



Inpatient Psychiatric Facility Quality Reporting Program Claims-Based Measure Specifications

This document is a resource for the Inpatient Psychiatric Facility Quality Reporting (IPFQR) Program for the Centers for Medicare & Medicaid Services (CMS).

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Notices and Disclaimers

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Table of Contents

Section 1: Follow-Up After Hospitalization for Mental Illness (FUH) Measure Specifications – Version 1.0.....	1
Section 2: 30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (IPF) Measure Specifications – Version 1.1.....	8

Section 1: Follow-Up After Hospitalization for Mental Illness (FUH) Measure Specifications – Version 1.0

Description of Measure

This measure assesses the percentage of inpatient psychiatric facility (IPF) hospitalizations for treatment of select mental health disorders that were followed by an outpatient mental health care encounter. Two rates are reported:

- The percentage of discharges for which the patient received follow-up within 7 days of discharge
- The percentage of discharges for which the patient received follow-up within 30 days of discharge

The measurement period used to identify cases in the denominator is 11 months. The measurement year begins on July 1 and ends on May 30 of the following year. Data from July 1 through June 30 of the following year are used to identify follow-up visits in the numerator.

Facilities are not required to collect and submit data for this claims-based measure. CMS will calculate the measure using Part A and Part B claims data received by Medicare for payment purposes. CMS will calculate this measure by linking Medicare fee-for-service (FFS) claims submitted by IPFs and subsequent outpatient providers for Medicare FFS IPF discharges. This approach requires no additional data collection or reporting by IPFs. Completion of this measure does not affect an IPF's payment determination.

Numerator Statement

This measure estimates the number of discharges from a psychiatric facility that are followed by an outpatient mental health care encounter within 7 and 30 days. Outpatient mental health care encounters are defined as outpatient visits, intensive outpatient encounters, or partial hospitalization provided by a mental health provider. An outpatient mental health provider is defined as any of the following types of professionals listed in Table A1. All codes used to identify providers are found in Medicare outpatient/carrier files. Either a Medicare specialty code OR taxonomy code qualifies as a numerator hit. Specialty codes and taxonomy codes are aligned where appropriate with the mental health practitioners defined in the Healthcare Effectiveness Data and Information Set[®] (HEDIS[®]) 2018 specifications.

Table A1: Codes to identify mental health practitioners in Medicare

HEDIS® Definition of Mental Health Practitioner	Specialty Code	Taxonomy (Linked to National Provider Identifier [NPI])
An MD or DO who is certified as a psychiatrist or child psychiatrist	26	2084P0800X
Neurologist (not in original HEDIS specification)	13	2084V0102X; 2084N0400X 2084N0402X
An MD or DO who successfully completed an accredited program of graduate medical or osteopathic education in psychiatry or child psychiatry and is licensed to practice patient care psychiatry or child psychiatry	86	2084A0401X; 2084P0802X 2084B0002X; 2084N0600X 2084D0003X; 2084F0202X 2084P0805X; 2084H0002X 2084P0005X; 2084N0008X 2084P2900X; 2084P0015X 2084S0012X; 2084S0010X 2084P0804X
Licensed Psychologist	62	103T00000X; 103TA0400X 103TA0700X; 103TC0700X 103TC2200X; 103TB0200X 103TC1900X; 103TE1000X 103TE1100X; 103TF0000X 103TF0200X; 103TP2701X 103TH0004X; 103TH0100X 103TM1700X; 103TM1800X 103TP0016X; 103TP0814X 103TP2700X; 103TR0400X 103TS0200X; 103TW0100X
Certified in Clinical Social Work	80	1041C0700X
Psychiatric Nurse, Physician's Assistant, or Occupational Therapist		364SP0808X 364SP0809X 364SP0807X 364SP0810X 364SP0811X 364SP0812X 364SN0800X 364SP0813X 363LP0808X 225XM0800X

Outpatient visits, intensive outpatient encounters, and partial hospitalizations are defined by the Current Procedural Terminology (CPT®), Healthcare Common Procedure Coding System (HCPCS), and Uniform Billing (UB) Revenue codes listed in Table A2. A claim meeting any of the requirements in the table constitutes an outpatient visit.

Table A2. Codes to identify outpatient visits, intensive outpatient encounters, and partial hospitalizations

CPT		
90832-90834, 90836-90838, 90839-90840, 90867-90869, 98960-98962, 99078, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99383-99387, 99393-99397, 99401-99404, 99411, 99412, 99510		
HCPCS		
G0155, G0176, G0177, G0409-G0411, H0002, H0004, H0031, H0034-H0037, H0039, H0040, H2000, H2001, H2010-H2020, M0064, S0201, S9480, S9484, S9485		
CPT		Place of Service
90791, 90792, 90845, 90847, 90849, 90853, 90863, 90870, 90875, 90876, 99324-99328, 99381-99387	with	03, 05, 07, 09, 11, 12, 13, 14, 15, 20, 22, 24, 33, 49, 50, 52, 53, 71, 72
99221-99223, 99231-99233, 99238, 99239, 99251-99255	with	52, 53
CPT		Type of Service/Facility Type Classification (TYP SVC/FACTYP)
90791, 90792, 90845, 90847, 90849, 90853, 90863, 90870, 90875, 90876, 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99324-99328, 99381-99387	with	(TYP SVC = 2 or 3 and FACTYP = 1–6 or 9) OR FACTYP = 7 or 8
UB Revenue		
0513, 0900-0905, 0907, 0911-0917, 0919 – encounter does not need NPI taxonomy or Medicare specialty code for a mental health provider		
0510, 0515-0517, 0519-0523, 0526-0529, 0770, 0771, 0779, 0982, 0983 – if encounter does not have NPI taxonomy or Medicare specialty code for a mental health provider, encounter must be for a principal mental illness diagnosis		

Claims with codes for emergency room visits do not count toward the numerator and should be removed. Emergency room visits are defined by the following UB revenue, Healthcare Common Procedure Coding System (HCPCS), Berenson-Eggers type of service (BETOS), and Place of Service codes in Table A3.

Table A3. Codes to identify emergency room visits

UB Revenue	0450-0459, 0981
HCPCS	99281, 99282, 99283, 99284, 99285
Place of Service	23
BETOS	M3

Denominator Statement

The denominator includes discharges paid under the IPF prospective payment system (PPS) during the performance period for Medicare fee-for-service (FFS) patients with a principal diagnosis of mental illness. Specifically, the measure includes IPF discharges (Table A4) for which the patient was:

- Discharged with a principal diagnosis of mental illness that would necessitate follow-up care with a mental health professional.
 - Defined using the ICD-9-CM and ICD-10-CM codes and claim type listed in Table A5 and Table A6.
- Discharged alive to ensure they are eligible for follow-up care.
 - Defined as any Discharge Status Code other than “20” (expired).
- Enrolled in Medicare Parts A and B during the month of the discharge date and at least one month after the discharge date to ensure data are available to capture the index admission and follow-up visits.
 - Defined as having continuous (no gaps) Medicare Part A and Part B coverage with no Health Maintenance Organization (HMO). Therefore, the Entitlement Buy-in Indicator must be “3” or “C” and the HMO indicator must be “0” for both the month of discharge and the month following the discharge month for the IPF stay to qualify as continuous FFS.
- Six years of age or older on the date of discharge because follow-up with a mental health professional may not always be recommended for younger children.
 - Defined using date of birth from the CMS denominator file.

Table A4. Codes to identify eligible IPF discharges

Facility Codes (Medicare inpatient file)
• Last 4 digits of the CMS Certification Number (CCN) is 4000–4499 (Psychiatric Hospital excluded from PPS)
• 3rd digit of CCN is ‘S’ (distinct part Psychiatric Unit in an acute care hospital)
• 3rd digit of CCN ‘M’ (Psychiatric Unit in a Critical Access Hospital [CAH])
NOTE: A stay in any facility that meets one of the three criteria above and is a participant in the IPFQR Program at the time of measure calculation constitutes an eligible IPF stay.

Table A5. ICD-9-CM codes to identify principal mental illness diagnosis and inpatient acute care

Diagnosis Codes	AND	Claim Type
295 – Schizophrenic disorders 296 – Episodic mood disorders 297 – Delusional disorders 298 – Other nonorganic psychoses 299 – Pervasive developmental disorders 300.3 – Obsessive-compulsive disorders 300.4 – Dysthymic disorder 301 – Personality disorders 308 – Acute reaction to stress 309 – Adjustment reaction 311 – Depressive disorder, not elsewhere classified 312 – Disturbance of conduct not elsewhere classified 313 – Disturbance of emotions specific to childhood and adolescence 314 – Hyperkinetic syndrome of childhood	AND	60

Table A6. ICD-10-CM codes to identify principal mental illness diagnosis and inpatient acute care

Diagnosis Codes	Claim
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		Type
F20 – Schizophrenia	AND	60
F21 – Schizotypal disorder		
F22 – Delusional disorders		
F23 – Brief psychotic disorder		
F24 – Shared psychotic disorder		
F25 – Schizoaffective disorder		
F28 – Other psychotic disorder not due to a substance or known physiological condition		
F29 – Unspecified psychosis not due to a substance or known physiological condition		
F30 – Manic episode		
F31 – Bipolar disorder		
F32 – Major depressive disorder, single episode		
F33 – Major depressive disorder, recurrent		
F34 – Persistent mood (affective) disorders		
F39 – Unspecified mood affective - disorder		
F42 – Obsessive-compulsive disorder		
F43 – Reaction to severe stress, and adjustment disorders		
F44.89 - Other dissociative and conversion disorders		
F53 – Puerperal psychosis		
F60 – Personality disorder		
F63 – Impulse disorders		
F68 – Other disorders of adult personality and behavior		
F84 – Pervasive developmental disorders		
F90 – Attention-deficit hyperactivity disorder		
F91 – Conduct disorder		
F93 – Childhood emotional disorder		
F94 – Childhood social functioning disorder		

Medicare files are used to identify all exclusions. The denominator excludes discharges for patients with the following characteristics:

- Discharged during the twelfth month of the measurement period because complete follow-up information would not be available for index admissions during the twelfth month
- Admitted or transferred to acute care facilities within the 30-day follow-up period for non-psychiatric diagnoses because admission or transfer to other institutions may prevent an outpatient follow-up visit from taking place
 - Defined using the claim type and codes listed in Table A7. Each facility type must have both a claim type and one of the corresponding CCN, HCPCS, UB, or place of service (POS) codes if they are listed in the row for that facility type.
- Admitted or transferred to non-acute care facilities within the 30-day follow-up period for any diagnosis because admission or transfer to other institutions may prevent an outpatient follow-up visit from taking place.
 - Defined using the claim type and codes listed in Table A8. Each facility type must have both a claim type and one of the corresponding CCN, HCPCS, UB, or place of service (POS) codes if they are listed in the row for that facility type.
- Discharged or transferred to other institutions, including direct transfer to a prison, within the 30-day follow-up period because those patients may not have the opportunity for an outpatient follow-up visit.
 - Defined using the discharge codes listed in Table A8.
- Who died during the 30-day follow-up period because patients who expire may not have the

opportunity for an outpatient follow-up visit.

- Defined using the Medicare Enrollment File.

Table A7. Codes to identify admission or transfer to acute and non-acute inpatient facility

Description	File	Claim Type	Codes
Acute care admissions (IPF or acute care hospitals)	Medicare Inpatient	60	<u>CCN:</u> 3rd through 6th digit= 0001-0899 or 4000-4449 or 3rd digit=S, M
SNF, Hospice, Outpatient and HHA	Medicare SNF, Hospice, Outpatient or HHA	10, 20, 30, 40, 50	<u>UB Revenue:</u> 0115, 0125, 0135, 0145, 0155, 0650, 0656, 0658, 0659, 019x, 0118, 0128, 0138, 0148, 0158, 0655, 1002, 1001
SNF, Hospice, Outpatient and HHA	Medicare SNF, Hospice, Outpatient or HHA	10, 20, 30, 40, 50	<u>UB Type of Bill:</u> 81x, 82x, 21x, 22x, 28x, 18x
Psychiatric residential treatment center	Medicare Carrier	71	<u>HCPCS:</u> T2048, H0017-H0019
SNF, Hospice, inpatient rehab, respite, intermediate care facility, residential substance abuse and psychiatric treatment facilities	Medicare Carrier	71	<u>Place of Service (POS):</u> 31, 32, 34, 54, 55, 56, 61

Table A8. Codes to identify transfer/discharge to another institution

Description	Discharge Code (Medicare inpatient file)
Discharged/transferred to other short term general hospital for inpatient care	02
Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of covered skilled care - for hospitals with an approved swing bed arrangement, use Code 61 - swing bed. For reporting discharges/transfers to a non- certified SNF, the hospital must use Code 04 - ICF.	03
Discharged/transferred to intermediate care facility (ICF)	04
Discharged/transferred to another type of institution for inpatient care	05
Discharged/transferred to court/law enforcement	21
Discharged/transferred to a federal hospital	43
Hospice – Home	50
Hospice - medical facility	51
Discharged/transferred within this institution to a hospital-based Medicare approved swing bed	61
Discharged/transferred to an inpatient rehabilitation facility including distinct parts/units of a hospital	62
Discharged/transferred to a long-term care hospital	63
Discharged/transferred to a nursing facility certified under Medicaid but not under Medicare	64
Discharged/transferred to a psychiatric hospital or psychiatric distinct unit of a hospital	65
Discharged/transferred to a Critical Access Hospital	66
Discharged/transferred to another type of health care institution not defined elsewhere in code list	70

Section 2: 30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (IPF) Measure Specifications – Version 1.1

Description of Measure

This facility-level measure estimates an unplanned, 30-day, risk-standardized readmission rate for adult Medicare FFS patients with a principal discharge diagnosis of a psychiatric disorder or dementia/Alzheimer’s disease. The performance period used to identify cases in the denominator is 24 months. Data from the start of the performance period through 30 days after the close of the performance period are used to identify readmissions. Data from 12 months prior to the start of the performance period through the performance period are used to identify risk factors.

Numerator Statement

The risk-adjusted outcome measure does not have a traditional numerator and denominator. The numerator statement describes the outcome being measured. A readmission is defined as any admission, for any reason, to an IPF or a short-stay acute care hospital (including CAHs) that occurs within 30 days after the discharge date from an eligible index admission to an IPF, except those considered planned. The measure uses the CMS 30-day Hospital-Wide Readmission (HWR) Measure Planned Readmission Algorithm, Version 4.0. The planned readmission algorithm follows two principles to identify planned readmissions:

- Select procedures and diagnoses, such as transplant surgery, maintenance chemotherapy/radiotherapy/immunotherapy, rehabilitation, and forceps delivery, are considered always planned (Tables B1 and B2).
- Some procedures, such as colorectal resection or aortic resection, are considered either planned or unplanned depending on the accompanying principal discharge diagnosis (Table B3). Specifically, a procedure is considered planned if it does not coincide with a principal discharge diagnosis of an acute illness or complication (Table B4).

Table B1 Procedure categories that are always planned

Procedure CCS	Description
64	Bone marrow transplant
105	Kidney transplant
134	Cesarean section
135	Forceps; vacuum; and breech delivery
176	Other organ transplantation

Table B2. Diagnosis categories that are always planned

Diagnosis CCS	Description
45	Maintenance chemotherapy
194	Forceps delivery
196	Normal pregnancy and/or delivery
254	Rehabilitation

Table B3. Potentially planned procedure categories

Procedure CCS	Description
1	Incision and excision of CNS
3	Excision destruction or resection of intervertebral disc
5	Insertion of catheter or spinal stimulator and injection into spinal canal
9	Other OR therapeutic nervous system procedures
10	Thyroidectomy; partial or complete
12	Therapeutic endocrine procedures

Procedure CCS	Description
33	Other OR procedures on mouth and throat
36	Lobectomy or pneumonectomy
38	Other diagnostic procedures on lung and bronchus
40	Other diagnostic procedures of respiratory tract and mediastinum
43	Heart valve procedures
44	Coronary artery bypass graft (CABG)
45	Percutaneous transluminal coronary angioplasty (PTCA) with or without stent placement
49	Other OR heart procedures
51	Endarterectomy; vessel of head and neck
52	Aortic resection; replacement or anastomosis
53	Varicose vein stripping; lower limb
55	Peripheral vascular bypass
56	Other vascular bypass and shunt; not heart
59	Other OR procedures on vessels of head and neck
66	Procedures on spleen
67	Other procedures; hemic and lymphatic system
74	Gastrectomy; partial and total
78	Colorectal resection
79	Excision (partial) of large intestine (not endoscopic)
84	Cholecystectomy and common duct exploration
85	Inguinal and femoral hernia repair
86	Other hernia repair
99	Other OR gastrointestinal therapeutic procedures
104	Nephrectomy; partial or complete
106	Genitourinary incontinence procedures
107	Extracorporeal lithotripsy; urinary
109	Procedures on the urethra
112	Other OR therapeutic procedures of urinary tract
113	Transurethral resection of prostate (TURP)
114	Open prostatectomy
119	Oophorectomy; unilateral and bilateral
120	Other operations on ovary
124	Hysterectomy; abdominal and vaginal
129	Repair of cystocele and rectocele; obliteration of vaginal vault
132	Other OR therapeutic procedures; female organs
142	Partial excision bone
152	Arthroplasty knee
153	Hip replacement; total and partial
154	Arthroplasty other than hip or knee
158	Spinal fusion
159	Other diagnostic procedures on musculoskeletal system
166	Lumpectomy; quadrantectomy of breast
167	Mastectomy
170 (ICD-9-CM only)	Excision of skin lesion
172	Skin graft
175 (ICD-10-CM only)	Other OR therapeutic procedures on skin, subcutaneous tissue, fascia and breast
ICD procedure codes	Description
ICD-9-CM: 30.1, 30.29, 30.3, 30.4, 31.74, 34.6 ICD-10-PCS: 0CBS4ZZ, 0CBS7ZZ, 0CBS8ZZ, 0B5N0ZZ, 0B5N3ZZ, 0B5N4ZZ, 0B5P0ZZ, 0B5P3ZZ, 0B5P4ZZ,	Laryngectomy, revision of tracheostomy, scarification of pleura

Procedure CCS	Description
0BW10FZ, 0BW13FZ, 0BW14FZ	
ICD-9-CM: 38.18	Endarterectomy leg vessel
ICD-9-CM: 55.03, 55.04 ICD-10-PCS: 0TC03ZZ, 0TC04ZZ, 0TC13ZZ, 0TC14ZZ, 0TC33ZZ, 0TC34ZZ, 0TC43ZZ, 0TC44ZZ	Percutaneous nephrostomy with and without fragmentation
ICD-10-PCS: 0T9030Z, 0T9130Z	Kidney procedures
ICD-9-CM: 94.26, 94.27 ICD-10-PCS: GZB0ZZZ, GZB1ZZZ, GZB2ZZZ, GZB3ZZZ, GZB4ZZZ	Electroshock therapy

Table B4. Acute principal discharge diagnosis categories

Diagnosis CCS	Description
1	Tuberculosis
2	Septicemia (except in labor)
3	Bacterial infection; unspecified site
4	Mycoses
5	HIV infection
7	Viral infection
8	Other infections; including parasitic
9	Sexually transmitted infections (not HIV or hepatitis)
54	Gout and other crystal arthropathies
55	Fluid and electrolyte disorders
60	Acute posthemorrhagic anemia
61	Sickle cell anemia
63	Diseases of white blood cells
76	Meningitis (except that caused by tuberculosis or sexually transmitted disease)
77	Encephalitis (except that caused by tuberculosis or sexually transmitted disease)
78	Other CNS infection and poliomyelitis
82	Paralysis
83	Epilepsy; convulsions
84	Headache; including migraine
85	Coma; stupor; and brain damage
87	Retinal detachments; defects; vascular occlusion; and retinopathy
89	Blindness and vision defects
90	Inflammation; infection of eye (except that caused by tuberculosis or sexually transmitted disease)
91	Other eye disorders
92	Otitis media and related conditions
93	Conditions associated with dizziness or vertigo
99	Hypertension with complications and secondary hypertension
100 (ICD-9-CM only)	Acute myocardial infarction (with the exception of ICD-9 codes 410.x2)
102	Nonspecific chest pain
104	Other and ill-defined heart disease
107	Cardiac arrest and ventricular fibrillation
109	Acute cerebrovascular disease
112	Transient cerebral ischemia
116	Aortic and peripheral arterial embolism or thrombosis
118	Phlebitis; thrombophlebitis and thromboembolism

Diagnosis CCS	Description
120	Hemorrhoids
122	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)
123	Influenza
124	Acute and chronic tonsillitis
125	Acute bronchitis
126	Other upper respiratory infections
127	Chronic obstructive pulmonary disease and bronchiectasis
128	Asthma
129	Aspiration pneumonitis; food/vomitus
130	Pleurisy; pneumothorax; pulmonary collapse
131	Respiratory failure; insufficiency; arrest (adult)
135	Intestinal infection
137	Diseases of mouth; excluding dental
139	Gastroduodenal ulcer (except hemorrhage)
140	Gastritis and duodenitis
142	Appendicitis and other appendiceal conditions
145	Intestinal obstruction without hernia
146	Diverticulosis and diverticulitis
148	Peritonitis and intestinal abscess
153	Gastrointestinal hemorrhage
154	Noninfectious gastroenteritis
157	Acute and unspecified renal failure
159	Urinary tract infections
165	Inflammatory conditions of male genital organs
168	Inflammatory diseases of female pelvic organs
172	Ovarian cyst
197	Skin and subcutaneous tissue infections
198	Other inflammatory condition of skin
225	Joint disorders and dislocations; trauma-related
226	Fracture of neck of femur (hip)
227	Spinal cord injury
228	Skull and face fractures
229	Fracture of upper limb
230	Fracture of lower limb
232	Sprains and strains
233	Intracranial injury
234	Crushing injury or internal injury
235	Open wounds of head; neck; and trunk
237	Complication of device; implant or graft
238	Complications of surgical procedures or medical care
239	Superficial injury; contusion
240	Burns
241	Poisoning by psychotropic agents
242	Poisoning by other medications and drugs
243	Poisoning by nonmedicinal substances
244	Other injuries and conditions due to external causes
245	Syncope
246	Fever of unknown origin
247	Lymphadenitis
249	Shock
250	Nausea and vomiting
251	Abdominal pain
252	Malaise and fatigue
253	Allergic reactions
259	Residual codes; unclassified

Diagnosis CCS	Description
650	Adjustment disorders
651	Anxiety disorders
652	Attention-deficit, conduct, and disruptive behavior disorders
653	Delirium, dementia, and amnesic and other cognitive disorders
656	Impulse control disorders NEC
658	Personality disorders
660	Alcohol-related disorders
661	Substance-related disorders
662	Suicide and intentional self-inflicted injury
663	Screening and history of mental health and substance abuse codes
670	Miscellaneous mental health disorders
ICD Codes	Description
<p>ICD-9-CM: 032.82, 036.40, 036.41, 036.42, 036.43, 074.20, 074.21, 074.22, 074.23, 112.81, 115.03, 115.04, 115.13, 115.14, 115.93, 115.94, 130.3, 391.0, 391.1, 391.2, 391.8, 391.9, 392.0, 398.0, 398.90, 398.99, 420.0, 420.90, 420.91, 420.99, 421.0, 421.1, 421.9, 422.0, 422.90, 422.91, 422.92, 422.93, 422.99, 423.0, 423.1, 423.2, 423.3, 429.0</p> <p>ICD-10-CM: A36.81, A39.50, A39.51, A39.52, A39.53, B33.20, B33.21, B33.22, B33.23, B37.6, B58.81, I01.0, I01.1, I01.2, I01.8, I01.9, I02.0, I09.0, I09.89, I09.9, I30.0, I30.1, I30.8, I30.9, I31.0, I31.1, I31.2, I31.4, I32, I33.0, I33.9, I39, I40.0, I40.1, I40.8, I40.9, I41, I51.4</p>	Peri-; endo-; and myocarditis; cardiomyopathy
<p>ICD-10-CM: I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4</p>	Acute myocardial infarction (without subsequent MI)
<p>ICD-9-CM: 426.0, 426.10, 426.11, 426.12, 426.13, 426.2, 426.3, 426.4, 426.50, 426.51, 426.52, 426.53, 426.54, 426.6, 426.7, 426.81, 426.82, 426.9,</p>	Conduction disorders

Diagnosis CCS	Description
ICD-10-CM: I44.0, I44.1, I44.2, I44.30, I44.39, I44.4, I44.5, I44.60, I44.69, I44.7, I45.0, I45.10, I45.19, I45.2, I45.3, I45.4, I45.5, I45.6, I45.81, I45.9426.10	
ICD-9-CM: 427.2, 785.0, 427.89, 427.9, 427.69 ICD-10-CM: I47.9, I49.3, I49.49, I49.8, I49.9, R00.0, R00.1	Dysrhythmia
ICD-9-CM: 398.91, 428.0, 428.1, 428.20, 428.21, 428.23, 428.30, 428.31, 428.33, 428.40, 428.41, 428.43, 428.9 ICD-10-CM: I09.81, I50.1, I50.20, I50.21, I50.23, I50.30, I50.31, I50.33, I50.40, I50.41, I50.43, I50.9	Congestive heart failure; nonhypertensive
ICD-9-CM: 574.0, 574.00, 574.01, 574.3, 574.30, 574.31, 574.6, 574.60, 574.61, 574.8, 574.80, 574.81, 575.0, 575.12, 576.1 ICD-10-CM: K80.00, K80.01, K80.12, K80.13, K80.30, K80.31, K80.32, K80.33, K80.36, K80.37, K80.42, K80.43, K80.46, K80.47, K80.62, K80.63, K80.66, K80.67, K81.0, K81.2, K83.0	Biliary tract disease
ICD-9-CM: 577.0 ICD-10-CM: K85.0, K85.1, K85.2, K85.3, K85.8, K85.9	Pancreatic disorders

Denominator Statement

The risk-adjusted outcome measure does not have a traditional numerator and denominator. The denominator statement describes the target population for measurement. The target population for this measure is adult Medicare FFS beneficiaries discharged from an IPF. The measure is based on all eligible index admissions from the target population. A readmission within 30-days will also be eligible as an index admission, if it meets all other eligibility criteria. Patients may have more than one index admission within the measurement period.

The denominator includes admissions to IPFs for patients with the following characteristics:

- Age 18 or older at admission
- Discharged alive
- Enrolled in Medicare FFS Parts A and B during the 12 months prior to, the month of, and at least one month after the index admission
- Discharged with a psychiatric principal diagnosis included in one of the Agency for Healthcare Research and Quality (AHRQ) Clinical Classification Software (CCS) ICD groupings in Table B5. (More information on CCS groupings and grouping ICD codes into clinically coherent groups is available: <https://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp>.)

Table B5. Principal discharge diagnosis clinical categories designating psychiatric illness for measure cohort

Diagnosis CCS	Description
650	Adjustment disorders
651	Anxiety disorders
652	Attention-deficit, conduct, and disruptive behavior disorders
653	Delirium, dementia, and amnesic and other cognitive disorders
654	Developmental disorders
655	Disorders usually diagnosed in infancy, childhood, or adolescence
656	Impulse control disorders, NEC
657	Mood disorders
658	Personality disorders
659	Schizophrenia and other psychotic disorders
660	Alcohol-related disorders
661	Substance-related disorders
662	Suicide and intentional self-inflicted injury
663	Screening and history of mental health and substance abuse codes
670	Miscellaneous disorders

The denominator excludes admissions for patients with the following characteristics:

- Discharged against medical advice (AMA) because the IPF may have limited opportunity to complete treatment and prepare for discharge
- With unreliable demographic and vital status data defined as the following:
 - Age greater than 115 years
 - Missing gender
 - Discharge status of “dead” but with subsequent admissions

- Death date prior to admission date
- Death date within the admission and discharge dates but the discharge status was not “dead”
- With readmissions on the day of discharge or day following discharge because those readmissions are likely transfers to another inpatient facility. The hospital that discharges the patient to home or a non-acute care setting is accountable for subsequent readmissions.
- With readmissions two days following discharge because readmissions to the same IPF within two days of discharge are combined into the same claim as the index admission and do not appear as readmissions due to the interrupted stay billing policy. Therefore, complete data on readmissions within two days of discharge are not available.

Statistical Risk Model and Variables

Hierarchical logistic regression is used to estimate a risk standardized readmission rate.

Risk Factor Variables

Four types of risk factors are included in the model:

1. Demographics (Table B6)
2. Principal discharge diagnosis of the IPF index admission – Discharge diagnoses were summarized into 13 distinct principal discharge risk variables using a modified version of the AHRQ CCS groupings (Table B7).
3. Comorbidity risk variables – Identified from secondary diagnoses of the index admission when not considered a potential complication of care and primary or secondary diagnoses of inpatient and outpatient encounters during 12-months prior to the index admission using modified CMS condition categories (CC) (Table B8).
4. Other risk factor variables from the literature that are available in Medicare FFS claims (Table B9)

Table B6. Demographic Risk Factors

Risk Factor Name/Description
Gender: Male
Age
18–34
35–44
45–54
55–64
65–74
75–84
85+

Table B7. Modified AHRQ CCS (Version 2016.1) Groupings for Principal Discharge Diagnosis Risk Factors

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
650	650 Adjustment Disorder	650	650 Adjustment Disorders	ICD-9-CM: All ICD-9-CM codes from CCS 650 ICD-10-CM: All ICD-10-CM codes from CCS 650

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
651	651 Anxiety	651	651 Anxiety Disorders	<p>ICD-9-CM: All ICD-9-CM codes from CCS 651</p> <p>ICD-10-CM: F06.4, F40.00, F40.01, F40.02, F40.10, F40.11, F40.210, F40.218, F40.220, F40.228, F40.230, F40.231, F40.232, F40.233, F40.240, F40.241, F40.242, F40.243, F40.248, F40.290, F40.291, F40.298, F40.8, F40.9, F41.0, F41.1, F41.3, F41.8, F41.9, F42, F43.0, F43.10, F43.11, F43.12, F48.8, F48.9, R45.2, R45.7, R46.81</p>
652/654/655	ADD/ Developmental/ Childhood Disorders	652	Attention-Deficit, Conduct, and Disruptive Behavior Disorders	<p>ICD-9-CM: All ICD-9-CM codes from CCS 652, 654, and 655</p> <p>ICD-10-CM: F64.2, F70, F71, F72, F73, F78, F79, F80.0, F80.1, F80.2, F80.4, F80.81, F80.89, F80.9, F81.0, F81.2, F81.81, F81.89, F81.9, F82, F84.0, F84.2, F84.3, F84.5, F84.8, F84.9, F88, F89, F90.0, F90.1, F90.2, F90.8, F90.9, F91.0, F91.1, F91.2, F91.3, F91.8, F91.9, F93.0, F93.8, F93.9, F94.0, F94.1, F94.2, F94.8, F94.9, F95.0, F95.1, F95.2, F95.8, F95.9, F98.0, F98.1, F98.21, F98.29, F98.3, F98.4, F98.5, F98.8, F98.9, H93.25, R41.83, R48.0</p>
		654	Developmental Disorders	
		94	Other ear and sense organ disorders	
		655	Disorders Usually Diagnosed in Infancy, Childhood, or Adolescence	
653	Dementia	653	Delirium, Dementia, and Amnestic and Other Cognitive Disorders	<p>ICD-9-CM: All ICD-9-CM codes from CCS 653</p> <p>ICD-10-CM: F01.50, F01.51, F02.80, F02.81, F03.90, F03.91, F04, F05, F07.0, F07.81, F07.89, F07.9, F09, F48.2,</p>

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
				G30.0, G30.1, G30.8, G30.9, G31.01, G31.09, G31.1, G31.83, R41.81, R54
656	Impulse Control Disorders excludes R45.850	656	Impulse Control Disorders, NEC	ICD-9-CM: All ICD-9-CM codes from CCS 656 ICD-10-CM: All ICD-10-CM codes from CCS 656
657.1	Bipolar Disorder	657	Mood Disorders	ICD-9-CM: 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 296.90, 296.99 ICD-10-CM: F06.33, F06.34, F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F30.8, F30.9, F31.0, F31.10, F31.11, F31.12, F31.13, F31.2, F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.70, F31.71, F31.72, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.81, F31.89, F31.9, F34.0)

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
657.2/, 662	Depressive Disorder	657	Mood Disorders	ICD-9-CM: 293.83, 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 296.90, 296.99, 300.4, 311; ICD-10-CM: F06.30, F06.31, F06.32, F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F32.8, F32.9, F33.0, F33.1, F33.2, F33.3, F33.40, F33.41, F33.42, F33.8, F33.9, F34.1, F34.8, F34.9, F39, All ICD-10-CM codes from CCS 662
		662	Suicide and Intentional Self-Inflicted Injury	
658	Personality Disorder	658	Personality Disorders	ICD-9-CM: All ICD-9-CM codes from CCS 658 ICD-10-CM: F21, F60.0, F60.1, F60.2, F60.3, F60.4, F60.5, F60.6, F60.7, F60.81, F60.89, F60.9, F69
		659	Schizophrenia and Other Psychotic Disorders	
659.1	Schizo-Affective	659	Schizophrenia and Other Psychotic Disorders	ICD-9-CM: 295.70, 295.71, 295.72, 295.73, 295.74, 295.75

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
				ICD-10-CM: F250, F251, F258, F259
659.2	Psychosis	659	Schizophrenia and Other Psychotic Disorders	ICD-9-CM: 293.81, 293.82, 295.00, 295.01, 295.02, 295.03, 295.04, 295.05, 295.10, 295.11, 295.12, 295.13, 295.14, 295.15, 295.20, 295.21, 295.22, 295.23, 295.24, 295.25, 295.30, 295.31, 295.32, 295.33, 295.34, 295.35, 295.40, 295.41, 295.42, 295.43, 295.44, 295.45, 295.50, 295.51, 295.52, 295.53, 295.54, 295.55, 295.60, 295.61, 295.62, 295.63, 295.64, 295.65, 295.80, 295.81, 295.82, 295.83, 295.84, 295.85, 295.90, 295.91, 295.92, 295.93, 295.94, 295.95, 297.0, 297.1, 297.2, 297.3, 297.8, 297.9, 298.0, 298.1, 298.2, 298.3, 298.4, 298.8, 298.9 ICD-10-CM: F06.0, F06.2, F20.0, F20.1, F20.2, F20.3, F20.5, F20.81, F20.89, F20.9, F22, F23, F24, F28, F29)
660	Alcohol Disorders	243	Poisoning by Nonmedicinal Substances	ICD-9-CM: All ICD-9-CM codes from CCS 660
		660	Alcohol-Related Disorders	ICD-10-CM: All ICD-10-CM codes from CCS 660 and T51.0X1A, T51.0X3A, T51.0X4A
661	Drug Disorders	242	Poisoning by Other Medications and Drugs	ICD-9-CM: All ICD-9-CM codes from CCS 661

Modified CCS	Modified CCS	AHRQ CCS	AHRQ CCS Description	ICD-9-CM and ICD-10-CM Codes
		255	Administrative/Social Admission	ICD-10-CM: All ICD-10-CM codes from CCS 661 and T40.3X1A, T40.3X3A, T40.3X4A, T40.2X1A, T40.2X3A, T40.2X4A, T40.4X1A, T40.4X3A, T40.4X4A, T40.601A, T40.603A, T40.604A, T40.691A, T40.693A, T40.694A, Z71.41, Z71.42, Z71.51, Z71.52, Z7.16
		661	Substance-Related Disorders	
670/663	Other Mental Disorders	95	Other nervous system disorders	ICD-9-CM: All ICD-9-CM codes from CCS 663, 670 and 302.0 ICD-10-CM: All ICD-10-CM codes from CCS 663, 670 and G21.0, O99.340, O99.341, O99.342, O99.343, O99.344, O99.345, R45.0, R45.1, R45.3, R45.4, R45.5, R45.6, R45.81, R45.82, R45.83, R45.84, R45.850, R45.86, R46.0, R46.1, R46.2, R46.3, R46.4, R46.5, R46.6, R46.7, R46.89, R78.0, R78.1, R78.2, R78.3, R78.4, R78.5, R78.6
		181	Other complications of pregnancy	
		195	Other complications of birth; puerperium affecting management of mother	
		259	Residual codes; unclassified	
		651	Anxiety disorders	
		652	Attention-deficit conduct and disruptive behavior disorders	
		656	Impulse control disorders NEC	
		657	Mood disorders	
		670	Miscellaneous Disorders	
		663	Screening and History of Mental Health and Substance Abuse Codes	

Table B8. Modified CMS CC Version 22 Groupings for Comorbidity Risk Factors

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
Psychiatric					

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
50.1	Hallucinations	50	Delirium and Encephalopathy	Complication if not POA	ICD-9-CM: 780.1 ICD-10-CM: R44.0, R44.1, R44.2, R44.3
50.2	Other delirium disorders	50	Delirium and Encephalopathy	Complication if not POA	ICD-9-CM: 293, 293.0, 293.1, 293.8, 293.9, 323.7, 348.3, 293.81, 293.82, 293.83, 293.89, 323, 323.71, 348.30, 348.31, 348.39, 349.82, 368.16 ICD-10-CM: F06.8, F06.34, F06.33, F06.32, F06.31, F06.30, F06.2, F06.1, F06.0, H53.16, F05, G93.49, G93.41, G93.40, G92, F53, I67.83, R48.3
51-53	Dementia	51	Dementia with complication	---	ICD-9-CM: All ICD-9-CM codes in CC 51, 52, and 53 ICD-10-CM: All ICD-10-CM codes in CC 51, 52, and 53
		52	Dementia without complication	---	
		53	Senility, Nonpsychotic Organic Brain Syndromes/Conditions	---	
54	Drug/Alcohol Psychosis	54	Drug/Alcohol Psychosis	Complication if not POA	ICD-9-CM: All ICD-9-CM codes in CC 54 ICD-10-CM: All ICD-10-CM codes in CC 54

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
55-56	Drug/Alcohol dependence/abuse	55	Drug/Alcohol Dependence	---	<p>ICD-9-CM: All ICD-9-CM codes in CC 55 and CC 56 <i>excluding</i> 305.1</p> <p>ICD-10-CM: All ICD-10-CM codes in CC 55 and CC 56 <i>excluding</i> F17.200, F17.201, F17.203, F17.208, F17.209, F17.210, F17.211, F17.213, F17.218, F17.219, F17.220, F17.221, F17.223, F17.228, F17.229, F17.290, F17.291, F17.293, F17.298, F17.299</p>
		56	Drug/Alcohol Abuse, Without Dependence	---	
56.1	Nicotine dependence disorder	56	Drug/Alcohol Abuse, Without Dependence	---	<p>ICD-9-CM: 305.1</p> <p>ICD-10-CM: F17.200, F17.201, F17.203, F17.208, F17.209, F17.210, F17.211, F17.213, F17.218, F17.219, F17.220, F17.221, F17.223, F17.228, F17.229, F17.290, F17.291, F17.293, F17.298, F17.299</p>

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
57/58.3/59	Schizophrenia/psychosis	57	Schizophrenia	---	ICD-9-CM: All ICD-9-CM codes in CC 57 and CC 59 and 297, 297.0, 297.1, 297.2, 297.3, 297.8, 297.9
		58	Major Depressive, Bipolar, and Paranoid Disorders	---	
		59	Reactive and Unspecified Psychosis	---	ICD-10-CM: All ICD-10-CM codes in CC 57 and CC 59 and F22, F24
58.1	Bipolar	58	Major Depressive, Bipolar, and Paranoid Disorders	---	ICD-9-CM: 296, 296.0, 296.1, 296.4, 296.5, 296.6, 296.7, 296.8, 296.9, 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.80, 296.81, 296.82,

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
					296.89, 296.90, 296.99 ICD-10-CM: F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F30.8, F30.9, F31.0, F31.10, F31.11, F31.12, F31.13, F31.2, F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.70, F31.71, F31.72, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.81, F31.89, F31.9, F33.8, F34.8, F34.9, F39

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
58.2/61	Depressive Disorders	58	Major Depressive, Bipolar, and Paranoid Disorders		ICD-9-CM: All ICD-9-CM codes in CC 61 and 296.2, 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.3, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, E95, E95.0, E95.00, E95.01, E95.02, E95.03, E95.04, E95.05, E95.06, E95.07, E95.08, E95.09, E95.1, E95.10, E95.11, E95.18, E95.2, E95.20, E95.21, E95.28, E95.29, E95.3, E95.30, E95.31, E95.38, E95.39, E95.4, E95.5, E95.50, E95.51, E95.52, E95.53, E95.54, E95.55, E95.56, E95.57, E95.59, E95.6, E95.7, E95.70, E95.71, E95.72,
		61	Depression	---	

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
					E95.79, E95.8, E95.80, E95.81, E95.82, E95.83, E95.84, E95.85, E95.86, E95.87, E95.88, E95.89, E95.9 ICD-10-CM: F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F32.8, F32.9, F33.0, F33.1, F33.2, F33.3, F334.0, F334.1, F334.2, F33.9, F34.0, F34.1, X71.x- X83.x
60.1	Antisocial Disorders	60	Antisocial Disorders	---	ICD-9-CM: 301.7 ICD-10-CM: F60.2
60.2	Other Personality Disorders	60	Other personality disorders	---	ICD-9-CM: All ICD-9-CM codes in CC 60 <i>excluding</i> 301.7 ICD-10-CM: All ICD-10-CM codes in CC 60 <i>excluding</i> F60.2
62.1	Anxiety	50	Delirium and Encephalopathy	---	ICD-9-CM: 293.84, 300.1, 300.2, 300.3, 300.5, 300.7, 300.00, 300.01, 300.02, 300.09, 300.10,

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
		62	Anxiety Disorders	---	300.11, 300.16, 300.19, 300.20, 300.21, 300.22, 300.23, 300.29, 300.81, 300.82, 300.89, 307.1, 307.51, 313.0, 313.21, 313.22
		63	Other Psychiatric Disorders	---	ICD-10-CM: F06.4, F40.00, F40.01, F40.02, F40.10, F40.11, F40.210, F40.218, F40.220, F40.228, F40.230, F40.231, F40.232, F40.233, F40.240, F40.241, F40.242, F40.243, F40.248, F40.290, F40.291, F40.298, F40.8, F40.9, F41.0, F41.1, F41.3, F41.8, F41.9, F42, F44.2, F44.4, F44.5, F44.6, F44.7, F44.89, F44.9, F45.0, F45.1, F45.20, F45.21, F45.22, F45.29, F45.8, F45.9, F48.8, F50.00, F50.01, F50.02,
		68	Other Developmental Disability	---	

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
					F50.2, F68.10, F68.11, F68.12, F68.13
62.2	PTSD	62	Anxiety Disorders	---	ICD-9-CM: 309.81 ICD-10-CM: F43.10, F43.11, F43.12
63	Other Psychiatric Disorders	63	Other Psychiatric Disorders	---	ICD-9-CM: All ICD-9-CM codes in CC 63 <i>excluding</i> 300.00, 300.09, 300.5 ICD-10-CM: All ICD-10-CM codes in CC 63 <i>excluding</i> F41.3, F41.8, F41.9, F48.8
64-67	Intellectual Disability	64	Profound Mental Retardation/Developmental Disability	---	ICD-9-CM: All ICD-9-CM codes in CC 64, CC 65, CC 66, and CC 67 ICD-10-CM: All ICD-10-CM codes in CC 64, CC 65, CC 66, and CC 67
		65	Severe Mental Retardation/Developmental Disability	---	
		66	Moderate Mental Retardation/Developmental Disability	---	
		67	Mild/Unspecified Mental Retardation/Developmental Disability	---	
68-69	Developmental Disorders	68	Other Developmental Disability	---	ICD-9-CM: All ICD-9-CM codes in CC 68 and CC 69 <i>excluding</i> 313.0, 313.21, 313.22 ICD-10-CM: All ICD-10-CM codes in CC 68 and CC 69
		69	Attention Deficit Disorder	---	
Non-Psychiatric					
1	Other Infection	7	Other Infectious Diseases	X	ICD-9-CM: All ICD-9-CM codes from the
2	Metastasis	8	Metastatic Cancer and Acute	---	

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes	
3	Other Cancer	11	Colorectal, Bladder, and Other Cancers	---	<p>corresponding CMS CCs</p> <p>ICD-10-CM: All ICD-10-CM codes from the corresponding CMS CCs</p>	
		12	Breast, Prostate, and Other Cancers and Tumors	---		
4.1	Diabetes Acute Complications	17	Diabetes with Acute Complications	X		
4.2	Diabetes Chronic Complications	18	Diabetes with Chronic Complications	---		
5	Diabetes	19	Diabetes without complication	---		
		122	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage	---		
		123	Diabetic and Other Vascular Retinopathies	---		
6	Malnutrition	21	Protein-Calorie Malnutrition	---		
7	Hematological Disorder	46	Severe Hematological Disorders	---		
8	Paraplegia/ amputation	70	Quadriplegia	---		<p>ICD-9-CM: All ICD-9-CM codes from the corresponding CMS CCs</p> <p>ICD-10-CM: All ICD-10-CM codes from the corresponding CMS CCs</p>
		71	Paraplegia	---		
		72	Spinal Cord Disorders/Injuries	---		
		103	Hemiplegia/Hemiparesis	X		
		104	Monoplegia, Other Paralytic Syndromes	X		
		189	Amputation Status, Lower Limb/Amputation Complications	X		
		190	Amputation Status	---		
9	Seizures	79	Seizure Disorders and Convulsions	---		
10	Heart Failure	85	Congestive Heart Failure	X		
11	Arrhythmia	96	Specified Heart Arrhythmias	X		
		97	Other Heart Rhythm and Conduction Disorders	X		
12	Asthma	113	Asthma	---		
13	Dialysis	134	Dialysis Status	X		
14	Sepsis	2	Septicemia/Shock	X		
15	Endocrine Disease	23	Other Significant Endocrine and Metabolic Disorders	---		
		24	Disorders of Fluid/Electrolyte/Acid-Base Balance	X		

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
16	Anemia	49	Iron Deficiency and Other/Unspecified Anemias and Blood Disease	---	ICD-9-CM: All ICD-9-CM codes from the corresponding CMS CCs ICD-10-CM: All ICD-10-CM codes from the corresponding CMS CCs
17	Cardio-Respiratory Failure	84	Cardio-Respiratory Failure and Shock	X	
18	AMI	86	Acute Myocardial Infarction	X	
		87	Unstable Angina and Other Acute Ischemic Heart Disease	X	
19	Renal Failure	135	Acute Renal Failure	X	
		136	Chronic Kidney Disease, Stage 5	X	
		137	Chronic Kidney Disease, Severe (Stage 4)	X	
		138	Chronic Kidney Disease, Moderate (Stage 3)	X	
		139	Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified)	X	
		140	Unspecified Renal Failure	X	
20	Pancreatic Disease	34	Chronic Pancreatitis	---	
21	Urinary Tract Disorder	145	Other Urinary Tract Disorders	---	
22	Coagulation Defects	48	Coagulation Defects and Other Specified Hematological Disorders	X	
23	Peptic Ulcer	36	Peptic Ulcer, Hemorrhage, Other Specified Gastrointestinal Disorders	X	
24	Infection	1	HIV/AIDS	---	
		3	Bacterial, Fungal, and Parasitic Central Nervous System Infections	---	
		4	Viral and Late Effects Central Nervous System Infections	---	
		5	Tuberculosis	---	
		6	Opportunistic Infections	---	
		39	Bone/Joint/Muscle Infections/Necrosis	---	
		164	Cellulitis, Local Skin Infection	X	
25	Liver Disease	27	End-Stage Liver Disease	---	
		28	Cirrhosis of Liver	---	
		29	Chronic Hepatitis	---	
		30	Acute Liver Failure/Disease	X	

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
		31	Other Hepatitis and Liver Disease	---	
26	Heart Disease	89	Coronary Atherosclerosis/Other Chronic Ischemic Heart Disease	---	
		88	Angina Pectoris	---	
		94	Hypertensive Heart Disease	---	
		107	Vascular Disease with Complications	X	
		108	Vascular Disease	X	
		109	Other Circulatory Disease	X	
27	Cerebral Disease	99	Cerebral Hemorrhage	X	
		100	Ischemic or Unspecified Stroke	X	
		102	Cerebrovascular Atherosclerosis, Aneurysm, and Other Disease	---	
		105	Late Effects of Cerebrovascular Disease, Except Paralysis	---	
28	COPD/Fibrosis	111	Chronic Obstructive Pulmonary Disease	---	
		112	Fibrosis of Lung and Other Chronic Lung Disorders	---	
29	Skin Ulcer	157	Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone	X	
		158	Pressure Ulcer of Skin with Full Thickness Skin Loss	X	
		159	Pressure Ulcer of Skin with Partial Thickness Skin Loss	X	
		160	Pressure Pre-Ulcer Skin Changes or Unspecified Stage	X	
		161	Chronic Ulcer of Skin, Except Pressure	---	
30	Lung Problems	114	Aspiration and Specified Bacterial Pneumonias	X	

ICD-9-CM:
All ICD-9-CM codes from the corresponding CMS CCs

ICD-10-CM:
All ICD-10-CM codes from the

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
		115	Pneumococcal Pneumonia, Empyema, Lung Abscess	X	corresponding CMS CCs
		116	Viral and Unspecified Pneumonia, Pleurisy	X	
		117	Pleural Effusion/Pneumothorax	X	
		118	Other Respiratory Disorders	X	
31	Cancer	9	Lung and Other Severe Cancers	---	
		10	Lymphoma and Other Cancers	---	
		13	Other Respiratory and Heart Neoplasms	---	
		14	Other Digestive and Urinary Neoplasms	---	
32	Organ Transplant	186	Major Organ Transplant or Replacement Status	X	
		187	Other Organ Transplant Status/Replacement	X	
33	Uncompleted Pregnancy	151	Miscarriage/Terminated Pregnancy	---	
		155	Uncompleted Pregnancy with Complications	---	
		156	Uncompleted Pregnancy with No or Minor Complications	---	
34	Injury	162	Severe Skin Burn or Condition	---	
		163	Moderate Skin Burn or Condition	---	
		167	Major Head Injury	X	
		168	Concussion or Unspecified Head Injury	X	
		172	Internal Injuries	---	
		174	Other Injuries	X	
		175	Poisonings and Allergic and Inflammatory Reactions	X	
					ICD-9-CM: All ICD-9-CM codes from the corresponding CMS CCs

Modified CC	Modified CC Description	CMS CC	CMS CC Description	Complication	ICD-9-CM and ICD-10-CM Codes
					ICD-10-CM: All ICD-10-CM codes from the corresponding CMS CCs

Table B9. Other Risk Factors

Risk Factor Name/Description
Discharged AMA in prior 12 months
Not discharged AMA in prior 12 months
No admissions to determine AMA
Suicide attempt/self-harm