

## HIERARCHICAL CONDITION CATEGORY (HCC) MODELS

In our operations, we have two HCC models:

**1. CMS-HCC model** – Also known as Medicare Risk Adjustment (MRA), this model is used by the Centers for Medicare and Medicaid Services (CMS) to pay Medicare Advantage organizations (MA) for their enrollees' medical expenditures.

**2. HHS-HCC model** – Also known as Commercial Risk Adjustment (CRA), this model is used by CMS to pay organizations participating in the ACA marketplace.

- ICD-10-CM codes with a dash (-), i.e., E11-, require additional characters; please refer to the ICD-10-CM codebook to complete the code.
- Codes that impact the HCC Models are in **bold** or identified as such.

## GENERAL CODING & DOCUMENTATION GUIDELINES

In order to support an ICD-10-CM code used for RAF payments, the documentation must include:

- Evidence that the diagnosis was addressed in a face-to-face encounter. For example;
  - Chief complaint indicating that the patient came in for an evaluation
  - Physical examination
- If it is a telehealth service, the documentation must indicate that the encounter was provided using an interactive audio and video telecommunications system that permits real-time interactive communication.
- The diagnosis or problem must be documented in words, not codes, along with its plan of care or how it affects patient care treatment or management (MEAT).

| DIABETES (DM)                          |                                |
|--|--------------------------------|
| Type                                   | Category                       |
| 1                                      | <b>E10-</b>                    |
| 2                                      | <b>E11-</b>                    |
| Gestational                            | See <b>O24.4-</b>              |
| Other types                            | See <b>E08-, E09- and E13-</b> |
| <b>DM (is) (with):</b>                 |                                |
| Poorly controlled or out of control    | <b>E11.65</b>                  |
| Nephropathy                            | <b>E11.21</b>                  |
| CKD (unspecified)                      | <b>E11.22</b>                  |
| CKD 1                                  | <b>E11.22 + N18.1</b>          |
| CKD 2                                  | <b>E11.22 + N18.2</b>          |
| CKD 3                                  | <b>E11.22 + N18.30</b>         |
| CKD 3a                                 | <b>E11.22 + N18.31</b>         |
| CKD 3b                                 | <b>E11.22 + N18.32</b>         |
| CKD 4                                  | <b>E11.22 + N18.4</b>          |
| CKD 5                                  | <b>E11.22 + N18.5</b>          |
| ESRD                                   | <b>E11.22 + N18.6</b>          |
| ESRD on dialysis                       | <b>E11.22 + N18.6 + Z99.2</b>  |
| Kidney transplant                      | <b>Z94.0</b>                   |
| Secondary renal hyperparathyroidism    | <b>N25.81</b>                  |
| Retinopathy                            | <b>E11.319</b>                 |
| Proliferative retinopathy in right eye | <b>E11.3591</b>                |
| Proliferative retinopathy in left eye  | <b>E11.3592</b>                |
| Proliferative retinopathy bilateral    | <b>E11.3593</b>                |

| DIABETES (DM)                      |                          |
|------------------------------------|--------------------------|
| <b>DM (is) (with):</b>             |                          |
| Cataract                           | <b>E11.36</b>            |
| Glaucoma                           | <b>E11.39 + H42</b>      |
| Mononeuritis                       | <b>E11.40</b>            |
| Neuropathy                         | <b>E11.40</b>            |
| Neuralgia                          | <b>E11.42</b>            |
| Polyneuropathy                     | <b>E11.42</b>            |
| PVD (PAD or peripheral angiopathy) | <b>E11.51</b>            |
| Arthropathy                        | <b>E11.618</b>           |
| Dermatitis                         | <b>E11.620</b>           |
| Ulcer on the right heel            | <b>E11.621 + L97.419</b> |
| Ulcer on the right midfoot         | <b>E11.621 + L97.419</b> |
| Ulcer on the left heel             | <b>E11.621 + L97.429</b> |
| Ulcer on the left midfoot          | <b>E11.621 + L97.429</b> |
| Ulcers on toes of right foot       | <b>E11.621 + L97.519</b> |
| Ulcers on toes of left foot        | <b>E11.621 + L97.529</b> |
| Acanthosis nigricans               | <b>E11.628 + L83</b>     |
| Periodontal disease                | <b>E11.630</b>           |
| Hyperglycemia                      | <b>E11.65</b>            |
| Hypertriglyceridemia               | <b>E11.69 + E78.1</b>    |
| Hyperlipidemia                     | <b>E11.69 + E78.5</b>    |

| HYPERTENSION (HTN), HEART FAILURE & CKD |                                      |
|---|--------------------------------------|
| HTN with CHF                            | <b>I11.0 + I50.9</b>                 |
| HTN with CKD 3                          | <b>I12.9 + N18.30</b>                |
| HTN with CKD 4                          | <b>I12.9 + N18.4</b>                 |
| HTN with CKD 5                          | <b>I12.0 + N18.5</b>                 |
| HTN with ESRD on dialysis               | <b>I12.0 + N18.6 + Z99.2</b>         |
| HTN with HF and CKD                     | <b>I13.0 + N18.9 + I50.9</b>         |
| HTN with HF and CKD 3                   | <b>I13.0 + N18.30 + I50.9</b>        |
| HTN with HF and CKD 4                   | <b>I13.0 + N18.4 + I50.9</b>         |
| HTN with HF and CKD 5                   | <b>I13.2 + N18.5, &amp; I50.9</b>    |
| HTN with HF and ESRD on dialysis        | <b>I13.2 + N18.6 + I50.9 + Z99.2</b> |
| Renal hyperparathyroidism               | <b>N25.81</b>                        |
| Heart failure or CHF                    | <b>I50.9</b>                         |
| HFpEF                                   | <b>I50.30</b>                        |
| Left ventricular failure                | <b>I50.1</b>                         |
| Cardiomyopathy                          | <b>I42.9</b>                         |
| Pulmonary hypertension (PH)             | <b>I27.20</b>                        |
| PH due to left heart disease            | <b>I27.22</b>                        |

| ARTERIOSCLEROSIS & PERIPHERAL VASCULAR DISEASES (PVD) |                          |
|---|--------------------------|
| CAD with angina pectoris                              | <b>I25.119</b>           |
| CAD with stable angina pectoris                       | <b>I25.118</b>           |
| Angina pectoris, not related to CAD                   | <b>I20.9</b>             |
| PVD (PAD)   | <b>I73.9</b>             |
| Arteriosclerosis of aorta                             | <b>I70.0</b>             |
| Calcification of aorta                                | <b>I70.0</b>             |
| Aortic aneurysm                                       | <b>I71.9</b>             |
| Arteriosclerosis in right leg                         | <b>I70.201</b>           |
| Arteriosclerosis in left leg                          | <b>I70.202</b>           |
| Arteriosclerosis in right leg with ulcer              | <b>I70.239 + L97.919</b> |
| Arteriosclerosis in left leg with ulcer               | <b>I70.249 + L97.929</b> |
| Arteriosclerosis in leg with ulcer in right calf      | <b>I70.232 + L97.219</b> |
| Arteriosclerosis in leg with ulcer in left calf       | <b>I70.242 + L97.229</b> |
| Arteriosclerosis in leg with ulcer in right ankle     | <b>I70.233 + L97.319</b> |
| Arteriosclerosis in leg with ulcer in left ankle      | <b>I70.243 + L97.329</b> |
| Varicose left leg with ulcer                          | <b>I83.92 + L97.929</b>  |
| Varicose right leg with ulcer                         | <b>I83.91 + L97.919</b>  |
| Chronic deep venous thrombosis of leg                 | <b>I82.509</b>           |
| Chronic pulmonary embolism                            | <b>I27.82</b>            |

| CARDIAC ARRHYTHMIAS                     |                |
|---|----------------|
| Atrial fibrillation                     | <b>I48.91</b>  |
| Atrial flutter                          | <b>I48.92</b>  |
| Paroxysmal supraventricular tachycardia | <b>I47.1</b>   |
| Paroxysmal tachycardia                  | <b>I47.2</b>   |
| Sick sinus syndrome                     | <b>I49.5</b>   |
| Sinoatrial node dysfunction             | <b>I49.5</b>   |
| <b>CVA (STROKE) RESIDUALS</b>           |                |
| Hemiplegia due to CVA                   | <b>I69.359</b> |
| Hemiparesis due to CVA                  | <b>I69.359</b> |
| RT side weakness due to CVA             | <b>I69.351</b> |
| LT side weakness due to CVA             | <b>I69.354</b> |
| Monoplegia of upper limb due to CVA     | <b>I69.339</b> |
| Monoplegia of lower limb due to CVA     | <b>I69.349</b> |
| Weakness of upper limb due to CVA       | <b>I69.339</b> |
| Weakness of lower limb due to CVA       | <b>I69.349</b> |

-Acute CVA, mostly codes under categories **I60** to **I63**, impacts the HCC model; however, it is mostly treated in the inpatient setting. Use code Z86.73 for an old (history of ) CVA without residuals.  
 -Acute myocardium infarct (AMI), categories **I21** and **I22**, impacts the HCC model but the code can be reported only in a 28-day (4 weeks) timeframe. Use I25.2, for old MIs or when documentation does not include the timeframe.

| RESPIRATORY CONDITIONS                   |                |
|--|----------------|
| Asthma (BA)                              | <b>J45.909</b> |
| BA, mild intermittent                    | <b>J45.20</b>  |
| BA, mild persistent                      | <b>J45.30</b>  |
| BA, moderate persistent                  | <b>J45.40</b>  |
| BA, severe persistent                    | <b>J45.50</b>  |
| Chronic bronchitis                       | <b>J42</b>     |
| Chronic obstructive asthma               | <b>J44.9</b>   |
| COPD                                     | <b>J44.9</b>   |
| COPD with asthma                         | <b>J44.9</b>   |
| Emphysema                                | <b>J43.9</b>   |
| Obstructive chronic bronchitis           | <b>J44.9</b>   |
| Pulmonary fibrosis                       | <b>J84.10</b>  |
| Pulmonary granuloma                      | <b>J84.10</b>  |
| Simple chronic bronchitis                | <b>J41.0</b>   |
| Smoker's cough                           | <b>J41.0</b>   |
| Chronic respiratory failure              | <b>J96.10</b>  |
| <b>CANCER (CA) &amp; OTHER NEOPLASMS</b> |                |

CA categories C00 to D09 require the following documentation:  
 • Surgery, surgery planning, chemotherapy, radiation, immunotherapy, hormone therapy, or other antineoplastic treatment  
 • Or, if applicable, patient treatment refusal, "watchful waiting" or the treatment is contraindicated due to age or other medical circumstances.

| CANCER (CA) & OTHER NEOPLASMS |                |
|-------------------------------|----------------|
| Female right breast CA        | <b>C50.911</b> |
| Female left breast CA         | <b>C50.912</b> |
| Secondary pleura CA           | <b>C78.2</b>   |
| Colon CA                      | <b>C18.9</b>   |
| Prostate CA                   | <b>C61</b>     |
| Secondary Bone CA             | <b>C79.51</b>  |
| Right lung CA                 | <b>C34.91</b>  |
| Left lung CA                  | <b>C34.92</b>  |
| Secondary right lung CA       | <b>C78.01</b>  |
| Secondary left lung CA        | <b>C78.02</b>  |
| Cervix CA                     | <b>C53.9</b>   |
| Uterus CA                     | <b>C55</b>     |
| Lymphoma                      | <b>C85.90</b>  |
| Leukemia                      | <b>C95.90</b>  |
| Melanoma                      | <b>D03.9</b>   |

Other neoplasms that impact the HCC model are those mainly affecting the central nervous systems like brain and meninges tumors regardless of the type (malignant or benign).

| MALNUTRITION, OBESITY & DIGESTIVE CONDITIONS |               |
|--|---------------|
| Malnutrition                                 | <b>E46</b>    |
| Malnutrition, mild degree                    | <b>E44.1</b>  |
| Morbid obesity                               | <b>E66.01</b> |

| MALNUTRITION, OBESITY & DIGESTIVE CONDITIONS |                |
|--|----------------|
| Morbid obesity with alveolar hypoventilation | <b>E66.2</b>   |
| Crohn's disease                              | <b>K50.90</b>  |
| Ulcerative colitis                           | <b>K51.912</b> |
| Chronic pancreatitis                         | <b>K86.1</b>   |
| Cirrhosis of liver                           | <b>K74.60</b>  |
| Chronic hepatitis                            | <b>K73.9</b>   |
| Chronic viral hepatitis B                    | <b>B18.0</b>   |
| Chronic viral hepatitis C                    | <b>B18.2</b>   |
| End-stage liver disease                      | <b>K72.90</b>  |
| Portal hypertension                          | <b>K76.6</b>   |
| Esophageal varices                           | <b>I85.00</b>  |

| OTHER METABOLIC & BLOOD DISEASES     |                |
|--------------------------------------|----------------|
| Homocystinemia                       | <b>E72.11</b>  |
| Homocystinuria                       | <b>E72.11</b>  |
| Hyperparathyroidism                  | <b>E21.3</b>   |
| Immunodeficiency due external causes | <b>D84.822</b> |
| Immunodeficiency due to conditions   | <b>D84.81</b>  |
| Immunodeficiency due to drugs        | <b>D84.821</b> |
| Neutropenia                          | <b>D70.9</b>   |
| Secondary hypercoagulable state      | <b>D68.69</b>  |
| Senile purpura                       | <b>D69.2</b>   |
| Thrombocytopenia                     | <b>D69.6</b>   |
| Thrombocytosis                       | <b>D47.3</b>   |

### MENTAL HEALTH CONDITIONS

|  |         |
|--|---------|
| Autistic disorder  | F84.0   |
| Asperger's syndrome  | F84.5   |
| Anorexia nervosa   | F50.00  |
| Bulimia nervosa  | F50.2   |
| MDD mild, single episode   | F32.0   |
| MDD moderate, single episode   | F32.1   |
| MDD severe, single episode   | F32.2   |
| MDD recurrent  | F33.9   |
| MDD in remission   | F32.5   |
| Bipolar disorder   | F31.9   |
| Bipolar disorder in remission  | F31.70  |
| Schizophrenia  | F20.9   |
| Paranoid schizophrenia   | F20.0   |
| Alcoholism   | F10.20  |
| Alcoholism in remission  | F10.21  |
| History of alcoholism  | F10.21  |
| Opioid dependence  | F11.20  |
| Opioid dependence in remission   | F11.21  |
| History of opioid dependence   | F11.21  |
| Erectile dysfunction due to alcohol use  | F10.980 |
| Anxious personality  | F60.6   |
| Borderline personality disorder  | F60.3   |
| Obsessive personality disorder   | F60.5   |
| Paranoid personality disorder  | F60.0   |
| Personality disorder   | F60.9   |
| Psychosis, use this code only if the underlying condition causing the psychosis is unknown; otherwise, use the appropriate underlying condition code (e.g., MDD code). | F29     |

### NEUROLOGY & OPHTHALMOLOGY CONDITIONS

|  |                |
|--|----------------|
| Alzheimer's disease                                | G30.9 & F02.80 |
| Cerebral palsy                                     | G80.9          |
| Dementia   | F03.90         |
| Epilepsy   | G40.909        |
| Exudative senile macular degeneration bilateral    | H35.323        |
| Exudative senile macular degeneration in left eye  | H35.322        |
| Exudative senile macular degeneration in right eye | H35.321        |
| Hemiparesis or hemiplegia                          | G81.90         |
| Monoplegia   | G83.30         |
| Monoplegia of lower limb                           | G83.10         |
| Monoplegia of upper limb                           | G83.20         |
| Quadriplegia                                       | G82.50         |
| Multiple sclerosis                                 | G35            |
| Muscular dystrophy                                 | G71.00         |
| Narcolepsy   | G47.419        |
| Polyneuropathy due to AIDS                         | B20 + G63      |
| Polyneuropathy due to alcohol use or alcoholism    | G62.1          |
| Polyneuropathy due to medications                  | G62.0          |
| Polyneuropathy due to radiotherapy                 | G62.82 & Y84.2 |
| Polyneuropathy due to vitamin B deficiency         | E53.9 & G63    |
| Polyneuropathy in RA                               | M05.50         |

### NEUROLOGY & OPHTHALMOLOGY CONDITIONS

|   |                  |
|---|------------------|
| Polyneuropathy residual of chemotherapy | G62.0 & T45.1X5S |
| Polyneuropathy residual of malnutrition | E64.0 & G63      |
| Paraplegia                              | G82.20           |
| Parkinson's disease                     | G20              |
| Vitreous hemorrhage, both eyes          | H43.13           |
| Vitreous hemorrhage, left eye           | H43.12           |
| Vitreous hemorrhage, right eye          | H43.11           |

### SKIN CONDITIONS & ARTHRITIS

|                        |        |
|------------------------|--------|
| Psoriatic arthropathy  | L40.50 |
| RA with polyneuropathy | M05.50 |
| Juvenile RA            | M08.00 |
| Polymyalgia rheumatic  | M35.3  |
| Senile purpura         | D69.2  |
| Melanoma               | D03.9  |

The only pressure ulcer stages that impact the HCC models are 3, 4, and unstageable.

### SKIN CONDITIONS & ARTHRITIS

| Anatomic location                     | Left site | Right site |
|---------------------------------------|-----------|------------|
| Pressure ulcer buttock stage 3        | L89.323   | L89.313    |
| Pressure ulcer buttock stage 4        | L89.324   | L89.314    |
| Pressure ulcer buttock unstageable    | L89.320   | L89.310    |
| Pressure ulcer heel stage 3           | L89.623   | L89.613    |
| Pressure ulcer heel stage 4           | L89.624   | L89.614    |
| Pressure ulcer heel unstageable       | L89.620   | L89.610    |
| Pressure ulcer hip stage 3            | L89.223   | L89.213    |
| Pressure ulcer hip stage 4            | L89.224   | L89.214    |
| Pressure ulcer hip unstageable        | L89.220   | L89.210    |
| Pressure ulcer lower back stage 3     | L89.143   | L89.133    |
| Pressure ulcer lower back stage 4     | L89.144   | L89.134    |
| Pressure ulcer lower back unstageable | L89.140   | L89.130    |
| Pressure ulcer upper back stage 3     | L89.123   | L89.113    |
| Pressure ulcer buttock stage 4        | L89.323   | L89.313    |
| Pressure ulcer buttock stage 4        | L89.324   | L89.314    |
| Pressure ulcer buttock unstageable    | L89.320   | L89.310    |
| Pressure ulcer heel stage 3           | L89.623   | L89.613    |
| Pressure ulcer upper back stage 4     | L89.124   | L89.114    |
| Pressure ulcer upper back unstageable | L89.120   | L89.110    |

### SKIN CONDITIONS & ARTHRITIS

| Anatomic location                        | Right site |
|--|------------|
| Pressure ulcer sacral region stage 3     | L89.153    |
| Pressure ulcer sacral region stage 4     | L89.154    |
| Pressure ulcer sacral region unstageable | L89.150    |
| Pressure ulcer of head stage 3           | L89.813    |
| Pressure ulcer of head stage 4           | L89.814    |
| Pressure ulcer of head unstageable       | L89.810    |

Non-pressure ulcers, code first the underlying condition like DM and arteriosclerosis of extremities.

### SKIN CONDITIONS & ARTHRITIS

| Anatomic location  | Left site | Right site |
|--------------------|-----------|------------|
| Ulcer in ankle     | L97.329   | L97.319    |
| Ulcer in buttock   | L98.419   | L98.419    |
| Ulcer in calf      | L97.229   | L97.219    |
| Ulcer in foot      | L97.529   | L97.519    |
| Ulcer in heel      | L97.429   | L97.419    |
| Ulcer in midfoot   | L97.429   | L97.419    |
| Ulcer in lower leg | L97.929   | L97.919    |
| Ulcer in thigh     | L97.129   | L97.119    |

### CONGENITAL CONDITIONS

|  |        |
|--|--------|
| Albinism                               | E70.30 |
| Cerebral palsy                         | G80.9  |
| Cleft lip, bilateral                   | Q36.0  |
| Cleft lip, median                      | Q36.1  |
| Cleft lip, unilateral                  | Q36.9  |
| Cleft palate                           | Q35.9  |
| Cleft palate with bilateral cleft lip  | Q37.8  |
| Cleft palate with unilateral cleft lip | Q37.9  |
| Down syndrome                          | Q90.9  |
| Muscular dystrophy                     | G71.00 |
| Spina bifida                           | Q05.9  |

Most pregnancy codes, including childbirth, impact the CRA model.

### OSTOMIES, TRANSPLANTS & AMPUTATIONS

|                                   |         |
|-----------------------------------|---------|
| Right hand amputation             | Z89.111 |
| Left hand amputation              | Z89.112 |
| Right arm amputation              | Z89.201 |
| Left arm amputation               | Z89.202 |
| Above left knee amputation (AKA)  | Z89.612 |
| Above right knee amputation (AKA) | Z89.611 |
| Below left knee amputation (BKA)  | Z89.512 |

### OSTOMIES, TRANSPLANTS & AMPUTATIONS

|                                   |         |
|-----------------------------------|---------|
| Below right knee amputation (BKA) | Z89.511 |
| Left ankle amputation             | Z89.442 |
| Left foot amputation              | Z89.432 |
| Left great toe amputation         | Z89.412 |
| Left toe amputation               | Z89.412 |
| Right ankle amputation            | Z89.441 |
| Right foot amputation             | Z89.431 |
| Right great toe amputation        | Z89.411 |
| Right toe amputation              | Z89.411 |
| Colostomy                         | Z93.3   |
| Cutaneous-vesicostomy             | Z93.51  |
| Cystostomy                        | Z93.50  |
| Gastrostomy (PEG)                 | Z93.1   |
| Ileostomy                         | Z93.2   |
| Tracheostomy                      | Z93.0   |
| Kidney transplant status          | Z94.0   |
| Heart transplant status           | Z94.1   |
| Lung transplant status            | Z94.2   |
| Heart and lungs transplant status | Z94.3   |
| Liver transplant status           | Z94.4   |
| Bone marrow transplant status     | Z94.81  |
| Intestine transplant status       | Z94.82  |
| Pancreas transplant status        | Z94.83  |
| Stem cells transplant status      | Z94.84  |

\*Codes that only impact the HHS-HCC model are indicated in blue.

This educational tool is not intended to diagnose, evaluate or treat patients. Each provider is responsible for the clinical and diagnostic decisions pertinent to their patient's care. This tool does not substitute official references.

If you have any questions, please contact: [gabriel.aponte@achnfl.com](mailto:gabriel.aponte@achnfl.com)

### REFERENCES & ADDITIONAL TOOLS:

- HCC and codes that impact the CMS-HCC model: <https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html>
- AAPC Risk Adjustment Search Tool: <https://www.aapc.com/resources/riskadjustment/>
- ICD-10-CM
- General information, codes, and official guidelines: <https://www.cdc.gov/nchs/icd/icd10cm.htm>
- CDC Code Browser: <https://icd10cmtool.cdc.gov/?fy=FY2021>
- Coding Clinic: <https://www.codingclinicadvisor.com/>