

Program Documentation for DLL Version 2.90 for the CMG Classification System Version 2.90

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Introduction

This documentation is for a revised version of the CMG dynamic-link library (DLL) for use in classifying patients in Inpatient Rehabilitation Facilities (IRFs). This revision represents a new version 2.90 of the CMG classification system with the DLL version also being 2.90. This new version applies to Federal Fiscal Year (FFY) 2017. This new version incorporates revisions to the comorbidities used by the CMG grouper.

This documentation and the CMG DLL are published by the Centers for Medicare & Medicaid services (CMS). The documentation and DLL may be copied freely, as our goal is broad dissemination to facilitate accurate classification of Inpatient Rehabilitation Facility (IRF) patients with the Case Mix Group (CMG) classification system.

Changes with CMG and DLL Versions 2.90

The prior CMG and DLL Versions were both 2.82, allowing processing of IRF-PAI assessments with discharge date on or after 10/1/2015. The only changes with Version 2.90 involve comorbidities used for Tier assignment. Ninety-nine single ICD-10-CM codes assigning Tier 3 (D) were added and 45 single ICD-10-CM codes assigning Tier 3 (D) were deleted. The added codes are indicated in Appendix C the "Comorbidity Tier Code Lookup Table" and the deleted codes are listed in Appendix D.

Program Logic

This section explains how the CMG DLL calculates CMG group codes. The methodology employed by the DLL follows the methodology described in the IRF regulations published by CMS. This document is aimed primarily at software developers who do not wish to use the DLL furnished by CMS and who need to develop their own software to calculate CMG groups.

Programmers who **do** wish to use CMS's DLL should refer to the Technical Documentation which accompanies this package. Familiarity with the program documentation contained in the present document is **not** required to use the DLL correctly.

Overview

Calculation of a CMG group from an IRF-PAI assessment record requires the following steps:

1. Read required items from the IRF-PAI record.
2. Ensure there are no data errors in the IRF-PAI items used.
3. Calculate preliminary variables.
4. If no data errors are found, compute the CMG group code.
5. Return the results: the CMG group code and an error code.

Each of these steps is detailed below.

Read Required Items

Only a subset of the items contained in the IRF-PAI assessment record is required to perform the CMG group calculation. Appendix A lists the required items. This appendix is derived from, and uses the conventions used in, the IRF-PAI data specifications. Please refer to the data specifications for details.

Appendix A contains the following columns:

- **Database name.** The item name used in CMS' standard data specifications and IRF-PAI database.
- **Form location.** The item number used on the IRF-PAI assessment form.
- **Description.** A description of the item.
- **Length.** The length of the item.
- **Start byte.** The starting position of the item in the standard fixed format string defined in the data specifications.
- **End byte.** The ending position of the item in the standard fixed format string.
- **Range.** A range or list of valid values.

The first step for a calculation routine is to read or obtain the values of the items listed in Appendix A.

Ensure There Are No Data Errors

To correctly calculate the CMG classification, it is necessary to ensure that all IRF-PAI items used have valid, well-formatted values. If there are invalid values or mis-formatted items, then a CMG calculation will produce unreliable results. IRF-PAI assessment data that has been submitted and accepted by the CMS IRF-PAI system have passed all critical edits and are ensured to have valid, well-formatted values, allowing correct CMG classification.

If the IRF-PAI assessment has not been accepted by the CMS IRF-PAI system, then the next step for a calculation routine will be to check the values of all of the items listed in Appendix A to make sure they all have valid and correctly formatted values. There are two ways to check item value and format validity.

1. Use the IRF-PAI Validation Utility Tool (VUT) provided by CMS on the IRF-PAI page on the QIES Technical Support Office (QTSO) web site (<https://www.qtso.com/vendorirf.html>).
2. Develop custom code to ensure valid values and correct formatting for the items in Appendix A. Please refer to the IRF-PAI Data Submission Specifications. If any data errors are detected, the CMG group must not be calculated (an error code should be set appropriately).

To develop custom error checking code to test for data errors for the Appendix A items, do the following:

1. Check to make sure that each item conforms to the range specifications contained in the last column of Appendix A. The first two items in Appendix A (ASMT_SYS_CD and TRANS_TYPE_CD) are not actually involved in the CMG calculations. However, the DLL and standard CMG logic check these items and return error codes if the items do not have the expected values. ASMT_SYS_CD should be a value of "IRF-PAI" indicating an IRF-PAI record and TRANS_TYPE_CD should be a value of "1" (new assessment record) or "2" (modified assessment record) but not "3" (record inactivation request).
2. Check to make sure that the ICD10 comorbidity fields (items 24A through 24Y) have a valid format. To be valid, the item must be caret [^] (indicating a blank item), or it must be in an 8 character fixed format string as follows:

- a. Character 1 must be alphabetic.
 - b. Character 2 must be numeric [0-9].
 - c. Character 3 must be numeric [0-9] or alphabetic [A-Z,a-z].
 - d. Character 4 must be a decimal point.
 - e. Characters 5 through 8 must be numeric [0-9], alphabetic [A-Z,a-z], or caret [^].
 - f. If any character 5 through 8 is equal to [^], all subsequent characters must equal [^].
3. For the items 24A through 24Y, if a comorbid condition item is blank or "No information" (represented by a single caret, [^]), then the next comorbid condition item in the list must be "No information" [^].

Calculate Preliminary Variables

Several preliminary variables must be calculated before determining the CMG group. If any of these preliminary calculations result in invalid values, the CMG group must not be calculated – an error code should be set appropriately instead. The following sections describe the preliminary calculations.

Motor Score

To compute the motor score, do the following:

1. The motor score is based upon the following 12 variables:

Variable Name	Item	Recode Zero To:	Weight
EATG_ADMSN_CD	39AA	1	0.6
GRMG_ADMSN_CD	39BA	1	0.2
BATHG_ADMSN_CD	39CA	1	0.9
DRSG_UPR_ADMSN_CD	39DA	1	0.2
DRSG_LWR_ADMSN_CD	39EA	1	1.4
TOILTG_ADMSN_CD	39FA	1	1.2
SPHNCTR_BLADR_ADMSN_CD	39GA	1	0.5
SPHNCTR_BWL_ADMSN_CD	39HA	1	0.2
BED_CHR_WC_ADMSN_CD	39IA	1	2.2
TOILT_ADMSN_CD	39JA	2	1.4
WLK_WC_ADMSN_CD	39LA	1	1.6
STR_ADMSN_CD	39MA	1	1.6

2. **If the input value of any of these 12 variables is equal to zero**, then recode the zero to the value shown in the third column of the table above (note that all variables are recoded to 1 except for Item 39Ja which is recoded to 2).
3. Multiply each input value (recoded as described in Step 2) by the weight shown in the fourth column of the table above.
4. The motor score is the sum of the recoded, weighted values of the 12 variables.

If any of the 12 variables has an out of range value, then the motor score is invalid and the CMG group must not be computed. A valid motor score will be in the range 12 through 84, inclusive.

Cognitive Score

To compute the cognitive score, do the following:

1. The cognitive score is based upon the following 5 variables:
 - a. CMPRHNSN_ADMSN_CD (item 39NA)
 - b. EXPRSN_ADMSN_CD (item 39OA)
 - c. SCL_INTRCTN_ADMSN_CD (item 39PA)
 - d. PRBLM_SLVG_ADMSN_CD (item 39QA)
 - e. MEMRY_ADMSN_CD (item 39RA)
2. For each of these 5 variables, recode the value to 1 if the input value is equal to zero.
3. The cognitive score is the sum of the values of the 5 variables as recoded in the previous step.

If any of the 5 variables has an out of range value, then the cognitive score is invalid and CMG group must not be computed. A valid cognitive score will be in the range 5 through 35, inclusive.

Age

Age is computed on the basis of the difference between the admission date (ADMSN_DT, item 12) and the birth date (BIRTH_DT, item 6). The IRF-PAI data specifications allow facilities to submit partial birth dates if the month or day of birth is unknown. The steps below describe how to handle partial birth dates and how to calculate age.

1. Impute month and/or day of birth if partial birth date is present.
 - a. If month of birth is blank:
 - i. Partial birth date is present.
 - ii. Replace blank month with "06" (June).
 - b. If day of birth is blank:
 - iii. Partial birth date is present.
 - iv. Replace blank day with "15".
 - c. If a partial birth date was submitted and if the birth year is equal to the admission year, then age cannot be calculated.
2. If a partial birth date is present, then use the imputed birth date, as described above, in the steps below. Otherwise, use the input birth date.
3. Check the birth date to determine whether it is a valid date. If it is invalid, then age cannot be calculated.
4. Check the admission date to determine whether it is a valid date. If it is invalid, then age cannot be calculated.
5. If the admission date precedes the birth date, then age cannot be calculated.
6. Calculate age in years by comparing the birth date with the admission date. Use the following rules:
 - a. If the admission month is less than the birth month, then age is equal to the difference in years, minus 1.

- b. If the admission month is greater than the birth month, then age is equal to the difference in years.
 - c. If the admission month is equal to the birth month, then examine the birth and admission days:
 - i. If the admission day is less than the birthday, then age is equal to the difference in years, minus 1.
 - ii. Otherwise, age is equal to the difference in years.
7. If the computed age is greater than 140, then age is invalid and the CMG group cannot be computed.

If age cannot be computed, then the CMG group cannot be computed. A valid age will be in the range 0 through 140, inclusive.

Look Up Rehabilitation Impairment Code (RIC)

The impairment group code at admission, IMPRMNT_GRP_ADMSN_CD (item 21A), is matched with an impairment group code in Appendix B to obtain the RIC code from Appendix B. The IMPRMNT_GRP_ADMSN_CD value submitted always has 2 leading zeros (0) at the front. These two initial zeros are not present in the impairment group codes in Appendix B. Trim the two leading zeros from IMPRMNT_GRP_ADMSN_CD before matching with the impairment group values in Appendix B. If the trimmed IMPRMNT_GRP_ADMSN_CD exactly matches one of the impairment group codes in column 3 of Appendix B, then the RIC code is the corresponding code in column 1. If the trimmed IMPRMNT_GRP_ADMSN_CD does not exactly match any of the impairment codes listed in Appendix B, then the RIC code cannot be determined and the CMG group cannot be computed.

Compute CMG Group Code

Once the motor score, cognitive score, age, and RIC have been determined, the CMG group code can be determined. The group code consists of a comorbidity tier code (A, B, C, or D) followed by a four digit group number. These items are determined using the following steps.

1. Determine the tier code.
 - a. The tier code is determined using the IRF-PAI assessment comorbidity condition ICD10 codes (listed below) and the RIC code in conjunction with Appendix C. The comorbidity condition ICD10 codes are as follows:
 - i. CMRB_COND_A_CD (item 24A)
 - ii. CMRB_COND_B_CD (item 24B)
 - iii. CMRB_COND_C_CD (item 24C)
 - iv. CMRB_COND_D_CD (item 24D)
 - v. CMRB_COND_E_CD (item 24E)
 - vi. CMRB_COND_F_CD (item 24F)
 - vii. CMRB_COND_G_CD (item 24G)
 - viii. CMRB_COND_H_CD (item 24H)
 - ix. CMRB_COND_I_CD (item 24I)
 - x. CMRB_COND_J_CD (item 24J)
 - xi. CMRB_COND_K_CD (item 24K)

- xii. CMRB_COND_L_CD (item 24L)
 - xiii. CMRB_COND_M_CD (item 24M)
 - xiv. CMRB_COND_N_CD (item 24N)
 - xv. CMRB_COND_O_CD (item 24O)
 - xvi. CMRB_COND_P_CD (item 24P)
 - xvii. CMRB_COND_Q_CD (item 24Q)
 - xviii. CMRB_COND_R_CD (item 24R)
 - xix. CMRB_COND_S_CD (item 24S)
 - xx. CMRB_COND_T_CD (item 24T)
 - xxi. CMRB_COND_U_CD (item 24U)
 - xxii. CMRB_COND_V_CD (item 24V)
 - xxiii. CMRB_COND_W_CD (item 24W)
 - xxiv. CMRB_COND_X_CD (item 24X)
 - xxv. CMRB_COND_Y_CD (item 24Y)
- b. The default tier code is "A" (i.e., if no match is found in Appendix C, as described below, then the tier code is "A").
- c. Appendix C is the Comorbidity TIER List published by CMS. See the descriptive comments at the beginning of Appendix C. The single ICD-10-CM codes starting at the beginning of the table allow easy row by row lookup. The code combinations (always pairs with this version) at the bottom of the table define pairs of codes that must both be present but the codes in a pair are not presented together, and do not allow an easy automated lookup. For this reason, a revised lookup source was created for the CMS DLL.

For the CMS provided DLL, the following reformatting was made to the information in Appendix C:

The single codes are padded with carets [^] to length 8 to match the ICD-10-CM formatting required on IRF-PAI assessment items. The single codes were then separated into two lists:

- i. Single Code List 1 containing all single codes not included in a code combination. This table involved the 1,156 single codes not list below for Single Code List 2.
- ii. Single Code List 2 containing all single codes also included in a code combination. Only 48 of the single codes are included in code combinations and these codes are:

B39.4
B39.5
B39.9
E08.21
E08.40
E08.51
E08.65
E08.69
E09.21
E09.40

E09.51
E09.69
E10.21
E10.311
E10.319
E10.36
E10.39
E10.40
E10.51
E10.65
E10.69
E11.21
E11.311
E11.319
E11.36
E11.39
E11.40
E11.51
E11.65
E11.69
G02
I26.90
I26.99
I39
J17
K25.0
K25.1
K25.2
K25.4
K25.5
K25.6
K26.0
K26.1
K26.2
K26.4
K26.5
K26.6
T80.0XXA

A special “Exclusion Flag” column was added to Single Code List 2. This logical flag will be set to True if the single code in Single Code List 2 is to be excluded because a code combination (in the Code Combination List) involving that single code is present on the IRF-PAI assessment and the combination is excluded due to the assessment’s RIC. If the Exclusion Flag has been set to True for a code in Single Code List 2, then that single code will be excluded from tier assignment.

The Single Code List 1 and Single Code List 2 were each sorted ascending by Tier number, allowing easy lookup of the highest payment Tier.

The code combinations were put in a reorganized Code Combination List. The code combination list has columns for 2 different ICD-10-CM codes (in this version combinations always involve a pair of codes) and contains a row for the two ICD-10-CM codes in each pair of codes involved in a combination, allowing easy lookup. The two ICD-10-CM codes in a row are padded with carets [^] to length 8 to match the ICD-10-CM formatting required on IRF-PAI assessment items. Since all combination pairs involve

Tier 3 (lowest paying), the Code Combination List can be processed after the Single Code List 1 and ensure that the Tier for the first match found is the highest payment Tier.

- d. In the Single Code List 1 loop through each of the rows to attempt to find a comorbidity Tier match as follows:
 - i. Determine whether the RIC code for the assessment is in the RIC exclusion list in the column labeled "RIC Exclusion" in the Single Code List 1. If the RIC code is in the exclusion list, then skip to the next row of the Single Code List 1. If the inclusion entry is blank, then no RICs are excluded for that row.
 - ii. If the RIC code is not in the RIC exclusion list or if the RIC exclusion list is blank, then do the following:
 1. Loop through the comorbidity condition ICD10 codes listed above (CMRB_COND_A_CD through CMRB_COND_Y_CD) and determine whether the comorbidity condition ICD10 code exactly matches the ICD10 code listed in the Single Code List 1.
 - a. If the comorbidity condition code equals a single caret [^], then no more comorbidity conditions are present. Go to the next Single Code List 1 row.
 - b. If there is an exact match between the comorbidity condition ICD10 and the Single Code List 1 ICD10, then do the following:
 - i. Determine the tier code by examining the column labeled "Tier" in Single Code List 1.
 - ii. If there is a "1" in the "Tier" column of Single Code List 1, then the tier code is "B".
 - iii. If there is a "2" in the "Tier" column of Single Code List 1, then the tier code is "C".
 - iv. If there is a "3" in the "Tier" column of Single Code List 1, then the tier code is "D".
 - v. Terminate Tier code lookup and go to Step 3 "Determine four digit group number" below.
 - c. If there is not an exact match between the comorbidity condition ICD10 and the Single Code List 1 ICD10, then go to the next comorbidity condition code.
 - e. Process the Code Combination List if no match was found in Single Code List 1 as follows:
 - i. Set the Exclusion Flag in Single Code List 2 to False for all codes.
 - ii. Loop through each of the rows in Code Combination List to attempt to find a comorbidity Tier match.
2. For each row in Code Combination List, loop through the comorbidity condition ICD10 codes listed above (CMRB_COND_A_CD through CMRB_COND_Y_CD) and determine whether the comorbidity condition ICD10 code exactly matches one of the two ICD10 codes listed in the Code Combination List.
 - a. If the comorbidity condition code equals a single caret [^], then no more comorbidity conditions are present. Go to the next Code Combination List row.

- b. If there is an exact match between the comorbidity condition ICD10 and one of the two Code Combination List ICD10s, set a flag indicating which of the two codes has been matched.
- c. If both Code Combination List ICD10's have been matched, then do the following:
 - i. Determine whether the RIC code for the assessment is in the RIC exclusion list in the column labeled "RIC Exclusion" in the Code Combination List. If the exclusion entry is blank, then no RICs are excluded for that row. If the RIC code is in the exclusion list, then:
 - 1. Locate each of the two codes in Single Code List 2 and, if found set the Exclusion Flag to True in Single Code List 2 for the code.
 - 2. Skip to the next row of the Code Combination List.
 - ii. If the RIC is not excluded then:
 - 1. Determine the tier code by examining the column labeled "Tier" in Code Combination List.
 - 2. If there is a "1" in the "Tier" column of Code Combination List, then the tier code is "B".
 - 3. If there is a "2" in the "Tier" column of Code Combination List, then the tier code is "C".
 - 4. If there is a "3" in the "Tier" column of Code Combination List, then the tier code is "D".
 - 5. Terminate Tier code lookup and go to Step 3 "Determine four digit group number" below.
- d. If there is not an exact match between the comorbidity condition ICD10s and both of the Code Combination List ICD10s, then go to the next row of Code Combination List.
- e. Process Single Code List 2 if no match was found in Code Combination List as follows:
 - i. For each row of Single Code List 2, determine whether the RIC code for the assessment is in the RIC exclusion list in the column labeled "RIC Exclusion" in the Single Code List 2. If the RIC code is in the exclusion list, then skip to the next row of the Single Code List 2. If the inclusion entry is blank, then no RICs are excluded for that row.
 - ii. Exclude the single ICD-10-CM code if the Exclusion Flag had been set True during processing of Code Combination List.
 - iii. If the single ICD-10-CM code has not been excluded, then do the following:
 - 1. Loop through the comorbidity condition ICD10 codes listed above (CMRB_COND_A_CD through CMRB_COND_Y_CD) and determine whether the comorbidity condition ICD10 code exactly matches the ICD10 code listed in the Single Code List 2.
 - a. If the comorbidity condition code equals a single caret [^], then no more comorbidity conditions are present. Go to the next row.
 - b. If there is an exact match between the comorbidity condition ICD10 and the Single Code List 2 ICD10, then do the following:

- i. Determine the tier code by examining the column labeled "Tier" in Single Code List 2.
 - ii. If there is a "1" in the "Tier" column of Single Code List 2, then the tier code is "B".
 - iii. If there is a "2" in the "Tier" column of Single Code List 2, then the tier code is "C".
 - iv. If there is a "3" in the "Tier" column of Single Code List 2, then the tier code is "D".
 - v. Terminate Tier code lookup and go to Step 3 "Determine four digit group number" below.
 - c. If there is not an exact match between the comorbidity condition ICD10 and the Single Code List 2 ICD10, then go to the next comorbidity condition code.
3. If no comorbidity Tier match was found, then the tier code is "A".
4. Determine the four digit group number. The group number is determined using the RIC code, the motor score, the cognitive score, and the age in conjunction with Appendix E. The procedure is as follows:
 - a. Loop through the rows of Appendix E until a match is found. A match is determined as follows:
 - i. The RIC code must match the code listed in column 2 of Appendix E.
 - ii. The motor score must be greater than or equal to the "motor score low value" listed in column 3 and less than or equal to the "motor score high value" listed in column 4 of Appendix E.
 - iii. If the "cognitive score low value" in column 5 and the "cognitive score high value" in column 6 are both non-blank, then the cognitive score must be greater than or equal to the cognitive score low value and less than or equal to the cognitive score high value listed in Appendix E.
 - iv. If the "age low value" in column 7 and the "age high value" in column 8 are both non-blank, then the age must be greater than or equal to the age low value and less than or equal to the age high value listed in Appendix E.
 - b. When a match is found in Appendix E, then the CMG group number is equal to the code listed in column 1 of Appendix E.

Return Results

The CMG group code is created by concatenating the tier code and the group number. For example, if the tier code is "A" and the group number is "0114", then the CMG group code is "A0114".

As noted above if any of the data items used in the calculations are out of range or invalid or if the motor score, cognitive score, age, or RIC code are invalid or cannot be computed, the CMG group code must not be computed. An appropriate error code should be set to identify the error condition.

Testing

Standard test data is available in the CMG 2.90. The standard test data is described in the "Technical Documentation". For applications rewriting CMG from scratch, custom test data should also be developed and used, in addition to the standard test data. The custom test data should test all CMG

calculations, including calculation of the motor score, cognitive score, and age; correct RIC lookup for all impairment codes at admission (Item 21A); correct CMG group lookup; and correct comorbidity tier assignment for each single comorbidity code and code combination (always a pair of codes for this version).

Appendix A: Variables Used for CMG Calculation

Database Name	Form Location	Description	Length	Start Byte	End Byte	Range
ASMT_SYS_CD	None	Assessment System Code	10	1	10	IRF-PAI
TRANS_TYPE_CD	None	Transaction Type Code	1	11	11	1, 2
BIRTH_DT	6	Birth Date	8	657	664	Valid full or partial date; spaces allowed only with partial date.
ADMSN_DT	12	Admission Date	8	688	695	Valid date
IMPRMNT_GRP_ADMSN_CD	21A	Impairment Group: Admission	9	720	728	Valid code
CMRBD_COND_A_CD	24A	Comorbid Conditions (ICD-10-CM Code)	8	754	761	Valid ICD-10-CM Code, ^
CMRBD_COND_B_CD	24B	Comorbid Conditions (ICD-10-CM Code)	8	762	769	Valid ICD-10-CM Code, ^
CMRBD_COND_C_CD	24C	Comorbid Conditions (ICD-10-CM Code)	8	770	777	Valid ICD-10-CM Code, ^
CMRBD_COND_D_CD	24D	Comorbid Conditions (ICD-10-CM Code)	8	778	785	Valid ICD-10-CM Code, ^
CMRBD_COND_E_CD	24E	Comorbid Conditions (ICD-10-CM Code)	8	786	793	Valid ICD-10-CM Code, ^
CMRBD_COND_F_CD	24F	Comorbid Conditions (ICD-10-CM Code)	8	794	801	Valid ICD-10-CM Code, ^
CMRBD_COND_G_CD	24G	Comorbid Conditions (ICD-10-CM Code)	8	802	809	Valid ICD-10-CM Code, ^
CMRBD_COND_H_CD	24H	Comorbid Conditions (ICD-10-CM Code)	8	810	817	Valid ICD-10-CM Code, ^
CMRBD_COND_I_CD	24I	Comorbid Conditions (ICD-10-CM Code)	8	818	825	Valid ICD-10-CM Code, ^
CMRBD_COND_J_CD	24J	Comorbid Conditions (ICD-10-CM Code)	8	826	833	Valid ICD-10-CM Code, ^
CMRBD_COND_K_CD	24K	Comorbid Conditions (ICD-10-CM Code)	8	1132	1139	Valid ICD-10-CM Code, ^
CMRBD_COND_L_CD	24L	Comorbid Conditions (ICD-10-CM Code)	8	1140	1147	Valid ICD-10-CM Code, ^
CMRBD_COND_M_CD	24M	Comorbid Conditions (ICD-10-CM Code)	8	1148	1155	Valid ICD-10-CM Code, ^
CMRBD_COND_N_CD	24N	Comorbid Conditions (ICD-10-CM Code)	8	1156	1163	Valid ICD-10-CM Code, ^
CMRBD_COND_O_CD	24O	Comorbid Conditions (ICD-10-CM Code)	8	1164	1171	Valid ICD-10-CM Code, ^
CMRBD_COND_P_CD	24P	Comorbid Conditions (ICD-10-CM Code)	8	1172	1179	Valid ICD-10-CM Code, ^
CMRBD_COND_Q_CD	24Q	Comorbid Conditions (ICD-10-CM Code)	8	1180	1187	Valid ICD-10-CM Code, ^
CMRBD_COND_R_CD	24R	Comorbid Conditions (ICD-10-CM Code)	8	1188	1195	Valid ICD-10-CM Code, ^
CMRBD_COND_S_CD	24S	Comorbid Conditions (ICD-10-CM Code)	8	1196	1203	Valid ICD-10-CM Code, ^
CMRBD_COND_T_CD	24T	Comorbid Conditions (ICD-10-CM Code)	8	1204	1211	Valid ICD-10-CM Code, ^
CMRBD_COND_U_CD	24U	Comorbid Conditions (ICD-10-CM Code)	8	1212	1219	Valid ICD-10-CM Code, ^
CMRBD_COND_V_CD	24V	Comorbid Conditions (ICD-10-CM Code)	8	1220	1227	Valid ICD-10-CM Code, ^
CMRBD_COND_W_CD	24W	Comorbid Conditions (ICD-10-CM Code)	8	1228	1235	Valid ICD-10-CM Code, ^
CMRBD_COND_X_CD	24X	Comorbid Conditions (ICD-10-CM Code)	8	1236	1243	Valid ICD-10-CM Code, ^

Appendix A: Variables Used for CMG Calculation

Database Name	Form Location	Description	Length	Start Byte	End Byte	Range
CMRBD_COND_Y_CD	24Y	Comorbid Conditions (ICD-10-CM Code)	8	1244	1251	Valid ICD-10-CM Code, ^
EATG_ADMSN_CD	39AA	SELF-CARE - Eating: Admission	2	882	883	00-07
GRMG_ADMSN_CD	39BA	SELF-CARE - Grooming: Admission	2	888	889	00-07
BATHG_ADMSN_CD	39CA	SELF-CARE - Bathing: Admission	2	894	895	00-07
DRSG_UPR_ADMSN_CD	39DA	SELF-CARE - Dressing - Upper: Admission	2	900	901	00-07
DRSG_LWR_ADMSN_CD	39EA	SELF-CARE - Dressing - Lower: Admission	2	906	907	00-07
TOILTG_ADMSN_CD	39FA	SELF-CARE - Toileting: Admission	2	912	913	00-07
SPHNCTR_BLADR_ADMSN_CD	39GA	SPHINCTER CONTROL - Bladder: Admission	2	918	919	01-07
SPHNCTR_BWL_ADMSN_CD	39HA	SPHINCTER CONTROL - Bowel: Admission	2	924	925	01-07
BED_CHR_WC_ADMSN_CD	39IA	TRANSFERS - Bed, chair, wheelchair: Admission	2	930	931	00-07
TOILT_ADMSN_CD	39JA	TRANSFERS - Toilet: Admission	2	936	937	00-07
WLK_WC_ADMSN_CD	39LA	LOCOMOTION - Walk/wheelchair: Admission	2	948	949	00-07
STR_ADMSN_CD	39MA	LOCOMOTION - Stairs: Admission	2	956	957	00-07
CMPRHNSN_ADMSN_CD	39NA	COMMUNICATION - Comprehension: Admission	2	962	963	01-07 ¹
EXPRSN_ADMSN_CD	39OA	COMMUNICATION - Expression: Admission	2	970	971	01-07 ¹
SCL_INTRCTN_ADMSN_CD	39PA	SOCIAL COGNITION - Social interaction: Admission	2	978	979	01-07
PRBLM_SLVG_ADMSN_CD	39QA	SOCIAL COGNITION - Problem solving: Admission	2	984	985	01-07
MEMRY_ADMSN_CD	39RA	SOCIAL COGNITION - Memory: Admission	2	990	991	01-07
DSCHRG_DT	40	Discharge Date	8	996	1003	Valid date

¹ Starting with Version 1.10 of the DLL, the range of valid values for 39Na and 39Oa was changed from 00-07 to 01-07.

Appendix B: RIC Lookup Table

RIC Code	RIC Label	Impairment Grp Code ¹	Impairment Group Label
01	Stroke (Stroke)	01.1	Left body involvement (right brain)
01	Stroke (Stroke)	01.2	Right body involvement (left brain)
01	Stroke (Stroke)	01.3	Bilateral Involvement
01	Stroke (Stroke)	01.4	No Paresis
01	Stroke (Stroke)	01.9	Other Stroke
02	Traumatic brain injury (TBI)	02.21	Open Injury
02	Traumatic brain injury (TBI)	02.22	Closed Injury
03	Nontraumatic brain injury (NTBI)	02.1	Non-traumatic
03	Nontraumatic brain injury (NTBI)	02.9	Other Brain
04	Traumatic spinal cord injury (TSCI)	04.210	Paraplegia, Unspecified
04	Traumatic spinal cord injury (TSCI)	04.211	Paraplegia, Incomplete
04	Traumatic spinal cord injury (TSCI)	04.212	Paraplegia, Complete
04	Traumatic spinal cord injury (TSCI)	04.220	Quadriplegia, Unspecified
04	Traumatic spinal cord injury (TSCI)	04.2211	Quadriplegia, Incomplete C1-4
04	Traumatic spinal cord injury (TSCI)	04.2212	Quadriplegia, Incomplete C5-8
04	Traumatic spinal cord injury (TSCI)	04.2221	Quadriplegia, Complete C1-4
04	Traumatic spinal cord injury (TSCI)	04.2222	Quadriplegia, Complete C5-8
04	Traumatic spinal cord injury (TSCI)	04.230	Other traumatic spinal cord dysfunction
05	Nontraumatic spinal cord injury (NTSCI)	04.110	Paraplegia, unspecified
05	Nontraumatic spinal cord injury (NTSCI)	04.111	Paraplegia, incomplete
05	Nontraumatic spinal cord injury (NTSCI)	04.112	Paraplegia, complete
05	Nontraumatic spinal cord injury (NTSCI)	04.120	Quadriplegia, unspecified
05	Nontraumatic spinal cord injury (NTSCI)	04.1211	Quadriplegia, Incomplete C1-4
05	Nontraumatic spinal cord injury (NTSCI)	04.1212	Quadriplegia, Incomplete C5-8
05	Nontraumatic spinal cord injury (NTSCI)	04.1221	Quadriplegia, Complete C1-4
05	Nontraumatic spinal cord injury (NTSCI)	04.1222	Quadriplegia, Complete C5-8
05	Nontraumatic spinal cord injury (NTSCI)	04.130	Other non-traumatic spinal cord dysfunction
06	Neurological (Neuro)	03.1	Multiple Sclerosis
06	Neurological (Neuro)	03.2	Parkinsonism
06	Neurological (Neuro)	03.3	Polyneuropathy
06	Neurological (Neuro)	03.5	Cerebral Palsy
06	Neurological (Neuro)	03.8	Neuromuscular Disorders

¹ The impairment group code submitted on the IRF-PAI assessment has 2 leading zeros added before the impairment group code in this Appendix.

Appendix B: RIC Lookup Table

RIC Code	RIC Label	Impairment Grp Code ¹	Impairment Group Label
06	Neurological (Neuro)	03.9	Other Neurologic
07	Fracture of LE (FracLE)	08.11	Status post unilateral hip fracture
07	Fracture of LE (FracLE)	08.12	Status post bilateral hip fractures
07	Fracture of LE (FracLE)	08.2	Status post femur (shaft) fracture
07	Fracture of LE (FracLE)	08.3	Status post pelvic fracture
08	Replacement of LE joint (ReplLE)	08.51	Status post unilateral hip replacement
08	Replacement of LE joint (ReplLE)	08.52	Status post bilateral hip replacements
08	Replacement of LE joint (ReplLE)	08.61	Status post unilateral knee replacement
08	Replacement of LE joint (ReplLE)	08.62	Status post bilateral knee replacements
08	Replacement of LE joint (ReplLE)	08.71	Status post knee and hip replacements (same side)
08	Replacement of LE joint (ReplLE)	08.72	Status post knee and hip replacements (different sides)
09	Other orthopedic(Ortho)	08.9	Other orthopedic
10	Amputation, lower extremity (AMPLE)	05.3	Unilateral lower extremity above the knee (AK)
10	Amputation, lower extremity (AMPLE)	05.4	Unilateral lower extremity below the knee (BK)
10	Amputation, lower extremity (AMPLE)	05.5	Bilateral lower extremity above the knee (AK/AK)
10	Amputation, lower extremity (AMPLE)	05.6	Bilateral lower extremity above/below the knee (AK/BK)
10	Amputation, lower extremity (AMPLE)	05.7	Bilateral lower extremity below the knee (BK/BK)
11	Amputation, other (AMP-NLE)	05.1	Unilateral upper extremity above the elbow (AE)
11	Amputation, other (AMP-NLE)	05.2	Unilateral upper extremity below the elbow (BE)
11	Amputation, other (AMP-NLE)	05.9	Other amputation
12	Osteoarthritis (OsteoA)	06.2	Osteoarthritis
13	Rheumatoid, other arthritis (RheumA)	06.1	Rheumatoid Arthritis
13	Rheumatoid, other arthritis (RheumA)	06.9	Other arthritis
14	Cardiac (Cardiac)	09	Cardiac
15	Pulmonary (Pulmonary)	10.1	Chronic Obstructive Pulmonary Disease
15	Pulmonary (Pulmonary)	10.9	Other pulmonary
16	Pain Syndrome (Pain)	07.1	Neck pain
16	Pain Syndrome (Pain)	07.2	Back pain
16	Pain Syndrome (Pain)	07.3	Extremity pain
16	Pain Syndrome (Pain)	07.9	Other pain
17	Major multiple trauma, no brain injury or spinal cord injury (MMT-NBSCI)	08.4	Status post major multiple fractures
17	Major multiple trauma, no brain injury or spinal cord injury (MMT-NBSCI)	14.9	Other multiple trauma
18	Major multiple trauma, with brain or spinal cord injury (MMT-BSCI)	14.1	Brain and spinal cord injury
18	Major multiple trauma, with brain or spinal cord injury (MMT-BSCI)	14.2	Brain and multiple fractures/amputation

Appendix B: RIC Lookup Table

RIC Code	RIC Label	Impairment Grp Code¹	Impairment Group Label
18	Major multiple trauma, with brain or spinal cord injury (MMT-BSCI)	14.3	Spinal cord and multiple fractures/amputation
19	Guillain Barre (GB)	03.4	Guillain Barre syndrome
20	Miscellaneous (Misc)	12.1	Spina Bifida
20	Miscellaneous (Misc)	12.9	Other congenital
20	Miscellaneous (Misc)	13	Other disabling impairments
20	Miscellaneous (Misc)	15	Developmental disability
20	Miscellaneous (Misc)	16	Debility
20	Miscellaneous (Misc)	17.1	Infection
20	Miscellaneous (Misc)	17.2	Neoplasms
20	Miscellaneous (Misc)	17.31	Nutrition (endocrine/metabolic) with intubation/parenteral nutrition
20	Miscellaneous (Misc)	17.32	Nutrition (endocrine/metabolic) without intubation/parenteral nutrition
20	Miscellaneous (Misc)	17.4	Circulatory disorders
20	Miscellaneous (Misc)	17.51	Respiratory disorders-Ventilator Dependent
20	Miscellaneous (Misc)	17.52	Respiratory disorders-Non-ventilator Dependent
20	Miscellaneous (Misc)	17.6	Terminal care
20	Miscellaneous (Misc)	17.7	Skin disorders
20	Miscellaneous (Misc)	17.8	Medical/Surgical complications
20	Miscellaneous (Misc)	17.9	Other medically complex conditions
21	Burns (Burns)	11	Burns

Appendix C: Comorbidity Tier Code Lookup Table

Note that this appendix is the Comorbidity Tier Lookup List Published by CMS for Federal Fiscal Year 2017 (starting with 10/1/2016).

When the “Choice” column in this appendix is blank, this indicates a “single” ICD-10-CM code that qualifies for tier assignment. There are three single code tables for TIER 1, Tier 2, and Tier3, respectively. Tier assignment also occurs based on ICD-10-CM code combinations which are given in the remaining tables after the single code tables. In the combination results, there is a separate table for each ICD-10-CM combination. In a combination, the codes have an “A” or “B” in the Choice column. Most combinations involve a single “A” code and a single “B” code and tier assignment is based on the pair of codes being present in the IRF-PAI assessment. More complex combinations have multiple “A” codes and/or multiple B codes. For example, the last combination at the bottom of the appendix has 5 “A” codes and 2 “B” codes. In this case, each “A” is combined with each “B”, yielding 10 code pairs. Tier assignment is based on any of these 10 pairs being present in the assessment.

In this appendix, the single code tables are followed by the code combination tables. Each table is sorted by the “ICD-10-CM” column.

Table C-1. Codes Assigning Tier 1

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
J38.01	--	Paralysis of vocal cords and larynx, unilateral	1	15	--	--	--	--
J38.02	--	Paralysis of vocal cords and larynx, bilateral	1	15	--	--	--	--
J38.4	--	Edema of larynx	1	15	--	--	--	--
Z43.0	--	Encounter for attention to tracheostomy	1	--	--	--	--	--
Z93.0	--	Tracheostomy status	1	--	--	--	--	--
Z99.2	--	Dependence on renal dialysis	1	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-2. Codes Assigning Tier 2

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A04.7	--	Enterocolitis due to Clostridium difficile	2	--	--	--	--	--
A04.8	--	Other specified bacterial intestinal infections	2	--	--	--	--	--
B96.5	--	Pseudomonas (aeruginosa) (mallei) (pseudomallei) as the cause of diseases classified elsewhere	2	--	--	--	--	--
I69.091	--	Dysphagia following nontraumatic subarachnoid hemorrhage	2	01	--	--	--	--
I69.191	--	Dysphagia following nontraumatic intracerebral hemorrhage	2	01	--	--	--	--
I69.291	--	Dysphagia following other nontraumatic intracranial hemorrhage	2	01	--	--	--	--
I69.391	--	Dysphagia following cerebral infarction	2	01	--	--	--	--
I69.891	--	Dysphagia following other cerebrovascular disease	2	01	--	--	--	--
I69.991	--	Dysphagia following unspecified cerebrovascular disease	2	01	--	--	--	--
K91.2	--	Postsurgical malabsorption, not elsewhere classified	2	--	--	--	--	--
R13.0	--	Aphagia	2	01	--	--	--	--
R13.10	--	Dysphagia, unspecified	2	01	--	--	--	--
R13.11	--	Dysphagia, oral phase	2	01	--	--	--	--
R13.12	--	Dysphagia, oropharyngeal phase	2	01	--	--	--	--
R13.13	--	Dysphagia, pharyngeal phase	2	01	--	--	--	--
R13.14	--	Dysphagia, pharyngoesophageal phase	2	01	--	--	--	--
R13.19	--	Other dysphagia	2	01	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-3. Codes Assigning Tier 3

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A02.1	--	Salmonella sepsis	3	--	--	--	--	--
A15.0	--	Tuberculosis of lung	3	15	--	--	--	--
A15.4	--	Tuberculosis of intrathoracic lymph nodes	3	15	--	--	--	--
A15.5	--	Tuberculosis of larynx, trachea and bronchus	3	15	--	--	--	--
A15.6	--	Tuberculous pleurisy	3	15	--	--	--	--
A15.8	--	Other respiratory tuberculosis	3	15	--	--	--	--
A15.9	--	Respiratory tuberculosis unspecified	3	15	--	--	--	--
A17.0	--	Tuberculous meningitis	3	03, 05	--	--	--	--
A17.1	--	Meningeal tuberculoma	3	03, 05	--	--	--	--
A17.81	--	Tuberculoma of brain and spinal cord	3	03, 05	--	--	--	--
A17.82	--	Tuberculous meningoencephalitis	3	03	--	--	--	--
A17.83	--	Tuberculous neuritis	3	03	--	--	--	--
A17.89	--	Other tuberculosis of nervous system	3	03, 05	--	--	--	--
A17.9	--	Tuberculosis of nervous system, unspecified	3	03, 05	--	--	--	--
A18.01	--	Tuberculosis of spine	3	03, 09	--	--	--	--
A18.02	--	Tuberculous arthritis of other joints	3	09	--	--	--	--
A18.03	--	Tuberculosis of other bones	3	09, 10, 11	--	--	--	--
A18.09	--	Other musculoskeletal tuberculosis	3	09	--	--	--	--
A18.10	--	Tuberculosis of genitourinary system, unspecified	3	--	--	--	--	--
A18.11	--	Tuberculosis of kidney and ureter	3	--	--	--	--	--
A18.12	--	Tuberculosis of bladder	3	--	--	--	--	--
A18.13	--	Tuberculosis of other urinary organs	3	--	--	--	--	--
A18.14	--	Tuberculosis of prostate	3	--	--	--	--	--
A18.15	--	Tuberculosis of other male genital organs	3	--	--	--	--	--
A18.16	--	Tuberculosis of cervix	3	--	--	--	--	--

Notes:

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A18.17	--	Tuberculous female pelvic inflammatory disease	3	--	--	--	--	--
A18.18	--	Tuberculosis of other female genital organs	3	--	--	--	--	--
A18.2	--	Tuberculous peripheral lymphadenopathy	3	--	--	--	--	--
A18.31	--	Tuberculous peritonitis	3	--	--	--	--	--
A18.32	--	Tuberculous enteritis	3	--	--	--	--	--
A18.39	--	Retroperitoneal tuberculosis	3	--	--	--	--	--
A18.4	--	Tuberculosis of skin and subcutaneous tissue	3	--	--	--	--	--
A18.50	--	Tuberculosis of eye, unspecified	3	--	--	--	--	--
A18.51	--	Tuberculous episcleritis	3	--	--	--	--	--
A18.52	--	Tuberculous keratitis	3	--	--	--	--	--
A18.53	--	Tuberculous chorioretinitis	3	--	--	--	--	--
A18.54	--	Tuberculous iridocyclitis	3	--	--	--	--	--
A18.59	--	Other tuberculosis of eye	3	--	--	--	--	--
A18.6	--	Tuberculosis of (inner) (middle) ear	3	--	--	--	--	--
A18.7	--	Tuberculosis of adrenal glands	3	--	--	--	--	--
A18.81	--	Tuberculosis of thyroid gland	3	--	--	--	--	--
A18.82	--	Tuberculosis of other endocrine glands	3	--	--	--	--	--
A18.83	--	Tuberculosis of digestive tract organs, not elsewhere classified	3	--	--	--	--	--
A18.84	--	Tuberculosis of heart	3	--	--	--	--	--
A18.85	--	Tuberculosis of spleen	3	--	--	--	--	--
A18.89	--	Tuberculosis of other sites	3	--	--	--	--	--
A19.0	--	Acute miliary tuberculosis of a single specified site	3	--	--	--	--	--
A19.1	--	Acute miliary tuberculosis of multiple sites	3	--	--	--	--	--
A19.2	--	Acute miliary tuberculosis, unspecified	3	--	--	--	--	--
A19.8	--	Other miliary tuberculosis	3	--	--	--	--	--
A19.9	--	Miliary tuberculosis, unspecified	3	--	--	--	--	--
A22.1	--	Pulmonary anthrax	3	15	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A22.7	--	Anthrax sepsis	3	--	--	--	--	--
A26.0	--	Cutaneous erysipeloid	3	--	--	--	--	--
A26.7	--	Erysipelothrix sepsis	3	--	--	--	--	--
A26.8	--	Other forms of erysipeloid	3	--	--	--	--	--
A26.9	--	Erysipeloid, unspecified	3	--	--	--	--	--
A28.0	--	Pasteurellosis	3	--	--	--	--	--
A28.2	--	Extraintestinal yersiniosis	3	--	--	--	--	--
A28.8	--	Other specified zoonotic bacterial diseases, not elsewhere classified	3	--	--	--	--	--
A28.9	--	Zoonotic bacterial disease, unspecified	3	--	--	--	--	--
A32.0	--	Cutaneous listeriosis	3	--	--	--	--	--
A32.11	--	Listerial meningitis	3	--	--	--	--	--
A32.12	--	Listerial meningoenzephalitis	3	--	--	--	--	--
A32.7	--	Listerial sepsis	3	--	--	--	--	--
A32.81	--	Oculoglandular listeriosis	3	--	--	--	--	--
A32.82	--	Listerial endocarditis	3	--	--	--	--	--
A32.89	--	Other forms of listeriosis	3	--	--	--	--	--
A32.9	--	Listeriosis, unspecified	3	--	--	--	--	--
A35	--	Other tetanus	3	06	--	--	--	--
A37.01	--	Whooping cough due to Bordetella pertussis with pneumonia	3	--	--	--	--	--
A37.11	--	Whooping cough due to Bordetella parapertussis with pneumonia	3	--	--	--	--	--
A37.81	--	Whooping cough due to other Bordetella species with pneumonia	3	15	--	--	--	--
A37.91	--	Whooping cough, unspecified species with pneumonia	3	15	--	--	--	--
A39.0	--	Meningococcal meningitis	3	03, 05	--	--	--	--
A39.1	--	Waterhouse-Friderichsen syndrome	3	05	--	--	--	--
A39.2	--	Acute meningococccemia	3	03, 05	--	--	--	--
A39.3	--	Chronic meningococccemia	3	03, 05	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A39.4	--	Meningococemia, unspecified	3	03, 05	--	--	--	--
A39.50	--	Meningococcal carditis, unspecified	3	14	--	--	--	--
A39.51	--	Meningococcal endocarditis	3	14	--	--	--	--
A39.52	--	Meningococcal myocarditis	3	14	--	--	--	--
A40.0	--	Sepsis due to streptococcus, group A	3	--	--	--	--	--
A40.1	--	Sepsis due to streptococcus, group B	3	--	--	--	--	--
A40.3	--	Sepsis due to Streptococcus pneumoniae	3	--	--	--	--	--
A40.8	--	Other streptococcal sepsis	3	--	--	--	--	--
A40.9	--	Streptococcal sepsis, unspecified	3	--	--	--	--	--
A41.01	--	Sepsis due to Methicillin susceptible Staphylococcus aureus	3	--	--	--	--	--
A41.02	--	Sepsis due to Methicillin resistant Staphylococcus aureus	3	--	--	--	--	--
A41.1	--	Sepsis due to other specified staphylococcus	3	--	--	--	--	--
A41.2	--	Sepsis due to unspecified staphylococcus	3	--	--	--	--	--
A41.3	--	Sepsis due to Hemophilus influenzae	3	--	--	--	--	--
A41.4	--	Sepsis due to anaerobes	3	--	--	--	--	--
A41.50	--	Gram-negative sepsis, unspecified	3	--	--	--	--	--
A41.51	--	Sepsis due to Escherichia coli [E. coli]	3	--	--	--	--	--
A41.52	--	Sepsis due to Pseudomonas	3	--	--	--	--	--
A41.53	--	Sepsis due to Serratia	3	--	--	--	--	--
A41.59	--	Other Gram-negative sepsis	3	--	--	--	--	--
A41.81	--	Sepsis due to Enterococcus	3	--	--	--	--	--
A41.89	--	Other specified sepsis	3	--	--	--	--	--
A41.9	--	Sepsis, unspecified organism	3	--	--	--	--	--
A42.7	--	Actinomycotic sepsis	3	--	--	--	--	--
A48.1	--	Legionnaires' disease	3	15	--	--	--	--
A50.41	--	Late congenital syphilitic meningitis	3	03, 05	--	--	--	--
A52.03	--	Syphilitic endocarditis	3	14	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
A52.06	--	Other syphilitic heart involvement	3	14	--	--	--	--
A52.13	--	Late syphilitic meningitis	3	03, 05	--	--	--	--
A52.19	--	Other symptomatic neurosyphilis	3	01, 03	--	--	--	--
A54.82	--	Gonococcal brain abscess	3	--	--	--	--	--
A54.84	--	Gonococcal pneumonia	3	--	--	--	--	--
A54.86	--	Gonococcal sepsis	3	--	--	--	--	--
A54.89	--	Other gonococcal infections	3	--	--	--	--	--
A54.9	--	Gonococcal infection, unspecified	3	--	--	--	--	--
A86	--	Unspecified viral encephalitis	3	03	--	--	--	--
A87.0	--	Enteroviral meningitis	3	03, 05	--	--	--	--
A87.2	--	Lymphocytic choriomeningitis	3	03, 05	--	--	--	--
A87.8	--	Other viral meningitis	3	03, 05	--	--	--	--
A87.9	--	Viral meningitis, unspecified	3	03, 05	--	--	--	--
A88.0	--	Enteroviral exanthematous fever [Boston exanthem]	3	03, 05	--	--	--	--
A89	--	Unspecified viral infection of central nervous system	3	03	--	--	--	--
B00.3	--	Herpesviral meningitis	3	03, 05	--	--	--	--
B00.4	--	Herpesviral encephalitis	3	03	--	--	--	--
B00.7	--	Disseminated herpesviral disease	3	03	--	--	--	--
B00.82	--	Herpes simplex myelitis	3	--	--	--	--	--
B00.89	--	Other herpesviral infection	3	--	--	--	--	--
B01.11	--	Varicella encephalitis and encephalomyelitis	3	03	--	--	--	--
B01.2	--	Varicella pneumonia	3	15	--	--	--	--
B02.1	--	Zoster meningitis	3	03, 05	--	--	--	--
B02.23	--	Postherpetic polyneuropathy	3	06	--	--	--	--
B05.0	--	Measles complicated by encephalitis	3	03	--	--	--	--
B05.2	--	Measles complicated by pneumonia	3	15	--	--	--	--
B10.01	--	Human herpesvirus 6 encephalitis	3	03	--	--	--	--

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B10.09	--	Other human herpesvirus encephalitis	3	03	--	--	--	--
B16.0	--	Acute hepatitis B with delta-agent with hepatic coma	3	03	--	--	--	--
B16.2	--	Acute hepatitis B without delta-agent with hepatic coma	3	03	--	--	--	--
B17.0	--	Acute delta-(super) infection of hepatitis B carrier	3	03	--	--	--	--
B17.11	--	Acute hepatitis C with hepatic coma	3	03	--	--	--	--
B17.2	--	Acute hepatitis E	3	03	--	--	--	--
B17.8	--	Other specified acute viral hepatitis	3	03	--	--	--	--
B18.0	--	Chronic viral hepatitis B with delta-agent	3	03	--	--	--	--
B18.1	--	Chronic viral hepatitis B without delta-agent	3	03	--	--	--	--
B18.2	--	Chronic viral hepatitis C	3	03	--	--	--	--
B19.0	--	Unspecified viral hepatitis with hepatic coma	3	03	--	--	--	--
B19.11	--	Unspecified viral hepatitis B with hepatic coma	3	03	--	--	--	--
B19.21	--	Unspecified viral hepatitis C with hepatic coma	3	03	--	--	--	--
B20	--	Human immunodeficiency virus [HIV] disease	3	--	--	--	--	--
B25.0	--	Cytomegaloviral pneumonitis	3	15	--	--	--	--
B26.1	--	Mumps meningitis	3	03, 05	--	--	--	--
B26.2	--	Mumps encephalitis	3	03	--	--	--	--
B26.3	--	Mumps pancreatitis	3	--	--	--	--	--
B33.3	--	Retrovirus infections, not elsewhere classified	3	--	--	--	--	--
B37.1	--	Pulmonary candidiasis	3	15	--	--	--	--
B37.5	--	Candidal meningitis	3	03, 05	--	--	--	--
B37.6	--	Candidal endocarditis	3	14	--	--	--	--
B37.7	--	Candidal sepsis	3	--	--	--	--	--
B37.81	--	Candidal esophagitis	3	--	--	--	--	--
B38.4	--	Coccidioidomycosis meningitis	3	03, 05	--	--	--	--
B39.0	--	Acute pulmonary histoplasmosis capsulati	3	15	--	--	--	--

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B39.1	--	Chronic pulmonary histoplasmosis capsulati	3	15	--	--	--	--
B39.2	--	Pulmonary histoplasmosis capsulati, unspecified	3	15	--	--	--	--
B39.3	--	Disseminated histoplasmosis capsulati	3	15	--	--	--	--
B39.4	--	Histoplasmosis capsulati, unspecified	3	15	--	--	--	--
B39.5	--	Histoplasmosis duboisii	3	--	--	--	--	--
B39.9	--	Histoplasmosis, unspecified	3	15	--	--	--	--
B44.0	--	Invasive pulmonary aspergillosis	3	15	--	--	--	--
B45.1	--	Cerebral cryptococcosis	3	03, 05	--	--	--	--
B58.2	--	Toxoplasma meningoencephalitis	3	03, 05	--	--	--	--
B58.3	--	Pulmonary toxoplasmosis	3	15	--	--	--	--
B58.81	--	Toxoplasma myocarditis	3	14	--	--	--	--
B59	--	Pneumocystosis	3	15	--	--	--	--
B77.81	--	Ascariasis pneumonia	3	15	--	--	--	--
B94.1	--	Sequelae of viral encephalitis	3	03	--	--	--	--
B97.30	--	Unspecified retrovirus as the cause of diseases classified elsewhere	3	--	--	--	--	--
B97.31	--	Lentivirus as the cause of diseases classified elsewhere	3	--	--	--	--	--
B97.32	--	Oncovirus as the cause of diseases classified elsewhere	3	--	--	--	--	--
B97.33	--	Human T-cell lymphotropic virus, type I [HTLV-I] as the cause of diseases classified elsewhere	3	06	--	--	--	--
B97.34	--	Human T-cell lymphotropic virus, type II [HTLV-II] as the cause of diseases classified elsewhere	3	06	--	--	--	--
B97.35	--	Human immunodeficiency virus, type 2 [HIV 2] as the cause of diseases classified elsewhere	3	--	--	--	--	--
B97.39	--	Other retrovirus as the cause of diseases classified elsewhere	3	--	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
C91.00	--	Acute lymphoblastic leukemia not having achieved remission	3	--	--	--	--	--
C91.02	--	Acute lymphoblastic leukemia, in relapse	3	--	--	--	--	--
C92.00	--	Acute myeloblastic leukemia, not having achieved remission	3	--	--	--	--	--
C92.02	--	Acute myeloblastic leukemia, in relapse	3	--	--	--	--	--
C92.40	--	Acute promyelocytic leukemia, not having achieved remission	3	--	--	--	--	--
C92.42	--	Acute promyelocytic leukemia, in relapse	3	--	--	--	--	--
C92.50	--	Acute myelomonocytic leukemia, not having achieved remission	3	--	--	--	--	--
C92.52	--	Acute myelomonocytic leukemia, in relapse	3	--	--	--	--	--
C92.60	--	Acute myeloid leukemia with 11q23-abnormality not having achieved remission	3	--	--	--	--	--
C92.62	--	Acute myeloid leukemia with 11q23-abnormality in relapse	3	--	--	--	--	--
C92.A0	--	Acute myeloid leukemia with multilineage dysplasia, not having achieved remission	3	--	--	--	--	--
C92.A2	--	Acute myeloid leukemia with multilineage dysplasia, in relapse	3	--	--	--	--	--
C93.00	--	Acute monoblastic/monocytic leukemia, not having achieved remission	3	--	--	--	--	--
C93.02	--	Acute monoblastic/monocytic leukemia, in relapse	3	--	--	--	--	--
C94.00	--	Acute erythroid leukemia, not having achieved remission	3	--	--	--	--	--
C94.02	--	Acute erythroid leukemia, in relapse	3	--	--	--	--	--
C95.00	--	Acute leukemia of unspecified cell type not having achieved remission	3	--	--	--	--	--
C95.02	--	Acute leukemia of unspecified cell type, in relapse	3	--	--	--	--	--
D57.00	--	Hb-SS disease with crisis, unspecified	3	--	--	--	--	--
D57.01	--	Hb-SS disease with acute chest syndrome	3	--	--	--	--	--
D57.02	--	Hb-SS disease with splenic sequestration	3	--	--	--	--	--

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D57.1	--	Sickle-cell disease without crisis	3	--	--	--	--	--
D57.20	--	Sickle-cell/Hb-C disease without crisis	3	--	--	--	--	--
D57.211	--	Sickle-cell/Hb-C disease with acute chest syndrome	3	--	--	--	--	--
D57.212	--	Sickle-cell/Hb-C disease with splenic sequestration	3	--	--	--	--	--
D57.219	--	Sickle-cell/Hb-C disease with crisis, unspecified	3	--	--	--	--	--
D57.411	--	Sickle-cell thalassemia with acute chest syndrome	3	--	--	--	--	--
D57.80	--	Other sickle-cell disorders without crisis	3	--	--	--	--	--
D57.811	--	Other sickle-cell disorders with acute chest syndrome	3	--	--	--	--	--
D57.812	--	Other sickle-cell disorders with splenic sequestration	3	--	--	--	--	--
D57.819	--	Other sickle-cell disorders with crisis, unspecified	3	--	--	--	--	--
D60.0	--	Chronic acquired pure red cell aplasia	3	--	--	--	--	--
D60.1	--	Transient acquired pure red cell aplasia	3	--	--	--	--	--
D60.8	--	Other acquired pure red cell aplasias	3	--	--	--	--	--
D60.9	--	Acquired pure red cell aplasia, unspecified	3	--	--	--	--	--
D61.01	--	Constitutional (pure) red blood cell aplasia	3	--	--	--	--	--
D61.09	--	Other constitutional aplastic anemia	3	--	--	--	--	--
D61.1	--	Drug-induced aplastic anemia	3	--	--	--	--	--
D61.2	--	Aplastic anemia due to other external agents	3	--	--	--	--	--
D61.3	--	Idiopathic aplastic anemia	3	--	--	--	--	--
D61.810	--	Antineoplastic chemotherapy induced pancytopenia	3	--	--	--	--	--
D61.811	--	Other drug-induced pancytopenia	3	--	--	--	--	--
D61.818	--	Other pancytopenia	3	--	--	--	--	--
D61.82	--	Myelophthisis	3	--	--	--	--	--

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D61.89	--	Other specified aplastic anemias and other bone marrow failure syndromes	3	--	--	--	--	--
D61.9	--	Aplastic anemia, unspecified	3	--	--	--	--	--
D64.81	--	Anemia due to antineoplastic chemotherapy	3	--	--	--	--	--
D65	--	Disseminated intravascular coagulation [defibrination syndrome]	3	--	--	--	--	--
D66	--	Hereditary factor VIII deficiency	3	--	--	--	--	--
D67	--	Hereditary factor IX deficiency	3	--	--	--	--	--
E08.21	--	Diabetes mellitus due to underlying condition with diabetic nephropathy	3	--	--	--	--	--
E08.22	--	Diabetes mellitus due to underlying condition with diabetic chronic kidney disease	3	--	--	--	--	--
E08.29	--	Diabetes mellitus due to underlying condition with other diabetic kidney complication	3	--	--	--	--	--
E08.311	--	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E08.319	--	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema	3	--	--	--	--	--
E08.3211	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E08.3212	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E08.3213	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E08.3219	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3291	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--

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E08.3292	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E08.3293	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E08.3299	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3311	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E08.3312	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E08.3313	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E08.3319	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3391	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E08.3392	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E08.3393	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E08.3399	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--

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E08.3411	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E08.3412	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E08.3413	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E08.3419	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3491	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E08.3492	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E08.3493	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E08.3499	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3511	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E08.3512	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E08.3513	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--

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E08.3519	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E08.3591	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E08.3592	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E08.3593	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E08.3599	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E08.36	--	Diabetes mellitus due to underlying condition with diabetic cataract	3	--	--	--	--	--
E08.39	--	Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication	3	--	--	--	--	--
E08.40	--	Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified	3	06	--	--	--	--
E08.41	--	Diabetes mellitus due to underlying condition with diabetic mononeuropathy	3	--	--	--	--	--
E08.42	--	Diabetes mellitus due to underlying condition with diabetic polyneuropathy	3	06	--	--	--	--
E08.43	--	Diabetes mellitus due to underlying condition with diabetic autonomic (poly)neuropathy	3	--	--	--	--	--
E08.44	--	Diabetes mellitus due to underlying condition with diabetic amyotrophy	3	--	--	--	--	--
E08.49	--	Diabetes mellitus due to underlying condition with other diabetic neurological complication	3	--	--	--	--	--
E08.51	--	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E08.52	--	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene	3	--	--	--	--	--

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E08.59	--	Diabetes mellitus due to underlying condition with other circulatory complications	3	--	--	--	--	--
E08.610	--	Diabetes mellitus due to underlying condition with diabetic neuropathic arthropathy	3	--	--	--	--	--
E08.618	--	Diabetes mellitus due to underlying condition with other diabetic arthropathy	3	--	--	--	--	--
E08.620	--	Diabetes mellitus due to underlying condition with diabetic dermatitis	3	--	--	--	--	--
E08.621	--	Diabetes mellitus due to underlying condition with foot ulcer	3	--	--	--	--	--
E08.622	--	Diabetes mellitus due to underlying condition with other skin ulcer	3	--	--	--	--	--
E08.628	--	Diabetes mellitus due to underlying condition with other skin complications	3	--	--	--	--	--
E08.630	--	Diabetes mellitus due to underlying condition with periodontal disease	3	--	--	--	--	--
E08.638	--	Diabetes mellitus due to underlying condition with other oral complications	3	--	--	--	--	--
E08.649	--	Diabetes mellitus due to underlying condition with hypoglycemia without coma	3	--	--	--	--	--
E08.65	--	Diabetes mellitus due to underlying condition with hyperglycemia	3	--	--	--	--	--
E08.69	--	Diabetes mellitus due to underlying condition with other specified complication	3	--	--	--	--	--
E09.21	--	Drug or chemical induced diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E09.22	--	Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease	3	--	--	--	--	--
E09.29	--	Drug or chemical induced diabetes mellitus with other diabetic kidney complication	3	--	--	--	--	--
E09.311	--	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E09.319	--	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy without macular edema	3	--	--	--	--	--

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E09.3211	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E09.3212	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E09.3213	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E09.3219	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3291	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E09.3292	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E09.3293	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E09.3299	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3311	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E09.3312	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E09.3313	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E09.3319	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--

Notes:

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E09.3391	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E09.3392	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E09.3393	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E09.3399	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3411	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E09.3412	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E09.3413	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E09.3419	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3491	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E09.3492	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E09.3493	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E09.3499	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3511	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E09.3512	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E09.3513	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E09.3519	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E09.3591	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E09.3592	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E09.3593	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E09.3599	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E09.36	--	Drug or chemical induced diabetes mellitus with diabetic cataract	3	--	--	--	--	--
E09.39	--	Drug or chemical induced diabetes mellitus with other diabetic ophthalmic complication	3	--	--	--	--	--
E09.40	--	Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified	3	06	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E09.41	--	Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy	3	--	--	--	--	--
E09.42	--	Drug or chemical induced diabetes mellitus with neurological complications with diabetic polyneuropathy	3	06	--	--	--	--
E09.43	--	Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy	3	--	--	--	--	--
E09.44	--	Drug or chemical induced diabetes mellitus with neurological complications with diabetic amyotrophy	3	--	--	--	--	--
E09.49	--	Drug or chemical induced diabetes mellitus with neurological complications with other diabetic neurological complication	3	--	--	--	--	--
E09.51	--	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E09.52	--	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene	3	--	--	--	--	--
E09.59	--	Drug or chemical induced diabetes mellitus with other circulatory complications	3	--	--	--	--	--
E09.610	--	Drug or chemical induced diabetes mellitus with diabetic neuropathic arthropathy	3	--	--	--	--	--
E09.618	--	Drug or chemical induced diabetes mellitus with other diabetic arthropathy	3	--	--	--	--	--
E09.620	--	Drug or chemical induced diabetes mellitus with diabetic dermatitis	3	--	--	--	--	--
E09.621	--	Drug or chemical induced diabetes mellitus with foot ulcer	3	--	--	--	--	--
E09.622	--	Drug or chemical induced diabetes mellitus with other skin ulcer	3	--	--	--	--	--
E09.628	--	Drug or chemical induced diabetes mellitus with other skin complications	3	--	--	--	--	--
E09.630	--	Drug or chemical induced diabetes mellitus with periodontal disease	3	--	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E09.638	--	Drug or chemical induced diabetes mellitus with other oral complications	3	--	--	--	--	--
E09.649	--	Drug or chemical induced diabetes mellitus with hypoglycemia without coma	3	--	--	--	--	--
E09.65	--	Drug or chemical induced diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E09.69	--	Drug or chemical induced diabetes mellitus with other specified complication	3	--	--	--	--	--
E10.21	--	Type 1 diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E10.22	--	Type 1 diabetes mellitus with diabetic chronic kidney disease	3	--	--	--	--	--
E10.29	--	Type 1 diabetes mellitus with other diabetic kidney complication	3	--	--	--	--	--
E10.311	--	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E10.319	--	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	3	--	--	--	--	--
E10.3211	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E10.3212	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E10.3213	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E10.3219	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3291	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E10.3292	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.3293	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E10.3299	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3311	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E10.3312	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E10.3313	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E10.3319	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3391	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E10.3392	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E10.3393	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E10.3399	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3411	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E10.3412	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.3413	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E10.3419	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3491	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E10.3492	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E10.3493	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E10.3499	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3511	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E10.3512	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E10.3513	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E10.3519	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E10.3591	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E10.3592	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.3593	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E10.3599	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E10.36	--	Type 1 diabetes mellitus with diabetic cataract	3	--	--	--	--	--
E10.39	--	Type 1 diabetes mellitus with other diabetic ophthalmic complication	3	--	--	--	--	--
E10.40	--	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	3	06	--	--	--	--
E10.41	--	Type 1 diabetes mellitus with diabetic mononeuropathy	3	06	--	--	--	--
E10.42	--	Type 1 diabetes mellitus with diabetic polyneuropathy	3	06	--	--	--	--
E10.43	--	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy	3	06	--	--	--	--
E10.44	--	Type 1 diabetes mellitus with diabetic amyotrophy	3	06	--	--	--	--
E10.49	--	Type 1 diabetes mellitus with other diabetic neurological complication	3	06	--	--	--	--
E10.51	--	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E10.52	--	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene	3	--	--	--	--	--
E10.59	--	Type 1 diabetes mellitus with other circulatory complications	3	--	--	--	--	--
E10.610	--	Type 1 diabetes mellitus with diabetic neuropathic arthropathy	3	06	--	--	--	--
E10.618	--	Type 1 diabetes mellitus with other diabetic arthropathy	3	--	--	--	--	--
E10.620	--	Type 1 diabetes mellitus with diabetic dermatitis	3	--	--	--	--	--
E10.621	--	Type 1 diabetes mellitus with foot ulcer	3	--	--	--	--	--
E10.622	--	Type 1 diabetes mellitus with other skin ulcer	3	--	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.628	--	Type 1 diabetes mellitus with other skin complications	3	--	--	--	--	--
E10.630	--	Type 1 diabetes mellitus with periodontal disease	3	--	--	--	--	--
E10.638	--	Type 1 diabetes mellitus with other oral complications	3	--	--	--	--	--
E10.649	--	Type 1 diabetes mellitus with hypoglycemia without coma	3	--	--	--	--	--
E10.65	--	Type 1 diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E10.69	--	Type 1 diabetes mellitus with other specified complication	3	--	--	--	--	--
E10.8	--	Type 1 diabetes mellitus with unspecified complications	3	--	--	--	--	--
E10.9	--	Type 1 diabetes mellitus without complications	3	--	--	--	--	--
E11.21	--	Type 2 diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E11.22	--	Type 2 diabetes mellitus with diabetic chronic kidney disease	3	--	--	--	--	--
E11.29	--	Type 2 diabetes mellitus with other diabetic kidney complication	3	--	--	--	--	--
E11.311	--	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E11.319	--	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	3	--	--	--	--	--
E11.3211	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E11.3212	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E11.3213	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.3219	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3291	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E11.3292	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E11.3293	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E11.3299	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3311	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E11.3312	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E11.3313	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E11.3319	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3391	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E11.3392	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E11.3393	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.3399	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3411	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E11.3412	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E11.3413	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E11.3419	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3491	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E11.3492	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E11.3493	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E11.3499	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3511	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E11.3512	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E11.3513	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.3519	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E11.3591	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E11.3592	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E11.3593	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E11.3599	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E11.36	--	Type 2 diabetes mellitus with diabetic cataract	3	--	--	--	--	--
E11.39	--	Type 2 diabetes mellitus with other diabetic ophthalmic complication	3	--	--	--	--	--
E11.40	--	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	3	06	--	--	--	--
E11.41	--	Type 2 diabetes mellitus with diabetic mononeuropathy	3	06	--	--	--	--
E11.42	--	Type 2 diabetes mellitus with diabetic polyneuropathy	3	06	--	--	--	--
E11.43	--	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy	3	06	--	--	--	--
E11.44	--	Type 2 diabetes mellitus with diabetic amyotrophy	3	06	--	--	--	--
E11.49	--	Type 2 diabetes mellitus with other diabetic neurological complication	3	06	--	--	--	--
E11.51	--	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E11.52	--	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	3	--	--	--	--	--
E11.59	--	Type 2 diabetes mellitus with other circulatory complications	3	--	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.610	--	Type 2 diabetes mellitus with diabetic neuropathic arthropathy	3	06	--	--	--	--
E11.618	--	Type 2 diabetes mellitus with other diabetic arthropathy	3	--	--	--	--	--
E11.620	--	Type 2 diabetes mellitus with diabetic dermatitis	3	--	--	--	--	--
E11.621	--	Type 2 diabetes mellitus with foot ulcer	3	--	--	--	--	--
E11.622	--	Type 2 diabetes mellitus with other skin ulcer	3	--	--	--	--	--
E11.628	--	Type 2 diabetes mellitus with other skin complications	3	--	--	--	--	--
E11.630	--	Type 2 diabetes mellitus with periodontal disease	3	--	--	--	--	--
E11.638	--	Type 2 diabetes mellitus with other oral complications	3	--	--	--	--	--
E11.649	--	Type 2 diabetes mellitus with hypoglycemia without coma	3	--	--	--	--	--
E11.65	--	Type 2 diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E11.69	--	Type 2 diabetes mellitus with other specified complication	3	--	--	--	--	--
E13.21	--	Other specified diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E13.22	--	Other specified diabetes mellitus with diabetic chronic kidney disease	3	--	--	--	--	--
E13.29	--	Other specified diabetes mellitus with other diabetic kidney complication	3	--	--	--	--	--
E13.311	--	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E13.319	--	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	3	--	--	--	--	--
E13.3211	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E13.3212	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E13.3213	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E13.3219	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3291	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E13.3292	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E13.3293	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E13.3299	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3311	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E13.3312	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E13.3313	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E13.3319	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3391	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--

Notes:

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E13.3392	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E13.3393	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E13.3399	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3411	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--
E13.3412	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E13.3413	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E13.3419	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3491	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E13.3492	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E13.3493	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E13.3499	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3511	--	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E13.3512	--	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	3	--	Yes	--	--	--
E13.3513	--	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	3	--	Yes	--	--	--
E13.3519	--	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	3	--	Yes	--	--	--
E13.3591	--	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	3	--	Yes	--	--	--
E13.3592	--	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	3	--	Yes	--	--	--
E13.3593	--	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	3	--	Yes	--	--	--
E13.3599	--	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	3	--	Yes	--	--	--
E13.36	--	Other specified diabetes mellitus with diabetic cataract	3	--	--	--	--	--
E13.39	--	Other specified diabetes mellitus with other diabetic ophthalmic complication	3	--	--	--	--	--
E13.40	--	Other specified diabetes mellitus with diabetic neuropathy, unspecified	3	06	--	--	--	--
E13.41	--	Other specified diabetes mellitus with diabetic mononeuropathy	3	06	--	--	--	--
E13.42	--	Other specified diabetes mellitus with diabetic polyneuropathy	3	06	--	--	--	--
E13.43	--	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy	3	06	--	--	--	--
E13.44	--	Other specified diabetes mellitus with diabetic amyotrophy	3	06	--	--	--	--
E13.49	--	Other specified diabetes mellitus with other diabetic neurological complication	3	06	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E13.51	--	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E13.52	--	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene	3	--	--	--	--	--
E13.59	--	Other specified diabetes mellitus with other circulatory complications	3	--	--	--	--	--
E13.610	--	Other specified diabetes mellitus with diabetic neuropathic arthropathy	3	06	--	--	--	--
E13.618	--	Other specified diabetes mellitus with other diabetic arthropathy	3	--	--	--	--	--
E13.620	--	Other specified diabetes mellitus with diabetic dermatitis	3	--	--	--	--	--
E13.621	--	Other specified diabetes mellitus with foot ulcer	3	--	--	--	--	--
E13.622	--	Other specified diabetes mellitus with other skin ulcer	3	--	--	--	--	--
E13.628	--	Other specified diabetes mellitus with other skin complications	3	--	--	--	--	--
E13.630	--	Other specified diabetes mellitus with periodontal disease	3	--	--	--	--	--
E13.638	--	Other specified diabetes mellitus with other oral complications	3	--	--	--	--	--
E13.649	--	Other specified diabetes mellitus with hypoglycemia without coma	3	--	--	--	--	--
E13.65	--	Other specified diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E13.69	--	Other specified diabetes mellitus with other specified complication	3	--	--	--	--	--
E66.01	--	Morbid (severe) obesity due to excess calories	3	--	--	--	--	--
E84.0	--	Cystic fibrosis with pulmonary manifestations	3	15	--	--	--	--
E84.11	--	Meconium ileus in cystic fibrosis	3	15	--	--	--	--
E84.19	--	Cystic fibrosis with other intestinal manifestations	3	15	--	--	--	--
E84.8	--	Cystic fibrosis with other manifestations	3	15	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E84.9	--	Cystic fibrosis, unspecified	3	15	--	--	--	--
G00.0	--	Hemophilus meningitis	3	03, 05	--	--	--	--
G00.1	--	Pneumococcal meningitis	3	03, 05	--	--	--	--
G00.2	--	Streptococcal meningitis	3	03, 05	--	--	--	--
G00.3	--	Staphylococcal meningitis	3	03, 05	--	--	--	--
G00.8	--	Other bacterial meningitis	3	03, 05	--	--	--	--
G00.9	--	Bacterial meningitis, unspecified	3	03, 05	--	--	--	--
G01	--	Meningitis in bacterial diseases classified elsewhere	3	03, 05	--	--	--	--
G02	--	Meningitis in other infectious and parasitic diseases classified elsewhere	3	03, 05	--	--	--	--
G03.0	--	Nonpyogenic meningitis	3	03, 05	--	--	--	--
G03.1	--	Chronic meningitis	3	03, 05	--	--	--	--
G03.2	--	Benign recurrent meningitis [Mollaret]	3	03, 05	--	--	--	--
G03.9	--	Meningitis, unspecified	3	03, 05	--	--	--	--
G04.00	--	Acute disseminated encephalitis and encephalomyelitis, unspecified	3	03	--	--	--	--
G04.01	--	Postinfectious acute disseminated encephalitis and encephalomyelitis (postinfectious ADEM)	3	03	--	--	--	--
G04.2	--	Bacterial meningoencephalitis and meningomyelitis, not elsewhere classified	3	03, 05	--	--	--	--
G04.30	--	Acute necrotizing hemorrhagic encephalopathy, unspecified	3	03	--	--	--	--
G04.31	--	Postinfectious acute necrotizing hemorrhagic encephalopathy	3	03	--	--	--	--
G04.39	--	Other acute necrotizing hemorrhagic encephalopathy	3	03	--	--	--	--
G04.81	--	Other encephalitis and encephalomyelitis	3	03	--	--	--	--
G04.89	--	Other myelitis	3	03	--	--	--	--
G04.90	--	Encephalitis and encephalomyelitis, unspecified	3	03	--	--	--	--
G04.91	--	Myelitis, unspecified	3	03	--	--	--	--

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G05.4	--	Myelitis in diseases classified elsewhere	3	03	--	--	--	--
G06.0	--	Intracranial abscess and granuloma	3	03	--	--	--	--
G06.1	--	Intraspinal abscess and granuloma	3	03	--	--	--	--
G06.2	--	Extradural and subdural abscess, unspecified	3	03	--	--	--	--
G07	--	Intracranial and intraspinal abscess and granuloma in diseases classified elsewhere	3	03	--	--	--	--
G37.3	--	Acute transverse myelitis in demyelinating disease of central nervous system	3	03	--	--	--	--
G37.4	--	Subacute necrotizing myelitis of central nervous system	3	03	--	--	--	--
G40.301	--	Generalized idiopathic epilepsy and epileptic syndromes, not intractable, with status epilepticus	3	02, 03	--	--	--	--
G40.311	--	Generalized idiopathic epilepsy and epileptic syndromes, intractable, with status epilepticus	3	02, 03	--	--	--	--
G40.319	--	Generalized idiopathic epilepsy and epileptic syndromes, intractable, without status epilepticus	3	02, 03	--	--	--	--
G40.411	--	Other generalized epilepsy and epileptic syndromes, intractable, with status epilepticus	3	02, 03	--	--	--	--
G40.419	--	Other generalized epilepsy and epileptic syndromes, intractable, without status epilepticus	3	02, 03	--	--	--	--
G81.00	--	Flaccid hemiplegia affecting unspecified side	3	01	--	--	--	--
G81.01	--	Flaccid hemiplegia affecting right dominant side	3	01	--	--	--	--
G81.02	--	Flaccid hemiplegia affecting left dominant side	3	01	--	--	--	--
G81.03	--	Flaccid hemiplegia affecting right nondominant side	3	01	--	--	--	--
G81.04	--	Flaccid hemiplegia affecting left nondominant side	3	01	--	--	--	--
G81.10	--	Spastic hemiplegia affecting unspecified side	3	01	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
G81.11	--	Spastic hemiplegia affecting right dominant side	3	01	--	--	--	--
G81.12	--	Spastic hemiplegia affecting left dominant side	3	01	--	--	--	--
G81.13	--	Spastic hemiplegia affecting right nondominant side	3	01	--	--	--	--
G81.14	--	Spastic hemiplegia affecting left nondominant side	3	01	--	--	--	--
G81.90	--	Hemiplegia, unspecified affecting unspecified side	3	01	--	--	--	--
G81.91	--	Hemiplegia, unspecified affecting right dominant side	3	01	--	--	--	--
G81.92	--	Hemiplegia, unspecified affecting left dominant side	3	01	--	--	--	--
G81.93	--	Hemiplegia, unspecified affecting right nondominant side	3	01	--	--	--	--
G81.94	--	Hemiplegia, unspecified affecting left nondominant side	3	01	--	--	--	--
G93.1	--	Anoxic brain damage, not elsewhere classified	3	02, 03	--	--	--	--
H05.011	--	Cellulitis of right orbit	3	--	--	--	--	--
H05.012	--	Cellulitis of left orbit	3	--	--	--	--	--
H05.013	--	Cellulitis of bilateral orbits	3	--	--	--	--	--
H05.019	--	Cellulitis of unspecified orbit	3	--	--	--	--	--
H05.021	--	Osteomyelitis of right orbit	3	--	--	--	--	--
H05.022	--	Osteomyelitis of left orbit	3	--	--	--	--	--
H05.023	--	Osteomyelitis of bilateral orbits	3	--	--	--	--	--
H05.029	--	Osteomyelitis of unspecified orbit	3	--	--	--	--	--
H05.031	--	Periostitis of right orbit	3	--	--	--	--	--
H05.032	--	Periostitis of left orbit	3	--	--	--	--	--
H05.033	--	Periostitis of bilateral orbits	3	--	--	--	--	--
H05.039	--	Periostitis of unspecified orbit	3	--	--	--	--	--
I09.0	--	Rheumatic myocarditis	3	14	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I12.0	--	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	3	--	--	--	--	--
I13.0	--	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	3	14	--	--	--	--
I13.2	--	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	3	14	--	--	--	--
I26.01	--	Septic pulmonary embolism with acute cor pulmonale	3	15	--	--	--	--
I26.02	--	Saddle embolus of pulmonary artery	3	15	--	--	--	--
I26.09	--	Other pulmonary embolism with acute cor pulmonale	3	15	--	--	--	--
I26.90	--	Septic pulmonary embolism without acute cor pulmonale	3	15	--	--	--	--
I26.92	--	Saddle embolus of pulmonary artery without acute cor pulmonale	3	15	--	--	--	--
I26.99	--	Other pulmonary embolism without acute cor pulmonale	3	15	--	--	--	--
I27.82	--	Chronic pulmonary embolism	3	15	--	--	--	--
I33.0	--	Acute and subacute infective endocarditis	3	14	--	--	--	--
I33.9	--	Acute and subacute endocarditis, unspecified	3	14	--	--	--	--
I39	--	Endocarditis and heart valve disorders in diseases classified elsewhere	3	14	--	--	--	--
I40.0	--	Infective myocarditis	3	14	--	--	--	--
I40.1	--	Isolated myocarditis	3	14	--	--	--	--
I40.8	--	Other acute myocarditis	3	14	--	--	--	--
I40.9	--	Acute myocarditis, unspecified	3	14	--	--	--	--
I41	--	Myocarditis in diseases classified elsewhere	3	14	--	--	--	--
I46.2	--	Cardiac arrest due to underlying cardiac condition	3	14	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I46.8	--	Cardiac arrest due to other underlying condition	3	14	--	--	--	--
I46.9	--	Cardiac arrest, cause unspecified	3	14	--	--	--	--
I49.01	--	Ventricular fibrillation	3	14	--	--	--	--
I50.1	--	Left ventricular failure	3	14	--	--	--	--
I50.20	--	Unspecified systolic (congestive) heart failure	3	14	--	--	--	--
I50.21	--	Acute systolic (congestive) heart failure	3	14	--	--	--	--
I50.22	--	Chronic systolic (congestive) heart failure	3	14	--	--	--	--
I50.23	--	Acute on chronic systolic (congestive) heart failure	3	14	--	--	--	--
I50.30	--	Unspecified diastolic (congestive) heart failure	3	14	--	--	--	--
I50.31	--	Acute diastolic (congestive) heart failure	3	14	--	--	--	--
I50.32	--	Chronic diastolic (congestive) heart failure	3	14	--	--	--	--
I50.33	--	Acute on chronic diastolic (congestive) heart failure	3	14	--	--	--	--
I50.40	--	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure	3	14	--	--	--	--
I50.41	--	Acute combined systolic (congestive) and diastolic (congestive) heart failure	3	14	--	--	--	--
I50.42	--	Chronic combined systolic (congestive) and diastolic (congestive) heart failure	3	14	--	--	--	--
I50.43	--	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure	3	14	--	--	--	--
I60.00	--	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	3	01, 02, 03	--	--	--	--
I60.01	--	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	3	01, 02, 03	--	--	--	--
I60.02	--	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	3	01, 02, 03	--	--	--	--
I60.10	--	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	3	01, 02, 03	--	--	--	--

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I60.11	--	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	3	01, 02, 03	--	--	--	--
I60.12	--	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	3	01, 02, 03	--	--	--	--
I60.2	--	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	3	01, 02, 03	Yes	--	--	--
I60.30	--	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	3	01, 02, 03	--	--	--	--
I60.31	--	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	3	01, 02, 03	--	--	--	--
I60.32	--	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	3	01, 02, 03	--	--	--	--
I60.4	--	Nontraumatic subarachnoid hemorrhage from basilar artery	3	01, 02, 03	--	--	--	--
I60.50	--	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	3	01, 02, 03	--	--	--	--
I60.51	--	Nontraumatic subarachnoid hemorrhage from right vertebral artery	3	01, 02, 03	--	--	--	--
I60.52	--	Nontraumatic subarachnoid hemorrhage from left vertebral artery	3	01, 02, 03	--	--	--	--
I60.6	--	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	3	01, 02, 03	--	--	--	--
I60.7	--	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	3	01, 02, 03	--	--	--	--
I60.8	--	Other nontraumatic subarachnoid hemorrhage	3	01, 02, 03	--	--	--	--
I60.9	--	Nontraumatic subarachnoid hemorrhage, unspecified	3	01, 02, 03	--	--	--	--
I61.0	--	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	3	01, 02, 03	--	--	--	--
I61.1	--	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	3	01, 02, 03	--	--	--	--
I61.2	--	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	3	01, 02, 03	--	--	--	--
I61.3	--	Nontraumatic intracerebral hemorrhage in brain stem	3	01, 02, 03	--	--	--	--

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I61.4	--	Nontraumatic intracerebral hemorrhage in cerebellum	3	01, 02, 03	--	--	--	--
I61.5	--	Nontraumatic intracerebral hemorrhage, intraventricular	3	01, 02, 03	--	--	--	--
I61.6	--	Nontraumatic intracerebral hemorrhage, multiple localized	3	01, 02, 03	--	--	--	--
I61.8	--	Other nontraumatic intracerebral hemorrhage	3	01, 02, 03	--	--	--	--
I61.9	--	Nontraumatic intracerebral hemorrhage, unspecified	3	01, 02, 03	--	--	--	--
I62.00	--	Nontraumatic subdural hemorrhage, unspecified	3	01, 02, 03	--	--	--	--
I62.01	--	Nontraumatic acute subdural hemorrhage	3	01, 02, 03	--	--	--	--
I62.02	--	Nontraumatic subacute subdural hemorrhage	3	01, 02, 03	--	--	--	--
I62.03	--	Nontraumatic chronic subdural hemorrhage	3	01, 02, 03	--	--	--	--
I62.1	--	Nontraumatic extradural hemorrhage	3	01, 02, 03	--	--	--	--
I63.00	--	Cerebral infarction due to thrombosis of unspecified precerebral artery	3	01	--	--	--	--
I63.011	--	Cerebral infarction due to thrombosis of right vertebral artery	3	01	--	--	--	--
I63.012	--	Cerebral infarction due to thrombosis of left vertebral artery	3	01	--	--	--	--
I63.013	--	Cerebral infarction due to thrombosis of bilateral vertebral arteries	3	01	Yes	--	--	--
I63.019	--	Cerebral infarction due to thrombosis of unspecified vertebral artery	3	01	--	--	--	--
I63.02	--	Cerebral infarction due to thrombosis of basilar artery	3	01	--	--	--	--
I63.031	--	Cerebral infarction due to thrombosis of right carotid artery	3	01	--	--	--	--
I63.032	--	Cerebral infarction due to thrombosis of left carotid artery	3	01	--	--	--	--
I63.033	--	Cerebral infarction due to thrombosis of bilateral carotid arteries	3	01	Yes	--	--	--
I63.039	--	Cerebral infarction due to thrombosis of unspecified carotid artery	3	01	--	--	--	--

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I63.09	--	Cerebral infarction due to thrombosis of other precerebral artery	3	01	--	--	--	--
I63.10	--	Cerebral infarction due to embolism of unspecified precerebral artery	3	01	--	--	--	--
I63.111	--	Cerebral infarction due to embolism of right vertebral artery	3	01	--	--	--	--
I63.112	--	Cerebral infarction due to embolism of left vertebral artery	3	01	--	--	--	--
I63.113	--	Cerebral infarction due to embolism of bilateral vertebral arteries	3	01	Yes	--	--	--
I63.119	--	Cerebral infarction due to embolism of unspecified vertebral artery	3	01	--	--	--	--
I63.12	--	Cerebral infarction due to embolism of basilar artery	3	01	--	--	--	--
I63.131	--	Cerebral infarction due to embolism of right carotid artery	3	01	--	--	--	--
I63.132	--	Cerebral infarction due to embolism of left carotid artery	3	01	--	--	--	--
I63.133	--	Cerebral infarction due to embolism of bilateral carotid arteries	3	01	Yes	--	--	--
I63.139	--	Cerebral infarction due to embolism of unspecified carotid artery	3	01	--	--	--	--
I63.19	--	Cerebral infarction due to embolism of other precerebral artery	3	01	--	--	--	--
I63.20	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	3	01	--	--	--	--
I63.211	--	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries	3	01	--	--	--	--
I63.212	--	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries	3	01	--	--	--	--
I63.213	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	3	01	Yes	--	--	--

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I63.219	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries	3	01	--	--	--	--
I63.22	--	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries	3	01	--	--	--	--
I63.231	--	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	3	01	--	--	--	--
I63.232	--	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	3	01	--	--	--	--
I63.233	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	3	01	Yes	--	--	--
I63.239	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries	3	01	--	--	--	--
I63.29	--	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	3	01	--	--	--	--
I63.30	--	Cerebral infarction due to thrombosis of unspecified cerebral artery	3	01	--	--	--	--
I63.311	--	Cerebral infarction due to thrombosis of right middle cerebral artery	3	01	--	--	--	--
I63.312	--	Cerebral infarction due to thrombosis of left middle cerebral artery	3	01	--	--	--	--
I63.313	--	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	3	01	Yes	--	--	--
I63.319	--	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	3	01	--	--	--	--
I63.321	--	Cerebral infarction due to thrombosis of right anterior cerebral artery	3	01	--	--	--	--
I63.322	--	Cerebral infarction due to thrombosis of left anterior cerebral artery	3	01	--	--	--	--
I63.323	--	Cerebral infarction due to thrombosis of bilateral anterior arteries	3	01	Yes	--	--	--
I63.329	--	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	3	01	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I63.331	--	Cerebral infarction due to thrombosis of right posterior cerebral artery	3	01	--	--	--	--
I63.332	--	Cerebral infarction due to thrombosis of left posterior cerebral artery	3	01	--	--	--	--
I63.333	--	Cerebral infarction to thrombosis of bilateral posterior arteries	3	01	Yes	--	--	--
I63.339	--	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	3	01	--	--	--	--
I63.341	--	Cerebral infarction due to thrombosis of right cerebellar artery	3	01	--	--	--	--
I63.342	--	Cerebral infarction due to thrombosis of left cerebellar artery	3	01	--	--	--	--
I63.343	--	Cerebral infarction to thrombosis of bilateral cerebellar arteries	3	01	Yes	--	--	--
I63.349	--	Cerebral infarction due to thrombosis of unspecified cerebellar artery	3	01	--	--	--	--
I63.39	--	Cerebral infarction due to thrombosis of other cerebral artery	3	01	--	--	--	--
I63.40	--	Cerebral infarction due to embolism of unspecified cerebral artery	3	01	--	--	--	--
I63.411	--	Cerebral infarction due to embolism of right middle cerebral artery	3	01	--	--	--	--
I63.412	--	Cerebral infarction due to embolism of left middle cerebral artery	3	01	--	--	--	--
I63.413	--	Cerebral infarction due to embolism of bilateral middle cerebral arteries	3	01	Yes	--	--	--
I63.419	--	Cerebral infarction due to embolism of unspecified middle cerebral artery	3	01	--	--	--	--
I63.421	--	Cerebral infarction due to embolism of right anterior cerebral artery	3	01	--	--	--	--
I63.422	--	Cerebral infarction due to embolism of left anterior cerebral artery	3	01	--	--	--	--
I63.423	--	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	3	01	Yes	--	--	--
I63.429	--	Cerebral infarction due to embolism of unspecified anterior cerebral artery	3	01	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I63.431	--	Cerebral infarction due to embolism of right posterior cerebral artery	3	01	--	--	--	--
I63.432	--	Cerebral infarction due to embolism of left posterior cerebral artery	3	01	--	--	--	--
I63.433	--	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	3	01	Yes	--	--	--
I63.439	--	Cerebral infarction due to embolism of unspecified posterior cerebral artery	3	01	--	--	--	--
I63.441	--	Cerebral infarction due to embolism of right cerebellar artery	3	01	--	--	--	--
I63.442	--	Cerebral infarction due to embolism of left cerebellar artery	3	01	--	--	--	--
I63.443	--	Cerebral infarction due to embolism of bilateral cerebellar arteries	3	01	Yes	--	--	--
I63.449	--	Cerebral infarction due to embolism of unspecified cerebellar artery	3	01	--	--	--	--
I63.49	--	Cerebral infarction due to embolism of other cerebral artery	3	01	--	--	--	--
I63.50	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	3	01	--	--	--	--
I63.511	--	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	3	01	--	--	--	--
I63.512	--	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	3	01	--	--	--	--
I63.513	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries	3	01	Yes	--	--	--
I63.519	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	3	01	--	--	--	--
I63.521	--	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	3	01	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I63.522	--	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	3	01	--	--	--	--
I63.523	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries	3	01	Yes	--	--	--
I63.529	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	3	01	--	--	--	--
I63.531	--	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	3	01	--	--	--	--
I63.532	--	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	3	01	--	--	--	--
I63.533	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries	3	01	Yes	--	--	--
I63.539	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	3	01	--	--	--	--
I63.541	--	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	3	01	--	--	--	--
I63.542	--	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	3	01	--	--	--	--
I63.543	--	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	3	01	Yes	--	--	--
I63.549	--	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	3	01	--	--	--	--
I63.59	--	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	3	01	--	--	--	--
I63.6	--	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	3	01	--	--	--	--
I63.8	--	Other cerebral infarction	3	01	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I63.9	--	Cerebral infarction, unspecified	3	01	--	--	--	--
I67.89	--	Other cerebrovascular disease	3	01	--	--	--	--
I70.231	--	Atherosclerosis of native arteries of right leg with ulceration of thigh	3	10, 11	--	--	--	--
I70.232	--	Atherosclerosis of native arteries of right leg with ulceration of calf	3	10, 11	--	--	--	--
I70.233	--	Atherosclerosis of native arteries of right leg with ulceration of ankle	3	10, 11	--	--	--	--
I70.234	--	Atherosclerosis of native arteries of right leg with ulceration of heel and midfoot	3	10, 11	--	--	--	--
I70.235	--	Atherosclerosis of native arteries of right leg with ulceration of other part of foot	3	10, 11	--	--	--	--
I70.238	--	Atherosclerosis of native arteries of right leg with ulceration of other part of lower right leg	3	10, 11	--	--	--	--
I70.239	--	Atherosclerosis of native arteries of right leg with ulceration of unspecified site	3	10, 11	--	--	--	--
I70.241	--	Atherosclerosis of native arteries of left leg with ulceration of thigh	3	10, 11	--	--	--	--
I70.242	--	Atherosclerosis of native arteries of left leg with ulceration of calf	3	10, 11	--	--	--	--
I70.243	--	Atherosclerosis of native arteries of left leg with ulceration of ankle	3	10, 11	--	--	--	--
I70.244	--	Atherosclerosis of native arteries of left leg with ulceration of heel and midfoot	3	10, 11	--	--	--	--
I70.245	--	Atherosclerosis of native arteries of left leg with ulceration of other part of foot	3	10, 11	--	--	--	--
I70.248	--	Atherosclerosis of native arteries of left leg with ulceration of other part of lower left leg	3	10, 11	--	--	--	--
I70.249	--	Atherosclerosis of native arteries of left leg with ulceration of unspecified site	3	10, 11	--	--	--	--
I70.25	--	Atherosclerosis of native arteries of other extremities with ulceration	3	10, 11	--	--	--	--
I70.261	--	Atherosclerosis of native arteries of extremities with gangrene, right leg	3	10, 11	--	--	--	--
I70.262	--	Atherosclerosis of native arteries of extremities with gangrene, left leg	3	10, 11	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I70.263	--	Atherosclerosis of native arteries of extremities with gangrene, bilateral legs	3	10, 11	--	--	--	--
I70.268	--	Atherosclerosis of native arteries of extremities with gangrene, other extremity	3	10, 11	--	--	--	--
I70.269	--	Atherosclerosis of native arteries of extremities with gangrene, unspecified extremity	3	10, 11	--	--	--	--
I70.92	--	Chronic total occlusion of artery of the extremities	3	10, 11	--	--	--	--
I71.00	--	Dissection of unspecified site of aorta	3	05	--	--	--	--
I71.01	--	Dissection of thoracic aorta	3	05	--	--	--	--
I71.02	--	Dissection of abdominal aorta	3	05	--	--	--	--
I71.03	--	Dissection of thoracoabdominal aorta	3	05	--	--	--	--
I71.1	--	Thoracic aortic aneurysm, ruptured	3	05	--	--	--	--
I71.3	--	Abdominal aortic aneurysm, ruptured	3	05	--	--	--	--
I71.5	--	Thoracoabdominal aortic aneurysm, ruptured	3	05	--	--	--	--
I71.8	--	Aortic aneurysm of unspecified site, ruptured	3	--	--	--	--	--
I76	--	Septic arterial embolism	3	--	--	--	--	--
I81	--	Portal vein thrombosis	3	--	--	--	--	--
I82.0	--	Budd-Chiari syndrome	3	--	--	--	--	--
I82.1	--	Thrombophlebitis migrans	3	--	--	--	--	--
I82.220	--	Acute embolism and thrombosis of inferior vena cava	3	--	--	--	--	--
I82.221	--	Chronic embolism and thrombosis of inferior vena cava	3	--	--	--	--	--
I82.3	--	Embolism and thrombosis of renal vein	3	--	--	--	--	--
I96	--	Gangrene, not elsewhere classified	3	10, 11	--	--	--	--
J04.11	--	Acute tracheitis with obstruction	3	15	--	--	--	--
J05.0	--	Acute obstructive laryngitis [croup]	3	15	--	--	--	--
J05.11	--	Acute epiglottitis with obstruction	3	15	--	--	--	--
J09.X1	--	Influenza due to identified novel influenza A virus with pneumonia	3	15	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
J09.X2	--	Influenza due to identified novel influenza A virus with other respiratory manifestations	3	15	--	--	--	--
J09.X3	--	Influenza due to identified novel influenza A virus with gastrointestinal manifestations	3	15	--	--	--	--
J09.X9	--	Influenza due to identified novel influenza A virus with other manifestations	3	15	--	--	--	--
J10.00	--	Influenza due to other identified influenza virus with unspecified type of pneumonia	3	15	--	--	--	--
J10.08	--	Influenza due to other identified influenza virus with other specified pneumonia	3	15	--	--	--	--
J10.1	--	Influenza due to other identified influenza virus with other respiratory manifestations	3	15	--	--	--	--
J11.00	--	Influenza due to unidentified influenza virus with unspecified type of pneumonia	3	15	--	--	--	--
J11.08	--	Influenza due to unidentified influenza virus with specified pneumonia	3	15	--	--	--	--
J12.0	--	Adenoviral pneumonia	3	15	--	--	--	--
J12.1	--	Respiratory syncytial virus pneumonia	3	15	--	--	--	--
J12.2	--	Parainfluenza virus pneumonia	3	15	--	--	--	--
J12.3	--	Human metapneumovirus pneumonia	3	15	--	--	--	--
J12.89	--	Other viral pneumonia	3	15	--	--	--	--
J12.9	--	Viral pneumonia, unspecified	3	15	--	--	--	--
J13	--	Pneumonia due to Streptococcus pneumoniae	3	15	--	--	--	--
J14	--	Pneumonia due to Hemophilus influenzae	3	15	--	--	--	--
J15.0	--	Pneumonia due to Klebsiella pneumoniae	3	15	--	--	--	--
J15.1	--	Pneumonia due to Pseudomonas	3	15	--	--	--	--
J15.20	--	Pneumonia due to staphylococcus, unspecified	3	15	--	--	--	--
J15.211	--	Pneumonia due to Methicillin susceptible Staphylococcus aureus	3	15	--	--	--	--
J15.212	--	Pneumonia due to Methicillin resistant Staphylococcus aureus	3	15	--	--	--	--
J15.29	--	Pneumonia due to other staphylococcus	3	15	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
J15.3	--	Pneumonia due to streptococcus, group B	3	15	--	--	--	--
J15.4	--	Pneumonia due to other streptococci	3	15	--	--	--	--
J15.5	--	Pneumonia due to Escherichia coli	3	15	--	--	--	--
J15.6	--	Pneumonia due to other aerobic Gram-negative bacteria	3	15	--	--	--	--
J15.7	--	Pneumonia due to Mycoplasma pneumoniae	3	15	--	--	--	--
J15.8	--	Pneumonia due to other specified bacteria	3	15	--	--	--	--
J15.9	--	Unspecified bacterial pneumonia	3	15	--	--	--	--
J16.0	--	Chlamydial pneumonia	3	15	--	--	--	--
J16.8	--	Pneumonia due to other specified infectious organisms	3	15	--	--	--	--
J17	--	Pneumonia in diseases classified elsewhere	3	15	--	--	--	--
J18.0	--	Bronchopneumonia, unspecified organism	3	15	--	--	--	--
J18.1	--	Lobar pneumonia, unspecified organism	3	15	--	--	--	--
J18.2	--	Hypostatic pneumonia, unspecified organism	3	15	--	--	--	--
J18.8	--	Other pneumonia, unspecified organism	3	15	--	--	--	--
J18.9	--	Pneumonia, unspecified organism	3	15	--	--	--	--
J21.0	--	Acute bronchiolitis due to respiratory syncytial virus	3	15	--	--	--	--
J21.1	--	Acute bronchiolitis due to human metapneumovirus	3	15	--	--	--	--
J21.8	--	Acute bronchiolitis due to other specified organisms	3	15	--	--	--	--
J21.9	--	Acute bronchiolitis, unspecified	3	15	--	--	--	--
J38.00	--	Paralysis of vocal cords and larynx, unspecified	3	15	--	--	--	--
J68.0	--	Bronchitis and pneumonitis due to chemicals, gases, fumes and vapors	3	15	--	--	--	--
J68.1	--	Pulmonary edema due to chemicals, gases, fumes and vapors	3	15	--	--	--	--
J69.0	--	Pneumonitis due to inhalation of food and vomit	3	15	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
J69.1	--	Pneumonitis due to inhalation of oils and essences	3	15	--	--	--	--
J69.8	--	Pneumonitis due to inhalation of other solids and liquids	3	15	--	--	--	--
J81.1	--	Chronic pulmonary edema	3	15	--	--	--	--
J82	--	Pulmonary eosinophilia, not elsewhere classified	3	15	--	--	--	--
J84.10	--	Pulmonary fibrosis, unspecified	3	15	--	--	--	--
J84.112	--	Idiopathic pulmonary fibrosis	3	15	--	--	--	--
J84.113	--	Idiopathic non-specific interstitial pneumonitis	3	15	--	--	--	--
J84.114	--	Acute interstitial pneumonitis	3	15	--	--	--	--
J84.115	--	Respiratory bronchiolitis interstitial lung disease	3	15	--	--	--	--
J84.17	--	Other interstitial pulmonary diseases with fibrosis in diseases classified elsewhere	3	15	--	--	--	--
J84.89	--	Other specified interstitial pulmonary diseases	3	15	--	--	--	--
J85.0	--	Gangrene and necrosis of lung	3	15	--	--	--	--
J85.1	--	Abscess of lung with pneumonia	3	15	--	--	--	--
J85.2	--	Abscess of lung without pneumonia	3	15	--	--	--	--
J85.3	--	Abscess of mediastinum	3	15	--	--	--	--
J86.0	--	Pyothorax with fistula	3	15	--	--	--	--
J86.9	--	Pyothorax without fistula	3	15	--	--	--	--
J90	--	Pleural effusion, not elsewhere classified	3	15	--	--	--	--
J94.2	--	Hemothorax	3	15	--	--	--	--
J95.1	--	Acute pulmonary insufficiency following thoracic surgery	3	15	--	--	--	--
J95.2	--	Acute pulmonary insufficiency following nonthoracic surgery	3	15	--	--	--	--
J95.3	--	Chronic pulmonary insufficiency following surgery	3	15	--	--	--	--
J95.821	--	Acute postprocedural respiratory failure	3	15	--	--	--	--

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J95.822	--	Acute and chronic postprocedural respiratory failure	3	15	--	--	--	--
J96.00	--	Acute respiratory failure, unspecified whether with hypoxia or hypercapnia	3	15	--	--	--	--
J96.01	--	Acute respiratory failure with hypoxia	3	15	--	--	--	--
J96.02	--	Acute respiratory failure with hypercapnia	3	15	--	--	--	--
J96.20	--	Acute and chronic respiratory failure, unspecified whether with hypoxia or hypercapnia	3	15	--	--	--	--
J96.21	--	Acute and chronic respiratory failure with hypoxia	3	15	--	--	--	--
J96.22	--	Acute and chronic respiratory failure with hypercapnia	3	15	--	--	--	--
J96.90	--	Respiratory failure, unspecified, unspecified whether with hypoxia or hypercapnia	3	15	--	--	--	--
J96.91	--	Respiratory failure, unspecified with hypoxia	3	15	--	--	--	--
J96.92	--	Respiratory failure, unspecified with hypercapnia	3	15	--	--	--	--
J98.51	--	Mediastinitis	3	15	Yes	--	--	--
J98.59	--	Other diseases of mediastinum, not elsewhere classified	3	15	Yes	--	--	--
K12.2	--	Cellulitis and abscess of mouth	3	--	--	--	--	--
K22.3	--	Perforation of esophagus	3	--	--	--	--	--
K22.8	--	Other specified diseases of esophagus	3	15	--	--	--	--
K25.0	--	Acute gastric ulcer with hemorrhage	3	--	--	--	--	--
K25.1	--	Acute gastric ulcer with perforation	3	--	--	--	--	--
K25.2	--	Acute gastric ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K25.4	--	Chronic or unspecified gastric ulcer with hemorrhage	3	--	--	--	--	--
K25.5	--	Chronic or unspecified gastric ulcer with perforation	3	--	--	--	--	--
K25.6	--	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	3	--	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.0	--	Acute duodenal ulcer with hemorrhage	3	--	--	--	--	--
K26.1	--	Acute duodenal ulcer with perforation	3	--	--	--	--	--
K26.2	--	Acute duodenal ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K26.4	--	Chronic or unspecified duodenal ulcer with hemorrhage	3	--	--	--	--	--
K26.5	--	Chronic or unspecified duodenal ulcer with perforation	3	--	--	--	--	--
K26.6	--	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K27.0	--	Acute peptic ulcer, site unspecified, with hemorrhage	3	--	--	--	--	--
K27.1	--	Acute peptic ulcer, site unspecified, with perforation	3	--	--	--	--	--
K27.2	--	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	3	--	--	--	--	--
K27.4	--	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	3	--	--	--	--	--
K27.5	--	Chronic or unspecified peptic ulcer, site unspecified, with perforation	3	--	--	--	--	--
K27.6	--	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	3	--	--	--	--	--
K28.0	--	Acute gastrojejunal ulcer with hemorrhage	3	--	--	--	--	--
K28.1	--	Acute gastrojejunal ulcer with perforation	3	--	--	--	--	--
K28.2	--	Acute gastrojejunal ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K28.4	--	Chronic or unspecified gastrojejunal ulcer with hemorrhage	3	--	--	--	--	--
K28.5	--	Chronic or unspecified gastrojejunal ulcer with perforation	3	--	--	--	--	--
K28.6	--	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K29.01	--	Acute gastritis with bleeding	3	--	--	--	--	--
K29.21	--	Alcoholic gastritis with bleeding	3	--	--	--	--	--

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K29.31	--	Chronic superficial gastritis with bleeding	3	--	--	--	--	--
K29.41	--	Chronic atrophic gastritis with bleeding	3	--	--	--	--	--
K29.51	--	Unspecified chronic gastritis with bleeding	3	--	--	--	--	--
K29.61	--	Other gastritis with bleeding	3	--	--	--	--	--
K29.71	--	Gastritis, unspecified, with bleeding	3	--	--	--	--	--
K29.81	--	Duodenitis with bleeding	3	--	--	--	--	--
K29.91	--	Gastroduodenitis, unspecified, with bleeding	3	--	--	--	--	--
K31.6	--	Fistula of stomach and duodenum	3	--	--	--	--	--
K31.811	--	Angiodysplasia of stomach and duodenum with bleeding	3	--	--	--	--	--
K31.82	--	Dieulafoy lesion (hemorrhagic) of stomach and duodenum	3	--	--	--	--	--
K35.2	--	Acute appendicitis with generalized peritonitis	3	--	--	--	--	--
K52.81	--	Eosinophilic gastritis or gastroenteritis	3	--	--	--	--	--
K55.011	--	Focal (segmental) acute (reversible) ischemia of small intestine	3	--	Yes	--	--	--
K55.012	--	Diffuse acute (reversible) ischemia of small intestine	3	--	Yes	--	--	--
K55.019	--	Acute (reversible) ischemia of small intestine, extent unspecified	3	--	Yes	--	--	--
K55.021	--	Focal (segmental) acute infarction of small intestine	3	--	Yes	--	--	--
K55.022	--	Diffuse acute infarction of small intestine	3	--	Yes	--	--	--
K55.029	--	Acute infarction of small intestine, extent unspecified	3	--	Yes	--	--	--
K55.031	--	Focal (segmental) acute (reversible) ischemia of large intestine	3	--	Yes	--	--	--
K55.032	--	Diffuse acute (reversible) ischemia of large intestine	3	--	Yes	--	--	--
K55.039	--	Acute (reversible) ischemia of large intestine, extent unspecified	3	--	Yes	--	--	--
K55.041	--	Focal (segmental) acute infarction of large intestine	3	--	Yes	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K55.042	--	Diffuse acute infarction of large intestine	3	--	Yes	--	--	--
K55.049	--	Acute infarction of large intestine, extent unspecified	3	--	Yes	--	--	--
K55.051	--	Focal (segmental) acute (reversible) ischemia of intestine, part unspecified	3	--	Yes	--	--	--
K55.052	--	Diffuse acute (reversible) ischemia of intestine, part unspecified	3	--	Yes	--	--	--
K55.059	--	Acute (reversible) ischemia of intestine, part and extent unspecified	3	--	Yes	--	--	--
K55.061	--	Focal (segmental) acute infarction of intestine, part unspecified	3	--	Yes	--	--	--
K55.062	--	Diffuse acute infarction of intestine, part unspecified	3	--	Yes	--	--	--
K55.069	--	Acute infarction of intestine, part and extent unspecified	3	--	Yes	--	--	--
K55.21	--	Angiodysplasia of colon with hemorrhage	3	--	--	--	--	--
K57.01	--	Diverticulitis of small intestine with perforation and abscess with bleeding	3	--	--	--	--	--
K57.11	--	Diverticulosis of small intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.13	--	Diverticulitis of small intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.21	--	Diverticulitis of large intestine with perforation and abscess with bleeding	3	--	--	--	--	--
K57.31	--	Diverticulosis of large intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.33	--	Diverticulitis of large intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.41	--	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	3	--	--	--	--	--
K57.51	--	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.53	--	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	3	--	--	--	--	--
K57.81	--	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	3	--	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K57.91	--	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	3	--	--	--	--	--
K57.93	--	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	3	--	--	--	--	--
K63.1	--	Perforation of intestine (nontraumatic)	3	--	--	--	--	--
K65.0	--	Generalized (acute) peritonitis	3	--	--	--	--	--
K65.1	--	Peritoneal abscess	3	--	--	--	--	--
K65.2	--	Spontaneous bacterial peritonitis	3	--	--	--	--	--
K65.3	--	Choleperitonitis	3	--	--	--	--	--
K65.4	--	Sclerosing mesenteritis	3	--	--	--	--	--
K65.8	--	Other peritonitis	3	--	--	--	--	--
K65.9	--	Peritonitis, unspecified	3	--	--	--	--	--
K67	--	Disorders of peritoneum in infectious diseases classified elsewhere	3	--	--	--	--	--
K68.11	--	Postprocedural retroperitoneal abscess	3	--	--	--	--	--
K68.19	--	Other retroperitoneal abscess	3	--	--	--	--	--
K68.9	--	Other disorders of retroperitoneum	3	--	--	--	--	--
K72.00	--	Acute and subacute hepatic failure without coma	3	--	--	--	--	--
K72.01	--	Acute and subacute hepatic failure with coma	3	--	--	--	--	--
K75.0	--	Abscess of liver	3	--	--	--	--	--
K76.2	--	Central hemorrhagic necrosis of liver	3	--	--	--	--	--
K76.3	--	Infarction of liver	3	--	--	--	--	--
K76.7	--	Hepatorenal syndrome	3	--	--	--	--	--
K82.2	--	Perforation of gallbladder	3	--	--	--	--	--
K83.2	--	Perforation of bile duct	3	--	--	--	--	--
K86.2	--	Cyst of pancreas	3	--	--	--	--	--
K86.3	--	Pseudocyst of pancreas	3	--	--	--	--	--
K94.00	--	Colostomy complication, unspecified	3	--	--	--	--	--
K94.01	--	Colostomy hemorrhage	3	--	--	--	--	--

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K94.02	--	Colostomy infection	3	--	--	--	--	--
K94.03	--	Colostomy malfunction	3	--	--	--	--	--
K94.09	--	Other complications of colostomy	3	--	--	--	--	--
K94.10	--	Enterostomy complication, unspecified	3	--	--	--	--	--
K94.11	--	Enterostomy hemorrhage	3	--	--	--	--	--
K94.12	--	Enterostomy infection	3	--	--	--	--	--
K94.13	--	Enterostomy malfunction	3	--	--	--	--	--
K94.19	--	Other complications of enterostomy	3	--	--	--	--	--
L02.01	--	Cutaneous abscess of face	3	--	--	--	--	--
L02.11	--	Cutaneous abscess of neck	3	--	--	--	--	--
L02.211	--	Cutaneous abscess of abdominal wall	3	--	--	--	--	--
L02.212	--	Cutaneous abscess of back [any part, except buttock]	3	--	--	--	--	--
L02.213	--	Cutaneous abscess of chest wall	3	--	--	--	--	--
L02.214	--	Cutaneous abscess of groin	3	--	--	--	--	--
L02.215	--	Cutaneous abscess of perineum	3	--	--	--	--	--
L02.216	--	Cutaneous abscess of umbilicus	3	--	--	--	--	--
L02.219	--	Cutaneous abscess of trunk, unspecified	3	--	--	--	--	--
L02.31	--	Cutaneous abscess of buttock	3	--	--	--	--	--
L02.411	--	Cutaneous abscess of right axilla	3	--	--	--	--	--
L02.412	--	Cutaneous abscess of left axilla	3	--	--	--	--	--
L02.413	--	Cutaneous abscess of right upper limb	3	--	--	--	--	--
L02.414	--	Cutaneous abscess of left upper limb	3	--	--	--	--	--
L02.415	--	Cutaneous abscess of right lower limb	3	10	--	--	--	--
L02.416	--	Cutaneous abscess of left lower limb	3	10	--	--	--	--
L02.419	--	Cutaneous abscess of limb, unspecified	3	10	--	--	--	--
L02.511	--	Cutaneous abscess of right hand	3	--	--	--	--	--
L02.512	--	Cutaneous abscess of left hand	3	--	--	--	--	--
L02.519	--	Cutaneous abscess of unspecified hand	3	--	--	--	--	--

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L02.611	--	Cutaneous abscess of right foot	3	10	--	--	--	--
L02.612	--	Cutaneous abscess of left foot	3	10	--	--	--	--
L02.619	--	Cutaneous abscess of unspecified foot	3	10	--	--	--	--
L02.811	--	Cutaneous abscess of head [any part, except face]	3	--	--	--	--	--
L02.818	--	Cutaneous abscess of other sites	3	--	--	--	--	--
L03.111	--	Cellulitis of right axilla	3	--	--	--	--	--
L03.112	--	Cellulitis of left axilla	3	--	--	--	--	--
L03.113	--	Cellulitis of right upper limb	3	--	--	--	--	--
L03.114	--	Cellulitis of left upper limb	3	--	--	--	--	--
L03.115	--	Cellulitis of right lower limb	3	10	--	--	--	--
L03.116	--	Cellulitis of left lower limb	3	10	--	--	--	--
L03.119	--	Cellulitis of unspecified part of limb	3	10	--	--	--	--
L03.121	--	Acute lymphangitis of right axilla	3	--	--	--	--	--
L03.122	--	Acute lymphangitis of left axilla	3	--	--	--	--	--
L03.123	--	Acute lymphangitis of right upper limb	3	--	--	--	--	--
L03.124	--	Acute lymphangitis of left upper limb	3	--	--	--	--	--
L03.125	--	Acute lymphangitis of right lower limb	3	10	--	--	--	--
L03.126	--	Acute lymphangitis of left lower limb	3	10	--	--	--	--
L03.129	--	Acute lymphangitis of unspecified part of limb	3	10	--	--	--	--
L03.211	--	Cellulitis of face	3	--	--	--	--	--
L03.212	--	Acute lymphangitis of face	3	--	--	--	--	--
L03.221	--	Cellulitis of neck	3	--	--	--	--	--
L03.222	--	Acute lymphangitis of neck	3	--	--	--	--	--
L03.311	--	Cellulitis of abdominal wall	3	--	--	--	--	--
L03.312	--	Cellulitis of back [any part except buttock]	3	--	--	--	--	--
L03.313	--	Cellulitis of chest wall	3	--	--	--	--	--
L03.314	--	Cellulitis of groin	3	--	--	--	--	--
L03.315	--	Cellulitis of perineum	3	--	--	--	--	--

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L03.316	--	Cellulitis of umbilicus	3	--	--	--	--	--
L03.317	--	Cellulitis of buttock	3	--	--	--	--	--
L03.319	--	Cellulitis of trunk, unspecified	3	--	--	--	--	--
L03.321	--	Acute lymphangitis of abdominal wall	3	--	--	--	--	--
L03.322	--	Acute lymphangitis of back [any part except buttock]	3	--	--	--	--	--
L03.323	--	Acute lymphangitis of chest wall	3	--	--	--	--	--
L03.324	--	Acute lymphangitis of groin	3	--	--	--	--	--
L03.325	--	Acute lymphangitis of perineum	3	--	--	--	--	--
L03.326	--	Acute lymphangitis of umbilicus	3	--	--	--	--	--
L03.327	--	Acute lymphangitis of buttock	3	--	--	--	--	--
L03.329	--	Acute lymphangitis of trunk, unspecified	3	--	--	--	--	--
L03.811	--	Cellulitis of head [any part, except face]	3	--	--	--	--	--
L03.818	--	Cellulitis of other sites	3	--	--	--	--	--
L03.891	--	Acute lymphangitis of head [any part, except face]	3	--	--	--	--	--
L03.898	--	Acute lymphangitis of other sites	3	--	--	--	--	--
M31.2	--	Lethal midline granuloma	3	--	--	--	--	--
N00.0	--	Acute nephritic syndrome with minor glomerular abnormality	3	--	--	--	--	--
N00.1	--	Acute nephritic syndrome with focal and segmental glomerular lesions	3	--	--	--	--	--
N00.2	--	Acute nephritic syndrome with diffuse membranous glomerulonephritis	3	--	--	--	--	--
N00.3	--	Acute nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	3	--	--	--	--	--
N00.4	--	Acute nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	3	--	--	--	--	--
N00.5	--	Acute nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	3	--	--	--	--	--
N00.6	--	Acute nephritic syndrome with dense deposit disease	3	--	--	--	--	--

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ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
N00.7	--	Acute nephritic syndrome with diffuse crescentic glomerulonephritis	3	--	--	--	--	--
N00.8	--	Acute nephritic syndrome with other morphologic changes	3	--	--	--	--	--
N00.9	--	Acute nephritic syndrome with unspecified morphologic changes	3	--	--	--	--	--
N01.0	--	Rapidly progressive nephritic syndrome with minor glomerular abnormality	3	--	--	--	--	--
N01.1	--	Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions	3	--	--	--	--	--
N01.2	--	Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis	3	--	--	--	--	--
N01.3	--	Rapidly progressive nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	3	--	--	--	--	--
N01.4	--	Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	3	--	--	--	--	--
N01.5	--	Rapidly progressive nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	3	--	--	--	--	--
N01.6	--	Rapidly progressive nephritic syndrome with dense deposit disease	3	--	--	--	--	--
N01.7	--	Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis	3	--	--	--	--	--
N01.8	--	Rapidly progressive nephritic syndrome with other morphologic changes	3	--	--	--	--	--
N01.9	--	Rapidly progressive nephritic syndrome with unspecified morphologic changes	3	--	--	--	--	--
N05.9	--	Unspecified nephritic syndrome with unspecified morphologic changes	3	--	--	--	--	--
N08	--	Glomerular disorders in diseases classified elsewhere	3	--	--	--	--	--
N15.1	--	Renal and perinephric abscess	3	--	--	--	--	--
N17.0	--	Acute kidney failure with tubular necrosis	3	--	--	--	--	--
N17.1	--	Acute kidney failure with acute cortical necrosis	3	--	--	--	--	--

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N17.2	--	Acute kidney failure with medullary necrosis	3	--	--	--	--	--
N17.8	--	Other acute kidney failure	3	--	--	--	--	--
N17.9	--	Acute kidney failure, unspecified	3	--	--	--	--	--
N32.89	--	Other specified disorders of bladder	3	--	--	--	--	--
O71.00	--	Rupture of uterus before onset of labor, unspecified trimester	3	--	--	--	--	--
O71.02	--	Rupture of uterus before onset of labor, second trimester	3	--	--	--	--	--
O71.03	--	Rupture of uterus before onset of labor, third trimester	3	--	--	--	--	--
O71.1	--	Rupture of uterus during labor	3	--	--	--	--	--
O75.1	--	Shock during or following labor and delivery	3	03	--	--	--	--
O75.3	--	Other infection during labor	3	01	--	--	--	--
O88.011	--	Air embolism in pregnancy, first trimester	3	01	--	--	--	--
O88.012	--	Air embolism in pregnancy, second trimester	3	01	--	--	--	--
O88.013	--	Air embolism in pregnancy, third trimester	3	01	--	--	--	--
O88.019	--	Air embolism in pregnancy, unspecified trimester	3	01	--	--	--	--
O88.02	--	Air embolism in childbirth	3	01	--	--	--	--
O88.03	--	Air embolism in the puerperium	3	01	--	--	--	--
O88.111	--	Amniotic fluid embolism in pregnancy, first trimester	3	01	--	--	--	--
O88.112	--	Amniotic fluid embolism in pregnancy, second trimester	3	01	--	--	--	--
O88.113	--	Amniotic fluid embolism in pregnancy, third trimester	3	01	--	--	--	--
O88.119	--	Amniotic fluid embolism in pregnancy, unspecified trimester	3	01	--	--	--	--
O88.12	--	Amniotic fluid embolism in childbirth	3	01	--	--	--	--
O88.13	--	Amniotic fluid embolism in the puerperium	3	01	--	--	--	--
O88.211	--	Thromboembolism in pregnancy, first trimester	3	15	--	--	--	--

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O88.212	--	Thromboembolism in pregnancy, second trimester	3	15	--	--	--	--
O88.213	--	Thromboembolism in pregnancy, third trimester	3	15	--	--	--	--
O88.219	--	Thromboembolism in pregnancy, unspecified trimester	3	15	--	--	--	--
O88.22	--	Thromboembolism in childbirth	3	15	--	--	--	--
O88.23	--	Thromboembolism in the puerperium	3	15	--	--	--	--
O88.311	--	Pyemic and septic embolism in pregnancy, first trimester	3	03	--	--	--	--
O88.312	--	Pyemic and septic embolism in pregnancy, second trimester	3	03	--	--	--	--
O88.313	--	Pyemic and septic embolism in pregnancy, third trimester	3	03	--	--	--	--
O88.319	--	Pyemic and septic embolism in pregnancy, unspecified trimester	3	03	--	--	--	--
O88.32	--	Pyemic and septic embolism in childbirth	3	03	--	--	--	--
O88.33	--	Pyemic and septic embolism in the puerperium	3	03	--	--	--	--
O88.811	--	Other embolism in pregnancy, first trimester	3	15	--	--	--	--
O88.812	--	Other embolism in pregnancy, second trimester	3	15	--	--	--	--
O88.813	--	Other embolism in pregnancy, third trimester	3	15	--	--	--	--
O88.819	--	Other embolism in pregnancy, unspecified trimester	3	15	--	--	--	--
O88.82	--	Other embolism in childbirth	3	15	--	--	--	--
O88.83	--	Other embolism in the puerperium	3	15	--	--	--	--
O90.4	--	Postpartum acute kidney failure	3	--	--	--	--	--
O99.419	--	Diseases of the circulatory system complicating pregnancy, unspecified trimester	3	01, 03	--	--	--	--
P07.01	--	Extremely low birth weight newborn, less than 500 grams	3	--	--	--	--	--
P07.02	--	Extremely low birth weight newborn, 500-749 grams	3	--	--	--	--	--

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P07.03	--	Extremely low birth weight newborn, 750-999 grams	3	--	--	--	--	--
R09.2	--	Respiratory arrest	3	15	--	--	--	--
R29.0	--	Tetany	3	06	--	--	--	--
R50.82	--	Postprocedural fever	3	--	--	--	--	--
R50.84	--	Febrile nonhemolytic transfusion reaction	3	--	--	--	--	--
R57.0	--	Cardiogenic shock	3	14	--	--	--	--
R57.1	--	Hypovolemic shock	3	--	--	--	--	--
R57.8	--	Other shock	3	--	--	--	--	--
R65.10	--	Systemic inflammatory response syndrome (SIRS) of non-infectious origin without acute organ dysfunction	3	--	--	--	--	--
R65.11	--	Systemic inflammatory response syndrome (SIRS) of non-infectious origin with acute organ dysfunction	3	--	--	--	--	--
R65.20	--	Severe sepsis without septic shock	3	--	--	--	--	--
R65.21	--	Severe sepsis with septic shock	3	--	--	--	--	--
R91.8	--	Other nonspecific abnormal finding of lung field	3	15	--	--	--	--
T79.0XXA	--	Air embolism (traumatic), initial encounter	3	02, 03	--	--	--	--
T79.1XXA	--	Fat embolism (traumatic), initial encounter	3	02, 03	--	--	--	--
T79.5XXA	--	Traumatic anuria, initial encounter	3	--	--	--	--	--
T80.0XXA	--	Air embolism following infusion, transfusion and therapeutic injection, initial encounter	3	03	--	--	--	--
T80.211A	--	Other infection due to central venous catheter, initial encounter	3	--	--	--	--	--
T80.212A	--	Unspecified infection due to central venous catheter, initial encounter	3	--	--	--	--	--
T80.218A	--	Other infection due to central venous catheter, initial encounter	3	--	--	--	--	--
T80.219A	--	Unspecified infection due to central venous catheter, initial encounter	3	--	--	--	--	--

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T81.10XA	--	Postprocedural shock unspecified, initial encounter	3	--	--	--	--	--
T81.11XA	--	Postprocedural cardiogenic shock, initial encounter	3	--	--	--	--	--
T81.12XA	--	Postprocedural septic shock, initial encounter	3	--	--	--	--	--
T81.19XA	--	Other postprocedural shock, initial encounter	3	--	--	--	--	--
T81.30XA	--	Disruption of wound, unspecified, initial encounter	3	--	--	--	--	--
T81.31XA	--	Disruption of external operation (surgical) wound, not elsewhere classified, initial encounter	3	--	--	--	--	--
T81.32XA	--	Disruption of internal operation (surgical) wound, not elsewhere classified, initial encounter	3	--	--	--	--	--
T81.33XA	--	Disruption of traumatic injury wound repair, initial encounter	3	--	--	--	--	--
T81.4XXA	--	Infection following a procedure, initial encounter	3	--	--	--	--	--
T81.83XA	--	Persistent postprocedural fistula, initial encounter	3	--	--	--	--	--
T82.01XA	--	Breakdown (mechanical) of heart valve prosthesis, initial encounter	3	14	--	--	--	--
T82.02XA	--	Displacement of heart valve prosthesis, initial encounter	3	14	--	--	--	--
T82.03XA	--	Leakage of heart valve prosthesis, initial encounter	3	14	--	--	--	--
T82.09XA	--	Other mechanical complication of heart valve prosthesis, initial encounter	3	14	--	--	--	--
T82.6XXA	--	Infection and inflammatory reaction due to cardiac valve prosthesis, initial encounter	3	14	--	--	--	--
T82.7XXA	--	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts, initial encounter	3	--	--	--	--	--
T84.50XA	--	Infection and inflammatory reaction due to unspecified internal joint prosthesis, initial encounter	3	08	--	--	--	--

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Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
T84.51XA	--	Infection and inflammatory reaction due to internal right hip prosthesis, initial encounter	3	08	--	--	--	--
T84.52XA	--	Infection and inflammatory reaction due to internal left hip prosthesis, initial encounter	3	08	--	--	--	--
T84.53XA	--	Infection and inflammatory reaction due to internal right knee prosthesis, initial encounter	3	08	--	--	--	--
T84.54XA	--	Infection and inflammatory reaction due to internal left knee prosthesis, initial encounter	3	08	--	--	--	--
T84.59XA	--	Infection and inflammatory reaction due to other internal joint prosthesis, initial encounter	3	08	--	--	--	--
T84.60XA	--	Infection and inflammatory reaction due to internal fixation device of unspecified site, initial encounter	3	09	--	--	--	--
T84.610A	--	Infection and inflammatory reaction due to internal fixation device of right humerus, initial encounter	3	09	--	--	--	--
T84.611A	--	Infection and inflammatory reaction due to internal fixation device of left humerus, initial encounter	3	09	--	--	--	--
T84.612A	--	Infection and inflammatory reaction due to internal fixation device of right radius, initial encounter	3	09	--	--	--	--
T84.613A	--	Infection and inflammatory reaction due to internal fixation device of left radius, initial encounter	3	09	--	--	--	--
T84.614A	--	Infection and inflammatory reaction due to internal fixation device of right ulna, initial encounter	3	09	--	--	--	--
T84.615A	--	Infection and inflammatory reaction due to internal fixation device of left ulna, initial encounter	3	09	--	--	--	--
T84.619A	--	Infection and inflammatory reaction due to internal fixation device of unspecified bone of arm, initial encounter	3	09	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
T84.620A	--	Infection and inflammatory reaction due to internal fixation device of right femur, initial encounter	3	09	--	--	--	--
T84.621A	--	Infection and inflammatory reaction due to internal fixation device of left femur, initial encounter	3	09	--	--	--	--
T84.622A	--	Infection and inflammatory reaction due to internal fixation device of right tibia, initial encounter	3	09	--	--	--	--
T84.623A	--	Infection and inflammatory reaction due to internal fixation device of left tibia, initial encounter	3	09	--	--	--	--
T84.624A	--	Infection and inflammatory reaction due to internal fixation device of right fibula, initial encounter	3	09	--	--	--	--
T84.625A	--	Infection and inflammatory reaction due to internal fixation device of left fibula, initial encounter	3	09	--	--	--	--
T84.629A	--	Infection and inflammatory reaction due to internal fixation device of unspecified bone of leg, initial encounter	3	09	--	--	--	--
T84.63XA	--	Infection and inflammatory reaction due to internal fixation device of spine, initial encounter	3	09	--	--	--	--
T84.69XA	--	Infection and inflammatory reaction due to internal fixation device of other site, initial encounter	3	09	--	--	--	--
T84.7XXA	--	Infection and inflammatory reaction due to other internal orthopedic prosthetic devices, implants and grafts, initial encounter	3	09	--	--	--	--
T85.71XA	--	Infection and inflammatory reaction due to peritoneal dialysis catheter, initial encounter	3	09	--	--	--	--
T85.72XA	--	Infection and inflammatory reaction due to insulin pump, initial encounter	3	09	--	--	--	--
T85.79XA	--	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts, initial encounter	3	09	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
T86.842	--	Corneal transplant infection	3	09	--	--	--	--
T87.40	--	Infection of amputation stump, unspecified extremity	3	09, 10, 11	--	--	--	--
T87.41	--	Infection of amputation stump, right upper extremity	3	09, 10, 11	--	--	--	--
T87.42	--	Infection of amputation stump, left upper extremity	3	09, 10, 11	--	--	--	--
T87.43	--	Infection of amputation stump, right lower extremity	3	09, 10, 11	--	--	--	--
T87.44	--	Infection of amputation stump, left lower extremity	3	09, 10, 11	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-4. ICD-10-CM Codes in Combination #1

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.4	A	Histoplasmosis capsulati, unspecified	3	03, 05	--	--	--	--
G02	B	Meningitis in other infectious and parasitic diseases classified elsewhere	--	--	--	--	--	--

Table C-5. ICD-10-CM Codes in Combination #2

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.4	A	Histoplasmosis capsulati, unspecified	3	--	--	--	--	--
H32	B	Chorioretinal disorders in diseases classified elsewhere	--	--	--	--	--	--

Table C-6. ICD-10-CM Codes in Combination #3

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.4	A	Histoplasmosis capsulati, unspecified	3	14	--	--	--	--
I32	B	Pericarditis in diseases classified elsewhere	--	--	--	--	--	--

Table C-7. ICD-10-CM Codes in Combination #4

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.4	A	Histoplasmosis capsulati, unspecified	3	14	--	--	--	--
I39	B	Endocarditis and heart valve disorders in diseases classified elsewhere	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-8. ICD-10-CM Codes in Combination #5

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.5	A	Histoplasmosis duboisii	3	03, 05	--	--	--	--
G02	B	Meningitis in other infectious and parasitic diseases classified elsewhere	--	--	--	--	--	--

Table C-9. ICD-10-CM Codes in Combination #6

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.5	A	Histoplasmosis duboisii	3	--	--	--	--	--
H32	B	Chorioretinal disorders in diseases classified elsewhere	--	--	--	--	--	--

Table C-10. ICD-10-CM Codes in Combination #7

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.5	A	Histoplasmosis duboisii	3	14	--	--	--	--
I32	B	Pericarditis in diseases classified elsewhere	--	--	--	--	--	--

Table C-11. ICD-10-CM Codes in Combination #8

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.5	A	Histoplasmosis duboisii	3	14	--	--	--	--
I39	B	Endocarditis and heart valve disorders in diseases classified elsewhere	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-12. ICD-10-CM Codes in Combination #9

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.5	A	Histoplasmosis duboisii	3	15	--	--	--	--
J17	B	Pneumonia in diseases classified elsewhere	--	--	--	--	--	--

Table C-13. ICD-10-CM Codes in Combination #10

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.9	A	Histoplasmosis, unspecified	3	03, 05	--	--	--	--
G02	B	Meningitis in other infectious and parasitic diseases classified elsewhere	--	--	--	--	--	--

Table C-14. ICD-10-CM Codes in Combination #11

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.9	A	Histoplasmosis, unspecified	3	--	--	--	--	--
H32	B	Chorioretinal disorders in diseases classified elsewhere	--	--	--	--	--	--

Table C-15. ICD-10-CM Codes in Combination #12

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.9	A	Histoplasmosis, unspecified	3	14	--	--	--	--
I32	B	Pericarditis in diseases classified elsewhere	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-16. ICD-10-CM Codes in Combination #13

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.9	A	Histoplasmosis, unspecified	3	14	--	--	--	--
I39	B	Endocarditis and heart valve disorders in diseases classified elsewhere	--	--	--	--	--	--

Table C-17. ICD-10-CM Codes in Combination #14

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
B39.9	A	Histoplasmosis, unspecified	3	15	--	--	--	--
J17	B	Pneumonia in diseases classified elsewhere	--	--	--	--	--	--

Table C-18. ICD-10-CM Codes in Combination #15

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E08.21	A	Diabetes mellitus due to underlying condition with diabetic nephropathy	3	--	--	--	--	--
E08.65	B	Diabetes mellitus due to underlying condition with hyperglycemia	--	--	--	--	--	--
E09.21	A	Drug or chemical induced diabetes mellitus with diabetic nephropathy	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-19. ICD-10-CM Codes in Combination #16

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E08.40	A	Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified	3	--	--	--	--	--
E08.65	B	Diabetes mellitus due to underlying condition with hyperglycemia	--	--	--	--	--	--
E09.40	A	Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified	--	--	--	--	--	--

Table C-20. ICD-10-CM Codes in Combination #17

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E08.51	A	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E08.65	B	Diabetes mellitus due to underlying condition with hyperglycemia	--	--	--	--	--	--
E09.51	A	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene	--	--	--	--	--	--

Table C-21. ICD-10-CM Codes in Combination #18

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E08.65	B	Diabetes mellitus due to underlying condition with hyperglycemia	3	--	--	--	--	--
E08.69	A	Diabetes mellitus due to underlying condition with other specified complication	--	--	--	--	--	--
E09.69	A	Drug or chemical induced diabetes mellitus with other specified complication	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-22. ICD-10-CM Codes in Combination #19

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E08.65	B	Diabetes mellitus due to underlying condition with hyperglycemia	3	--	---	--	--	--
E08.8	A	Diabetes mellitus due to underlying condition with unspecified complications	--	--	--	--	--	--
E09.8	A	Drug or chemical induced diabetes mellitus with unspecified complications	--	--	--	--	--	--

Table C-23. ICD-10-CM Codes in Combination #20

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.21	A	Type 2 diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-24. ICD-10-CM Codes in Combination #21

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.21	A	Type 1 diabetes mellitus with diabetic nephropathy	3	--	--	--	--	--
E10.65	B	Type 1 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-25. ICD-10-CM Codes in Combination #22

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.311	A	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E11.319	A	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	--	--	--	--	--	--
E11.36	A	Type 2 diabetes mellitus with diabetic cataract	--	--	--	--	--	--
E11.39	A	Type 2 diabetes mellitus with other diabetic ophthalmic complication	--	--	--	--	--	--
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-26. ICD-10-CM Codes in Combination #23

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.311	A	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	3	--	--	--	--	--
E10.319	A	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	--	--	--	--	--	--
E10.36	A	Type 1 diabetes mellitus with diabetic cataract	--	--	--	--	--	--
E10.39	A	Type 1 diabetes mellitus with other diabetic ophthalmic complication	--	--	--	--	--	--
E10.65	B	Type 1 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-27. ICD-10-CM Codes in Combination #24

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.40	A	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	3	6	--	--	--	--
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-28. ICD-10-CM Codes in Combination #25

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.40	A	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	3	6	--	--	--	--
E10.65	B	Type 1 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-29. ICD-10-CM Codes in Combination #26

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.51	A	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-30. ICD-10-CM Codes in Combination #27

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.51	A	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	3	--	--	--	--	--
E10.65	B	Type 1 diabetes mellitus with hyperglycemia	--	--	--	--	--	--

Table C-31. ICD-10-CM Codes in Combination #28

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E11.69	A	Type 2 diabetes mellitus with other specified complication	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-32. ICD-10-CM Codes in Combination #29

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E10.65	B	Type 1 diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E10.69	A	Type 1 diabetes mellitus with other specified complication	--	--	--	--	--	--

Table C-33. ICD-10-CM Codes in Combination #30

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
E11.65	B	Type 2 diabetes mellitus with hyperglycemia	3	--	--	--	--	--
E11.8	A	Type 2 diabetes mellitus with unspecified complications	--	--	--	--	--	--

Table C-34. ICD-10-CM Codes in Combination #31

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.0	A	Acute gastric ulcer with hemorrhage	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-35. ICD-10-CM Codes in Combination #32

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.1	A	Acute gastric ulcer with perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-36. ICD-10-CM Codes in Combination #33

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.2	A	Acute gastric ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-37. ICD-10-CM Codes in Combination #34

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.4	A	Chronic or unspecified gastric ulcer and hemorrhage	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-38. ICD-10-CM Codes in Combination #35

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.5	A	Chronic or unspecified gastric ulcer with perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-39. ICD-10-CM Codes in Combination #36

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K25.6	A	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-40. ICD-10-CM Codes in Combination #37

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.0	A	Acute duodenal ulcer with hemorrhage	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-41. ICD-10-CM Codes in Combination #38

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.1	A	Acute duodenal ulcer with perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-42. ICD-10-CM Codes in Combination #39

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.2	A	Acute duodenal ulcer with both hemorrhage and perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-43. ICD-10-CM Codes in Combination #40

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.4	A	Chronic or unspecified duodenal ulcer with hemorrhage	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix C: Comorbidity Tier Code Lookup Table

Table C-44. ICD-10-CM Codes in Combination #41

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.5	A	Chronic or unspecified duodenal ulcer with perforation	3	--	--	--	--	--
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-45. ICD-10-CM Codes in Combination #42

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
K26.6	A	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	3	--	--	--		
K56.60	B	Unspecified intestinal obstruction	--	--	--	--	--	--

Table C-46. ICD-10-CM Codes in Combination #43

ICD-10-CM	Choice	ICD-10-CM Label	Tier	RIC Exclusion	Added	Tier Change	Exclusion Change	Label Change
I26.90	B	Septic pulmonary embolism without acute cor pulmonale	3	15	--	--	--	--
I26.99	B	Other pulmonary embolism without acute cor pulmonale	--	--	--	--	--	--
T80.0XXA	A	Air embolism following infusion, transfusion and therapeutic injection, initial encounter	--	--	--	--	--	--
T81.718A	A	Complication of other artery following a procedure, not elsewhere classified, initial encounter	--	--	--	--	--	--
T81.72XA	A	Complication of vein following a procedure, not elsewhere classified, initial encounter	--	--	--	--	--	--
T82.817A	A	Embolism due to cardiac prosthetic devices, implants and grafts, initial encounter	--	--	--	--	--	--
T82.818A	A	Embolism due to vascular prosthetic devices, implants and grafts, initial encounter	--	--	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix D: Comorbidities Deleted in V2.90

ICD-10-CM	Choice	ICD-10-CM Label
E08.321	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.329	--	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema
E08.331	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.339	--	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema
E08.341	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.349	--	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema
E08.351	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema
E08.359	--	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema
E09.321	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.329	--	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E09.331	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.339	--	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E09.341	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.349	--	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E09.351	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema
E09.359	--	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema
E10.321	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.329	--	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E10.331	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.339	--	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E10.341	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.349	--	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E10.351	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E10.359	--	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix D: Comorbidities Deleted in V2.90

ICD-10-CM	Choice	ICD-10-CM Label
E11.321	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.329	--	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E11.331	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.339	--	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E11.341	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.349	--	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E11.351	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E11.359	--	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema
E13.321	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.329	--	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E13.331	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.339	--	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E13.341	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.349	--	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E13.351	--	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema
E13.359	--	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema
I60.20	--	Nontraumatic subarachnoid hemorrhage from unspecified anterior communicating artery
I60.21	--	Nontraumatic subarachnoid hemorrhage from right anterior communicating artery
I60.22	--	Nontraumatic subarachnoid hemorrhage from left anterior communicating artery
J98.5	--	Diseases of mediastinum, not elsewhere classified
K55.0	--	Acute vascular disorders of intestine

Appendix E: CMG Group Number Lookup Table

CMG Group Number	RIC Code	Motor Score Low Value (min=12.0)	Motor Score High Value (max=84.0)	Cognitive Score Low Value (min=5)	Cognitive Score High Value (max=35)	Age Low Value (min=0)	Age High Value (max=140)
0101	01	51.1	84.0	--	--	--	--
0102	01	44.5	51.0	19	35	--	--
0103	01	44.5	51.0	5	18	--	--
0104	01	38.9	44.4	--	--	--	--
0105	01	34.3	38.8	--	--	--	--
0106	01	30.1	34.2	--	--	--	--
0107	01	26.2	30.0	--	--	--	--
0108	01	12.0	26.1	--	--	85	140
0109	01	22.4	26.1	--	--	0	84
0110	01	12.0	22.3	--	--	0	84
0201	02	53.4	84.0	24	35	--	--
0202	02	44.3	53.3	24	35	--	--
0203	02	44.3	84.0	5	23	--	--
0204	02	40.7	44.2	--	--	--	--
0205	02	28.8	40.6	--	--	--	--
0206	02	22.1	28.7	--	--	--	--
0207	02	12.0	22.0	--	--	--	--
0301	03	41.1	84.0	--	--	--	--
0302	03	35.1	41.0	--	--	--	--
0303	03	26.2	35.0	--	--	--	--
0304	03	12.0	26.1	--	--	--	--
0401	04	48.5	84.0	--	--	--	--
0402	04	30.4	48.4	--	--	--	--
0403	04	16.1	30.3	--	--	--	--
0404	04	12.0	16.0	--	--	64	140
0405	04	12.0	16.0	--	--	0	63
0501	05	51.4	84.0	--	--	--	--
0502	05	40.2	51.3	--	--	--	--
0503	05	31.3	40.1	--	--	--	--
0504	05	29.3	31.2	--	--	--	--
0505	05	23.8	29.2	--	--	--	--
0506	05	12.0	23.7	--	--	--	--
0601	06	47.8	84.0	--	--	--	--
0602	06	37.4	47.7	--	--	--	--
0603	06	25.9	37.3	--	--	--	--
0604	06	12.0	25.8	--	--	--	--
0701	07	42.2	84.0	--	--	--	--
0702	07	34.2	42.1	--	--	--	--
0703	07	28.2	34.1	--	--	--	--
0704	07	12.0	28.1	--	--	--	--
0801	08	49.6	84.0	--	--	--	--
0802	08	37.1	49.5	--	--	--	--

Notes:

Last four columns show changes implemented in V2.90 (ICD10CM added to list, tier assignment changed, RIC exclusions changed, or label changed) versus the prior V2.82.

Appendix E: CMG Group Number Lookup Table

CMG Group Number	RIC Code	Motor Score Low Value (min=12.0)	Motor Score High Value (max=84.0)	Cognitive Score Low Value (min=5)	Cognitive Score High Value (max=35)	Age Low Value (min=0)	Age High Value (max=140)
0803	08	28.7	37.0	--	--	84	140
0804	08	28.7	37.0	--	--	0	83
0805	08	22.1	28.6	--	--	--	--
0806	08	12.0	22.0	--	--	--	--
0901	09	44.8	84.0	--	--	--	--
0902	09	34.4	44.7	--	--	--	--
0903	09	24.2	34.3	--	--	--	--
0904	09	12.0	24.1	--	--	--	--
1001	10	47.7	84.0	--	--	--	--
1002	10	36.3	47.6	--	--	--	--
1003	10	12.0	36.2	--	--	--	--
1101	11	36.4	84.0	--	--	--	--
1102	11	12.0	36.3	--	--	--	--
1201	12	37.7	84.0	--	--	--	--
1202	12	30.8	37.6	--	--	--	--
1203	12	12.0	30.7	--	--	--	--
1301	13	36.4	84.0	--	--	--	--
1302	13	26.2	36.3	--	--	--	--
1303	13	12.0	26.1	--	--	--	--
1401	14	48.9	84.0	--	--	--	--
1402	14	38.6	48.8	--	--	--	--
1403	14	31.2	38.5	--	--	--	--
1404	14	12.0	31.1	--	--	--	--
1501	15	49.3	84.0	--	--	--	--
1502	15	39.1	49.2	--	--	--	--
1503	15	29.2	39.0	--	--	--	--
1504	15	12.0	29.1	--	--	--	--
1601	16	37.2	84.0	--	--	--	--
1602	16	26.8	37.1	--	--	--	--
1603	16	12.0	26.7	--	--	--	--
1701	17	39.3	84.0	--	--	--	--
1702	17	31.1	39.2	--	--	--	--
1703	17	25.6	31.0	--	--	--	--
1704	17	12.0	25.5	--	--	--	--
1801	18	40.9	84.0	--	--	--	--
1802	18	23.1	40.8	--	--	--	--
1803	18	12.0	23.0	--	--	--	--
1901	19	36.0	84.0	--	--	--	--
1902	19	18.1	35.9	--	--	--	--
1903	19	12.0	18.0	--	--	--	--
2001	20	49.2	84.0	--	--	--	--
2002	20	38.8	49.1	--	--	--	--
2003	20	27.9	38.7	--	--	--	--
2004	20	12.0	27.8	--	--	--	--
2101	21	12.0	84.0	--	--	--	--

Appendix E: CMG Group Number Lookup Table