

# Medicare Severity Diagnosis Related Groups MS DRG

## Nutrition Comorbid Conditions

**CMS DRG  
APR DRG  
MS DRG  
P. O. A**



**R A C  
AHRQ  
PQRI  
P 4 P**

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# Public Reporting and Pay-for-Performance Industry / Environment Scan

“MY PATIENTS ARE SICKER THAN THE OTHERS”

- ❑ **PROFILING**
  - Reputation
  - Severity of Illness
  - Mortality Profile
- ❑ Consumer Driven Market
- ❑ **REPORT CARDS**
  - Rating tools state/national
- ❑ **QUALITY MEASURES - AHRQ**
  - Physician
  - Hospital
- ❑ E/M Doctor’s Reimbursement
- ❑ Hospital Reimbursement

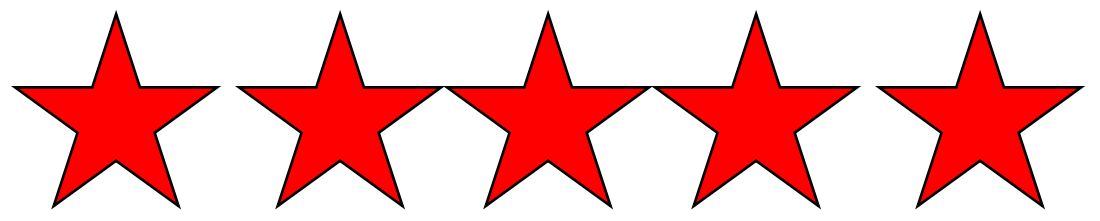
❑ Joke:



DOCUMENTATION MUST SHOW: SEVERITY of ILLNESS

PROFILING BY:

- ❑ Federal & State Agencies
- ❑ Joint Commission
- ❑ CMS & Insurances
- ❑ PRO / QIO
- ❑ Hospitals / Employers
  
- ❑ General Public **INTERNET**
  
- ❑ **PAY 4 PERFORMANCE**
  
- ❑ **FIVE STAR HOSPITAL/Physician**



“IT IS MORE THAN P4P IT IS PART OF A MOVEMENT IT IS CALL FOR ACTION”  
Trent Haywood, MD, JD -CMS

“IT WOULD ACCOUNT FOR 30% OF THE PAYMENT FROM FEDERAL PROGRAMS”  
Mark McClellan, CMS Administrator

## PRINCIPAL DIAGNOSIS

The condition/conditions established after study to be chiefly responsible for occasioning the admission of the patient to inpatient hospital care”

- ❑ At the time of discharge, if DX is uncertain:
- ❑ "possible/probable/questionable/likely"
  - diagnostic workup
  - initial therapeutic approach
  - arrangements for further workup or observation

**PDX**

**SDX**

## SECONDARY DIAGNOSES

All conditions that coexist at the time of admission and/or that develop subsequently and require:

- ❑ Clinical evaluation and/or
- ❑ Therapeutic treatment and/or
- ❑ Diagnostic procedures and/or
- ❑ Extended length of hospital stay (≥1 day) and/or
- ❑ Require increased nursing care and/or monitoring

### POSSIBLE/PROBABLE / QUESTIONABLE/LIKELY"

- \*diagnostic workup
- \*initial therapeutic approach
- \*arrangements for further workup or observation

# MEDICARE SEVERITY DIAGNOSES RELATED GROUPS

## MS DRG

### The Severity of Illness

based on the presence of:



**MCC** = Major Comorbid Condition  
**CC** = Comorbid Condition  
Other sec. DXs

### MS-DRG - Established by :

- Principal Diagnosis,
- Comorbid/Complications
- Principal Procedure

**MCC & CC LIST**  
**DX Impacting MS DRG**

- Hospital payments/ Medicare

### 745 MS DRG

- relative weight  
= severity/resources
- w/o CC or MCC
- w/ CC and/or MCC

## CASE MIX INDEX - CMI

The mean (average) of relative weight for a group of patients reflecting resource utilization

- DRG-APR-DRG (All Patient Refined) = **SOI & ROM**
  - Severity Of Illness and Risk Of Mortality
  - All DX documented

## APR DRG – measuring SOI & ROM

	PRINCIPAL DIAGNOSIS: CAD	
	CASE 1	CASE 2
<b>Secondary Diagnosis</b>  PPX-CABG SPX-Cardiac Cath.	HX Chronic Obstructive Pulmonary Disease – symptoms/TX Hx of Atrial Fibrillation Dyspnea, hypoxia post surgery Prealb 9 Pulm. Edema, Cardiomegaly Diuretics, Hx of CHF /CHF exacerbation	Chronic Obstructive Pulmonary Disease - Exacerbation Atrial Fibrillation <i>Pulmonary Insufficiency</i> Acidosis Malnutrition <i>Acute systolic HF</i> (and Chronic) Prolonged Mechanical Ventilation (respiratory failure)
<b>Medicare DRG</b>	548 CABG w/Cath w/o MCC RW.... Diff. in \$ for hospital	548 CABG w/Cath. w/ MCC RW.....
<b>APR-DRG</b>	190 CABG w/Cath	191 CABG w/Cath.
<b>APR-DRG Severity of Illness</b>	<b>2 Moderate</b>	<b>4 Extreme</b>
<b>APR-DRG Risk of Mortality</b>	<b>1 Minor</b>	<b>4 Extreme</b>
<b>Medicare Relative DRG Weight</b>	<b>RW 4.644</b>	<b>RW 4.644</b> <b>RW 6.123</b>
<b>APR-DRG Relative Weight</b>	2.7930	3.7052
<b>National Mortality Rate (APR-DRG Adjusted)</b>	<b>0.04%</b>	<b>32.02%</b>

[www.healthgrades.com](http://www.healthgrades.com)

[www.solucient.com](http://www.solucient.com)

[www.doctorquality.com](http://www.doctorquality.com)



**2007 RATINGS  
STROKE**

Inhospital Mortality (Survival)

St Vincent's Hospital		BEST
Baptist Medical Center		AS EXPECTED
St Luke's Hospital		AS EXPECTED
Memorial Hospital		POOR
BMC Beaches		AS EXPECTED
Shands Hospital		AS EXPECTED

Inhospital +1 month Mortality (Recovery +30)



Inhospital +6 month Mortality (Recovery +180)



# MEDICARE SEVERITY DIAGNOSES RELATED GROUPS

How the specific documentation could influence the CMI:

**MS DRG**

CMI FORMULA =  $\frac{\text{Sum of all Patients' DRGs RW}}{\text{\# inpatient patients}}$

FINANCIAL VIABILITY

Case	RW	#cases	RW	#cases	RW
Cocaine relate	0.58			2	1.16
GERD	0.68			3	2.04
Chest pain	0.55	6	3.3	1	.55
PN w/o CC	0.74	9	6.66	2	1.48
PN w/ CC	1.02	10	10.2	4	4.08
PN w/ MCC	1.46	2	2.92	6	8.76
C.PN w/o CC	1.04	3	3.12	1	1.04
C.PN w/ CC	1.49	3	4.47	7	10.43
C.PN w/MCC	2.04	1	2.04	5	10.2
Resp. Failure	1.37	1	1.37	4	5.48
		35	34.06	35	45.22

- Monitored by
  - \*hospital finance services
  - \*CMS/OIG
  - \*Insurance Companies
- For 1.0 - Medicare Blend Rate

**\$ 8,000**

- Other Insurances paying DRG
- List w/ MS DRG payers

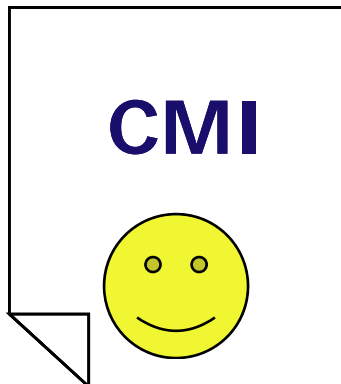
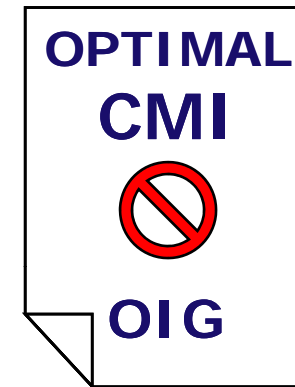
$$34.06 / 35 = 0.97$$

$$45.22 / 35 = 1.29$$

# COMPREHENSIVE DOCUMENTATION



- ❑ Continuity /Support of patient care
- ❑ Accurate coding = QUALITY DATA
- ❑ Credentialing, certification, licensure
- ❑ Sets insurance premiums



- ❑ *Maintains Physicians participation to Managed Care*
- ❑ Legal issues - "the more, the better"
- ❑ Optimal reimbursement
- ❑ Benchmark

# Types of Malnutrition

- ❑ Overnutrition
- ❑ Secondary malnutrition
- ❑ Micronutrient malnutrition --
- ❑ Protein Calorie malnutrition --

## A. Overnutrition

- ❑ Too many calories leading to obesity, diabetes, hypertension and cardiovascular disease
- ❑ "Transition diets" now a consideration of WHO due to increase worldwide in chronic disease due to dietary change

## B. Secondary Malnutrition causative conditions

- ❑ Loss of appetite (anorexia, etc), cancer
- ❑ Alteration of normal metabolism
  - during infection/fever
  - HIV/AIDS
  - Terminal diseases
- ❑ Prevention of nutrient absorption
  - Diarrheal infection causing changes in GI epithelium – Crohn, etc
- ❑ Diversion of nutrients to parasitic agents themselves
  - Hookworms, tapeworms, worms, malaria

### Key Study – Physical signs

Fatigue  
Muscle soreness  
Irritability  
Hunger pains  
Lack of  
    Ambition  
    Self-discipline  
    Poor concentration  
Often moody and depressed  
Less able to laugh heartily  
Less able to tolerate heat  
Heart rate decreased  
Muscle tone decreased

# Role of calories

- Involuntary use:
  - breathing
  - blood circulation
  - digestion
  - maintaining muscle tone
  - body temperature
- Physical activity
- Mental activity
- Fighting disease - immunity
- Growth



# Role of protein

- For building cells that make up muscles, membranes, cartilage and hair
- Carrying oxygen
- Nutrient transport
- Antibodies
- Enzymes needed for most chemical reactions in the body

**What happens to people when they have inadequate amounts of food and nutrients?**

- **Metabolic changes**
- **Physiologic changes**
- **Psychological changes**

# Major Restructure of Comorbid Conditions

## Metabolic Disorders

MCC & CC LIST  
Sec.DX Impacting MS DRG

### Non-CC

Malnutrition of moderate disease (non -CC)  
Malnutrition of mild disease (non -CC)

### CC

- **Protein-calorie malnutrition (CC)**
  - Malnutrition (unspecified)
- **Malnutrition (calorie) (CC)**
  - Dystrophy due to malnutrition
- **Arrested development w/ protein calorie malnutrition**  
(Nutritional dwarfism, Physical retard due to malnutrition)

### MCC

- **Kwashiorkor**  
Changes in skin and hair pigment, edema, retarded growth, pathologic liver changes
- **Nutritional marasmus**
- **Nutritional atrophy**
- **Severe Calorie Deficiency**
- **Severe Malnutrition (NOS)**
- **Severe protein-calorie**  
Nutritional edema w/o dyspigmentation

CLARIFICATION REQUIRED to ACCURATELY REFLECT:  
SEVERITY OF ILLNESS & RISK OF MORTALITY

**DOCUMENTATION CLARIFICATION**  
Clinical Documentation Initiative

**MALNUTRITION SEVERE MALNUTRITION**

Values Commonly Used to Grade the Severity of Malnutrition:

MEASURE	<u>Degrees of Malnutrition</u>		<b>SEVERE</b>
	mild	moderate	
<b>NORMAL WT</b>	85% - 90%	75% - 85%	< 75%
<b>BMI</b>	18 – 18.9	16 – 17.9	< 16
<b>SERUM ALBUMIN</b>	3.1 – 3.4	2.4 – 3.0	< 2.4
<b>PREALBUMIN</b>	11-15	6-10	≤ 5

**BMI FORMULA**  
Weight in Pounds x703  
Height in inches<sup>2</sup>

**DOCUMENT the BMI:**

BMI	Weight Status
< 18.5	Underweight
18.5-24.9	Normal
25 – 29.5	Overweight
> 30	Obese
≥ 40	Morbid Obesity

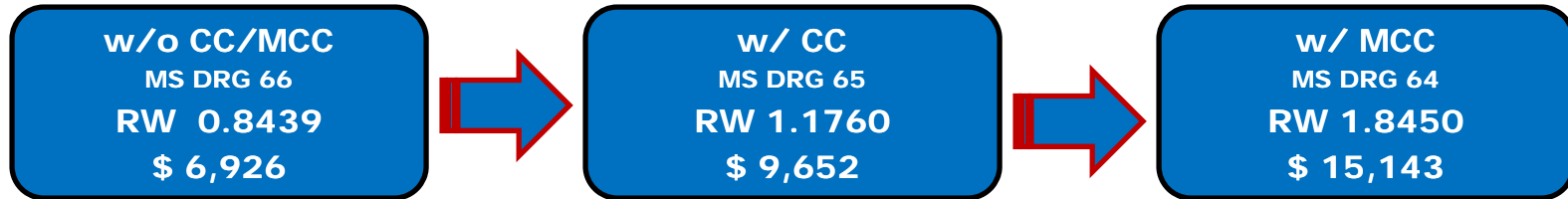
Risk Factors for Malnutrition: Terminal illness, ESRD, ESLD, AIDS, COPD, underlying infections, chronic debilitating diseases, difficulty swallowing or chewing, weight loss, depression, chronic N&V, diarrhea, , etc.




THIS IS NOT A PART OF MEDICAL RECORD  
PLEASE REMOVE BEFORE SCANNING

P H Y S I C I A N A L E R T

BLEND RATE = 8,000

## INTRACRANIAL HEMORRHAGE OR CEREBRAL INFRACTION



PDX	Cerebral Infarction/ Stroke / Intracerebral hemorrhage		
Case I SDX	Left side weakness	Hemiplegia/hemiparesis/D/C	
Case II SDX	MRI – perivascular edema Left shift	MRI – perivascular edema, repeat MRI-Left shift	Cerebral edema
Case III SDX	Albumin 2.3 Pre albumin 5  BMI not calculated  Orders: nutrition consult Treatment / Nutrition / weight the patient	Protein calorie malnutrition (Malnutrition)  <u>BMI &lt;19 (from RD notes)</u>  	<u>Severe malnutrition</u>  <u>BMI &lt;19 (from RD notes)</u>
Case V SDX	Sacral Pressure Ulcer Stage II (poor documented) or unstageable		Sacral Pressure Ulcer Stage III, Not POA

## Multiple sclerosis & cerebellar ataxia

MS DRG	w/o CC/MCC 60	w/CC 59	w/MCC 58
RW	0.8160	0.9226	1.2669
RMB	6,501	7,350	10,094
PDX	Multiple sclerosis exacerbation	Multiple sclerosis exacerbation	Multiple sclerosis exacerbation
SDX	Dysuria, UA – L. E. WBC ↑ C&S: E. Coli  <i>Nutritional Supplement – prealb. 5</i>	T – 102, HR 120, WBC 19,000, Bandemia, BP 90/50 Blood Culture negative, BUN 50, Cr. 2.3, 2 Antibiotics <i>Urosepsis = UTI</i>  <u>Malnutrition</u>	BP 90/50, RR 38, Hypoxia, Hypercapnia T 102, HR 120, WBC 19,000, Bandemia, B. Culture (-) 2AB <i>(Severe) Sepsis</i> <i>ARF (spell this out)</i>  <u>Severe Malnutrition</u>



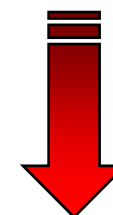
# POA MUST BE DOCUMENTED BY THE PROVIDER

YES ---NO ---U ---W

"U" - Unclear documentation as to whether the condition was  
POA  
(should not be routinely assigned/used only in very  
limited circumstances)

"W" decision of the provider -- it cannot be clinically determined

Reasonably Preventable through the  
application of  
**EVIDENCE-BASED guidelines**  
Avoidable complications



Issues related to:

- \*\* inconsistent
- \*\* missing
- \*\* conflicting
- \*\* unclear



Clarify before billing!!!

**Beginning October 1, 2008, CMS cannot assign a case to a higher MS DRG based on the occurrence of one of these conditions, if the condition was acquired during hospitalization**

Applies from October 1, 2008

# HOSPITAL ACQUIRED CONDITIONS

Secondary Diagnosis  
NOT Present On  
Admission

MS DRG if CC or  
MCC  
is  
the only CC or MCC  
NEVER EVENTS

- **Object left in surgery (CC)**
- **Air embolism (MCC)**
- **Blood incompatibility (CC)**
- **Surgical Site infection/ortho device (CC) \* Infection and inflammatory reaction due to orthopedic devices/implant/graft OR Other postoperative infections**

## WITH

**Procedure:** -Spinal Fusion and Refusion

-Arthroplasty: Shoulder and Elbow

-Bariatric surgery PDX - Morbid Obesity and Postop. Infection

**PX:** Lap/open Gastroenterostomy or gastric restrictive PX


- **Catheter associated urinary tract infections (CC)**
- **Pressure ulcers stage III, IV (MCC) – the rest – not CC/MCC**
- **Vascular catheter associated infections –Central Venous Catheter (CC)**
- **Mediastinitis post coronary artery bypass graft (MCC)**
- **Falls & Trauma, Burns, Fractures, Dislocations (CC or MCC)**
- **Deep Vein Thrombosis or Embolism / Pulmonary Embolism / Pulmonary infarction (MCC)**

**Procedure:** Total/Partial Hip and Knee Replacement,

- **Manifestation of poor glycemic control: Ketoacidosis (MCC),**
  - **Coma: hyperosmolar (MCC),**
  - **hypoglycemic (CC)**

# Nervous systems neoplasm

**BLEND RATE = 8,000**

MS DRG	MS.DRG 55 w/o MCC	MS.DRG 54 w/MCC
RW	1.1213	1.4228
RMB	8,934	11,336
PDX	Brain Neoplasm Metastatic to liver, bone	Brain Neoplasm Metastatic to liver, bone
SDX	<p>T – 102, HR 120, WBC 19,000, Bandemia, BP 90/50, UA-C&amp;S – E. coli Blood Culture negative, BUN 50, Cr. 2.3, 2 Antibiotics</p> <p>Malnutrition – pre.alb. 5 </p> <p>Wound Care Notes: sacral pressure ulcer, stage III</p>	<p>BP 90/50, RR 38, Hypoxia, Hypercapnia T 102, HR 120, WBC 19,000, Bandemia, B. Culture (-) 2AB Urosepsis = <u>UTI</u></p> <p><u>Severe Malnutrition</u></p> <p><u>No mention by the doctor, or just Wound Care referral</u></p>

# RENAL FAILURE

**BLEND RATE = 8,000**

<p><b>PDX: ESRD &amp; HTN</b>          Creatinine 3.4 (baseline 2.4)          HTN -uncontrolled</p> <p>RD consult          Low Protein, low albumin, prealb. 7,supplement</p>	<p>w/o CC/MCC          684</p>	<p>0.9835</p>	<p>7,836</p>
<p><b>PDX: ESRD &amp; HTN</b>          Creatinine 3.4 (baseline 2.4)          HTN -uncontrolled</p> <p><b>Malnutrition</b></p>	<p>w/ CC          683</p>	<p>1.1942</p>	<p>9,515</p>
<p><b>PDX: ESRD &amp; HTN</b>          Creatinine 3.4 (baseline 2.4)          HTN -uncontrolled</p> <p><b>Severe Malnutrition</b></p>	<p>w/ MCC          682</p>	<p>1.4664</p>	<p>11,684</p>

# Chronic Obstructive Pulmonary Disease



**BLEND RATE = 8,000**

PDX	COPD Exacerbation		
Case I SDX	RR=28, Dyspnea, CO <sub>2</sub> 70, O <sub>2</sub> 65, BIPAP X-Ray abnormal, order a CT Scan  _____ _____ _____	<b>COPD Exacerbation</b> RR=28, Dyspnea, CO <sub>2</sub> 60, O <sub>2</sub> 65, BIPAP <u>Chronic Resp. Failure</u> <u>CT Scan: Atelectasis</u>	<b>COPD Exacerbation</b> RR=28, Dyspnea, CO <sub>2</sub> 60, O <sub>2</sub> 65, BIPAP Post adm: acute respiratory Failure  _____ _____ _____
Case II SDX	Dementia, confusion, hallucinations  _____ _____ _____	<u>Senile Dementia with Delirium</u>  _____	
Case III SDX	Nutritional support ES.COPD Order prealb.  _____ _____	<b>Malnutrition</b> BMI <18  _____ _____	<u>Severe malnutrition</u>  _____ _____ _____
Case IV SDX	HX HIV (CD4 180) HIV/AIDS Hx PN, PCP		<u>AIDS</u> (CD4 180)  _____ _____ _____ _____