Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Confirm Diagnosis of Heart Failure (HF) [HFCONFIRMED]	Instruction: Determine if the patient has a documented history of HF. **Yes (1):** Select this option if the patient has a documented history of HF anywhere in the office/clinic record. **No/No reason documented (0):** Select this option if the patient has no documented history of HF anywhere in the office/clinic record. **If "No" - STOP ABSTRACTION** **Skip (2):** Select this option if you are unable to find the patient's medical record.	Congestive heart failure, CHF, left ventricular failure, biventricular failure, cardiac failure, pump failure, cardiac decompensation, Kerly B lines, pulmonary vascular congestion, ischemic cardiomyopathy, venous congestion, dilated cardiomyopathy, pulmonary edema, lung edema, interstitial edema, perihilar edema/fluid, fluid or volume overload, perihilar congestion, interstitial congestion, pulmonary vascular engorgement or cephalization or alveolar edema, left-sided heart failure, right-sided heart failure, systolic heart failure, diastolic heart failure	Pleural effusions, pleural fluid, cardiomegaly, enlarged heart, cardiomyopathy, hypertrophic cardiomyopathy, nonrestrictive cardiomyopathy, enlarged vessels or fullness of pulmonary vasculature
Left Ventricular Function Assessment Result [HFLVFRESULT]	Instruction: Determine if at any time a LVF assessment was performed and the result documented in the office/clinic record (quantitative or qualitative). **Yes (1):** Select this option if the result of the LVF assessment is documented in the office/clinic record (quantitative or qualitative). **No/No reason documented (0):** Select this option if the result of the LVF assessment is not documented in the office/clinic record (quantitative or qualitative).	**Synonyms for LVF description may include:** **Left ventricular function (LVF)** • akinesis • contractility • diastolic dysfunction • diastolic function • diastolic impairment • dyskinesis • ejection fraction (EF) • hypokinesis • left ventricular diastolic dysfunction • left ventricular diastolic function • left ventricular dysfunction (LVD) • left ventricular ejection fraction (LVEF) • left ventricular systolic dysfunction (LVSD) • systolic dysfunction • systolic function	**Left ventricular function (LVF)** • left ventricular compliance • left ventricular dilatation • left ventricular dilation • left ventricular function, or any of the other terms in the **LVF Inclusion list**, described using one of the following qualifiers: cannot exclude, cannot rule out, may have, may have had, may indicate, possible, suggestive of, suspect, or suspicious • left ventricular hypertrophy (LVH)

Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Hospitalized for Treatment of Heart Failure **[HFHOSPITAL]** **[HFLVFYEAR]**	Instruction: Determine if the patient was hospitalized for HF at any time during the measurement period. *Note: The default setting for this element is SKIP.* **Yes (1):** Select this option if the patient was hospitalized for HF during the measurement period. • **LVF assessment performed during the measurement period (1):** Select this option if the LVF assessment was performed during the measurement period. • **LVF not performed/No reason documented (0)** Select this option if a LVF assessment was not performed during the measurement period or no reason was documented in the office/clinic record. • **LVF not performed for medical reasons (3):** Select this option if a LVF assessment was not performed during the measurement period for medical reasons. • **LVF not performed for patient reasons (4):** Select this option if a LVF assessment was not performed during the measurement period for patient reasons.	**LVF assessment may be determined by one of the following diagnostic studies:** **Echocardiogram (echo)** • 2-D • cardiac ultrasound • doppler color flow mapping • M-mode echo • transesophageal echocardiogram (TEE) **Nuclear medicine tests** • Adenosine myocardial perfusion stress test with mention of LVF • cardiac blood pool imaging • Cardiolite scan with mention of LVF • gated blood pool imaging study • gated heart study • gated ventriculogram • multiple gated acquisition scan (MUGA) • radionuclide ventriculography • Sestamibi scan with mention of LVF • technetium scan with mention of LVF • Thallium stress test with mention of LVF • wall motion study **Cardiac catheterization (cath) with left ventriculogram (LV gram)** • cardiac catheterization (cath) with mention of LVF • cardiac/coronary angiogram with left ventriculogram (LV gram) • cardiac/coronary angiogram with mention of LVF • cardiac/coronary arteriogram with left ventriculogram (LV gram) • cardiac/coronary arteriogram with mention of LVF • left ventriculogram **LVF not performed for medical reasons (3) may include:** other reasons documented by practitioner for not obtaining LVF testing during the measurement period	None
[HFHOSPITAL]	**No/No reason documented (0):** Select this option if the patient was not hospitalized for HF during the measurement period. **Skip (2):** Select this option if you are not abstracting records for this claims-based measure.		

Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Office/clinic Visit Date [HFPCVISITDATE]	THIS ELEMENT IS SYNCHRONIZED WITH THE OFFICE/CLINIC VISIT DATE ELEMENT IN PC Instruction: Enter the date of each visit to the office/clinic in MM/DD/YYYY format <u>during the measurement period</u> Instruction: Determine if the pre-populated visit date is invalid.	Invalid reasons may include: • Pre-populated visit not to a primary care provider • Pre-populated visit date not found in medical record	None
[HFPCINVALID]	Yes (1): Select this option if the pre-populated visit date is invalid. No (0): Select this option if the pre-populated visit is not invalid. NOTE: This element defaults to no. .		
Weight Measurement [HFWEIGHT]	Instruction: Determine if the patient's weight was measured at <u>every office/clinic visit during the measurement period.</u> Yes (1): Select this option if the patient's weight was measured at this office/clinic visit. No/No reason documented (0): Select this option if the patient's weight was not measured for this office/clinic visit or no reason was documented in the office/clinic record. Not measured for medical reason (3): Select this option if weight was not measured for medical reasons.	Not measured for medical reason (3) may include: patient visits in which physician was unable to weigh patient	None
Patient Education [HFPTEDUCATION]	Instruction: Determine whether the patient/caregiver received education regarding heart failure <u>during the measurement period.</u> Yes (1): Select this option if the patient/caregiver received education regarding heart failure. No/No reason documented (0): Select this option if the patient/caregiver did not receive education regarding heart failure. Note: Patient/caregiver education may consist of one or		None

Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
	more of the following: • *Diet (sodium restriction)* • *Weight monitoring* • *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*		

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Left Ventricular Systolic Dysfunction (LVSD) **[HFCADLVSD]**	THIS ELEMENT IS SYNCHRONIZED WITH THE LEFT VENTRICULAR SYSTOLIC DYSFUNCTION (LVSD) ELEMENT IN CAD Instructions: Determine if the patient has LVSD (use most recent result). LVSD is present when left ventricular ejection fraction (LVEF) is less than 40% or documented as moderate to severe. **Yes (1):** Select this option if the patient has LVSD. **No/No reason documented (0):** Select this option if the patient does not have LVSD. *Note: If multiple diagnostic studies were performed on the same day to measure ejection fraction, use the following hierarchy to determine if LVSD is present:* • *cardiac catheterization* • *echocardiogram* • *MUGA or other cardiac scan*	None	

Data Abstraction Definitions
Heart Failure (HF)

LVSD Synonyms– (moderate or severe)
Contractility described as:
- abnormal
- compromised
- decreased
- depressed
- impaired
- low
- poor
- reduced
- very low

Ejection fraction (EF) described as:
- abnormal
- compromised
- decreased
- depressed
- impaired
- low
- poor
- reduced
- very low

Hypokinesis described as:
- diffuse
- generalized
- global

Left ventricular dysfunction (LVD) described as:
- marked
- moderate
- moderate-severe
- severe
- significant
- substantial
- the severity is not specified
- very severe

Left ventricular ejection fraction (LVEF) described as:
- abnormal
- compromised
- decreased
- depressed
- impaired
- low
- poor
- reduced
- very low

Left ventricular function (LVF) described as:
- abnormal
- compromised
- decreased
- depressed
- impaired
- low
- poor
- reduced

Left ventricular systolic dysfunction (LVSD) described as:
- marked
- moderate
- moderate-severe
- severe
- significant
- substantial
- the severity is not specified
- very severe

Systolic dysfunction described as:
- marked
- moderate
- moderate-severe
- severe
- significant
- substantial
- the severity is not specified
- very severe

Systolic function described as:
- abnormal
- compromised
- decreased
- depressed
- impaired
- low
- poor
- reduced
- very low

Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Beta Blocker Therapy [HFBBLOCKDRUG]	Instruction: Determine if the patient was prescribed beta-blocker therapy at any time during the measurement period. **Yes (1):** Select this option if the patient was prescribed beta-blocker therapy. **No/No reason documented (0):** Select this option if the patient was not prescribed beta-blocker therapy or no reason was documented in the office/clinic record. **Not prescribed for medical reasons (3):** Select this option if the patient was not prescribed beta-blocker therapy for medical reasons. **Not prescribed for patient reasons (4):** Select this option if the patient was not prescribed beta-blocker therapy for patient reasons. **Not prescribed for system reasons (5):** Select this option if the patient was not prescribed beta-blocker therapy for system reasons.	**See drug list of beta-blocker medications in Table 1.** **Not prescribed for medical reasons (3) may include:** adverse reaction to beta-blockers, asthma, documentation of bradycardia < 50 bpm (without beta-blocker therapy), exercise induced bronchospasm, history of Class IV (congestive) heart failure, history of second- or third-degree atrioventricular (AV) block without permanent pacemaker, hypotension, orthostatic hypotension, sick sinus syndrome, SSS, other reason documented by the practitioner for not prescribing beta-blocker therapy	None
ACE Inhibitor or ARB Therapy [HFACEARBDRUG]	Instruction: Determine if the patient was prescribed ACE inhibitor or ARB therapy at any time during the measurement period. **Yes (1):** Select this option if the patient was prescribed ACE inhibitor or ARB therapy. **No/No reason documented (0):** Select this option if the patient was not prescribed ACE inhibitor or ARB therapy or no reason was documented in the office/clinic record. **Not prescribed for medical reasons (3):** Select this option if the patient was not prescribed ACE inhibitor and was not prescribed ARB therapy for medical reasons. **Not prescribed for patient reasons (4):** Select this option if the patient was not prescribed ACE inhibitor and was not prescribed ARB therapy for patient reasons. **Not prescribed for system reasons (5):** Select this option if the patient was not prescribed ACE inhibitor and not prescribed ARB therapy for system reasons.	**See drug list of ACE Inhibitor medications in Table 2 and ARBs in Table 3.** **Not prescribed for medical reasons (3) may include:** acute renal failure, adverse reaction to ACE (angiotensin-converting enzyme) inhibitor and ARB (angiotensin receptor blocker), allergy/intolerance to ACE inhibitor and ARB, angioedema , anuria, ARF, bilateral renal artery stenosis, BRAS, chronic renal failure, CRF, hypertrophic obst cardiomyopathy, mitral insufficiency, mitral stenosis, moderate or severe aortic stenosis, pregnancy, RAS, renal artery stenosis, renal failure, rheumatic aortic stenosis, rheumatic aortic valve obstruction, subaortic stenosis, other reason documented by the practitioner for not prescribing ACE inhibitor and not prescribing ARB therapy	None

Data Abstraction Definitions
Heart Failure (HF)

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCLUSIONS
Atrial Fibrillation **[HFAFIB]**	Instruction: Determine if the patient has paroxysmal or chronic atrial fibrillation. **Yes (1):** Select this option if the patient has documented paroxysmal or chronic atrial fibrillation. **No/No reason documented (0):** Select this option if the patient did not have paroxysmal or chronic atrial fibrillation.	Atrial fibrillation, atrial fibrillation listed as chronic or paroxysmal (AF, AFIB, A-fib, atrial fib, auricular fibrillation, auricular fib, fib/flutter)	Atrial flutter (without documentation of AFIB), new onset atrial fibrillation
Warfarin Therapy **[HFWARFDRUG]**	Instruction: Determine if the patient was prescribed warfarin therapy <u>at any time during the measurement period.</u> **Yes (1):** Select this option if the patient was prescribed warfarin therapy. **No/No reason documented (0):** Select this option if the patient was not prescribed warfarin therapy or no reason was documented in the office/clinic record. **Not prescribed for medical reasons (3):** Select this option if the patient was not prescribed warfarin therapy for medical reasons. **Not prescribed for patient reasons (4):** Select this option if the patient was not prescribed warfarin therapy for patient reasons. **Not prescribed for system reasons (5):** Select this option if the patient was not prescribed warfarin therapy for system reasons.	**See drug list of warfarin therapy in Table 4.** **Not prescribed for medical reasons (3) may include:** alcohol cirrhosis of liver, allergy/intolerance, anemia, angioneurotic edema, blood in stool, cirrhosis of liver, coagulation defects, chronic erythremia, hematuria, hemoptysis, leukemia (acute or chronic), multiple myeloma, non-ruptured cerebral aneurysm, GI ulcers with hemorrhage, patient noncompliance, risk of bleeding or bleeding disorder, thrombocytopenia, other reason documented by the practitioner for not prescribing warfarin therapy	None