_DERIVED = 1
2666
2667 IF REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR M0445_PRESS_ULCER <> 1] AND
2668 M0450_NBR_PRSULC_STG3 = 00 OR 01 OR 02 OR 03 OR 04,
2669 THEN M0450_NPRSULC3_INVLD = 1 AND
2670 CLIN_DERIVED = 1
2671
2672 IF REDUCED = 1 AND M0440_LESION_OPEN_WND = 1 AND M0450_NBR_PRSULC_STG3 <> 00 OR 01
2673 OR 02 OR 03 OR 04 OR BLANK,
2674 THEN M0450_NPRSULC3_INVLD = 1 AND
2675 CLIN_DERIVED = 1
2676

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IF REDUCED = 1 AND M0440_LESION_OPEN_WND <> 1 AND M0450_NBR_PRSULC_STG3 = 00 OR 01
OR 02 OR 03 OR 04,

THEN M0450_NPRSULC3_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND M0445_PRESS_ULCER = 1 AND
M0450_NBR_PRSULC_STG4 <> 00 OR 01 OR 02 OR 03 OR 04,

THEN M0450_NPRSULC4_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR M0445_PRESS_ULCER <> 1] AND
M0450_NBR_PRSULC_STG4 = 00 OR 01 OR 02 OR 03 OR 04,

THEN M0450_NPRSULC4_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND = 1 AND M0450_NBR_PRSULC_STG4 <> 00 OR 01
OR 02 OR 03 OR 04 OR BLANK,

THEN M0450_NPRSULC4_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND <> 1 AND M0450_NBR_PRSULC_STG4 = 00 OR 01
OR 02 OR 03 OR 04,

THEN M0450_NPRSULC4_INVLD = 1 AND
CLIN_DERIVED = 1

M0460:

IF REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND M0445_PRESS_ULCER = 1 AND
M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04 OR NA,

THEN M0460_STGPRSUL_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR M0445_PRESS_ULCER <> 1] AND
M0460_STG_PRBLM_ULCER = 01 OR 02 OR 03 OR 04 OR NA,

THEN M0460_STGPRSUL_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND = 1 AND M0460_STG_PRBLM_ULCER <> 01 OR
02 OR 03 OR 04 OR NA OR BLANK,

THEN M0460_STGPRSUL_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND <> 1 AND M0460_STG_PRBLM_ULCER = 01 OR
02 OR 03 OR 04 OR NA,

THEN M0460_STGPRSUL_INVLD = 1 AND
CLIN_DERIVED = 1

IF OASISV150_OR_LATER = 1 AND REDUCED = 0 AND
M0440_LESION_OPEN_WND = 1 AND
M0445_PRESS_ULCER = 1 AND
[M0450_NBR_PRSULC_STG3 = 01 OR 02 OR 03 OR 04 or

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2727 0450_NBR_PRSULC_STG4 = 01 OR 02 OR 03 OR 04] and
2728 M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04,
2729 THEN M0460_STGPRSUL_INVLD = 1 AND
2730 CLIN_DERIVED = 1
2731
2732 IF OASISV150_OR_LATER = 1 AND REDUCED = 1 AND
2733 M0440_LESION_OPEN_WND = 1 AND
2734 [M0450_NBR_PRSULC_STG3 = 01 OR 02 OR 03 OR 04 or
2735 M0450_NBR_PRSULC_STG4 = 01 OR 02 OR 03 OR 04] AND
2736 M0460_STG_PRBLM_ULCER <> 01 OR 02 OR 03 OR 04,
2737 THEN M0460_STGPRSUL_INVLD = 1 AND
2738 CLIN_DERIVED = 1
2739
2740 M0476:
2741 IF REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND M0468_STASIS_ULCER = 1 AND
2742 M0476_STAT_PRB_STASULC <> 01 OR 02 OR 03 OR NA,
2743 THEN M0476_STATSTASIS_INVLD = 1 AND
2744 CLIN_DERIVED = 1
2745
2746 IF REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR M0468_STASIS_ULCER <> 1] AND
2747 M0476_STAT_PRB_STASULC = 01 OR 02 OR 03 OR NA,
2748 THEN M0476_STATSTASIS_INVLD = 1 AND
2749 CLIN_DERIVED = 1
2750
2751 IF REDUCED = 1 AND M0440_LESION_OPEN_WND = 1 AND
2752 M0476_STAT_PRB_STASULC <> 01 OR 02 OR 03 OR NA OR BLANK,
2753 THEN M0476_STATSTASIS_INVLD = 1 AND
2754 CLIN_DERIVED = 1
2755
2756 IF REDUCED = 1 AND M0440_LESION_OPEN_WND <> 1 AND
2757 M0476_STAT_PRB_STASULC = 01 OR 02 OR 03 OR NA,
2758 THEN M0476_STATSTASIS_INVLD = 1 AND
2759 CLIN_DERIVED = 1
2760
2761 IF OASISV150_OR_LATER = 1 AND REDUCED = 0 AND [M0440_LESION_OPEN_WND = 1 AND
2762 M0468_STASIS_ULCER = 1 AND M0470_NBR_STASULC = 01 OR 02 OR 03 OR 04] AND
2763 M0476_STAT_PRB_STASULC <> 01 OR 02 OR 03 OR 04,
2764 THEN M0476_STATSTASIS_INVLD = 1 AND
2765 CLIN_DERIVED = 1
2766
2767 IF OASISV150_OR_LATER = 1 AND REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR
2768 M0468_STASIS_ULCER <> 1 OR M0470_NBR_STASULC <> 01 OR 02 OR 03 OR 04] AND
2769 M0476_STAT_PRB_STASULC = 01 OR 02 OR 03,
2770 THEN M0476_STATSTASIS_INVLD = 1 AND
2771 CLIN_DERIVED = 1

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M0488:

IF REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND M0482_SURG_WOUND = 1 AND
M0488_STAT_PRB_SURGWND <> 01 OR 02 OR 03 OR NA,

THEN M0488_STATSURG_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 0 AND [M0440_LESION_OPEN_WND <> 1 OR M0482_SURG_WOUND <> 1] AND
M0488_STAT_PRB_SURGWND = 01 OR 02 OR 03 OR NA,

THEN M0488_STATSURG_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND = 1 AND M0488_STAT_PRB_SURGWND <> 01 OR
02 OR 03 OR NA OR BLANK,

THEN M0488_STATSURG_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0440_LESION_OPEN_WND <> 1 AND M0488_STAT_PRB_SURGWND = 01 OR
02 OR 03 OR NA,

THEN M0488_STATSURG_INVLD = 1 AND
CLIN_DERIVED = 1

IF OASISV150_OR_LATER = 1 AND REDUCED = 0 AND M0440_LESION_OPEN_WND = 1 AND
M0482_SURG_WOUND = 1 AND M0484_NBR_SURGWND = 01 OR 02 OR 03 OR 04] AND
M0488_STAT_PRB_SURGWND <> 01 OR 02 OR 03,

THEN M0488_STATSURG_INVLD = 1 AND
CLIN_DERIVED = 1

M0490:

IF M0490_WHEN_DYSPNEIC <> 00 OR 01 OR 02 OR 03 OR 04,

THEN M0490_DYSPNEIC_INVLD = 1 AND
CLIN_DERIVED = 1

M0530:

IF REDUCED = 0 AND M0520_UR_INCONT=01 AND M0530_UR_INCONT_OCCURS <> 00 OR 01 OR 02,
THEN M0530_URINCONT_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 0 AND M0520_UR_INCONT <> 01 AND M0530_UR_INCONT_OCCURS=00 OR 01 OR 02,
THEN M0530_URINCONT_INVLD = 1 AND
CLIN_DERIVED = 1

IF REDUCED = 1 AND M0530_UR_INCONT_OCCURS <> 00 OR 01 OR 02 OR BLANK,
THEN M0530_URINCONT_INVLD = 1 AND
CLIN_DERIVED = 1

M0540:

IF M0100_ASSMT_REASON = 01 OR 02 OR 03 AND M0540_BWL_INCONT <> 00 OR 01 OR 02 OR 03
OR 04 OR 05 OR NA OR UK,

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2822 THEN M0540_BWLINCONT_INVLD = 1 AND
2823 CLIN_DERIVED = 1
2824
2825 IF M0100_ASSMT_REASON = 04 OR 05 AND M0540_BWL_INCONT <> 00 OR 01 OR 02 OR 03 OR 04
2826 OR 05 OR NA,
2827 THEN M0540_BWLINCONT_INVLD = 1 AND
2828 CLIN_DERIVED = 1
2829
2830 M0550:
2831 IF M0540_BWL_INCONT = 00 OR 01 OR 02 OR 03 OR 04 OR 05 OR UK AND M0550_OSTOMY <> 00,
2832 THEN M0550_OSTOMY_INVLD = 1 AND
2833 CLIN_DERIVED = 1
2834
2835 IF M0540_BWL_INCONT = NA AND M0550_OSTOMY <> 01 OR 02,
2836 THEN M0550_OSTOMY_INVLD = 1 AND
2837 CLIN_DERIVED = 1
2838
2839 IF M0550_OSTOMY <> 00 OR 01 OR 02, THEN M0550_OSTOMY_INVLD = 1 AND
2840 CLIN_DERIVED = 1
2841 M0610:
2842 IF [M0610_BD_MEM_DEFICIT <> 0 or 1 OR
2843 M0610_BD_IMP_DECISN <> 0 or 1 OR
2844 M0610_BD_VERBAL <> 0 or 1 OR
2845 M0610_BD_PHYSICAL <> 0 or 1 OR
2846 M0610_BD_SOC_INAPPRO <> 0 or 1 OR
2847 M0610_BD_DELUSIONS <> 0 or 1 OR
2848 M0610_BD_NONE <> 0 OR 1] THEN M0610_BEHAV_INVLD = 1 AND
2849 CLIN_DERIVED = 1
2850
2851 IF [M0610_BD_MEM_DEFICIT = 0 AND
2852 M0610_BD_IMP_DECISN = 0 AND
2853 M0610_BD_VERBAL = 0 AND
2854 M0610_BD_PHYSICAL = 0 AND
2855 M0610_BD_SOC_INAPPRO = 0 AND
2856 M0610_BD_DELUSIONS = 0 AND
2857 M0610_BD_NONE = 0] THEN M0610_INTERNAL_LOGIC_INVLD = 1 AND
2858 CLIN_DERIVED = 1
2859
2860 IF [M0610_BD_MEM_DEFICIT = 1 OR
2861 M0610_BD_IMP_DECISN = 1 OR
2862 M0610_BD_VERBAL = 1 OR
2863 M0610_BD_PHYSICAL = 1 OR
2864 M0610_BD_SOC_INAPPRO = 1 OR
2865 M0610_BD_DELUSIONS = 1] AND
2866 M0610_BD_NONE = 1] THEN M0610_INTERNAL_LOGIC_INVLD = 1 AND
2867 CLIN_DERIVED = 1
2868

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M0650/M0660:

IF [M0650_CUR_DRESS_UPPER <>00 OR 01 OR 02 OR 03 OR M0660_CUR_DRESS_LOWER <>00 OR 01 OR 02 OR 03],

THEN M0650_660_CUR_DRESS_INVLD = 1 AND
FUNC_DERIVED = 1

IF FFY04_OR_LATER = 1 AND [M0650_CUR_DRESS_UPPER <> 00 OR 01 OR 02 OR 03] AND
[M0660_CUR_DRESS_LOWER <>00 OR 01 OR 02 OR 03],

THEN M0650_660_CUR_DRESS_INVLD = 1 AND
FUNC_DERIVED = 1 *(Both are invalid – domain score
could potentially increase if either were corrected)*

IF FFY04_OR_LATER = 1 AND [M0650_CUR_DRESS_UPPER <> 00 OR 01 OR 02 OR 03] AND
[M0660_CUR_DRESS_LOWER = 00],

THEN M0650_660_CUR_DRESS_INVLD = 1 AND
FUNC_DERIVED = 1 *[M0660 is valid but does not earn
points, M0650 is invalid – domain score could potentially
increase if M0650 were corrected]*

IF FFY04_OR_LATER = 1 AND [M0650_CUR_DRESS_UPPER =00 AND [M0660_CUR_DRESS_LOWER
<>00 OR 01 OR 02 OR 03],

THEN M0650_660_CUR_DRESS_INVLD = 1 AND
FUNC_DERIVED = 1 *[M0660 is invalid, M0650 is not
earning points – domain score could potentially increase
if M0660 were corrected]*

M0670:

IF M0670_CUR_BATHING <>00 OR 01 OR 02 OR 03 OR 04 OR 05,

THEN M0670_CUR_BATHING_INVLD = 1 AND
FUNC_DERIVED = 1

M0680:

IF M0680_CUR_TOILETING <>00 OR 01 OR 02 OR 03 OR 04,

THEN M0680_CUR_TOILETING_INVLD = 1 AND
FUNC_DERIVED = 1

M0690:

IF M0690_CUR_TRANSFERRING <>00 OR 01 OR 02 OR 03 OR 04 OR 05,

THEN M0690_CUR_TRANSFER_INVLD = 1 AND
FUNC_DERIVED = 1

M0700:

IF M0700_CUR_AMBULATION <>00 OR 01 OR 02 OR 03 OR 04 OR 05,

THEN M0700_CUR_AMBULATION_INVLD = 1 AND
FUNC_DERIVED = 1

M0825:

IF M0825_THERAPY_NEED <> 0 OR 1 OR NA,

THEN M0825_THERAPY_NEED_INVLD = 1 AND
SERV_DERIVED = 1

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2967

M0175:

IF M0175_DC_HOSP_14_DAYS <> 0 OR 1,	THEN M0175_DC_HOSP_INVLD = 1 AND SERV_DERIVED = 1
IF M0175_DC_REHAB_14_DAYS <> 0 OR 1,	THEN M0175_DC_REHAB_INVLD = 1 AND SERV_DERIVED = 1
IF M0175_DC_SNF_14_DAYS <> 0 OR 1,	THEN M0175_DC_SNF_INVLD = 1 AND SERV_DERIVED = 1
IF M0175_DC_NH_14_DAYS <> 0 OR 1,	THEN M0175_DC_OTH_NH_INVLD = 1 AND SERV_DERIVED = 1
IF M0175_DC_OTHER <> 0 OR 1,	THEN M0175_DC_OTHER_INVLD = 1 AND SERV_DERIVED = 1
IF M0175_NONE_14_DAYS <> 0 OR 1,	THEN M0175_DC_NONE_INVLD = 1 AND SERV_DERIVED = 1
IF [M0175_DC_HOSP_14_DAYS = 0 AND M0175_DC_REHAB_14_DAYS = 0 AND M0175_DC_SNF_14_DAYS = 0 AND M0175_DC_NH_14_DAYS = 0 AND M0175_DC_OTHER = 0 AND M0175_NONE_14_DAYS = 0],	THEN M0175_INTERNAL_LOGIC_INVLD = 1 AND SERV_DERIVED = 1
IF [M0175_DC_HOSP_14_DAYS = 1 OR M0175_DC_REHAB_14_DAYS = 1 OR M0175_DC_SNF_14_DAYS = 1 OR M0175_DC_NH_14_DAYS = 1 OR M0175_DC_OTHER = 1] AND M0175_NONE_14_DAYS = 1,	THEN M0175_INTERNAL_LOGIC_INVLD = 1 AND SERV_DERIVED = 1

4. Assigning Cases to Diagnostic Groups (DGs) – payment episodes starting before 1/1/2008:

IF PRIM_DX_IN_USE =	"013.**" OR	<i>["**When a dx code is shown at the 3-digit level,</i>
	"045.**" OR	<i>any code that begins with those 3 digits will</i>
	"046.**" OR	<i>earn points for casemix classification. When</i>
	"047.**" OR	<i>a code appears at the 4- or 5-digit level,</i>
	"048.**" OR	<i>only that specific code will earn points.]</i>
	"049.**" OR	
	"191.**" OR	
	"192.**" OR	
	"225.**" OR	
	"320.0" OR	
	"320.1" OR	
	"320.2" OR	

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

2968	"320.3" OR
2969	"320.81" OR
2970	"320.82" OR
2971	"320.89" OR
2972	"320.9" OR
2973	"322.**" OR
2974	"323.9" OR
2975	"324.**" OR
2976	"325.**" OR
2977	"326.**" OR
2978	"330.0" OR
2979	"330.1" OR
2980	"330.8" OR
2981	"330.9" OR
2982	"331.0" OR
2983	
2984	"331.2" OR
2985	"331.3" OR
2986	"331.4" OR
2987	"331.81" OR
2988	"331.89" OR
2989	"331.9" OR
2990	"332.**" OR
2991	"333.**" OR
2992	"334.0" OR
2993	"334.1" OR
2994	"334.2" OR
2995	"334.3" OR
2996	"334.8" OR
2997	"334.9" OR
2998	"335.**" OR
2999	"336.0" OR
3000	"336.1" OR
3001	"336.8" OR
3002	"336.9" OR
3003	"337.0" OR
3004	"337.20" OR
3005	"337.21" OR
3006	"337.22" OR
3007	"337.29" OR
3008	"337.3" OR
3009	"337.9" OR
3010	"340.**" OR
3011	"341.**" OR
3012	"342.**" OR
3013	"343.**" OR
3014	"344.**" OR
3015	"347.**" OR
3016	"348.**" OR
3017	"349.**" OR

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```
3018         "352.**" OR
3019         "356.**" OR
3020         "357.0" OR
3021         "357.5" OR
3022         "357.6" OR
3023         "357.7" OR
3024         "357.9" OR
3025
3026         "358.2" OR
3027         "358.8" OR
3028         "358.9" OR
3029         "392.**" OR
3030         "430.**" OR
3031         "431.**" OR
3032         "432.**" OR
3033         "433.**" OR
3034         "434.**" OR
3035         "435.**" OR
3036         "436.**" OR
3037         "437.**" OR
3038         "741.**" OR
3039         "742.**" OR
3040         "851.**" OR
3041         "852.**" OR
3042         "853.**" OR
3043         "854.**" OR
3044         "907.**" OR
3045         "950.**" OR
3046         "951.**" OR
3047         "952.**" OR
3048         "953.**" OR
3049         "954.**" OR
3050         "955.**" OR
3051         "956.**",
3052     THEN NEURO_DG =1
3053
3054     IF FFY03_OR_LATER = 0 and PRIM_DX_IN_USE = 357.8, THEN NEURO_DG =1
3055     IF FFY03_OR_LATER = 1 and PRIM_DX_IN_USE = [357.81, 357.82, or 357.89],
3056         THEN NEURO_DG =1
3057
3058     IF FFY04_OR_LATER = 0 and PRIM_DX_IN_USE = 331.1 or 358.0, THEN NEURO_DG =1
3059     IF FFY04_OR_LATER = 1 and PRIM_DX_IN_USE = [331.11 or 331.19 or 358.00 or 358.01 or 331.82],
3060         THEN NEURO_DG =1
3061
3062     IF FFY07_OR_LATER = 0 and PRIM_DX_IN_USE = 323.5 or 323.8, THEN NEURO_DG =1
3063     IF FFY07_OR_LATER = 1 and PRIM_DX_IN_USE = [323.51 or 323.52 or 323.81 or 323.82],
3064         THEN NEURO_DG =1
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
3065
3066 IF SEC_DX_IN_USE = "320.7" OR
3067 "321.0" OR
3068 "321.1" OR
3069 "321.2" OR
3070 "321.3" OR
3071 "321.4" OR
3072 "321.8" OR
3073 "323.1" OR
3074 "323.2" OR
3075 "330.2" OR
3076 "330.3" OR
3077 "331.7" OR
3078 "334.4" OR
3079 "336.2" OR
3080 "336.3" OR
3081 "337.1" OR
3082 "357.1" OR
3083 "357.2" OR
3084 "357.3" OR
3085 "357.4" OR
3086 "358.1",
3087 THEN NEURO_DG = 1
3088
3089 IF FFY07_OR_LATER = 0 and SEC_DX_IN_USE = 323.0 or 323.4 or 323.6 or 323.7, THEN NEURO_DG =1
3090 IF FFY07_OR_LATER = 1 and SEC_DX_IN_USE = [323.01 or 323.02 or 323.41 or 323.42 or 323.61 or
3091 323.62 or 323.63 or 323.71 or 323.72],
3092 THEN NEURO_DG =1
3093
3094 IF FFY04_OR_LATER =1 AND PRIM_DX_IN_USE = 925.** THROUGH 929.** AND SEC_DX_IN_USE =
3095 "851.**" OR
3096 "852.**" OR
3097 "853.**" OR
3098 "854.**",
3099 THEN NEURO_DG =1
3100
3101 IF PRIM_DX_IN_USE = "250.**",
3102 THEN DIABETES_DG =1
3103
3104 IF PRIM_DX_IN_USE = "170.**" OR
3105 "171.**" OR
3106 "213.**" OR
3107 "274.**" OR
3108 "710.**" OR
3109 "711.00" OR
3110 "711.01" OR
3111 "711.02" OR
3112 "711.03" OR
3113 "711.04" OR
3114 "711.05" OR
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3115	"711.06"	OR
3116	"711.07"	OR
3117	"711.08"	OR
3118	"711.09"	OR
3119	"711.90"	OR
3120	"711.91"	OR
3121	"711.92"	OR
3122	"711.93"	OR
3123	"711.94"	OR
3124	"711.95"	OR
3125	"711.96"	OR
3126	"711.97"	OR
3127	"711.98"	OR
3128	"711.99"	OR
3129	"712.80"	OR
3130	"712.81"	OR
3131	"712.82"	OR
3132	"712.83"	OR
3133	"712.84"	OR
3134	"712.85"	OR
3135	"712.86"	OR
3136	"712.87"	OR
3137	"712.88"	OR
3138	"712.89"	OR
3139	"712.90"	OR
3140	"712.91"	OR
3141	"712.92"	OR
3142	"712.93"	OR
3143	"712.94"	OR
3144	"712.95"	OR
3145	"712.96"	OR
3146	"712.97"	OR
3147	"712.98"	OR
3148	"712.99"	OR
3149	"714.**"	OR
3150	"716.**"	OR
3151	"717.**"	OR
3152	"718.**"	OR
3153	"720.0"	OR
3154	"720.1"	OR
3155	"720.2"	OR
3156	"720.89"	OR
3157	"720.9"	OR
3158	"721.**"	OR
3159	"722.**"	OR
3160	"723.**"	OR
3161	"724.**"	OR
3162	"725.**"	OR
3163	"728.**"	OR
3164	"730.00"	OR

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3165	"730.01"	OR
3166	"730.02"	OR
3167	"730.03"	OR
3168	"730.04"	OR
3169	"730.05"	OR
3170	"730.06"	OR
3171	"730.07"	OR
3172	"730.08"	OR
3173	"730.09"	OR
3174	"730.10"	OR
3175	"730.11"	OR
3176	"730.12"	OR
3177	"730.13"	OR
3178	"730.14"	OR
3179	"730.15"	OR
3180	"730.16"	OR
3181	"730.17"	OR
3182	"730.18"	OR
3183	"730.19"	OR
3184	"730.20"	OR
3185	"730.21"	OR
3186	"730.22"	OR
3187	"730.23"	OR
3188	"730.24"	OR
3189	"730.25"	OR
3190	"730.26"	OR
3191	"730.27"	OR
3192	"730.28"	OR
3193	"730.29"	OR
3194	"730.30"	OR
3195	"730.31"	OR
3196	"730.32"	OR
3197	"730.33"	OR
3198	"730.34"	OR
3199	"730.35"	OR
3200	"730.36"	OR
3201	"730.37"	OR
3202	"730.38"	OR
3203	"730.39"	OR
3204	"730.90"	OR
3205	"730.91"	OR
3206	"730.92"	OR
3207	"730.93"	OR
3208	"730.94"	OR
3209	"730.95"	OR
3210	"730.96"	OR
3211	"730.97"	OR
3212	"730.98"	OR
3213	"730.99"	OR
3214	"731.0"	OR

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
3215         "731.2" OR
3216         "732.**" OR
3217         "781.**" OR
3218         "800.**" OR
3219         "801.**" OR
3220         "802.**" OR
3221         "803.**" OR
3222         "804.**" OR
3223         "805.**" OR
3224         "806.**" OR
3225         "807.**" OR
3226         "808.**" OR
3227         "809.**" OR
3228         "810.**" OR
3229         "811.**" OR
3230         "812.**" OR
3231         "813.**" OR
3232         "814.**" OR
3233         "815.**" OR
3234         "816.**" OR
3235         "817.**" OR
3236         "818.**" OR
3237         "819.**" OR
3238         "820.**" OR
3239         "821.**" OR
3240         "822.**" OR
3241         "823.**" OR
3242         "824.**" OR
3243         "825.**" OR
3244         "827.**" OR
3245         "828.**" OR
3246         "831.**" OR
3247         "832.**" OR
3248         "833.**" OR
3249         "835.**" OR
3250         "836.**" OR
3251         "837.**" OR
3252         "838.**" OR
3253         "846.**" OR
3254         "847.**" OR
3255         "887.**" OR
3256         "896.**" OR
3257         "897.**" OR
3258         "927.**" OR
3259         "928.**",
3260         THEN ORTHO_DG =1
3261
3262 IF SEC_DX_IN_USE =
3263         "711.10" OR
3264         "711.11" OR
3265         "711.12" OR
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3265	"711.13" OR
3266	"711.14" OR
3267	"711.15" OR
3268	"711.16" OR
3269	"711.17" OR
3270	"711.18" OR
3271	"711.19" OR
3272	"711.20" OR
3273	"711.21" OR
3274	"711.22" OR
3275	"711.23" OR
3276	"711.24" OR
3277	"711.25" OR
3278	"711.26" OR
3279	"711.27" OR
3280	"711.28" OR
3281	"711.29" OR
3282	"711.30" OR
3283	"711.31" OR
3284	"711.32" OR
3285	"711.33" OR
3286	"711.34" OR
3287	"711.35" OR
3288	"711.36" OR
3289	"711.37" OR
3290	"711.38" OR
3291	"711.39" OR
3292	"711.40" OR
3293	"711.41" OR
3294	"711.42" OR
3295	"711.43" OR
3296	"711.44" OR
3297	"711.45" OR
3298	"711.46" OR
3299	"711.47" OR
3300	"711.48" OR
3301	"711.49" OR
3302	"711.50" OR
3303	"711.51" OR
3304	"711.52" OR
3305	"711.53" OR
3306	"711.54" OR
3307	"711.55" OR
3308	"711.56" OR
3309	"711.57" OR
3310	"711.58" OR
3311	"711.59" OR
3312	"711.60" OR
3313	"711.61" OR
3314	"711.62" OR

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3315	"711.63" OR
3316	"711.64" OR
3317	"711.65" OR
3318	"711.66" OR
3319	"711.67" OR
3320	"711.68" OR
3321	"711.69" OR
3322	"711.70" OR
3323	"711.71" OR
3324	"711.72" OR
3325	"711.73" OR
3326	"711.74" OR
3327	"711.75" OR
3328	"711.76" OR
3329	"711.77" OR
3330	"711.78" OR
3331	"711.79" OR
3332	"711.80" OR
3333	"711.81" OR
3334	"711.82" OR
3335	"711.83" OR
3336	"711.84" OR
3337	"711.85" OR
3338	"711.86" OR
3339	"711.87" OR
3340	"711.88" OR
3341	"711.89" OR
3342	"712.10" OR
3343	"712.11" OR
3344	"712.12" OR
3345	"712.13" OR
3346	"712.14" OR
3347	"712.15" OR
3348	"712.16" OR
3349	"712.17" OR
3350	"712.18" OR
3351	"712.19" OR
3352	"712.20" OR
3353	"712.21" OR
3354	"712.22" OR
3355	"712.23" OR
3356	"712.24" OR
3357	"712.25" OR
3358	"712.26" OR
3359	"712.27" OR
3360	"712.28" OR
3361	"712.29" OR
3362	"712.30" OR
3363	"712.31" OR
3364	"712.32" OR

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
3365         "712.33" OR
3366         "712.34" OR
3367         "712.35" OR
3368         "712.36" OR
3369         "712.37" OR
3370         "712.38" OR
3371         "712.39" OR
3372         "713.0" OR
3373         "713.1" OR
3374         "713.2" OR
3375         "713.3" OR
3376         "713.4" OR
3377         "713.5" OR
3378         "713.6" OR
3379         "713.7" OR
3380         "713.8" OR
3381         "720.81" OR
3382         "730.70" OR
3383         "730.71" OR
3384         "730.72" OR
3385         "730.73" OR
3386         "730.74" OR
3387         "730.75" OR
3388         "730.76" OR
3389         "730.77" OR
3390         "730.78" OR
3391         "730.79" OR
3392         "730.80" OR
3393         "730.81" OR
3394         "730.82" OR
3395         "730.83" OR
3396         "730.84" OR
3397         "730.85" OR
3398         "730.86" OR
3399         "730.87" OR
3400         "730.88" OR
3401         "730.89" OR
3402         "731.1" OR
3403         "731.8",
3404         THEN ORTHO_DG = 1
3405
3406 IF FFY04_OR_LATER = 1 AND PRIM_DX_IN_USE = 925.** THROUGH 929.** AND IF SEC_DX_IN_USE =
3407     "800.**" OR
3408     "801.**" OR
3409     "802.**" OR
3410     "803.**" OR
3411     "804.**" OR
3412     "805.**" OR
3413     "806.**" OR
3414     "807.**" OR
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
3415         "808.**" OR
3416         "809.**" OR
3417         "810.**" OR
3418         "811.**" OR
3419         "812.**" OR
3420         "813.**" OR
3421         "814.**" OR
3422         "815.**" OR
3423         "816.**" OR
3424         "817.**" OR
3425         "818.**" OR
3426         "819.**" OR
3427         "820.**" OR
3428         "821.**" OR
3429         "822.**" OR
3430         "823.**" OR
3431         "824.**" OR
3432         "825.**" OR
3433         "827.**" OR
3434         "828.**" OR
3435         THEN ORTHO_DG = 1
3436
3437 IF PRIM_DX_IN_USE =
3438         "870.**" OR
3439         "872.**" OR
3440         "873.**" OR
3441         "874.**" OR
3442         "875.**" OR
3443         "876.**" OR
3444         "877.**" OR
3445         "878.**" OR
3446         "879.**" OR
3447         "880.**" OR
3448         "881.**" OR
3449         "882.**" OR
3450         "883.**" OR
3451         "884.**" OR
3452         "885.**" OR
3453         "886.**" OR
3454         "890.**" OR
3455         "891.**" OR
3456         "892.**" OR
3457         "893.**" OR
3458         "894.**" OR
3459         "895.**" OR
3460         "941.**" OR
3461         "942.**" OR
3462         "943.**" OR
3463         "944.**" OR
3464         "945.**" OR
3465         "946.**" OR
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3465 "948.**" OR
3466 "949.**",
3467 THEN BURNTRAUM_DG = 1
3468

3469 5. Scoring – payment episodes starting before 1/1/2008:
3470

3471 **CLINICAL SEVERITY DOMAIN:**
3472

3473 M0230/M0240/M0245a/M0245b:
3474

3475 IF M0230_PRIMARY_DIAG_ICD_INVLD <>1 AND
3476 [M0245_PMT_ICD1_INVLD <>1 AND M0245_PMT_ICD2_INVLD <>1] AND
3477 [PRIM_DX_IN_USE_INVLD <>1 AND SEC_DX_IN_USE_INVLD <>1] AND
3478 NEURO_DG = 1,
3479 THEN NEURO_DG_PTS = 20
3480

3481 IF M0230_PRIMARY_DIAG_ICD_INVLD <>1 AND
3482 [M0245_PMT_ICD1_INVLD <>1 AND M0245_PMT_ICD2_INVLD <>1] AND
3483 [PRIM_DX_IN_USE_INVLD <>1 AND SEC_DX_IN_USE_INVLD <>1] AND
3484 DIABETES_DG =1,
3485 THEN DIABETES_DG_PTS = 17
3486

3487 IF M0230_PRIMARY_DIAG_ICD_INVLD <>1 AND
3488 [M0245_PMT_ICD1_INVLD <>1 AND M0245_PMT_ICD2_INVLD <>1] AND
3489 [PRIM_DX_IN_USE_INVLD <>1 AND SEC_DX_IN_USE_INVLD <>1] AND
3490 ORTHO_DG = 1,
3491 THEN ORTHO_DG_PTS = 11
3492

3493 SET CLIN_SCORE = CLIN_SCORE + MAX (NEURO_DG_PTS, DIABETES_DG_PTS, ORTHO_DG_PTS)
3494

3495 M0250:

3496 IF M0250_THERAPIES_INVLD <> 1 AND M0250_INTERNAL_LOGIC_INVLD <> 1 AND
3497 M0250_THH_ENT_NUTRITION = 1, THEN M02503_PTS = 24
3498

3499 IF M0250_THERAPIES_INVLD <> 1 AND M0250_INTERNAL_LOGIC_INVLD <> 1 AND
3500 M0250_THH_PAR_NUTRITION = 1, THEN M02502_PTS = 20
3501

3502 IF M0250_THERAPIES_INVLD <> 1 AND M0250_INTERNAL_LOGIC_INVLD <> 1 AND
3503 M0250_THH_IV_INFUSION = 1, THEN M02501_PTS = 14
3504

3505 SET M0250_TREATMT_PTS = MAX (M02501_PTS, M02502_PTS, M02503_PTS)
3506 SET CLIN_SCORE = CLIN_SCORE + M0250_TREATMT_PTS
3507

3508 M0390:

3509 IF M0390_VISION_INVLD <> 1 AND M0390_VISION = 01 OR 02,
3510 THEN M0390_VISION_PTS = 6 AND
3511 CLIN_SCORE = CLIN_SCORE + M0390_VISION_PTS
3512

3513 M0420:

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```
3514 IF M0420_PAIN_INVLD <> 1 AND M0420_FREQ_PAIN = 02 OR 03,
3515     THEN M0420_PAIN_PTS = 5 AND
3516     CLIN_SCORE = CLIN_SCORE + M0420_PAIN_PTS
3517
3518 M0440:
3519 IF FFY04_OR_LATER = 0 AND
3520 IF M0440_LESION_INVLD <> 1 AND
3521 M0230_PRIMARY_DIAG_ICD_INVLD <> 1 AND
3522 [PRIM_DX_IN_USE_INVLD <> 1 AND
3523 M0440_LESION_OPEN_WND = 1 AND BURNTRAUM_DG= 1,
3524     THEN M0440_LESION_PTS = 21 AND
3525     CLIN_SCORE = CLIN_SCORE + M0440_LESION_PTS
3526
3527 IF FFY04_OR_LATER = 1 AND
3528 IF M0440_LESION_INVLD <> 1 AND
3529 M0230_PRIMARY_DIAG_ICD_INVLD <> 1 AND
3530 [M0245_PMT_ICD1_INVLD <> 1 AND M0245_PMT_ICD2_INVLD <> 1] AND
3531 [PRIM_DX_IN_USE_INVLD <> 1 AND SEC_DX_IN_USE_INVLD <> 1] AND
3532 M0440_LESION_OPEN_WND = 1 AND BURNTRAUM_DG= 1,
3533     THEN M0440_LESION_PTS = 21 AND
3534     CLIN_SCORE = CLIN_SCORE + M0440_LESION_PTS
3535
3536 M0450:
3537 IF FFY04_OR_LATER = 0 AND
3538 [M0450_NPRSULC3_INVLD <> 1 AND M0450_NPRSULC4_INVLD <> 1] AND
3539 (M0450_NBR_PRSULC_STG3 + M0450_NBR_PRSULC_STG4) >= 2,
3540     THEN M0450_NPRSULC34_PTS = 17 AND
3541     CLIN_SCORE = CLIN_SCORE + M0450_NPRSULC34_PTS
3542
3543 ELSE,
3544 IF FFY04_OR_LATER = 0 AND
3545 M0450_NPRSULC3_INVLD <> 1 AND
3546 M0450_NBR_PRSULC_STG3 >= 2,
3547     THEN M0450_NPRSULC34_PTS = 17 AND
3548     CLIN_SCORE = CLIN_SCORE + M0450_NPRSULC34_PTS
3549
3550 ELSE,
3551 IF FFY04_OR_LATER = 0 AND
3552 M0450_NPRSULC4_INVLD <> 1 AND
3553 M0450_NBR_PRSULC_STG4 >= 2,
3554     THEN M0450_NPRSULC34_PTS = 17 AND
3555     CLIN_SCORE = CLIN_SCORE + M0450_NPRSULC34_PTS
3556
3557 IF FFY04_OR_LATER = 1 AND
3558 [M0450_NPRSULC3_INVLD <> 1 AND M0450_NPRSULC4_INVLD <> 1] AND
3559 (M0450_NBR_PRSULC_STG3 + M0450_NBR_PRSULC_STG4) >= 2,
3560     THEN M0450_NPRSULC34_PTS = 17 AND
3561     CLIN_SCORE = CLIN_SCORE + M0450_NPRSULC34_PTS
3562
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3563 M0460:
3564 IF M0460_STGPRSUL_INVLD <> 1 AND M0460_STG_PRBLM_ULCER = 01 OR 02,
3565 THEN M0460_STGPRSUL_PTS = 15 AND
3566 CLIN_SCORE = CLIN_SCORE + M0460_STGPRSUL_PTS
3567 ELSE
3568 IF M0460_STGPRSUL_INVLD <> 1 AND M0460_STG_PRBLM_ULCER = 03 OR 04,
3569 THEN M0460_STGPRSUL_PTS = 36 AND
3570 CLIN_SCORE = CLIN_SCORE + M0460_STGPRSUL_PTS
3571
3572 M0476:
3573 IF M0476_STATSTASIS_INVLD <> 1 AND M0476_STAT_PRB_STASULC = 02,
3574 THEN M0476_STATSTASIS_PTS = 14 AND
3575 CLIN_SCORE = CLIN_SCORE + M0476_STATSTASIS_PTS
3576 ELSE
3577 IF M0476_STATSTASIS_INVLD <> 1 AND M0476_STAT_PRB_STASULC = 03,
3578 THEN M0476_STATSTASIS_PTS = 22 AND
3579 CLIN_SCORE = CLIN_SCORE + M0476_STATSTASIS_PTS
3580
3581 M0488:
3582 IF M0488_STATSURG_INVLD <> 1 AND M0488_STAT_PRB_SURGWND = 02,
3583 THEN M0488_STATSURG_PTS = 7 AND
3584 CLIN_SCORE = CLIN_SCORE + M0488_STATSURG_PTS
3585 ELSE
3586 IF M0488_STATSURG_INVLD <> 1 AND M0488_STAT_PRB_SURGWND = 03,
3587 THEN M0488_STATSURG_PTS = 15 AND
3588 CLIN_SCORE = CLIN_SCORE + M0488_STATSURG_PTS
3589
3590 M0490:
3591 IF M0490_DYSPNEIC_INVLD <> 1 AND M0490_WHEN_DYSPNEIC = 02 OR 03 OR 04,
3592 THEN M0490_DYSPNEIC_PTS = 5 AND
3593 CLIN_SCORE = CLIN_SCORE + M0490_DYSPNEIC_PTS
3594
3595 M0530:
3596 IF M0530_URINCONT_INVLD <> 1 AND M0530_UR_INCONT_OCCURS = 01 OR 02,
3597 THEN M0530_URINCONT_PTS = 6 AND
3598 CLIN_SCORE = CLIN_SCORE + M0530_URINCONT_PTS
3599
3600 M0540:
3601 IF M0540_BWLINCONT_INVLD <> 1 AND M0540_BWL_INCONT = 02 OR 03 OR 04 OR 05,
3602 THEN M0540_BWLINCONT_PTS = 9 AND
3603 CLIN_SCORE = CLIN_SCORE + M0540_BWLINCONT_PTS
3604
3605 M0550:
3606 IF M0550_OSTOMY_INVLD <> 1 AND M0550_OSTOMY = 01 or 02,
3607 THEN M0550_OSTOMY_PTS = 10 AND
3608 CLIN_SCORE = CLIN_SCORE + M0550_OSTOMY_PTS
3609

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M0610:

IF M0610_BEHAV_INVLD <> 1 AND M0610_INTERNAL_LOGIC_INVLD <> 1 AND
[M0610_BD_MEM_DEFICIT = 1 OR
M0610_BD_IMP_DECISN = 1 OR
M0610_BD_VERBAL = 1 OR
M0610_BD_PHYSICAL = 1 OR
M0610_BD_SOC_INAPPRO = 1 OR
M0610_BD_DELUSIONS = 1], THEN M0610_BEHAV_PTS = 3 AND
CLIN_SCORE = CLIN_SCORE + M0610_BEHAV_PTS

FUNCTIONAL STATUS DOMAIN:

M0650:

IF M0650_660_CUR_DRESS_INVLD <> 1 AND [M0650_CUR_DRESS_UPPER = 01 OR 02 OR 03
OR M0660_CUR_DRESS_LOWER = 01 OR 02 OR 03],
THEN M0650_660_DRESS_PTS = 4 AND
FUNC_SCORE = FUNC_SCORE + M0650_660_DRESS_PTS

M0670:

IF M0670_CUR_BATHING_INVLD <> 1 AND M0670_CUR_BATHING = 02 OR 03 OR 04 OR 05,
THEN M0670_BATH_PTS = 8 AND
FUNC_SCORE = FUNC_SCORE + M0670_BATH_PTS

M0680:

IF M0680_CUR_TOILETING_INVLD <> 1 AND M0680_CUR_TOILETING = 02 OR 03 OR 04,
THEN M0680_TOILET_PTS = 3 AND
FUNC_SCORE = FUNC_SCORE + M0680_TOILET_PTS

M0690:

IF M0690_CUR_TRANSFER_INVLD <> 1 AND M0690_CUR_TRANSFERRING = 01,
THEN M0690_TRANSFER_PTS = 3 AND
FUNC_SCORE = FUNC_SCORE + M0690_TRANSFER_PTS
ELSE
IF M0690_CUR_TRANSFER_INVLD <> 1 AND M0690_CUR_TRANSFERRING = 02 OR 03 OR 04 OR 05,
THEN M0690_TRANSFER_PTS = 6 AND
FUNC_SCORE = FUNC_SCORE + M0690_TRANSFER_PTS

M0700:

IF M0700_CUR_AMBULATION_INVLD <> 1 AND M0700_CUR_AMBULATION = 01 OR 02,
THEN M0700_AMBULATN_PTS = 6 AND
FUNC_SCORE = FUNC_SCORE + M0700_AMBULATN_PTS
ELSE
IF M0700_CUR_AMBULATION_INVLD <> 1 AND M0700_CUR_AMBULATION = 03 OR 04 OR 05,
THEN M0700_AMBULATN_PTS = 9 AND
FUNC_SCORE = FUNC_SCORE + M0700_AMBULATN_PTS

SERVICE UTILIZATION DOMAIN:

M0825:

IF M0825_THERAPY_NEED_INVLD <> 1 AND M0825_THERAPY_NEED = 01,

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

```
3660 THEN M0825_THERAPY_PTS = 4 AND
3661 SERV_SCORE = SERV_SCORE + M0825_THERAPY_PTS
3662
3663 M0175:
3664 IF [M0175_DC_REHAB_INVLD <> 1 AND
3665     M0175_DC_SNF_INVLD <> 1 AND
3666     M0175_DC_OTH_NH_INVLD <> 1 AND
3667     M0175_DC_OTHER_INVLD <> 1 AND
3668     M0175_DC_NONE_INVLD <> 1 AND
3669     M0175_INTERNAL_LOGIC_INVLD <> 1]
3670 AND
3671     M0175_DC_HOSP_14_DAYS = 0,
3672     THEN M0175_DC_HOSP_PTS = 1 AND
3673     SERV_SCORE = SERV_SCORE + M0175_DC_HOSP_PTS
3674
3675 IF [M0175_DC_HOSP_INVLD <> 1 AND
3676     M0175_DC_REHAB_INVLD <> 1 AND
3677     M0175_DC_SNF_INVLD <> 1 AND
3678     M0175_DC_OTH_NH_INVLD <> 1 AND
3679     M0175_DC_OTHER_INVLD <> 1 AND
3680     M0175_DC_NONE_INVLD <> 1 AND
3681     M0175_INTERNAL_LOGIC_INVLD <> 1]
3682 AND
3683     [M0175_DC_REHAB_14_DAYS = 1 OR M0175_DC_SNF_14_DAYS = 1],
3684     THEN M0175_DC_REHAB_SNF_PTS = 2 AND
3685     SERV_SCORE = SERV_SCORE + M0175_DC_REHAB_SNF_PTS
3686
```

6. Computation of HIPPS Code, by Position – payment episodes starting before 1/1/2008:

```
3688 SET HIPPS_1 = "H"
3689
3690 IF CLIN_SCORE < 8, THEN HIPPS_2 = A
3691 IF 8 <= CLIN_SCORE <= 19, THEN HIPPS_2 = B
3692 IF 20 <= CLIN_SCORE <= 40, THEN HIPPS_2 = C
3693 IF CLIN_SCORE > 40, THEN HIPPS_2 = D
3694
3695 IF FUNC_SCORE < 3, THEN HIPPS_3 = E
3696 IF 3 <= FUNC_SCORE <= 15, THEN HIPPS_3 = F
3697 IF 16 <= FUNC_SCORE <= 23, THEN HIPPS_3 = G
3698 IF 24 <= FUNC_SCORE <= 29, THEN HIPPS_3 = H
3699 IF FUNC_SCORE = 30, THEN HIPPS_3 = I
3700
3701 IF SERV_SCORE < 3, THEN HIPPS_4 = J
3702 IF SERV_SCORE = 3, THEN HIPPS_4 = K
3703 IF 4 <= SERV_SCORE <= 6, THEN HIPPS_4 = L
3704 IF SERV_SCORE = 7, THEN HIPPS_4 = M
3705
3706
```

SECTION 2: Grouper Logic for Medicare Payment Episodes Starting on or before 12/31/2007

3707 IF CLIN_DERIVED = 0 AND FUNC_DERIVED = 0 AND SERV_DERIVED = 0, THEN HIPPS_5 = 1
3708 IF CLIN_DERIVED = 1 AND FUNC_DERIVED = 0 AND SERV_DERIVED = 0, THEN HIPPS_5 = 2
3709 IF CLIN_DERIVED = 0 AND FUNC_DERIVED = 1 AND SERV_DERIVED = 0, THEN HIPPS_5 = 3
3710 IF CLIN_DERIVED = 0 AND FUNC_DERIVED = 0 AND SERV_DERIVED = 1, THEN HIPPS_5 = 4
3711 IF CLIN_DERIVED = 1 AND FUNC_DERIVED = 1 AND SERV_DERIVED = 0, THEN HIPPS_5 = 5
3712 IF CLIN_DERIVED = 0 AND FUNC_DERIVED = 1 AND SERV_DERIVED = 1, THEN HIPPS_5 = 6
3713 IF CLIN_DERIVED = 1 AND FUNC_DERIVED = 0 AND SERV_DERIVED = 1, THEN HIPPS_5 = 7
3714 IF CLIN_DERIVED = 1 AND FUNC_DERIVED = 1 AND SERV_DERIVED = 1, THEN HIPPS_5 = 8

3715
3716 SET HIPPS = CONCATENATE (HIPPS_1, HIPPS_2, HIPPS_3, HIPPS_4, HIPPS_5)
3717

3718 7. Screening out ineligible cases – payment episodes starting before 1/1/2008:

3719

3720 Invalid dates:

3721 IF M0090_INFO_COMPLETED_DT_INVLD = 1, THEN HIPPS = BLANK

3722

3723 Invalid reasons for assessment:

3724 IF ORB_PERIOD = 0 AND M0100_ASSMT_REASON <> 01 or 02 or 03 or 04 or 05, THEN HIPPS = BLANK

3725 IF ORB_PERIOD = 1 AND M0100_ASSMT_REASON <> 01 or 03 or 04 or 05, THEN HIPPS = BLANK

3726

3727 Non-Medicare/non-casemix assessments:

3728 IF M0825_THERAPY_NEED = "NA", THEN HIPPS = BLANK

3729

3730 8. Create claim-OASIS matching key – payment episodes starting before 1/1/2008:

3731

3732 SET CLAIM_OASIS_MATCH = CONCATENATE (M0030_START_CARE_DT,
3733 M0090_INFO_COMPLETED_DT,
3734 M0100_ASSMT_REASON)
3735

3736 9. Create Data Validity Flag – payment episodes starting before 1/1/2008:

3737

3738 *For payment episodes starting before 1/1/2008, the data validity flag is equal to the final character/validity flag*
3739 *found at the end of the HIPPS code.*

3740

3741 10. Output – payment episodes starting before 1/1/2008:

3742

3743 OUTPUT HIPPS = XXXX9 (or BLANK)
3744 OUTPUT GROUPEX_VERSION = 02.03
3745 OUTPUT CLAIM_OASIS_MATCH = YYYYMMDDYYYYMMDD99
3746 OUTPUT DATA VALIDITY FLAG = 9 [same as HIPPS_5]