

ICD-10-CM/PCS MS-DRG Conversion Project

ICD-9-CM Coordination & Maintenance Committee
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Pat Brooks, RHIA
Senior Technical Advisor
Hospital and Ambulatory Policy Group
Center for Medicare Management
Centers for Medicare & Medicaid Services
(CMS)

Patricia.brooks2@cms.hhs.gov

ICD-10 Final Rule

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- 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 (AHA), American Health Information Management Association (AHIMA), and Centers for Disease Control and Prevention (CDC) (Cooperating Parties)

http://www.cms.hhs.gov/ICD10/05_Educational_Resources.asp

http://www.cms.hhs.gov/ICD10/07_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 (GEMs)
 - 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 conversion process
 - **Converting MS-DRGs 26.0 to ICD-10-CM and ICD-10-PCS**
 - posted at http://www.cms.hhs.gov/ICD9ProviderDiagnosticCodes/03_meetings.asp#TopOfPage
 - Overview on information included in this paper will be provided today

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 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

A00*	Cholera (3 codes)
A020	Salmonella enteritis
A03*	Shigellosis (6 codes)
A04*	Other bacterial intestinal infections (10 codes)
A050	Foodborne staphylococcal intoxication
A052	Foodborne Clostridium perfringens [Clostridium welchii] intoxication
A053	Foodborne Vibrio parahaemolyticus intoxication
A054	Foodborne Bacillus cereus intoxication
A055	Foodborne Vibrio vulnificus intoxication
A058	Other specified bacterial foodborne intoxications
A059	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
DRG38 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%

- The GEMs produce 95% of the MDC 6 mapping without any need for review
- The remaining 5% is 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 the 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

List Conflict Example: Other specified rheumatic heart diseases

- “I09.89 Other specified rheumatic heart diseases
Includes: Rheumatic diseases of pulmonary valve”

TRANSLATES TO BOTH

- “398.99 Other rheumatic heart diseases”
 - MS-DRGs 314-316 Other Circulatory System Diagnoses
- AND
- “397.1 Rheumatic diseases of pulmonary valve”
 - MS-DRGs 306-307 Cardiac Congenital and Valvular Disorders

Conflict resolution:

- 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

Use of GEMs to Convert Payment System

- Discussed progress at C & M meetings
- Work completed to date has been posted
- Planned to complete ICD-10 MS-DRG conversion by October 2009
- Will post ICD-10 Definitions Manual by end of 2009
- Final ICD-10 MS-DRG logic subject to rulemaking

http://www.cms.hhs.gov/ICD10/01m_2009_ICD10PCS.asp

Findings to Date

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

Stage 2 – Completion of Project

- 3M staff will be describing the completion of the MS-DRG conversion
- Issues to be discussed will 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
 - MCC and CC conversions
 - Cardiovascular MS-DRGs
 - Musculoskeletal system MS-DRGs
- General advice for undertaking a similar project

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

Janice Bonazelli, 3M

Rhonda Butler, 3M

Stage 2 - General Approach

- Began in summer 2008 when test conversion and review of MDC 6 was completed
- Additional clinical coding experts added to conversion team to assist with review

Stage 2 - General Approach

- Conversion process developed and refined during MDC 6, applied to the remaining MDCs
 - MS-DRGs are 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

Staff Utilized

- Team members include key participants in
 - Original DRG development project at Yale University in the 1970's
 - Design, development and current maintenance of
 - MS-DRGs
 - GEMs
 - ICD-10-PCS

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

Refinement of Methods

- Rule-based decisions made for some categories or lists
 - Example: ICD-10 clusters are not included in the MCC/CC list

Automation and Process Efficiencies Added

- General ICD-9-CM procedure codes
 - Table developed containing 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 “995.92 Severe sepsis” is the principal diagnosis, and “785.82 Septic shock” is a secondary diagnosis, “785.82” will be an MCC in the MS-DRGs
- Therefore, when “R65.21 Severe sepsis with septic shock” 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 “R65.21”

Enhancements to the GEMs

- ICD-10-CM injury and poisoning codes specifying subsequent encounter
- Translation rules for obstetrics codes

Enhancements to the GEMs

ICD-10-CM subsequent encounter injury and poisoning codes

- 2009 version of the ICD-10-CM guidelines published in January
- 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”

Enhancements to the GEMs

Translation rules for obstetrics diagnosis codes

- Initial rules for translation developed by CDC to manage the explosion of translation alternatives, while correct, were too restrictive
- Rules modified to allow more “real world” translation alternatives for obstetrics diagnosis code entries in the GEMs

Enhancements to the GEMs

Translation rules for obstetrics diagnosis codes

Example:

2009 GEMs

- “O15.03 Eclampsia in pregnancy, third trimester”
Translates to
 - “642.63 Eclampsia, antepartum”

2010 GEMs

- “O15.03 Eclampsia in pregnancy, third trimester”
Translates to
 - “642.63 Eclampsia, antepartum”
 - OR
 - “642.61 Eclampsia, with delivery”

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 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 MCC list

- “428.21 Acute systolic heart failure”
Is replaced by
 - “I50.21 Acute systolic (congestive) heart failure”
On the MCC list
- “428.23 Acute on chronic systolic heart failure”
Is 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 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”

Is 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 code differences

- In ICD-9-CM, myocardial infarction 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

Myocardial Infarction 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

Myocardial Infarction 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 (FY2007)

Is 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

- These 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 (FY2007)
- 410.72 Subendocardial infarction, subsequent episode of care
 - 16,409 MedPAR records (FY2007)

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 And 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”
Is 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”
 - Is 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”
 - Is 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 And 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
- 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

Undertaking Similar Conversion Projects—Basic Steps

- 4. Identify and resolve ICD-10-CM/PCS list conflicts in an application
- 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

Undertaking Similar Conversion Projects—Basic Steps

- 7. Identify ICD-10-CM/PCS clusters that are necessary to fully replicate application logic
- 8. Perform final review of translated lists ICD-10-CM/PCS and ICD-9-CM, 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

Undertaking Similar Conversion Projects—Staff Needed

- Computer programmers or other technical personnel
 - Needed to perform steps 1-3 and step 9
 - Must understand the program logic in the application or be able to get information from the software engineers who maintain the application
 - Could also write programs to partially automate translation, produce efficient display of translation results, and add efficiencies to other steps in the conversion process

Undertaking Similar Conversion Projects—Staff Needed

- Clinical coding and data analysts
 - Needed for steps 4-8
 - Must be able to evaluate the completeness and accuracy of the translation results for an application
 - Ideally, a team composed of personnel with clinical coding expertise, data analysis expertise, and detailed knowledge of the practical use of the application

Undertaking Similar Conversion Projects—Staff Needed

- Clinicians
 - Consulted as needed for steps 4-8
 - Input in resolving issues such as ICD-10-CM/PCS list conflicts
 - Needed to validate the clinical equivalence of the translated lists
 - Ideally, are familiar with both ICD-9-CM and ICD-10-CM/PCS codes

Undertaking Similar Conversion Projects—Process Efficiencies

- Step 1: Finding and classifying lists
 - Can be made more efficient by writing programs to analyze the original application
- Step 2: The lookup of lists
 - Can be made more efficient by writing programs to search the content of the ICD-10-CM/PCS to ICD-9-CM GEMs for the relevant entries
- Step 3: The initial population of lists with ICD-10-CM/PCS codes
 - Can be made more efficient by writing programs to return the results of the ICD-10-CM/PCS reverse lookup

Undertaking Similar Conversion Projects—Process Efficiencies

- Step 4: The identification of ICD-10-CM/PCS list conflicts
 - Can be made more efficient by writing programs to look for each ICD-10-CM/PCS code assigned to more than one list in a mutually exclusive category
- Step 5: Resolving list conflicts
 - Can be made more efficient by using rules to resolve conflicts based on frequency, price or correlation with other reference data

Undertaking Similar Conversion Projects—Process Efficiencies

- Step 6: Tailoring list assignment for general ICD-9-CM procedure codes
 - Can be made more efficient by writing programs to correlate a procedure code with the body system(s) of a specific category or list in the application
- Step 7: Finding ICD-10-CM/PCS clusters
 - Can be made more efficient by writing programs to identify which lists require ICD-10-CM/PCS clusters to fully replicate application logic

ICD-10-PCS Update

New Procedures

- New values to replicate FY 2010 new procedure codes
- **Examples:**
 - Cardiac Contractility Modulation (CCM) device
 - Laser Interstitial Thermal Therapy (LITT)
 - Endovascular bioactive coils

ICD-10-PCS Update Index Redesign

- Migrated to database for better control of production and maintenance
- New architecture will support:
 - A complete and accurate reflection of all PCS Table values useful as lookup terms
 - Additional clinical terms that uncontroversially correspond to a PCS value or values

ICD-10-PCS Update

Index Redesign Examples

- **PCS Table values**

Excision

Subcutaneous Tissue

Abdomen

Open

Diagnostic 0JB80ZX

No Qualifier 0JB80ZZ

Percutaneous

Diagnostic 0JB83ZX

No Qualifier 0JB83ZZ

- **Additional clinical terms**

Ablation see Destruction

Cystocele Repair see Repair, Subcutaneous Tissue and Fascia,
Pelvic Region 0JQ****

ICD-10-PCS Update Index Redesign

- All Part Body Key entries will be added to the index as lookup terms
- Examples:

Aryepiglottic fold	see Larynx
Broad ligament	see Uterine Supporting Structure
Submandibular Nerve	see Trigeminal Nerve

Resources

- MS-DRG Conversion Report
- This slide presentation

- Both posted on CMS website
 - http://www.cms.hhs.gov/ICD9ProviderDiagnosticCodes/03_meetings.asp#TopOfPage