

# **2023**

## **Episodes of Care Risk Adjustment**

### **Episode Types**

#### **Wave 1**

[Asthma Acute Exacerbation](#)

[Perinatal](#)

[Total Joint Replacement](#)

#### **Wave 2**

[Acute Percutaneous Coronary Intervention](#)

[COPD Acute Exacerbation](#)

[Non-acute Percutaneous Coronary Intervention](#)

[Outpatient and Non-acute Inpatient](#)

[Cholecystectomy](#)

[Screening and Surveillance Colonoscopy](#)

#### **Wave 3**

[Esophagogastroduodenoscopy](#)

[Gastrointestinal Hemorrhage](#)

[Inpatient Urinary Tract Infection](#)

[Outpatient Urinary Tract Infection](#)

[Pneumonia](#)

[Respiratory Infection](#)

#### **Wave 4**

[Attention Deficit and Hyperactivity Disorder](#)

[Bariatric Surgery](#)

[Congestive Heart Failure Acute Exacerbation](#)

[Coronary Artery Bypass Graft](#)

[Heart Valve Replacement or Repair](#)

[Oppositional Defiant Disorder](#)

#### **Wave 5**

[Breast Biopsy](#)

[Otitis Media](#)

[Tonsillectomy](#)

#### **Wave 6**

[Acute Diabetes Exacerbation](#)

[HIV Infection](#)

[Pancreatitis](#)

[Skin and Soft Tissue Infections](#)

#### **Wave 7**

[Back/Neck Pain](#)

[Femur/Pelvis Fracture](#)

[Knee Arthroscopy](#)

[Non-operative Ankle Injury](#)

[Non-operative Knee Injury](#)

[Non-operative Shoulder Injury](#)

[Non-operative Wrist Injury](#)

[Spinal Decompression without Fusion](#)

[Spinal Fusion](#)

#### **Wave 8**

[Acute Gastroenteritis](#)

[Acute Seizure](#)

[Appendectomy](#)

[Bronchiolitis](#)

[Colposcopy](#)

[Gastrointestinal Obstruction](#)

[Hernia Repair](#)

[Hysterectomy](#)

[Pediatric Pneumonia](#)

[Syncope Work-up](#)

#### **Wave 9**

[Acute Kidney and Ureter Stones](#)

[Cystourethroscopy](#)

#### **Appendix**

## Factors and Weights

Acute Diabetes Exacerbation		
CCS Code	Factor	Weight
	Age (per year)	0.001
	Female	0.657
	Male	0.717
1.1	Bacterial infection	0.166
3.11	Other nutritional, endocrine, and metabolic disorders	0.091
4.3	Diseases of the white blood cells	0.065
6.6	Coma, stupor, and brain damage	0.250
7.2	Diseases of the heart	0.072
7.4	Diseases of arteries; arterioles; and capillaries	0.032
7.5	Diseases of veins and lymphatics	0.158
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.169
10.1	Diseases of the urinary system	0.107
12.3	Chronic ulcer of the skin	0.149

Acute Gastroenteritis		
CCS Code	Factor	Weight
	Female	0.549
	Male	0.525
3.1	Thyroid disorders	0.100
3.2	Diabetes mellitus without complications	0.058
3.8	Fluid and electrolyte disorders	0.787
4.2	Coagulation and hemorrhagic disorders	0.548
4.3	Diseases of white blood cells	0.661
6.2	Hereditary and degenerative nervous system conditions	0.156
6.4	Epilepsy, convulsions	0.139
6.9	Other nervous system disorders	0.062
9.4	Upper gastrointestinal disorders	0.239
9.5	Abdominal hernia	0.214
9.6	Lower gastrointestinal disorders	0.588
9.7	Biliary tract disease	0.318
9.8	Liver disease	0.418
9.9	Pancreatic disorders (not diabetes mellitus)	0.256
13.1	Infective arthritis and osteomyelitis	0.528
13.2	Non traumatic Joint Disorders	0.050
14.2	Digestive congenital anomalies	0.326

Acute Kidney and Ureter Stones		
CCS Code	Factor	Weight
	Female	0.897
	Male	0.869
1.1	Bacterial Infection	0.168
3.7	Gout	0.008
3.8	Fluid and electrolyte disorders	0.288
3.11	Other nutritional, endocrine, and metabolic disorders	0.041

4.1	Anemia	0.074
4.3	Diseases of white blood cells	0.233
5.13	Suicide and intentional self-inflicted injury	0.143
6.3	Paralysis	0.460
7.2	Diseases of the heart	0.053
7.5	Diseases of veins and lymphatics	0.091
9.12	Other gastrointestinal disorders	0.071

Acute Percutaneous Coronary Intervention		
CCS Code	Factor	Weight
	Female	0.975
	Male	0.960
3.8	Fluid and electrolyte disorders	0.083
4.1	Anemia	0.005
4.3	Diseases of the white blood cells	0.049
7.3	Cerebrovascular disease	0.015
7.4	Diseases of the arteries, arterioles, and capillaries	0.013
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.023
9.8	Liver disease	0.010

Acute Seizure		
CCS Code	Factor	Weight
	Female	0.562
	Male	0.562
3.8	Fluid and electrolyte disorders	0.541
4.1	Anemia	0.142
4.2	Coagulation and hemorrhagic disorders	0.345
4.3	Diseases of white blood cells	0.351
5.4	Delirium Dementia, Amnestic, and other cognitive disorders	0.397
5.11	Alcohol related disorders	0.243
6.9	Other nervous system disorders	0.211
7.2	Diseases of the heart	0.125
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.361
14.1	Cardiac and circulatory Congenital Anomalies	0.269
14.4	Nervous System Congenital Anomalies	0.354

Appendectomy		
CCS Code	Factor	Weight
	Female	0.893
	Male	0.899
1.1	Bacterial infection	0.181
3.8	Fluid and electrolyte disorders	0.159
7.1	Hypertension	0.046
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.357
9.7	Biliary tract disease	0.072
9.12	Other gastrointestinal disorders	0.053
14.2	Digestive congenital anomalies	0.248
16.10	Complications	0.319

Asthma Acute Exacerbation		
CCS Code	Factor	Weight
	Female	0.666
	Male	0.751
1.3	Viral Infection	0.206
3.11	Other Nutritional, Endocrine, Metabolic Disorders	0.105
3.2	Diabetes mellitus without complication	0.172
3.3	Diabetes mellitus with complications	0.086
3.8	Fluid and electrolyte disorders	0.894
4.3	Diseases of white blood cells	0.713
7.2	Diseases of the heart	0.170
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.854
9.4	Upper gastrointestinal disorders	0.062

Attention Deficit and Hyperactivity Disorder		
CCS Code	Factor	Weight
	Female	0.903
	Male	0.950
5.2	Anxiety disorders	0.094
5.6	Disorders usually diagnosed in infancy childhood or adolescence	0.088
5.8	Mood disorders	0.075
5.15	Miscellaneous mental disorders	0.133
8.9	Other upper respiratory disease	0.054
9.12	Other gastrointestinal disorders	0.041
16.12	Other injuries and conditions due to external causes	0.043

Back/Neck Pain		
CCS Code	Factor	Weight
	Female	0.487
	Male	0.476
3.10	Immunity disorders	0.134
4.3	Central nervous system infection	0.060
6.5	Headache; including migraine	0.145
6.9	Other nervous system disorders	0.189
7.2	Diseases of the heart	0.100
7.3	Cerebrovascular disease	0.067
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.100
9.4	Upper gastrointestinal disorders	0.031
9.5	Abdominal hernia	0.070
9.6	Lower gastrointestinal disorders	0.055
9.8	Liver disease	0.082
9.12	Other Gastrointestinal disorders	0.045
10.1	Diseases of the urinary system	0.040
10.3	Diseases of the female genital organs	0.033
13.2	Non-traumatic joint disorders	0.140
13.6	Acquired deformities	0.217
13.8	Other connective tissue disease	0.144
13.9	Other bone disease and musculoskeletal deformities	0.191
16.1	Joint disorders and dislocations, trauma related	0.067
16.4	Intracranial injury	0.126

16.7	Sprains and strains	0.179
16.8	Superficial injury; contusion	0.082
16.12	Other injuries and conditions due to external causes	0.247

Bariatric Surgery		
CCS Code	Factor	Weight
	Female	0.912
	Male	0.906
3.8	Fluid and electrolyte disorders	0.050
4.1	Anemia	0.031
4.3	Diseases of the white blood cells	0.055
5.15	Mental illness	0.029
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.108
9.5	Abdominal hernia	0.034
9.8	Liver disease	0.044
12.1	Skin and subcutaneous tissue infection	0.047
16.10	Complications	0.088

Breast Biopsy		
CCS Code	Factor	Weight
	Age	0.003
	Female	0.808
	Male	0.530
5.12	Substance-related disorders	0.093
7.2	Diseases of the heart	0.066
9.8	Liver disease	0.152
11.1	Contraception and procreative management	0.086
16.10	Complications	0.103

Bronchiolitis		
CCS Code	Factor	Weight
	Female	0.669
	Male	0.664
1.2	Mycoses	0.095
1.3	Viral infection	0.115
3.8	Fluid and electrolyte disorders	2.005
8.3	Asthma	0.445

Colposcopy		
CCS Code	Factor	Weight
	Female	0.824
1.3	Viral infection	0.154
5.8	Mood disorders	0.108
5.12	Substance related disorders	0.400
11.1	Contraception and procreative management	0.091
14.3	Genitourinary congenital anomalies	0.069

Congestive Heart Failure Acute Exacerbation		
CCS Code	Factor	Weight
	Female	0.659

	Male	0.804
1.1	Bacterial infection	0.115
3.8	Fluid and electrolyte disorders	0.152
4.2	Coagulation and hemorrhagic disorders	0.157
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.254
9.8	Liver disease	0.096
14.1	Cardiac and circulatory congenital anomalies	0.293

COPD Acute Exacerbation		
CCS Code	Factor	Weight
	Female	0.592
	Male	0.678
1.1	Bacterial infections	0.209
1.2	Mycoses	0.180
3.2	Diabetes mellitus without complications	0.144
3.3	Diabetes mellitus with complication	0.014
3.5	Nutritional deficiencies	0.148
3.8	Fluid and electrolyte disorders	0.519
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.378

Coronary Artery Bypass Graft		
CCS Code	Factor	Weight
	Female	0.837
	Male	0.810
1.1	Bacterial infection	0.197
3.2	Diabetes mellitus without complication	0.014
3.3	Diabetes mellitus with complications	0.010
3.8	Fluid and electrolyte disorders	0.063
7.4	Diseases of the arteries, arterioles, and capillaries	0.050
9.8	Liver disease	0.087
9.10	Gastrointestinal hemorrhage	0.145
10.1	Diseases of the urinary system	0.060
16.10	Complications	0.060

Cystourethroscopy		
CCS Code	Factor	Weight
	Female	0.875
	Male	0.785
3.8	Fluid and electrolyte disorders	0.287
5.12	Substance related disorders	0.138
6.9	Other nervous system disorders	0.101
8.3	Asthma	0.186
14.3	Genitourinary congenital anomalies	0.357
16.10	Complications	0.376

Esophagogastroduodenoscopy		
CCS Code	Factor	Weight
	Female	0.831
	Male	0.831
1.1	Bacterial infection	0.037

3.8	Fluid and electrolyte disorders	0.037
5.6	Disorders diagnosed in infancy, childhood, and adolescence	0.064
5.12	Substance-related disorders	0.038
5.14	Screening and history of mental health and substance abuse codes	0.033
6.3	Paralysis	0.172
6.5	Headache; including migraine	0.025
7.2	Diseases of the heart	0.019
8.3	Asthma	0.050
8.8	Other lower respiratory disease	0.021
9.1	Intestinal infection	0.043
9.5	Abdominal hernia	0.026
9.7	Biliary tract disease	0.037
9.10	Gastrointestinal hemorrhage	0.037
9.11	Noninfectious gastroenteritis	0.053
9.12	Other gastrointestinal disorders	0.099
14.2	Digestive congenital anomalies	0.132
16.0	Injury and poisoning	0.029

Femur/Pelvis Fracture		
CCS Code	Factor	Weight
	Female	0.742
	Male	0.742
3.8	Fluid and electrolyte disorders	0.144
4.1	Anemia	0.162
9.12	Other Gastrointestinal disorders	0.103
16.1	Joint disorders and dislocations; trauma-related	0.199
16.5	Crushing injury or internal injury	0.302
16.6	Open wounds	0.143

Gastrointestinal Hemorrhage		
CCS Code	Factor	Weight
	Female	0.396
	Male	0.618
3.2	Diabetes mellitus without complications	0.187
3.3	Diabetes mellitus with complications	0.177
3.8	Fluid and electrolyte disorders	0.768
4.2	Coagulation and hemorrhagic disorders	0.555
4.4	Other hematologic conditions	0.232
5.11	Alcohol-related disorders	0.260
5.14	Screening and history of mental health and substance abuse	0.149
9.8	Liver disease	0.238

Gastrointestinal Obstruction		
CCS Code	Factor	Weight
	Female	0.432
	Male	0.434
3.8	Fluid and electrolyte disorders	0.252

3.11	Obesity	0.103
4.1	Anemia	0.260
4.3	Diseases of the white blood cells	0.119
9.5	Abdominal hernia	0.150
9.6	Lower gastrointestinal disorders	0.087
9.12	Other gastrointestinal disorders	0.189
12.1	Skin and subcutaneous tissue infections	0.141

Heart Valve Replacement or Repair		
CCS Code	Factor	Weight
	Female	0.803
	Male	0.769
1.1	Bacterial infection	0.304
3.7	Gout and other crystal arthropathies	0.199
3.8	Fluid and electrolyte disorders	0.020
4.2	Coagulation and hemorrhagic disorders	0.132
7.5	Diseases of veins and lymphatics	0.103
9.7	Biliary tract disease	0.200
9.12	Other gastrointestinal disorders	0.115
12.3	Chronic ulcer of skin	0.235

Hernia Repair		
CCS Code	Factor	Weight
	Age (per year)	0.004
	Female	0.592
	Male	0.592
1.1	Bacterial Infection	0.168
3.3	Diabetes mellitus with complications	0.088
3.8	Fluid and electrolyte disorders	0.227
3.11	Other nutritional, endocrine, and metabolic disorders	0.062
4.1	Anemia	0.085
4.3	Diseases of white blood cells	0.115
6.9	Other nervous system disorders	0.109
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.264
9.6	Lower gastrointestinal disorders	0.238
9.7	Biliary tract disease	0.212
9.8	Liver disease	0.069
9.12	Other gastrointestinal disorders	0.101
10.3	Diseases of the female genital organs	0.063
14.3	Genitourinary congenital anomalies	0.147



HIV Infection		
CCS Code	Factor	Weight
	Female	1.000
	Male	1.000

Hysterectomy		
CCS Code	Factor	Weight
	Age	0.003
	Female	0.717
1.1	Bacterial infection	0.046
3.8	Fluid and electrolyte disorders	0.094
4.1	Anemia	0.068
4.2	Coagulation and hemorrhagic disorders	0.085
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.206
9.6	Lower gastrointestinal disorders	0.116
9.12	Other gastrointestinal disorders	0.046
10.1	Diseases of the urinary system	0.052
14.3	Genitourinary congenital anomalies	0.085
16.5	Crushing injury or internal injury	0.215
16.10	Complications	0.165

Inpatient Urinary Tract Infection		
CCS Code	Factor	Weight
	Age (per year)	0.007
	Female	0.386
	Male	0.419
1.1	Bacterial infection	0.291
3.8	Endocrine; nutritional; and metabolic diseases and immunity disorders	0.074
3.11	Other nutritional, endocrine, and metabolic disorders	0.086
4.1	Anemia	0.090
4.3	Diseases of the white blood cells	0.127
9.8	Liver disease	0.083
14.3	Genitourinary congenital anomalies	0.175

Knee Arthroscopy		
CCS Code	Factor	Weight
	Female	0.814
	Male	0.810
13.1	Infective arthritis and osteomyelitis (except that caused by TB or STD)	0.373
16.7	Sprains and strains	0.407
16.8	Other injuries and conditions due to external causes	0.056
16.12	Fractures	0.075

Non-acute Percutaneous Coronary Intervention		
CCS Code	Factor	Weight
	Age (per year)	0.002
	Female	0.841
	Male	0.844
3.2	Diabetes without complications	0.001

7.3	Cerebrovascular disease	0.058
7.4	Diseases of the arteries, arterioles, and capillaries	0.035
7.5	Diseases of the veins and lymphatics	0.025

Non-operative Ankle Injury		
CCS Code	Factor	Weight
	Female	0.528
	Male	0.498
5.12	Substance-related disorders	0.127
6.9	Other nervous system disorders	0.161
9.8	Liver disease	0.062
13.8	Other connective tissue disease	0.176
16.1	Joint disorders and dislocations; trauma-related	0.080
16.2	Fractures	0.277
16.7	Sprains and strains	0.180
16.8	Superficial injury; contusion	0.065
16.12	Other injuries and conditions due to external causes	0.353

Non-operative Knee Injury		
CCS Code	Factor	Weight
	Female	0.646
	Male	0.585
5.12	Substance-related disorders	0.086
6.9	Other nervous system disorders	0.114
13.8	Other connective tissue disease	0.040
16.1	Joint disorders and dislocations; trauma-related	0.178
16.2	Fractures	0.336
16.7	Sprains and strains	0.113
16.8	Superficial injury; contusion	0.110
16.12	Other injuries and conditions due to external causes	0.238

Non-operative Shoulder Injury		
CCS Code	Factor	Weight
	Female	0.713
	Male	0.637
3.3	Diabetes mellitus with complications	0.066
5.12	Substance related disorders	0.122
6.5	Headache; including migraine	0.066
13.8	Other connective tissue disease	0.145
16.1	Joint disorders and dislocations; trauma-related	0.313
16.2	Fractures	0.196
16.7	Sprains and strains	0.042
16.8	Superficial injury; contusion	0.013
16.12	Other injuries and conditions due to external causes	0.286

Non-operative Wrist Injury		
CCS Code	Factor	Weight
	Female	0.486
	Male	0.530
5.12	Substance-related disorders	0.173

13.8	Other connective tissue disease	0.147
16.2	Fractures	0.546
16.8	Superficial injury; contusion	0.076
16.12	Other injuries and conditions due to external causes	0.323

Oppositional Defiant Disorder		
CCS Code	Factor	Weight
	Female	0.947
	Male	0.934
5.1	Adjustment disorders	0.105
5.8	Mood disorders	0.088
5.12	Substance-related disorders	0.409

Otitis Media		
CCS Code	Factor	Weight
	Female	0.708
	Male	0.724
1.1	Bacterial infection	0.041
1.2	Mycoses	0.067
1.3	Viral infection	0.053
3.8	Fluid and electrolyte disorders	0.180
4.1	Anemia	0.096
4.3	Diseases of white blood cells	0.134
5.5	Developmental disorders	0.347
5.6	Disorders usually diagnosed in infancy childhood or adolescence	0.052
6.4	Epilepsy; convulsions	0.241
6.5	Headache; including migraine	0.073
6.9	Other nervous system disorders	0.093
7.2	Diseases of the circulatory system	0.068
7.4	Diseases of arteries; arterioles; and capillaries	0.168
8.1	Respiratory infections	0.014
8.8	Other lower respiratory disease	0.132
8.9	Other upper respiratory disease	0.077
9.2	Disorders of teeth and jaw	0.067
9.3	Diseases of mouth; excluding dental	0.068
9.4	Upper gastrointestinal disorders	0.048
9.11	Noninfectious gastroenteritis	0.039
9.12	Other gastrointestinal disorders	0.090
12.2	Diseases of the skin and subcutaneous tissue	0.045
12.4	Other skin disorders	0.067
14.5	Other congenital anomalies	0.071
16.12	Other injuries and conditions due to external causes	0.034

Outpatient and Non-acute Inpatient Cholecystectomy		
CCS Code	Factor	Weight
	Female	0.889
	Male	0.909
3.8	Fluid and electrolyte disorders	0.134
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.120
9.5	Abdominal hernia	0.093

9.6	Lower gastrointestinal disorders	0.081
9.8	Liver disease	0.088
9.9	Pancreatic disorders (not diabetes)	0.296
16.10	Complications	0.182

#### Outpatient Urinary Tract Infection

CCS Code	Factor	Weight
	Female	0.719
	Male	0.764
1.1	Bacterial infection	0.280
3.8	Fluid and electrolyte disorders	0.384
4.3	Diseases of white blood cells	0.317
7.2	Diseases of the heart	0.096
9.5	Abdominal hernia	0.145
9.6	Lower gastrointestinal disorders	0.223
9.7	Biliary tract disease	0.333
9.8	Liver disease	0.356
9.12	Other gastrointestinal disorders	0.169
13.3	Spondylosis; intervertebral disc disorders; other back problems	0.245
14.3	Genitourinary congenital anomalies	0.379

#### Pancreatitis

CCS Code	Factor	Weight
	Female	0.497
	Male	0.497
1.1	Bacterial infection	0.519
3.5	Nutritional deficiencies	0.266
4.3	Diseases of the white blood cells	0.048
5.11	Alcohol-related disorders	0.109
9.6	Lower GI disorders	0.304
9.7	Biliary tract disease	0.195

#### Pediatric Pneumonia

CCS Code	Factor	Weight
	Female	0.579
	Male	0.558
1.1	Bacterial infection	0.246
1.3	Viral infection	0.004
3.5	Nutritional deficiencies	0.410
3.8	Fluid and electrolyte disorders	1.550
4.3	Diseases of the white blood cells	0.411
8.3	Asthma	0.171
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.671
8.6	Respiratory failure; insufficiency; arrest (adult)	2.196

#### Perinatal

CCS Code	Factor	Weight
	Age (per year)	0.002
	Female	0.706
1.1	Bacterial infection	0.042

1.4	Other infections; including parasitic	0.042
3.2	Diabetes mellitus without complications	0.082
3.3	Diabetes mellitus with complications	0.433
3.8	Fluid and electrolyte disorders	0.125
3.11	Endocrine; nutritional; and metabolic diseases and immunity disorders	0.027
4.1	Anemia	0.038
4.2	Coagulation and hemorrhagic disorders	0.092
4.3	Diseases of white blood cells	0.109
5.13	Suicide and intentional self-inflicted injury	0.076
5.14	Screening and history of mental health and substance abuse codes	0.044
6.4	Epilepsy; convulsions	0.099
6.9	Other nervous system disorders	0.022
7.1	Hypertension	0.079
7.2	Diseases of the heart	0.078
7.4	Diseases of arteries; arterioles; and capillaries	0.057
8.3	Asthma	0.055
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.169
8.8	Other respiratory infections	0.026
9.4	Upper gastrointestinal disorders	0.047
9.6	Lower gastrointestinal disorders	0.084
9.7	Biliary tract disease	0.088
9.8	Liver disease	0.059
10.1	Diseases of the urinary system	0.038
10.3	Diseases of female genital organs	0.051
13.3	Spondylosis; intervertebral disc disorders; other back problems	0.029
14.1	Cardiac and circulatory congenital anomalies	0.112
14.3	Genitourinary congenital anomalies	0.116
14.5	Other congenital anomalies	0.080
16.10	Complications	0.091
16.12	Other injuries and conditions due to external causes	0.031

Pneumonia		
CCS Code	Factor	Weight
	Female	0.495
	Male	0.646
3.1	Thyroid Disorders	0.154
3.2	Diabetes mellitus without complications	0.150
3.8	Fluid and electrolyte disorders	0.726
4.3	Diseases of white blood cells	0.564
5.14	Screening and history of mental health and substance abuse	0.153
8.2	Chronic obstructive pulmonary disease and Bronchiectasis	0.273
8.5	Pleurisy, pneumothorax, pulmonary collapse	0.466

Respiratory Infection		
CCS Code	Factor	Weight
	Female	0.811
	Male	0.799
1.1	Bacterial infection	0.060
1.3	Viral infection	0.025
3.8	Fluid and electrolyte disorders	0.154

3.10	Immunity disorders	0.148
4.3	Diseases of white blood cells	0.154
5.12	Substance-related disorders	0.066
6.5	Headache; including migraine	0.061
6.8	Ear conditions	0.025
7.2	Diseases of the heart	0.112
7.4	Diseases of arteries; arterioles; and capillaries	0.056
8.2	Chronic obstructive pulmonary disease and bronchiectasis	0.110
8.3	Asthma	0.130
8.8	Other lower respiratory disease	0.154
8.9	Other upper respiratory disease	0.067
9.3	Diseases of the mouth; excluding dental	0.050
9.12	Other gastrointestinal disorders	0.042
10.1	Diseases of the urinary system	0.021
10.3	Diseases of female genital organs	0.021
12.4	Other skin disorders	0.013
13.3	Spondylosis; intervertebral disc disorders; other back problems	0.018
13.8	Other connective tissue disease	0.031

Screening and Surveillance Colonoscopy		
CCS Code	Factor	Weight
	Age	0.002
	Female	0.735
	Male	0.784
3.2	Diabetes mellitus without complications	0.019
3.3	Diabetes mellitus with complications	0.028
5.12	Substance related disorders	0.137
5.14	Screening and history of mental health and substance abuse	0.076
7.1	Hypertension	0.039
7.5	Diseases of the veins and lymphatics	0.039
8.2	Diseases of the respiratory system	0.044
8.3	Asthma	0.031
9.4	Upper gastrointestinal disorders	0.024
9.6	Lower gastrointestinal disorders	0.066
9.10	Gastrointestinal hemorrhage	0.071
9.11	Diseases of the gastrointestinal system	0.077
9.12	Other gastrointestinal disorders	0.054
14.2	Digestive congenital anomalies	0.090

Skin and Soft Tissue Infections		
CCS Code	Factor	Weight
	Female	0.558
	Male	0.586
1.1	Bacterial Infection	0.473
3.2	Diabetes mellitus without complications	0.067
3.3	Diabetes mellitus with complications	0.145
3.8	Fluid and electrolyte disorders	0.536
5.5	Developmental disorders	0.085
5.12	Substance related disorder	0.451
5.14	Screening & history of mental health and substance abuse codes	0.070

6.3	Paralysis	0.284
6.5	Headache, including migraine	0.046
6.9	Other nervous system disorders	0.070
7.1	Hypertension	0.063
7.2	Diseases of the heart	0.042
7.4	Diseases of arteries, arterioles, and capillaries	0.043
7.5	Diseases of veins and lymphatics	0.149
9.6	Lower gastrointestinal disorders	0.107
9.8	Liver disease	0.078
12.4	Other skin disorders	0.167
13.7	Systemic lupus erythematosus and connective tissue disorders	0.188
13.8	Other connective tissue disease	0.359
16.6	Open wounds	0.276
16.8	Superficial injury; contusion	0.078
16.11	Poisoning	0.156
16.12	Other injuries and conditions due to external causes	0.069

Spinal Decompression Without Fusion		
CCS Code	Factor	Weight
	Age (per year)	0.002
	Female	0.739
	Male	0.763
3.2	Diabetes mellitus without complications	0.056
3.8	Fluid and electrolyte disorders	0.139
3.11	Obesity	0.032
4.3	Diseases of the white blood cells	0.215
6.9	Other nervous system disorders	0.099
7.4	Diseases of the arteries, arterioles, and capillaries	0.077
8.2	Chronic obstructive pulmonary disease, bronchiectasis	0.092
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.192
13.2	Non traumatic joint disorders	0.052

Spinal Fusion		
CCS Code	Factor	Weight
	Age	0.001
	Female	0.816
	Male	0.839
3.8	Fluid and electrolyte disorders	0.064
3.11	Obesity	0.002
4.1	Anemia	0.120
4.3	Diseases of the white blood cells	0.075
5.12	Substance related disorders	0.005
6.9	Other nervous system disorders	0.056
8.5	Pleurisy; pneumothorax; pulmonary collapse	0.093
9.12	Other gastrointestinal disorders	0.038
13.6	Acquired deformities	0.056

Syncope Work-up		
CCS Code	Factor	Weight
	Age (per year)	0.006

	Female	0.289
	Male	0.289
3.8	Fluid and electrolyte disorders	0.417
6.8	Ear conditions	0.104
6.9	Other nervous system disorders	0.141
7.1	Hypertension	0.141
7.2	Diseases of the heart	0.349
7.3	Cerebrovascular disease	0.440
7.4	Diseases of the arteries, arterioles, and capillaries	0.102
9.6	Lower gastrointestinal disorders	0.152
9.8	Liver disease	0.139
16.4	Intracranial injury	0.087

Tonsillectomy		
CCS Code	Factor	Weight
	Female	0.725
	Male	0.776
3.8	Fluid and electrolyte disorders	0.143
3.11	Other nutritional, endocrine, and metabolic disorders	0.043
4.1	Anemia	0.192
4.2	Coagulation and hemorrhagic disorders	0.193
5.5	Developmental disorders	0.088
6.4	Epilepsy; convulsions	0.180
6.8	Ear conditions	0.144
6.9	Other nervous system disorders	0.051
7.4	Diseases of arteries, arterioles, and capillaries	0.097
8.3	Asthma	0.078
8.9	Other upper respiratory disease	0.043
9.12	Other gastrointestinal disorders	0.023
13.9	Other bone disease and musculoskeletal deformities	0.092
14.1	Cardiac and circulatory congenital anomalies	0.300
14.2	Digestive congenital anomalies	0.140
16.10	Complications	0.432

Total Joint Replacement		
CCS Code	Factor	Weight
	Female	0.922
	Male	0.933
1.1	Bacterial infection	0.130
3.4	Other endocrine disorders	0.038
3.5	Nutritional deficiencies	0.021
3.8	Fluid and electrolytes disorders	0.054
3.11	Other nutritional, endocrine, and metabolic disorders	0.009
6.9	Other nervous system disorders	0.046
13.7	Systemic lupus erythematosus and connective tissue disorders	0.074
13.9	Other bone disease and musculoskeletal deformities	0.016



## Appendix

*Developed at the Agency for Healthcare Research and Quality (AHRQ), the Clinical Classifications Software (CCS) is a hierarchical tool for clustering patient diagnoses into a manageable number of clinically meaningful categories. These categories map directly to ICD-9 and ICD-10 codes. Because the clinical classification is hierarchical, each level of factors includes the clinical categories lower in the hierarchy.*

*More information including an overview, complete mapping, and technical specifications for the CCS tool can be found at the following link: [Clinical Classifications Software \(CCS\) for ICD-10-CM/PCS](#).*