2013 ICD-10-CM
Session VI:
Chapter 9: Diseases of the Circulatory System (I00-I99)
Chapter 10: Diseases of the Respiratory System (J00-J99)

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Your Presenters Today

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Speaker Introductions

Barbara Flynn, RHIA, CCS, is the Vice President for Health Information Management Services and Denial Management Services for the Florida Hospital Association Management Corporation (FHAMC). Barbara joined the professional staff of the Florida Hospital Association (FHA) in January 1991, where she developed service lines to assist member hospitals with HIM staffing, coding and billing compliance, interim management, educational programs, documentation improvement programs, and insurance and RAC denial appeals. Barbara developed “Denial Management Services” in January 2008, to mitigate and assist member hospitals to appeal RAC coding and medical necessity denials. Barbara became an AHIMA ICD-10-CM/PCS Trainer and Ambassador in March 2010.

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Preparation is Your Key to Success

Course Objectives

• Understand the mechanism of the disease process
• Understand and Apply
  – Chapter-Specific Coding Guidelines for:
    • Chapter 9: Diseases of the Circulatory System (I00-I99)
    • Chapter 10: Diseases of the Respiratory System (J00-J99)
  – General coding guidelines for specific diagnoses
  – Continued… ->
Preparation is Your Key to Success

Course Objectives (continued…)

- Identify the Anatomy, Function and Common Diseases and Disorders of the Circulatory and Respiratory Systems
- Identify Common Diseases and Disorders of the Circulatory and Respiratory Systems
- Correctly Assign ICD-10-CM Codes for Diseases of the Circulatory System (I00-I99)
- Correctly Assign ICD-10-CM Codes for Diseases of the Respiratory System (J00-J99)

Introduction to Chapter 9: Diseases of the Circulatory System (I00-I99)
Chapter 9: Diseases of the Circulatory System (I00-I99)

- This chapter contains the following blocks of codes:
  - I00-I02 Acute rheumatic fever
  - I05-I09 Chronic rheumatic heart diseases
  - I10-I15 Hypertensive diseases
  - I20-I25 Ischemic heart diseases
  - I26-I28 Pulmonary heart disease and diseases of pulmonary circulation
    - Continued… ->

Chapter 9: Diseases of the Circulatory System (I00-I99)

- I30-I52 Other forms of heart disease
- I60-I69 Cerebrovascular diseases
- I70-I79 Diseases of arteries, arterioles and capillaries
- I80-I89 Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified
- I95-I99 Other and unspecified disorders of the circulatory system
Circulation of the Arms & Hands

- Right subclavian artery
- Axillary vein
- Cephalic vein
- basilic vein
- Median cubital vein
- Median antebrachial
cephalic vein

- Ventral artery
- Brachiocephalic trunk
- Common carotid artery
- Right subclavian
toe
- Ascending aorta
- Brachial artery
- Subscapular artery
- Profunda circumflexa
- Humeral artery
- Axillary arch
circumflex
- Humeral artery
- Brachial artery
- Deep artery
of arm
- Medial intercostal
arteries
- Common
terminal artery
- Radial artery
- Ulnar artery
- Deep palmar arch
- Superficial palmar arch
- digits

Interior View of Heart

- Brachiocephalic trunk
- left common carotid artery
- left subclavian
toe
- superior vena cava
- aorta
- right pulmonary
toartes
- right pulmonary veins
- right atrium
- tricuspid valve
- chordae tendineae
- right ventricle
- inferior vena cava
- septum
Chapter 9: Anatomy: Arteries of the Body in 3D

- Arteries of the body - PART 1 - Anatomy Tutorial. Link: [http://www.youtube.com/watch?v=LQne1SILsVk](http://www.youtube.com/watch?v=LQne1SILsVk)
- Arteries of the body - PART 2 - Anatomy Tutorial. Link: [http://www.youtube.com/watch?v=20346sgZ3dA](http://www.youtube.com/watch?v=20346sgZ3dA)

Chapter 9: Anatomy: Veins of the Body in 3D

- Veins of the body - PART 1 - Anatomy Tutorial. Link: [http://www.youtube.com/watch?v=sI6yXy3u2sl](http://www.youtube.com/watch?v=sI6yXy3u2sl)
- Veins of the body - PART 2 - Anatomy Tutorial. Link: [http://www.youtube.com/watch?v=ZQd73stLZI8](http://www.youtube.com/watch?v=ZQd73stLZI8)
Chapter 9: Anatomy: The Heart and Major Vessels in 3D

• The Heart and Major Vessels – Part 1 – Anatomy tutorial. Link: The Heart and Major Vessels - PART 1 - Anatomy Tutorial - YouTube

• The Heart and Major Vessels – Part 2 – Anatomy tutorial. Link: http://www.youtube.com/watch?v=IKBD28Y9Cc

Chapter 9: Anatomy: Blood Supply to the Heart in 3D

• Blood supply to the heart – Part 1 – Anatomy Tutorial. Link: http://www.youtube.com/watch?v=Kv-MN-Gy6jw

• Blood supply to the heart – Part 2 – Anatomy Tutorial. Link: http://www.youtube.com/watch?v=wl5jnS40kM
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

- Chapter 9: Diseases of the Circulatory System (I00-I99) Specific Coding Guidelines:
  - 9. Chapter 9: Diseases of the Circulatory System (I00-I99)
    - 9.a. Hypertension
      - 9.a.1 Hypertension with Heart Disease
      - 9.a.2 Hypertensive Chronic Kidney Disease
      - 9.a.3 Hypertensive Heart and Chronic Kidney Disease
      - 9.a.4 Hypertensive Cerebrovascular Disease
      - 9.a.5 Hypertensive Retinopathy
        » Continued… ->
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

• Chapter 9: Diseases of the Circulatory System (I00-I99) Specific Coding Guidelines:
  – 9. Chapter 9: Diseases of the Circulatory System (I00-I99) Continued…
    • 9.a. Hypertension
      – 9.a.6 Hypertension Secondary
      – 9.a.7 Hypertensive, Transient
      – 9.a.8 Hypertension, Controlled
      – 9.a.9 Hypertension, Uncontrolled

Chapter 9: Hypertensive Diseases Code Axes (I10)

• Essential Hypertension (I10)
  – high blood pressure.
  – measurement of force against the walls of arteries as the heart pumps blood through body
  – Blood pressure readings example: 120/80 mmHg.
  – One or both of these numbers can be too high.
    • Continued... ->
Chapter 9: Hypertensive Diseases
Code Axes (I10)

- Essential Hypertension (I10)
  - Numerator is systolic blood pressure (peak)
  - Denominator is diastolic blood pressure (resting phase)
  - Normal blood pressure lower than 120/80 mmHg most of the time.
  - High blood pressure (hypertension) is 140/90 mmHg or above most of the time

Hypertensive Diseases Code Axes (I11, I12, I13, I15)

- Hypertensive heart disease (I11)
- Hypertensive chronic kidney disease (I12)
- Hypertensive heart and chronic kidney disease (I13)
- Secondary hypertension (I15)
Hypertensive Diseases Code Axes (R03.0, H35.0, I97.0, O10 – O16)

- Transient hypertension (R03.0)
- Hypertensive retinopathy (H35.0)
- Post-procedural hypertension (I97.3)
- Pre-existing hypertension complicating pregnancy, childbirth and the puerperium (O10)
- Pre-existing hypertension with pre-eclampsia (O11)
- Gestational (pregnancy-induced) hypertension without significant proteinuria (O13)
- Unspecified maternal hypertension (O16)

Chapter 9: Diseases of the Circulatory System (I00-I99) 9.e. Acute myocardial infarction (AMI)
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

- 9. Chapter 9: Diseases of the Circulatory System (I00-I99)
  
  • e. Acute myocardial infarction (AMI)
    - 9.e.1. ST elevation myocardial infarction (STEMI) and non ST elevation myocardial infarction (NSTEMI)
    - 9.e.2. Acute myocardial infarction, unspecified
    - 9.e.3. AMI documented as nontransmural or subendocardial but site provided
    - 9.e.4. Subsequent acute myocardial infarction

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Acute MI - 4 weeks

- Initial- I21
  - STEMI
  - Non-STEMI

- Subsequent- I22
  - STEMI
  - Non-STEMI
Decision Tree for Coding Acute MI

• Patient is admitted due to acute MI:

Previous AMI?  
Yes  
Older than 28 days?  
Yes  
I21 Pdx  
I25.2 Odx  
No  
I22 PDx  
I21 Odx

No  
I21 Pdx

Key to Abbreviations
Pdx: Principal Diagnosis
Odx: Secondary Diagnosis

Decision Tree for Coding Acute MI

• Patient is admitted due to other condition and has an AMI during this admission:

Previous AMI?  
Yes  
Other condition Pdx  
AMI older than 28 days?  
Yes  
I21 Odx  
I25.2 Odx  
No  
I22 Odx  
I21 Odx

No  
Other condition Pdx  
I21 Odx

Key to Abbreviations
Pdx: Principal Diagnosis
Odx: Secondary Diagnosis
Acute Myocardial Infarction (AMI)
Code Axes (I21.01 – I97.191)

- ST elevation (STEMI) myocardial infarction of anterior wall (I21.01, I21.02, I21.09)
- ST elevation (STEMI) myocardial infarction of inferior wall (I21.11, I21.19)
- ST elevation (STEMI) myocardial infarction of other and unspecified sites (I21.21, I21.29, I21.3)
- Subsequent ST elevation (STEMI) myocardial infarction of anterior/ inferior walls (I22.0, I22.1)
- Subsequent non-ST elevation (NSTEMI) myocardial infarction (I22.2)
- Subsequent ST elevation (STEMI) myocardial infarction of other/unspecified site (I22.8, I22.9)
  - Continued… ->

Acute Myocardial Infarction (AMI)
Code Axes (I21.01 – I97.191)

- Old myocardial infarction (I25.2)
- Intraoperative acute myocardial infarction, during cardiac surgery (I97.790)
- Intraoperative acute myocardial infarction, during cardiac surgery (I97.791)
- Postprocedural acute myocardial infarction, following cardiac surgery (I97.190)
- Postprocedural acute myocardial infarction, following other surgery (I97.191)
AMI ICD-10-CM Documentation Elements

- ICD-10-CM Documentation Elements
- New duration for “acute”
  - Acute myocardial infarction reported only within 4 weeks, not 8 weeks
- New codes for “subsequent” AMI within 4 weeks of AMI
  - Addition of a new code category for a subsequent (new) AMI occurring within the 4 week time frame of healing from an initial
  - AMI requires you to report both the initial & subsequent STEMI/NSTEMI

ICD-10-CM Code Structural Changes: Initial AMI

All AMI’s, both STEMI & NSTEMI within 4 weeks of occurrence

STEMI, NSTEMI, site (wall), other, NOS

Specific artery
The Coronary Arteries
Anterior surface of the heart showing coronary arteries. The left coronary artery has two terminal branches: the anterior interventricular branch (also called the left anterior descending) and the circumflex branch.

Postero-inferior surface of the heart showing coronary arteries. The right coronary artery gives off a right marginal branch and a large posterior interventricular branch.

The Coronary Veins
The coronary veins drain mainly into the coronary sinus, which drains directly into the right atrium. There are some small veins that drain directly into the heart chambers. Generally, these drain into the right side of the heart.
## Anatomic Cardiac Regions

<table>
<thead>
<tr>
<th>Anatomic Region of Heart</th>
<th>Coronary Artery (most likely associated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inferior</td>
<td>Right coronary</td>
</tr>
<tr>
<td>Anteroseptal</td>
<td>Left anterior descending</td>
</tr>
<tr>
<td>Anteroapical</td>
<td>Left anterior descending (distal)</td>
</tr>
<tr>
<td>Anterolateral</td>
<td>Circumflex</td>
</tr>
<tr>
<td>Posterior</td>
<td>Right coronary artery</td>
</tr>
</tbody>
</table>

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## Myocardial Infarction
Arterial Plaque Deposits

Coronary Artery Disease (CAD)
ST Elevation (STEMI) & Non-ST Elevation (NSTEMI) Myocardial Infarction Index

I21 ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction
  I21.0 ST elevation (STEMI) myocardial infarction of anterior wall
    I21.01 ST elevation (STEMI) myocardial infarction involving left main coronary artery
    I21.02 ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery
    I21.09 ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall
  I21.4 Non-ST elevation (NSTEMI) myocardial infarction

ST Elevation (STEMI) & Non-ST Elevation (NSTEMI) Myocardial Infarction Index

I22 Subsequent ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction
  I22.0 Subsequent ST elevation (STEMI) myocardial infarction of anterior wall
  I22.1 Subsequent ST elevation (STEMI) myocardial infarction of inferior wall
  I22.2 Subsequent non-ST elevation (NSTEMI) myocardial infarction
  I22.8 Subsequent ST elevation (STEMI) myocardial infarction of other sites
    I22.9 Subsequent ST elevation (STEMI) myocardial infarction of unspecified site
Clinical Documentation Improvement Alert

• If a STEMI AMI converts to an NSTEMI due to thrombolytic therapy, it is still classified as a STEMI, due to the higher severity level of the STEMI and the fact that the patient was treated for the condition. *

Clinical Documentation Improvement Alert

• Intraoperative acute myocardial infarction, during cardiac or other surgery (I97.790, I97.91)
• Postprocedural acute myocardial infarction, following cardiac or other surgery (I97.190, I97.191) *
Clinical Documentation Improvement Alert

• Review the documentation carefully for AMI cases, particularly as it involves timeframes and patients who have been readmitted.
• An acute MI is defined in ICD-10 terms as that occurring within the last 28 days.
• The definition of “subsequent” has changed between ICD-9 and ICD-10, making clear and accurate documentation much more important. *

Other Acute Ischemic Heart Disease (I24.1)

• Acute ischemic heart disease does not always progress to acute myocardial infarction

• Documentation be clear and accurate, particularly in cases in which the patient had a:
  – coronary embolism
  – occlusion, or
  – thromboembolism not related to AMI. *
Polling Questions #1

1. In ICD-10-CM, the initial time frame for acute myocardial infarction treatment is within eight weeks of onset?
   A. True
   B. False

Chapter 9: Diseases of the Circulatory System (I00-I99) 9.b. Atherosclerotic Coronary Artery Disease and Angina
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

- Chapter 9: Diseases of the Circulatory System (I00-I99) Specific Coding Guidelines:
  - 9. Chapter 9: Diseases of the Circulatory System (I00-I99)
    - 9.b. Atherosclerotic Coronary Artery Disease and Angina

Chronic Ischemic Heart Disease Code Axes (I25.-)

Arteriosclerotic heart disease (ASHD)
- ASHD of native coronary artery with & without angina pectoris (I25.10-I25.119)
- ASHD of coronary artery bypass graft(s) & coronary artery of transplanted heart with angina pectoris (I25.700 – I25.709)
- ASHD of autologous vein coronary artery bypass graft(s) with angina pectoris (I25.710 – I25.719)
- ASHD of autologous artery coronary artery bypass graft(s) with angina pectoris (I25.720-I25.729)
- ASHD of nonautologous biological coronary artery bypass graft(s) with angina pectoris (I25.730-I25.739) (Continued ->)
Chronic Ischemic Heart Disease
Code Axes (I25.-)

- Arteriosclerotic heart disease (ASHD)
  - ASHD of native coronary artery of transplanted heart with angina pectoris (I25.750 – I25.759)
  - ASHD of bypass graft of coronary artery of transplanted heart with angina pectoris (I25.760 – I25.769)
  - ASHD of other coronary artery bypass graft(s) with angina pectoris (I25.790 – I25.799)
  - ASHD other and unspecified forms of chronic ischemic heart disease (I25.8 – I25.9)

Chapter 9: Coronary Artery Disease with Angina Code Axes (I25.110-I25.799)

- ICD-10-CM Axes of Classification:
  - CAD of native heart vs. transplanted heart
  - Type of vessel: native versus bypass graft (by type of graft)
  - CAD of Native coronary artery
  - CAD of autologous vein graft
  - CAD of autologous artery graft
  - CAD of nonautologous biological graft
  - CAD of other graft
  - CAD of unspecified graft
    • Continued… - >
Chapter 9: Coronary Artery Disease with Angina Code Axes (I25.110-I25.799)

- ICD-10-CM Axes of Classification:
  - Plus
  - Type of Angina (4 types)
    - Unstable,
    - angina pectoris with documented spasm,
    - other forms of angina pectoris,
    - unspecified

Coronary Artery Disease with Angina Code Axes (I25.110-I25.799) Index

- I25 Chronic ischemic heart disease
  - I25.1 Atherosclerotic heart disease of native coronary artery
    - I25.10...... without angina pectoris
    - I25.11 Atherosclerotic heart disease of native coronary artery with angina pectoris
      - I25.110 Atherosclerotic heart disease of native coronary artery with unstable angina pectoris
      - I25.111...... with documented spasm
      - I25.118 Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris
      - I25.119 Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris
Coronary Artery Disease with Angina Code (I25.110-I25.799)

- Native versus transplanted heart, vessel type and manifestation CC’s:
  - The following ICD-10-CM codes are all considered complication and comorbid conditions:

Rhythm and Conduction Disorders Code Axes (I44.-, I45.-, I47.-, I49.-)

- Code Axes
  - Atrioventricular and left bundle-branch block (I44.0-I44.7)
  - Other conduction disorders (I45.0 – I45.9)
  - Atrial fibrillation and flutter (I48.0 – I48.9-)
  - Other cardiac arrhythmias (I49.0 – I49.9)
Rhythm and Conduction Disorders
Key Terms (I44.-, I45.-, I47.-, I49.-)

- Atrioventricular (AV) block, type I and II
- Mobitz block, type I & II
- Wenckebach's block
- Complete heart block
- Atrioventricular block
- Left bundle-branch hemiblock
- Sinoatrial block
- Sinoauricular block
- Accelerated atrioventricular conduction
- Accessory atrioventricular conduction
- Anomalous atrioventricular excitation
- Lown-Ganong-Levine syndrome
- Pre-excitation atrioventricular conduction
- Wolff-Parkinson-White (WPW) syndrome
- Atrioventricular (AV) dissociation
- Interference dissociation
- Isorhythmic dissociation
- Nonparoxysmal AV nodal tachycardia
- Stokes-Adams syndrome
- Sick sinus syndrome (SSS)
- Fascicular block
- Bifascicular block
- Right bundle branch block (RBBB)
- Left bundle branch block (LBBB)
- Trifascicular block
- Atrial fibrillation
- Atrial flutter
- Ventricular fibrillation
- Ventricular flutter

Arrhythmia

(normal)

(atrial fibrillation)
Rhythm and Conduction Disorders
Clinical Tips & Medical Necessity

• Mobitz I and Mobitz II AV blocks are both classified as second degree AV blocks, and are based on electrocardiographic (ECG) patterns, not on location.
• Even though slightly different, the conditions were classified to two different codes in ICD-9-CM, but in ICD-10-CM, both are classified to code I44.1.*

Rhythm and Conduction Disorders CC’s & MCC’s

• For those conditions involving atrioventricular blocks and other conduction disorders, only codes for complete atrioventricular block (I44.2), bifascicular and trifascicular blocks (I45.2 and I45.3) and other specified conduction disorders (I45.89 are designated as complication/comorbidity (CC) conditions.
• Codes representing serious tachycardias, such as re-entry ventricular arrhythmia (I47.0), supraventricular tachycardia (I47.1), and ventricular tachycardia (I47.2), are CC’s. *
Heart Failure Code Axes (I50.-)

- Code Axes
  - Left ventricular failure (I50.1)
  - Systolic (congestive) heart failure (I50.2-)
  - Diastolic (congestive) heart failure (I50.3-)
  - Combined systolic (congestive) and diastolic (congestive) heart failure (I50.4-)
  - Heart failure, unspecified (I50.9)
  - Postprocedural heart failure (I97.13-)
  - Heart failure due to hypertension (I11.0)
  - Heart failure due to hypertension with chronic kidney disease (CKD) (I13.0 – I13.2)
  - Rheumatic heart failure (I09.81)
  - Other complications (heart failure) of obstetric surgery and procedures (O75.4)

Heart Failure Key Terms (I50.-)

- Cardiac asthma
- Edema of lung with heart disease
- Edema of lung with heart failure
- Left heart failure
- Pulmonary edema with heart disease
- Pulmonary edema with heart failure
- Biventricular (heart) failure
- Cardiac, heart or myocardial failure
- Congestive heart disease
- Congestive heart failure
- Right ventricular failure (secondary to left heart failure)
Heart Failure (I50.-)

• Systolic (congestive) heart failure (I50.2-)
  – Systolic heart failure is characterized by impairment of myocardial contraction, resulting in inadequate emptying of the ventricle and associated ventricular dilation. *

• Diastolic (congestive) heart failure (I50.3-)
  – Diastolic heart failure occurs in patients with CHF symptoms, yet with preserved left ventricular ejection fraction (>0.50) in the absence of major valvular disease. Filling defect occurs as a result of impaired myocardial relaxation, resulting in increased diastolic pressure. Diastolic dysfunction accounts for 40 percent to 60 percent of patients with CHF. **

Chapter 9: Diseases of the Circulatory System (I00-I99) 9.c. Intraoperative and Postprocedural Cerebrovascular Accident
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

- Chapter 9: Diseases of the Circulatory System (I00-I99) Specific Coding Guidelines:
  - 9. Chapter 9: Diseases of the Circulatory System (I00-I99)
    - 9.c. Intraoperative and Postprocedural Cerebrovascular Accident

Chapter 9: Diseases of the Circulatory System (I00-I99) 9.d. Sequelae of Cerebrovascular Disease
Chapter 9: Diseases of the Circulatory System (I00-I99) Coding Guidelines

d. Sequelae of Cerebrovascular Disease

- 9.d.1. Category I69, Sequelae of Cerebrovascular disease
- 9.d.2. Codes from category I69 with codes from I60-I67
- 9.d.3. Codes from category I69 and Personal history of transient ischemic attack (TIA) and cerebral infarction (Z86.73)

Cerebrovascular Infarction & Hemorrhage Code Axes (I60.- – I63.-)

- Nontraumatic subarachnoid hemorrhage (I60.-)
- Nontraumatic intracerebral hemorrhage (I61.-)
- Other and unspecified nontraumatic intracranial hemorrhage (I62.-)
- Cerebral infarction due to thrombosis of precerebral arteries (I63.0-)
- Cerebral infarction due to embolism of precerebral arteries (I63.1-)
- Cerebral infarction due to unspecified occlusion or stenosis of precerebral arteries (I63.2-)
- Cerebral infarction due to thrombosis of cerebral arteries (I63.3-)
- Cerebral infarction due to embolism of cerebral arteries (I63.4-)
- Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries (I63.5-)
- Cerebral infarction due cerebral venous thrombosis, nonpyogenic (I63.6-)
- Other and unspecified cerebral infarction (I63.8, I63.9)
Nontraumatic Subarachnoid Hemorrhage (I60.-)

The nontraumatic hemorrhages described in category (I60.-) describe bleeding into the subarachnoid space, the area between the arachnoid membrane and the pia mater surrounding the brain.

- Carotid siphon and bifurcation
- Middle cerebral artery
- Anterior communicating artery
- Posterior communicating artery
- Basilar artery
- Vertebral artery
- Other intracranial arteries
- Unspecified intracranial artery

Key Terms found in the documentation for nontraumatic subarachnoid hemorrhage may include:

- Ruptured cerebral aneurysm
- Ruptured (congenital) berry aneurysm
- Ruptured (congenital) cerebral aneurysm
- Subarachnoid hemorrhage (nontraumatic) from cerebral artery
- Subarachnoid hemorrhage (nontraumatic) from communicating artery
- Meningeal hemorrhage
- Rupture of cerebral arteriovenous malformation
Nontraumatic Intracerebral (I61.-) & Intracranial Hemorrhage (I62.-)

- For conditions in category (I61.-), the code description includes the terminology of a hemorrhage in a certain location, such as the following:
  - Hemisphere (cortical, subcortical, or unspecified)
  - Brain stem
  - Cerebellum
  - Intraventricular
  - Multiple localized
  - Other and unspecified

Ischemic & Hemorrhagic Strokes

Ischemic Stroke

Hemorrhagic Stroke

Atherosclerosis
Cerebral Infarction (I63.-)

- Blood vessel that supplies a part of the brain becomes blocked or leakage occurs outside the vessel walls*
- May be classified to the following locations:
  - Vertebral, Carotid, Cerebellar, Middle, Anterior or Posterior Arteries (right, left, unspecified)
  - Basilar, Other Cerebral or Precerebral Arteries

Transient Ischemic Attack (TIA) (G45.9)
Trivia Tip

Which ICD-10-CM codes would you assign for a patient admitted with an acute cerebral infarction due to thrombosis with associated right, dominant hemiparesis and aphasia that has cleared by the time of discharge?

Introduction to Chapter 10: Diseases of the Respiratory System (J00-J99)
Physiology - Diffusion

Movement of atoms or molecules from an area of higher concentration to an area of lower concentration. Atoms and small molecules can move across a cell membrane by diffusion.
**Physiology - Osmosis**

Diffusion of fluid through a semipermeable membrane until there is an equal concentration of fluid on both sides of the membrane.

**Upper Respiratory System**
Chapter 10
Diseases of the Respiratory System

J00-J06 - Acute upper respiratory infections

J09-J18 - Influenza and pneumonia

Coding Note:
Numerous “Code First,” “Code also” and “Excludes 1” notes

Polling Question #2

When you breath in through your nose, the air is filtered of small particles such as pollen or smoke by the:

A. Sinuses
B. Uvula
C. Cilia
D. Pharynx
Acute upper respiratory infections (J00-J06)

Excludes1: chronic obstructive pulmonary disease with acute lower respiratory infection (J44.0)
influenza virus with other respiratory manifestations (J09.42, J10.1, J11.1)

J00 Acute nasopharyngitis [common cold]
Acute rhinitis
Coryza (acute)
Infective nasopharyngitis NOS
Infective rhinitis
Nasal catarrh, acute
Nasopharyngitis NOS

Excludes1: acute pharyngitis (J02.--) acute sore throat NOS (J02.9)
pharyngitis NOS (J02.9), rhinitis NOS (J31.0)
sore throat NOS (J02.9)

Excludes2: allergic rhinitis (J30.1-J30.9)
chronic pharyngitis (J31.2)
chronic rhinitis (J31.0)
chronic sore throat (J31.2)
nasopharyngitis, chronic (J31.1)
vasomotor rhinitis (J30.0)
**J01 Acute sinusitis**

Includes: acute abscess of sinus
- acute abscess of sinus
- acute empyema of sinus
- acute infection of sinus
- acute inflammation of sinus
- acute suppuration of sinus

*Use additional code (B95-B97) to identify infectious agent.*

**Excludes1:** sinusitis NOS (J32.9)

**Excludes2:** chronic sinusitis (J32.0-J32.8)

**J01.0 Acute maxillary sinusitis**

Acute antritis

**J01.00 Acute maxillary sinusitis, unspecified**

**J01.01 Acute recurrent maxillary sinusitis**

**Influenza Infection**

- Influenza A Virus
  - H1N1
  - H3N2

- Influenza B and C Virus
  - *Use additional code for associated pleural effusion, if applicable*
  - *Use additional code for associated sinusitis, if applicable*
Influenza and pneumonia (J09-J18)

Excludes2: allergic or eosinophilic pneumonia (J82)
aspiration pneumonia NOS (J69.0)
meconium pneumonia (P24.01)
neonatal aspiration pneumonia (P24.-)
pneumonia due to solids and liquids (J69.-)
congenital pneumonia (P23.9)
lipid pneumonia (J69.1)
rheumatic pneumonia (I00)
ventilator associated pneumonia (J95.851)

J09 Influenza due to certain identified influenza viruses

J09.X Influenza due to identified novel influenza A virus
  J09.X1 Influenza due to identified novel influenza A virus with pneumonia
  J09.X2 Influenza due to identified novel influenza A virus with other respiratory manifestations
  Use additional code, if applicable, for associated:
    pleural effusion (J91.8)
    sinusitis (J01.-)
  J09.X3 Influenza due to identified novel influenza A virus with gastrointestinal manifestations
  Excludes1: 'intestinal flu' [viral gastroenteritis] (A08.-)
  J09.X9 Influenza due to identified novel influenza A virus with other manifestations
J10 Influenza due to other identified influenza virus
J11 Influenza due to unidentified influenza virus
Chapter 10 – Coding Guidelines

c. Influenza due to certain identified influenza viruses
   Code only confirmed cases
   Requires diagnostic statement from provider
   Unconfirmed must be coded to J11, Influenza due to unidentified influenza virus

Lower Respiratory System

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**J12 - Viral pneumonia, not elsewhere classified**

Includes: bronchopneumonia due to viruses other than influenza viruses

*Code first associated influenza, if applicable (J09.X1, J10.0-, J11.0-)*

*Code also associated abscess, if applicable (J85.1)*

Excludes1: aspiration pneumonia, congenital pneumonia, interstitial, lipid and neonatal

- J12.0 Adenoviral pneumonia
- J12.1 Respiratory syncytial virus pneumonia
- J12.2 Parainfluenza virus pneumonia
- J12.3 Human metapneumovirus pneumonia
- J12.8 Other viral pneumonia
  - J12.81 Pneumonia due to SARS-associated coronavirus
    Severe acute respiratory syndrome NOS
  
- J12.89 Other viral pneumonia
- J12.9 Viral pneumonia, unspecified

All of these conditions are Major Comorbid Conditions (MCCs)

---

**J13 Pneumonia due to Streptococcus pneumoniae**

Bronchopneumonia due to S. pneumoniae

*Code first associated influenza, if applicable (J09.X1, J10.0-, J11.0-)*

*Code also associated abscess, if applicable (J85.1)*

Excludes1: congenital pneumonia due to S. pneumoniae (P23.6)

- Lobar pneumonia, unspecified organism (J18.1)
- Pneumonia due to other streptococci (J15.3-J15.4)

---

**J14 Pneumonia due to Hemophilus influenzae**

Bronchopneumonia due to H. influenzae

*Code first associated influenza, if applicable (J09.X1, J10.0-, J11.0-)*

*Code also associated abscess, if applicable (J85.1)*

Excludes1: congenital pneumonia due to H. influenzae (P23.6)
J15  **Bacterial Pneumonia, not elsewhere classified**

**Includes:** bronchopneumonia due to bacteria other than S. pneumoniae and H. influenzae

*Code first* associated influenza, if applicable (J09.X1, J10.0-, ~J11.0-)

*Code also* associated abscess, if applicable (J85.1)

**Excludes1:** chlamydial pneumonia (J16.0)
  - congenital pneumonia (P23.-)
  - Legionnaires' disease (A48.1)
  - spirochetal pneumonia (A69.8)

J15.0  Pneumonia due to *Klebsiella pneumoniae*

J15.1  Pneumonia due to *Pseudomonas*

All of these conditions are **Major Comorbid Conditions (MCCs)**

---

J15.2  **Pneumonia due to staphylococcus**

J15.20  Pneumonia due to staphylococcus, unspecified

J15.21  Pneumonia due to staphylococcus *aureus*

  - J15.211  Pneumonia due to *Methicillin susceptible Staphylococcus aureus*
    - MSSA pneumonia
    - Pneumonia due to *Staphylococcus aureus NOS*
  
  - J15.212  Pneumonia due to *Methicillin resistant Staphylococcus aureus*

J15.29  Pneumonia due to other staphylococcus

All forms of staph pneumonia are **Major Comorbid Conditions (MCCs)**
Chest x-ray - Pneumonia

J15.3 Pneumonia due to streptococcus, group B
J15.4 Pneumonia due to other streptococci

**Excludes1:** pneumonia due to streptococcus, group B
(J15.3)

pneumonia due to Streptococcus pneumoniae (J13)

J15.5 Pneumonia due to Escherichia coli
J15.6 Pneumonia due to other aerobic Gram-negative bacteria
Pneumonia due to Serratia marcescens

J15.7 Pneumonia due to Mycoplasma pneumoniae
J15.8 Pneumonia due to other specified bacteria
J15.9 Unspecified bacterial pneumonia
Pneumonia due to gram-positive bacteria

All of these pneumonia codes are Major Comorbid Conditions (MCCs)
J16 Pneumonia due to other infectious organisms, not elsewhere classified

Code first associated influenza, if applicable (J09.X1, J10.0-, -J11.0-)

Code also associated abscess, if applicable (J85.1)

Excludes1: congenital pneumonia (P23.-)
ornithosis (A70)
pneumocystosis (B59)
pneumonia NOS (J18.9)

J16.0 Chlamydial pneumonia

J16.8 Pneumonia due to other specified infectious organisms

All of these pneumonia codes are Major Comorbid Conditions (MCCs)

---

J18 Pneumonia, unspecified organism

J18.0 Bronchopneumonia, unspecified organism

Excludes1: hypostatic bronchopneumonia (J18.2)
lipid pneumonia (J69.1)

Excludes2: acute bronchiolitis (J21.-)
chronic bronchiolitis (J44.9)

J18.1 Lobar pneumonia, unspecified organism

J18.2 Hypostatic pneumonia, unspecified organism

Hypostatic bronchopneumonia
Passive pneumonia

J18.8 Other pneumonia, unspecified organism

J18.9 Pneumonia, unspecified organism

All of these pneumonia codes are Major Comorbid Conditions (MCCs) except J18.2 which is a CC
Use additional code

Use additional code, where applicable, to identify:

- exposure to environmental tobacco smoke (Z77.22)
- exposure to tobacco smoke in the perinatal period (P96.81)
- history of tobacco use (Z87.891)
- occupational exposure to environmental tobacco smoke (Z57.31)
- tobacco dependence (F17.-)
- tobacco use (Z72.0)

Respiratory Failure

- Life-threatening condition
- Always has an underlying cause
- System failure to eliminate CO2 or take in adequate O2
  - Hypoxemic – Lower than 60 mm/Hg PaO2
  - Hypercapnic – Higher than 50 mm/Hg PaCO2
  - pH - <7.35
Pleural Effusion

J91 Pleural effusion in conditions classified elsewhere
Excludes2: pleural effusion in heart failure (I50.-)
pleural effusion in systemic lupus erythematosus (M32.13)

J91.0 Malignant pleural effusion
*Code first* underlying neoplasm

J91.8 Pleural effusion in other conditions classified elsewhere
*Code first* underlying disease, such as:
- filariasis (B74.0-B74.9)
- influenza (J09.X2, J10.1, J11.1)

Chapter 10 – Coding Guidelines

a. Chronic Obstructive Pulmonary Disease and Asthma

b. Acute Respiratory Failure
   1) Acute respiratory failure as principal dx
   2) Acute respiratory failure as secondary dx
   3) Sequencing of acute respiratory failure and other acute condition
Chronic Lower Respiratory Diseases (J40-J47)

J40 Bronchitis, not specified as acute or chronic
- Bronchitis NOS
- Bronchitis with tracheitis NOS
- Catarrhal bronchitis
- Tracheobronchitis NOS

Chronic Lower Respiratory Diseases (J40-J47)

J41 Simple and mucopurulent chronic bronchitis
- J41.1 Simple chronic bronchitis
- J41.8 Mucopurulent chronic bronchitis
- J41.9 Mixed simple and mucopurulent chronic bronchitis

- J42 Unspecified chronic bronchitis
  - Chronic bronchitis NOS
  - Chronic tracheitis
  - Chronic tracheobronchitis
Chronic Bronchitis

Narrowed airway
Inflamed lining of the bronchial tube
Thick mucus in excess
Damaged cilia

Emphysema

J43.0 Unilateral pulmonary emphysema [MacLeod's syndrome]
J43.1 Panlobular emphysema
  • Panacinar emphysema
J43.2 Centrilobular emphysema
J43.8 Other emphysema
J43.9 Emphysema, unspecified (NOS)
  • Bullous emphysema
  • Emphysematous bleb
Bullous emphysema
The lung on the left is almost entirely replaced by bullous emphysematous lesions.

Emphysematous blebs

Excision of Emphysematous Blebs and Bullae
Chronic Lower Respiratory Diseases

**COPD** (J40-J47)

- **J44.0** Chronic obstructive pulmonary disease with acute lower respiratory infection*
- **J44.1** Chronic obstructive pulmonary disease with (acute) exacerbation
  - Decompensated COPD
  - Decompensated COPD with (acute) exacerbation

**Excludes 2:** chronic obstructive pulmonary disease [COPD] with acute bronchitis (J44.0)

- **J44.9** Chronic obstructive pulmonary disease, unspecified (NOS)

---

Chronic Obstructive Pulmonary Disease

Physiopathology

[Diagram showing normal lung and lung with COPD]

- [cdc.gov/copd](https://www.cdc.gov/copd/)
- [nihbi.nih.gov/health/health-topics/topics/copd/](https://www.nhlbi.nih.gov/health/health-topics/topics/copd/)
- [who.int/respiratory/copd/en/](http://www.who.int/respiratory/copd/en/)
Chronic Lower Respiratory Diseases (J40-J47)

J45.X Asthma

• Asthma affects people of all ages
• Most often starts during childhood
• In the United States, more than 25 million people
• About 7 million of these people are children

www.nhlbi.nih.gov/health/health-topics/topics/asthma/
www.cdc.gov/asthma/
www.lung.org/lung-disease/asthma/ (American Lung Association)
www.aaaai.org/conditions-and-treatments/asthma.aspx
### Chronic Lower Respiratory Diseases (J40-J47)

**Intermittent versus Persistent**

**J45.2 Mild intermittent asthma**
- J45.20 Mild intermittent asthma, uncomplicated (NOS)
- J45.21 Mild intermittent asthma with (acute) exacerbation
- J45.22 Mild intermittent asthma with status asthmaticus

**J45.3 Mild persistent asthma**
- J45.30 Mild persistent asthma, uncomplicated (NOS)
- J45.31 Mild persistent asthma with (acute) exacerbation
- J45.32 Mild persistent asthma with status asthmaticus

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**ICD-10-CM Series, Session VI**

February 22, 2013

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http://www.nhlbi.nih.gov/guidelines/asthma/index.htm

http://www.med.umich.edu/ioca/practiceguides/

---

**Classification of Asthma Severity (Intermittent vs. Persistent)**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Intermittent</th>
<th>Mild</th>
<th>Moderate</th>
<th>Persistent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
<td>≤ 2 days/week</td>
<td>&gt; 2 days/week but not daily</td>
<td>Daily</td>
<td>Throughout the day</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>0-1</td>
<td>&gt; 1-4</td>
<td>≥ 5</td>
<td>&gt; 5</td>
</tr>
<tr>
<td>SABA use (per day)</td>
<td>≤ 2</td>
<td>&gt; 2</td>
<td>&gt; 2</td>
<td>&gt; 2</td>
</tr>
<tr>
<td>Intolerance with normal activity</td>
<td>≥ 2</td>
<td>&gt; 2</td>
<td>&gt; 2</td>
<td>&gt; 2</td>
</tr>
<tr>
<td>FEV₁ (predicted) or FEF₂₅-₇₅ (predicted)</td>
<td>Normal</td>
<td>&gt; 80%</td>
<td>60-80%</td>
<td>&lt; 60%</td>
</tr>
<tr>
<td>FEV₁/FVC</td>
<td>≥ 80%</td>
<td>&gt; 80%</td>
<td>&lt; 80%</td>
<td>&lt; 80%</td>
</tr>
<tr>
<td>Exacerbations requiring oral corticosteroids</td>
<td>≤ 1/year</td>
<td>&gt; 1/month</td>
<td>&gt; 1/month</td>
<td>&gt; 1/month</td>
</tr>
</tbody>
</table>

**Recommended step for starting treatment**

- Step 1: Consider short courses of oral corticosteroids
- Step 2: Consider oral corticosteroids
- Step 3: Consider short courses of oral corticosteroids
- Step 4: Consider oral corticosteroids
- Step 5: Consider oral corticosteroids

*For children 0-4 years old, first clear benefit in observed 4-6 weeks, step treatment and consider alternative diagnosis or adjusting therapy accordingly.*
# Chronic Lower Respiratory Diseases (J40-J47)

## J45.4 Moderate persistent asthma
- J45.40 Moderate persistent asthma, uncomplicated (NOS)
- J45.41 Moderate persistent asthma with (acute) exacerbation
- J45.42 Moderate persistent asthma with status asthmaticus

## J45.5 Severe persistent asthma
- J45.50 Severe persistent asthma, uncomplicated (NOS)
- J45.51 Severe persistent asthma with (acute) exacerbation
- J45.52 Severe persistent asthma with status asthmaticus

## J45.9 Other and unspecified asthma
### J45.91 Unspecified asthma
- Asthmatic bronchitis NOS
- Childhood asthma NOS
- Late onset asthma
- J45.901 Unspecified asthma with (acute) exacerbation
- J45.902 Unspecified asthma with status asthmaticus
- J45.909 Unspecified asthma, uncomplicated (NOS)

### J45.99 Other asthma NOS
- J45.990 Exercise induced bronchospasm
- J45.991 Cough variant asthma
- J45.998 Other asthma
Chronic Lower Respiratory Diseases (J40-J47)

J47 Bronchiectasis

J47.0 Bronchiectasis with acute lower respiratory infection
Bronchiectasis with acute bronchitis

J47.1 Bronchiectasis with (acute) exacerbation

J47.9 Bronchiectasis, uncomplicated
Bronchiectasis NOS

Physiopathology

Bronchiectasis and mucoid impactions
### Lung Diseases Due To External Agents J60-J70

- **J60** Coalworker's pneumoconiosis
- **J61** Pneumoconiosis due to asbestos and other mineral fibers
- **J62** Pneumoconiosis due to dust containing silica
- **J63** Pneumoconiosis due to other inorganic dusts
- **J64** Unspecified pneumoconiosis
- **J65** Pneumoconiosis associated with tuberculosis
- **J66** Airway disease due to specific organic dust
- **J67** Hypersensitivity pneumonitis due to organic dust
- **J68** Respiratory conditions due to inhalation of chemicals, gases, fumes and vapors
- **J69** Pneumonitis due to solids and liquids
- **J70** Respiratory conditions due to other external agents

### Other Respiratory Diseases Principally Affecting the Interstitium J80-J84

- **J80** Acute respiratory distress syndrome
  - Acute respiratory distress syndrome in adult or child
  - Adult hyaline membrane disease
  - **Excludes1**: respiratory distress syndrome in newborn (perinatal) (P22.0)

- **J81** Pulmonary edema
  - Use additional code to identify:
    - exposure to environmental tobacco smoke (Z77.22)
    - history of tobacco use (Z87.891)
    - occupational exposure to environmental tobacco smoke (Z57.31)
    - tobacco dependence (F17.-)
    - tobacco use (Z72.0)
  - **Excludes1**: ……
    - pulmonary edema with heart disease NOS (I50.1)
    - pulmonary edema with heart failure (I50.1)
J82 Pulmonary eosinophilia, not elsewhere classified

J84 Other interstitial pulmonary diseases
  J84.0 Alveolar and parieto-alveolar conditions
    J84.114 Acute interstitial pneumonitis
      Hamman-Rich syndrome
      Excludes1: pneumocystis pneumonia (B59)
    J84.115 Respiratory bronchiolitis interstitial lung disease
    J84.116 Cryptogenic organizing pneumonia
      Excludes1: organizing pneumonia NOS, or due to known underlying cause (J84.89)
    J84.117 Desquamative interstitial pneumonia

Polling Question #3

Of all of the pneumonia codes, which of the following codes is considered a CC and not an MCC?

A. J18.0 Bronchopneumonia, unspecified org
B. J18.2 Hypostatic pneumonia unspecified org
C. J18.8 Other pneumonia, unspecified org
D. J18.9 Pneumonia, unspecified org
Chapter 10
Diseases of the Respiratory System
continued…

J85-J86  Suppurative and necrotic conditions of the lower respiratory tract
J90-J94  Other diseases of the pleura
J95      Intraoperative and postprocedural complications and disorders of respiratory system, not elsewhere classified
J96-J99  Other diseases of respiratory system

Ventilator-Associated Pneumonia (VAP)

J95.85  Complication of respirator [ventilator]
  J95.850  Mechanical complication of respirator
          Excludes1: encounter for respirator [ventilator] dependence during power failure (Z99.12)
  J95.851  Ventilator associated pneumonia
          Ventilator associated pneumonitis
          Use additional code to identify the organism, if known (B95.-, B96.-, B97.-)
          Excludes1: ventilator lung in newborn (P27.8)
  J95.859  Other complication of respirator [ventilator]
Chapter 10 – Coding Guidelines

c. Ventilator-associated Pneumonia

1) Documentation of Ventilator associated Pneumonia J95.851

2) Ventilator associated Pneumonia Develops after Admission

Acute Pulmonary Edema

• Cardiogenic – codes to CHF
• Non-cardiogenic

J81 Pulmonary edema

Use additional code to identify:
- exposure to environmental tobacco smoke (Z77.22)
- history of tobacco use (Z87.891)
- occupational exposure to environmental tobacco smoke (Z57.31)
- tobacco dependence (F17-)
- tobacco use (Z72.0)
Audience Questions

February 22, 2013

The End

February 22, 2013
ICD-10-CM Resources & References

- ICD-10-CM Draft Official Guidelines for Coding and Reporting 2013
- 2013 Release of ICD-10-CM Code
  - Guidelines, Addenda, List of Codes, GEMS
- HHS Announces Intent to Delay ICD-10-CM/PCS Compliance Date
  - Search for the February 16, 2012 press release
ICD-10-CM Resources & References

2013 ICD-10-CM is available at:
http://www.cdc.gov/nchs/icd/icd10cm.htm or

  - 2013 Code Descriptions in Tabular Order - Updated 12/5/11 [ZIP, 1MB]
  - 2013 Code Tables and Index [ZIP, 17MB]
  - 2013 Addenda [ZIP, 353KB]
  - 2013 ICD-10-CM Duplicate Code Numbers [ZIP, 64KB]
  - 2013 General Equivalence Mappings - Diagnosis Codes and Guide [ZIP, 583KB]
  - 2013 Reimbursement Mappings - Diagnosis Codes and Guide [ZIP, 266KB]

ICD-10-CM Resources & References

- General ICD-10 Information
  - http://www.cms.gov/ICD10

- General Equivalence Mappings and User’s Guides
ICD-10-CM Resources & References

ICD-10-CM: The Complete Official Draft Code Set 2013 (by OptumInsight, formerly Ingenix)
• Introduction
• ICD-10-CM Draft Conventions
• ICD-10-CM Official Guidelines for Coding and Reporting (Draft 2012)
• ICD-10-CM Index to Diseases and Injuries
• ICD-10-CM Neoplasm Table
• Table of Drugs and Chemicals
• ICD-10-CM Index to External Causes
• ICD-10-CM Tabular List of Diseases and Injuries