

# MS-DRG Grouping

Rev 02282019

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# Introduction

Diagnosis-related group (DRG) is a system to classify hospital cases into one of approximately 500 groups, also referred to as DRGs, expected to have similar hospital resource use. They have been used in the United States since 1983. There is more than one DRG system being used in the United States, but only the MS-DRG (CMS-DRG) system is used by Medicare. Our system uses the MS-DRG system as it relates to the Medicare Inpatient Prospective Payment System (IPPS).

DRG *Grouping* is the method used to assign a DRG based on the diagnoses made and procedures performed for a particular patient's case. It takes into account the principal diagnosis, any secondary diagnoses that may act as complications, as well as the procedures (either surgical or non-surgical). In some cases, gender and discharge status are also required to group a case into a DRG. Only one DRG is assigned for each case, so Grouping finds all applicable DRGs and assigns the highest severity DRG that applies.

## What you'll need

In order to group a case into a DRG, you'll need:

- The principal diagnosis
- Any secondary diagnoses
- All procedures performed
- Patient gender (not always needed)
- Patient discharge status (not always needed)

## How it works

The main flow of DRG Grouping is as follows:

1. Find the Major Diagnostic Category (MDC) for the case
  - (a) Verify if the case procedure requirements are to be assigned to the PRE MDC
  - (b) If not, find the MDC based on the principal diagnosis – with top priority going first to MDCs 24 (Multiple Significant Trauma), then 25 (HIV)
2. Find out whether or not any Operating Room (OR) procedures were performed.
3. Find the applicable DRG from the MDC
  - (a) If OR procedures were performed,
    - i. go down the list of Surgical DRGs in the MDC and find which DRGs apply.
  - (b) If OR procedures were not performed
    - i. go down the list of Medical DRGs in the MDC and find which DRGs apply.
  - (c) If the DRGs make a distinction based on complications, check the secondary diagnoses to see if any qualify as Complications/Comorbidities (CC) or Major Complications/Comorbidities (MCC)
  - (d) If a secondary diagnosis *does* qualify as a CC or MCC, check the exclusion lists to ensure it is not excluded by the principal diagnosis.

# Step-by-Step Walk-through

DRGs are grouped into Medicare Severity Diagnosis Related Groups and have 25 groups. These include PRE-MDCs, Unrelated Operating Room Procedures, and Invalid and Ungroupable DRGs. See a sample below.

## Medicare Severity Diagnosis Related Group

ICD-10 MS-DRG v36.0 (2019)

Code(s)	Description
-	-/+ Deleted, Replaced, Expanded Codes
001 - 017	PRE-MDC
020 - 103	MDC 01: DISEASES & DISORDERS OF THE NERVOUS SYSTEM
113 - 125	MDC 02: DISEASES & DISORDERS OF THE EYE
129 - 159	MDC 03: DISEASES & DISORDERS OF THE EAR, NOSE, MOUTH & THROAT
163 - 208	MDC 04: DISEASES & DISORDERS OF THE RESPIRATORY SYSTEM
215 - 316	MDC 05: DISEASES & DISORDERS OF THE CIRCULATORY SYSTEM
326 - 395	MDC 06: DISEASES & DISORDERS OF THE DIGESTIVE SYSTEM

### ***Step 1: Find the Major Diagnostic Category (MDC) for the case***

This used to be straight-forward and you could look up the right MDC just according to the principal diagnosis – but then some exceptions were added that made it a little more roundabout.

#### **PRE-MDC – Resource-Intensive Procedures**

Several resource-intensive procedures are put into a separate group before MDC assignment. These are called PRE-MDCs and are based on the procedure rather than the diagnosis. For example, *tracheostomies*, as well as the transplant of the *heart, liver, lung, pancreas, or bone marrow*, will categorize the case into the PRE-MDC, regardless of the principal/secondary diagnoses.

## Medicare Severity Diagnosis Related Group

ICD-10 MS-DRG v36.0 (2019)

### PRE-MDC

#### ⊕ ICD10CM Code Assignment

#### Surgical DRGs

001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC
002	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC
003	ECMO OR TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.
004	TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.

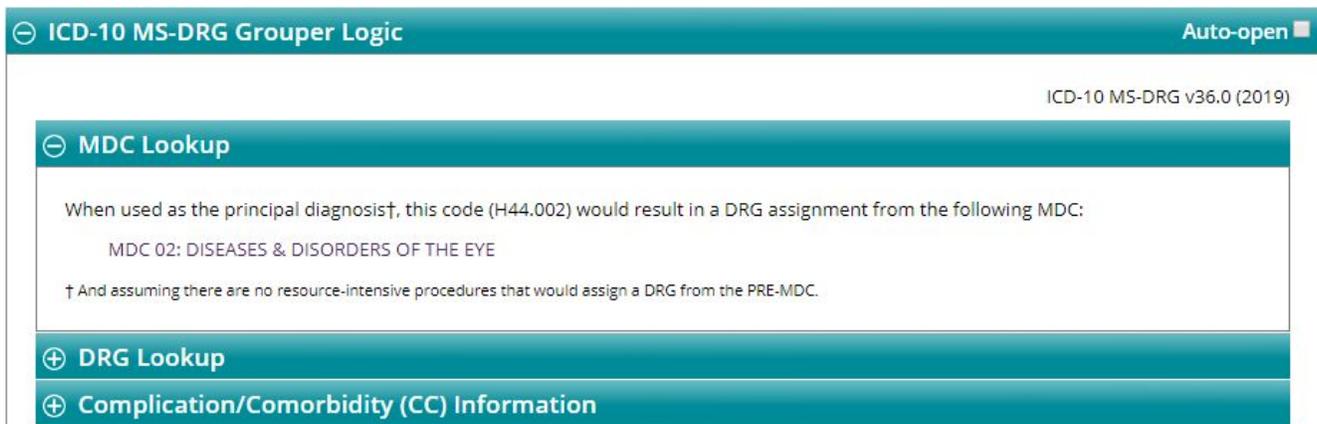
**Tip:** If conditions for the assignment to the PRE-MCD are met, PRE-MCD takes precedence over MCD's 1-25.

If the case did qualify for PRE-MDC, move on to step 2.

### Normal MDC Lookup

If the procedures didn't qualify for a DRG from the PRE-MDC, then it will be assigned one from a numbered DRG: 1 through 25.

Go to the code page for your principal diagnosis, open the “DRG Grouper Logic” section, and pop open “MDC Lookup”. It will list at least one MDC here, although occasionally more. If you only see one, congrats! You've found your MDC – move on to Step 2. If there are multiple, you'll need to check to see which you qualify for.



The screenshot shows a web interface titled "ICD-10 MS-DRG Grouper Logic" with an "Auto-open" button. The version is "ICD-10 MS-DRG v36.0 (2019)". The "MDC Lookup" section is expanded, showing the text: "When used as the principal diagnosis†, this code (H44.002) would result in a DRG assignment from the following MDC: MDC 02: DISEASES & DISORDERS OF THE EYE". A footnote states: "† And assuming there are no resource-intensive procedures that would assign a DRG from the PRE-MDC." Below this are two collapsed sections: "DRG Lookup" and "Complication/Comorbidity (CC) Information".

Assignment to the following DRGs is based on more than the principal diagnosis.

### MDC 24 – Multiple Significant Trauma (MST)

Assignment to MDC 24 is based on a principal diagnosis of significant trauma and at least two significant trauma diagnoses from *different* site categories (Chest, abdomen, kidney, urinary system, pelvis/spine, upper limb, lower limb, head).

**Tip:** If the principal diagnosis designated to a DRG should be selected from this MDC, *AND* an O.R. (Operating Room) procedure was performed but does not match the Surgical DRGs listed above, see the [Unrelated Operating Room Procedures DRGs](#).

You can check MDC 24 to see lists of the diagnoses that qualify as significant trauma in each area, or you can also look in the “MDC Lookup” section under “DRG Grouper Logic” on an ICD-10-CM or ICD-9 code page to see if one of your diagnosis qualifies as a significant trauma.

**Remember:** In order to qualify for MDC 24, you need two significant traumas from different body site categories.

MDC 24: MULTIPLE SIGNIFICANT TRAUMA

⊖ ICD10CM Code Assignment

Assignment to MDC 24 is based on a principal diagnosis of significant trauma and at least two significant trauma diagnoses of different body site categories.

If conditions for assignment to MDC 24 are met, MDC 24 takes precedence over MDCs 1-23 and 25.

- ⊕ SIGNIFICANT HEAD TRAUMA
- ⊕ SIGNIFICANT CHEST TRAUMA
- ⊕ SIGNIFICANT ABDOMINAL TRAUMA
- ⊕ SIGNIFICANT TRAUMA OF KIDNEY
- ⊕ SIGNIFICANT TRAUMA OF URINARY SYSTEM
- ⊕ SIGNIFICANT TRAUMA OF PELVIS OR SPINE
- ⊕ SIGNIFICANT TRAUMA OF THE UPPER LIMB
- ⊕ SIGNIFICANT TRAUMA OF THE LOWER LIMB

Close Section

### **MDC 25 – Human Immunodeficiency Virus Infections (HIV)**

Assignment to MDC 25 is based on either a principal diagnosis of HIV infection or a principle diagnosis of a significant HIV-related condition and a secondary diagnosis of HIV infection.

**Tip:** If conditions for assignment to MDC 25 are met, MDC 25 takes precedence over MDCs 1-23

- If HIV was present, check the “ICD-10-CM or ICD-9 Code Assignment section at MDC 25 to see if the case qualifies for MDC 25. If so, move on to Step 2.

**MDC 25: HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS**

⊖ ICD10CM Code Assignment

Assignment to MDC 25 is based on either a principal diagnosis of HIV Infection or a principle diagnosis of a significant HIV-related condition and a secondary diagnosis of HIV Infection.

If conditions for assignment to MDC 25 are met, MDC 25 takes precedence over MDCs 1-23.

⊖ HIV Infection

B20 Human immunodeficiency virus [HIV] disease

⊕ Significant HIV-related condition

Close Section

### MDC 12,13: Diseases & Disorders of Male/Female Reproductive System

If both MDC 12 and 13 show up, simply choose the MDC that matches the patient's gender – 12 for Male, 13 for female. For Example, A18.14 Tuberculosis of prostate.

⊖ ICD-10 MS-DRG Grouper Logic Auto-open

ICD-10 MS-DRG v36.0 (2019)

⊖ MDC Lookup

When used as the principal diagnosis†, this code (A18.14) would result in a DRG assignment from one of the following MDCs:

MDC 12: DISEASES & DISORDERS OF THE MALE REPRODUCTIVE SYSTEM  
MDC 25: HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS

† And assuming there are no resource-intensive procedures that would assign a DRG from the PRE-MDC.

⊕ DRG Lookup

⊕ Complication/Comorbidity (CC) Information

### ***Step 2: Find out if any Operating Room (O.R.) procedures were performed***

After finding an MDC, the next step is to find out if you're looking at the Surgical DRGs or Non-Surgical ones.

To do this, look at the code pages for each of the procedures performed and pop open the “DRG Grouper Logic” section.

Then look at the O.R. Status. Only one O.R. procedure is needed to qualify for a Surgical DRG instead of a Non-Surgical one.

For example, **02B60ZZ** - Excision of Right Atrium, Open Approach Approach *does* qualify as an O.R. Procedure:

ICD-10 MS-DRG Grouper Logic Auto-open

ICD-10 MS-DRG v36.0 (2019)

O.R. Status: This code (02B60ZZ) DOES qualify as an Operating Room procedure

[+ DRG Lookup](#)

But **10Y07ZM** - Transplantation of Gastrointestinal System into Products of Conception, *does not*:

ICD-10 MS-DRG Grouper Logic Auto-open

ICD-10 MS-DRG v36.0 (2019)

O.R. Status: This code (10Y07ZM) does NOT qualify as an Operating Room procedure.

[+ DRG Lookup](#)

### Step 3: Find the applicable DRG from the MDC

Return to the MDC that you found in step 1. Find the list of “Surgical DRGs” or “Medical DRGs”, according to the result of step 2.

#### Medicare Severity Diagnosis Related Group

ICD-10 MS-DRG v36.0 (2019)

#### MDC 04: DISEASES & DISORDERS OF THE RESPIRATORY SYSTEM

##### + ICD10CM Code Assignment

##### Surgical DRGs

- 163 MAJOR CHEST PROCEDURES W MCC
- 164 MAJOR CHEST PROCEDURES W CC
- 165 MAJOR CHEST PROCEDURES W/O CC/MCC
  
- 166 OTHER RESP SYSTEM O.R. PROCEDURES W MCC
- 167 OTHER RESP SYSTEM O.R. PROCEDURES W CC
- 168 OTHER RESP SYSTEM O.R. PROCEDURES W/O CC/MCC

Note: If the Principal Diagnosis designated a DRG should be selected from this MDC, AND an O.R. (Operating Room) procedure was performed but does not match the Surgical DRGs listed above, see the Unrelated Operating Room Procedures DRGs.

##### Medical DRGs

- 207 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT >96 HOURS OR PERIPHERAL EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)
- 208 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <=96 HOURS
  
- 175 PULMONARY EMBOLISM W MCC
- 176 PULMONARY EMBOLISM W/O MCC

Go down the list of DRGs and find the first that applies to your case. You may be able to rule out the DRGs simply by the DRG's title (for example, if you know it was a Medical DRG from MDC 04, and

there was not Ventilator Support, then you can skip over DRGs 207 & 208. Otherwise, click on a DRG to see the logic table for the DRG.

### DRG Logic Tables

In a logic table, each column represents a condition, until the final column, which lists the resultant DRG if the conditions are met. For example, look at DRG 656 - KIDNEY & URETER PROCEDURES FOR NEOPLASM W MCC,

see the Figure below showing the logic table for DRGs 656-661

**Tip:** To qualify for the DRG all of the conditions must be met on the line.  
(See the DRG on the right of the DRG Logics table that applies to each section.)

ICD-9 MS-DRG Grouper Logic					Auto-open
ICD-10 MS-DRG Grouper Logic					Auto-open
ICD-10 MS-DRG v36.0 (2019)					
Use the following table to find the applicable DRG to your situation.					
Kidney and Ureter Procedures	Neoplasm	MCC	CC	DRG	
Yes	Yes	Yes		656	
Yes	Yes	No	Yes	657	
Yes	Yes	No	No	658	
Yes	No	Yes		659	
Yes	No	No	Yes	660	
Yes	No	No	No	661	
Kidney and Ureter Procedures					
Neoplasm					

The first column is “Kidney and Ureter Procedures”, and all the rows list “Yes” for that condition – which means that in order to qualify for DRGs 656-661, you need to have a procedure from the “Kidney and Ureter Procedures” section, conveniently located below the logic table. If the current case does *not* have a procedure from this section, then you need to move on to the next set of DRGs in the MDC. If the current case *does* have a Kidney/Ureter procedure, then you need to see which of the other conditions the case satisfies. In this case, a Neoplasm diagnosis causes assignment 656-658; absence of neoplasm causes assignment to DRGS 659-661. A very common set of conditions are whether or not complications were present – the CCs/MCCs (covered next).

## Complications and Comorbidities

The cost of treating a patient can vary widely if there are other complications present. DRGs account for this by often making a designation between cases that have complications and those that don't; this is done by categorizing these complicating secondary diagnoses into “Complications and Comorbidities” (CCs), and “Major Complications and Comorbidities” (MCCs).

To tell if a secondary diagnosis acts as a CC/MCC – simply go to each codes' page and look in the “DRG Grouper Logic” section, under “Complication/Comorbidity (CC) Information”.

Here is the CC info section for ICD10-CM code A00.0 (Cholera):

ICD-10 MS-DRG Grouper Logic Auto-open

ICD-10 MS-DRG v36.0 (2019)

- ⊕ MDC Lookup
- ⊕ DRG Lookup
- ⊖ **Complication/Comorbidity (CC) Information**

CC/MCC Status: CC

When used as a *secondary diagnosis*, this code (A00.0) DOES create a Complication/Comorbidity (CC) - *IF* the principal diagnosis does *not* appear in the 'Principal Diagnosis Exclusions' list below (otherwise it is treated as a non-CC).

Principal Diagnosis Exclusions (for A00.0 as Secondary Diagnosis)

When used as a *secondary diagnosis* with one of the following principal diagnosis codes, this code (A00.0) does NOT create a CC or MCC (is excluded):

A00.0	Cholera due to <i>Vibrio cholerae</i> 01, biovar cholerae
A00.1	Cholera due to <i>Vibrio cholerae</i> 01, biovar eltor
A00.9	Cholera, unspecified

Secondary Diagnosis Exclusions (for A00.0 as Principal Diagnosis)

When this code (A00.0) is used as a *principal diagnosis*, the following secondary diagnosis codes do NOT create a CC or MCC (are excluded):

A00.0	Cholera due to <i>Vibrio cholerae</i> 01, biovar cholerae
A00.1	Cholera due to <i>Vibrio cholerae</i> 01, biovar eltor
A00.9	Cholera, unspecified
A05.0	Foodborne staphylococcal intoxication
A05.3	Foodborne <i>Vibrio parahaemolyticus</i> intoxication
A05.4	Foodborne <i>Bacillus cereus</i> intoxication
A05.5	Foodborne <i>Vibrio vulnificus</i> intoxication
A05.8	Other specified bacterial foodborne intoxications
A09	Infectious gastroenteritis and colitis, unspecified

The first paragraph shows the CC/MCC status – in this case, a secondary diagnosis of Cholera *does* act as a complication (CC). However, there are some exceptions, such as when the secondary diagnosis is simply the same as the principal diagnosis or (more likely) when treatment of a secondary diagnosis would be included in treating the principal diagnosis.

Principal Diagnosis Exclusions – this is the paragraph you'll need to check if you're looking at a secondary diagnosis and want to see if it acts as a complication or if it is excluded (contained as part of the principal diagnosis). In this case, the excluded codes are other manifestations of Cholera.

Secondary Diagnosis Exclusions – you can also check the principal diagnosis' code page to see which secondary diagnoses do not act as complications. In this case, if the Principal Diagnosis is Cholera (A00.0), a secondary diagnosis of Staph food poisoning (A05.0) isn't really a complication, and as such is excluded from being a CC.

There can be several secondary diagnoses for a case, and it only takes *one* to cause assignment to a CC or MCC DRG.

### Hospital Acquired Conditions (HACs)

There are also a set of complicating diagnoses that are *not* considered CCs/MCCs if the diagnosis was not present on the patients' admission.

These are for conditions that are easily preventable with proper care - for example, a “Foreign body accidentally left during a procedure” (T81.500A).

The screenshot shows the 'ICD-10 MS-DRG Grouper Logic' interface. The top bar is teal with a minus icon and the text 'ICD-10 MS-DRG Grouper Logic' on the left, and 'Auto-open' with a square icon on the right. Below the bar, the version 'ICD-10 MS-DRG v36.0 (2019)' is displayed. A navigation menu on the left has three items: 'MDC Lookup' (plus icon), 'DRG Lookup' (plus icon), and 'Complication/Comorbidity (CC) Information' (minus icon). The main content area is white and contains the following text:

CC/MCC Status: CC

When used as a *secondary diagnosis*, this code (T81.500A) DOES create a Complication/Comorbidity (CC) IF:

- the condition was present on the patient's admission (NOT hospital-acquired) AND
- the principal diagnosis does *not* appear in the 'Principal Diagnosis Exclusions' list below

otherwise it is treated as a non-CC.

Principal Diagnosis Exclusions (for T81.500A as Secondary Diagnosis)

When used as a *secondary diagnosis* with one of the following principal diagnosis codes, this code (T81.500A) does NOT create a CC or MCC (is excluded):

D78.81	Other intraoperative complications of the spleen
D78.89	Other postprocedural complications of the spleen
E36.8	Other intraoperative complications of endocrine system

If the condition was *not* hospital-acquired (i.e.. the foreign body was present on admission), then such a diagnosis can still act as a complication. Just pay attention to the complication conditions to see whether the complication applies.

## Other Uncommon Conditions

Occasionally, there are conditions that deal with factors other than diagnoses and procedures – such as discharge status (alive vs. expired – see DRGs 280-285).

ICD-10 MS-DRG Grouper Logic Auto-open

ICD-10 MS-DRG v36.0 (2019)

Use the following table to find the applicable DRG to your situation.

<i>Acute Myocardial Infarction</i>	<i>Discharged Alive</i>	<i>MCC</i>	<i>CC</i>	<i>DRG</i>
Yes	Yes	Yes		280
Yes	Yes	No	Yes	281
Yes	Yes	No	No	282
Yes	No	Yes		283
Yes	No	No	Yes	284
Yes	No	No	No	285

⊕ Acute Myocardial Infarction

⊕ Discharged Alive

## Unrelated Operating Room Procedures

In the case that an Operating Room procedure was performed (as outlined in Step 2) but no Surgical DRGs from the MDC match, then an applicable DRG is selected from DRGs 981-989. The same procedure is used, starting at the top of the list and moving down until a DRG matches the case.

## Ungroupable

In the event that no DRG matches the case, or there is not enough information to successfully match on, the Ungroupable DRG (999) is assigned.

# Estimating Payment

After you have found the DRG to be assigned to your case, you can check out the expected payment amount using the “DRG Payment Calculator” section of the DRG page. These payments are based on the DRG relative weight but also adjusted to the cost of living and other area-specific factors, so make sure to update your Client/Fee Schedule information with the proper Hospital Provider Number and CBSA (state/region). Also be sure to specify whether or not your facility qualifies for any quality data reporting initiatives.

⊕ ICD-9 MS-DRG Grouper Logic Auto-open

⊕ ICD-10 MS-DRG Grouper Logic Auto-open

⊖ MS-DRG IPPS Payment Calculator Auto-open

Note: This calculator gives only an estimate of payment. It is not to be relied upon for exact payment. Edit Location Settings

Provider: Unadjusted

Calculations made using full update amounts.

To see provider-specific calculations here, please click Edit Location Settings and enter your Hospital Provider Number/CCN and CBSA.

Total Federal Operating Payment + Total Federal Capital Payment	=	Total Federal Payment
\$58,862.08 + \$4,789.49	=	\$63,651.56

⊕ Total Federal Operating Payment: \$58,862.08

⊕ Total Federal Capital Payment: \$4,789.49

## Payment/Reductions/Transfers

The following information has an impact and affects how hospitals get paid when using DRGs

- Clinical condition and costs related to the average Medicare case.
- Based on Market Conditions for the hospitals location.
- Outlier payments (extreme cost).
- Teaching Residents - payment for Graduate Medical Education (GME) programs that help train residents, (Indirect Medical Education [IME]).
- Operating and capital payment rates are increased for hospitals that treat a disproportionate share of low-income patients, and they receive additional payments for uncompensated care.
- Hospitals certain approved technologies that are new and costly.
- In some cases, payment is reduced when a patient has a short length of stay (LOS).
- Beginning with discharges occurring on and after October 1, 2012, IPPS payments also reflect any applicable adjustments under the Hospital Value-Based Purchasing (VBP) and Hospital Readmissions Reduction Program (HRRP).
- The base payment rate, or standardized amount (a dollar figure), includes a labor-related and non labor-related share. The labor-related share is adjusted by a wage index to reflect area differences in the cost of labor.

- Discharge base rates, also known as standardized payment amounts (operating and capital costs).

## **DRG payment Reduction**

The DRG payment will be reduced if the following conditions are met:

- The patient's LOS is at least 1 day less than the geometric mean LOS for the DRG
- The patient is transferred to another hospital covered by the Acute Care Hospital IPPS or, for certain MS-DRGs, discharged to a post-acute setting
- The patient is transferred to a hospital that does not have an agreement to participate in the Medicare Program (effective October 1, 2010) and
- The patient is transferred to a CAH (effective October 1, 2010)

## **Transfers**

These post-acute care settings are included in the transfer policy:

Long-term care hospitals

Rehabilitation facilities

Psychiatric facilities

SNFs

Home health care when the patient receives clinically-related care that begins within 3 days after the hospital stay

Rehabilitation distinct part (DP) units located in an acute care hospital or a CAH

Psychiatric DP units located in an acute care hospital or a CAH

Cancer hospitals

Children's hospitals

## **A Few Things to Remember**

- A lot of the information required to complete the DRG grouping is built in. If something doesn't make sense, try reading the explanatory text.
- Always work your way *down* lists. Higher items have precedence over lower ones, and will also result in a higher payment, because they indicate a more severe or resource-intensive case.
- If the MDC qualifies as a PRE-MDC, it will categorize the case into the PRE-MDC, regardless of the principal/secondary diagnoses.
- MDC-0 Does not cause assignment as these are all transplants.
- Assignment to MDC 24 is based on a principal diagnosis of significant trauma and at least two significant trauma diagnoses from *different* site categories (Chest, abdomen, kidney, urinary system, pelvis/spine, upper limb, lower limb, head).
- If conditions for assignment to MDC 25 are met, MDC 25 takes precedence over MDCs 1-23.
- DRG Logic Tables: All conditions must be met in the table to qualify for the DRG.

- There can be several secondary diagnoses for a case, and it only takes *one* to cause assignment to a CC or MCC DRG.
- The secondary diagnoses do not cause assignment to MDCs 24 or 25.

## **Common Acronyms and MS-DRG Meanings**

**ALOS - Average Length of Stay** - The mean length of stay is the duration for hospital inpatients, the day of admission to discharge during a given period.

**Arithmetic Mean LOS** - Arithmetic Mean Length of Stay- referring to the average number of days a patient spends in the hospital. Used as a quality metric to pay the same amount for procedures, regardless of days spent in the hospital. May be used to determine payment for outlier cases.

**CAH - Critical Access Hospital** - Generally, a CAH is a small facility that provides limited outpatient and inpatient hospital services to people in rural areas. For more information, visit CMS.gov [Critical Access Hospital](#).

**Case Mix** - Patient population grouped by characteristics such as age, sex, diagnosis, and risk factors, as well as treatment received, and resources used during treatment.

**CC - Comorbid Condition**- The next level of severity. This is an additional medical problem during the same encounter or at the same time as the principal medical problem. The CC may be totally unrelated, or it might be a related problem.

**DSHs - Disproportionate Share Hospitals** - Hospitals that treat a disproportionate share of low-income patients receive additional operating and capital payments.

**DRG Relative Weight** - The weight assigned to MS-DRGs reflects the average relative costliness of cases that are similar to the average Medicare case, based on standardized charges and costs.

- Hospital wage rates across labor markets
- Size and intensity of the hospital's resident training activities
- Number of low-income patients the hospital treats

**GMLOS - Geometric Mean LOS** - Used to summarize lengths of stay. The geometric mean is always lower than the Arithmetic Mean as it is less influenced by large positive outliers. Therefore, it is more commonly used and is appropriate to use for positive continuous variables. Used for transfer cases.

**HAC - Hospital Acquired Conditions** - HACs are conditions acquired during hospitalization (the condition was not present on admission).

**IPPS - Inpatient Prospective Payment System**. How CMS pays for most inpatient services under Medicare Part A.

**Market Conditions Adjustment** - Base operating and capital rates are adjusted by an area wage index to reflect the expected differences in local market prices for labor, which is intended to measure differences in hospital wage rates among labor markets by comparing the average hourly wage (AHW) for hospital workers in each urban or statewide rural area to the nationwide average.

**MCC** - Major Complication or Comorbidity, reflects the highest level of severity, allows assignment of a case to the highest weighted DRG.

**MDC** - Major Diagnostic Categories come from dividing all of the diagnoses and putting them into 25 mutually exclusive areas. The MDCs all correspond to a single organ system or cause. MDC-0 is designated for transplants due to the expense involved, as transplants can come from a diagnosis that may not come from one category. DRGs are also mapped into MDC codes. [List of MDC's](#)

**MS-DRG** - Medicare Severity Diagnosis Related Groups, defined by patient attributes which include principal diagnosis, specific secondary diagnosis, procedures, sex and discharge status. Discharge status and the presence of either an MCC or CC will define the MS-DRG assignment. [List of DRGs](#)

**NCCI** - National Correct Coding Initiative CMS developed the NCCI to promote national correct coding methods and to control improper coding leading to inappropriate payment in Medicare Part B claims. [NCCI Edits Manual](#)

**Non-CC** - Non-Complication/Comorbidity does not significantly affect severity of illness and resource use.

**Non-operating room procedures** - the set of procedures contains only procedures which are not expected to require the operating room. If a patient does not require surgery, they are considered a “medical patient”, not a “surgical patient”.

**Only secondary diagnoses** - Indicates that, in order to be assigned to the specified MS-DRG, no secondary diagnoses other than those in the specified list may appear on the patient’s record. For example, in order to be assigned to MS-DRG 795, only secondary diagnoses from the specified list may appear on the patient’s record.

**Operating room procedures** - procedures which are expected to require the operating room, indicating the patient is a “surgical patient”. A patient can only be assigned one surgical class. Patients with multiple procedures would be assigned to the surgical class highest in the hierarchy.

**Outlier Payments** - Additional payments are made for outlier or extremely costly cases, to promote access to high quality inpatient care for seriously ill patients.

**Principal diagnoses** - indicates that a specific set of principal diagnoses are used in the definition of the MS-DRG. External cause codes describe the circumstances causing the injury, not the nature of the injury, and therefore should not be listed as the principal diagnosis. External cause codes begin with V, W, X or Y codes (ICD-10-CM), E codes (ICD-9-CM).

**Rural Hospitals** - Must be located in a rural area and meet specific criteria.

**Secondary diagnoses** - a specific set of secondary diagnoses are used in the definition of the MS-DRG. An example would be the presence of a secondary diagnosis of history of malignancy is used to define MS-DRG 082-084. If the secondary is the same as the primary, it will be considered a duplicate.

**VBP - Hospital Value-Based Purchasing Adjustment** - Value Based incentive payments to hospitals based on their overall performance based on a set of quality measures. Beginning on or after October 1, 2012.

## **Resources**

CMS - Design and Development of the Diagnosis Related Group (DRG)

[https://www.cms.gov/icd10manual/version34-fullcode-cms/fullcode\\_cms/Design\\_and\\_development\\_of\\_the\\_Diagnosis\\_Related\\_Group\\_\(DRGs\)\\_PBL-038.pdf](https://www.cms.gov/icd10manual/version34-fullcode-cms/fullcode_cms/Design_and_development_of_the_Diagnosis_Related_Group_(DRGs)_PBL-038.pdf)

MLN - Acute Care Hospital Inpatient Prospective Payment System

<https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/AcutePaymtSysfctsht.pdf>

Medicare Claims Processing Manual Chapter 3 - Inpatient Hospital Billing

<https://www.cms.gov/regulations-and-guidance/guidance/manuals/downloads/clm104c03.pdf>

Health Data Analysis Toolkit - American Health Information Management Association

[http://www.dphu.org/uploads/attachements/books/books\\_1051\\_0.pdf](http://www.dphu.org/uploads/attachements/books/books_1051_0.pdf)

CMS - Acute Inpatient PPS

<https://www.cms.gov/medicare/medicare-fee-for-service-payment/AcuteInpatientPPS/index.html>

Hospital Acute Inpatient Services Payment System - [paymentbasics](#)

*This is trutorial is informational only and is not all inclusive, this is only intended to give a view of how the MS-DRG grouper works. For more details please contact CMS.gov.*