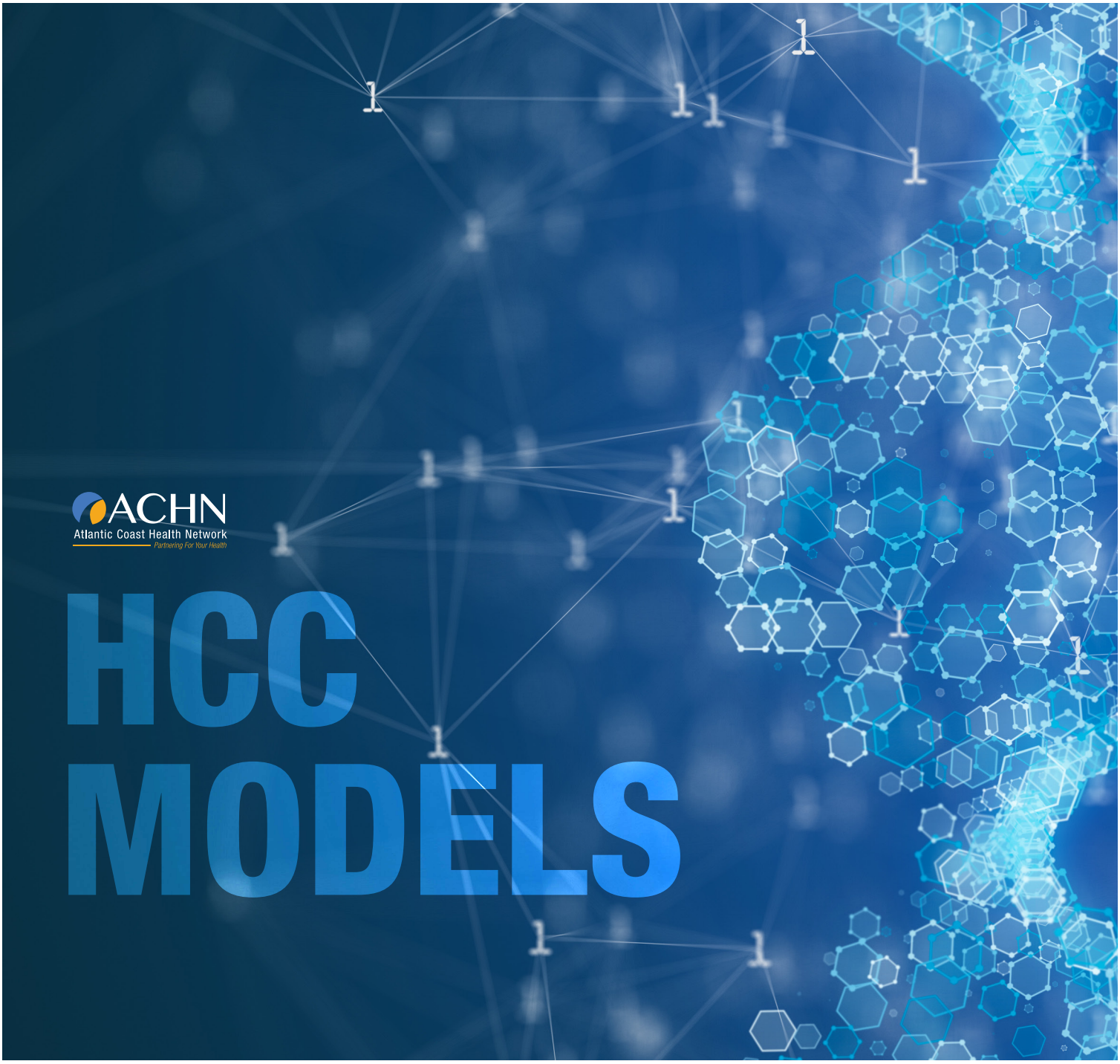

A COMPREHENSIVE RESOURCE TOOL WITH OUTPATIENT CODING & DOCUMENTATION INSIGHTS

DISCLAIMERS & OFFICIAL SOURCES THAT NEED TO BE ALWAYS FOLLOWED

We encourage our providers to follow official sources to code accurately and comply with payers and other regulatory agencies. The use of the following official guidelines were resources in the development of the document.

- American Hospital Association Coding Clinic for ICD-10-CM and ICD-10-PCS, which is mentioned as ICD-10-CM & Coding Clinic
  - http://www.codingclinicadvisor.com/
- CMS Managed Care Manual, CMS-HCC lists, 2008 Risk Adjustment Data Technical Assistance for Medicare Advantage Organizations Participant & Resource Guides, and Contract-Level Risk Adjustment Data Validation Medical Record Reviewer Guidance, which is mentioned as HCC Manuals
  - https://www.csscoperations.com/internet/csscw3_files.nsf/F/CSSCparticipant-guide-publish_052909.pdf/$FILE/participant-guide-publish_052909.pdf
  - https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-Risk-Adjustment-Data-Validation-Program/Other-Content-Types/RADV-Docs/Medical-Record-Reviewer-Guidance.pdf
  - https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html
  - https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMS019326
- ICD-10-CM Official Guidelines for Coding and Reporting, which is mentioned as ICD-10-CM & Coding Clinic
  - http://www.cdc.gov/nchs/icd/icd10cm.htm
- CMS Evaluation and Management Services Guide, 1995 and 1997 Documentation Guidelines for Evaluation and Management Services, which is mentioned as CMS Doc
  - https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Evaluation-and-Management-Visits
- Current Procedural Terminology (CPT) codes, modifiers, and their descriptions are registered trademarks of the American Medical Association (AMA)
  - https://www.ama-assn.org/practice-management/cpt

- 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.
  - Codes that only impact the commercial HCC (CRA) model are in **blue**.
- Diagnoses and health measures that impact quality programs are in **orange**.

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. Any questions about this document can be made to gabriel.aponte@achnfl.com.

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HIERACRCHICAL CONDITION CATEGORY (HCC) MODELS & RISK ADJUSTMENT FACTOR (RAF)

In our operations, we have two HCC models, which are:

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 to pay organizations participating in Medicaid programs and ACA marketplace.

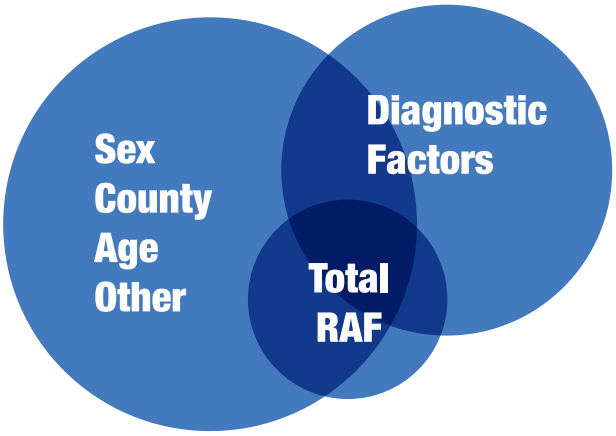
HCC models allow the government and payers to pay organizations for the patient's risk instead of a fixed amount. By doing so, the government is able to make appropriate and accurate payments for patients with differences in expected costs.

Regardless of the model, consideration of several factors is necessary when assigning the payment amount. However, these factors can fall under two categories: demographic data and diagnostic data. Adding up and then multiplying by the fixed amount assigned to each patient gives the RAF calculation. This estimate adjusts the fixed payment according to the patient's demographic and diagnostic information (HCC Manuals).

As providers, we only have control of one component of the RAF calculation, which is the diagnostic information. The provider should identify, treat, document, code, and bill existing conditions of their patient's panel.

Demographic Factors

Providers must identify, treat, document, code, and bill existing conditions to payers at least twice a year.



CMS and payers get the diagnostic information from the ICD-10-CM codes that providers billed on their claims. However, not all ICD-10-CM codes have an RAF score, only those included by CMS in the HCC model. Also, CMS and payers clear their databases every year. Providers must resubmit every active diagnosis that the patient has in order to receive accurate payments.

We recommend scheduling one comprehensive face-to-face visit before July 1st and one before December 31st every year. Providers should evaluate all active conditions during these encounters and bill them to the payer.

CALCULATING THE RISK ADJUSTMENT

This is an example of how clinical documentation impacts the RAF calculation and payment. In this scenario, two different providers evaluated the same patient.

A 70-year-old male patient with diabetes and morbid obesity (BMI 41); DM has caused nerve damage, polyneuropathy.

DOCTOR 1

Documentation	ICD-10-CM	Score
Demographics	-	0.600
DM w/ Polyneuropathy	E11.42	0.340
Morbid Obesity	E66.01	0.383
	Total RAF	**1.323**

Fixed annual amount **$9,600 x 1.323 = $12,700.80**

The organization will receive an adjustment of **$3,100.80** to cover any cost risk related to DM complications and morbid obesity.

DOCTOR 2

Documentation	ICD-10-CM	Score
Demographics	-	0.600
DM	E11.9	0.107
Obesity	E66.9	-
	Total RAF	**0.707**

Fixed annual amount **$9,600 x 0.707 = $6,787.20**

The organization will receive **$5,913.60** less to treat the same patient with the same comorbidities. The provider neither documented the DM as complicated nor included the term “morbid” in the obesity diagnosis.

*For purpose of this document, CMS-HCC scores are based on CMS' 2020 community-nondual-aged enrollees. HHS-HCC/CRA scores are based on Platinum enrollees.

DISEASE (HCC GROUPS)

Cancers Condition Groups
- Metastatic Cancer & Acute Leukemia
- Lymphomas
- Lung, Colorectal & Bladder, Breast, Prostate, Colorectal, Other Cancers & Tumors

Musculoskeletal & Connective Tissue Condition Groups
- Bone/Joint/Muscle Infections/Necrosis
- Rheumatoid Arthritis & Inflammatory Connective Tissue
- Muscular Dystrophy

Endocrine & Nutritional Condition Groups
- Diabetes with Acute, Chronic or without Complications
- Cystic Fibrosis
- Protein-Calorie Malnutrition & Morbid Obesity
- Other Significant Endocrine and Metabolic Disorders

Infections, Hematologic & Immune Condition Groups
- Immune System Disorders
- HIV/AIDS and Opportunistic Infections
- Septicemia/Shock
- Severe Hematological Disorders

Renal Condition Groups
- AKF, CKD stages 3a, 3b, 4, 5, ESRD, and Dialysis

Injuries & Fractures - Condition Groups
- Spinal Cord Disorders/Injuries
- Severe and Major Head Injury
- Vertebral Fractures without Spinal Cord Injury
- Hip Fracture/Dislocation

Gastrointestinal Condition Groups
- End-Stage Liver Disease, Cirrhosis of Liver, Chronic Hepatitis
- Intestinal Obstruction/Perforation, Inflammatory Bowel Disease
- Pancreatic Disease

In addition, Commercial Risk Adjustment (CRA) models mainly use the following HCC groups:

Pregnancy, Newborn & Congenital Condition Groups in the CRA Model
- Ectopic/molar pregnancy, miscarriages, and pregnancy with/without complications
- Immature/premature newborns
- Congenital skeletal, connective tissue, and metabolic disorders
- Cleft lip/palate
- Down syndrome, Fragile X, and other chromosomal anomalies
- Major congenital heart/circulatory disorders

Cardiovascular & Respiratory Conditions Groups
- Respiratory Arrest
- Cardiorespiratory Failure & Shock
- Congestive Heart Failure
- Acute Myocardial Infarction
- Unstable Angina & Other Acute Ischemic Heart Diseases
- Angina Pectoris
- Cerebral Hemorrhage & Strokes
- Specified Heart Arrhythmias
- Chronic Obstructive Pulmonary Disease (COPD)
- Fibrosis of Lung & Other Chronic Lung Disorders
- Aspiration & Specified Bacterial Pneumonia
- Pneumococcal Pneumonia, Emphysema, Lung Abscess
- Atherosclerosis of Extremities with Ulceration or Gangrene
- Vascular Disease with/without Complications

Neurological & Sensory Organ Condition Groups
- Cerebral Palsy, Hemiplegia/Hemiparesis, Paraplegia, Quadriplegia, Other Extensive Paralysis
- Infective & Toxic Polyneuropathy
- Multiple Sclerosis
- Parkinson's & Huntington's Diseases
- Seizure Disorders & Convulsions
- Coma, Brain Compression/Anoxic Brain Damage, Cerebral Hemorrhage, Ischemic or Unspecified Stroke
- Proliferative Diabetic Retinopathy & Vitreous Hemorrhage

Ostomies, Amputations, Machinery Dependence & Other Condition Groups
- Respirator Dependence/Tracheotomy Status
- Major Organ Transplant Status
- Artificial Openings for Feeding or Elimination
- Amputation Status, Lower Limb/Amputation Complications
- Major Complications of Medical Care & Trauma

Integumentary Condition Groups
- Extensive Third-Degree Burns
- Pressure ulcers II, III, IV, and unstageable
- Chronic Ulcer of Skin, Except Pressure

Mental Condition Groups
- Schizophrenia, Major Depressive Disorders, Bipolar
- Unspecified Psychosis
- Substance Use Disorders

Mental & Other Conditions Groups in the CRA Model
- Anorexia/bulimia nervosa
- Autistic and other pervasive developmental disorders
- Asthma

GENERAL DOCUMENTATION GUIDELINES & SUPPORTING ICD-10-CM CODES

SOAP Documentation Format for Your Evaluation and Management Services

Although clinicians use several types of documentation formats, we recommend the SOAP format when documenting or creating templates in the electronic health record (EHR). This method of documentation reminds clinicians of specific tasks while providing a framework for evaluating information. The SOAP note helps guide healthcare workers use their clinical reasoning to assess, diagnose, and treat a patient based on the information provided by them (Podder, 2020).

Subjective–Information coming from the patient and others

- Chief complaint (CC), history of present illness (HPI)
  - Describe the CC and how the present illness/problem has developed
- Past, surgical, family, and social histories
  - Include any transplant status here
- Review of systems (ROS), do not confuse this section with the physical exam section
  - This is a system based list of questions that help uncover symptoms not otherwise mentioned by the patient.

Objective–Information created by you

- Vital signs and physical exam findings
  - Do not forget to include current ostomies (e.g., colostomy) and amputations in your findings
- Laboratory data, imaging results, and other diagnostic data
- Conclusion of reviewing other clinicians' documentation

Assessment–State your diagnostic conclusion

- This section documents the synthesis of "subjective" and "objective" evidence to arrive at a diagnosis. This is the assessment of the patient's status through analysis of the problem, possible interaction of the problems, and changes in the status of the problems. Elements include the following.
  - Current problems/diagnoses with status and/or severity
    - List the problem list in order of importance
  - Differential Diagnosis
  - This list includes the different possible diagnoses, from most to least likely, and the thought process behind this list. This is where the decision-making process is explained in depth. Included should be the possibility of other diagnoses that may harm the patient but are less likely.

Plan–What are you doing or going to do with those diagnoses?

- State which testing is needed and the rationale for choosing each test to resolve diagnostic ambiguities; ideally what the next step would be if positive or negative
- Therapy needed (medications) and/or specialist referral(s) or consults
- Patient education, counseling

Each page must include:

- Date of the encounter (service)
- Patient's name and other identifiers like date of birth or record number
- Treating provider's legible name, signature, and credentials (e.g., DO)

Sign and close the encounter as soon as possible

- The documentation should be generated at the time of service or shortly thereafter. Delayed entries within a reasonable time frame (24-48 hrs.) are acceptable for purposes of clarification, error correction, the addition of information not initially available, and if certain unusual circumstances prevented the generation of the note at the time of service (First Coast, 2006). See recommended late entry guidelines further below in this document.

Use words instead of symbols and codes to document the encounter

- Avoid using of ICD-10-CM/PCS, CPT, HCPCS II codes, and nonstandard abbreviations in clinical documentation. Codes and their descriptions are intended to facilitate the coding process; they were not originally created for clinical documentation purposes. However, if code descriptions are used in the documentation, the provider may need to further clarify the diagnostic statement within the same clinical note by adding additional information (e.g., including information in an open-text note).
  - If the EHR uses the code's description in lieu of a diagnostic statement, avoid ambiguous code descriptions that may make the documentation unclear (ICD-10-CM & Coding Clinic). For example:
    - Avoid code descriptions that encompass terms like "other," "unspecified," "without," or "in disease classified elsewhere."
    - Be aware of multiple diagnoses in the same code description. Some codes may include more than one diagnosis in their description, making the documentation ambiguous or unclear. For example, code I12.9 reads *Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease or unspecified chronic kidney disease*. This code includes several CKD stages, including an unspecified stage.

Telehealth Services

- In addition to general documentation guidelines, the documentation must indicate that the encounter involved interactive audio and video telecommunications system that permits real-time interactive communication (HCC Manuals). The documentation of the virtual platform (e.g., Zoom) may not be enough because some software has the capability to use only one component (e.g., only audio).

Late entries (addendums) and corrections to the clinical note

- Do not alter or delete the original document. In the case of electronic health record (EHR) the programming will not allow it. In traditional format (by hand), strikethrough any information you wish to correct and add initials and date. In addition, follow these guidelines:
  - Only the attending or treating provider can amend the medical record
  - A statement that the entry is an addendum to the medical record (an addendum should not be added to the medical record without identifying it as such)
  - The date the record is being amended
  - The actual correction to be added
  - The date of the service being amended
  - Legible name, signature, and credentials

  EHR must also follow these guidelines; otherwise, providers are responsible for contacting their EHR carrier to make sure that any documentation requirement is met.

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

1. Evidence that a **diagnosis was addressed in a face-to-face encounter**. For example, the documentation includes the following information:
   - Chief complaint indicating that the patient came in for an evaluation
   - Physical examination
2. **The diagnosis must be documented in words along with its plan of care** or how it affects patient care treatment or management (ICD-10-CM & Coding Clinic). Some coders use the acronyms MEAT and TAMPER™ to apply this requirement better.
   - Documentation of how the diagnosis is being **M**onitored, **E**valuated, **A**ssessed, or **T**reated (MEAT). TAMPER™ includes the same components plus **P**lan and **R**eferral.
3. **Every encounter should stand alone**; therefore, presenting all the required documentation is necessary in the clinical note used to bill the encounter. In fact, for CMS Risk Adjustment Data Validation (RAVD) audits, only one note submission can validate the ICD-10-CM code in question.
4. The **code must follow** these **two guidelines**:
   - ICD-10-CM Official Guidelines for Coding and Reporting
   - AHA Coding Clinic for ICD-10-CM/PCS

Supporting an ICD-10-CM code:

1. Face-to-face encounter
2. Diagnosis is documented in words
3. With MEAT/TAMPER™
4. Billed following ICD-10-CM guidelines

Check your EHR configuration, template, and documentation

1. Update your problem list and assessment section every time that the patient is evaluated.
   - Do not code and report (bill) conditions that were previously treated and no longer exist.
   - Move those diagnoses that no longer exist to the history section of the template.
2. Make sure you are using the correct ICD-10-CM code in your EHR assessment/plan section
   - Some codes identify an episode of care, for example stroke codes include one coding set for the acute event (e.g., I63.9), other sets for residuals, and another code for the medical history of without stroke sequelae.

DIAGNOSIS CODE BILLING FIELDS

- Most billing platforms allow providers to enter up to 12 diagnosis codes in the claim ICD section, Item 21 of the CMS-1500 form, Diagnosis or Nature of Illness or Injury. Otherwise, contact your billing system carrier to enable this feature.

Tip for reporting more than six diagnosis codes in the same encounter

CMS-1500 Item 21 Field	Diagnosis Code
A	Reason for the encounter and first-listed diagnosis
B	Any other related diagnosis code required by ICD-10-CM instructions to follow the first-listed diagnosis.
C-L	Any other diagnosis code that impacts the HCC models and/or HEDIS/Star/Quality programs. Report only one code with the same HCC.

Z codes that do not impact the HCC models, or non-essential codes may not be reported if the 12 claim fields are already filled.

MALIGNANT NEOPLASMS (CANCERS, CA)

Codes within categories **C00-D09** identify active CA and only should be used if one of the following criteria is documented:

- The term “active,” is documented and whether the cancer is primary, secondary (metastasis), or in situ.
- Treatment, such as chemotherapy, radiation, immunotherapy, or hormone therapy.
- If the patient refuses treatment, if “watchful waiting” is advised, or if the treatment is contraindicated due to age or other medical circumstances.

When a malignancy has either previously excised or eradicated from its site, no further treatment directed to that site is necessary, and no evidence of any existing malignancy appears, a code from category Z85 should be used to indicate the former site of the malignancy (ICD-10-CM & Coding Clinic).

- In addition, routine surveillance for recurrence of a previously treated malignancy does not support an active code. Code Z08 and the appropriate Z85.- are used for those instances.

However, leukemia, multiple myeloma, and malignant plasma cell neoplasms may always be coded as active unless the provider indicates that the condition has been completely eradicated. Also, the ICD-10-CM has codes indicating whether or not the malignancy has achieved remission (ICD-10-CM & Coding Clinic).

Secondary CA Codes

- The documentation should include the term “secondary,” or the origin site.
  - For example: “secondary pelvic bone cancer,” or “prostate cancer metastasized to the pelvic bone.”

Coding Examples

1. A female patient with active right breast cancer comes for chemotherapy.
   - Z51.11 Encounter for antineoplastic chemotherapy
   - **C50.911** Malignant neoplasm of unspecified site of right female breast
2. A patient with active stomach cancer and a history of right breast cancer refuses further treatment.
   - **C16.9** Malignant neoplasm of stomach, unspecified
   - Z85.3 Personal history of malignant neoplasm of breast
   - Z53.29 Procedure and treatment not carried out because of patient's decision for other reasons
3. A patient with active prostate cancer receives a diagnosis with metastasis to the pelvic bone. He comes in for education on treatment options.
   - **C61** Malignant neoplasm of prostate
   - **C79.51** Secondary malignant neoplasm of bone

Common CA Diagnoses Impacting the HCC Models

Diagnosis	ICD-10-CM
Female right breast CA	C50.911
Female left breast CA	C50.912
Secondary pleura CA	C78.2
Colon CA	C18.9
Prostate CA	C61
Secondary Bone CA	C79.51
Right lung CA	C34.91
Left lung CA	C34.92
Secondary right lung CA	C78.01
Secondary left lung CA	C78.02
Cervix CA	C53.9
Uterus CA	C55
Lymphoma	C85.90

DIABETES MELLITUS (DM)

If applicable, the documentation should include:

- Type of diabetes, see below table for more information
- Relationship terms linking diabetes with its complications. For example:
  - "Diabetic," "due to," "secondary to," "related to," and "associated to"
- Evaluation and treatment, such as diabetic foot examinations, oral drugs, and insulin

Type of DM	ICD-10-CM Categories & Subcategories	Treatment
Type 1	E10.-	Insulin
Type 2	E11.-	Oral hypoglycemic drugs (Z79.84), non-insulin injectables (Z79.899), and/or insulin (**Z79.4**).
Secondary	E08.- due to an underlying condition E09.- due to drugs or chemicals E13.- due to other circumstances	Oral hypoglycemic drugs (Z79.84), non-insulin injectables (Z79.899), and/or insulin (**Z79.4**).
Gestational	O24.4-, see Pregnancy section for more information	Diet, oral hypoglycemic drugs, and/or insulin. See the sixth character in the subcategory for classification.

Quality- Hemoglobin A1c (A1c) Control

At a minimum, documentation in the medical record must include a note indicating the date when the HbA1c test was performed and the result. The most recent A1C level must be <8.0% for non-Medicare patients and <9.0% for Medicare (MA) patients to meet the measure. Even though a chart review validates this measure; you may use the following CPT codes to report this measure in your claims

- 3044F, Most recent A1c result is <7%
- 3051F, Most recent A1c result is 7% to 7.99%
- 3052F, Most recent A1c level is 8% to 9%
- 3046F, Most recent A1c result is >9%

Coding Examples

1. The patient has diabetes with chronic kidney disease, stage 3a. The diabetes is uncontrolled with hyperglycemia; the last glucose reading was 180. He is taking metformin and Plavix for diabetic Peripheral Arterial Disease (PAD). We'll reorient on the importance of glucose control and diet.
   - **E11.22** Type 2 diabetes mellitus with diabetic chronic kidney disease
   - **N18.31** Chronic kidney disease, stage 3a
   - **E11.65** Type 2 diabetes mellitus with hyperglycemia
   - **E11.51** Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
   - Z79.84 Long term (current) use of oral hypoglycemic drugs
2. The patient has ESRD due to diabetes. He's not complying with the dialysis schedule (skipped one session last week). She has polyneuropathy.
   - **E11.22** Type 2 diabetes mellitus with diabetic chronic kidney disease
   - **N18.6** End stage renal disease
   - **E11.42** Type 2 diabetes mellitus with diabetic polyneuropathy
   - Z91.15 Patient's noncompliance with renal dialysis
3. The patient had pancreatic CA ten years ago; it was eradicated. He is on insulin due to DM secondary to pancreatectomy. He comes in to evaluate erectile dysfunction due to diabetic Peripheral Vascular Disease and polyneuropathy.

- **E13.42** Other specified diabetes mellitus with diabetic polyneuropathy
- **E13.51** Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene
- N52.1 Erectile dysfunction due to diseases classified elsewhere
- Z85.07 Personal history of malignant neoplasm of pancreas
- Z90.410 Acquired total absence of pancreas
- **Z79.4** Long term (current) use of insulin

Common DM Codes Impacting the HCC Models

Assign as many DM codes as needed to identify all the associated conditions that the patient has.

Diagnosis	ICD-10-CM
DM poorly controlled or out of control	**E11.65**
DM with hyperglycemia	**E11.65**
DM with nephropathy	**E11.21**
DM with CKD (unspecified)	**E11.22**
DM with CKD I	**E11.22** and N18.1
DM with CKD II	**E11.22** and N18.2
DM with CKD III	**E11.22** and **N18.30**
DM with CKD IV	**E11.22** and **N18.4**
DM with CKD V	**E11.22** and **N18.5**
DM with ESRD	**E11.22** and **N18.6**
DM with ESRD on dialysis	**E11.22**, **N18.6**, and **Z99.2**
DM with retinopathy	**E11.319**
DM with proliferative retinopathy in right eye	**E11.3591**
DM with proliferative retinopathy in left eye	**E11.3592**
DM with proliferative retinopathy bilateral	**E11.3593**
DM with cataract	**E11.36**
Diabetic glaucoma	**E11.39** and H42
DM with mononeuritis	**E11.40**
DM with neuropathy	**E11.40**
DM with neuralgia	**E11.42**
DM with polyneuropathy	**E11.42**
DM with PVD (PAD or peripheral angiopathy)	**E11.51**
Arthropathy related to DM	**E11.618**
DM with dermatitis	**E11.620**
DM with acanthosis nigricans	**E11.628** and L83
DM with ulcers on toes of right foot	**E11.621** and **L97.919**

Diagnosis	ICD-10-CM
DM with ulcers on toes of left foot	**E11.621** and **L97.929**
DM with ulcer on the right heel	**E11.621** and **L97.419**
DM with ulcer on the left heel	**E11.621** and **L97.429**
DM with ulcer on the right midfoot	**E11.621** and **L97.419**
DM with ulcer on the left midfoot	**E11.621** and **L97.429**
DM with periodontal disease	**E11.630**
Hyperlipidemia related to DM	**E11.69** and **E78.5**
Hypertriglyceridemia related to DM	**E11.69** and **E78.1**
DM	**E11.9**, this code identifies a DM without any complication. It should not be used with other DM codes.

MALNUTRITION & MORBID OBESITY

Malnutrition, E40-E46

- According to the World Health Organization (2020), malnutrition refers to deficiencies, excesses, or imbalances in a person's energy or nutrients intake. The term malnutrition addresses three broad groups of conditions:
  - Undernutrition, which includes wasting (low weight-for-height), stunting (low height-for-age) and underweight (low weight-for-age)
  - Micronutrient-related malnutrition, which includes micronutrient deficiencies (a lack of important vitamins and minerals) or micronutrient excess. According to the US National Library of Medicine, a patient may develop malnutrition due to the lack of a single vitamin in the diet
  - Overweight, obesity, and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and some cancers)

However, there are two additional common definitions and diagnostic criteria the healthcare community uses:

1. The American Society for Parenteral and Enteral Nutrition (ASPEN) guidelines https://www.nutritioncare.org/Guidelines_and_Clinical_Resources/Toolkits/Malnutrition_Toolkit/Definitions/
2. The Global Leadership Initiative on Malnutrition (GLIM) guidelines https://pubmed.ncbi.nlm.nih.gov/30920778/

Nevertheless, the provider's diagnostic statement that the condition exists determines the assignment of a diagnosis code. The assignment is not based on clinical criteria used by the provider to establish the diagnosis (ICD-10-CM & Coding Clinic).

If applicable, the documentation should include:

- Malnutrition severity
- Any underlying condition or complication; cancer, drug or alcohol use, CKD, pancreatitis, anemias, others
- Body mass index (BMI), see codes under category Z68
- Lab results and evaluation; Any diet and nutritional supplements

Morbid obesity, E66.01 or E66.2

Morbid obesity is a condition that is defined by having either a BMI greater than 40, a BMI greater than 35 with at least one obesity-related condition, or more than 100 pounds over an ideal body weight (Obesity Medicine Association, 2019). The limited list of obesity-related conditions includes: hypertensive cardiovascular disease, pulmonary/respiratory disease, diabetes, sleep apnea, or degenerative arthritis of weight-bearing joints (First Coast, 2019).

If applicable, the documentation should include:

- Any complication due to morbid obesity and comorbidities
- BMI
- Evaluation, lab results, and any care plan

Coding Examples

1. A male patient with morbid obesity, BMI 37, with OA in the right knee with pain while walking. He has diabetic PVD and obstructive sleep apnea. He's referred to a specialist for diet and plan of care.
   - **E66.01** Morbid (severe) obesity due to excess calories
   - M17.11 Unilateral primary osteoarthritis, right knee
   - G47.33 Obstructive sleep apnea (adult) (pediatric)
   - **E11.51** Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
   - Z68.37 Body mass index [BMI] 37.0-37.9, adult
2. A bedridden patient with late-onset Alzheimer's disease. She is functionally quadriplegic with HH services. She is malnourished, moderate degree. Dietician referral was completed and sent to the health plan.
   - **E44.0** Moderate protein-calorie malnutrition
   - **G30.1** Alzheimer's disease with late onset
   - **F02.80** Dementia in other diseases classified elsewhere without behavioral disturbance
   - **R53.2** Functional quadriplegia
   - Z74.01 Bed confinement status

Common Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
Malnutrition	E46
Malnutrition, mild degree	E44.1
Morbid obesity	E66.01
Morbid obesity with alveolar hypoventilation	E66.2

OTHER METABOLIC, BLOOD & ENDOCRINE DISEASES

- **Neutropenia, D70.9**. It is an abnormally low level of neutrophils
- **Thrombocytopenia, D69.6**. It is any disorder in which the body platelets are abnormally low. This condition is sometimes associated with abnormal bleeding (US National Library of Medicine, 2018).
  - Include any treatment or evaluation of the condition like complete blood count (CBC) and blood clotting tests (PTT and PT.)

The above conditions may be associated routinely with a disease process and should not be assigned as an additional code unless otherwise instructed by the ICD-10-CM manual.

HYPERCOAGULABLE & IMMUNOCOMPROMISED STATES

Patients have a **hypercoagulable state** if they either have laboratory abnormalities or clinical conditions that relate to an increased risk of thrombosis or recurrent thrombosis without recognizable predisposing factors (US National Library of Medicine National Institutes of Health, 2009).

- **Primary hypercoagulable states, D68.59**, are generally inherited abnormalities of coagulation in which a physiologic anticoagulant mechanism is defective. For example, antithrombin III deficiency, protein C and protein S deficiency, abnormalities of the fibrinolytic system, and dysfibrinogenemias.
- **Secondary hypercoagulable states, D68.69**, are generally acquired disorders in patients with underlying systemic diseases or clinical conditions known to be associated with an increased risk of thrombosis. For example, malignancy, pregnancy, use of oral contraceptives, myeloproliferative disorders, hyperlipidemia, diabetes mellitus, history of DVTs, A-fib, and abnormalities of blood vessels and rheology.

Immunodeficiency state. According to Coding Clinic, an immunocompromised state refers to the weakened condition of an individual's immune system, which makes it it less able to fight infections and other diseases. Treating a patient who is immunocompromised poses more risks and challenges; therefore, it is important to identify a patient with this status.

- **Immunodeficiency due to drugs**, code **D84.821**. Some medications that interfere with the immune system are immunosuppressant, corticosteroids, and chemotherapy.
- **Immunodeficiency due to conditions**, code **D84.81**. This code identifies an immunocompromised state due to a specific medical condition, such as diabetes, cancers, and genetic disorders.
- **Immunodeficiency due to external causes**, code **D84.822**. This code identifies other external factors that cause immunodeficiency, like radiation therapy or due to bone marrow transplantscancers, and genetic disorders.

Document the underlying condition causing the immunodeficiency. Also, signs and symptoms like recurrent infections, hematologic disorders, opportunistic infections, and other information that reflects a weak immune system.

Coding Examples

1. An immunocompromised patient due to DM comes in today to evaluate vaginal infection. She has a history of diabetic foot ulcers and is on metformin for diabetes with PVD and polyneuropathy.
   - N76.0 Acute vaginitis
   - **E11.42** Type 2 diabetes mellitus with diabetic polyneuropathy
   - **E11.51** Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
   - **D84.81** Immunodeficiency due to conditions classified elsewhere
   - Z86.31 Personal history of diabetic foot ulcer
   - Z79.84 Long term (current) use of oral hypoglycemic drugs
2. A patient in a secondary hypercoagulable state with a history of DVT with long-term use of anticoagulants to prevent new clots and treat A-fib.
   - **D68.69** Other thrombophilia
   - **I48.91** Unspecified atrial fibrillation
   - Z86.718 Personal history of other venous thrombosis and embolism
   - Z79.01 Long term (current) use of anticoagulants

MENTAL HEALTH

Besides the treatment plan, include the following documentation for each diagnosis:

- **Anorexia nervosa & bulimia nervosa**
  - Type of anorexia/bulimia
  - BMI
- **Bipolar disorder and major depressive disorder (MDD)**
  - Severity; mild, moderate, severe
  - Status and episodes; recurrent or in remission
    - **Quality**, patients adhered to antidepressant medication for at least 180 days (6 months)
- **Personality disorders**
  - The term “personality” must always be in the documentation, e.g., “obsessive-compulsive personality disorder.”
  - Type: schizoid, paranoid, schizotypal, antisocial, borderline, narcissistic, avoidant, dependent, and/or obsessive-compulsive.
- **Psychosis**
  - Type and if it is related to another condition like MDD or substance use disorders
- **Schizophrenia**
  - Type, e.g., paranoid schizophrenia
- **Substance use disorders**
  - Type of substance
  - Severity; mild, moderate, severe
  - Status of remission, if applicable
    - **Quality**: patients not achieving a remission status must be evaluated within 14 days of the first evaluation and have three more follow-up visits during the month.
  - Any induced complication, such as erectile dysfunction, insomnia, anxiety, polyneuropathy, withdrawal symptoms, hepatitis, gastritis, psychosis, dementia, and others.

Common Mental Health Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
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	**F29**, *use this code only If the underlying condition causing the psychosis is unknown; otherwise, use the appropriate underlying condition code (e.g., MDD code).*

NEUROLOGICAL & OPHTHALMIC CONDITIONS

Polyneuropathy, if applicable, document:

- Underlying conditions or problems that may cause the condition
  - Alcohol use, DM, RA, CA, AIDS/HIV, hypothyroidism, hepatitis C
  - Vitamins deficiencies (B1, B6, B12, Niacin, and E) and malnutrition
  - Drugs, medication, or treatments like chemotherapy or radiotherapy
- Evaluation and treatment like electromyogram, neurological examinations, vibration perception threshold tests, gabapentin, or any other drugs.

Diagnosis	ICD-10-CM
Polyneuropathy due to alcohol use or alcoholism NOTE: use code from category F10.- to specify the type of alcohol use	**G62.1**
Polyneuropathy, residual of chemotherapy	**G62.0** and T45.1X5S
Polyneuropathy due to medications NOTE: use additional code to specify medication, T36-T50	**G62.0**
Polyneuropathy due to vitamin B deficiency	E53.9 and **G63**
Polyneuropathy due to AIDS	**B20** and **G63**
Polyneuropathy residual of malnutrition	**E64.0** and **G63**
Neuropathy due to CKD (uremic neuropathy)	N18.9 and **G63**
Polyneuropathy due to radiotherapy	**G62.82** and **Y84.2**
Polyneuropathy due to hypothyroidism	E03.9 and **G63**
RA with polyneuropathy	**M05.50**

Other Neurological and Ophthalmic Conditions Impacting the HCC Models

Diagnosis	ICD-10-CM
Multiple sclerosis	G35
Cerebral palsy	G80.9
Muscular dystrophy	G71.00
Monoplegia	G83.30
Monoplegia of upper limb	G83.20
Monoplegia of lower limb	G83.10
Hemiparesis or hemiplegia	G81.90
Paraplegia	G82.20
Quadriplegia	G82.50
Parkinson's disease	G20
Alzheimer's disease	G30.9 and F02.80
Dementia	F03.90
Epilepsy	G40.909
Narcolepsy	G47.419
Exudative senile macular degeneration in right eye	H35.321
Exudative senile macular degeneration in left eye	H35.322
Exudative senile macular degeneration bilateral	H35.323
Vitreous hemorrhage, right eye	H43.11
Vitreous hemorrhage, left eye	H43.12
Vitreous hemorrhage, both eyes	H43.13

HYPERTENSION, HEART FAILURE & CHRONIC KIDNEY DISEASE

Hypertension (HTN) or high blood pressure (HBP)

- I10, this code is used to classify HTN without any related manifestation
- I11-, this category includes I10 plus any heart complication.
  - If applicable, use additional codes to specify HF, like **I50.9**
  - Any condition classified under the following codes is not reported separately I51.4-I51.7, I51.89, I51.9, like unspecified myocarditis, cardiomegaly, and myocardial degeneration.
- I12-, this category includes I10 and renal conditions related to HTN
  - If applicable, use additional codes to identify CKD, codes under category N18- (see below more details about CKD coding)
  - Do not code any condition classified under N26- separately, like renal atrophy, N26.1
- I13-, this category includes codes under categories I10, I11-, and I12-.
  - Use additional codes to identify HF and CKD, if applicable.
- **Pulmonary hypertension (PH)**, code **I27.20**, also impacts the HCC models. PH is a complex and often misunderstood disease. It is a high blood pressure of the blood vessels in the lungs. These vessels can become stiff, damaged, or narrow, and the right side of the heart must work harder to pump blood through (Pulmonary Hypertension Association).
  - If the pressure in the pulmonary artery is greater than 25 mmHg at rest or 30 mmHg during physical activity, it is abnormally high and is called pulmonary hypertension (AHA).

Heart failure (HF)

- ICD-10-CM HF mainly by affected side and severity, e.g., chronic diastolic HF. However, providers may use clinical classification systems like NYHA or ACCF/AHA to document or establish the diagnosis. Here is a summary of these two HF clinical classifications:

ACCF/AHA Stage		NYHA See legend below	ICD-10-CM
A	At high risk for HF but without structural heart disease or symptoms of HF • Patients with HTN, DM, CAD, metabolic syndrome, and history of alcohol use	-	Z91.89
B	Structural heart disease but without signs or symptoms of HF • Patients with an old MI and LV remodeling, including LVH and low EF, and/or significant valve disease	I	I50.9
C	Structural heart disease with prior or current symptoms of HF • Patients with structural heart disease plus SOB, fatigue, and/or reduced exercise tolerance	II, III, or IV	I50.9
D	Refractory HF requiring specialized interventions • Patients with marked symptoms at rest despite medical maximal medical therapy	IV	I50.84

I- No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, SOB.
II- Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, SOB.
III- Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or SOB.
IV- Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

Chronic Kidney Disease (CKD)

- The ICD-10-CM classifies CKD based on severity. Stages 1-5 and end-stage renal disease (ESRD) designate the severity of CKD. If both a stage of CKD and ESRD are documented, assign code **N18.6** only.
  - Patients who underwent kidney transplants may still have some form of chronic kidney disease (CKD) because the kidney transplant may not fully restore kidney function. Assign the appropriate N18 code for the patient's stage of CKD and code **Z94.0**.
- Using GFR to stage the CKD
  - Stages 1 and 2 have a normal GFR, >59, but evidence of renal damage will appear like renal cysts or protein in the urine.
  - Two abnormal GFR results in a period of three months or more apart establish the rest of the stages (Kidney Foundation).

Stage	GFR	ICD-10-CM
3, unsp	30-59	N18.30
3a	45-59	N18.31
3b	30-44	N18.32
4	15-29	N18.4
5	< 15	N18.5

Code **N16.8** is assigned when the provider has documented "end-stage renal disease" (ESRD) or there is documentation indicating that the patient requires dialysis (ICD-10-CM & Coding Clinic).

- **Secondary hyperparathyroidism** is common in people who have kidney failure. It is important to treat secondary hyperparathyroidism to prevent it from causing other health problems, such as bone disease (American Kidney Fund). Abnormal PTH levels may indicate the presence of the condition.
  - Renal, **N25.81**
  - Primary, **E21.0**
  - Due to other conditions, **E21.1**

Additional Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
HTN with CHF	**I11.0** and **I50.9**
HTN with CKD 3	I12.9 and **N18.30**
HTN with CKD 4	I12.9 and **N18.4**
HTN with CKD 5	**I12.0** and **N18.5**
HTN with ESRD on dialysis	**I12.0, N18.6,** and **Z99.2**
HTN with HF and CKD	**I13.0,** N18.9, and **I50.9**
HTN with HF and CKD 3	**I13.0, N18.30,** and **I50.9**
HTN with HF and CKD 4	**I13.0, N18.4,** and **I50.9**
HTN with HF and CKD 5	**I13.2, N18.5,** and **I50.9**
HTN with HF and ESRD on dialysis	**I13.2, N18.6, I50.9,** and Z99.2
Congestive heart failure (CHF)	**I50.9**
HFpEF	**I50.30**
Left ventricular failure	**I50.1**
PH due to left heart disease	**I27.22**

Coding Examples

1. A patient with HTN with CKD stage 5, and renal hyperparathyroidism comes in today for an evaluation. She has an AV shunt in place.
   - **I12.0** Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
   - **N18.5** Chronic kidney disease, stage 5
   - **N25.81** Secondary hyperparathyroidism of renal origin
   - **Z99.2** Dependence on renal dialysis
2. A patient with nephropathy, HTN, and chronic systolic heart failure comes in for an evaluation.
   - **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
   - N28.9 Disorder of kidney and ureter, unspecified
   - **I50.22** Chronic systolic (congestive) heart failure

3. Echo results show pulmonary hypertension secondary to left systolic chronic heart failure with a pulmonary pressure of 40. The patient has hypertensive cardiomegaly.
   - **I27.22** Pulmonary hypertension due to left heart disease
   - **I11.0** Hypertensive heart disease with heart failure
   - **I50.22** Chronic systolic (congestive) heart failure

ARTERIOSCLEROSIS

The documentation should include:

- The anatomic location of the arteriosclerosis
  - Aorta, **I70.0**

    According to the American Heart Association, approximately 50% of hypertensive patients have an arteriosclerotic aorta. This condition is equally responsible for acute cerebrovascular disease as other cardiovascular conditions.
  - Coronary arteries (CAD), subcategory I25.1-

    If applicable, indicate the presence of any bypass graft (CABG)
  - Legs, **I70.2**-

    If applicable, indicate the presence of any bypass graft
  - Renal artery, **I70.1**
- Any complication such as angina pectoris, intermittent claudication, and ulcers
  - Normally, unstable angina (acute coronary syndrome) should not be coded in the office setting since this event requires facility treatment, e.g., code **I25.110**
- Evaluation and/or treatment for the condition, such as anticoagulants, lipid control drugs, and nitroglycerines.

Common Arteriosclerosis Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
CAD with angina pectoris	I25.119
Angina pectoris (use I25.119 instead if there is documentation of CAD)	I20.9
Arteriosclerosis in right leg	I70.201
Arteriosclerosis in left leg	I70.202
Arteriosclerosis in right leg with ulcer	I70.239 and L97.919
Arteriosclerosis in left leg with ulcer	I70.249 and L97.929
Arteriosclerosis in leg with ulcer in right calf	I70.232 and L97.219
Arteriosclerosis in leg with ulcer in left calf	I70.242 and L97.229
Arteriosclerosis in leg with ulcer in right ankle	I70.233 and L97.319
Arteriosclerosis in leg with ulcer in left ankle	I70.243 and L97.329
PVD (PAD)	I73.9

Coding Examples

1. A patient with diabetes comes in due to right foot gangrene related to peripheral arteriosclerosis in both legs. The history and physical evaluation also show a left great toe ulcer limited to skin breakdown.
   - **E11.52** Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene
   - **E11.621** Type 2 diabetes mellitus with foot ulcer
   - **I70.263** Atherosclerosis of native arteries of extremities with gangrene, bilateral legs
   - **L97.521** Non-pressure chronic ulcer of other part of left foot limited to breakdown of skin
2. A former smoker patient with arteriosclerosis in both legs and the aorta complains of rest pain. A discussion about treatment options occurred.
   - **I70.223** Atherosclerosis of native arteries of extremities with rest pain, bilateral legs
   - **I70.0** Atherosclerosis of aorta
   - Z87.891 Personal history of nicotine dependence
3. A patient with angina pectoris and CAD comes today for nitroglycerin and disease management education.
   - **I25.119** Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris

ACUTE MYOCARDIUM INFARCTIONS (AMI)

Three code sets classify AMI

1. Category **I21-**
   - Use codes under this category during the 28 days (4 weeks) of the AMI's onset
2. Category **I22-**
   - Use codes under this category for any subsequent AMI during the 28-day (4 weeks) timeframe of a previous type 1 or unspecified AMI. A subsequent AMI does not extend the 28-day timeframe of the initial AMI.
     - Do not assign a code from category I22 for subsequent myocardial infarctions other than type 1 or unspecified. Instead, assign the appropriate codes from category I21 to identify each specific type.
3. Code I25.2
   - Use this code for terminologies, such as "old MI" or an AMI older than 28 days (4 weeks)

Quality- ordering beta blockers during six months of the AMI event unless it is contraindicated.

Common AMI codes that impact the HCC models

Diagnosis	ICD-10-CM
AMI	I21.9
Acute STEMI	I21.3
Acute NSTEMI	I21.4
Subsequent STEMI	I22.9
Arteriosclerosis in right leg with ulcer	I22.2

Coding Examples

1. An admitted patient came through ER due to CAD with ACS. Once admitted, a STEMI was diagnosed then a subsequent STEMI occurred during the hospital stay.
   - **I21.3** ST elevation (STEMI) myocardial infarction of unspecified site
   - **I22.9** Subsequent ST elevation (STEMI) myocardial infarction of unspecified site
   - **I25.110** Atherosclerotic heart disease of native coronary artery with unstable angina pectoris
2. A patient comes for a follow-up of a 3-week-old STEMI. He indicates feeling better. His B/P monitoring reorientation is to manage his HTN. The patient is on beta-blockers.
   - **I21.3** ST elevation (STEMI) myocardial infarction of unspecified site
   - I10 Essential (primary) hypertension

BRAIN INFARCTS (CVA)

Three code sets classify CVAs

1. Categories **I60** to **I63** mostly classify the acute phase of a CVA. These codes may be reported only in a facility setting.
2. Category I69 classifies the sequelae of a CVA
   - Some residuals are:
     - Cognitive deficits
     - Speech and language deficits
     - Paralyses like monoplegia and hemiplegia
     - Side weaknesses and paresis
3. Code Z86.73 classifies the history of a CVA without any residual

Common CVA Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
Hemiplegia due to CVA	I69.359
Hemiparesis due to CVA	I69.359
RT side weakness due to CVA	I69.351
LT side weakness due to CVA	I69.354
Monoplegia of upper limb due to CVA	I69.339
Monoplegia of lower limb due to CVA	I69.349
Weakness of upper limb due to CVA	I69.339
Weakness of lower limb due to CVA	I69.349

Coding Examples

1. A hypertensive patient is admitted due to sudden weakness in the face and left arm, then suddenly evolved to a comatose state (NIHSS score 14). Studies confirmed a cerebral infarction due to embolism of both carotid arteries.
   - **I63.133** Cerebral infarction due to embolism of bilateral carotid arteries
   - R29.714 NIHSS score 14
   - I10 Essential (primary) hypertension
2. A patient with a history of CVA and alcoholism comes in today to evaluate HTN. She has a left side weakness due to the previous CVA.
   - I10 Essential (primary) hypertension
   - **I69.354** Hemiplegia and hemiparesis following cerebral infarction affecting left non-dominant side
   - **F10.21** Alcohol dependence, in remission

Additional Cardiovascular Diseases Impacting the HCC Models

Diagnosis	ICD-10-CM
Alcoholic cardiomyopathy	I42.6
Angina pectoris stable	I20.8
Aortic aneurysm	I71.9
Aortic atherosclerosis	I70.0
Atrial fibrillation	I48.91
Atrial flutter	I48.92
Cardiomyopathy	I42.9
Paroxysmal supraventricular tachycardia	I47.1
Paroxysmal tachycardia	I47.2
Secondary cardiomyopathy	I42.9
Sick sinus syndrome	I49.5
Sinoatrial node dysfunction	I49.5
Chronic deep venous thrombosis (DVT) of leg	I82.509
Chronic pulmonary embolism (PE)	I27.82
Varicose veins in the left leg with ulcer	I83.029 and L97.929
Varicose veins in the right leg with ulcer	I83.019 and L97.919

An arrhythmia controlled with an implanted cardiac device?

According to Coding Clinic, it is appropriate to code the specific condition and the presence of the cardiac device. For example, assign codes **I49.5**, Sick sinus syndrome, and Z95.0, Presence of cardiac pacemaker. The SSS is still present and is a reportable chronic condition. Although the pacemaker is controlling the heart rate, it does not cure SSS, and the condition is still being managed/monitored.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE & OTHER RESPIRATORY CONDITIONS

Chronic Obstructive Pulmonary Disease (COPD)

If applicable, the documentation should include:

- The underlying condition of COPD, such as asthma (BA), chronic bronchitis, emphysema, and others.
  - Specify if the bronchitis is acute or chronic
  - Specify if any chronic obstruction (COPD) in asthma
  - Specify use of tobacco (nicotine)
- The severity and other complications like chronic respiratory failure and hypoxemia/hypoxia
- Evaluation and treatment like respiratory therapies, drugs, and the use of oxygen

Quality

- Patients discharged either from an inpatient stay or an emergency department visit due to a COPD exacerbation require the following drug dispense:
  - Systemic corticosteroid within 14 days of the event
  - Bronchodilator within 30 days of the event
- Patients with COPD must have at least one spirometry performed every two years

Asthma (BA)

If applicable, document the severity of BA

- Intermittent or persistent
- Mild, moderate, or severe

Common Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
BA	J45.909
BA, mild intermittent	J45.20
BA, mild persistent	J45.30
BA, moderate persistent	J45.40
BA, severe persistent	J45.50
Chronic bronchitis	J42
Chronic obstructive asthma	J44.9
COPD	J44.9
COPD with asthma	J44.9
Emphysema	J43.9
Obstructive chronic bronchitis without exacerbation	J44.9
Pulmonary fibrosis	J84.10
Pulmonary granuloma	J84.10
Simple chronic bronchitis	J41.0
Smoker's cough	J41.0
Chronic respiratory failure	J96.10

Coding Examples

1. A patient came into the ER with an acute COPD exacerbation; he was then admitted to the hospital due to acute respiratory failure with hypoxia. During the hospital stay, a COVID-related pneumonia was confirmed as the underlying cause.
   - U07.1 COVID-19
   - **J44.1** Chronic obstructive pulmonary disease with (acute) exacerbation
   - **J44.0** Chronic obstructive pulmonary disease with (acute) lower respiratory infection
   - **J96.01** Acute respiratory failure with hypoxia
   - **J12.82** Pneumonia due to coronavirus disease 2019
2. A former smoker patient is seen to follow-up COPD due to emphysema. He is dependent on supplementary oxygen due to chronic respiratory failure.
   - **J43.9** Emphysema, unspecified
   - **J96.10** Chronic respiratory failure, unspecified whether with hypoxia or hypercapnia
   - Z99.81 Dependence on supplemental oxygen
   - Z87.891 Personal history of nicotine dependence

Digestive System Conditions Impacting the HCC Models

Diagnosis	ICD-10-CM
Portal hypertension	K76.6
Esophageal varices	I85.00
End-stage liver disease	K72.90
Cirrhosis of liver	K74.60
Chronic hepatitis	K73.9
Chronic viral hepatitis B	B18.0
Chronic viral hepatitis C	B18.2
Chrohn's disease	K50.90
Ulcerative colitis	K51.912
Chronic pancreatitis	K86.1

SKIN CONDITIONS

- **Purpura or senile purpura, D69.2**. This condition is characterized by unsightly ecchymoses and purple patches on the arms or legs of elderly persons. Blood extravasation following minor trauma is the cause for the condition (US National Library of Medicine National Institutes of Health, 2017).
  - Include in the documentation any physical finding, other evaluation of the condition, and how it affects patient's care
- **Ulcers**, document the type of ulcer and its underlying cause:
  - Due to pressure, category L89-
    - Other terms that support the category: decubitus, plaster ulcer, or bed sores
    - Specify the anatomic site of the ulcer
    - Document the stage; I-IV, pressure-induced deep tissue injury, or unstageable

– Due to DM, arteriosclerosis in legs, varicose veins, and other vascular conditions, use category **L97**-

Specify anatomic site and severity of the ulcer

- Skin breakdown
- Anatomic layers involved like fat, muscle, or bone tissue
- Necrosis of bone or muscle

For the depth (severity) of non-pressure chronic ulcers and pressure ulcer stage codes, code assignment may be based on medical record documentation from clinicians who are not the patient's provider (i.e., nurses). However, the associated diagnosis (such as a diabetic ulcer or pressure ulcer) must be documented by the patient's provider (ICD-10-CM & Coding Clinic).

Common Pressure Ulcers Stages & Anatomic Areas Impacting the HCC Models

Anatomic location and 3-4 stages or unstageable	Left site	Right site
Pressure ulcer buttock stage 2	L89.322	L89.312
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 2	L89.622	L89.612
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 2	L89.222	L89.212
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 2	L89.142	L89.132
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 2	L89.122	L89.112
Pressure ulcer upper back stage 3	L89.123	L89.113
Pressure ulcer upper back stage 4	L89.124	L89.114
Pressure ulcer upper back unstageable	L89.120	L89.110

Pressure ulcer sacral region stage 2	L89.152
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 2	L89.812
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 ulcer codes, code first the underlying cause:

Anatomic location and 3-4 stages or unstageable	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	L97.929	L97.919
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

Coding Examples

1. A patient with varicose veins comes to treat a right calf ulcer; the fat layer is visualized.
   - **I83.012** Varicose veins of right lower extremity with ulcer of calf
   - **L97.212** Non-pressure chronic ulcer of right calf with fat layer exposed
2. A quadriplegic bedridden patient is seen today to evaluate the progress of a pressure ulcer of the sacral region. The ulcer-care nurse's clinical notes indicate that the ulcer is stage 4.
   - **L89.154** Pressure ulcer of sacral region, stage 4
   - **G82.50** Quadriplegia, unspecified
   - Z74.01 Bed confinement status
3. A diabetic patient with PVD and neuropathy is seen today to evaluate a right heel ulcer. The ulcer is deep to the muscle, no necrosis is noticed. The great toe of the same foot was amputated last year due to a gangrenous ulcer. Treatment options were discussed with the patient and caregiver.
   - **E11.40** Type 2 diabetes mellitus with diabetic neuropathy, unspecified
   - **E11.51** Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
   - **E11.621** Type 2 diabetes mellitus with foot ulcer
   - **L97.415** Non-pressure chronic ulcer of right heel and midfoot with muscle involvement without evidence of necrosis
   - **Z89.411** Acquired absence of right great toe
   - Z86.31 Personal history of diabetic foot ulcer

ARTHRITIS & OTHER MUSCULOSKELETAL DISEASES

Arthritis

The documentation should include:

- Type and cause of the arthritis
  - Degeneration, other terms osteoarthritis (OA), osteoarthrosis, and degenerative joint disease (DJD), see codes under categories M15 to M19, and M47.
  - An inflammatory process like rheumatoid arthritis (RA)
    - **Quality**: The formatting for "Quality" is different from previous examples.
  - Viral infection or other causes like injuries
- Affected joints and, if applicable, any other organ involvement

According to Coding Clinic, the term “arthritis” is primarily meant to represent osteoarthritis (OA); therefore, the default codes are those under OA categories. If the provider's documentation includes the term "arthritis" without further specifications, not describing an inflammatory process, use an OA code.

However, according to Coding Clinic, sacroiliac DJD should be coded using code **M46.1**, sacroiliitis.

Common Codes Impacting the HCC Models

Diagnosis	ICD-10-CM
Psoriatic arthropathy	**L40.50**
RA with polyneuropathy	**M05.50**
Juvenile RA	**M08.00**
Polymyalgia rheumatic	**M35.3**
Sacroiliac DJD	**M46.1**
Sacroiliitis	**M46.1**

Coding Examples

1. A patient with RA in both wrists and ankles comes in for an evaluation. She also suffers from polyneuropathy due to this condition. A refill of methotrexate was given.
   a. **M05.59** Rheumatoid polyneuropathy with rheumatoid arthritis of multiple sites
2. A patient complains of pain in both hands and ankles due to psoriatic arthritis.
   a. **L40.50** Arthropathic psoriasis, unspecified

Quality: Use of Imaging Studies for Low Back Pain (LBP)

For non-Medicare patients between ages 18-50 should not have an imaging study for an uncomplicated LBP less than 28-day-old of its onset (the first time the LBP code was billed on the claim). Other management options should be put in place before ordering an x-ray, MRI, or CT scan. The quality measure excludes patients with the following conditions: active or history of cancers, HIV, substance use disorders, transplants, and other conditions. Please refer to the HEDIS book for more information.

INITIAL & SUBSEQUENT ENCOUNTER CHARACTERS

The initial and subsequent encounter characters are the 7th character of codes mostly found in classifications identifying injuries (e.g., fractures), medical complications, poisoning, and other diseases caused by external agents.

Coding Examples

- M80.021A Age-related osteoporosis with current pathological fracture, right humerus, initial encounter for fracture
- S36.031A Moderate laceration of spleen, initial encounter
- S82.041D Displaced comminuted fracture of right patella, subsequent encounter for closed fracture with routine healing
- T39.1X2D Poisoning by 4-Aminophenol derivatives, intentional self-harm, subsequent encounter
- **T84.020A** Dislocation of internal right hip prosthesis, initial encounter

Definitions & Guidelines

- **Initial encounter**, 7th characters A, B, and C. The condition is being treated with *active treatment*.
  - ICD-10-CM defines active treatment as the care episode where the condition is receiving treatments, such as surgery, emergency attention, or the first time the condition is diagnosed. Different providers may offer active treatment until the establishment of an aftercare plan. The assignment of the 7th character is based on whether the patient is undergoing active treatment and not whether the provider is seeing the patient for the first time (ICD-10-CM & Coding Clinic).
    - In the case of medical complications related to infections, i.e., an infected dialysis graft, the initial encounter character is used until the drug therapy to treat the infection is over.

Most of the initial encounter codes that impact the HCC models are reported by acute care providers.

- **Subsequent encounter**, 7th characters D to R
  - The condition is receiving routine care (aftercare) during the recovery or healing phase. Examples of subsequent care are physical therapy, cast change or removal, an x-ray to check healing status of fracture, removal of external or internal fixation devices, medication adjustment, pain management, other aftercare and follow-up visits following treatment of the injury or condition (ICD-10-CM & Coding Clinic).
- **Sequela**, 7th character S
  - This character is for complications or conditions that arise as a direct result of a condition. The code with the 7th character S identifies the injury responsible for the sequela. The specific type of sequela (e.g., scar) is sequenced first, followed by the injury code (ICD-10-CM & Coding Clinic).

EXAMPLE

A male patient is running late to take an airplane from New York to Texas. On the go, he fell and broke his right ankle. The ambulance provider took him to the nearest NY hospital emergency room (ER). The provider stabled the ankle and established a diagnosis of “Sprain of calcaneofibular ligament of the right ankle.” The ER doctor also told him to go to his local foot-and-ankle specialist as soon as he gets to Texas.

- The patient went to the specialist in Texas. She evaluated the sprain and established an aftercare plan. After three months, he returns to the provider, and receives follow-up care.
- After several years, the patient developed a degenerative process in the ankle, and the primary care provider indicated that it is related to a previous injury. The definitive diagnosis was “OA in right ankle secondary to sprain of calcaneofibular ligament.”

Provider & Service	7th Character	Code & Rationale
The ambulance provider took the patient to the ER	**Initial**	S93.411A, *Sprain of calcaneofibular ligament of right ankle, initial encounter*. The sprain still is in the episode of active treatment; therefore, all providers in NY should report the initial encounter character.
The ER physician established the injury diagnosis	**Initial**	
The foot-and-ankle specialist evaluated and established an aftercare plan	**Initial**	S93.411A, *Sprain of calcaneofibular ligament of right ankle, initial encounter*. Although an aftercare plan was established in this visit, the sprain still was in active treatment before the encounter. Any encounter after this visit should be reported with a subsequent encounter character.
The specialist provided follow-up services	**Subsequent**	S93.411D, Sprain of calcaneofibular ligament of right ankle, subsequent encounter.
The PCP evaluated residual from the injury and established an OA diagnosis	**Sequela**	M19.171 Post-traumatic osteoarthritis, right ankle and foot S93.411S, Sprain of calcaneofibular ligament of right ankle, sequela

PREGNANCY, CHILDBIRTH & THE PUERPERIUM (OB)

- The use of OB codes
  - It is assumed that any condition, including injuries, affects the pregnancy state; therefore, codes under categories **O00-O9A** have sequencing priority over any other code in the ICD-10-CM manual. Additional codes from other ICD-10-CM chapters may be used in conjunction with OB codes to specify conditions further.
    - Except for category **O09**, Supervision of high-risk pregnancy, OB codes are not subject to a specific provider specialty; any provider rendering services to a pregnant woman should use these codes.

      O09 codes are intended to be reported only by the provider supervising the pregnancy during the prenatal period.
    - However, if the provider states that the condition being treated is not affecting the pregnancy, in that case, OB guidelines and codes are not applied. Yet, the provider should include code **Z33.1** to indicate that the patient is pregnant.
  - OB codes may also be used to describe pregnancy-related complications after the peripartum (last month of pregnancy up to 5 months after delivery) or postpartum period (6-week after delivery) if the provider documents that a condition is pregnancy-related.
    - Particularly, peripartum cardiomyopathy, code **O90.3**, may be diagnosed during pregnancy, but it may continue to progress months after delivery. However, code **O90.3** is only for use when the cardiomyopathy develops due to pregnancy in a woman who did not have pre-existing heart disease.

- Pre-existing conditions vs. conditions due to the pregnancy
  - Certain OB categories distinguish between conditions of the mother that existed before pregnancy (pre-existing) and those that directly resulted from pregnancy. When assigning OB codes, it is crucial to assess if a condition was pre-existing before pregnancy or developed during or due to the pregnancy to assign the correct code.
    - Categories that do not distinguish between pre-existing and pregnancy-related conditions may be used for either. It is acceptable to use codes specifically for the puerperium with codes complicating pregnancy and childbirth if a condition arises postpartum during the delivery encounter.
- Normal vs. a high-risk or complicated **pregnancy** for coding purposes

Normal Pregnancy	Category	High Risk/Complicated	Category
No complications, and a normal weight	Z34-	Pre-existing conditions, e.g., DM, HTN, or complications related to the pregnant state like preeclampsia	See the appropriate OB code in categories O09-O9A
37 to 40 weeks of gestation		<37 weeks >40 weeks >42 weeks	O60-(pre-term delivery) O48.0- O48.1-
One baby (fetus)		Twins and multiple gestations	O30- and O31-
Mom's age is 16 to 34 years		<16 years old >34 years old	O09.6- O09.5-
No previous (history of) obstetric complications		History of infertility, abortions, pre-term, in-vitro fertilization, stillbirth, ectopic/molar pregnancy, hidden pregnancy, insufficient antenatal care, and other obstetric complications	O09-

Coding Tip

- You will need at least two codes to report a pregnancy case:
  - The pregnancy code, **O** or **Z34** codes, whether is a normal pregnancy or not.
  - The weeks of gestation code, **Z3A-**
- Normal vs. complicated delivery for coding purposes
  - A normal delivery, code **O80**, is a full-term delivery without any complications antepartum, during the delivery, or postpartum. A normal delivery includes minimal or no assistance, with or without episiotomy, without fetal manipulation (e.g., rotation version) or instrumentation (forceps) of a spontaneous, cephalic, vaginal, full-term, single, live-born infant (ICD-10-CM & Coding Clinic).
    - However, do not use this code if any other OB code is necessary to describe a current complication of the antenatal, delivery, or postnatal period.

- Additional codes from other chapters may be used with code **O80** if they are not related to or are in any way complicating the pregnancy.

Coding Tip

- You will need at least three codes to report a delivery case
  1. The delivery O code
  2. The weeks of gestation code, **Z3A-**
  3. Delivery outcome code, **Z37-**

Coding Examples

1. A patient with pre-existing hypertension comes today to evaluate blood pressure management during pregnancy. Her OB-Gyn provider referred her to our cardiology practice. She is 10 weeks of gestation with a single fetus. Labs are normal, BP is controlled, and education was provided.
   - **O10.011** Pre-existing essential hypertension complicating pregnancy, first trimester
   - **Z3A.10** 10 weeks gestation of pregnancy
2. A 17-year-old patient with 20 weeks of gestation is seen today to evaluate her eating disorder of bulimia nervosa. She is currently in a healthy weight (BMI 10th percentile); however, she expresses that she's worried about gaining weight due to the pregnancy. Also, the caregiver indicated that he suspects a binge eating episode this week, patient denies it.
   - **O99.342** Other mental disorders complicating pregnancy, second trimester
   - **F50.2** Bulimia nervosa
   - Z68.52 Body mass index [BMI] pediatric, 5th percentile to less than 85th percentile for age
   - **Z3A.20** 20 weeks gestation of pregnancy
3. A full-term (38 weeks) patient with gestational diabetes has delivered live-born twins (1 placenta and amniotic sac). Diabetes has been controlled with diet.
   - **O30.013** Twin pregnancy, monochorionic/monoamniotic, third trimester
   - **O24.420** Gestational diabetes mellitus in childbirth, diet controlled
   - **Z3A.38** 38 weeks gestation of pregnancy
   - **Z37.2** Twins, both liveborn

PERINATAL PERIOD (NEWBORN) & CONGENITAL CONDITIONS

- For coding and reporting purposes, the perinatal period occurs before birth through the 28th day following birth. The ICD-10-CM uses the following terms to classify this period in coding: newborn, neonatal, and infant
  - By default, all conditions that arise during the perinatal period are coded using categories P00-P96 unless the providers indicate that the condition was acquired in the community, not during the birth process. Codes from other chapters may be used with perinatal codes to provide more specific detail.
  - If the condition continues throughout the patient's life, the perinatal code should continue to be used regardless of the patient's age.

- Assign an appropriate code from categories Q00-Q99 when a malformation/deformation or chromosomal abnormality is documented.
  - Additional codes should be assigned for manifestations that are not an inherent component of the congenital disorder.
- Congenital codes may be used throughout the life of the patient. If a congenital malformation or deformity has been corrected, a personal history code should be used to identify the history of the malformation or deformity.

Common Congenital Codes Impacting the HCC Models

Condition	ICD-10-CM
Down syndrome	Q90.9
Cerebral palsy	G80.9
Spina bifida	Q05.9
Cleft palate	Q35.9
Cleft lip, bilateral	Q36.0
Cleft lip, median	Q36.1
Cleft lip, unilateral	Q36.9
Cleft palate with bilateral cleft lip	Q37.8
Cleft palate with unilateral cleft lip	Q37.9
Albinism	E70.30

ADDITIONAL HEALTH CIRCUMSTANCES THAT IMPACT THE HCC MODELS

These statuses must be documented as long as the patient currently has the condition, problem, or status. Usually, they are found in the present medical history (HPI), physical exam section, or the clinical note assessment section.

Status or problem	ICD-10-CM
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
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

Status or problem	ICD-10-CM
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

SOCIAL DETERMINANTS OF HEALTH (SDOH)

SDOHs are conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes (CDC, 2021). They can be grouped into five domains with the following ICD-10-CM categories:

1. Healthcare access and quality, see categories Z55, Z56, and code Z91.120
2. Education access and quality, see categories Z55 and Z62
3. Social and community context, see categories Z57, Z60, and Z62 to Z65
4. Economic stability, see categories Z56 and Z59
5. Neighborhood and built environment, see the category Z58

- Documentation and reporting requirements (ICD-10-CM & Coding Clinic)
  - SDOHs should be coded and reported when the information is documented. They do not need to be established by a physician or any provider legally accountable to establish a diagnosis since SDOHs represent social information rather than medical diagnoses:
    - They can be documented by social workers, community health workers, case managers, or nurses and reported if their documentation is included in the official medical record.
    - Patient self-reported documentation may be used to assign codes for SDOHs, as long as the patient self-reported information is signed-off and incorporated into the medical record by either a clinician or provider.

2019 NOVEL CORONAVIRUS DISEASE (COVID-19)

The ICD-10-CM classifies the COVID-19 in Chapter 22. This chapter includes U codes for temporary assignment of new diseases of uncertain etiology or emergency use (ICD-10-CM & Coding Clinic).

- Confirmed active cases. Use code U07.1, COVID-19
  - Only confirmed active cases can be reported with code U07.1. However, it is not required documentation of a positive test result for COVID-19; the provider's documentation that the individual has COVID-19 is sufficient.
  - Code also, if applicable, any related complication such as:
    - Pneumonia, J12.82
    - Acute bronchitis, J20.8
    - Acute respiratory distress syndrome (ARDS), **J80**
    - Acute respiratory failure, see subcategory **J96.0-**
    - Non-related signs and symptoms (S&Ss) like diarrhea, A08.39
    - Multisystem inflammatory syndrome, **M35.81**
    - Sepsis, **A41.89**
- History of COVID-19 and post-COVID cases (patient no longer has the infection)
  - Without any COVID-19-related residual, use code Z86.16, Personal history of COVID-19.
  - With residuals, use code U09.9, Post COVID-19 condition, plus the related post-infection complication, such as:
    - Chronic respiratory failure, see subcategory J**96.1-**
    - Loss of smell or taste, R43.8
    - Multisystem inflammatory syndrome, **M35.81**
    - Pulmonary embolism, see category **I26.-**
    - Pulmonary fibrosis, **J84.10**
- Unconfirmed cases and other related scenarios

Scenario	Coding & Reporting
Unconfirmed cases without S&Ss (asymptomatic)	During the pandemic, use code Z20.822, Contact with and (suspected) exposure to COVID 19, whether the patient has been exposed or not to the virus.
Unconfirmed cases with S&Ss	Code the S&S with code Z20.822. Common possible S&Ss are: • Fever, R50.9 • Shortness of breath (SOB), R06.02 • Acute cough, R05.1, or unspecified cough, R05.9
Screening encounters	• Negative results, use code Z20.822 during the pandemic and, if applicable, any S&Ss • Positive results, use code U07.1 *Code Z11.52, Encounter for screening for COVID-19, should not be used during the pandemic, use S&S or Z20.822 codes instead.*
Vaccine administration	Use code Z23, Encounter for immunization, plus the appropriate procedure CPT/HCPCS code.

ADDITIONAL TOOLS & REFERENCES

- 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/
- COVID-19 Frequently Asked Questions Regarding ICD-10-CM Coding: https://www.codingclinicadvisor.com/faqs-icd-10-cm-coding-covid-19
- Social Determinants of Health: https://health.gov/healthypeople/objectives-and-data/social-determinants-health
- TAMPER™ is a trademark of IonHealthcare. https://www.ionhealthcare.com/

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