Reporting Major Cardiovascular DRGs

Audio Seminar/Webinar
February 22, 2007

Practical Tools for Seminar Learning
Disclaimer

The American Health Information Management Association makes no representation or guarantee with respect to the contents herein and specifically disclaims any implied guarantee of suitability for any specific purpose. AHIMA has no liability or responsibility to any person or entity with respect to any loss or damage caused by the use of this audio seminar, including but not limited to any loss of revenue, interruption of service, loss of business, or indirect damages resulting from the use of this program.

As a provider of continuing education, the American Health Information Management Association (AHIMA) must assure balance, independence, objectivity and scientific rigor in all of its endeavors. AHIMA is solely responsible for control of program objectives and content and the selection of presenters. All speakers and planning committee members are expected to disclose to the audience:

1) any significant financial interest or other relationships with the manufacturer(s) or provider(s) of any commercial product(s) or services(s) discussed in an educational presentation;
2) any significant financial interest or other relationship with any companies providing commercial support for the activity; and
3) if the presentation will include discussion of investigational or unlabeled uses of a product.

The intent of this requirement is not to prevent a speaker with commercial affiliations from presenting, but rather to provide the participants with information from which they may make their own judgments.
Faculty

James S. Kennedy, MD, CCS

Dr. Kennedy is a senior physician consultant with FTI Cambio Health Solutions based in Brentwood, TN. Trained as a general internist at the University of Tennessee in Memphis, Dr. Kennedy's experience includes medical private practice along with successful entrepreneurial healthcare-related startups in the public and private sector. His expertise includes physician-hospital leadership, healthcare systems improvement, healthcare documentation, coding, DRG assignment compliance, and government relations.

Telephone:  615-324-8576; 877-515-5354
Email:  james.kennedy@fticambiohealth.com

Donna Wilson, RHIA, CCS

Ms. Wilson is the Revenue Integrity Manager at Roper Saint Francis Healthcare in Charleston, SC. She has been in the coding field for the past 25 years. Her first job was as an inpatient coder. She eventually moved into the role of Coding Supervisor, Coding Compliance and now into her current job as the Revenue Integrity Manager.

Donna is the Coastal Region of South Carolina (SCHIMA) Coding Roundtable Coordinator. She was awarded the "Best Actress" award from AHIMA for her work on the SCHIMA Coding Roundtable process in 2003. The South Carolina Health Information Management Association (SCHIMA) recently received the Best Coding Roundtable team from AHIMA in October 2005 and again in October 2006. Donna also serves on AHIMA Coding Community Council, AHIMA CoP Advisory Board and serves as a student mentor on the Student CoP. She is the HIM/coding representative for the state of South Carolina on the UB Committee. She loves the field of coding and frequently signs her correspondence - "Happily coding away- Donna."
Table of Contents

Disclaimer .................................................................................................................................... i
Faculty .......................................................................................................................................... ii
Seminar Agenda ............................................................................................................................ 1
Polling Question #1 ...................................................................................................................... 1
DRGs 101 ......................................................................................................................................... 2
Poll Results .................................................................................................................................... 2
Cardiovascular Procedures ........................................................................................................... 3
The “Heart Hospital” .................................................................................................................... 3
MedPAC Report ................................................................................................................................ 4
How Medicare Did It ..................................................................................................................... 5
Challenges ........................................................................................................................................ 5
Documentation Tips ....................................................................................................................... 6
Example of a Reference Card ........................................................................................................ 6
Follow-up on Education ................................................................................................................ 7
MCVD Basics .................................................................................................................................. 8
ICD-9-CM Basics ........................................................................................................................... 8
Secondary Diagnoses ..................................................................................................................... 8
Procedures Applicable to MCVDs ............................................................................................... 9
MCVFD Prevalence ....................................................................................................................... 9
Classifications .................................................................................................................................. 10
Principal or Secondary Diagnosis ............................................................................................... 10
Exclusion Criteria .......................................................................................................................... 11
Heart Failure .................................................................................................................................... 11
Physician’s Definition .................................................................................................................... 11
Framingham Criteria for HF .......................................................................................................... 12
Systolic or Diastolic Dysfunction .................................................................................................. 12
Systolic Heart Failure .................................................................................................................. 13
Diastolic Heart Failure ............................................................................................................... 14
Tips on Capturing Heart Failure .................................................................................................. 15
Examples of Physician Queries .................................................................................................... 16
Polling Question #2 ...................................................................................................................... 17
Cardiogenic or Other Shock .......................................................................................................... 17
Results of Poll #2 ........................................................................................................................ 18
Angina vs. Non-anginal Pain ......................................................................................................... 18
Angina Pectoris ............................................................................................................................. 19
Other Mechanisms for Angina ..................................................................................................... 19
Grading of Angina ....................................................................................................................... 20
Postmyocardial Infarction Syndrome .......................................................................................... 20
Other Sequelae of MI ................................................................................................................... 21
Cardiac Valves MCVD .................................................................................................................. 21
Acute Pericarditis ......................................................................................................................... 22
Arrhythmias ..................................................................................................................................... 22
Aneurysms ...................................................................................................................................... 23
Emboli and Thrombosis ................................................................................................................ 24
Strokes - TIA ............................................................................................................................... 24
Polling Question #3 ...................................................................................................................... 25
Heart Trauma .................................................................................................................................. 25
Complications of Vascular Device ............................................................................................... 26
Infectious and Other Complications ......................................................................................... 26
Results of Poll #3 ........................................................................................................................ 26
AHIMA Resources ....................................................................................................................... 27
Appendix ......................................................................................................................................... 31
Agenda

- Discuss ICD-9-CM guidelines as they relate to Major Cardiovascular Diagnoses in DRG assignment
- Learn the pathophysiology of the MCVDs and how to identify them
- Review key roles that coding professionals play in ensuring accurate code assignments
- Develop strategies that engage physicians and surgeons in documenting MCVDs accurately

Polling Question #1

What best describes your role in assessing cardiovascular quality at your hospital?
* 1 Coder
* 2 HIM Director
* 3 Case Manager
* 4 Quality Manager
* 5 Other
**DRGs 101**

**A DRG is a grouping of diagnoses and procedures of similar resource utilization.**

- Each DRG is assigned a weight that reflects the average relative costliness of cases in that group compared with the costliness for the average Medicare case.
  - Factors in DRG assignment
    - Principal Diagnosis
    - Secondary Diagnoses
    - **significant enough to increase LOS by 1 day in most cases**
    - Principal Procedure - Principal diagnosis dependent
    - Discharge Disposition (e.g. death)
    - Age

- Hospital Payment
  - Base rate (usually around $6000) x DRG relative weight
  - Examples –
    - DRG 89 - Pneumonia with CC - R.W. 1.0376 x $6000 = ~$6180
    - DRG 90 - Pneumonia w/o CC - R.W. 0.6148 x $6000 = ~$3600


---

**Poll Results**

![Poll Results Image]

---

AHIMA 2007 Audio Seminar Series
**DRGs**

**Cardiovascular Procedures**

Prior to 2006, Medicare paid only one DRG payment for most cardiovascular procedures. For example, in 2003:

<table>
<thead>
<tr>
<th>DRG</th>
<th>Procedure Description</th>
<th>R.W.</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
<td>CABG with Cath - R.W. 5.3850</td>
<td></td>
</tr>
<tr>
<td>109</td>
<td>CABG without Cath - R.W. 3.9795</td>
<td></td>
</tr>
<tr>
<td>516</td>
<td>PTCA without stent with AMI - R.W. 2.7273</td>
<td></td>
</tr>
<tr>
<td>517</td>
<td>PTCA with stent with MI - R.W. 2.1789</td>
<td></td>
</tr>
<tr>
<td>518</td>
<td>PTCA without stent without MI - R.W. 1.7297</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Permanent Pacemaker with Acute MI/ Shock/ CHF - R.W. 3.4466</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>Other Pacemaker Implantation - R.W. 2.3078</td>
<td></td>
</tr>
</tbody>
</table>

Private investors noted that Medicare paid practically the same for sick and not so sick patients.

**DRGs**

**The “Heart Hospital”**

- In states without a certificate of need law, cardiologists built limited-service “heart hospitals” to refer their patients to:
  - States affected: Kansas, Texas, others
- Other full-service hospitals alleged that these patients at these “heart hospitals” were not as sick as the ones referred to them:
  - Heart Hospitals did not take emergency services, yet were paid the same as the full service hospitals

http://www.aha.org/aha/content/2005/pdf/Wichita%20Final%20PDF.pdf
In FY 2006, MedPAC and CMS comes to the rescue

**MedPAC Report - 2005 CMS Follow-up**

- **MedPAC**
  - MedPAC concluded that physicians established specialty hospitals, in part, because of “inaccuracies in the Medicare payment system”
  - MedPAC indicated that “improving payment accuracy” will make competition more equitable.

- **CMS**
  - FY 2006 IPPS Rule replaced 9 cardiovascular DRGs with 12 new ones that better recognize severity of illness as an interim step to improve the DRG system
    - Affected 700,000 cases
  - RAND report will suggest further refinements for FY2008
### How Medicare Did It

<table>
<thead>
<tr>
<th>DRG 107 - CABG with Cath</th>
<th>DRGs 478, 516, 517, 526, and 527</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRG 547 w/ MCVD</td>
<td>DRG 553 - Other Vascular Procedure with CC with MCVD</td>
</tr>
<tr>
<td>R.W. 6.1390</td>
<td>R.W. 3.0124</td>
</tr>
<tr>
<td>DRG 548 w/o MCVD</td>
<td>DRG 554 - Other Vascular Procedure with CC w/o MCVD</td>
</tr>
<tr>
<td>R.W. 4.6440</td>
<td>R.W. 2.0773</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DRG 109 - CABG without Cath</th>
<th>DRG 555 - PCVP* w/ MCVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRG 549 w/ MCVD</td>
<td>R.W. 5.0246</td>
</tr>
<tr>
<td>DRG 550 w/o MCVD -</td>
<td>R.W. 3.5904</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DRGs 115 and 116</th>
<th>DRG 556 - Other Vascular Procedure with CC w/o MCVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRG 551 - Permanent Cardiac Pacemaker Implant with MCVD or AICD Lead or Generator</td>
<td>R.W. 3.0364</td>
</tr>
<tr>
<td>DRG 552 - w/o MCVD -</td>
<td>R.W. 2.0860</td>
</tr>
</tbody>
</table>

*PCVP – Percutaneous CV Procedure

### Challenges

- Coders had to learn new “CC” system
  - Not only did we need a regular CC (e.g. for DRG 479), we needed to also capture a MCVD
  - A MCVD worth about $9,000 in CABGs, $3,600 in PTCAs

- CV Surgeons had not been impacted by the CC systems like the other physicians
  - New group of physicians to develop documentation quality relationship

Weights - CMS IPPS 2007
**Documentation Tips**

- Educate cardiologists and cardiothoracic surgeons.
- Keep it simple.
- Develop reference cards.
- Post documentation reminders on cardiac floors.

---

**Example of Reference Card**

Centers for Medicare and Medicaid Services (CMS) developed a standard list of diagnoses that are recognized as MCVDs for DRGs. Here are some common MCVDs:

<table>
<thead>
<tr>
<th>Secondary Dx</th>
<th>ICD-9-CM Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aneurysm - Heart</td>
<td>414.10</td>
</tr>
<tr>
<td>Angina – Unstable</td>
<td>411.1</td>
</tr>
<tr>
<td>Atrioventricular Block, Complete</td>
<td>426.0</td>
</tr>
<tr>
<td>Bacterial Endocarditis</td>
<td>421.0</td>
</tr>
<tr>
<td>Bil. Bundle Branch Block</td>
<td>426.53</td>
</tr>
<tr>
<td>Cardiac Arrest</td>
<td>427.5</td>
</tr>
<tr>
<td>Cardiogenic Shock</td>
<td>785.51</td>
</tr>
<tr>
<td>Carotid Stenosis w/ Infarction</td>
<td>433.91</td>
</tr>
<tr>
<td>Cerebral Infarction</td>
<td>434.91</td>
</tr>
<tr>
<td>Complication of Cardiac Device</td>
<td>996.72</td>
</tr>
<tr>
<td>Congestive Heart Failure</td>
<td>428.0</td>
</tr>
<tr>
<td>Cor Pulmonale-Acute</td>
<td>415.0</td>
</tr>
<tr>
<td>Infection of Cardiac Device</td>
<td>496.61</td>
</tr>
<tr>
<td>Intracerebral Hemorrhage</td>
<td>431</td>
</tr>
<tr>
<td>Myocardial Infarction(initial)</td>
<td>5th digit=1</td>
</tr>
<tr>
<td>Paroxysmal Ventricular Tach</td>
<td>427.1</td>
</tr>
<tr>
<td>Pericarditis-Acute</td>
<td>420.99</td>
</tr>
<tr>
<td>Pulmonary Embolism</td>
<td>415.19</td>
</tr>
<tr>
<td>Rheumatic Hrt. Failure-Conges.</td>
<td>398.91</td>
</tr>
<tr>
<td>Shock-Unspecified</td>
<td>785.50</td>
</tr>
<tr>
<td>Ventricular Fibrillation</td>
<td>427.41</td>
</tr>
</tbody>
</table>
Follow-up on Education

- Once you have educated the physicians initially, you will need on-going dialogue to keep the momentum.
- Educate physician extenders, ER physicians, anesthesiologists, and hospitalists as well.
- Attend medical staff meetings quarterly to report MCV capture rates. Drill down by physicians.
ICD-9-CM Basics
Referable to MCVDs

- **Principal Diagnosis** - defined as that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.
- **Other Diagnosis** - defined in UHDDS as all conditions that
  - coexist at the time of admission,
  - that develop subsequently, or
  - that affect the treatment received and/or the length of stay.
  - Diagnoses that relate to an earlier episode which have no bearing on the current hospital stay are to be excluded.
  - UDHHS definitions apply to inpatients in acute care (and other) hospital settings
- **Complications and Comorbidities (Secondary Diagnoses)**
  - **Chronic** Conditions may be reported, need to meet the UDHHS and ICD-9-CM definition of “other diagnosis” (Coding Clinic, 2nd Quarter, 1992; 2Q 2000, Volume 17(2), pages 20-21)
  - **Acute** Conditions require documentation by an attending or other treating physician AND demonstration that the condition affected the treatment received and/or the length of stay.

Let’s Remember Again
Secondary Diagnoses

- For reporting purposes the definition for “other diagnoses” is interpreted as additional conditions that affect patient care in terms of requiring:
  - Clinical evaluation
  - Therapeutic treatment
  - Diagnostic procedures
  - Extended length of hospital stay; or
  - Increased nursing care and/or monitoring
Procedures Applicable to MCVDs

- CABG
- PTCA
  - With and without stent
- Pacemaker implantation

Most peripheral vascular work
- Enarterectomies and peripheral angioplasties
  - (except carotids)
- Vena cava interruptions
- Blood vessel repairs
- Insertion or replacement of neurostimulator pulse generator

Don’t forget to look at the radiology report for angioplasties

MCVD Prevalence
Source: 2006 MedPAR

- CABGs
  - Total – 40%
    - 547/549 to 548/550
    - 547 to 548 – 50%
    - 549 to 550 – 27.5%

- Pacemakers
  - Total – 39.6%
    - 551 to 552

- Peripheral Vascular Disease
  - Total – 33.6%
    - 553 to 554

- PTCAs
  - Total – 43.2%
    - 555/557 to 556/558
    - 555 to 556 – 66%
    - 557 to 558 – 39.1%

In the presenter’s experience, a trained eye can find and/or query for a MCVD in approximately 10-15% additional cases in hospitals without an active clinical documentation program.
MCVD Characteristics
Classifications

Heart Failure
Acute MI
  Same admission or transfer
  Post-myocardial infarction syndrome
Other heart problems
  e.g. LV aneurysm, coronary aneurysms, ruptured papillary muscles or chordae tendineae, ACUTE pericarditis, ACUTE cor pulmonale, endocarditis, heart trauma
“Complications”
  e.g. occluded CABG grafts NOS, stenotic coronary stents, others

Resources: Ingenix’s DRG Expert 2007, pp 36-51

MCVD Characteristics
Principal or Secondary Diagnosis

• If the MCVD would place the patient in MDC 5 (Diseases and Disorders of the Circulatory System), then it can be a principal or secondary diagnosis
  • Some exclusion criteria exist - to be discussed later
  • Example - Accelerated Angina, Ventricular Tachycardia, Acute Myocardial Infarction

• If the MCVD would not place the patient in MDC 5, it must be a secondary diagnosis
  • Example - Cerebral embolus without infarction, pulmonary embolus
  • If these are sequenced as a principal diagnosis, then DRG 468 (R.W. 3.9925) will likely be assigned.
**MCVD Characteristics**

**Exclusion Criteria**

- DRG 551 – Permanent Cardiac Pacemaker Implant with MCVD or AICD Lead or Generator
  - Exclusions
    - 426.0 – Complete Heart Block
    - 426.53 – Bilateral Bundle Branch Block
    - 426.54 – Trifascicular Block

- Other MCVD DRGs – 547, 549, 553, 555, 557
  - All except 551
  - Exclusions
    - 411.1 – Accelerated Angina
    - 411.8 – Coronary Occlusion without MI

**Heart Failure**

**Physician’s Definitions**

- A condition in which an abnormality of cardiac function is responsible for the inability of the heart to pump blood at a rate commensurate with the requirements of the metabolizing tissues and/or allows it to do so only from an abnormally elevated ventricular diastolic pressure
  - Source: Harrison’s Textbook of Medicine

- Characterized by
  - Signs and Symptoms of intravascular and interstitial volume overload, or
  - Manifestations of inadequate tissue perfusion, such as fatigue or poor exercise tolerance
  - Source: ICD-9-CM C&M Committee, 2001
## Framingham Criteria for HF

<table>
<thead>
<tr>
<th>Major Criteria</th>
<th>Minor Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paroxysmal Nocturnal Dyspnea</td>
<td>Bilateral Ankle Edema</td>
</tr>
<tr>
<td>Neck Vein Distension</td>
<td>Nocturnal Cough</td>
</tr>
<tr>
<td>Rales</td>
<td>Dyspnea on Exertion</td>
</tr>
<tr>
<td>Cardiomegaly on CXR</td>
<td>Hepatomegaly</td>
</tr>
<tr>
<td>Acute Pulm. Edema</td>
<td>Pleural Effusion</td>
</tr>
<tr>
<td>$S_3$ gallop</td>
<td>Decrease in Vital Capacity by 1/3</td>
</tr>
<tr>
<td>↑ CVP (&gt;16 cm H$_2$O)</td>
<td>Tachycardia (&gt;120)</td>
</tr>
<tr>
<td>Hepatojugular Reflux</td>
<td></td>
</tr>
</tbody>
</table>

Need 2 Major or 1 Major and 2 minor criteria at one time

**While elevated Brain Naturetic Peptide is not an official criteria, it usually indicates heart failure.**

## Systolic or Diastolic Dysfunction

- Just means that the ventricle is dysfunctional in systole or in diastole; it does not mean that the heart is failing.
- If Heart Failure is described, it is inherent to the process and thus is not coded.
- If another etiology is described (e.g. HTN or a cardiomyopathy), it is inherent to the process and thus is not coded.
**Systolic Heart Failure**

- **EF < 40%**

**Muscle doesn’t contract well**

- Hypertensive or Ischemic Heart Disease
- Toxins (Drugs (doxirubicin, EtOH))
- Valvular Disease (Stenosis & Regurg.)
- Viral & other myocarditis (Rheumatic fever)
- Congenital Diseases
- Complications of Cardiac Surgery & Pregnancy
- Arrhythmias (fibrillation, BBB)
**Diastolic Heart Failure- Normal EF**

- Associated w/ Fem Sex, Elderly, HTN, ASCVD, Tachyarrhythmias
- Hypertension and Myocardial Ischemia (without infarction) are the most common causes
- Infiltrative Diseases (Hemochromatosis, Amyloidosis, Type II Diabetes Mellitus) contribute
- Hypertrophic/Restrictive Cardiomyopathy, Constrictive Pericarditis are rarer.
- Excludes patients with active valvular disease, however muscle disease may persist after correction, thus it must be considered.

*Supporting Data includes Doppler Echocardiogram or Invasive Hemodynamic Monitoring to show ↑LVEDP*
**Tips in Capturing Heart Failure**

- **History of having Framingham criteria**
  - Edema in setting of COPD means chronic cor pulmonale resulting in right heart failure

- **CHF Rx**
  - Lanoxin (digoxin), Coreg, Beta-blockers (atenelol, metropolol), diuretics (furosemide, Lasix), spironolactone, ACE or ARB-inhibitors (Vasotec, Diovan, any drug ending in “pril” or “sartan”)
  - Especially pertinent if patient described as having “dysfunction” – what would happen if these medications were discontinued?

- **Laboratory - Elevated BNP (usually over 200)**

**Cardiac Cath/ ECHO findings**

- **EF less than 30% - beware of MD calling this “dysfunction”**
- **Ventricular wall motion abnormalities**
- **Cardiac Index < 2.2 on Cardiac Cath**

- **Pulmonary edema on chest x-ray**
  - Need to differentiate whether heart is normal or not
  - Not all pulmonary edema is heart failure
Examples of physician queries:

- Consult from another hospital: Noted Left ventricular hypertrophy, Cardiomyopathy, and Elevated BNP.
  • Please explain any impairment from the patient’s LVH and cardiomyopathy and the clinical significance of the elevated BNP in this setting? Please document your answer in progress notes.
- Physician stated that the patient had heart failure and documented appropriately in the medical record.

Examples of physician queries:

- Note from another hospital stated: Left pleural effusion with elevated BNP.
  • Please explain the underlying etiology and the clinical significance of the left pleural effusion and the elevated BNP
- Physician replied that this was due to heart failure and documented in the progress notes.
Polling Question #2

A patient described as having a hypokinetic heart with ejection fraction of 25% on ECHO undergoes a CABG. He is on Lanoxin, Coreg, Vasotec, and Lasix and has no CHF symptoms.

To attain data quality, the coder should

1. Code Heart Failure (428.9)
2. Code Left Ventricular Dysfunction (427.9)
3. Code Abnormal ECHO (793.2)
4. Query the cardiac surgeon for the clinical significance of the ECHO and the indications for the patient’s medications

Cardiogenic or Other Shock

- Shock
  - Resistant Hypotension
    - SBP less than 90 or need for vasopressors
  - Evidence of organ hypoperfusion
    - Metabolic acidosis (pH < 7.35)

- If patient admitted with hypotension requiring dopamine and underwent PTCA/ CABG, worthy to ask physician if shock was present
**Results Poll #2**

A patient described as having a hypokinetic heart with ejection fraction of 25% on ECHO undergoes a CABG. He is on Lanoxin, Coreg, Vasotec, and Lasix and has no CHF symptoms.

To attain data quality, the coder should

*1 Code Heart Failure (428.9)  
*2 Code Left Ventricular Dysfunction (427.9)  
*3 Code Abnormal ECHO (793.2)  
*4 Query the cardiac surgeon for the clinical significance of the ECHO and the indications for the patient’s medications

---

**Angina vs. Non-anginal Pain**

**Angina**
- Sensations in chest of squeezing, heaviness, pressure, weight, vise-like aching, burning, tightness  
- Radiation to shoulder, neck, jaw, inner arm, epigastrium (can occur without chest component); band-like discomfort  
- Relatively predictable  
- Lasts 3-15 minutes  
- Abates when stressor is gone or TNG is taken

**Non-anginal**
- Pain is pleuritic, sharp, prickling, knife-like, pulsating, lancinating, choking  
- Involves chest wall; is positional, tender to palpation, can be inframammary, radiation patterns highly variable  
- Random onset  
- Lasts seconds, minutes, hours, or all day  
- Variable response to nitroglycerin
Angina Pectoris

Other Mechanisms for Angina

- Prinzmetal angina – coronary spasm
  - Commonly seen with cocaine use
- Coronary Embolus (e.g. due to vegetation from endocarditis, mitral valve prolapse)
- Vasculitis (e.g. Polyarteritis nodosa)
- Coronary Trauma (e.g. laceration, XRT)
- Mural thickening (e.g. amyloidosis, use of BCPs)
- Dissecting Aortic Aneurysm
- Disproportionate Oxygenation (e.g. Aortic stenosis, hypertrophic cardiomyopathy)
- Hematologic diseases (e.g. thrombocytosis, polycythemia rubra vera)
- Angina with normal coronaries

Source: NEJM 2005; 352(24):2524-2533
Grading of Angina

- **Stable Angina**
  - I - None with inactivity; present if strenuous
  - II - Early onset with regular activity (climbing 1 flight)
  - III - Marked limitation of early activity
  - IV - Angina at rest (angina decubitus)

- **Unstable Angina** - one of the following 3
  - Occurs at rest and last for over 20 minutes OR
  - Severe, described of flank pain, and started within past month
  - Cresendo pattern

- **Non-Q wave Myocardial Infarction**
  - Elevations of cardiac enzymes (Troponin I > 0.4 ng/ dl) in the setting of anginal symptoms, EKG changes, or other cardiac manifestations

- **ST-segment elevation Myocardial Infarction**
  - Same as Non-Q wave but with ST-segment elevations
  - Important to mention location in Risk-Adjusted Mortality Scores
    - e.g. - Anterior wall MI

Postmyocardial Infarction Syndrome - Dressler’s Syndrome

- Also known as postpericardiotomy syndrome
- An ACUTE pleuro-pericarditis that develops 2 to 10 weeks after a myocardial infarction or heart surgery.
  - The inflammatory response is believed to be the result of an autoimmune reaction to myocardial neo-antigens.
  - One in five patients with a myocardial infarction will suffer recurrence of chest pain within a few days, most commonly after an anterior infarction.

- A diagnosis of acute post-MI pericarditis is suggested by:
  - a low grade fever
  - chest pain
  - a pericardial friction rub
  - rarely, the pericardial effusion may cause cardiac tamponade

- **Laboratory**
  - Elevated sedimentation rate, pleural or pericardial effusions, elevated ST-segments on EKGs

- **Rx** - steroids, NSAIDs
Other Sequelae of MI

- **Mural Thrombus 429.79**
  - Clot within the heart chamber - usually seen on ECHO
- **Acquired septal defect - 429.71**
  - Must be stipulated as acquired, because the others are:
    - Septal defect NEC - 745.9
    - Atrial septal defect - 745.5
    - Ventricular septal defect - 745.4
    - Specified type NEC - 745.8
  - Not the same as septal infarction

Cardiac Valves MCVD

- **425.5 Ruptured Chordae Tendinae and 425.6 Papillary Muscle Rupture**
  - Occurs after MIs
  - Manifests as new onset systolic murmur or mitral insufficiencies
- **429.81 – Other Papillary Muscle disorders**
  - Usually the result of old MIs
  - Chronic mitral insufficiency
- **Endocarditis**
  - Vegetations on valves
  - Usually have fevers and positive blood cultures
  - Physicians usually document these.
Acute Pericarditis

- Same incidence and presentation as Dressler’s syndrome – 2-10%
- Many physicians will write “pericarditis” only
  - codes to 423.9
  - Must query for acute pericarditis – 420.9x – to be an MCVD
- Hemopericardium 423.0 is also a MCVD

Arrhythmias

Qualification as additional diagnoses?

Physicians must document these in the diagnostic statement as an acute or chronic condition that required monitoring to qualify as additional diagnoses.

Look for ECG or telemetries, pacemaker use, or Rx with antiarrhythmics or pacing.

- Complete Heart Block
  - Patients will have permanent pacemakers in for these
- Trifascicular Block
  - Usually ONLY found on the ECG
  - Combination of First-degree AV Block, RBBB, and (LAFB or LAPB)
- Ventricular Tachycardia
  - Defined as 3 or more PVCs in a row
  - May be known as “Torsades des Pointes”
  - May not be present on ECG because patient is taking amidarone or other antiarrhythmic and/or has an AICD in place
Arrhythmias
Qualification as additional diagnoses?

- Special Caution on “Bifascicular Block NOS”
  - Defined as RBBB with LAFB or RBBB with LAPB in most physicians minds
  - Can also be alternating RBBB or LBBB, though these are not common
  - Most will write “Bifascicular Block” as shorthand

- ICD-9-CM definitions
  - 426.51 – RBBB with LPFB
  - 426.52 – RBBB with LAFB
  - 426.53 – Other Bilateral BBB
    - Bifascicular Block NOS
    - Bilateral BBB NOS
    - RBBB with LBBB

Compliance Warning – if the physician documents Bifascicular Block and the ECG shows 426.51 or 426.52, ethically we should query the physician for clarification.

Aneurysms
Heart, Coronaries, and Aortic

- Left Ventricular Saccular
  - Usually seen on ECHO

- Coronaries
  - Dissections or Saccular
  - Usually seen on Cath

- Aortic Aneurysms
  - All Dissections count
  - Saccular Aneurysms must be ruptured

- Peripheral Vessel
  - Dissections only
Embolism and Thrombosis

- Acute Cor Pulmonale
  - Pulmonary Embolus is most common cause
    - Look for hypoxemia, positive CT Scan
- Embolus to aorta and vital organs (kidneys)
  - A cause of acute renal failure post CABG (post Aortic clamping)
- Embolism and thrombus of vena cava

Strokes - TIA

- Any form of stroke
  - Also document 997.02 - Iatrogenic cerebrovascular infarction or hemorrhage - where appropriate
  - Cerebral infarction
  - Cerebral hemorrhage
  - Subarachnoid hemorrhage
    - “Apoplexy”
  - Subdural hematoma

  TIA = ischemic neurological symptoms < 1 hr AND no evidence of cerebral infarction

- TIA (435.x) are NOT MCVDs
  - Defined as a ischemic retinal or neurologic event lasting less than 60 minutes for which no evidence of infarction is found
- Mechanisms of TIA are MCVDs
  - 434.00 - Cerebral Thrombosis without mention of infarction
  - 434.10 - Cerebral Embolus without mention of infarction
  - 434.90 - Unspecified cerebral artery occlusion without mention of infarction
Polling Question #3

A patient has a permanent pacemaker in place for chronic 3rd Degree heart block which is documented on the pre-anesthesia assessment prior to a CABG. After surgery, the surgeon notes the pacemaker activity seen on telemetry but does not describe the underlying rhythm.

To attain data quality, the coder should

*1 Code Third Degree Heart Block (426.0)
*2 Code 426.0 if the surgeon documents the presence third-degree heart block as an addendum to the discharge summary
*3 Not even consider Third Degree Heart Block as an additional diagnosis option since it is a chronic condition and did not impact the length of stay or require therapeutic intervention.
*4 Write Coding Clinic and see what they would say (ask about bifascicular block also), posting their answer on the AHIMA Communities of Practice

Heart Trauma

- Any form of heart laceration
- Any form of heart injury associated with open wounds to the chest
Complications of Vascular Device

- Occluded Coronary Arteries NOS
  - 996 - Complications peculiar to certain specified procedures
  - 996.03 - Due to CABG
    - Excludes
    - Atherosclerosis of graft (414.02, 414.03)
    - Embolism [occlusion NOS] [thrombus] of graft (996.72)

- In-stent stenosis
  - 996.72 - Coding Clinic 3rd Quarter, 2001
    - 3rd Quarter 2006 Coding Clinic discusses this further
  - These frequently require angioplasty or possibly CABG and will qualify as a MCVD

Infectious and Other Complications of Cardiac or Vascular Devices

- Infected prosthetic valves
  - Cause of endocarditis

- Infectious complications of other vascular devices covered as well
  - Central line, PICC or Swan-Ganz (pulmonary artery) catheter infections
A patient has a permanent pacemaker in place for chronic 3rd Degree heart block which is documented on the pre-anesthesia assessment prior to a CABG. After surgery, the surgeon notes the pacemaker activity seen on telemetry but does not describe the underlying rhythm.

To attain data quality, the coder should

*1  Code Third Degree Heart Block (426.0)
*2  Code 426.0 if the surgeon documents the presence third-degree heart block as an addendum to the discharge summary
*3  Not even consider Third Degree Heart Block as an additional diagnosis option since it is a chronic condition and did not impact the length of stay or require therapeutic intervention.
*4  Write Coding Clinic and see what they would say (ask about bifascicular block also), posting their answer on the AHIMA Communities of Practice

AHIMA Resources

• Cardiology Diagnosis Coding
• Cardiology Procedures Coding

AHIMA Web-based Focused Courses and Assessments
http://campus.ahima.org/campus/course_info/CATS/CATS_newtraining.html#cdx
Audience Questions

Audio Seminar Discussion

Following today’s live seminar
Available to AHIMA members at
www.AHIMA.org

Click on Communities of Practice (CoP) - icon on top right
AHIMA Member ID number and password required - for members only

Join the Coding Community from your Personal Page
Under Community Discussions, choose the
Audio Seminar Forum

You will be able to:
• Discuss seminar topics
• Network with other AHIMA members
• Enhance your learning experience
AHIMA Audio Seminars

Visit our Web site http://campus.AHIMA.org for information on the 2007 seminar schedule. While online, you can also register for seminars or order CDs and pre-recorded Webcasts of past seminars.

Upcoming Audio Seminars

• Useful Applications for SNOMED-CT®
  • March 8, 2007

• Information Integrity in EHRs
  • March 13, 2007

• Coding Kidney Disease and Treatment
  • March 15, 2007
Thank you for joining us today!

Remember – sign on to the AHIMA Audio Seminars Web site to complete your evaluation form and receive your CE Certificate online at:


Each person seeking CE credit must complete the sign-in form and evaluation in order to view and print their CE certificate.

Certificates will be awarded for AHIMA and ANCC Continuing Education Credit.
Appendix

CE Certificate Instructions
To receive your

**AHIMA CE Certificate**

2 AHIMA CEUs or 1.8 Nursing Contact Hours

Please go to the AHIMA Web site


click on the link “Sign-in” next to today’s audio seminar and complete the form then click “Complete Online Evaluation”

You will be find a link (Certificate>>) to the CE certificate for this seminar at the end of the evaluation. The certificate should appear and a screen should pop-up allowing you to print the certificate

You must complete the sign-in information and the seminar evaluation in order to validate your CE credit