



# ICD-10-CM/PCS Medicare Severity - Diagnosis Related Group Conversion Project



# MS-DRG Conversion Project

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# ICD-10 Final Rule

## CMS-0013-F

- Published January 16, 2009
- October 1, 2013 – Compliance date for implementation of ICD-10-Clinical Modification (CM) and ICD-10-Procedure Coding System (PCS)

<http://edocket.access.gpo.gov/2009/pdf/E9-743.pdf>

# ICD-10 Final Rule Issues

- Single implementation date for all users
  - Date of service for ambulatory and physician reporting
  - Date of discharge for inpatient settings
- ICD-9-CM codes will not be accepted for services provided on or after October 1, 2013
- ICD-9-CM claims for services prior to implementation date will continue to flow through systems for a period of time

# ICD-10 Final Rule Issues

- Outreach and education
  - CMS has collaboratively developed materials and conducted outreach conference calls with American Hospital Association, American Health Information Management Association, and Centers for Disease Control and Prevention (Cooperating Parties)

[http://www.cms.hhs.gov/ICD10/05\\_Educational\\_Resources.asp](http://www.cms.hhs.gov/ICD10/05_Educational_Resources.asp)

[http://www.cms.hhs.gov/ICD10/06a\\_2009\\_CMS\\_Sponsored\\_Calls.asp](http://www.cms.hhs.gov/ICD10/06a_2009_CMS_Sponsored_Calls.asp)

# ICD-9/ICD-10 Code Mappings

- ICD-9 and ICD-10 codes are quite different
- Tools are needed to convert data
- General Equivalence Mappings (GEM)
  - Designed to aid in converting applications and systems from ICD-9 to ICD-10
  - Bi-directional mappings
  - “Find and replace” codes or lists of codes

# Bi-Directional Mappings

Source	Target	A.K.A.
From ICD-9-CM	To ICD-10-CM	“Forward mapping”
From ICD-10-CM	To ICD-9-CM	“Backward mapping”

# ICD-10 MS-DRG Conversion Project

- Detailed paper on converting Medicare Severity - Diagnosis Related Groups (MS-DRG) 26.0 to ICD-10-CM and ICD-10-PCS

[http://www.cms.hhs.gov/ICD10/09\\_ICD10\\_MS\\_DRG\\_Conversion\\_Project.asp](http://www.cms.hhs.gov/ICD10/09_ICD10_MS_DRG_Conversion_Project.asp)



# Use of GEMs to Convert Payment System

- CMS illustrated use of GEMs by developing ICD-10 version of MS-DRGs
- Stage 1 began with digestive MS-DRGs, Major Diagnostic Category (MDC 06)
- Presented results at September 24, 2008 ICD-9-CM Coordination and Maintenance (C&M) Committee Meeting
- Sharing lessons learned during this process

# MS-DRG Conversion Goals

- Coded in ICD-9 or ICD-10, the same patient is assigned to the same MS-DRG
- Clinically equivalent
- Definitions manual has familiar look and feel

## **MDC 6, DISEASES & DISORDERS OF THE DIGESTIVE SYSTEM**

<b>A00*</b>	Cholera (3 codes)
<b>A020</b>	Salmonella enteritis
<b>A03*</b>	Shigellosis (6 codes)
<b>A04*</b>	Other bacterial intestinal infections (10 codes)
<b>A050</b>	Foodborne staphylococcal intoxication
<b>A052</b>	Foodborne Clostridium perfringens [Clostridium welchii] intoxication
<b>A053</b>	Foodborne Vibrio parahaemolyticus intoxication
<b>A054</b>	Foodborne Bacillus cereus intoxication
<b>A055</b>	Foodborne Vibrio vulnificus intoxication
<b>A058</b>	Other specified bacterial foodborne intoxications
<b>A059</b>	Bacterial foodborne intoxication, unspecified

# Find and Replace Diagnosis Codes

## 4 ICD-9-CM Codes Replaced by 28 ICD-10-CM Codes

**DRG385** Inflammatory bowel disease w MCC  
**DRG386** Inflammatory bowel disease w CC  
**DRG387** Inflammatory bowel disease w/o CC/MCC

### PRINCIPAL DIAGNOSIS

**555.0** Regional enteritis of small intestine  
**555.1** Regional enteritis of large intestine  
**555.2** Regional enteritis of small intestine with large intestine  
**555.9** Regional enteritis of unspecified site

**DRG 385** Inflammatory bowel disease w MCC  
**DRG 386** Inflammatory bowel disease w CC  
**DRG 387** Inflammatory bowel disease w/o CC/MCC

### PRINCIPAL DIAGNOSIS

**K5000** Crohn's disease of small intestine without complications  
**K50011** Crohn's disease of small intestine with rectal bleeding  
**K50012** Crohn's disease of small intestine with intestinal obstruction  
**K50013** Crohn's disease of small intestine with fistula  
**K50014** Crohn's disease of small intestine with abscess  
**K50018** Crohn's disease of small intestine with other complication  
**K50019** Crohn's disease of small intestine with unspecified complications  
**K5010** Crohn's disease of large intestine without complications  
**K50111** Crohn's disease of large intestine with rectal bleeding  
**K50112** Crohn's disease of large intestine with intestinal obstruction  
**K50113** Crohn's disease of large intestine with fistula  
**K50114** Crohn's disease of large intestine with abscess  
**K50118** Crohn's disease of large intestine with other complication  
**K50119** Crohn's disease of large intestine with unspecified complications  
**K5080** Crohn's disease of both small and large intestine without complications  
**K50811** Crohn's disease of both small and large intestine with rectal bleeding  
**K50812** Crohn's disease of both small and large intestine with intestinal obstruction  
**K50813** Crohn's disease of both small and large intestine with fistula  
**K50814** Crohn's disease of both small and large intestine with abscess  
**K50818** Crohn's disease of both small and large intestine with other complication

# Find and Replace Procedure Codes

## 2 ICD-9-CM Codes Replaced by 112 ICD-10-PCS Codes

**DRG 335** Peritoneal  
Adhesiolysis w  
MCC

**DRG 336** Peritoneal  
Adhesiolysis w CC

**DRG 337** Peritoneal  
Adhesiolysis w/o  
CC/MCC

### **OPERATING ROOM PROCEDURES**

**54.51** Laparoscopic Lysis Of  
Peritoneal Adhesions

**54.59** Other Lysis Of  
Peritoneal Adhesions

**DRG 335** Peritoneal adhesiolysis w MCC

**DRG 336** Peritoneal adhesiolysis w CC

**DRG 337** Peritoneal adhesiolysis w/o CC/MCC

### **OPERATING ROOM PROCEDURES**

**0DN80ZZ** Release Small Intestine, Open Approach

**0DN82ZZ** Release Small Intestine, Open Endoscopic Approach

**0DN83ZZ** Release Small Intestine, Percutaneous Approach

**0DN84ZZ** Release Small Intestine, Percutaneous Endoscopic  
Approach

**0DN90ZZ** Release Duodenum, Open Approach

**0DN92ZZ** Release Duodenum, Open Endoscopic Approach

**0DN93ZZ** Release Duodenum, Percutaneous Approach

**0DN94ZZ** Release Duodenum, Percutaneous Endoscopic Approach

**0DNA0ZZ** Release Jejunum, Open Approach

**0DNA2ZZ** Release Jejunum, Open Endoscopic Approach

**0DNA3ZZ** Release Jejunum, Percutaneous Approach

**0DNA4ZZ** Release Jejunum, Percutaneous Endoscopic Approach

**0DNB0ZZ** Release Ileum, Open Approach

**0DNB2ZZ** Release Ileum, Open Endoscopic Approach

**0DNB3ZZ** Release Ileum, Percutaneous Approach

**0DNB4ZZ** Release Ileum, Percutaneous Endoscopic Approach

**0DNE0ZZ** Release Large Intestine, Open Approach

**0DNE2ZZ** Release Large Intestine, Open Endoscopic Approach

# MS-DRGs Conversion Summary

List Summary	Diagnosis Codes	Procedure Codes	Total
Number Of Unique Lists in MS-DRGs	~200	~300	~500
Codes in MDC 6 Lists Auto-Replaced by GEMs	99%	91%	95%
Codes In MDC 6 Lists Auto-Replaced by GEMs and Modified by Clinical Review	1%	9%	5%

- GEMs produce 95% of the MDC 6 mapping without any need for review
- Remaining 5% based on MDC 6
  - Need for review of the remaining MDCs expected to steadily decrease
  - As the rules derived for MDC 6 are applied to the remaining MDCs, fewer codes will need clinical review

# Overly Broad ICD-9 Procedure Codes

- Approximately 200 overly broad ICD-9 Procedure Codes identified
- Should an ICD-9 Procedure Code be replaced with *all* associated PCS codes *everywhere* an ICD-9 code is listed?
- Because PCS codes always specify body part, approach and device, 92.27 is associated with 261 PCS codes

## Examples of Overly Broad ICD-9 Codes

92.27	Implantation Or Insertion Of Radioactive Elements
86.09	Other Incision Of Skin And Subcutaneous Tissue
83.82	Graft Of Muscle Or Fascia
81.96	Other Repair Of Joint
80.19	Other Arthrotomy Of Other Specified Site
77.19	Other Incision Of Other Bone, Except Facial Bones, Without Division
39.50	Angioplasty or atherectomy of other non-coronary vessel(s)
39.31	Suture Of Artery
39.29	Other (Peripheral) Vascular Shunt Or Bypass
38.21	Biopsy Of Blood Vessel
01.24	Other Craniotomy
04.04	Other Incision Of Cranial And Peripheral Nerves

# Solution for ICD-9 Overly Broad Procedure Codes

- Limit assignment of PCS codes associated with overly broad ICD-9 codes to anatomic sites corresponding to each MDC
- MDC 6 Example
  - DRGs 356, 357, 358 Other Digestive System O.R. Procedures “92.27 Implantation or Insertion of Radioactive Elements”
- For Procedure 92.27, only 10 of the 261 PCS codes are assigned to MDC 6

## **Likely** in MDC 6

0DH571Z Insertion of Radioactive Element into Esophagus, Via Natural or Artificial Opening

0DHP81Z Insertion of Radioactive Element into Rectum, Via Natural or Artificial Opening Endoscopic

## **Extremely Unlikely** in MDC 6

08H0X1Z Insertion of Radioactive Element into Right Eye, External Approach

0BHL01Z Insertion of Radioactive Element into Left Lung, Open Approach

0HHU31Z Insertion of Radioactive Element into Left Breast, Percutaneous Approach

# ICD-9 Code Conflicts

- An ICD-10 Code is assigned to more than one ICD-9 code *and* the ICD-9 codes are assigned to different MS-DRGs
- To resolve the conflict for ICD-10 code I09.89, the ICD-10 code is assigned to the ICD-9 code 397.1, which results in the most appropriate MS-DRG assignment

I09.89	Other specified rheumatic heart diseases  Includes: Rheumatic disease of pulmonary valve
I09.89	Combines the descriptions of two ICD-9 codes  All other rheumatic diseases of the heart currently classified have unique codes in ICD-10-CM and according to frequency data, ICD-9 code 398.99 is rarely used

398.99	Other rheumatic heart diseases  In MDC 5 DRG 314, 315, 316 Other circulatory system diagnoses
397.1	Rheumatic diseases of pulmonary valve  In MDC 5 DRG 306, 307 Cardiac congenital and valvular disorders



# Use of GEMs to Convert Payment System

- Discussed progress at C&M Meetings
- Draft ICD-10 Definitions Manual has been posted (goal was by end of 2009)
- Final ICD-10 MS-DRG logic subject to rulemaking

[http://www.cms.hhs.gov/ICD10/01m\\_2009\\_ICD10PCS.asp](http://www.cms.hhs.gov/ICD10/01m_2009_ICD10PCS.asp)

# Findings to Date

- GEMs worked well in converting codes
  - Produce 95% of the mapping without need for review
  - Through rule development, the number needing review decreased
- Automation of some steps is helpful

# Stage 2 – Completion of Project

- This presentation describes how CMS completed the MS-DRG conversion to ICD-10
- Issues we will discuss include
  - General approach
  - Staff utilized
  - Automation and refinement of processes
  - Generic issues identified and how resolved
  - Enhancement of GEMs as result of process

# Stage 2 – Completion of Project

- Examples of the conversion process will be described
  - Major Complicating Condition (MCC) and Complication and Comorbidity (CC) conversions
  - Cardiovascular MS-DRGs
  - Musculoskeletal system MS-DRGs
- General advice for undertaking a similar project

# MS-DRG Conversion to ICD-10-CM/PCS

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# Stage 2 - General Approach

- Conversion process developed and refined during MDC 6, applied to the remaining MDCs
  - MS-DRGs composed of logical relationships among 500+ lists of ICD-9-CM codes
  - All 500+ lists extracted from MS-DRGs and each list attribute identified (e.g., mutual exclusion)
  - List conflicts identified and resolved
  - General ICD-9-CM Procedure Codes identified and ICD-10-PCS based list assignment tailored to body system
  - Necessary ICD-10-CM/PCS clusters identified and evaluated

# Staff Utilized

- Researchers, physicians, clinical coding experts, MS-DRG analysts, and software programmers
- All team members have expertise in MS-DRGs, ICD-10-CM/PCS, the GEMs, or some combination of the three

# Refinement of Methods

- Basic method used to resolve MDC 6 list conflicts proved to be applicable to all MDCs
  - Frequency data parameters used to resolve list conflicts in most cases
    - 5x frequency deemed “clearly dominant” choice to resolve a list conflict
  - Not fully automated, all decisions reviewed



# Automation and Process Efficiencies Added

- General ICD-9-CM Procedure Codes
  - Developed table that contains all ICD-9-CM Procedure Codes with 100+ GEM translations to ICD-10-PCS
  - Systematically reviewed and rules developed for tailoring list assignment by body system

# Automation and Process Efficiencies Added

- ICD-10 Clusters
  - Discovery of necessary ICD-10 clusters automated
- Reverse index lookup
  - Used as a review tool, essential for discovering all possible clinical concepts contained in a code

# New Issues Identified

## **ICD-10-CM codes that include a CC/MCC**

- Certain ICD-10-CM Diagnosis Codes specify both an underlying condition and an acute manifestation or complication in one code
- Translated to ICD-9-CM, two codes are needed – one for the underlying condition and one for the acute manifestation or complication

# New Issues Identified

## ICD-10-CM codes that include a CC/MCC

### Example:

- “R65.21 Severe sepsis with septic shock”

Translates to:

- “995.92 Severe sepsis”

PLUS

- “785.52 Septic shock”

# New Issues Resolved

## **ICD-10-CM codes that include a CC/MCC**

- When an ICD-10-CM combination Diagnosis Code would be its own CC/MCC in the MS-DRGs if it had been coded in ICD-9-CM, this result was replicated in the ICD-10-CM based version of MS-DRGs
- The DRG assignment logic will be modified to assign all ICD-10-CM codes that meet these criteria to the appropriate “with CC” or “with MCC” MS-DRG in a category

# New Issues Resolved

## ICD-10-CM codes that include a CC/MCC

### Example:

- When “415.19 Other pulmonary embolism and infarction” is the principal diagnosis and “415.0 Acute cor pulmonale” is a secondary diagnosis, “415.0” will be an MCC in the MS-DRGs
- Therefore, when “I26.09 Other pulmonary embolism with acute cor pulmonale” is the principal diagnosis, the MS-DRG assignment logic will be modified to assign it to the appropriate “with MCC” MS-DRG based solely on the principal diagnosis of “I26.09”

# Enhancements to the GEMs

## **ICD-10-CM subsequent encounter injury and poisoning codes**

- 2009 version of the ICD-10-CM guidelines published in January 2009
- Rule 19a clarified that the subsequent encounter ICD-10-CM codes are to be used as aftercare and therefore should be translated to the “V” codes in ICD-9-CM

# Enhancements to the GEMs

## ICD-10-CM subsequent encounter injury and poisoning

### Example:

#### 2009 GEMs

- “S51.011D Laceration without foreign body of right elbow, subsequent encounter”

Translates to:

- “881.01 Open wound of elbow, without mention of complication”

#### 2010 GEMs

- “S51.011D Laceration without foreign body of right elbow, subsequent encounter”

Translates to:

- “V58.89 Other specified aftercare”



# MCC and CC Lists Converted

- Conversion of lists 99.4% straightforward with Stage 2 process improvements
- 99 ICD-10-CM list conflicts in the entire MCC/CC category
  - All resolved, the majority using Medicare Provider Analysis and Review (MedPAR) frequency data

# MCC and CC Lists Converted

## **MCC list:**

- 1,592 codes in the ICD-9-CM based version
- Replaced by 3,152 codes in the ICD-10-CM based version

## **CC list:**

- 3,427 codes in the ICD-9-CM based version
- Replaced by 13,594 codes in the ICD-10-CM based version

# MCC List Examples

## **Straightforward Example: Heart failure codes in the MCC list**

- “428.21 Acute systolic heart failure”

Replaced by:

- “I50.21 Acute systolic (congestive) heart failure” on the MCC list
- “428.23 Acute on chronic systolic heart failure”
- Replaced by:
- “I50.23 Acute on chronic systolic (congestive) heart failure” on the MCC list

# MCC and CC Examples

## List Conflict Example: Bacteremia

### “R78.81 Bacteremia Includes: Septicemia NOS”

TRANSLATES TO BOTH:

- “038.9 Unspecified septicemia”
  - Assigned to MCC list
  - 567,036 records in fiscal year (FY) 2007 MedPAR data

AND

- “790.7 Bacteremia”
  - Assigned to CC list
  - 104,815 records in FY 2007 MedPAR data

### **Conflict resolution:**

“R78.81 Bacteremia” is assigned to the MCC list, based on the higher frequency data

# Cardiovascular MS-DRGs

- Conversion of most lists straightforward
  - Heart failure and shock
  - Peripheral Vascular Disorders
  - Angina Pectoris
  - Coronary artery bypass
  - Percutaneous Cardiovascular procedures
  - And others

# Cardiovascular MS-DRG Example

- “MS-DRGs 231 - 236 Coronary Artery Bypass”
  - 9 ICD-9-CM codes replaced by 232 ICD-10-PCS codes, no issues

## **Example:**

- “36.11 Aortocoronary bypass of one coronary artery”

Replaced by:

- “0210[04][9AJK]W Bypass Coronary Artery, One Site to Aorta” (8 codes)

# Cardiovascular MS-DRGs

## Issues Resolved

### **Coronary atherosclerosis codes that specify angina**

- 8 ICD-10-CM coronary atherosclerosis codes are combination codes
- Specify both the underlying diagnosis of atherosclerosis and the current exacerbation of unstable angina
- Coded as the principal diagnosis, the MS-DRG logic will be modified to assign the coronary atherosclerosis with angina codes to the appropriate “with MCC/CC” MS-DRG, even if there are no secondary diagnoses recorded

# Cardiovascular MS-DRGs

## Issues Resolved

### Coronary atherosclerosis codes that specify angina

#### Example:

- “I25.710 Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris

Translates to:

- “414.02 Coronary atherosclerosis of autologous vein bypass graft”

PLUS

- “411.1 Intermediate coronary syndrome”
- Therefore, when “I25.710” is the principal diagnosis, the MS-DRG assignment logic will be modified to assign it to the appropriate “with CC” MS-DRG



# Cardiovascular MS-DRGs

## Issues Resolved

### **Myocardial Infarction (MI) code differences**

- In ICD-9-CM, MI codes specify information about patient encounter
  - Initial episode of care (MS-DRGs 280 - 285 Myocardial Infarction)
  - Subsequent episode of care within eight weeks of acute MI (MS-DRGs 314 - 316 Other Circulatory System Diagnoses)
  - Unspecified episode of care (MS-DRGs 314 - 316 Other Circulatory System Diagnoses)

# Cardiovascular MS-DRGs

## Issues Resolved

### **MI code differences**

- In ICD-10-CM, such information about encounter has been removed from the classification
- ICD-9-CM codes specifying subsequent or unspecified encounter for care of MI are not explicitly replicated in the ICD-10-CM based version of MS-DRGs
  - Frequency data comparatively low, expected to have minimal impact

# Cardiovascular MS-DRGs

## Issues Resolved

### **MI code differences**

### **Example: Replicated in ICD-10 based MS-DRGs**

MS-DRGs 280 - 285 Myocardial Infarction

- “410.71 Subendocardial infarction, initial episode of care”
  - 504,776 MedPAR records (FY 2007)

Replaced by:

- “I21.4 Non-ST elevation (NSTEMI) myocardial infarction”

# Cardiovascular MS-DRGs

## Issues Resolved

### **Not Replicated in ICD-10 based MS-DRGs**

MS-DRGs 314 - 316 Other Circulatory System Diagnoses

- Codes are not replaced in the ICD-10 based MS-DRGs
  - Frequency data comparatively low, expected to have minimal impact
- 410.70 Subendocardial infarction, episode of care unspecified
  - 1,118 MedPAR records (FY 2007)
- 410.72 Subendocardial infarction, subsequent episode of care
  - 16,409 MedPAR records (FY 2007)

# Cardiovascular MS-DRGs

## Issues Resolved

### **ICD-10-PCS clusters for device replacement**

- Several areas in the cardiovascular system MS-DRGs require ICD-10-PCS clusters in order to fully replicate MS-DRG assignment logic

# Cardiovascular MS-DRGs

## Issues Resolved

**Example: ICD-10-PCS clusters necessary to replicate cardiac defibrillator MS-DRGs**

ICD-10-PCS Code(s)	ICD-9-CM Code	Mutually Exclusive MS-DRG in MDC 05
0JH60P5 Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach <b>And</b> 02HL3MZ Insertion of Electrode into Left Ventricle, Percutaneous Approach	00.51 Implantation Of Cardiac Resynchronization Defibrillator, Total System [CRT-D]	Cardiac Defibrillator Implant (MS-DRG 222 - 227)
0JH60P5 Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach	00.54 Implantation Or Replacement Of Cardiac Resynchronization Defibrillator Pulse Generator Only [CRT-D]	AICD Generator Procedures (MS-DRG 245) (MS-DRGs version 26.0)
02HL3MZ Insertion of Electrode into Left Ventricle, Percutaneous Approach	37.76 Replacement Of Transvenous Atrial And/Or Ventricular Lead(s) [Electrode]	Revision of Lead/pacemaker (MS-DRG 260 - 262)

# Musculoskeletal System MS-DRGs

- Conversion of most lists straightforward
  - Fractures of Femur
  - Osteomyelitis
  - Medical Back Problems
  - Major Joint Replacement
  - Cervical Spinal Fusion
  - Knee Procedures
  - And others

# Musculoskeletal System

## MS-DRG Example

- “MS-DRGs 533 - 534 Fractures of Femur”
  - 14 ICD-9-CM codes replaced by 273 ICD-10-CM codes, no issues

### **Example:**

- “821.01 Fracture of shaft of femur, closed”
  - Replaced by:
- “S723\*\*A Fracture of shaft of femur, initial encounter for closed fracture (36 codes)



# Musculoskeletal System

## MS-DRGs Issues Resolved

### **Replicating wound debridement**

- ICD-10-PCS codes do not contain diagnosis information
- MS-DRGs assignment logic differentiates between Procedure Codes for excisional wound debridement (MS-DRGs 463 - 465) and other codes for excision of soft tissue (MS-DRGs 500 - 502)
  - This diagnostic distinction not made in ICD-10-PCS codes

# Musculoskeletal System

## MS-DRGs Issues Resolved

### **Replicating wound debridement**

- The frequency data for the wound debridement procedure is overwhelmingly dominant compared to other Procedure Codes for excision of soft tissue
  - Therefore, ICD-10-PCS codes for excision of soft tissue are assigned to MS-DRGs “463 - 465 Wound Debridement...”

# Musculoskeletal System

## MS-DRGs Issues Resolved

### Replicating wound debridement

#### Examples:

- “0HBKXZZ Excision of Right Lower Leg Skin, External Approach”  
Assigned to:
  - MS-DRGs “463 - 465 Wound Debridement and Skin Graft Except Hand, for Musculoskeletal and Connective Tissue Disorders”
  - Decision supported by frequency data

# Musculoskeletal System

## MS-DRGs Issues Resolved

### Replicating wound debridement

#### Examples:

- “0JBN0ZZ Excision of Right Lower Leg Subcutaneous Tissue and Fascia, Open Approach”

Assigned to:

- MS-DRGs “463 - 465 Wound Debridement and Skin Graft Except Hand, for Musculoskeletal and Connective Tissue Disorders”
- Decision supported by frequency data

# Musculoskeletal System

## MS-DRGs Issues Resolved

### **ICD-10-PCS clusters for hip and knee revision**

- Several areas in the musculoskeletal system MS-DRGs require ICD-10-PCS clusters in order to fully replicate MS-DRG assignment logic

# Musculoskeletal System

## MS-DRGs Issues Resolved

**Example: ICD-10-PCS clusters necessary to replicate MS-DRGs 466 - 468**

ICD-10-PCS Code(s)	ICD-9-CM Code	Mutually Exclusive MS-DRG in MDC 08
0SR90J5 Replacement of Right Hip Joint with Synthetic Substitute, Metal on Polyethylene, Open Approach <b>And</b> 0SP90JZ Removal of Synthetic Substitute from Right Hip Joint, Open Approach	00.70 Revision of hip replacement, both acetabular and femoral components]	Revision of Hip or Knee Replacement (MS-DRG 466 - 468)
0SR90J5 Replacement of Right Hip Joint with Synthetic Substitute, Metal on Polyethylene, Open Approach	81.51 Total Hip Replacement	Major Joint Replacement or Reattachment of Lower Extremity (MS-DRG 469 - 470)
0SP90JZ Removal of Synthetic Substitute from Right Hip Joint, Open Approach	80.05 Arthrotomy For Removal Of Prosthesis Of Hip	Hip and Femur Procedures Except Major Joint (MS-DRG 480 - 482)

# Undertaking Similar Conversion Projects – Basic Steps

1. Find the lists of ICD-9-CM codes in an application
2. Using the ICD-10-CM/PCS to ICD-9-CM GEMs in reverse lookup, find the translation of each ICD-9-CM code on a list

# Undertaking Similar Conversion Projects – Basic Steps

3. Using the translations found in the previous step, replace the ICD-9-CM based lists with lists of their ICD-10-CM/PCS code counterparts
4. Identify and resolve ICD-10-CM/PCS list conflicts in an application



# Undertaking Similar Conversion Projects – Basic Steps

5. Resolve list conflicts by choosing which list the ICD-10-CM/PCS code will be assigned to in the converted application
6. Identify general ICD-9-CM Procedure Codes that lead to inappropriate list assignment and tailor the list assignment accordingly
7. Identify ICD-10-CM/PCS clusters that are necessary to fully replicate application logic

# Undertaking Similar Conversion Projects – Basic Steps

8. Perform final review of translated ICD-10-CM/PCS and ICD-9-CM lists to identify any additional issues specific to the requirements of the application (e.g., the ICD-10-CM coronary atherosclerosis with angina codes are assigned to the appropriate “with MCC/CC” MS-DRG, even if there are no secondary diagnoses recorded)
9. Create an ICD-10-CM/PCS based copy of the application by replacing the ICD-9-CM lists in the application with the final translated ICD-10-CM/PCS lists

# Resources

- MS-DRG Conversion Report  
<http://www.cms.hhs.gov/ICD10/Downloads/MsdrgConversion.pdf>
- ICD-10 General Information  
<http://www.cms.hhs.gov/ICD10>
- ICD-10 Educational Resources  
[http://www.cms.hhs.gov/ICD10/05\\_Educational\\_Resources.asp](http://www.cms.hhs.gov/ICD10/05_Educational_Resources.asp)
- ICD-10 2009 Sponsored Calls  
[http://www.cms.hhs.gov/ICD10/06a\\_2009\\_CMS\\_Sponsored\\_Calls.asp](http://www.cms.hhs.gov/ICD10/06a_2009_CMS_Sponsored_Calls.asp)
- HIMSS (Health Information and Management Systems Society)  
Offers providers and others ICD-10 resources  
<http://www.himss.org/icd10>

## ICD-9 Notice

The International Classification of Diseases, 9<sup>th</sup> Edition, Clinical Modification (ICD-9-CM) is published by the United States Government. A CD-ROM, which may be purchased through the Government Printing Office, is the only official Federal government version of the ICD-9-CM. ICD-9-CM is an official Health Insurance Portability and Accountability Act standard.