FY 2008 DRG Update

Audio Seminar/ Webinar

September 27, 2007

Practical Tools for Seminar Learning
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FY 2008 DRG Update

**Agenda**

- Discuss the DRG changes for 2008
  - Development and implementation of Medicare-Severity Diagnosis-Related Groups (MS-DRGs)
  - DRG grouping changes
  - Secondary Diagnosis Changes
    - Completely new CC Structure
- Develop a Clinical Coding, Documentation and a Pathophysiologic approach to the new rules

**Historical CMS-DRG System Structure**

- Did not account for patients with greater severity of illness
  - CCs had the same weight no matter how severe
  - Designated a CC by an increase in LOS by at least one day in 75% of the patients
- Paired DRG system only required one secondary diagnosis to as a CC
  - Patients with multiple CCs given same resource weight as those with one.
Previously Proposed Alternatives (CSA-DRGs) were not implemented

- In August, 2006 CMS commissioned RAND Corporation to report on different alternatives
- Metrics - How well did it...
  - Explain variation of using resources
  - Impact case mix
  - Manage groupings,
  - Easily implement,
  - Promote understanding
  - Assure payment Accuracy
  - Prevent DRG Creep
- Those given a shot:
  - 3M’s Consolidated-Severity (APR) DRGs
  - 3M’s All-Payer DRGs
  - Ingenix’s All-Payer Severity DRGs
  - Solucient’s DRGs
  - A new system created by CMS - Medicare-Severity-DRGs (MS-DRGs)

MS-DRGs better than CMS-DRG except MDC 18, 19, 21
**MS-DRG chosen as the winner!**

• Medicare decided to go ahead with MS-DRG effective date October 1, 2007
  • Reasons well outlined in 2008 IPPS Final Rule
  • While RAND report may show need for revisions (especially in MDC 18, 19, 21), Medicare plans that this is permanent replacement for DRG system

**Audience Poll Question**

How prepared is your facility for MS-DRGs?

*1 We’ve read the final rule, know the new CCs by heart, and are ready to roll!

*2 We’re still learning the new CC structure but believe we will be ready by October 1

*3 MS-DRGs do not apply to us since we are an exempt-facility (e.g. critical access hospital)

*4 We’re not ready
Basic Facts
Rate Changes

- **Base Rate Changes**
  - Market Basket increases 3.3% for hospitals reporting quality measures, 1.3% for those that do not.
  - Capital increases 0.9% for all hospitals. 3% large urban hospital payment eliminated. Teaching hospital payments being phased out.

- **Indirect Medical Education**
  - Formula multiplier increases from 1.32 to 1.35
  - IME is case mix sensitive; MS-DRGs have significant impact

- **Outliers**
  - High cost outlier threshold reduced from $24,485 to $22,635

![Impact of FY08 Changes on Average Payment Per Case](chart.png)
Basic Facts

• “Coding and Documentation Adjustment”
  • 1.2% reduction - FY2008
  • 1.8% reduction - FY2009 & FY2010
    • Can be more or less based on CMI changes experienced during the first few months of MS-DRGs
  • Applies only to short-term acute care hospitals; LTACHs exempt from this.

Poll Results
**Basic Facts**

**MS-DRGs**

- Still have 25 MDCs
  - Pre-MDC and DRGs with all MDCs remain
- 745 total MS-DRGs
  - Increase from 538 CMS-DRGs
  - Base DRG structure basically the same
  - Complete overhaul of the CC structure

---

**Base DRGs**

- For the most part, base DRG structure remains except for:
  - Creation of 1 new DRG
  - Elimination of 43 age differentiations (e.g. 0-17, Diabetes age <35)
  - Usual and customary minor changes in base DRGs (see subsequent slides)
  - Consolidations of 34 low-volume DRGs into other DRGs
- 335 Base DRGs remain
  - Pre-MDC (e.g. trachs)
  - Surgical Procedure unrelated to Principal Diagnosis
  - Simple/Complex Pneumonia
  - Excisional Debridement as major O.R. Procedure
  - HIV w/ o Major Dx
  - Major GI Dx
  - Major Esophageal Dx
  - Major Hematological Dx
  - Major Bladder Procedures
  - and others all remain

*DRG numbering completely revised – not a one-to-one mapping*
Base DRG Definition Changes
Consolidations

- Carpal Tunnel Release
  - into MS-DRG 40-42 - Peripheral and Cranial Nerve and Other System Procedure w/o, w CC, and w/ MCC
- Retinal Procedures, Primary Iris Procedures, Lens Procedures with or without Vitrectomy
  - into MS-DRG 116-117 - Intraocular procedures w and w/o MCC
- Hyphema
  - into MS-DRG 124-125 - Other Disorders of the Eye w and w/o MCC

Base DRG Definition Changes
Consolidations

- Siadoadenectomy
  - into MS-DRG 139 - Salivary Gland Procedures
- Cleft Lip and Palate Repair
  - into MS-DRG 133 - Other Ear, Nose, Mouth and Throat O.R. Procedures with and without CC/MCC
- Rhinoplasty, Tonsillectomy, Adenoidectomy, Myringotomy with Tube Insertion
  - into NEW DRG MS-DRG 131-132 - Cranial/Facial Bone Procedure w and w/o CC/MCC
- Epiglottis
  - into MS-DRG 152-153 - Otitis Media and Upper Respiratory Infection with and without MCC
Base DRG Definition
Changes Consolidations

- Nasal Trauma and Deformity
  - Into MS-DRG 154-156 - Other Ear, Nose, Mouth, and Throat Diagnoses w/o CC/ MCC, w CC, and w MCC

- Dental and Oral Disease with and without Extractions
  - Into MS-DRG 157-159 Dental and Oral Diseases - w/o CC/ MCC, w CC, and w MCC

- Hepatobiliary Diagnostic Procedure with and without malignancy
  - Into MS-DRG 420-422 - Hepatobiliary Diagnostic Procedure w/o CC/ MCC, w CC, and w MCC

- Nonspecific arthropathies
  - Into MS-DRG 553-554 - Bone Diseases and Arthropathies w and w/o MCC

- Subtotal Mastectomy for Malignancy plus Breast Biopsy/ Local Excision and other procedures for non-malignancy
  - Into MS-DRG 584-585 - Breast Biopsy, Local Breast Excision, and other Breast Procedures w/ and w/o CC/ MCC
  - Codes 85.22 and 85.23 in CMS-DRGs 259 and 260 were moved to MS-DRG 582 and 583 - Mastectomy for Malignancy - w and w/o CC/ MCC

- Perianal and Pilonidal Procedures
  - Into MS-DRG 579-581 - Other Skin, Subcutaneous Tissue and Breast Procedures w/ MCC, w CC, and w/o CC/ MCC
Base DRG Definition
Changes Consolidations

- **Parathyroid, Thyroglossal, and Thyroid Procedures**
  - Into MS-DRG 625 - 627 - Thyroid, Thyroglossal, and Parathyroid Procedures w/ MCC, w/ CC, and w/o CC/ MCC

- **Diabetes Age < 35 and > 35**
  - Into MS-DRG 637 - Diabetes Mellitus

- **Testes Procedures for Malignancy and Nonmalignancy**
  - Into MS-DRG 711 - 712 - Testes Procedure with and without CC/ MCC

- **Circumcision (Procedure code 64.0) changes to non-O.R. cases - only this procedure will go to Medical DRG**

- **Sterilization, Male**
  - Into MS-DRG 729-730 - Other Male Reproductive System Diagnoses w/ and w/o CC/ MCC

- **Laparoscopy and Incisional Tubal Interruption, Endoscopic Tubal Interruption, D&C, Conization, and Radioimplant for Malignancy/ Non-Malignancy**
  - Into MS-DRG 744-745 - D&C, Conization, Laparoscopy and Tubal Ligation w/ and w/o CC/ MCC

- **History of Malignancy with and w/o Endoscopy**
  - Into MS-DRG 843-845 - Other Myeloproliferative Disease or Poorly Differentiated Neoplasm Diagnosis w/ MCC, w/ CC and w/o CC/ MCC

- **Aftercare with and w/o Malignancy**
  - Into MS-DRG 949-950 - Aftercare w/ and w/o CC/ MCC
Changes to Specific DRG Classifications

- **Intestinal Transplantation**
  - Split CMS-DRG 480 – Liver Transplant and/or Intestinal Transplant into:
    - MS-DRG 5 – Liver transplant with MCC or intestinal transplant
      - ICD-9-CM Procedure code 46.97
    - MS-DRG 6 – Liver transplant without MCC

- **Pain Codes**
  - The new ICD-9-CM codes created in FY 2007 for central and chronic pain syndrome and chronic pain (codes 338.0, 338.21 through 338.29, and 338.4) moved from MDC 23 to MDC 1 when present as the principal diagnosis
  - Reassigned from CMS-DRG 463-464 – Signs and Symptoms to MS-DRG 91-93 – Other Disorders of the Nervous System

Changes to Specific DRG Classifications

- **With movement of pain codes from MDC 23 to MDC 1, reassignment of full system spinal cord neurostimulator cases as follows**
  - **Spinal Neurostimulators**
    - MS-DRG 028 Spinal procedures w MCC
    - MS-DRG 029 Spinal procedures w CC or spinal neurostimulators
    - MS-DRG 030 Spinal procedures w/o CC/MCC
  - **Peripheral Neurostimulators**
    - MS-DRG 40 Periph and cranial nerve and other nerv syst proc w MCC
    - MS-DRG 41 Periph/cranial nerve and other nerv syst proc w CC or periph neurostim
    - MS-DRG 42 Periph/cranial nerve and other nerv syst proc w/o CC/MCC

- **When the principal diagnosis falls to MDC 8**
  - **Spinal Neurostimulators:**
    - MS-DRG 490 Back and neck proc exc spinal fusion w CC/MCC or disc device/neurostim
    - MS-DRG 491 Back and neck proc exc spinal fusion w/o CC/MCC
Changes to Specific DRG Classifications

- Hip and Knee revisions/ replacements
  - Proposal to divide knees and hips rejected by CMS due to new severity DRGs
- New MS-DRGs
  - 466 Revision of Hip or Knee replacement with MCC
  - 467 Revision of hip or knee replacement with CC
  - 468 Revision of hip or Knee replacement without CC/ MCC
  - 469 Major Joint replacement or reattachment of lower extremity with MCC
  - 470 Major joint replacement or reattachment of lower extremity without MCC

Changes to Specific DRG Classifications

- Spinal Fusions
  - With principal dx of tuberculosis or osteomyelitis have higher charges than other spinal fusions
    - Added to MS-DRGs 456-458
    - Codes 015.02, 015.04, 015.05, 730.08, 730.18, 730.28
  - MS-DRG 456 Spinal fusion except cervical with spinal curvature or malignancy or 9+ fusions with MCC
  - MS-DRG 457 with CC
  - MS-DRG 458 without CC/ MCC
**Changes to Specific DRG Classifications**

**Headaches**
- Chronic headaches admitted for drug withdrawal
  - Longer LOS
  - Be sure to code appropriately
- **MS DRGs for Seizures and Headaches**
  - MS-DRG 100 Seizures with MCC
  - MS-DRG 101 Seizures without MCC
  - MS-DRG 102 Headaches with MCC
  - MS-DRG 103 Headache without MCC

**Changes to Specific DRG Classifications**

- **Intracranial Stents**
  - Previously assigned to CMS-DRG 533-534 - Extracranial procedures
  - Moved to
    - MS-DRG 23-24 - Craniotomy with Major Device Implant or Acute Complex Central Nervous System Principal Diagnosis
    - MS-DRG 25-27 - Craniotomy and Endovascular Intracranial Procedure
  - 00.62 Percutaneous angioplasty or atherectomy of intracranial vessel(s)
    - Removed from non-covered procedure edit
    - **Must be accompanied by 00.65 percutaneous insertion of intracranial vascular stent**
    - **Without these together, case will fail edit and not be paid**
Changes to Specific DRG Classifications

- **Chemotherapeutic Implant (Gliadel Wafer)**
  - Procedure code 00.10 – used in malignant brain tumors
  - Moved to:
    - **MS-DRG 023 - Craniotomy with Major Device Implant or Acute Complex Central Nervous System Principal Diagnosis with MCC or Chemo Implant**

Changes to Specific DRG Classifications

- **High Dose Interleukin-2 (IL-2)**
  - **Proleukin**
    - Code 00.15
    - Discussion on high cost of treatment reflected by DRG assignment
    - Assigned to MS-DRG 837 Chemotherapy with Acute Leukemia as Secondary Diagnosis or with high dose chemotherapeutic agent with MCC
    - MS-DRG 838 Chemotherapy with Acute Leukemia as Secondary Diagnosis with CC or high dose chemotherapeutic agent
Changes to Specific DRG Classifications

- Cochlear Implants
  - Codes 20.96, 20.97, 20.98
  - Previously assigned to CMS-DRG 49 - Head and Neck Procedures
  - New titles:
    - MS-DRG 129 Major head and neck procedures w CC/ MCC or major device
    - MS-DRG 130 Major head and neck procedures w/o CC/ MCC

- Endovascular implantation of graft in aorta
  - Reassign cases with procedure code 39.73, Endovascular implantation of graft in thoracic aorta, from MS-DRG 238 to MS-DRG 237.
  - New titles
    - MS-DRG 237 Major cardiovascular procedures w MCC or thoracic aortic aneurysm repair
    - MS-DRG 238 Major cardiovascular procedures w/o MCC
**Changes to Specific DRG Classifications**

- Multiple stent procedures (00.43, Procedure on 4 or more vessels or 00.48, Insertion of 4 or more vascular stents)
  - Reassign cases in MS-DRG 247 with procedure codes 00.66, PTCA or coronary atherectomy and code 36.07, Insertion of drug-eluting coronary artery stent(s). New titles:
    - MS-DRG 246 Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/ stents
    - MS-DRG 247 Perc cardiovasc proc w drug-eluting stent w/o MCC
  - Reassign cases in MS-DRG 249 with procedure codes 00.66, PTCA or coronary atherectomy and code 36.06, Insertion of non-drug-eluting coronary artery stent(s). New titles:
    - MS-DRG 248 Perc cardiovasc proc w non-drug-eluting stent w MCC or 4+ ves/ stents
    - MS-DRG 249 Perc cardiovasc proc w non-drug-eluting stent w/o MCC

**Add-on Payments**

- No add-on payments for FY2008
  - Discontinued
    - Endovascular Graft Repair of the Thoracic Aorta
    - Restore® Rechargeable Implantable Neurostimulator
      - See neurostimulator section, however, for neurostimulators to be equated to MCCs
    - X STOP Interspinous Process Decompression System
  - No new Add-on Payments approved.
2 Year Implementation of MS-DRG Weights

- Phase in of cost based weights
- Blend of 50% CMS DRG rate and 50% MS-DRG rate

Post Acute Care Transfer Policy

- Criteria for selection of DRGs remains unchanged
  - 273 out of 745 fall under policy
  - Appx 36% similar to last year
- Be careful – patients with MCC will have longer GMLOS, thus may be prone to PACTP
Hospital Quality Reporting

2% reduction in payment for non-reporting
- Heart Attack
- Heart Failure
- Pneumonia
- Surgical Care Improvement
- Mortality Measures
- Patient experience survey

Additional Diagnoses beyond nine needed?

- HIPAA requires Medicare accept up to 25 diagnosis and procedure codes but Medicare does not have to process them
  - Therefore, Medicare only utilizes the first 9 diagnoses
  - Current system limitations do not allow for additional processing
- CMS is reviewing how many times the additional dx really change the process
What about usage by private insurance company?

- MS-DRGs are not designed for Non-Medicare patients
  - Some payers may adopt V25 MS-DRGs
    - North Dakota BCBS will transition on January 1, 2008.
  - Some may stay on V24 CMS-DRGs
    - However, Medicare will not maintain V24 CMS-DRGs. Other vendors (e.g. 3M) may opt to do so.
  - Some have already migrated to APR-DRGs
    - e.g. Mississippi Medicaid

- Check with your payers
Basic Facts
CC Changes

- Major revision of CC structure
  - Creation of Major CC (MCC)
  - Expansion of CC/MCC through most of the base DRGs
  - Elimination of
    - Major Cardiovascular Diagnoses
    - Complex Diagnoses for Cardiac Catheterization, and
    - Complicating Diagnoses for Acute Myocardial Infarction.

Comprehensive Review of CC List

- Old CMS-DRG System
  - Any secondary diagnosis that causes an increase in LOS by at least 1 day in 75% patients
  - CC list is still pretty much the same as it was in the Yale version in 1983
    - They used age >70 as factor also to account for undercoding of secondary Dx, but this was removed in 1988
Mitigating Factors for Changing CCs under CMS-DRGs

- Medicare LOS Dropped
  - 9.8 days 1983
  - 5.7 days in 2005
- Change in practice patterns
  - Increase in post acute care services
  - Shift to outpatient services
- Patients more likely to have CC
  - Appx 80% admissions had a CC

Basic Methodology to Change CC Structure

- CMS devised new list of CCs
  - Resource utilization, not LOS, became the determining factor.
  - Initial list devised upon high resource utilization, expensive and technically complex service, or extensive care requiring a greater number of caregivers (e.g. quadriplegia)
  - Further refined by removing chronic diseases without acute exacerbation (e.g. COPD) unless it showed consistency and intensity of physiologic decompensation (e.g. acute systolic heart failure, exacerbation of COPD)
Basic Methodology to Change CC Structure

- CMS opted to adopt S-DRG methodology
  - No CC, CC, Major CC
- CMS opted for only one CC or MCC to change DRG
  - APR-DRGs required multiple CCs to change DRG
- Initial CC list further refined
  - Retained MCCs from AP-DRGs and Severity levels 3 and 4 from APR-DRGs were chosen.
  - Deleted any diagnosis not a CC in AP-DRGs or level 1 in APR-DRGs.
  - Each CC analyzed for its impact on charges to conditions without CCs. If charges roughly doubled, it was selected as CC. If charges roughly tripled, it was a MCC.
  - Medical officers and public comment refined the list.
- For newborns, obstetrics, and congenital abnormalities, CMS chose to designate APR-DRG levels 3 and 4 as MCC and level 2 as CC.

Determinants if a Base DRG was split into CCs or MCCs

- 5 criteria used
  - A reduction in variance of charges of at least 3 percent within the MS-DRG CC or MCC subgroup.
  - At least 5 percent of the patients in the MS-DRG group had to fall within the CC or MCC subgroup.
  - At least 500 cases must be in the CC or MCC subgroup.
  - There must be at least a 20 percent difference in average charges between subgroups.
  - There must be a $4,000 difference in average charge between subgroups.

- See next slide for results.
Final Results

- Overall statistics
  - Without CC - 41.1%
  - With CC - 36.6%
  - With MCC - 22.2%

- Code differentiation
  - MCC - 1,096
  - CC - 4,221
  - Non-CC - 8,232

- MS-DRG CC/ MCC Structure
  - CC does not matter
    - e.g. MS-DRG 313 - Chest Pain
  - No CC | MCC
    - CC carries no weight.
    - Must have MCC to change DRG
  - No CC | CC/ MCC
    - CC and MCC have equal weight to change DRG
  - No CC | CC | MCC
    - CC and MCC have differing impacts to change DRG

Lists available on CMS website:  http://www.cms.hhs.gov

CC Exclusion List

- Similar to existing exclusion list
  - Example:
    - Primary cardiomyopathy is CC except when heart failure is the principal diagnosis
    - SIRS due to non-infectious causes is a CC except when pancreatitis is the principal diagnosis

Lists available on CMS website:  http://www.cms.hhs.gov
Deleted CCs under MS-DRGs
They still matter!

- Chronic Blood Loss Anemia
- Some forms of myelodysplastic syndrome
- Angina Pectoris, NOS
- Uncontrolled Diabetes
- Urinary Retention
- Mild/Moderate Malnutrition
- Atrial Fibrillation
- Mitral Valve Disease
- Aortic Valve Diseases
- Atrial Fibrillation
- Atheroembolism
- Hydronephrosis
- Atonic Bladder
- COPD NOS (496)
- Chronic bronchitis NOS
- CHF NOS (428.0)
- Dehydration/Hypovolemia
- Alcoholism/Acute intoxication
- Drug Abuse
- Drug dependency NOS
- CKD (NOS - stage 1-3)
- Chronic Renal Insufficiency
- Various Heart blocks
  - Preexcitation
  - Breast Lump

Most Common “Single Deleted CC”

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
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<tbody>
<tr>
<td>496</td>
<td>Chronic Airway Obstruction NEC</td>
</tr>
<tr>
<td>427.31</td>
<td>Atrial Fibrillation</td>
</tr>
<tr>
<td>428.0</td>
<td>Congestive Heart Failure NOS</td>
</tr>
<tr>
<td>276.50</td>
<td>Volume Depletion NOS</td>
</tr>
<tr>
<td>413.9</td>
<td>Angina Pectoris NOS- NOS</td>
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<tr>
<td>780.39</td>
<td>Convulsions NEC</td>
</tr>
<tr>
<td>276.51</td>
<td>Dehydration</td>
</tr>
<tr>
<td>424.0</td>
<td>Mitral Valve Disorder</td>
</tr>
<tr>
<td>280.0</td>
<td>Chronic Blood Loss Anemia</td>
</tr>
<tr>
<td>424.1</td>
<td>Aortic Valve Disorder</td>
</tr>
</tbody>
</table>

New MS-DRG CCs/MCCs

**CCs**
- Many SPECIFIED underlying infections, obstetrical/neonatal conditions, and malignancies
- Crohn’s Disease and Ulcerative Colitis
- Transient Ischemic Attack
- Thiamine Deficiency
- Chronic osteomyelitis
- CABG Graft Stenosis
- Precipitous Drop in Hematocrit

**MCCs**
- Many SERIOUS open fractures, underlying infections and OB/neonatal conditions (e.g. encephalitis, abortion with shock)
- Bile duct obstruction
- Encephalopathy

V-Codes in MS-DRGs - CCs

<table>
<thead>
<tr>
<th>V420</th>
<th>KIDNEY TRANSPLANT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>V421</td>
<td>HEART TRANSPLANT STATUS</td>
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<td>LUNG TRANSPLANT STATUS</td>
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<tr>
<td>V427</td>
<td>LIVER TRANSPLANT STATUS</td>
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<tr>
<td>V4281</td>
<td>TRNSPL STATUS-BNE MARROW</td>
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<tr>
<td>V4282</td>
<td>TRSPL STS-PERI P STM CELL</td>
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<td>V4283</td>
<td>TRNSPL STATUS-PANCREAS</td>
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<td>V4284</td>
<td>TRNSPL STATUS-INTESTINES</td>
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<td>V4321</td>
<td>HEART ASSI ST DEV REPLACE</td>
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<table>
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<td>V4611</td>
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<td>WEANING FROM RESPI RATOR</td>
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<td>V4614</td>
<td>MECH COMP RESPI RATOR</td>
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<tr>
<td>V551</td>
<td>ATTEN TO GASTROSTOMY</td>
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<tr>
<td>V6284</td>
<td>SUI CIDAL IDEATION</td>
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<tr>
<td>V850*</td>
<td>BMI LESS THAN 19,ADULT</td>
</tr>
<tr>
<td>V854*</td>
<td>BMI 40 AND OVER,ADULT</td>
</tr>
</tbody>
</table>

* Coding Clinic – 4th Quarter, 2005 – pages 96-98
Elimination of Cath Complex Dx Now Requires MCC

- CAD without cardiac cath (DRG 132 - 0.6318)
  - MS DRG 303 - w/o MCC - RW 0.6055
    - No DRG w/ CC available
  - MS DRG 302 - w/ MCC - RW 0.8236
- Angina without Cath (DRG 140 - R.W. 0.5041)
  - MS DRG 311 (0.5118)
  - Doesn't matter if CC or MCC present; DRG doesn't change
- CAD with Cardiac Cath (DRG 125 - 1.0530)
  - MS 287 - w/ o MCC - R.W. 1.1412
    - No DRG w/ CC available
  - MS 286 - w/ MCC - R.W. 1.6667

Some MCCs to consider:
- ACUTE systolic Heart Failure
- Ventricular fibrillation
  - on amiodarone - has AI CD
- Non-Q wave MI at referring hospital

Elimination of MCVD Now Requires MCC

Example:
- DRG 235 CABG w/ MCC
  - R.W. 5.1381
- DRG 236 CABG w/ o MCC
  - R.W. 3.7307

MCVDs that are not MCCs
- Bifascicular Block
- Trifascicular Block
- Complete Heart Block
- CHF NOS
- 996.72
  - Occluded graft
  - “In-stent stenosis”
- Cerebral embolus w/o infarction
- Acute Pericarditis

MCCs pertinent to CV surgery
- Sepsis (995.91 and 995.92)
- SIRS due to CV surgery w/ organ dysfunction (995.94)
- Acute Respiratory Failure (518.81)
- Pressure sores
  - Present on Admission
- (Toxic-Metabolic) Encephalopathy
  - Instead of delirium/ ICU psychosis
- Acute systolic heart failure
- Indication for amiodarone (vent. Fib)
- Non-Q-wave MI at referring hospital
Cardiology Service CMI Primarily Affected

<table>
<thead>
<tr>
<th>Name</th>
<th>BILLS</th>
<th>TACMIV24</th>
<th>TACMIV25</th>
<th>?CMI</th>
<th>Reimbursement Change if Base Rate = $5000</th>
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<td>2.28777</td>
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</tbody>
</table>

Source: CMS IPPS Final Rule FY2008

CC Examples
Angina Pectoris - MI

- 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
  - Occurs at rest and lasts for over 20 minutes OR
  - Severe, described as flank pain, and started within past month, OR
  - Crescendo 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

MS-DRG

413.9 - 0
413.9 - 0
413.9 - 0
413.0 - CC
411.1 - CC
410.71 - MCC
Arrhythmias

- Atrial Fibrillation - 427.31 - Not a CC
- Atrial Flutter - 427.32
  - A CC
- “Atrial Fib-Flutter”
  - Probably requires both codes - 427.31/427.32

May have to look on nursing notes or telemetry strips to code these

Ventricular Arrhythmias

- 427.1 Ventricular Tachycardia (>100/minute) - CC
  - Sustained vs. Nonsustained
    - Not treated if <30 seconds
  - Torsade de Pointes
    - Associated w Long QT Interval
- 427.41 Ventricular Flutter - MCC
- 427.42 Ventricular Fibrillation - MCC
  - Treated with cardioversion/ AICD
  - Amiodarone may be used to suppress further attack of V-tach or V-fib.
Heart Failure

<table>
<thead>
<tr>
<th>ICD9</th>
<th>CMS CC</th>
<th>MSDRG CC</th>
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</thead>
<tbody>
<tr>
<td>4280</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>CHF NOS (decomp - R Hrt Fail)</td>
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<td>4281</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>LEFT HEART FAILURE</td>
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<td>MSDRG CC</td>
<td>SYSTOLIC HRT FAILURE NOS</td>
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<td>CMS CC</td>
<td>MSDRG MCC</td>
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</tr>
<tr>
<td>42822</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>CHR SYSTOLIC HRT FAILURE</td>
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<tr>
<td>42823</td>
<td>CMS CC</td>
<td>MSDRG MCC</td>
<td>AC ON CHR SYST HRT FAIL</td>
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<tr>
<td>42830</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>DIASTOLIC HRT FAILURE NOS</td>
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<tr>
<td>42832</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>CHR DIASTOLIC HRT FAIL</td>
</tr>
<tr>
<td>42833</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>CHF NOS (decomp - R Hrt Fail)</td>
</tr>
<tr>
<td>42840</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>SYST/DIAST HRT FAIL NOS</td>
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<tr>
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<td>CMS CC</td>
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<tr>
<td>4289</td>
<td>CMS CC</td>
<td>MSDRG CC</td>
<td>HEART FAILURE NOS</td>
</tr>
</tbody>
</table>

• **Manifestation** -
  - Pulmonary edema, peripheral edema, respiratory distress,
  - Must differentiate from fluid overload in normal heart

• **Underlying Cause**
  - Cardiomyopathy - Cardiac Tamponade COPD
    - Cor Pulmonale - Aortic Stenosis
  - Systolic vs. Diastolic vs. both

• **Severity**
  - Acute vs. Chronic
    - Decompensated doesn't Count

• **Instigating Cause**
  - Noncompliance, ?MI?, ?PE?

• **Complication**
  - Acute/Chronic Respiratory Failure
  - Venous Status Ulcer with inflammation
  - “Cardiac Cirrhosis”
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)
- Some physicians use the term “congestive cardiomyopathy” – 425.4 – which is a CC

Diastolic Heart Failure - Normal EF
Docs disagree on what “normal EF” is (>50%)

- Associated w/? 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 Heart Failure**

- **Chronic failure**
  - Treatment with Coreg®, Lanoxin®, Lasix® or Bumex®, ACE-inhibitors (“pril”-drugs), ARBs (“sartan”-drugs)
  - BNP can be normal or slightly elevated.
  - “Congestive Cardiomyopathy”

- **Acute failure**
  - On treatment for chronic failure with immediate need to increase medications
  - Recent increase in symptoms
    - Pulmonary edema for left side
    - Pedal Edema for right side
  - Elevated pro-BNP (Brain Naturetic Peptide)

  *The Physician must state acute/chronic AND systolic/diastolic or both to obtain the best CC*

---

**“Hypertensive Crisis”**

- **Accelerated HTN - CC**
  - Defines as BP > 160/100 with vague symptoms (e.g. dizziness/ headache)
    - May be called “Hypertensive Urgency”
    - Does not require aggressive Rx

- **Malignant HTN - CC**
  - Defined as BP > 180/120 with evidence of end organ damage (papilledema, confusion, heart failure)
    - May be called “Hypertensive Crisis/Emergency”
    - Requires aggressive Rx - ICU admission/ Nitroprusside
  - If Confusion is present, consider Hypertensive Encephalopathy as a CDI opportunity, either as principal diagnosis or as a CC
**Bacteremia vs. Septicemia**

- **Bacteremia (790.7 – a CC):**
  - Bacteria in the blood without an associated inflammatory response

- **Septicemia (038.x – a MCC):**
  - Pathological organisms (viruses, bacteria, fungus, or other organisms) OR their toxins in the systemic blood

- **Toxemia (no code - query for septicemia):**
  - Circulating interleukins, tumor necrosis factors, and inflammation modulators

Source: *Coding Clinic, 4th Quarter, 2003, page 80*

---

**Sepsis – a MCC**

- 1992 Definition Sepsis is “the systemic inflammatory response to infection, manifested by two or more of the following SIRS conditions”

- It is **NOT THE INFECTION ITSELF**, but it is the **RESULT** of or the **RESPONSE** to the infection.

Systemic Inflammatory Response Syndrome (>2 of the following):

- Temperature > 38 C or < 36 C
- Pulse > 90/min
- Respirations > 20/min
- White Blood Cells >12,000 or <4000 or > 10% Bands formed

**WARNING!!!**

If the WBC Count is normal AND there is no “left shift” – “bandemia” – it is VERY difficult to substantiate that a patient has sepsis.
Secondary Diagnosis Issues

CCs
- 790.7 – Bacteremia
- 599.0 – UTI (“Urosepsis”)
- 995.93
  • SI RS due to non-infectious causes without organ dysfunction

Major CCs
- All septicemia codes - 038.x
- 995.91 & 995.92
  • SI RS due to infection with and without organ dysfunction
- 995.94
  • SI RS due to non-infectious causes WITH organ dysfunction
- All the pneumonias
- 518.81 – Acute respiratory failure

MS DRGs
Simple and Complex Pneumonia

Simple Pneumonia (DRG 89 – 1.0376)
- MS 195 - w/o CC
  • 0.8398
- MS 194 - w/ CC
  • 1.0235
- MS 193 - w/ MCC
  • 1.2505

Complex Pneumonia (DRG 79 – 1.6268)
- MS 179 - w/o CC
  • 0.1.2754
- MS 178 - w/ CC
  • 1.5636
- MS 177 - w/ MCC
  • 1.8444

Sepsis and HIV patients follow different rules
MS-DRG Assignment Issues

Patient was admitted with pneumococcal pneumonia and negative blood cultures
- The fever was 103 degrees, WBC 17,000 w/ 20% bands
- Pt. treated with antibiotics (source control) and IV fluids (addresses both pneumonia and sepsis). Pt. was not placed on mechanical ventilation.
- Is the principal Dx
  - Pneumococcal pneumonia?
    - MS-DRG 193 - w/ MCC - 1.25
    - MS-DRG 194 - w/ CC - 1.02
    - MS-DRG 195 - w/o CC/ MCC - 0.84
  - Septicemia?
    - MS-DRG 871 w/ MCC - 1.75
  - Pneumonia is NOT excluded as a MCC

MS-DRG Assignment Issues Surgery

Patient admitted with renal abscess
- Temperature 103, WBC 20,000 on admission; hypotensive on admission and required dopamine/ fluids
  - Failed to respond to antibiotic therapy and percutaneous drainage. Required surgery.

What’s the CDI opportunity in this circumstance?
- Renal Abscess
  - MS-DRG 659 - w/ MCC - 2.81
  - MS-DRG 660 - w/ CC - 2.06
  - MS-DRG 661 - w/o CC - 1.40
- Sepsis
  - MS-DRG 853 - w/ MCC - 5.18
  - MS-DRG 854 - w/ CC - 3.93
  - MS-DRG 855 - w/o CC - 3.37
**C - Respiratory Failure**

**Two out of three**

- **Hypoxemia**
  - Classical definition: \( pO_2 < 60 \text{ mm Hg} \)
  - Needs to be “significant” hypoxemia

- **Hypercapnia**
  - Defined as \( pCO_2 > 50 \)
  - \( pH \) usually < 7.35

- **Respiratory Distress**
  
  \[ pO_2 < 60 \text{ corresponds to } O_2 \text{ Sat} < 88\% \]

**Options in Respiratory Failure**

<table>
<thead>
<tr>
<th>MS-DRG</th>
<th>MS-DRG Title</th>
<th>Weights</th>
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<tbody>
<tr>
<td>177</td>
<td>Respiratory infections &amp; inflammations w MCC</td>
<td>1.8444</td>
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<tr>
<td>178</td>
<td>Respiratory infections &amp; inflammations w CC</td>
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</tr>
<tr>
<td>179</td>
<td>Respiratory infections &amp; inflammations w/o CC/MCC</td>
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<tr>
<td>189</td>
<td>Pulmonary edema &amp; respiratory failure</td>
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<tr>
<td>190</td>
<td>Chronic obstructive pulmonary disease w MCC</td>
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<td>Chronic obstructive pulmonary disease w CC</td>
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<td>292</td>
<td>Heart failure &amp; shock w CC</td>
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<td>293</td>
<td>Heart failure &amp; shock w/o CC/ MCC</td>
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## Acute/Chronic Resp. Failure MS-DRG CC/ MCC Allowance

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<th>MS-DRG CC</th>
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<td>ACUTE RESPIRATORY FAILURE</td>
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<td>518.82</td>
<td>CMS CC</td>
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<td>518.83</td>
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<td>CHRONIC RESPIRATORY FAILURE</td>
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<tr>
<td>518.84</td>
<td>CMS CC</td>
<td>MSDRG MCC</td>
<td>ACUTE AND CHRONIC RESP FAILURE</td>
</tr>
</tbody>
</table>

### COPD/ Asthma
- COPD and asthma are not CCs unless there is evidence of exacerbation.
- Be aware of possible acute (MCC) or chronic (CC) respiratory failure associated with these.

<table>
<thead>
<tr>
<th>Code</th>
<th>CMS CC</th>
<th>MS-DRG CC</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>4911</td>
<td></td>
<td></td>
<td>MUCOPURUL CHR BRONCHITIS</td>
</tr>
<tr>
<td>49120</td>
<td></td>
<td></td>
<td>OBST CHR BRONC W/O EXAC</td>
</tr>
<tr>
<td>49121</td>
<td>MSDRG CC</td>
<td>OBS CHR BRONC W(AC) EXAC</td>
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</tr>
<tr>
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<td>MSDRG CC</td>
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<tr>
<td>496</td>
<td></td>
<td></td>
<td>CHR AIRWAY OBSTRUCT NEC</td>
</tr>
</tbody>
</table>
**Signs of Exacerbations**

- Increased frequency or duration of cough, wheezing, shortness of breath
  - Reduced exercise tolerance
  - Awakening at night with symptoms
- Immediate need for increased therapy
  - More inhalers or breathing treatments; BiPAP
- Change in oxygen status
  - Fall in pO2 of 10-15 mm Hg or more (see respiratory failure)
- Production of yellow sputum or hemoptysis
  - Rx with antibiotics

**Acute Blood Loss Anemia**

**Precipitous Drop in Hematocrit**

- 790.01 – Precipitous Drop in Hematocrit – a CC
- Major Blood Loss defined as 20% blood loss
  - Would correlate with drop in hematocrit of 8 if baseline is 40
- **AHA Coding Clinic** states that if postoperative anemia is due to acute blood loss, assign 285.1 – Acute blood loss anemia (CC, 1st Quarter 2007)
  - Some orthopedic surgeons unwilling to document this since Healthgrades considers 285.1 as a complication.
  - An alternative may be 790.01 – Precipitous Drop in Hematocrit – which is a CC under MS-DRGs and would be unlikely to influence quality reports
Chronic Kidney Disease

Criteria

1. Kidney damage for ≥3 months, as defined by structural or functional abnormalities of the kidney, with or without decreased GFR, manifest by either:
   - Pathological abnormalities; or
   - Markers of kidney damage, including abnormalities in the composition of the blood or urine, or abnormalities in imaging tests

2. GFR <60 mL/min/1.73 m² for ≥3 months, with or without kidney damage

Methods to estimate GFR are discussed in Guideline 4. Markers of kidney damage are discussed in Guidelines 5–6.

Chronic Kidney Disease Staging

<table>
<thead>
<tr>
<th>Term</th>
<th>GFR</th>
<th>Usual Serum Cr.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>585.1 – CKD Stage 1</td>
<td>&gt; 90</td>
<td>&lt;0.9</td>
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<tr>
<td>585.2 – CKD Stage 2</td>
<td>60-89</td>
<td>1.0 - 1.3</td>
</tr>
<tr>
<td>585.3 – CKD Stage 3</td>
<td>30-59</td>
<td>1.4 - 2.5</td>
</tr>
<tr>
<td>**585.4 – CKD Stage 4</td>
<td>15-29</td>
<td>2.5 - 4.5 - CCs</td>
</tr>
<tr>
<td>**585.5 – CKD Stage 5</td>
<td>&lt;15</td>
<td>&gt;4.5 - CCs</td>
</tr>
<tr>
<td>***585.6 – ESRD – Need for chronic dialysis - MCCs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>585.9 – Chronic Renal Insuff. OR Failure NOS – NOT A CC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Serum Cr. for a 170 lb. white male, age 65

**Red Font indicates CC

***Blue Font indicates Major CC

Source: [http://www.kidney.org/professionals/kdoqi/guidelines_ckd/p4_class_g1.htm](http://www.kidney.org/professionals/kdoqi/guidelines_ckd/p4_class_g1.htm)
Uncontrolled Diabetes
Not a CC in MS-DRGs

- Options:
  - Diabetic Ketoacidosis - (MCC)
    - BS over 300 with ketones in urine and HCO
    - less than 18
  - Diabetic Hyperosmolar State - MCC
    - BS over 600
  - Diabetic autonomic neuropathy - CC
    - On Viagra, has gastroparesis, constipation, neurogenic bladder
  - Diabetic ulcer - CC
  - Diabetic nephrosis - CC
    - 4+ protein in urine, low albumin
  - Diabetic nephropathy with CKD state 4 or 5 - CC

Malnutrition

<table>
<thead>
<tr>
<th>Lab Values</th>
<th>Normal</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albumin (g/dl)</td>
<td>3.5-5.0</td>
<td>3.0-3.4</td>
<td>2.1-2.9</td>
<td>&lt;2.1</td>
</tr>
<tr>
<td>Transferrin (mg/dl)</td>
<td>176-315</td>
<td>134-175</td>
<td>117-133</td>
<td>&lt;117</td>
</tr>
<tr>
<td>Prealbumin (mg/dl)</td>
<td>18-45</td>
<td>10-17</td>
<td>5-9</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

- CC
  - 263.8 - Specified Malnutrition - NEC
  - 263.9 - Malnutrition NOS
- MCC
  - 260 - Kwashiorkor
  - 261 - Marasmus
    - Severe Malnutrition
  - 262 - Other severe malnutrition

Notes/Comments/Questions
Chemical Dependency

• Alcohol and Drug Use
  • Legal drug = Use; Illegal drug = abuse
• Alcohol and Drug Abuse
  • Causes immediate consequences or bodily harm
• Chemical dependency = Addiction
  • Lack of use causes withdrawal symptoms
  • Mental obsession to use
  • Continued use even though severe consequences

Must be coded as “CONTINUOUS” to count as a CC – Alcohol and marijuana do not count as CCs

Criteria available: Coding Clinic, 2nd Quarter, 1991, pg. 11

What Should HIM and Coding Professionals Do Now and Ongoing to Prepare for and Work with all the IPPS Changes??
CMS’s Solution
Clinical Documentation Integrity

“We do not believe there is anything inappropriate, unethical or otherwise wrong with hospitals taking full advantage of coding opportunities to maximize Medicare payment that is supported by documentation in the medical record.”... “We encourage hospitals to engage in complete and accurate coding”


Action Steps to Prepare

- Encoder is just a tool
- Coding guidelines change - Review Quarterly Coding Clinic
- Additional Education for
  - Physicians
  - Coders
- Rethink coder’s role in the process
  - Clinical Documentation Specialists
- Don’t forget: Coding concepts have not changed
**Action Steps to Prepare**

- **Become the experts**
  - MS-DRG methodology and related changes
    - Keep up with industry information
      - via email, etc.

- **Create awareness/promote teamwork:**
  - Senior Management
  - IS personnel
  - Department Directors
  - Financial Team
  - Physicians

**Summary**

- Clinical documentation is at the center
- Linkage of documentation to the coding and payment systems continues
- There is a linkage to Quality measures and scorecards of performance from documentation and coding
- Coding rules and guidelines
Resources


- AHIMA resources on the MS-DRG system: http://www.ahima.org/reimbursement

References

- FY2008 IPPS Proposed Rule
- FY2008 IPPS Final Rule
- Cecil’s Book of Medicine
- DRG Expert 2007 - Ingenix
- Merck Manual
Thank you

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Faculty: Lynda Starbuck, MS, RHIA and Becky J. Wilson, CCS, CPC
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