

**Quality Alliance Steering Committee
Episodes Work Group Meeting**

**Monday, January 5, 2009
1:00 – 2:00 EDT**

**Call-In Number: 888-870-8270
Pass Code: 202-797-6068**

Agenda

- **Welcome and Introductions** **Gregg Meyer/Chuck Cutler**
- **Review of congestive heart failure (CHF)
measure specifications** **Kevin Weiss**
- **Review of breast cancer work group
decisions** **Kevin Weiss**
- **Discussions with regional collaboratives** **Niall Brennan**
- **Wrap up and adjournment** **Gregg Meyer/Chuck Cutler**

Episode-of-Care for Chronic Management of CHF over 1-year Period

Measure Description

Resource use and costs associated with management of congestive heart failure (CHF) care over a one year period. Identify patients in a management phase of CHF by including patients with CHF in the year prior to the measurement year and measure CHF-related resource use and costs during the measurement year. Patients with new diagnoses of CHF and those with end stage disease are excluded from the measure. Costs of care are attributed to the physician providing the plurality of care for CHF during the measurement year.

Required Data Elements

Administrative claims data

Calculation

For patients meeting inclusion criteria, determine CHF-related resource use and costs over a one-year period in the measurement year. Prices from a standard price list will be applied to the CHF-related resource use to estimate the costs of the episode of care related to CHF. Resources will be defined for five categories: 1) inpatient facility; 2) evaluation and management; 3) procedure and laboratory; 4) pharmacy; and 5) other. Costs will be risk adjusted for age and comorbidities. For inpatient facility costs, the standard cost is based on a per diem cost for a DRG and will be multiplied by the length of stay for the index event. For each of the other resource use categories, standardized prices will be available for each of the unique codes available under the other categories.

Episode Definition

CHF-related care over a one year period.

Measures

- CHF-related resource use / costs
 - Inpatient Facility
 - Evaluation and Management
 - Procedure and Laboratory
 - Pharmacy
 - Other

Draft specifications—subject to change. Please do not cite or quote.

Eligible Population

Age	Patients at least 18 years of age or older
Enrollment Criteria	Continuous medical and pharmacy benefit enrollment for at least one year preceding the measurement year and during the measurement year, with no more than one gap in enrollment of more than 45 days during each year of continuous enrollment.
Inclusion Criteria	Patients included in the measure must have at least two ambulatory visits for CHF-related care with at least one visit > 1 month prior to the measurement year (See Table CHF-A for codes).
Exclusion	<p>Patients with stage D heart failure are excluded as assessed by the following (See Table CHF-C for codes):</p> <ul style="list-style-type: none"> a hospitalization within 6 months prior to the measurement year with 1) a primary diagnosis of CHF or 2) a secondary diagnosis of CHF with a primary cardiopulmonary diagnosis <p>Persons with any of the following diagnoses in the measurement year or the year prior to measurement are excluded (see Table CHF-C for codes):</p> <ul style="list-style-type: none"> active cancer; end stage renal disease (ESRD); dialysis; renal failure; organ transplant; HIV/AIDS; pregnancy; left ventricular assist device (LVAD); mechanical assist devices

Table CHF-A: Diagnostic Codes for CHF-Related Ambulatory Care to Identify CHF Patients

Description	ICD-9 Code
Rheumatic Heart Failure (congestive)	398.91
Malignant Hypertensive Heart Disease with CHF	402.01
Benign Hypertensive Heart Disease with CHF	402.11
Hypertensive Heart Disease with CHF	402.91
Hypertensive Heart and Renal Disease, Malignant, With CHF	404.01, 404.03, 404.11
Hypertensive Heart And Renal Disease, Benign, With CHF	404.13
Hypertensive Heart And Renal Disease, Unspecified, With CHF	404.91
Hypertensive Heart + Renal Failure, Unspecified, With CHF	404.93
Heart Failure	428
Congestive Heart Failure	428.0
Left Heart Failure	428.1
Systolic Heart Failure	428.2, 428.20, 428.22
Diastolic Heart Failure	428.3, 428.30, 428.32

Draft specifications—subject to change. Please do not cite or quote.

Combined Systolic and Diastolic Heart Failure	428.4
Combined Systolic and Diastolic Heart Failure, unspecified	428.40
Combined Systolic and Diastolic Heart Failure, chronic	428.42
Heart Failure, unspecified	428.9

Codes present in any diagnostic field during the measurement period and the year prior

Table CHF-B: Codes to Identify Categories of Service

Codes for CHF-Related and Cardiopulmonary-Related Services

Description	ICD-9 Code
Other symptoms involving cardiovascular system	785.9
Orthostatic hypotension	458.0
Hypotension nos	458.9
Abnormal cardiovascular study nos	794.30
Non-specific abnormal electrocardiogram	794.31
Abnormal cardiovascular study nec	794.39
Painful respiration	786.52
Abnormal sputum	786.4
Hemoptysis	786.3
Cough	786.2
Pulmonary congestion and hypostasis	514
Respiratory abnormality nos	786.00
Hyperventilation	786.01
Orthopnea	786.02
Apnea	786.03
Cheyne-stokes respiration	786.04
Tachypnea	786.06
Wheezing	786.07
Respiratory abnormality nec	786.09
Abnormal chest sounds	786.7
Other symptoms involving respiratory system and chest	786.9
Abnormal findings-lung field	793.1
Abnormal pulmonary function study	794.2
Cardiac dysrhythmias	427.
Paroxysmal atrial tachycardia	427.0
Paroxysmal tachycardia nos	427.2
Atrial fibrillation & flutter	427.3
Atrial fibrillation	427.31
Atrial flutter	427.32
Premature beats	427.6
Premature beats nos	427.60
Atrial premature beats	427.61
Premature beats nec	427.69
Other cardiac dysrhythmias	427.8
Sinoatrial node dysfunction	427.81
Cardiac dysrhythmias nec	427.89
Cardiac dysrhythmia nos	427.9
Tachycardia nos	785.0
Palpitations	785.1

Draft specifications—subject to change. Please do not cite or quote.

Electrolyte/fluid disorders nec	276.9
Volume depletion nos	276.50
Dehydration	276.51
Hyposmolality	276.1
Hypovolemia	276.5
Hyperpotassemia	276.7
Hypopotassemia	276.8
Hypovolemia	276.52
Fluid overload	276.6
Abnormal blood chemistry nec	790.6
Abnormal coagulation profile	790.92
Long-term use anticoagulants	V58.61
Rheumatic heart failure	398.91
Congestive heart failure	428.0
Shortness of breath	786.05
Left heart failure	428.1
Heart failure	428.
Systolic heart failure	428.2
Diastolic heart failure	428.3
Combined systolic and diastolic heart failure	428.4
Unspecified systolic heart failure	428.20
Chronic systolic heart failure	428.22
Unspecified diastolic heart failure	428.30
Chronic diastolic heart failure	428.32
Unspecified combined systolic & diastolic heart failure	428.40
Chronic combined systolic & diastolic heart failure	428.42
Heart failure nos	428.9
Edema	782.3
Acute systolic heart failure	428.21
Acute on chronic systolic heart failure	428.23
Acute diastolic heart failure	428.31
Acute on chronic diastolic heart failure	428.33
Acute combined systolic & diastolic heart failure	428.41
Acute chronic combined systolic & diastolic heart failure	428.43
Acute lung edema	518.4
Malignant hypertension heart/renal with chf	404.01
Malignant hypertension heart/renal with chf & rf	404.03
Benign hypertension heart/renal with chf	404.11
Benign hypertension heart/renal with chf & rf	404.13
Hypertension heart/renal nos with chf	404.91
Hypertension heart/renal nos with chf & rf	404.93
Malignant hypertension heart disorder with chf	402.01
Benign hypertension heart disorder w chf	402.11
Hypertension heart disorder w chf	402.91
Complicated implant card defib	996.04
Pleurisy w/o effusion or tb	511.0
Pleural effusion nos	511.9
Bacterial pleurisy/effusion not tb	511.1
Pleural effusion nec not tb	511.8
Chronic respiratory failure	518.83
Acute and chronic respiratory failure	518.84

Draft specifications—subject to change. Please do not cite or quote.

Respiratory failure	518.81
Other pulmonary insufficiency	518.82

Inpatient Facility Codes

Description	CPT	UB Revenue
Nonacute inpatient	99301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337	0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x
Acute inpatient	99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, 99291	010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987

Evaluation and Management Codes

Description	CPT Codes
Office or Other Outpatient Services	99201–99215
Hospital Observation Services	99217–99220
Hospital Inpatient Services	99221–99239
Consultations	99241–99275
Critical Care and Intensive Care Services	99289–99298
Nursing Facility, Domiciliary and Home Services	99301–99350
Case Management Services and Care Plan Oversight Services	99361–99380
Preventive Medicine Services	99381–99429
Other E&M Services	99450–99456, 99354–99357

Procedure and Laboratory

Description	CPT	HCPCs	ICD-9 Diagnosis	ICD-9 Procedure
Cholesterol	80061, 83700, 83701, 83704, 83718, 83719, 83721			
BNP blood test				
Cardiac catheterization	93539, 93540, 93555, 93556, 93501, 93503, 93510, 93511, 93514, 93524, 93526, 93527, 93528, 93529, 93539, 93540, 93555, 93556			
Chest x-ray	71010, 71015, 71020, 71021, 71022, 71023, 71030, 71034, 71035, 75756, 93542, 93543, 93545			
Coronary angiography	71275, 72191, 72198, 73225, 75635, 75898, 93508,			
Echocardiogram	93307, 93308, 93320, 93321,	A9900		
Electrocardiogram (ECG or EKG)	93000, 03005, 93010, 93012, 93014, 93040, 93041, 93042, 93224, 93225, 93226, 93227, 93230, 93231, 93232, 93236, 93237, 93270, 93272, 93278,			
Exercise stress test (cardiac stress test)	93015, 93016, 93017, 93018,			

Draft specifications—subject to change. Please do not cite or quote.

Holter monitor				
Nuclear heart scan				
Pharmacologic Stress Test	93024			
Cardiac output measurement	93561, 93562,			
Heart flow reserve measure	93571, 93572			

Pharmacy

Description	Medication				
Angiotensin converting enzyme (ACE) inhibitors	benazepril captopril	enalapril fosinopril	lisinopril moexipril	perindopril quinapril	ramipril trandolapril
Angiotensin II inhibitors	candesartan eprosartan	irbesartan losartan	olmesartan telmisartan	valsartan	
Diuretics					
Vasodilators					
Digoxin					
Beta Blockers	metoprolol		carvedilol		bisoprolol
Anticoagulants	warfarin		heparin		
Statins					
Calcium Channel Blockers					
Inotropes	Dobutamine		milrinone		
Anti-platelets					
CoQ10					
Atrocore					

CHF-related medications include ACE inhibitors, angiotensin II inhibitors, diuretics, vasodilators, digoxin, beta blockers, anticoagulants, statins, calcium channel blockers, and inotropes.

Codes for Durable Medication Equipment

Description	CPT	HCPCS	ICD-9-CM Diagnosis
Oxygen therapy rx		4030F	
C-PAP		E0601, E0601, A7034, A7032, A7030, A7031, A7044, A7046, A7037, A7038, A7039, A7035, A7033, A7036, E0561, E0562, E0470, KO532	

Table CHF-C: Codes to Identify Exclusions

Codes for Inpatient CHF-Related Care

Description	ICD-9 Code
Rheumatic Heart Failure (congestive)	398.91
Malignant Hypertensive Heart Disease with CHF	402.01

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Benign Hypertensive Heart Disease with CHF	402.11
Hypertensive Heart Disease with CHF	402.91
Hypertensive Heart and Renal Disease, Malignant, With CHF	404.01, 404.03, 404.11
Hypertensive Heart And Renal Disease, Benign, With CHF	404.13
Hypertensive Heart And Renal Disease, Unspecified, With CHF	404.91
Hypertensive Heart + Renal Disease, Unspecified, With CHF	404.93
Heart Failure	428
Congestive Heart Failure	428.0
Left Heart Failure	428.1
Systolic Heart Failure	428.2, 428.20, 428.22
Diastolic Heart Failure	428.3, 428.30, 428.32
Acute systolic heart failure	428.21
Acute on chronic systolic heart failure	428.23
Acute diastolic heart failure	428.31
Acute on chronic diastolic heart failure	428.33
Acute combined systolic & diastolic heart failure	428.41
Acute chronic combined systolic & diastolic heart failure	428.42
Acute lung edema	518.4

Codes present in the primary diagnostic field within 6 month period prior to the measurement year or as a secondary diagnosis with primary cardiopulmonary-related diagnosis.

Codes for Inpatient Cardiopulmonary-Related Care

Description	ICD-9 Code
Other symptoms involving cardiovascular system	785.9
Orthostatic hypotension	458.0
Hypotension nos	458.9
Abnormal cardiovascular study nos	794.30
Non-specific abnormal electrocardiogram	794.31
Abnormal cardiovascular study nec	794.39
Painful respiration	786.52
Abnormal sputum	786.4
Hemoptysis	786.3
Cough	786.2
Pulmonary congestion and hypostasis	514
Respiratory abnormality nos	786.00
Hyperventilation	786.01
Orthopnea	786.02
Apnea	786.03
Cheyne-stokes respiration	786.04
Tachypnea	786.06
Wheezing	786.07
Respiratory abnormality nec	786.09
Abnormal chest sounds	786.7
Other symptoms involving respiratory system and chest	786.9
Abnormal findings-lung field	793.1
Abnormal pulmonary function study	794.2
Cardiac dysrhythmias	427.

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Paroxysmal atrial tachycardia	427.0
Paroxysmal tachycardia nos	427.2
Atrial fibrillation & flutter	427.3
Atrial fibrillation	427.31
Atrial flutter	427.32
Premature beats	427.6
Premature beats nos	427.60
Atrial premature beats	427.61
Premature beats nec	427.69
Other cardiac dysrhythmias	427.8
Sinoatrial node dysfunct	427.81
Cardiac dysrhythmias nec	427.89
Cardiac dysrhythmia nos	427.9
Tachycardia nos	785.0
Palpitations	785.1
Electrolyte/fluid disorders nec	276.9
Volume depletion nos	276.50
Dehydration	276.51
Hyposmolality	276.1
Hypovolemia	276.5
Hyperpotassemia	276.7
Hypopotassemia	276.8
Hypovolemia	276.52
Fluid overload	276.6
Abnormal blood chemistry nec	790.6
Abnormal coagulation profile	790.92
Long-term use anticoagulants	V58.61
Rheumatic heart failure	398.91
Shortness of breath	786.05
Diastolic heart failure	428.3
Combined systolic and diastolic heart failure	428.4
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Acute chronic combined systolic & diastolic heart failure	428.43
Complicated implant cardiac defib	996.04
Pleurisy w/o effusion not tb	511.0
Pleurisy effusion nos	511.9
Bacterial pleurisy/effusion not tb	511.1
Pleural effusion nec not tb	511.8
Chronic respiratory failure	518.83
Acute and chronic respiratory failure	518.84
Respiratory failure	518.81
Other pulmonary insufficiency	518.82

Codes to Identify Active Cancer Treatment

Description	ICD-9-CM Diagnosis
Cancer	140-208, 230-239

Draft specifications—subject to change. Please do not cite or quote.

WITH

Description	CPT	ICD-9-CM Procedure	UB Revenue
Treatment	38230, 38240-38242, 77261-77799, 79000-79999, 96400-96549	41.0, 41.91, 92.2	028x, 033x, 0342, 0344, 0973

Codes to Identify ESRD

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue	UB Type of Bill	POS
ESRD (including renal dialysis)	36145, 36800-36821, 36831-36833, 90919-90921, 90923-90925, 90935, 90937, 90939, 90940, 90945, 90947, 90989, 90993, 90997, 90999, 99512	G0257, G0311-G0319, G0321-G0323, G0325-G0327, G0392, G0393, S9339	585.5, 585.6, V42.0, V45.1, V56	38.95, 39.27, 39.42, 39.43, 39.53, 39.93, 39.94, 39.95, 54.98	080x, 082x-085x, 088x	72x	65

Codes to Identify Organ Transplant

Description	CPT	HCPCS	ICD-9-CM Procedure	UB Revenue
Organ transplant	32850-32856, 33930-33945, 44132-44137, 44715-44721, 47133-47147, 48160, 48550-48556, 50300-50380	S2152, S2053-S2055, S2060, S2061, S2065	33.5, 33.6, 37.5, 41.94, 46.97, 50.5, 52.8, 55.6	0362, 0367, 0810-0813, 0819

Codes to Identify HIV

Description	ICD-9-CM Diagnosis
HIV	042

Codes to Identify Pregnancy

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue
Normal Pregnancy			V22.x		
Treat ectopic pregnancy	59120, 59121, 59130, 59135, 59136, 59140, 59150, 59151				
D & C after delivery	59160				
Insertion of cervical dilator	59200				
Episiotomy or vaginal repair	59300				
Revision of cervix	59320, 59325				
Repair of uterus	59350				
Obstetrical care	59400, 59409, 59410				

Antepartum manipulation	59412				
Deliver placenta	59414				
Antepartum care only	59425, 59426				
Care after delivery	59510, 59514, 59515, 59525				
Vbac delivery	59610, 59612, 59614				
Attempted vbac delivery	59618, 59620, 59622				
Treatment of miscarriage	59812, 59820, 59821				
Treat uterus infection	59830				
Abortion	59840, 59841, 59850, 59851, 59852, 59855, 59856, 59857, 59866				
Remove cerclage suture	59871				
Fetal invas px w/us	59897				
Laparo proc, ob care/deliver	59898				
Maternity care procedure	59899				
Ob us < 14 wks	76801, 76802				
Ob us >= 14 wks	76805, 76810				
Ob us	76811, 76812, 76813, 76814, 76815, 76816,				
Transvaginal us	76817				
Fetal biophys profile	76818, 76819				
Umbilical artery echo	76820				
Middle cerebral artery echo	76821				
Echo exam of fetal heart	76825				
Anesthesia	01958, 01960, 01961				
Complications of pregnancy, childbirth, and the puerperium			630-676		

Codes for Mechanical Assist Devices

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure
Left Ventricular Assist Device (LVAD)	0048T, 0049T, 33975, 33976, 33977, 33978, 33979, 33980	Q0491, Q0492, Q0493, Q0494, Q0495, Q0496, Q0497, Q0498, Q0499, Q0500, Q0501, Q0502, Q0503, Q0504, Q0505		37.66

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Balloon Valvuloplasty Catheter				
Enhanced Counterpulsation (ECP) Device				
Intra-aortic Balloon Pump (IABP)				
Prosthetic Heart Valve				
Biventricular Cardiac Pacemaker	33213, 33224, 33225, 33226, 33240, 33241, 33249, 33211			
ICD (Implantable Cardioverter Defibrillator) Implantation				

Risk Adjustment Method

Comorbid conditions identified as HCCs in 12 months preceding event date using inpatient and outpatient ICD-9 codes.

Episode Severity / Disease Staging

TBD

Outlier Methodology

TBD

Sample Size Requirements for Individual Physician Measurement

TBD

Level of Measurement/Analysis

Measurement will take place at the level of the individual physician. Attribution of resource use and costs for a patient will be assigned to the physician that is responsible for the plurality of the CHF-related care for a patient. To determine the plurality of care, all E&M codes for CHF care on separate dates during the measurement year will be identified and the physician with the highest number of those visits will be assigned the resource use and costs. If less than 30% of CHF-related care is provided by a single physician then the resource use and costs for that individual is not assigned to any provider.

Note: Portions of these measure specifications are based on existing HEDIS and Prometheus measure specifications.

Draft specifications—subject to change. Please do not cite or quote.

Episode-of-Care for Post Hospitalization Management of CHF over 4-Month Period

Measure Description

Resource use and costs associated with management of congestive heart failure (CHF) care over a 4-month period post discharge from a hospitalization for CHF. Identify patients in a management phase of CHF by including patients with a diagnosis of CHF in the 1 to 6-month period prior to admission and measure CHF-related resource use and costs during the 4-month period after discharge. Patients with new diagnoses of CHF and those with end stage disease are excluded from the measure. Costs of care are attributed to the physician providing the plurality of CHF-related care during the 4-month post-discharge period.

Required Data Elements

Administrative claims data

Calculation

For patients meeting inclusion criteria, determine CHF-related resource use and costs over a 4-month period post-discharge from a hospitalization for CHF. Prices from a standard price list will be applied to the CHF-related resource use to estimate the costs of the episode of care related to CHF. Resources will be defined for five categories: 1) inpatient facility; 2) evaluation and management; 3) procedure and laboratory; 4) pharmacy; and 5) other. Costs will be risk adjusted for age and comorbidities. For inpatient facility costs, the standard cost is based on a per diem cost for a DRG and will be multiplied by the length of stay for the event. For each of the other resource use categories, standardized prices will be available for each of the unique codes available under the other categories.

Episode Definition

CHF-related care over a 4-month period post-discharge from a hospitalization for CHF (see Table CHF-A for codes).

Measures

- CHF-related resource use / costs
 - Inpatient Facility
 - Evaluation and Management
 - Procedure and Laboratory

Draft specifications—subject to change. Please do not cite or quote.

- Pharmacy
- Other

Eligible Population

Age	Patients at least 18 years of age or older
Enrollment Criteria	Continuous medical and pharmacy benefit enrollment for at least a 24-month period, with no more than one gap in enrollment of more than 45 days during each year of continuous enrollment.
Inclusion Criteria	Patients included in the measure must have at least 1 ambulatory visit for CHF-related care (See Table CHF-B for codes) during the period between 1 and 6 months prior to the admission, not including the period within 1 month prior to the admission for CHF (See Table CHF-A for codes).
Exclusion	<p>Patients with stage D heart failure are excluded as assessed by the following (See Table CHF-D for codes):</p> <ul style="list-style-type: none"> a hospitalization within 6 months prior to the triggering hospitalization with 1) a primary diagnosis of CHF or 2) a secondary diagnosis of CHF with a primary cardiopulmonary diagnosis <p>Persons with any of the following diagnoses during the 6-month period prior to or the 4-month period after the admission are excluded (see Table CHF-D for codes):</p> <ul style="list-style-type: none"> active cancer; end stage renal disease (ESRD); dialysis; renal failure; organ transplant; HIV/AIDS; pregnancy; left ventricular assist device (LVAD); mechanical assist devices

Table CHF-A: Diagnostic Codes for CHF-Related Inpatient Care to Trigger the Episode of Care

Description	ICD-9 Code
Rheumatic Heart Failure (congestive)	398.91
Malignant Hypertensive Heart Disease with CHF	402.01
Benign Hypertensive Heart Disease with CHF	402.11
Hypertensive Heart Disease with CHF	402.91
Hypertensive Heart and Renal Disease, Malignant, With CHF	404.01, 404.03, 404.11
Hypertensive Heart And Renal Disease, Benign, With CHF	404.13
Hypertensive Heart And Renal Disease, Unspecified, With CHF	404.91

Draft specifications—subject to change. Please do not cite or quote.

Hypertensive Heart + Renal Disease, Unspecified, With CHF	404.93
Heart Failure	428
Congestive Heart Failure	428.0
Left Heart Failure	428.1
Systolic Heart Failure	428.2, 428.20, 428.22
Diastolic Heart Failure	428.3, 428.30, 428.32
Combined Systolic and Diastolic Heart Failure	428.4
Combined Systolic and Diastolic Heart Failure, unspecified	428.40
Combined Systolic and Diastolic Heart Failure, chronic	428.42
Heart Failure, unspecified	428.9
Acute systolic heart failure	428.21
Acute on chronic systolic heart failure	428.23
Acute diastolic heart failure	428.31
Acute on chronic diastolic heart failure	428.33
Acute combined systolic & diastolic heart failure	428.41
Acute chronic combined systolic & diastolic heart failure	428.42
Acute lung edema	518.4

Codes present in the primary diagnostic field from the beginning of the measurement year to 4 months before the end of the measurement year.

Table CHF-B: Diagnostic Codes for CHF-Related Ambulatory Care to Identify Established CHF Patients

Description	ICD-9 Code
Rheumatic Heart Failure (congestive)	398.91
Malignant Hypertensive Heart Disease with CHF	402.01
Benign Hypertensive Heart Disease with CHF	402.11
Hypertensive Heart Disease with CHF	402.91
Hypertensive Heart and Renal Disease, Malignant, With CHF	404.01, 404.03, 404.11
Hypertensive Heart And Renal Disease, Benign, With CHF	404.13
Hypertensive Heart And Renal Disease, Unspecified, With CHF	404.91
Hypertensive Heart + Renal Failure, Unspecified, With CHF	404.93
Heart Failure	428
Congestive Heart Failure	428.0
Left Heart Failure	428.1
Systolic Heart Failure	428.2, 428.20, 428.22
Diastolic Heart Failure	428.3, 428.30, 428.32
Combined Systolic and Diastolic Heart Failure	428.4
Combined Systolic and Diastolic Heart Failure, unspecified	428.40
Combined Systolic and Diastolic Heart Failure, chronic	428.42
Heart Failure, unspecified	428.9

Codes present in any diagnostic field between 1 and 6 months prior to the admission for CHF, not including the period within 1 month prior to the admission.

Draft specifications—subject to change. Please do not cite or quote.

Table CHF-C: Codes to Identify Categories of Service

Codes for CHF-Related and Cardiopulmonary-Related Services

Description	ICD-9 Code
Other symptoms involving cardiovascular system	785.9
Orthostatic hypotension	458.0
Hypotension nos	458.9
Abnormal cardiovascular study nos	794.30
Non-specific abnormal electrocardiogram	794.31
Abnormal cardiovascular study nec	794.39
Painful respiration	786.52
Abnormal sputum	786.4
Hemoptysis	786.3
Cough	786.2
Pulmonary congestion and hypostasis	514
Respiratory abnormality nos	786.00
Hyperventilation	786.01
Orthopnea	786.02
Apnea	786.03
Cheyne-stokes respiration	786.04
Tachypnea	786.06
Wheezing	786.07
Respiratory abnormality nec	786.09
Abnormal chest sounds	786.7
Other symptoms involving respiratory system and chest	786.9
Abnormal findings-lung field	793.1
Abnormal pulmonary function study	794.2
Cardiac dysrhythmias	427.
Paroxysmal atrial tachycardia	427.0
Paroxysmal tachycardia nos	427.2
Atrial fibrillation & flutter	427.3
Atrial fibrillation	427.31
Atrial flutter	427.32
Premature beats	427.6
Premature beats nos	427.60
Atrial premature beats	427.61
Premature beats nec	427.69
Other cardiac dysrhythmias	427.8
Sinoatrial node dysfunction	427.81
Cardiac dysrhythmias nec	427.89
Cardiac dysrhythmia nos	427.9
Tachycardia nos	785.0
Palpitations	785.1
Electrolyte/fluid disorders nec	276.9
Volume depletion nos	276.50
Dehydration	276.51
Hyposmolality	276.1
Hypovolemia	276.5
Hyperpotassemia	276.7
Hypopotassemia	276.8
Hypovolemia	276.52

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Fluid overload	276.6
Abnormal blood chemistry nec	790.6
Abnormal coagulation profile	790.92
Long-term use anticoagulants	V58.61
Rheumatic heart failure	398.91
Congestive heart failure	428.0
Shortness of breath	786.05
Left heart failure	428.1
Heart failure	428.
Systolic heart failure	428.2
Diastolic heart failure	428.3
Combined systolic and diastolic heart failure	428.4
Unspecified systolic heart failure	428.20
Chronic systolic heart failure	428.22
Unspecified diastolic heart failure	428.30
Chronic diastolic heart failure	428.32
Unspecified combined systolic & diastolic heart failure	428.40
Chronic combined systolic & diastolic heart failure	428.42
Heart failure nos	428.9
Edema	782.3
Acute systolic heart failure	428.21
Acute on chronic systolic heart failure	428.23
Acute diastolic heart failure	428.31
Acute on chronic diastolic heart failure	428.33
Acute combined systolic & diastolic heart failure	428.41
Acute chronic combined systolic & diastolic heart failure	428.43
Acute lung edema	518.4
Malignant hypertension heart/renal with chf	404.01
Malignant hypertension heart/renal with chf & rf	404.03
Benign hypertension heart/renal with chf	404.11
Benign hypertension heart/renal with chf & rf	404.13
Hypertension heart/renal nos with chf	404.91
Hypertension heart/renal nos with chf & rf	404.93
Malignant hypertension heart disorder with chf	402.01
Benign hypertension heart disorder w chf	402.11
Hypertension heart disorder w chf	402.91
Complicated implant card defib	996.04
Pleurisy w/o effusion or tb	511.0
Pleural effusion nos	511.9
Bacterial pleurisy/effusion not tb	511.1
Pleural effusion nec not tb	511.8
Chronic respiratory failure	518.83
Acute and chronic respiratory failure	518.84
Respiratory failure	518.81
Other pulmonary insufficiency	518.82

Inpatient Facility Codes

Description	CPT	UB Revenue
Nonacute inpatient	99301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337	0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x

Draft specifications—subject to change. Please do not cite or quote.

Acute inpatient	99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, 99291	010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987
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Evaluation and Management Codes

Description	CPT Codes
Office or Other Outpatient Services	99201–99215
Hospital Observation Services	99217–99220
Hospital Inpatient Services	99221–99239
Consultations	99241–99275
Critical Care and Intensive Care Services	99289–99298
Nursing Facility, Domiciliary and Home Services	99301–99350
Case Management Services and Care Plan Oversight Services	99361–99380
Preventive Medicine Services	99381–99429
Other E&M Services	99450–99456, 99354–99357

Procedure and Laboratory

Description	CPT	HCPCs	ICD-9 Diagnosis	ICD-9 Procedure
Cholesterol	80061, 83700, 83701, 83704, 83718, 83719, 83721			
BNP blood test				
Cardiac catheterization	93539, 93540, 93555, 93556, 93501, 93503, 93510, 93511, 93514, 93524, 93526, 93527, 93528, 93529, 93539, 93540, 93555, 93556			
Chest x-ray	71010, 71015, 71020, 71021, 71022, 71023, 71030, 71034, 71035, 75756, 93542, 93543, 93545			
Coronary angiography	71275, 72191, 72198, 73225, 75635, 75898, 93508			
Echocardiogram	93307, 93308, 93320, 93321	A9900		
Electrocardiogram (ECG or EKG)	93000, 03005, 93010, 93012, 93014, 93040, 93041, 93042, 93224, 93225, 93226, 93227, 93230, 93231, 93232, 93236, 93237, 93270, 93272, 93278			
Exercise stress test (cardiac stress test)	93015, 93016, 93017, 93018			
Holter monitor				
Nuclear heart scan				
Pharmacologic Stress Test	93024			
Cardiac output measurement	93561, 93562			

Draft specifications—subject to change. Please do not cite or quote.

Heart flow reserve measure	93571, 93572			
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Pharmacy

Description	Medication				
Angiotensin converting enzyme (ACE) inhibitors	benazepril captopril	enalapril fosinopril	lisinopril moexipril	perindopril quinapril	ramipril trandolapril
Angiotensin II inhibitors	candesartan eprosartan	irbesartan losartan	olmesartan telmisartan	valsartan	
Diuretics					
Vasodilators					
Digoxin					
Beta Blockers	metoprolol		carvedilol	bisoprolol	
Anticoagulants	warfarin		heparin		
Statins					
Calcium Channel Blockers					
Inotropes	Dobutamine		milrinone		
Anti-platelets					
CoQ10					
Atrocore					

CHF-related medications include ACE inhibitors, angiotensin II inhibitors, diuretics, vasodilators, digoxin, beta blockers, anticoagulants, statins, calcium channel blockers, inotropes.

Codes for Durable Medication Equipment

Description	CPT	HCPCS	ICD-9-CM Diagnosis
Oxygen therapy rx		4030F	
C-PAP		E0601, E0601, A7034, A7032, A7030, A7031, A7044, A7046, A7037, A7038, A7039, A7035, A7033, A7036, E0561, E0562, E0470, KO532	

Table CHF-D: Codes to Identify Exclusions

Codes for Inpatient CHF-Related Care

Description	ICD-9 Code
Rheumatic Heart Failure (congestive)	398.91
Malignant Hypertensive Heart Disease with CHF	402.01
Benign Hypertensive Heart Disease with CHF	402.11
Hypertensive Heart Disease with CHF	402.91
Hypertensive Heart and Renal Disease, Malignant, With CHF	404.01, 404.03, 404.11
Hypertensive Heart And Renal Disease, Benign, With CHF	404.13

Draft specifications—subject to change. Please do not cite or quote.

Hypertensive Heart And Renal Disease, Unspecified, With CHF	404.91
Hypertensive Heart + Renal Disease, Unspecified, With CHF	404.93
Heart Failure	428
Congestive Heart Failure	428.0
Left Heart Failure	428.1
Systolic Heart Failure	428.2, 428.20, 428.22
Diastolic Heart Failure	428.3, 428.30, 428.32
Combined Systolic and Diastolic Heart Failure	428.4
Combined Systolic and Diastolic Heart Failure, unspecified	428.40
Combined Systolic and Diastolic Heart Failure, chronic	428.42
Heart Failure, unspecified	428.9
Acute systolic heart failure	428.21
Acute on chronic systolic heart failure	428.23
Acute diastolic heart failure	428.31
Acute on chronic diastolic heart failure	428.33
Acute combined syst & dias heart failure	428.41
Acute chronic combined systolic & diastolic heart failure	428.42
Acute lung edema	518.4

Codes present in the primary diagnostic field within 6 month period prior to the admission that triggers the episode or as a secondary diagnosis with a primary cardiopulmonary diagnosis.

Codes for Inpatient Cardiopulmonary-Related Care

Description	ICD-9 Code
Other symptoms involving cardiovascular system	785.9
Orthostatic hypotension	458.0
Hypotension nos	458.9
Abnormal cardiovascular study nos	794.30
Non-specific abnormal electrocardiogram	794.31
Abnormal cardiovascular study nec	794.39
Painful respiration	786.52
Abnormal sputum	786.4
Hemoptysis	786.3
Cough	786.2
Pulmonary congestion and hypostasis	514
Respiratory abnormality nos	786.00
Hyperventilation	786.01
Orthopnea	786.02
Apnea	786.03
Cheyne-stokes respiration	786.04
Tachypnea	786.06
Wheezing	786.07
Respiratory abnormality nec	786.09
Abnormal chest sounds	786.7
Other symptoms involving respiratory system and chest	786.9
Abnormal findings-lung field	793.1
Abnormal pulmonary function study	794.2

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Cardiac dysrhythmias	427.
Paroxysmal atrial tachycardia	427.0
Paroxysmal tachycardia nos	427.2
Atrial fibrillation & flutter	427.3
Atrial fibrillation	427.31
Atrial flutter	427.32
Premature beats	427.6
Premature beats nos	427.60
Atrial premature beats	427.61
Premature beats nec	427.69
Other cardiac dysrhythmias	427.8
Sinoatrial node dysfunct	427.81
Cardiac dysrhythmias nec	427.89
Cardiac dysrhythmia nos	427.9
Tachycardia nos	785.0
Palpitations	785.1
Electrolyte/fluid disorders nec	276.9
Volume depletion nos	276.50
Dehydration	276.51
Hyposmolality	276.1
Hypovolemia	276.5
Hyperpotassemia	276.7
Hypopotassemia	276.8
Hypovolemia	276.52
Fluid overload	276.6
Abnormal blood chemistry nec	790.6
Abnormal coagulation profile	790.92
Long-term use anticoagulants	V58.61
Rheumatic heart failure	398.91
Shortness of breath	786.05
Diastolic heart failure	428.3
Combined systolic and diastolic heart failure	428.4
Unspecified combined systolic & diastolic heart failure	428.40
Heart failure nos	428.9
Edema	782.3
Acute chronic combined systolic & diastolic heart failure	428.43
Complicated implant cardiac defib	996.04
Pleurisy w/o effusion not tb	511.0
Pleurisy effusion nos	511.9
Bacterial pleurisy/effusion not tb	511.1
Pleural effusion nec not tb	511.8
Chronic respiratory failure	518.83
Acute and chronic respiratory failure	518.84
Respiratory failure	518.81
Other pulmonary insufficiency	518.82

Codes to Identify Active Cancer Treatment

Description	ICD-9-CM Diagnosis
Cancer	140-208, 230-239

Draft specifications—subject to change. Please do not cite or quote.

WITH

Description	CPT	ICD-9-CM Procedure	UB Revenue
Treatment	38230, 38240-38242, 77261-77799, 79000-79999, 96400-96549	41.0, 41.91, 92.2	028x, 033x, 0342, 0344, 0973

Codes to Identify ESRD

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue	UB Type of Bill	POS
ESRD (including renal dialysis)	36145, 36800-36821, 36831-36833, 90919-90921, 90923-90925, 90935, 90937, 90939, 90940, 90945, 90947, 90989, 90993, 90997, 90999, 99512	G0257, G0311-G0319, G0321-G0323, G0325-G0327, G0392, G0393, S9339	585.5, 585.6, V42.0, V45.1, V56	38.95, 39.27, 39.42, 39.43, 39.53, 39.93, 39.94, 39.95, 54.98	080x, 082x-085x, 088x	72x	65

Codes to Identify Organ Transplant

Description	CPT	HCPCS	ICD-9-CM Procedure	UB Revenue
Organ transplant	32850-32856, 33930-33945, 44132-44137, 44715-44721, 47133-47147, 48160, 48550-48556, 50300-50380	S2152, S2053-S2055, S2060, S2061, S2065	33.5, 33.6, 37.5, 41.94, 46.97, 50.5, 52.8, 55.6	0362, 0367, 0810-0813, 0819

Codes to Identify HIV

Description	ICD-9-CM Diagnosis
HIV	042

Codes to Identify Pregnancy

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	UB Revenue
Normal Pregnancy			V22.x		
Treat ectopic pregnancy	59120, 59121, 59130, 59135, 59136, 59140, 59150, 59151				
D & c after delivery	59160				
Insertion of cervical dilator	59200				
Episiotomy or vaginal repair	59300				
Revision of cervix	59320, 59325				
Repair of uterus	59350				
Obstetrical care	59400, 59409, 59410				

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Antepartum manipulation	59412				
Deliver placenta	59414				
Antepartum care only	59425, 59426				
Care after delivery	59510, 59514, 59515, 59525				
Vbac delivery	59610, 59612, 59614				
Attempted vbac delivery	59618, 59620, 59622				
Treatment of miscarriage	59812, 59820, 59821				
Treat uterus infection	59830				
Abortion	59840, 59841, 59850, 59851, 59852, 59855, 59856, 59857, 59866				
Remove cerclage suture	59871				
Fetal invas px w/us	59897				
Laparo proc, ob care/deliver	59898				
Maternity care procedure	59899				
Ob us < 14 wks	76801, 76802				
Ob us >= 14 wks	76805, 76810				
Ob us	76811, 76812, 76813, 76814, 76815, 76816,				
Transvaginal us	76817				
Fetal biophys profile	76818, 76819				
Umbilical artery echo	76820				
Middle cerebral artery echo	76821				
Echo exam of fetal heart	76825				
Anesthesia	01958, 01960, 01961				
Complications of pregnancy, childbirth, and the puerperium			630-676		

Codes for Mechanical Assist Devices

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure
Left Ventricular Assist Device (LVAD)	0048T, 0049T, 33975, 33976, 33977, 33978, 33979, 33980	Q0491, Q0492, Q0493, Q0494, Q0495, Q0496, Q0497, Q0498, Q0499, Q0500, Q0501, Q0502, Q0503, Q0504, Q0505		37.66
Balloon Valvuloplasty Catheter				
Enhanced Counterpulsation (ECP) Device				
Intra-aortic Balloon Pump (IABP)				
Prosthetic Heart Valve				

Draft specifications—subject to change. Please do not cite or quote.

Biventricular Cardiac Pacemaker	33213, 33224, 33225, 33226, 33240, 33241, 33249, 33211			
ICD (Implantable Cardioverter Defibrillator) Implantation				

Risk Adjustment Method

Comorbid conditions indentified as HCCs using inpatient and outpatient ICD-9 codes.

Episode Severity / Disease Staging

TBD

Outlier Methodology

TBD

Sample Size Requirements for Individual Physician Measurement

TBD

Level of Measurement/Analysis

Measurement will take place at the level of the individual physician. Attribution of resource use and costs for a patient will be assigned to the physician that is responsible for the plurality of the CHF-related care for a patient. To determine the plurality of care, all E&M codes for CHF care on separate dates during the 4-month post discharge period will be identified and the physician with the highest number of those visits will be assigned the resource use and costs. If less than 30% of CHF-related care is provided by a single physician then the resource use and costs for that individual is not assigned to any provider.

Note: Portions of these measure specifications are based on existing HEDIS and Prometheus measure specifications.

Draft specifications—subject to change. Please do not cite or quote.

Breast Cancer Episodes

- *Summary of two breast cancer episodes as discussed during work group meeting Dec. 1-2 '08*

1. Episode of Breast Biopsy

- Sum of costs during 60 days prior to a breast biopsy
- Intending to address perceived variation in the utilization of imaging and other studies between initial screening and biopsy

2. Breast Cancer Treatment

- Subsequent to pathology report with breast cancer diagnosis
- Sum of breast cancer-related costs up to 3 months prior and up to 15 months after trigger report to ensure all relevant utilization is included

Measure 1: Episode of Breast Biopsy

- Trigger is biopsy with CPT code 10021, 10022, 19100, 19101, 19102, 19103, 19106, 19120, 19125 (exclude 19260)
 - If more than one biopsy, use initial one as triggering event
 - If multiple biopsies on the same day, include all
- Duration T - 60 through T + 7: Look back 60 days, forward 7 (to capture claims lag for biopsy-related services, primarily)
- Clinically appropriate services to include in measure calculation:
 - Imaging: screening and diagnostic mammograms (analog and digital), ultrasounds, MRIs, ductograms
 - Biopsy-related: surgical, anesthesia, pathology, and facility codes
 - E&M visits: lump, nipple discharge, abnormal mammogram, Paget's, breast pain, dermatitis (763.80, 763.81, 611.72, 611.79) – each may appear anywhere on claim
 - Lab tests including cytology (Halo, nipple discharge)
 - Pharmacy: valium and drugs related to sedation (used during biopsy)
 - We will test measures empirically to identify other services to include
- Denominator exclusions:
 - Males
 - Subsequent biopsies within 3 months (and not on same day as trigger) may not trigger a separate episode
- Age: stratify +/-30 years old (also empirically explore 35, 40, other cut-off points)
- Empirically explore costs associated with complications (e.g. infection) post biopsy care
- Stratify by initial claim: mammogram vs E&M visit vs cytology (Halo)
- Attribution: community level (initial screening is considered a public health intervention)

Measure 2: Breast Cancer Treatment

- Trigger event is pathology report with diagnosis of breast cancer (ICD-9 174) and at least one E&M claim for breast cancer (ICD-9 174)
- Denominator exclusions:
 - Prior diagnosis of breast cancer in past 24 months (174, 233)
 - 2 or more concurrent claims for metastatic disease (196, 197, 198, 155.5)
 - Other cancers in past 24 months (excluding non-melanoma skin cancer)
- Episode duration: 3 months prior to trigger (to capture biopsy and pathology-related services), and 15 months subsequent to trigger (to capture therapy)
- Clinically appropriate services to include in measure calculation: all oncology-related costs
 - Inpatient/outpatient facility, E&M services, laboratory (e.g., pathology, oncoprote, genetic testing), imaging, procedures (e.g. radiation oncology, surgery), chemotherapy and other pharmacy claims, genetic counseling, durable medical equipment (e.g., lymphedema sleeves, prosthetics), home transportation, 911 ambulance services
 - Costs related to infection, neutropenia, anemia (CBCs, transfusions), thrombocytopenia, breast reconstructive surgery, venous thrombosis (including pulmonary embolism), device-related complications, physical therapy, depression
- Population-level measure: consider calculating by region, county, state
- Adjust for
 - Race/ethnicity
 - Age
 - Socioeconomic status
 - Co-morbidities
- Stratify by
 - Chemo (substratifications: with Herceptin, without Herceptin, or neo-adjuvant)
 - No chemo
- Empirically evaluate merits of measure of all costs (per capita measure)
- Evaluate stratifying Medicaid and uncompensated care patients from other patients (if data beyond claims are available for use)