HEART FAILURE (HF)
Algorithm for Measures Calculation – EHRS

PATIENT SELECTION CRITERIA

Include if **ALL** the following criteria are met:

- At least two **face-to-face office visits** with the physician, physicians' assistant, or nurse practitioner during the measurement time period with a **documented diagnosis** of heart failure
- Is **18 years or older** at the beginning of the measurement time period

➢ ***List of Data Elements located in Appendix A***

Measure Owner Designation
♣ AMA/PCPI is the measure owner
▲CMS is the measure owner
■ NCQA is the measure owner

HEART FAILURE (HF)
Algorithm for Measures Calculation – EHRS

At least two face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the measurement time period.

ENCOUNTER CODE** (C4)
99201-99205, 99212-99215,
99241-99245,
99354, 99355, 99385-99387,
99395-99397, 99401-99404

AND

Patient is 18 years or older at the beginning of the measurement time period
[DATEOFBIRTH]* ≥ 18

AND

Patient has a documented diagnosis of HF

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

[HFCONFIRMED]*= 1

*** Bracketed element names reflect MCMP-PAT element names**

**** Encounter Code box will not be repeated for every measure, but is a required element for every measure**

HEART FAILURE (HF)
Algorithm for Measures Calculation – EHRS

Left Ventricular Function (LVF) Assessment (♣ HF-1): Percentage of patients with quantitative or qualitative results for LVF assessment

Denominator: All patients with HF ≥ 18 years of age

Denominator Inclusions

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) codes for inclusion:

[HFCONFIRMED] =1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

Numerator: Patients with quantitative or qualitative results for LVF assessment recorded

Numerator Inclusion Option #1

Patients who have quantitative or qualitative results of left ventricular function (LVF) assessment recorded at any office/clinic visit at any time before the end of the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable CPT (C4) and SNOMED (SNM) codes for identification of a LVF assessment test:

LVF ASSESS CODE (C4)	LVF ASSESS CODE (SNM)
78414, 78468, 78472, 78473, 78480,	250907009, 366188009
78481, 78483, 78494, 93303, 93304,	
93307, 93308, 93312, 93314, 93315,	
93317, 93350, 93543	

AND

LVF QUAL CODE (SNM)	EJEC FRAC CODE (SNM)
371857005, 395172009,	41466009, 46258004,
414072005	70822001, 250908004

[HFLVFRESULT] = 1

OR

Numerator Inclusion Option #2

Patients who have quantitative or qualitative results of LVF assessment recorded at any office/clinic visit before the end of the measurement period.

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for identification of a LVF assessment test:

LVF ASSMT CODE (C4)
3020F

[HFLVFRESULT] =1

Left Ventricular Function (LVF) Testing (▲HF-2): Percentage of patients with LVF testing during the current year for patients hospitalized with a principal diagnosis of HF during the measurement period

Denominator: All patients with a principal diagnosis of HF ≥ 18 years of age hospitalized during the measurement period

Denominator Inclusions

All patients with a documented principal diagnosis of heart failure and 18 years or older at the beginning of the measurement period and were hospitalized during the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

[HFHOSPITAL] = 1

HOSP CODE (C4)
99218-99223, 99231-99236,
99238, 99239, 99251-99255,
99261-99263,99271-99275,
99281-99285, 99291, 99292

Numerator: Patients with LVF testing during the measurement period

Numerator Inclusion Option #1

Patients who have LVF testing during the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable CPT (C4) and SNOMED (SNM) codes for identification of a LVF assessment test:

LVF ASSESS CODE (C4)	LVF ASSESS CODE (SNM)
78414, 78468, 78472, 78473, 78480,	250907009, 366188009
78481, 78483, 78494, 93303, 93304,	
93307, 93308, 93312, 93314, 93315,	
93317, 93350, 93543	

[HFLVFYEAR] = 1

OR

Numerator Inclusion Option #2

Patients who have LVF testing during the measurement period.

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for identification of a LVF assessment test:

LVF ASSMT CODE (C4)
3020F

[HFLVFYEAR]= 1

Denominator Exclusions *(Exclusions only applied if the patient did not receive LVF testing during the measurement period if patient was hospitalized for HF)*

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for medical reason:

MEDICAL REASON (C4)
3020F-1P

[HFLVFYEAR] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for patient reason:

PATIENT REASON (C4)
3020F-2P

[HFLVFYEAR] = 4

Weight Measurement (♣HF-3): Percentage of patient visits with weight measurement recorded

Denominator: All patient visits for patients with HF ≥ 18 years of age

Denominator Inclusions

All patient visits with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

[HFPCVISITDATE] AND [HFPCINVALID]=0

ENCOUNTER CODE (C4)
99201-99205, 99212-99215,
99241-99245,
99354, 99355, 99385-99387,
99395-99397, 99401-99404

Numerator: Patient visits with weight measurement recorded

Numerator Inclusion Option #1

Patient visits with a weight measurement recorded during the measurement period.

[HFPCVISITDATE] WITH

TOPIC_EVALUATION_CODES Table lists an applicable SNOMED (SNM) code for inclusion:

WEIGHT CODE (SNM)
27113001

[HFWEIGHT] = 1

OR

Numerator Inclusion Option #2

Patient visits with a weight measurement recorded during the measurement period.

[HFPCVISITDATE]
WITH

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for inclusion:

WEIGHT CODE (C4)
2001F

[HFWEIGHT]= 1

Denominator Exclusion *(Exclusion only applied if the patient did not receive weight measurement)*

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for medical reason:

[HFPCVISITDATE]
WITH

MEDICAL REASON (C4)
2001F-1P

[HFWEIGHT] = 3

Patient Education (♣HF-5): Percentage of patients who were provided with patient education on disease management and health behavior changes during one or more visit(s)

Denominator: All patients with HF ≥ 18 years of age

Denominator Inclusions

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and one or more visit(s).

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

Numerator: Patients provided with patient education during one or more visit(s)

Numerator Inclusion Option #1

Patients who were provided education on disease management and health behavior changes at one or more visits during the measurement period.
Note: Patient education should include one or more of the following: Weight monitoring; Diet (sodium restriction); Symptom management; Physical activity; Smoking cessation; Medication instruction; Minimizing or avoiding use of NSAIDS; Referral for visiting nurse, or specific educational or management programs; Prognosis/end-of-life issues

TOPIC_EVALUATION_CODES Table lists applicable SNOMED (SNM) codes for inclusion:

EDUCATION CODE (SNM)
243084008, 311401005

[HFPTEDUCATION] = 1

OR

Numerator Inclusion Option #2

Patients who were provided education on disease management and health behavior changes at one or more visits during the measurement period.
Note: Patient education should include one or more of the following: Weight monitoring; Diet (sodium restriction); Symptom management; Physical activity; Smoking cessation; Medication instruction; Minimizing or avoiding use of NSAIDS; Referral for visiting nurse, or specific educational or management programs; Prognosis/end-of-life issues

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for inclusion:

EDUCATION CODE (C4)
4003F

[HFPTEDUCATION] = 1

Beta-Blocker Therapy (*HF-6): Percentage of patients who were prescribed beta-blocker therapy

Denominator: All patients with HF ≥ 18 years of age with LVSD defined as LVEF < 40% or with moderately or severely depressed left ventricular systolic function

Denominator Inclusion Option #1

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and who also have LVSD defined as ejection fraction < 40% (use most recent value) or moderately or severely depressed left ventricular systolic function.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9), CPT (C4) and SNOMED (SNM) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

LVF ASSESS CODE (C4)	LVF ASSESS CODE (SNM)
78414, 78468, 78472, 78473, 78480,	250907009, 366188009
78481, 78483, 78494, 93303, 93304,	
93307, 93308, 93312, 93314, 93315,	
93317, 93350, 93543	

AND

EJEC FRAC CODE (SNM)
41466009, 46258004,
70822001, 250908004
AND documentation of LVEF < 40%

[HFCADLVSD] = 1

OR

Denominator Inclusion Option #2

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and who also have LVSD defined as ejection fraction < 40% (use most recent value) or with moderately or severely depressed left ventricular systolic function.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) and CPT Category II (C4) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

[HFCADLVSD] = 1

EJEC FRAC CODE (C4)
3021F

Numerator: Patients who were prescribed beta-blocker therapy

Numerator Inclusion Option #1

TOPIC_DRUG_CODES Table lists applicable drug codes for patients who were prescribed beta-blocker therapy during the measurement period and DRUG_EXCLUSION = N.

[HFBBLOCKDRUG] = 1

OR

Numerator Inclusion Option #2

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for patients who were prescribed beta-blocker therapy during the measurement period:

BETA BLOCKER CODE (C4)
4006F

[HFBBLOCKDRUG] = 1

Denominator Exclusions *(Exclusions only applied if the patient did not receive beta-blocker therapy)*

TOPIC_MEDICAL_EXCLUSION Table lists applicable ICD-9 (I9) and SNOMED (SNM) codes for medical reason exclusion:

EXCLUSION CODE (I9)	EXCLUSION CODE (SNM)
427.81, 427.89,	36083008, 42177007,
458.0, 458.1, 458.21, 458.29,	44602002, 48867003,
458.8, 458.9, 493.00-493.02,	49044005, 49710005,
493.10-493.12, 493.20-493.22,	207585002, 293963004,
493.81, 493.82, 493.90-493.92	407577009, 407591003

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable SNOMED (SNM) code for documentation of bradycardia as defined by two consecutive heart rate readings < 50 bpm that occur during the measurement period:

HEART RATE CODE (SNM)
364075005

OR

TOPIC_MEDICAL_EXCLUSION Table lists applicable ICD-9 (I9) codes for history of 2nd or 3rd degree AV block without permanent pacemaker. AV_BLOCK codes must be present without the PERM_PACEMAKER code:

AV BLOCK CODE (I9)	PERM PACEMAKER CODE (I9)
426.0, 426.12, 426.13	V45.01

[HFBBLOCKDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for medical reason exclusion:

MEDICAL REASON (C4)
4006F-1P

[HFBBLOCKDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for patient reason exclusion:

PATIENT REASON (C4)
4006F-2P

[HFBBLOCKDRUG] = 4

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for system reason exclusion:

SYSTEM REASON (C4)
4006F-3P

[HFBBLOCKDRUG] = 5

ACE Inhibitor/ARB Therapy (*HF-7): Percentage of patients who were prescribed ACE Inhibitor or ARB therapy

Denominator: All patients with HF ≥ 18 years of age with LVSD defined as LVEF < 40% or with moderately or severely depressed left ventricular systolic function

Denominator Inclusion Option #1

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and who also have LVSD defined as ejection fraction < 40% (use most recent value) or with moderately or severely depressed left ventricular systolic function.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9), CPT (C4) and SNOMED (SNM) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

LVF ASSESS CODE (C4)	LVF ASSESS CODE (SNM)
78414, 78468, 78472, 78473, 78480,	250907009, 366188009
78481, 78483, 78494, 93303, 93304,	
93307, 93308, 93312, 93314, 93315,	
93317, 93350, 93543	

AND

EJEC FRAC CODE (SNM)
41466009, 46258004,
70822001, 250908004,
And documentation of LVEF < 40%

[HFCADLVSD] = 1

OR

Denominator Inclusions Option #2

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and who also have LVSD defined as ejection fraction < 40% (use most recent value) during the measurement period or with moderately or severely depressed left ventricular systolic function.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) and CPT Category II (C4) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

[HFCADLVSD] = 1

EJEC FRAC CODE (C4)
3021F

Numerator: Patients who were prescribed ACE Inhibitor or ARB therapy

Numerator Inclusion Option #1

TOPIC_DRUG_CODES Table lists applicable drug codes for patients who were prescribed ACE Inhibitor or ARB therapy during the measurement period and DRUG_EXCLUSION = N.

[HFACEARBDRUG] = 1

OR

Numerator Inclusion Option #2

Patients who were prescribed ACE Inhibitor or ARB therapy during the measurement period.

TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for inclusion:

ACE ARB THERAPY CODE (C4)
4009F

[HFACEARBDRUG] = 1

Denominator Exclusions *(Exclusions only applied if the patient did not receive ACE Inhibitor or ARB therapy)*

TOPIC_MEDICAL_EXCLUSION Table lists applicable ICD-9 (I9) codes for medical reason exclusion. The EXCLUSION code can occur anytime before the end of the measurement period while the PREGNANCY codes must occur during the measurement period:

EXCLUSION CODE (I9)	PREGNANCY CODE (I9)
277.6, 395.0, 395.2, 396.0, 396.2, 396.8,	V22.0-V22.2, V23.0-V23.3, V23.41,
403.01, 403.11, 403.91, 404.02, 404.03,	V23.49, V23.5, V23.7,
404.12, 404.13, 404.92, 404.93,	V23.81-V23.84, V23.89, V23.9
425.1, 440.1, 584.5-584.9,	
585.5, 585.6, 586, 747.22,	
788.5, V56.0, V56.8,	
39.95, 54.98	

[HFACEARBDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists applicable SNOMED (SNM) codes for allergy or intolerance to ACE Inhibitor therapy and to ARB therapy:

ACE ALLERGY CODE (SNM)	ARB ALLERGY CODE (SNM)
1001288, 293500009,	407579007,
295036000,	407590002,
	407593000

[HFACEARBDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for medical reason exclusion:

MEDICAL REASON (C4)
4009F-1P

[HFACEARBDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for patient reason exclusion:

PATIENT REASON (C4)
4009F-2P

[HFACEARBDRUG] = 4

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for system reason exclusion:

SYSTEM REASON (C4)
4009F-3P

[HFACEARBDRUG] = 5

Warfarin Therapy for Patients with Atrial Fibrillation (♣HF-8): Percentage of patients with paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy

Denominator: All patients with heart failure ≥ 18 years of age with paroxysmal or chronic atrial fibrillation

Denominator Inclusions

All patients with a documented diagnosis of heart failure and 18 years or older at the beginning of the measurement period and who also have paroxysmal or chronic atrial fibrillation (afib) during the measurement period.

TOPIC_EVALUATION_CODES Table lists applicable ICD-9 (I9) codes for inclusion:

[HFCONFIRMED] = 1

DX CODE (I9)
402.01, 402.11, 402.91,
404.01, 404.03, 404.11, 404.13,
404.91, 404.93, 428.0, 428.1,
428.20-428.23, 428.30-428.33,
428.40-428.43, 428.9

AND

[HFAFIB] = 1

AFIB CODE (I9)
427.31

Numerator: Patients who were prescribed warfarin therapy

Numerator Inclusion Option #1

TOPIC_DRUG_CODES Table lists applicable drug codes for patients who were prescribed warfarin therapy during the measurement period and DRUG_EXCLUSION = N.

[HFWARFDRUG] = 1

OR

Numerator Inclusion Option #2

Patients who were prescribed warfarin therapy during the measurement period. TOPIC_EVALUATION_CODES Table lists an applicable CPT Category II (C4) code for inclusion:

WARFARIN THERAPY CODE (C4)
4012F

[HFWARFDRUG] = 1

Denominator Exclusions *(Exclusions only applied if the patient did not receive warfarin therapy)*

TOPIC_MEDICAL_EXCLUSION Table lists applicable ICD-9 (I9) codes for medical reason exclusion. The EXCLUSION code can occur anytime before the end of the measurement period:

EXCLUSION CODE (I9)
203.00, 203.01, 203.10, 203.11, 203.80, -203.81,
204.00, 204.01, 204.10, 204.11, 204.20, 204.21, 204.80,
204.81, 204.90, 204.91, 205.00, 205.01,
205.10, 205.11, 205.20, 205.21, 205.30, 205.31,
205.80, 205.81, 205.90, 205.91, 206.00-206.01,
206.10-206.11, 206.20, 206.21, 206.80, 206.81,
206.90, 206.91, 207.00, 207.01, 207.10, 207.11, 207.20,
207.21, 207.80, 207.81, 208.00, 208.01, 208.10, 208.11,
208.20, 208.21, 208.80, 208.81, 208.90, 208.91,
280.0, 280.9, 285.1, 286.0-286.7, 286.9,
287.30-287.33, 287.39, 287.4,
287.5, 430, 431, 432.0, 432.1, 432.9,
437.3, 459.0, 530.7, 531.00, 531.01,
531.20, 531.21, 531.40, 531.41, 531.60, 531.61,
532.00, 532.01, 532.20, 532.21, 532.40, 532.41,
532.60, 532.61, 533.00, 533.01, 533.20, 533.21,
533.40, 533.41, 533.60, 533.61, 534.00, 534.01,
534.20, 534.21, 534.40, 534.41, 534.60, 534.61,
569.3, 570, 571.2, 571.5, 578.0, 578.1, 578.9,
599.7, 786.3

OR

TOPIC_MEDICAL_EXCLUSION Table lists applicable ICD-9 (I9) codes for adverse effects exclusion where an ADVERSE_EFFECT_1 code must be accompanied by an ADVERSE_EFFECT_2 code:

ADVERSE EFFECT 1 CODE (I9)	ADVERSE EFFECT 2 CODE (I9)
995.0, 995.1, 995.2,	E934.2
995.27, 995.29	

[HFWARFDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable SNOMED (SNM) code for allergy or intolerance to warfarin therapy:

ALLERGY CODE (SNM)
294881007

[HFWARFDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for medical reason exclusion:

MEDICAL REASON (C4)
4012F-1P

[HFWARFDRUG] = 3

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for patient reason exclusion:

PATIENT REASON (C4)
4012F-2P

[HFWARFDRUG] = 4

OR

TOPIC_MEDICAL_EXCLUSION Table lists an applicable CPT Category II (C4) code for system reason exclusion:

SYSTEM REASON (C4)
4012F-3P

[HFWARFDRUG] = 5

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣HF-1 LVF Assessment		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	LVF ASSESS CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT4, SNOMED)
	LVF ASSESS CODE	LVF assessment code
	LVF ASSESS DATE	Date LVF assessment documented
	EJEC FRAC CODING SYSTEM	Type of coding system applicable for a ejection fraction code (SNOMED)
	EJEC FRAC CODE	Ejection fraction code
	EJEC FRAC DATE	Date ejection fraction testing documented
	EJEC FRAC RESULT	Numeric result of ejection fraction percentage
	LVF QUAL CODING SYSTEM	Type of coding system applicable for a LVF qualitative result code (SNOMED)
	LVF QUAL CODE	LVF qualitative result code
	LVF QUAL DATE	Date LVF qualitative result documented
	LVF ASSMT CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT Category II)
	LVF ASSMT CODE	LVF assessment
	LVF ASSMT DATE	Date LVF assessment documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
▲HF-2 LVF Testing		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	HOSP CODING SYSTEM	Type of coding system applicable for a hospitalization code (CPT4)
	HOSP CODE	Hospitalization for HF code
	HOSP DATE	Date of hospitalization for HF
	LVF ASSESS CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT4, SNOMED)
	LVF ASSESS CODE	LVF assessment code
	LVF ASSESS DATE	Date LVF assessment documented
	MEDICAL REASON CODING SYSTEM	Type of coding system applicable for a medical reason (CPT Category II)
	MEDICAL REASON CODE	Code used for medical reason
	MEDICAL REASON DATE	Date medical reason was documented
	PATIENT REASON CODING SYSTEM	Type of coding system applicable for a patient reason (CPT Category II)
	PATIENT REASON CODE	Code used for patient reason
	PATIENT REASON DATE	Date patient reason was documented
	LVF ASSMT CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT Category II)
	LVF ASSMT CODE	LVF assessment
	LVF ASSMT DATE	Date LVF assessment documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣HF-3 Weight Measurement		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	WEIGHT CODING SYSTEM	Type of coding system applicable for a weight measurement code (SNOMED, CPT Category II)
	WEIGHT CODE	Weight measurement code
	WEIGHT DATE	Date weight measurement documented
	MEDICAL REASON CODING SYSTEM	Type of coding system applicable for a medical reason code (CPT Category II)
	MEDICAL REASON CODE	Code used for medical reason
	MEDICAL REASON DATE	Date medical reason documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣**HF-5 Patient Education**		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	EDUCATION CODING SYSTEM	Type of coding system applicable for a patient education code (SNOMED, CPT Category II)
	EDUCATION CODE	Code used for patient education
	EDUCATION DATE	Date patient education documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣HF-6 Beta-Blocker Therapy		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	EJEC FRAC CODING SYSTEM	Type of coding system applicable for a ejection fraction code (CPT Category II, SNOMED)
	EJEC FRAC CODE	Ejection fraction code
	EJEC FRAC DATE	Date ejection fraction testing documented
	EJEC FRAC RESULT	Numeric result of ejection fraction percentage
	LVF ASSESS CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT4, CPT Category II, SNOMED)
	LVF ASSESS CODE	LVF assessment code
	LVF ASSESS DATE	Date LVF assessment documented
	DRUG CODING SYSTEM	Type of coding system applicable for a beta blocker drug (NDC)
	DRUG CODE	Beta blocker drug codes
	DRUG ORDER DATE	Date beta blocker drug was prescribed
	DRUG EXCLUSION	Is drug used as an exclusion to the measure (Yes or No)
	BETA BLOCKER THERAPY CODING SYSTEM	Type of coding system applicable for a Beta blocker therapy (CPT Category II)
	BETA BLOCKER THERAPY CODE	Beta blocker therapy code
	BETA BLOCKER THERAPY DATE	Date beta blocker therapy was prescribed
	EXCLUSION CODING SYSTEM	Type of coding system applicable for a medical reason (ICD9, SNOMED)
	EXCLUSION CODE	Code used for exclusion
	EXCLUSION DATE	Date medical exclusion documented
	HEART RATE CODING SYSTEM	Type of coding system applicable for a heart rate code (SNOMED)
	HEART RATE CODE	Code used for heart rate
	HEART RATE DATE	Date heart rate measurement documented
	HEART RATE RESULT	Numeric result for heart rate

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣**HF-6 Beta-Blocker Therapy**		
	AV BLOCK CODING SYSTEM	Type of coding system applicable for an AV block diagnosis (ICD9)
	AV BLOCK CODE	Diagnosis code for AV block
	AV BLOCK DATE	Date AV block diagnosis documented
	PERM PACEMAKER CODING SYSTEM	Type of coding system applicable for a permanent pacemaker code (ICD9)
	PERM PACEMAKER CODE	Permanent pacemaker code
	PERM PACEMAKER DATE	Date placement of permanent pacemaker documented
	MEDICAL REASON CODING SYSTEM	Type of coding system applicable for a medical reason (CPT Category II)
	MEDICAL REASON CODE	Code used for medical reason
	MEDICAL REASON DATE	Date medical reason documented
	PATIENT REASON CODING SYSTEM	Type of coding system applicable for a patient reason (CPT Category II)
	PATIENT REASON CODE	Code used for patient reason
	PATIENT REASON DATE	Date patient reason was documented
	SYSTEM REASON CODING SYSTEM	Type of coding system applicable for a system reason (CPT Category II)
	SYSTEM REASON CODE	Code used for system reason
	SYSTEM REASON DATE	Date system reason documented

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣HF-7 ACE Inhibitor or ARB Therapy		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	EJEC FRAC CODING SYSTEM	Type of coding system applicable for an ejection fraction code (CPT4, CPT Category II, SNOMED)
	EJEC FRAC CODE	Ejection fraction code
	EJEC FRAC DATE	Date ejection fraction testing documented
	EJEC FRAC RESULT	Numeric result of ejection fraction percentage
	DRUG CODING SYSTEM	Coding system applicable for an ACE Inhibitor or ARB drug codes (NDC)
	DRUG CODE	ACE Inhibitor or ARB drug codes
	DRUG ORDER DATE	Date ACE Inhibitor or ARB drug was prescribed
	DRUG EXCLUSION	Is drug used as an exclusion to the measure (Yes or No)
	ACE ARB THERAPY CODING SYSTEM	Type of coding system applicable for an ACE ARB code (CPT Category II)
	ACE ARB THERAPY CODE	ACE ARB therapy code
	ACE ARB THERAPY DATE	Date ACE ARB therapy was prescribed
	LVF ASSESS CODING SYSTEM	Type of coding system applicable for a LVF assessment code (CPT4, SNOMED)
	LVF ASSESS CODE	LVF assessment code
	LVF ASSESS DATE	Date LVF assessment was documented
	EXCLUSION CODING SYSTEM	Type of coding system applicable for a medical reason (ICD9)
	EXCLUSION CODE	Code used for exclusion
	EXCLUSION DATE	Date medical exclusion documented
	PREGNANCY CODING SYSTEM	Type of coding system applicable for a pregnancy diagnosis code (ICD9)
	PREGNANCY CODE	Code used for pregnancy diagnosis
	PREGNANCY DATE	Date pregnancy diagnosis documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣**HF-7 ACE Inhibitor or ARB Therapy**		
	ALLERGY CODING SYSTEM	Type of coding system applicable for an allergy code (SNOMED)
	ALLERGY CODE	Code used for allergy
	ALLERGY DATE	Date allergy documented
	MEDICAL REASON CODING SYSTEM	Type of coding system applicable for a medical reason (CPT Category II)
	MEDICAL REASON CODE	Code used for medical reason
	MEDICAL REASON DATE	Date medical reason documented
	PATIENT REASON CODING SYSTEM	Type of coding system applicable for a patient reason (CPT Category II)
	PATIENT REASON CODE	Code used for patient reason
	PATIENT REASON DATE	Date patient reason documented
	SYSTEM REASON CODING SYSTEM	Type of coding system applicable for a system reason (CPT Category II)
	SYSTEM REASON CODE	Code used for system reason
	SYSTEM REASON DATE	Date system reason documented

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣**HF-8 Warfarin Therapy**		
	TOPIC TYPE	Topic that is being reported on
	TOPIC INDICATOR	The specific indicator or measure
	BIRTHDATE	Birth date
	MEASURE START DATE	Date the measurement period begins
	MEASURE END DATE	Date the measurement period ends
	ENCOUNTER CODING SYSTEM	Coding system applicable to face-to-face office visit (CPT4)
	ENCOUNTER CODE	Code used for encounter
	ENCOUNTER DATE	Date of encounter
	DX CODING SYSTEM	Coding system applicable to the diagnosis code (ICD9)
	DX CODE	Diagnosis code
	DX DATE	Date of diagnosis
	AFIB CODING SYSTEM	Type of coding system applicable for a diagnosis code of atrial fibrillation (ICD9)
	AFIB CODE	Diagnosis code for atrial fibrillation
	AFIB DATE	Date atrial fibrillation was documented
	DRUG CODING SYSTEM	Type of coding system applicable for a warfarin drug code (NDC)
	DRUG CODE	Warfarin drug codes
	ORDER DATE	Date warfarin was prescribed
	DRUG EXCLUSION	Is drug used as an exclusion to the measure (Yes or No)
	EXCLUSION CODING SYSTEM	Type of coding system applicable to a medical reason for exclusion (ICD9)
	EXCLUSION CODE	Code used for medical exclusion
	EXCLUSION DATE	Date medical exclusion documented
	WARFARIN THERAPY CODING SYSTEM	Type of coding system applicable for a warfarin therapy code (CPT Category II)
	WARFARIN THERAPY CODE	Warfarin therapy code
	WARFARIN THERAPY DATE	Date warfarin therapy was prescribed
	ADVERSE EFFECT 1 CODING SYSTEM	Type of coding system applicable for an adverse effect 1 code (ICD9)
	ADVERSE EFFECT 1 CODE	Code used for adverse effect 1
	ADVERSE EFFECT 1 DATE	Date adverse effect 1 documented
	ADVERSE EFFECT 2 CODING SYSTEM	Type of coding system applicable for adverse effect 2 code (ICD9)
	ADVERSE EFFECT 2 CODE	Code used for adverse effect 2
	ADVERSE EFFECT 2 DATE	Date adverse effect 2 documented
	ALLERGY CODING SYSTEM	Type of coding system applicable for an allergy code (SNOMED)
	ALLERGY CODE	Code used for allergy
	ALLERGY DATE	Date allergy code documented

Shaded data elements apply to each measure

APPENDIX A
HF MEASURES WITH CORRESPONDING DATA ELEMENTS

Ambulatory Care Measure	Short Name	Description
♣**HF-8 Warfarin Therapy**		
	MEDICAL REASON CODING SYSTEM	Type of coding system applicable for a medical reason (CPT Category II)
	MEDICAL REASON CODE	Code used for medical reason
	MEDICAL REASON DATE	Date medical reason documented
	PATIENT REASON CODING SYSTEM	Type of coding system applicable for a patient reason (CPT Category II)
	PATIENT REASON CODE	Code used for patient reason
	PATIENT REASON DATE	Date patient reason documented
	SYSTEM REASON CODING SYSTEM	Type of coding system applicable for a system reason (CPT Category II)
	SYSTEM REASON CODE	Code used for system reason
	SYSTEM REASON DATE	Date system reason documented