OPTUM360°®

Risk Adjustment Coding and HCC Guide

Simplifying the RA/HCC systems
and optimization opportunities

2021

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Contents

Introduction

The traditional fee-for-service payment model has been widely used since the 1930s when health insurance plans initially gained popularity within the United States. In this payment model, a provider or facility is compensated based on the services provided. This payment model has proven to be very expensive. Closer attention is being paid to healthcare spending versus outcomes and quality of care and this has been compared to the healthcare spending of other nations. This has caused a need to develop a system to evaluate the care being given.

In the 1970s, Medicare began demonstration projects that contracted with health maintenance organizations (HMO) to provide care for Medicare beneficiaries in exchange for prospective payments. In 1985, this project changed from demonstration status to a regular part of the Medicare program, Medicare Part C. The Balanced Budget Act (BBA) of 1997 named Medicare's Part C managed care program Medicare+Choice, and the Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003 again renamed it to Medicare Advantage (MA).

Medicare is one of the world's largest health insurance programs, and about one-third of the beneficiaries on Medicare are enrolled in an MA private healthcare plan. Due to the great variance in the health status of Medicare beneficiaries, risk adjustment provides a means of adequately compensating those plans with large numbers of seriously ill patients while not overburdening other plans that have healthier individuals. MA plans have been using the Hierarchical Condition Category (HCC) risk-adjustment model since 2004.

The primary purpose of a risk-adjustment model is to predict (on average) the future healthcare costs for specific consortiums enrolled in MA health plans. The Centers for Medicare and Medicaid Services (CMS) is then able to provide capitation payments to these private health plans. Capitation payments are an incentive for health plans to enroll not only healthier individuals but those with chronic conditions or who are more seriously ill by removing some of the financial burden.

The MA risk-adjustment model uses HCCs to assess the disease burden of its enrollees. HCC diagnostic groupings were created after examining claims data so that enrollees with similar disease processes, and consequently similar healthcare expenditures, could be pooled into a larger data set in which an average expenditure rate could be determined. The medical conditions included in HCC categories are those that were determined to most predictably affect the health status and healthcare costs of any individual.

Section of 1343 of the Affordable Care Act (ACA) of 2010 provides for a risk-adjustment program for non-Medicare Advantage plans that are available in online insurance exchange marketplaces. Beginning in 2014, commercial insurances were able to potentially mitigate increased costs for the insurance plan and increased premiums for higher-risk populations, such as those with chronic illnesses, by using a risk-adjustment model. The risk-adjustment program developed for use by non-Medicare plans is maintained by the Department of Health and Human Services (HHS). This model also uses HCC diagnostic groupings; however, this set of HCCs differs from the CMS-HCCs to reflect the differences in the populations served by each healthcare plan type.

This publication will cover the following:

- History and purpose of risk-adjustment factor (RAF)

- Key terms definitions

- Acceptable provider types

- Payment methodology and timeline

- Coding and documentation

Chapter 1. Risk Adjustment Basics

The need to track and report disease and causes of death was recognized in the 18th century. The various popular methodologies were compiled over the course of the First through Fifth International Statistical Institute Conferences in the 20th century; during the Sixth International Conference, the World Health Organization (WHO) was tasked with revising and maintaining the classifications of disease and death. In the 1930s health insurance coverage gained popularity. Many labor groups and companies started offering this type of benefit to their employees. In 1966, the American Medical Association (AMA) published the first edition of the Current Procedural Terminology (CPT®) to standardize the reporting of surgical procedures. This framework created the fee-for-service payment model, which is currently used.

The fee-for-service model, however, does not account for acuity or morbidity of its patients. A medically complex, chronically ill patient's healthcare provider would receive the same reimbursement for the same procedure done on a healthy patient.

In 1997, the Balanced Budget Act mandated that Medicare begin allowing participants to choose between traditional Medicare and managed Medicare plans (now Medicare Advantage), which would incorporate the risk-adjustment payment methodology no later than January 2000. Initially, these managed Medicare plans were paid a fixed dollar amount to care for Medicare members. In 2007, these MA plans were based 100 percent on risk adjustment. This better allocates resources to populations of medically needy patients.

Risk adjustment allows the Centers for Medicare and Medicaid Services (CMS) to pay plans for the risk of the beneficiaries they enroll, instead of an average amount for Medicare beneficiaries. By risk adjusting plan payments, CMS is able to make appropriate and accurate payments for enrollees with differences in expected costs. Risk adjustment is used to adjust bidding and payment based on the health status and demographic characteristics of an enrollee. Risk scores measure individual beneficiaries' relative risk and are used to adjust payments for each beneficiary's expected expenditures. By risk adjusting plan bids, CMS is able to use standardized bids as base payments to plans.

Key Terms

- **Hierarchical condition categories (HCC).** Groupings of clinically similar diagnoses in each risk-adjustment model. Conditions are categorized hierarchically and the highest severity takes precedence over other conditions in a hierarchy. Each HCC is assigned a relative factor that is used to produce risk scores for Medicare beneficiaries, based on the data submitted in the data collection period.

- **Medicare Advantage (MA) plan.** Sometimes called "Part C" or "MA plans," offered by private companies approved by Medicare. If a Medicare Advantage plan is selected by the enrollee, the plan will provide all of Part A (hospital insurance) and Part B (medical insurance) coverage. Medicare Advantage plans may offer extra coverage, such as vision, hearing, dental, and/or health and wellness programs. Most include Medicare prescription drug coverage (Part D).

- **Risk-adjustment factor (RAF).** Risk score assigned to each beneficiary based on his or her disease burden, as well as demographic factors.

- **Sweeps.** Submission deadline for risk adjustment data that occurs three times annually: January, March, and September. Generally, claims continue to be accepted for two weeks after the deadline.

HCC Compared to MS-DRG

Feature Payment groups	HCCs (Medicare, non RX) 79 HCCs	MS-DRGs 754 MS-DRGs
ICD-10-CM codes	Just over 10,000 have RAF value.	All ICD-10-CM codes have the potential to affect MS-DRG assignment. Some codes may result in an "ungroupable" MS-DRG.
ICD-10-CM codes are used in one payment group only	An ICD-10-CM code appears in only one HCC, with few exceptions.	Codes may be used in multiple MS-DRGs.
ICD-10-PCS codes	HCCs are not affected by ICD-10-PCS procedure codes.	Thousands of ICD-10-PCS codes, alone or in combination, can affect MS-DRG assignment.
Payment group assignment	An individual may have more than one HCC assigned.	Only one MS-DRG is assigned for each inpatient stay.
Codes used in payment	All HCCs are defined by diagnosis codes, typically chronic conditions.	MS-DRGs may include both procedures and diagnoses, both acute and chronic conditions.
Demographic factors used in payment	Age, sex, institutional status, disability, dual eligibility for Medicare and Medicaid.	Age, sex, discharge status.
Reporting time frame	HCCs are calculated over a year, using scores from all providers that have treated the patient in that time.	MS-DRGs capture one inpatient encounter at a time and for one single provider at a time.
Validation	Diagnostic codes reported must follow the coding conventions in the ICD-10-CM classification and the Tabular List and Alphabetic Index and they must adhere to the *ICD-10-CM Official Guidelines for Coding and Reporting*. Chronic diseases treated on an ongoing basis may be coded and reported as many times as the patient receives treatment/care for the condition(s). No sequencing is involved, and codes may be assigned for all properly documented conditions that coexist at the time of the encounter/visit, and require or affect patient care, treatment, or management. Some organizations use mnemonics such as MEAT (Monitor, Evaluate, Assess, Treatment) to assist with identifying reportable conditions.	Diagnostic codes reported must follow the coding conventions in the ICD-10-CM classification and the Tabular List and Alphabetic Index and they must adhere to the *ICD-10-CM Official Guidelines for Coding and Reporting*. Sequencing of Principal and Secondary diagnoses applies, and must meet the Uniform Hospital Discharge Data Set (UHDDS) definitions of Principal and Other Diagnoses.

• Hospital outpatient facilities

Type of Hospital Outpatient Facility
Short-term (general and specialty) hospitals
Medical assistance facilities/critical access hospitals
Community mental health centers
Federally qualified health centers/religious nonmedical healthcare institutions*[1]
Long-term hospitals
Rehabilitation hospitals
Children's hospitals
Rural health clinics, freestanding and provider-based*[2]
Psychiatric hospitals

* Facilities use a composite bill that covers both the physician and the facility component of the services rendered in these facilities that do not result in an independent physician claim.

1 Community mental health centers (CMHC) provide outpatient services, including specialized outpatient services for children, the elderly, individuals who are chronically ill, and residents of the CMHC's mental health services area who have been discharged from an inpatient treatment facility.

2 Federally qualified health centers (FQHC) are facilities located in a medically underserved area that provide Medicare beneficiaries with preventative primary medical care under the direction of a physician.

• Physicians

Code	Specialty	Code	Specialty	Code	Specialty
1	General practice	26	Psychiatry	67	Occupational therapist
2	General surgery	27**	Geriatric psychiatry	68	Clinical psychologist
3	Allergy/immunology	28	Colorectal surgery	72*	Pain management
4	Otolaryngology	29	Pulmonary disease	76*	Peripheral vascular disease
5	Anesthesiology	33*	Thoracic surgery	77	Vascular surgery
6	Cardiology	34	Urology	78	Cardiac surgery
7	Dermatology	35	Chiropractic	79	Addiction medicine
8	Family practice	36	Nuclear medicine	80	Licensed clinical social worker
9**	Interventional pain management (IPM)	37	Pediatric medicine	81	Critical care (intensivists)
10	Gastro-enterology	38	Geriatric medicine	82	Hematology
11	Internal medicine	39	Nephrology	83	Hematology/oncology
12	Osteopathic manipulative therapy	40	Hand surgery	84	Preventive medicine
13	Neurology	41	Optometry	85	Maxillofacial surgery
14	Neurosurgery	42	Certified nurse midwife	86	Neuro-psychiatry

*   Indicates that a number has been skipped.

** Added effective January 1, 2010, dates of service.

disease. These conditions are generally managed by ongoing medication and have the potential for acute exacerbations if not treated properly, particularly if the patient is experiencing other acute conditions. It is likely that these diagnoses would be part of a general overview of the patient's health when treating co-existing conditions for all but the most minor of medical encounters. Co-existing conditions also include ongoing conditions such as multiple sclerosis, hemiplegia, rheumatoid arthritis, and Parkinson's disease. Although they may not impact every minor healthcare episode, it is likely that patients having these conditions would have their general health status evaluated within a data reporting period, and these diagnoses would be documented and reportable at that time." Another type of co-existing condition is "symptoms." Symptoms that are integral to an underlying condition should not be coded.

With chronic or ongoing conditions, CMS acknowledges that there is a common error or issue with the use of "history of." The use of "history of" means the patient no longer has the condition and the diagnosis often indexes to an ICD-10-CM "Z" code, which does not map to an HCC category in most models. The documenting provider may designate a current condition as historical or designate a resolved condition as still active. It is important to carefully review all parts of the note for additional information about conditions that may affect care during the encounter. Conditions documented in any portion of the medical record should be evaluated and reported as appropriate. This includes conditions documented in the history of present illness or past history, if the condition is still current; exam, problem lists such as current, on-going, or active; the review of systems; and assessment and plan portions.

On-going Chronic Conditions

Within the *2008 Risk Adjustment Data Technical Assistance for Medicare Advantage Organizations Participant Guide*, CMS acknowledges that there are certain chronic conditions that are not expected to resolve and will continue to require medical management as well as impact future care, even for minor encounters or encounters for an unrelated issue. These conditions include:

- Congestive heart failure

- Chronic obstructive pulmonary disease

- Chronic hepatitis B

- Atherosclerosis of aorta

- Atherosclerosis of the extremities

- Psychiatric codes, even single episode (use remission identifier)

- Alcohol and drug dependency (even in remission)

- Diabetes

- Parkinson's disease

- Lupus (SLE)

- Rheumatoid arthritis (RA)

- Amputation status

- Functional artificial openings

- HIV/AIDS

Chapter 3. Audits and Quality Improvement

A chart audit is a detailed review of the medical record to determine if the services rendered match the services reported. In risk adjustment, this is ensuring that conditions reported are supported by valid medical records. Most often, audits are performed to ensure accuracy and compliance; however, quality improvement measure audits are increasingly popular.

It is advisable to regularly audit the documentation being used as well as the coding for risk adjustment to ensure compliance.

Step 1
Determine who will perform the audit. An internal audit is typically performed by coding staff within the practice that are proficient in coding and interpreting payer guidelines. Depending upon the size of the practice and the number of services provided annually, a compliance department with full-time auditors may be established. If not, the person performing the audit should not audit claims that he or she coded.

Step 2
Define the scope of the audit. Determine what types of services to include in the review. Use the most recent Office of Inspector General (OIG) Work Plan, recovery audit contractor (RAC) issues, and third-party payer provider bulletins, which will help identify areas that can be targeted for upcoming audits. Review the OIG Work Plan, which is now a web-based work plan updated monthly rather than yearly, to determine if there are issues of concern that apply to the practice. Determine specific coding issues or claim denials that are experienced by the practice. The frequency of coding or claims issues and potential effect on reimbursement or potential risk can help prioritize which areas should be reviewed. Services that are frequently performed or have complex coding and billing issues should also be reviewed, as the potential for mistakes or impact to revenue could be substantial.

Step 3
Determine the type of audit to be performed and the areas to be reviewed. Once the area of review is identified, careful consideration should be given to the type of audit performed. Reviews can be prospective or retrospective. If a service is new to the practice, or if coding and billing guidelines have recently been revised, it may be advisable to create a policy stating that a prospective review is performed on a specified number of claims as part of a compliance plan. The audit should include ensuring the medical record coded meets administrative requirements, such as patient name and date of service are on the record, accuracy of diagnosis codes, compliance of any queries generated, and whether the source document supports code assignment.

Step 4
Assemble reference materials. Reference materials, such as current editions of coding manuals and Centers for Medicare and Medicaid Services (CMS) or other third-party policies pertinent to the services being reviewed, should be collected.

Step 5
Develop customized data capture tools. Use an audit worksheet, see example on page 83. Audit worksheets can aid in the audit process. They help verify that signatures were obtained and that patient identifying information (e.g., complete name, date of birth) is correct.

Step 6
Develop a reporting mechanism for findings. Once the audit is complete, written recommendations should be made. The recommendations can include conducting a more frequent focused audit, implementing improved documentation templates, or conducting targeted education on ICD-10-CM coding. Each practice should have benchmarks set up that

Diagnosis Code	Description	CMS-HCC Model Category V24	HCC Description	CMS-HCC Hierarchies	Community, NonDual, Aged	Community, NonDual, Disabled	Community, FBDual, Aged	Community, FBDual, Disabled	Community, PBDual, Aged	Community, PBDual, Disabled	Institutional
C34.1Ø	Malignant neoplasm of upper lobe, unspecified bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.2	Malignant neoplasm of middle lobe, bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.3Ø	Malignant neoplasm of lower lobe, unspecified bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.8Ø	Malignant neoplasm of overlapping sites of unspecified bronchus and lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.9Ø	Malignant neoplasm of unspecified part of unspecified bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C37	Malignant neoplasm of thymus	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C38.Ø	Malignant neoplasm of heart	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C38.1	Malignant neoplasm of anterior mediastinum	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C38.2	Malignant neoplasm of posterior mediastinum	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C38.3	Malignant neoplasm of mediastinum, part unspecified	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C38.4	Malignant neoplasm of pleura	9	Lung and Other Severe Cancers	10, 11, 12	1.024	0.910	1.010	1.001	1.001	0.880	0.623
C38.8	Malignant neoplasm of overlapping sites of heart, mediastinum and pleura	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C39.Ø	Malignant neoplasm of upper respiratory tract, part unspecified	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C39.9	Malignant neoplasm of lower respiratory tract, part unspecified	11	Colorectal, Bladder, and Other Cancers	12	0.307	0.345	0.317	0.355	0.330	0.351	0.294
C4Ø.ØØ	Malignant neoplasm of scapula and long bones of unspecified upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461
C4Ø.Ø1	Malignant neoplasm of scapula and long bones of right upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461
C4Ø.Ø2	Malignant neoplasm of scapula and long bones of left upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461
C4Ø.1Ø	Malignant neoplasm of short bones of unspecified upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461
C4Ø.11	Malignant neoplasm of short bones of right upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461
C4Ø.12	Malignant neoplasm of short bones of left upper limb	10	Lymphoma and Other Cancers	11, 12	0.675	0.663	0.717	0.756	0.648	0.667	0.461

Diagnosis Code	Description	CMS-HCC Model Category V24	HCC Description	CMS-HCC Hierarchies	Community, NonDual, Aged	Community, NonDual, Disabled	Community, FBDual, Aged	Community, FBDual, Disabled	Community, PBDual, Aged	Community, PBDual, Disabled	Institutional
MØØ.159	Pneumococcal arthritis, unspecified hip	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.161	Pneumococcal arthritis, right knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.162	Pneumococcal arthritis, left knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.169	Pneumococcal arthritis, unspecified knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.171	Pneumococcal arthritis, right ankle and foot	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.172	Pneumococcal arthritis, left ankle and foot	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.179	Pneumococcal arthritis, unspecified ankle and foot	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.18	Pneumococcal arthritis, vertebrae	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.19	Pneumococcal polyarthritis	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.2Ø	Other streptococcal arthritis, unspecified joint	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.211	Other streptococcal arthritis, right shoulder	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.212	Other streptococcal arthritis, left shoulder	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.219	Other streptococcal arthritis, unspecified shoulder	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.221	Other streptococcal arthritis, right elbow	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.222	Other streptococcal arthritis, left elbow	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.229	Other streptococcal arthritis, unspecified elbow	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.231	Other streptococcal arthritis, right wrist	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.232	Other streptococcal arthritis, left wrist	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.239	Other streptococcal arthritis, unspecified wrist	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.241	Other streptococcal arthritis, right hand	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.242	Other streptococcal arthritis, left hand	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.249	Other streptococcal arthritis, unspecified hand	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.251	Other streptococcal arthritis, right hip	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.252	Other streptococcal arthritis, left hip	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.259	Other streptococcal arthritis, unspecified hip	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.261	Other streptococcal arthritis, right knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.262	Other streptococcal arthritis, left knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.269	Other streptococcal arthritis, unspecified knee	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401
MØØ.271	Other streptococcal arthritis, right ankle and foot	39	Bone/Joint/Muscle Infections/Necrosis		0.401	0.378	0.558	0.682	0.443	0.435	0.401

Disease Interactions

Disease Interactions	Description Label	Community, NonDual, Aged	Community, NonDual, Disabled	Community, FBDual, Aged	Community, FBDual, Disabled	Community, PBDual, Aged	Community, PBDual, Disabled	Institutional
HCC47_gCancer	Immune Disorders*Cancer	0.838	0.460	0.853	0.679	0.656	0.601	—
Diabetes_CHF	Congestive Heart Failure*Diabetes	0.121	0.024	0.192	0.043	0.113	—	0.169
CHF_gCopdCF	Congestive Heart Failure*Chronic Obstructive Pulmonary Disease	0.155	0.121	0.230	0.154	0.158	0.141	0.191
HCC85_gRenal_v24	Congestive Heart Failure*Renal	0.156	0.411	0.187	0.461	0.186	0.382	—
gCopdCF_CARD_RESP_FAIL	Cardiorespiratory Failure*Chronic Obstructive Pulmonary Disease	0.363	0.379	0.528	0.455	0.392	0.479	0.414
HCC85_HCC96	Congestive Heart Failure*Specified Heart Arrhythmias	0.085	0.282	0.138	0.361	0.101	0.303	—
gSubstanceUseDisorder_gPsych	Substance Use Disorder*Psychiatric	—	0.138	—	0.191	—	0.201	—
SEPSIS_PRESSURE_ULCER	Sepsis*Pressure Ulcer	—	—	—	—	—	—	0.155
SEPSIS_ARTIF_OPENINGS	Sepsis*Artificial Openings for Feeding or Elimination	—	—	—	—	—	—	0.474
ART_OPENINGS_PRESSURE_ULCER	Artificial Openings for Feeding or Elimination*Pressure Ulcer	—	—	—	—	—	—	0.359
gCopdCF_ASP_SPEC_BACT_PNEUM	Chronic Obstructive Pulmonary Disease*Aspiration and Specified Bacterial Pneumonias	—	—	—	—	—	—	0.216
ASP_SPEC_BACT_PNEUM_PRES_ULC	Aspiration and Specified Bacterial Pneumonias*Pressure Ulcer	—	—	—	—	—	—	0.472
SEPSIS_ASP_SPEC_BACT_PNEUM	Sepsis*Aspiration and Specified Bacterial Pneumonias	—	—	—	—	—	—	0.346
SCHIZOPHRENIA_gCopdCF	Schizophrenia*Chronic Obstructive Pulmonary Disease	—	—	—	—	—	—	0.417
SCHIZOPHRENIA_CHF	Schizophrenia*Congestive Heart Failure	—	—	—	—	—	—	0.127
SCHIZOPHRENIA_SEIZURES	Schizophrenia*Seizure Disorders and Convulsions	—	—	—	—	—	—	0.573

Disabled/Disease Interactions

Disabled/Disease Interactions	Description Label	Community, NonDual, Aged	Community, NonDual, Disabled	Community, FBDual, Aged	Community, FBDual, Disabled	Community, PBDual, Aged	Community, PBDual, Disabled	Institutional
DISABLED_HCC85	Disabled, Congestive Heart Failure	—	—	—	—	—	—	0.279
DISABLED_PRESSURE_ULCER	Disabled, Pressure Ulcer	—	—	—	—	—	—	0.544
DISABLED_HCC161	Disabled, Chronic Ulcer of the Skin, Except Pressure Ulcer	—	—	—	—	—	—	0.473
DISABLED_HCC39	Disabled, Bone/Joint Muscle Infections/Necrosis	—	—	—	—	—	—	0.456
DISABLED_HCC77	Disabled, Multiple Sclerosis	—	—	—	—	—	—	0.496
DISABLED_HCC6	Disabled, Opportunistic Infections	—	—	—	—	—	—	0.405