NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 0083 **NQF Project:** Cardiovascular Endorsement Maintenance 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Heart Failure : Beta-blocker therapy for Left Ventricular Systolic Dysfunction
De.2 **Brief description of measure**: Percentage of patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting or at hospital discharge
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure is paired with Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction.
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Effectiveness, Equity De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** **Y☐** **N☐**

B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use**)** **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Leading cause of morbidity/mortality, High resource use, Severity of illness, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Heart failure is a chronic condition that poses a major and growing threat to the public's health. Improving the effectiveness of care and optimizing patient outcomes will become increasingly important as the population of the United States ages. •Currently, approximately 5.7 million Americans are living with heart failure. •Heart failure incidence approaches 10 per 1000 population after 65 years of age. •A person aged 40 years or older has a 1 in 5 chance of developing heart failure. •Hospital discharges for heart failure rose from 877,000 in 1996 to 1,106,000 in 2006. •80% percent of men and 70% of women less than 65 years of age who have heart failure will die within 8 years. •In 2005, 1 in 8 death certificates (292,214 deaths) in the United States mentioned heart failure. •For 2009, the estimated direct and indirect cost of heart failure in the United States is $37.2 billion, representing a portion of the estimated $475.3 billion for all cardiovascular diseases. 1a.4 **Citations for Evidence of High Impact:** Lloyd-Jones D, Adams RJ, Brown TM, et al., American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics–2010 update: a report from the American Heart Association. Circulation. 2010;126:e46-e215.	**1a** C☐ P☐ M☐ N☐

Comment [KP1]: **1a.** The measure focus addresses:
•a specific national health goal/priority identified by NQF's National Priorities Partners; OR
•a demonstrated high impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: This measure is aimed at improving the number of patients with HF who are prescribed beta-blocker therapy in the outpatient and inpatient setting, particularly the three beta-blockers proven to reduce mortality and recommended in the treatment of patients with heart failure and LVSD.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Registry data from IMPROVE HF indicates that beta-blockers were prescribed to 86% of eligible outpatients without documented contraindications or intolerance. More importantly, use of beta-blockers varied widely with practices reporting rates of adherence as low as 8.6% and as high as 100%.(1)

From March 1, 2003, through December 31, 2004, Fonarow and colleagues analyzed data from the 259 U.S. hospitals (48,612 patients) participating in the Organized Program to Initiate Lifesaving Treatment in Hospitalized Patients With Heart Failure (OPTIMIZE-HF) to determine the effect of a quality improvement initiative. Baseline data indicated that 78% of eligible patients were prescribed a beta-blocker at discharge. Use of any of the three recommended, evidence-based beta blockers (bisoprolol fumarate, carvedilol, metoprolol succinate) was significantly lower with 56% of eligible patients. (2)

(1)Fonarow GC, Yancy CW, Heywood JT. Adherence to heart failure quality-of-care indicators in US hospitals: analysis of the ADHERE Registry. Arch Intern Med. 2005; 165: 1469–1477.
(2)Fonarow GC, Abraham WT, Albert NM, et al. Influence of a performance-improvement initiative on quality of care for patients hospitalized with heart failure: results of the Organized Program to Initiate Lifesaving Treatment in Hospitalized Patients with Heart Failure (OPTIMIZE-HF). Arch Intern Med. 2007; 167:1493-1502.

Please see additional performance data in section 1 of the attached Measure Testing Summary.

1b.3 Citations for data on performance gap:
Please see additional performance data in section 1 and project descriptions at the end of the attached Measure Testing Summary.

1b.4 Summary of Data on disparities by population group:
A recent analysis of data derived from 14,464 outpatients enrolled from July 2008 through June 2009 into the American College of Cardiology's PINNACLE program concluded that there were no substantial racial or sex differences in compliance for key performance measures for CAD, HF, and atrial fibrillation. (Chan et al, 2010) Compliance rates between black and whites and men and women were generally similar for beta-blocker use for patients with heart failure and left ventricular systolic dysfunction. More specifically, 92.5% of Whites, 92.6% of Blacks, 92.4% of Men and 91.9% of Women with heart failure and left ventricular systolic dysfunction were prescribed beta-blocker therapy.

Reference: Chan PS, Oetgen WJ, Buchanan D, et al. Cardiac Performance Measure Compliance in Outpatients, The American College of Cardiology and National Cardiovascular Data Registry's PINNACLE (Practice Innovation And Clinical Excellence) Program, J. Am. Coll. Cardiol. 2010;56;8-14.

1b.5 Citations for data on Disparities:

1b
C☐
P☐
M☐
N☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Beta-blockers are recommended for all patients with stable heart failure and left ventricular systolic dysfunction, unless contraindicated. Treatment should be initiated as soon as a patient is diagnosed with left ventricular systolic dysfunction and does not have low blood pressure, fluid overload, or recent treatment with an intravenous positive inotropic agent. Beta-blockers have been shown to lessen the symptoms of heart failure, improve the clinical status of patients, reduce future clinical deterioration, and decrease the risk of mortality and the combined risk of mortality and hospitalization.

1c
C☐
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N☐

Comment [KP2]: 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

Comment [k3]: 1 Examples of data on opportunity for improvement include, but are not limited to: prior studies, epidemiologic data, measure data from pilot testing or implementation. If data are not available, the measure focus is systematically assessed (e.g., expert panel rating) and judged to be a quality problem.

Comment [k4]: 1c. The measure focus is:
•an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;
OR
•if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
oIntermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
oProcess – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
oStructure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
oPatient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
oAccess – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
oEfficiency – demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

Comment [k5]: 4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., … [1]

1c.2-3. Type of Evidence: Evidence-based guideline

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
"Beta-blockers have now been evaluated in more than 20,000 patients with HF who participated in more than 20 published placebo-controlled clinical trials." "This collective experience indicates that long-term treatment with beta blockers can lessen the symptoms of HF, improve the clinical status of patients, and enhance the patient's overall sense of well-being." (1)

(1)Jessup M, Abraham WT, Casey DE, et al., writing on behalf of the 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult Writing Committee. 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2009;53:1343– 82.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Level A (Data derived from multiple randomized clinical trials or meta-analyses as noted by the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines)

1c.6 Method for rating evidence: Levels of Evidence are classified as follows:
-Level of Evidence A: Data derived from multiple randomized clinical trials or meta-analyses
-Level of Evidence B: Data derived from a single randomized trial or nonrandomized studies
-Level of Evidence C: Only consensus opinion of experts, case studies, or standard-of-care

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines***):**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
Beta-blockers (using 1 of the 3 proven to reduce mortality, i.e., bisoprolol, carvedilol, and sustained release metoprolol succinate) are recommended for all stable patients with current or prior symptoms of [heart failure] and reduced LVEF, unless contraindicated. (Class I, Level of Evidence: A) (ACCF/AHA, 2009) (1)

Treatment with a beta blocker should be initiated at very low doses [see excerpt from guideline table below], followed by gradual increments in dose if lower doses have been well tolerated… physicians, especially cardiologists and primary care physicians, should make every effort to achieve the target doses of the beta blockers shown to be effective in major clinical trials. (ACCF/AHA, 2009) (1)

For the hospitalized patient:
-In patients with reduced ejection fraction experiencing a symptomatic exacerbation of [heart failure] requiring hospitalization during chronic maintenance treatment with oral therapies known to improve outcomes, particularly [ACE inhibitors] or ARBs and beta-blocker therapy, it is recommended that these therapies be continued in most patients in the absence of hemodynamic instability or contraindications. (Class I, Level of Evidence: C) (ACCF/AHA, 2009) (1)
-In patients hospitalized with [heart failure] with reduced ejection fraction not treated with oral therapies known to improve outcomes, particularly [ACE inhibitors] or ARBs and beta-blocker therapy, initiation of these therapies is recommended in stable patients prior to hospital discharge. (Class I, Level of Evidence: B) (ACCF/AHA, 2009) (1)
-Initiation of beta-blocker therapy is recommended after optimization of volume status and successful discontinuation of intravenous diuretics, vasodilators, and inotropic agents. Beta-blocker therapy should be initiated at a low dose and only in stable patients. Particular caution should be used when initiating beta blockers in patients who have required inotropes during their hospital course. (Class I, Level of Evidence: B) (ACCF/AHA, 2009) (1)

1c.10 Clinical Practice Guideline Citation: (1)Jessup M, Abraham WT, Casey DE, et al., writing on behalf of the 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult

Comment [k6]: 3 The strength of the body of evidence for the specific measure focus should be systematically assessed and rated (e.g., USPSTF grading system http://www.ahrq.gov/clinic/uspstf07/methods/benefit.htm). If the USPSTF grading system was not used, the grading system is explained including how it relates to the USPSTF grades or why it does not. However, evidence is not limited to quantitative studies and the best type of evidence depends upon the question being studied (e.g., randomized controlled trials appropriate for studying drug efficacy are not well suited for complex system changes). When qualitative studies are used, appropriate qualitative research criteria are used to judge the strength of the evidence.

Writing Committee. 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2009;53:1343–82. 1c.11 **National Guideline Clearinghouse or other URL:** http://content.onlinejacc.org/cgi/reprint/53/15/e1.pdf 1c.12 **Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*)**:** Class I (Conditions for which there is evidence and/or general agreement that a given procedure or treatment is beneficial, useful, and effective by the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines) 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF*)**:** Classifications of Recommendations are classified as follows: Class I: Conditions for which there is evidence and/or general agreement that a given procedure or treatment is beneficial, useful, and effective. Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of a procedure or treatment. Class IIa: Weight of evidence/opinion is in favor of usefulness/efficacy. Class IIb: Usefulness/efficacy is less well established by evidence/opinion. Class III: Conditions for which there is evidence and/or general agreement that a procedure/treatment is not useful/effective and in some cases may be harmful. 1c.14 **Rationale for using this guideline over others:** It is the PCPI policy to use guidelines, which are evidence-based, applicable to physicians and other healthcare providers, and developed by a national specialty organization or government agency. In addition, the PCPI has now expanded what is acceptable as the evidence base for measures to included documented quality improvement (QI) initiatives or implementation projects that have demonstrated improvement in the quality of care.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, **met?** **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement** (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Patients who were prescribed* beta-blocker therapy** either within a 12 month period when seen in the outpatient setting or at hospital discharge *Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list **Beta-blocker therapy should include bisoprolol, carvedilol, or sustained release metoprolol succinate.	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Comment [k7]: USPSTF grading system **http://www.ahrq.gov/clinic/uspstf/grades.htm**: **A -** The USPSTF recommends the service. There is high certainty that the net benefit is substantial. **B -** The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. **C -** The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. **D -** The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. **I -** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

Comment [KP8]: 2a. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. The required data elements are of high quality as defined by NQF's Health Information Technology Expert Panel (HITEP) .

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator***):**
Once during the measurement period

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions***):**
See attached for EHR Specifications.
For Claims/Administrative: Report CPT Category II Code: 4006F- Beta-blocker therapy prescribed

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40%

LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 18 years and older

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
12 consecutive months

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
See attached for EHR Specifications.
For Claims/Administrative: See coding tables attached for coding (ICD-9-CM, ICD-10-CM, SNOMED, CPT)
AND
Report CPT Category II Code (in development)3021F- Left ventricular ejection fraction (LVEF) < 40% or documentation of moderately or severely depressed left ventricular systolic function

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):**
Documentation of medical reason(s) for not prescribing beta-blocker therapy

Documentation of patient reason(s) for not prescribing beta-blocker therapy

Documentation of system reason(s) for not prescribing beta-blocker therapy

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
See attached for EHR Specifications.
For Claims/Administrative: See coding tables attached for coding (ICD-9-CM, ICD-10-CM, SNOMED, CPT)
- Append modifier to CPT II code 4006F-1P
- Append modifier to CPT II code 4006F-2P
- Append modifier to CPT II code 4006F-3P

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
See attached for calculation algorithm

Comment [k9]: 11 Risk factors that influence outcomes should not be specified as exclusions.
12 Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic administrative data/claims, Electronic clinical data, Electronic Health/Medical Record, Registry data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
www.pinnacleregistry.org

2a.29-31 Data dictionary/code table web page URL or attachment: Attachment NQF 0083_PCPI_HF-6_Beta Blocker for LVSD.pdf

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Home, Ambulatory Care: Office, Hospital, Ambulatory Care: Clinic, Nursing home (NH) /Skilled Nursing Facility (SNF), Ambulatory Care: Hospital Outpatient, Assisted Living, Group homes

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: Measure testing results with some relevance to this measure are provided in the attached summary. Please note, however, that the results summarized are from the testing of earlier versions of the PCPI Heart Failure and Hypertension measures. Additional PCPI staff analysis of the relevance of available testing data to the current version of these measures is ongoing and will be submitted to NQF separately and at the earliest possible date. Please see additional information in sections 2, 4, 6, 7, 8, 9, 10 of the attached Measure Testing Summary.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
Please see additional information in sections 2, 4, 6, 7, 8, 9, 10 of the attached Measure Testing Summary

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Please see additional information in sections 2, 4, 6, 7, 8, 9, 10 of the attached Measure Testing Summary

2b
C☐
P☐
M☐
N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*:

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
All PCPI performance measures are assessed for content validity by expert work group members during the development process. Additional input on the content validity of draft measures is obtained through a 30-day public comment period and by also soliciting comments from a panel of consumer, purchaser, and patient representatives convened by the PCPI specifically for this purpose. All comments received are

2c
C☐
P☐
M☐
N☐

Comment [KP10]: 2b. Reliability testing demonstrates the measure results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

Comment [k11]: 8 Examples of reliability testing include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing may address the data items or final measure score.

Comment [KP12]: 2c. Validity testing demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

Comment [k13]: 9 Examples of validity testing include, but are not limited to: determining if measure scores adequately distinguish between providers known to have good or poor quality assessed by another valid method; correlation of measure scores with another valid indicator of quality for the specific topic; ability of measure scores to predict scores on some other related valid measure; content validity for multi-item scales/tests. Face validity is a subjective assessment by experts of whether the measure reflects the quality of care (e.g., whether the proportion of patients with BP < 140/90 is a marker of quality). If face validity is the only validity addressed, it is systematically assessed (e.g., ratings by relevant stakeholders) and the measure is judged to represent quality care for the specific topic and that the measure focus is the most important aspect of quality for the specific topic.

reviewed by the expert work group and the measures adjusted as needed. Other external review groups (eg, focus groups) may be convened if there are any remaining concerns related to the content validity of the measures.

2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:

2d. Exclusions Justified

2d.1 **Summary of Evidence supporting exclusion(s):**
The PCPI support the consideration of exceptions or exclusions on a measure by measure basis. There must be clear rationale to permit an exception for a medical, patient, or system reason based on whether or not that reason is significant and occurs frequently enough. The PCPI also support systematic review and analysis of each physician´s exceptions data to identify practice patterns and opportunities for quality improvement.

The Heart Failure Work Group agreed to include a medical reason exception so that clinicians can exclude patients for whom the prescription of beta-blocker therapy may not be indicated or contraindicated (eg, low blood pressure, fluid overload) - see verbatim guidelines statements below. A patient reason exception has been included for patients who might decline this particular pharmacologic treatment. Additionally, a system reason exception has been included to account for potential financial constraints that would inhibit use/prescription of a beta-blocker.

"Beta blockers should be prescribed to all patients with stable HF due to reduced LVEF unless they have a contraindication to their use or have been shown to be unable to tolerate treatment with these drugs.

Which patients are sufficiently stable to be considered for treatment with a beta blocker? Regardless of the severity of symptoms, patients should not be hospitalized in an intensive care unit, should have no or minimal evidence of fluid overload or volume depletion, and should not have required recent treatment with an intravenous positive inotropic agent.

Betablockers may be considered in patients who have reactive airway disease or asymptomatic bradycardia but should be used with great caution or not at all in patients with persistent symptoms of either condition."

2d.2 **Citations for Evidence:**
Jessup M, Abraham WT, Casey DE, et al., writing on behalf of the 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult Writing Committee. 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2009;53:1343–82.

2d.3 **Data/sample** *(description of data/sample and size)*: Please see additional information in sections 1,3,5,7 of the attached Measure Testing Summary.

2d.4 **Analytic Method** *(type analysis & rationale)*:
Please see additional information in sections 1,3,5,7 of the attached Measure Testing Summary.

2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:
Please see additional information in sections 1,3,5,7 of the attached Measure Testing Summary.

2d
C☐
P☐
M☐
N☐
NA☐

2e. Risk Adjustment for Outcomes/ Resource Use Measures

2e.1 **Data/sample** *(description of data/sample and size)*:

2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*:
This is a process measure; risk adjustment is not indicated.

2e.3 **Testing Results** *(risk model performance metrics)*:

2e
C☐
P☐
M☐
N☐
NA☐

Comment [KP14]: 2d. Clinically necessary measure exclusions are identified and must be:
•supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;
AND
•a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
AND
•precisely defined and specified:
–if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Comment [k15]: 10 Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, sensitivity analyses with and without the exclusion, and variability of exclusions across providers.

Comment [KP16]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:
•an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care;[Error! Bookmark not defined.] OR
rationale/data support no risk adjustment.

Comment [k17]: 13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences.

2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:	
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)***:** Please see additional information in section 1 of the attached Measure Testing Summary. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)***:** Please see additional information in section 1 of the attached Measure Testing Summary. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)***:** Please see additional information in section 1 of the attached Measure Testing Summary.	**2f** **C☐** **P☐** **M☐** **N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)***:** Please see additional information in sections 6,7,8,9,10 of the attached Measure Testing Summary. **2g.2 Analytic Method** *(type of analysis & rationale)***:** Please see additional information in sections 6,7,8,9,10 of the attached Measure Testing Summary. **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)***:** Please see additional information in sections 6,7,8,9,10 of the attached Measure Testing Summary.	**2g** **C☐** **P☐** **M☐** **N☐** **NA☐**
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)***:** **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** The ACCF, AHA, and PCPI advocate that performance measure data should, where possible, be stratified by race, ethnicity, and primary language to assess disparities and initiate subsequent quality improvement activities addressing identified disparities, consistent with recent national efforts to standardize the collection of race and ethnicity data. A 2008 NQF report endorsed 45 practices including stratification by the aforementioned variables.(1) A 2009 IOM report "recommends collection of the existing Office of Management and Budget (OMB) race and Hispanic ethnicity categories as well as more fine-grained categories of ethnicity (referred to as granular ethnicity and based on one's ancestry) and language need (a rating of spoken English language proficiency of less than very well and one's preferred language for health-related encounters)."(2) References (1)National Quality Forum Issue Brief (No.10). Closing the Disparities Gap in Healthcare Quality with Performance Measurement and Public Reporting. Washington, DC: NQF, August 2008. (2)Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement. March 2010. AHRQ Publication No. 10-0058-EF. Agency for Healthcare Research and Quality, Rockville, MD. Available at: http://www.ahrq.gov/research/iomracereport. Accessed May 25, 2010.	**2h** **C☐** **P☐** **M☐** **N☐** **NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties***, met?** **Rationale:**	*2* **C☐** **P☐** **M☐** **N☐**

Comment [KP18]: 2f. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.

Comment [k19]: 14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically meaningful; or whether a statistically significant difference of $25 in cost for an episode of care (e.g., $5,000 v. $5,025) is practically meaningful. Measures with overall poor performance may not demonstrate much variability across providers.

Comment [KP20]: 2g. If multiple data sources/methods are allowed, there is demonstration they produce comparable results.

Comment [KP21]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender);OR rationale/data justifies why stratification is not necessary or not feasible.

3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** In use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** This measure is not yet used in any public reporting initiative. The measure will, however, be eligible for inclusion in the CMS PQRS and other government programs in 2012 and would thus provide information about clinician participation to the public. The ACCF, AHA, and PCPI believe that the reporting of such participation information is a beneficial first step on a trajectory toward the public reporting of performance results, which is most appropriate after the measures are thoroughly tested and the reliability of the performance data has been validated. Continued NQF endorsement will facilitate our ongoing progress toward this public reporting objective. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** All PCPI measures are suitable for use in quality improvement initiatives and are made freely available on the PCPI website and through the implementation efforts of medical specialty societies and other PCPI members. The PCPI strongly encourages the use of its measures in QI initiatives and seeks to provide information on such initiatives to PCPI members. The American Heart Association's Get With The Guidelines®-Outpatient (GWTG-O) is a virtual performance improvement program that will improve adherence to evidence-based care in the outpatient setting, including specialist practices, general healthcare practices and health clinics. GWTG-Outpatient has had a long history of quality improvement for cardiovascular care. They have published 65 publications over the past 10 years. This program is designed to assist healthcare professionals in the outpatient setting to provide the best possible care to patients. This program collects a number of clinical measures for primary and secondary prevention. Clinical measure sets include those developed by American Heart Association, including those co-developed with other organizations, such as the American College of Cardiology Foundation and the American Medical Association, as well as other National Quality Forum endorsed measures. Through this program, data is collected on clinical measures affecting a number of cardiovascular related conditions including, atrial fibrillation, coronary artery disease, heart failure, hypertension, diabetes, and preventative care. The primary analytical system used is Duke Clinical Research Institute. Get With The Guidelines®-Outpatient is a quality improvement program that can be utilized for Maintenance of Certification (MOC) with groups like American Board of Internal Medicine (ABIM) and American Board of Family Medicine (ABFM). ABIM has confirmed that the reports received from Get With The Guidelines-Outpatient can be utilized in completion of their Self-Directed Practice Improvement Module (PIM). The Self-Directed PIM provides one pathway for earning practice performance credit in ABIM's MOC program. This program includes several integral components: A preliminary Continuing Education (CE) course for the care team, data submission and reporting that is integrated with existing Electronic Health Records (EHRs)/health technology platforms, corresponding professional and provider education including webinars, online tools and resources, digital access to reference materials and videos through the Get With The Guidelines®-Outpatient website (http://outpatient.heart.org). The free continuing education activity titled, Outpatient Quality Improvement Focus, addresses the quality chasm and treatment gap, presents the benefits of quality improvement and identifies the steps necessary for implementation in the practice setting. This continuing education activity is certified for physicians, nurses and pharmacists. Since its debut in 2005, Get With The Guidelines-Heart Failure® (GWTG-HF) has helped hospital teams across the nation provide evidence-based heart failure treatment consistent with up-to-date scientific guidelines from the American Heart Association. GWTG-HF historically has had a long history of quality	**3a** C☐ P☐ M☐ N☐

Comment [KP22]: 3a. Demonstration that information produced by the measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives). An important outcome that may not have an identified improvement strategy still can be useful for informing quality improvement by identifying the need for and stimulating new approaches to improvement.

improvement for heart failure patient care. To date 17 peer-reviewed publications have been derived from data directly taken from GWTG-HF. This program is designed to assist healthcare professionals in the inpatient setting to provide the best possible care to patients with heart failure, by reducing the likelihood of recurring events, and allowing heart failure patients not only survive but reclaim their quality of life after hospitalization.

Hospitals, physicians, nurses and other healthcare providers who use GWTG-HF have access to patient-specific guideline information and immediate access to clinical decision support through the American Heart Association's Patient Management Tool™* (PMT), an online, interactive assessment and reporting system, through our vendor Outcome Sciences Inc. Using the PMT, hospitals can track their program performance and pinpoint areas for improvement.
GWTG-HF collects a number of clinical heart failure measures, including ejection fraction. Clinical measure sets include those developed by American Heart Association, including those co-developed with other organizations, such as the American College of Cardiology Foundation and the American Medical Association, as well as National Quality Forum. Through this program, we collect relevant medical history and more than 20 other elements, including symptoms, vital signs, exams, labs, medications, procedures, discharge status, ejection fraction, post discharge information, and many other data elements. More information on GWTG-HF is available at heart.org/getwiththeguidelines.

The American Heart Association has amassed a wealth of robust heart failure-related resources, newly aligned into a comprehensive offering to help take the failure out of heart failure.

One of our newest initiatives, known as "Target: Heart Failure" is intended to help medical professionals address the growing challenge by organizing the American Heart Association's wealth of robust heart failure-related resources into a comprehensive offering. The campaign provides healthcare professional with easy access to free educational tools, prevention programs, treatment guidelines, outcomes-based programs and quality initiatives,
including a downloadable toolkit containing awareness and prevention materials. Target: Heart Failure is an initiative to help healthcare professionals advance heart failure awareness, prevention, treatment and recovery. More information on Target: Heart Failure is available at www.heart.org/targethf

The American College of Cardiology Foundation's Cardiology Practice Improvement Pathway (CPIP) uses clinical measure sets that are developed and specified by the American College of Cardiology Foundation with the American Heart Association and the American Medical Association's Physician Consortium for Performance Improvement for Hypertension, Stable Coronary Artery Disease, Heart Failure, and Atrial Fibrillation/Atrial Flutter. This program is intended as an approved quality improvement product that can be applied toward ABIM's Part IV practice performance requirement for Maintenance of Certification (ABIM AQI application submitted). They are in the process of creating a homepage on the Cardiosource.org homepage. The URL will be cardiosource.org/cpip. The web-based tool will be available after spring 2011. Through an online webinar hosted in November 2010, CPIP anticipates enrolling 50 - 100 practices during 2011 which will provide data from about 500-1,000 cardiologists. This ACCF initiative has contracted with the NY QIO: IPRO to analyze and scores based on thresholds. Of the 100 points needed to achieve recognition in the program, 70 come directly from clinical points such as the Heart Failure measures that are being submitted to NQF for consideration. IPRO will audit 5% of practices who submit their data for recognition evaluation.

The American College of Cardiology Foundation's has an Performance Improvement program entitled "A New Era" which is an educational format approved for credit by the American Medical Association (AMA) and the American Nursing Credentialing Center. This continuing medical education program blends both quality improvement and educational methodologies to provide a high quality learning experience that impacts changes to practice. These activities are structured, long-term processes in which a healthcare professional learns about the heart failure specific performance metrics, uses metrics to retrospectively assess his practice, applies these metrics prospectively over a useful interval, and reevaluates his performance. As part of this process, clinicians set goals for change and engage in structured learning activities to improve their performance. As of December 6th, 2010:
- 425 clinicians have enrolled in A New ERA
- The data is generated from all but four states (Montana, New Hampshire, South Dakota, and Wyoming)
- 82% are physicians

- 90% agreed or strongly agreed that performance metric data were valuable - 80% agreed or strongly agreed that performance metric data review would help them improve their practice - No one has finished the program, as it takes several months to do so In 2008, the American College of Cardiology Foundation launched the PINNACLE program (formerly known as the Improving Continuous Cardiac Care or IC3). This was the first, national, prospective, outpatient based cardiac QI registry in the US. While participation is voluntary, this registry collects a variety of longituditional patient data at the point of service, including patients' symptoms, vital signs, medication, and recent hospitalizations. Jointly developed ACCF/AHA/PCPI measures for Coronary Artery Disease, Heart Failure, and Atrial Fibrillation. Data collection is achieved in 2 ways for the practices: paper forms or practice's electronic medical record data collection systems. The primary analytical system used is St. Luke's Mid America Heart Institute. The ACCF registry, PINNACLE, pulls data from outpatient facilities via paper flowsheets or 14 EHR vendors. As of December 10, 2010, there are 47 practices collecting data at 200 sites with 276,000 unique patients representing 1 million documented encounters. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability*?	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?** **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**

Comment [KP23]: 3b. The measure specifications are harmonized with other measures, and are applicable to multiple levels and settings.

Comment [k24]: 16 Measure harmonization refers to the standardization of specifications for similar measures on the same topic (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures for the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to many measures (e.g., age designation for children) so that they are uniform or compatible, unless differences are dictated by the evidence. The dimensions of harmonization can include numerator, denominator, exclusions, and data source and collection instructions. The extent of harmonization depends on the relationship of the measures, the evidence for the specific measure focus, and differences in data sources.

Comment [KP25]: 3c. Review of existing endorsed measures and measure sets demonstrates that the measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare, is a more valid or efficient way to measure).

4a. Data Generated as a Byproduct of Care Processes

4a.1-2 **How are the data elements that are needed to compute measure scores generated?**
Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)

4a C☐ P☐ M☐ N☐

Comment [KP26]: 4a. For clinical measures, required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery. (e.g., BP recorded in the electronic record, not abstracted from the record later by other personnel; patient self-assessment tools, e.g., depression scale; lab values, meds, etc.)

4b. Electronic Sources

4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*)
Yes

4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**

4b C☐ P☐ M☐ N☐

Comment [KP27]: 4b. The required data elements are available in electronic sources. If the required data are not in existing electronic sources, a credible, near-term path to electronic collection by most providers is specified and clinical data elements are specified for transition to the electronic health record.

4c. Exclusions

4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?**
No

4c.2 **If yes, provide justification.**

4c C☐ P☐ M☐ N☐ NA☐

Comment [KP28]: 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences

4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**
Although we are not currently aware of any unintended consequences related to this measure, we plan through an active redesign of the PCPI website to facilitate the collection of information on unintended consequences from the users of PCPI measures.

4d C☐ P☐ M☐ N☐

Comment [KP29]: 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

4e. Data Collection Strategy/Implementation

4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:**
Please see additional information in section 3 of the attached Measure Testing Summary.

4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:**
Costs to implement the measure have not been calculated.

4e.3 **Evidence for costs:**

4e.4 **Business case documentation:**

4e C☐ P☐ M☐ N☐

Comment [KP30]: 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility*?

4

Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met?
Rationale:

4 C☐ P☐ M☐ N☐

RECOMMENDATION

(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y** ☐ **N** ☐ **A** ☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
American Medical Association, 515 N State St, Chicago, Illinois, 60654

Co.2 Point of Contact
Mark, Antman, DDS, MBA, mark.antman@ama-assn.org, 312-464-5056-

Measure Developer If different from Measure Steward
Co.3 Organization
American Medical Association, 515 N State St, Chicago, Illinois, 60654

Co.4 Point of Contact
Mark, Antman, DDS, MBA, mark.antman@ama-assn.org, 312-464-5056-

Co.5 Submitter If different from Measure Steward POC
Mark, Antman, DDS, MBA, mark.antman@ama-assn.org, 312-464-5056-, American Medical Association

Co.6 Additional organizations that sponsored/participated in measure development
American College of Cardiology Foundation/American Heart Association

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Robert O. Bonow, MD, MACC, FAHA, FACP (Co-Chair) (cardiology)
Theodore G. Ganiats, MD (Co-Chair) (family medicine; measure methodology)
Craig T. Beam, CRE (patient representative)
Kathleen Blake, MD (cardiac electrophysiology)
Donald E. Casey, Jr., MD, MPH, MBA, FACP (internal medicine)
Sarah J. Goodlin, MD (geriatrics, palliative medicine)
Kathleen L. Grady, PhD, APN, FAAN, FAHA (cardiac surgery)
Randal F. Hundley, MD, FACC (cardiology, health plan representative)
Mariell Jessup, MD, FACC, FAHA, FESC (cardiology, heart failure)
Thomas E. Lynn, MD (family medicine, measure implementation)
Frederick A. Masoudi, MD, MSPH (cardiology)
David Nilasena MD, MSPH, MS (general preventive medicine, public health, measure implementation)
Paul D. Rockswold, MD, MPH (family medicine)
Ileana L. Piña, MD, FACC (cardiology, heart failure)
Lawrence B. Sadwin (patient representative)
Joanna D. Sikkema, MSN, ANP-BC, FAHA (cardiology)
Carrie A. Sincak, PharmD, BCPS (pharmacy)
John Spertus, MD, MPH (cardiology)
Patrick J. Torcson, MD, FACP, MMM (hospital medicine)
Elizabeth Torres, MD (internal medicine)
Mark V. Williams, MD, FHM (hospital medicine)
John B Wong, MD (internal medicine)

PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study must be equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and

employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.
Ad.2 If adapted, provide name of original measure: Heart Failure (HF): Beta-Blocker Therapy **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2003 **Ad.7 Month and Year of most recent revision:** 12, 2010 **Ad.8 What is your frequency for review/update of this measure?** Every 3 years or as new evidence becomes available that materially affects the measures. **Ad.9 When is the next scheduled review/update for this measure?** 12, 2013
Ad.10 Copyright statement/disclaimers: This Physician Performance Measurement Set (PPMS) and related data specifications were developed by the Physician Consortium for Performance Improvement® (the Consortium) including the American College of Cardiology (ACC), the American Heart Association (AHA) and the American Medical Association (AMA) to facilitate quality improvement activities by physicians. The performance measures contained in this PPMS are not clinical guidelines and do not establish a standard of medical care, and have not been tested for all potential applications. While copyrighted, they can be reproduced and distributed, without modification, for noncommercial purposes, e.g., use by health care providers in connection with their practices. Commercial use is defined as the sale, license, or distribution of the performance measures for commercial gain, or incorporation of the performance measures into a product or service that is sold, licensed or distributed for commercial gain. Commercial uses of the PPMS require a license agreement between the user and the AMA, (on behalf of the Consortium) or the ACC or the AHA. Neither the AMA, ACC, AHA, the Consortium nor its members shall be responsible for any use of this PPMS. THE MEASURES AND SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.   Limited proprietary coding is contained in the measure specifications for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The AMA, the ACC, the AHA, the Consortium and its members disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT®) or other coding contained in the specifications.
Ad.11 -13 Additional Information web page URL or attachment: Attachment Testing Summary HF NQF Final_2_10_2011-634329406104256980.pdf
Date of Submission (*MM/DD/YY*)**:** 03/16/2011

Page 3: [1] Comment [k5] **Karen Pace** **10/5/2009 8:59:00 AM**

4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., mammography) or measures for multiple care processes that affect a single outcome.

AMA-PCPI Level I EHR Specifications

Clinical Topic	Heart Failure
Measure Title	**Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction**
Measure #	**PCPI HF-6 / NQF 0083 / PQRI 8**
Measure Description	Percentage of patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting or at hospital discharge
Measurement Period	Twelve consecutive months
Initial Patient Population	Patient Age: Patients aged 18 years and older before the start of the measurement period Diagnosis Active: Patient has a diagnosis of Heart Failure before or simultaneously to encounter date Encounter: At least two visits (or at least one inpatient discharge) with the physician, physician's assistant, or nurse practitioner during the measurement period
Denominator Statement	All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40% *NOTE: LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction*
Numerator Statement	Patients who were prescribed* beta-blocker therapy** either within a 12 month period when seen in the outpatient setting or at hospital discharge *Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list **Beta-blocker therapy should include bisoprolol, carvedilol, or sustained release metoprolol succinate
Denominator Exceptions	Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, low blood pressure, fluid overload, patients recently treated with an intravenous positive inotropic agent, not indicated, contraindicated, other medical reason) Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, social, religious, other patient reason) Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, resources to perform the services not available, insurance coverage, other reason attributable to health care delivery system)

AMA - PCPI Level I EHR Specifications

Measure Logic for Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction

Measure Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting or at hospital discharge

Measurement Period: 12 consecutive months

PCPI # HF-6 / NQF # 0083 / PQRI # 8

PAGE 1

Identify Patients in Initial Patient Population (IPP)

- PATIENT AGE [1] 18 years and older
- And
- DIAGNOSIS[2] Active — Heart Failure — Value Set 000265
- And
- ENCOUNTER[3 4] — Value Set 000002, 000009

Identify Patients in Denominator (D)

- All Patients Identified within the Initial Patient Population
- And
- Quantitative ╬ (a) OR Qualitative ▲ (b)

Quantitative ╬ (a):
- DIAGNOSTIC STUDY Result — Ejection Fraction < 40% — Value Set 000003
- OR
- PERFORMED Diagnostic Study — Value Set 000004
- And
- RESULT Documented — LVEF < 40% — Value Set 000004

Qualitative ▲ (b):
- DIAGNOSTIC STUDY Result — LVSD : Moderate or Severe Dysfunction — Value Set 000248
- OR
- DIAGNOSIS Active — LVSD — Value Set 000244
- And
- RESULT Documented — Severity Status: Moderate or Severe — Value Set 000247

Identify Patients in Numerator (N)

- All Patients Identified within the Denominator
- And
- MEDICATION Prescribed — Beta-blocker Therapy for LVSD — Value Set 000211

Identify Patients who have valid Denominator Exceptions (E)

- See PAGE 2 For (E)

PARAMETER SPECIFICATIONS (Value Sets are found in the Coding Appendices):

IPP: [1] Patient Age-18 years and older before the start of measurement period; [2]Diagnosis, Active-before or simultaneously to encounter date; [3] Encounter, value set 000002- ≥ to 2 visits during measurement period; [4] Encounter,value set 000009-at each hospital discharge during the measurement period;

D: All in (D) occurring before or simultaneously to measurement period;

N: Medication, Prescribed-active or ordered during the measurement period;

╬The results will be documented as numerical values represented as a percentage

▲ Qualitative results correspond to numeric equivalents as follows (Crosswalk):
- Hyperdynamic: corresponds to LVEF greater than 70%
- Normal: corresponds to LVEF 50% to 70% (midpoint 60%)
- Mild dysfunction: corresponds to LVEF 40% to 49% (midpoint 45%)
- Moderate dysfunction: corresponds to LVEF 30% to 39% (midpoint 35%)
- Severe dysfunction: corresponds to LVEF less than 30%

Version 2.0

AMA - PCPI Level I EHR Specifications

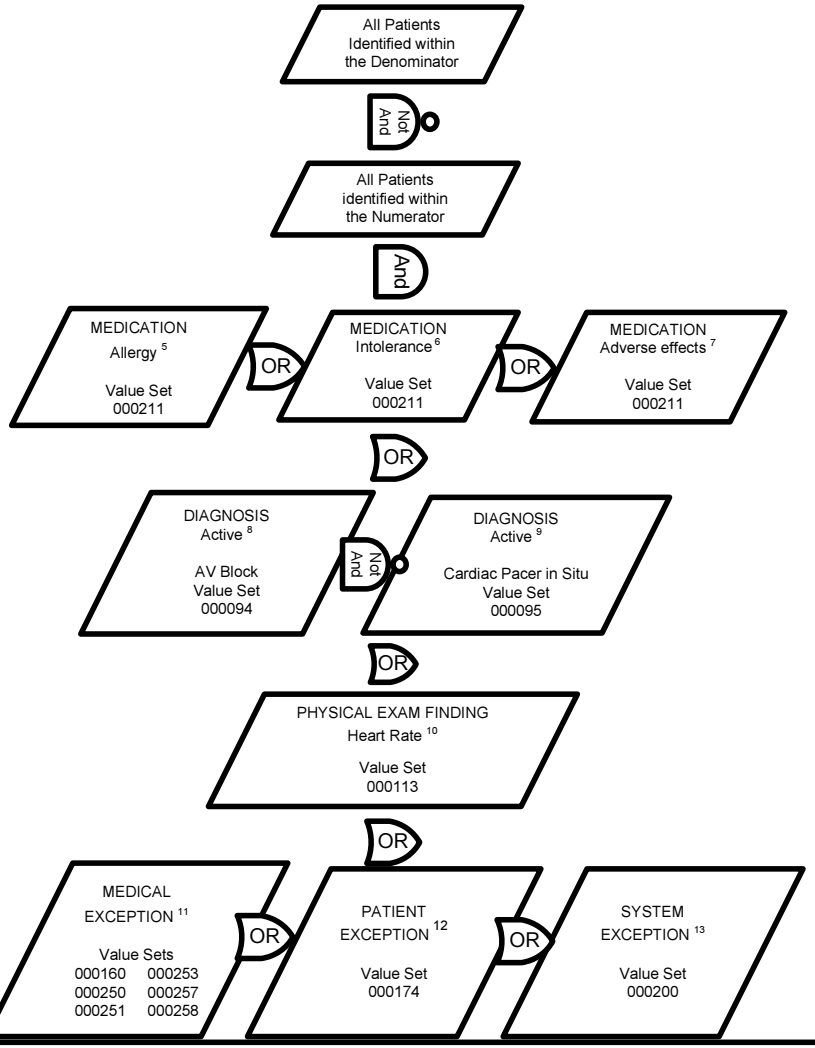
Measure Logic for Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction

Measure Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting or at hospital discharge

Measurement Period: 12 consecutive months

PCPI # HF-6 / NQF # 0083 / PQRI # 8

PAGE 2

Identify Patients in Initial Patient Population (IPP)	Identify Patients in Denominator (D)	Identify Patients in Numerator (N)	Identify Patients who have valid Denominator Exceptions * (E)
See PAGE 1 For (IPP)	See PAGE 1 For (D)	See PAGE 1 For (N)	

PARAMETER SPECIFICATIONS (Value Sets are found in the Coding Appendices):

E: [5, 6, 7, 8, 9, 12, 13] in (E) occurring before or simultaneously to measurement period; [10] Physical Exam Finding-2 consecutive heart rate readings during measurement period at less than 50 beats per minute; [11] Medical Exception-Value Sets 000160, 000250, 000251, 000257, 000258 occur before or simultaneously to measurement period, value set 000253 occurring during measurement period; [5 6 7] Medication Allergy, Intolerance, Adverse Effects-the Value Set listed references the medications to which the allergy, intolerance or adverse effect exist;

* Coded examples are NOT intended to be an exhaustive list. Exceptions will vary for each patient and situation.

Basic Measure Calculation:

$$\frac{(N)}{(D) - (E)} = \%$$

The PCPI strongly recommends that exception rates also be computed and reported alongside performance rates as follows:

Exception Calculation:

$$\frac{(E)}{(D)} = \%$$

Exception Types:
E= E1 (Medical Exceptions) + E2 (Patient Exceptions) + E3 (System Exceptions)
For patients who have more than one valid exception, only one exception should be be counted when calculating the exception rate

Initial Patient Population (IPP)	Denominator (D)	Numerator (N)	Denominator Exceptions (E)
Definition: The initial patient population identifies the general group of patients that the performance measureis designed to address; usually focused on a specific clinical condition (e.g., coronary artery disease, asthma). For example, a patient aged 18 years and older with a diagnosis of CADwho has at least 2 Visits during the measurement period.	**Definition:** The denominator defines the specific group of patients for inclusion in a specific performance measure based on specific criteria (e.g., patient's age, diagnosis, prior MI). In some cases, the denominator may be I dentical to the initial patient population.	**Definition:** The numerator defines the group of patients in the denominator for whom a process or outcome of care occurs (e.g., flu vaccine received).	**Definition:** Denominator exceptions are the valid reasons why patients who are included in the denominator population did not receive a process or outcome of care (described in the numerator). Patients may have Denominator Exceptions for medical reasons (e.g., patient has an egg allergy so they did not receive flu vaccine); patient reasons (e.g., patient declined flu vaccine); or system reasons (e.g., patient did not receive flu Vaccine due to vaccine shortage). These cases are removed from the denominator population for the performance calculation, however the number of patients with valid exceptions should be calculated and reported. This group of patients constitutes the Denominator Exception reporting population – patients for whom the numerator was not achieved and a there is a valid Denominator Exception.
Find the patients who meet the Initial Patient Population criteria (IPP)	Find the patients who qualify for the denominator (D): ○ From the patients within the Patient Population criteria (IPP) select those people who meet Denominator selection criteria. (In some cases the IPP and D are identical).	Find the patients who qualify for the Numerator (N): ○ From the patients within the Denominator (D) criteria, select those people who meet Numerator selection criteria. ○ Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator	From the patients who did not meet the Numerator criteria, determine if the patient meets any criteria for the Denominator Exception (E1 + E2+E3). If they meet any criteria, they should be removed from the Denominator for performance calculation. As a point of reference, these cases are removed from the denominator population for the performance calculation, however the number of patients with valid exceptions should be calculated and reported.

AMA-PCPI Level I EHR Specifications
Heart Failure - Beta Blocker Therapy for LVSD

value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	402.01	MAL HYP HRT DIS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	402.11	BEN HYP HRT DIS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	402.91	HYP HRT DIS NOS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.01	MAL HYP HRT/REN DIS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.03	MAL HYP HRT/REN DIS W HF&RF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.11	BEN HYP HRT/REN DIS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.13	BEN HYP HRT/REN DIS W HF&RF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.91	HYP HRT/REN DIS W HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	404.93	MAL HYP HRT/REN DIS W HF&RF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.0	CHF NOS
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.1	LEFT HEART FAILURE
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.20	SYSTOLIC HRT FAILURE NOS
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.21	AC SYSTOLIC HRT FAILURE
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.22	CHR SYSTOLIC HRT FAILURE
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.23	AC ON CHR SYSTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.30	DIASTOLC HRT FAILURE NOS
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.31	AC DIASTOLIC HRT FAILURE
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.32	CHR DIASTOLIC HRT FAIL
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.33	AC ON CHR DIASTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.40	SYSTOLIC/DIASTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.41	AC SYSTOLIC/DIASTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.42	CHR SYSTOLIC/DIASTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.43	AC/CHR SYSTOLIC/DIASTOLIC HF
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I9	428.9	HEART FAILURE NOS
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I11.0	Hypertensive heart disease with heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.1	Left ventricular failure/Cardiac asthma
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.20	Unspecified systolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.21	Acute systolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.22	Chronic systolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.23	Acute on chronic systolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.30	Unspecified diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.31	Acute diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.32	Chronic diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.33	Acute on chronic diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	I10	I50.9	Heart failure, unspecified / Biventricular (heart) failure NOS
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	364006	acute left-sided heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	5053004	cardiac insufficiency due to prosthesis (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	5148006	hypertensive heart disease with congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	5375005	chronic left-sided congestive heart failure (disorder)

AMA-PCPI Level I EHR Specifications
Heart Failure - Beta Blocker Therapy for LVSD

value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	10091002	high output heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	10335000	chronic right-sided heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	10633002	acute congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	13839000	Bernheim's syndrome (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	25544003	low output heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	33644002	postvalvulotomy syndrome (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	42343007	congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	43736008	rheumatic left ventricular failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	44313006	right heart failure secondary to left heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	46113002	hypertensive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	48447003	chronic heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	56675007	acute heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	60856006	cardiac insufficiency following cardiac surgery (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	66989003	chronic right-sided congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	74960003	acute left-sided congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	77737007	benign hypertensive heart disease with congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	80479009	acute right-sided congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	82523003	congestive rheumatic heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	83105008	malignant hypertensive heart disease with congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	84114007	heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	85232009	left heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	88805009	chronic congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	92506005	biventricular congestive heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	90727007	pleural effusion due to congestive heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	111283005	chronic left-sided heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	128404006	right heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	194767001	benign hypertensive heart disease with congestive cardiac failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	194779001	hypertensive heart and renal disease with (congestive) heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	194781004	hypertensive heart and renal disease with both (congestive) heart failure and renal failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	195111005	Decompensated cardiac failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	195112003	compensated cardiac failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	195114002	acute left ventricular failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	206586007	congenital cardiac failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	233924009	heart failure as a complication of care (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	277639002	sepsis-associated right ventricular failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	314206003	refractory heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	359617009	acute right-sided heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	359620001	acute right heart failure
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	367363000	right ventricular failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	410431009	cardiorespiratory failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	417996009	systolic heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	418304008	diastolic heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	424404003	decompensated chronic heart failure (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	426012001	right heart failure due to pulmonary hypertension (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	426263006	congestive heart failure due to left ventricular systolic dysfunction (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	426611007	congestive heart failure due to valvular disease (disorder)
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	441481004	chronic systolic heart failure

AMA-PCPI Level I EHR Specifications
Heart Failure - Beta Blocker Therapy for LVSD

value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000265	HF	6	IPP	Heart Failure	Diagnosis/Condition/Problem	SNM	441530006	chronic diastolic heart failure
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99201	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99202	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99203	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99204	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99205	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99212	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99213	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99214	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99215	
000009	HF	6	IPP	Encounter-INPT Discharge	Encounter	CPT	99238	
000009	HF	6	IPP	Encounter-INPT Discharge	Encounter	CPT	99239	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99241	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99242	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99243	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99244	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99245	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99304	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99305	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99306	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99307	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99308	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99309	
000002	HF	6	IPP	Encounter -Nursing Facility	Encounter	CPT	99310	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99324	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99325	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99326	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99327	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99328	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99334	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99335	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99336	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99337	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99341	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99342	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99343	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99344	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99345	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99347	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99348	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99349	
000002	HF	6	IPP	Encounter-Outpatient	Encounter	CPT	99350	
000003	HF	6	D (a)	Ejection Fraction	Diagnostic Study	SNM	70822001	CARDIAC EJECTION FRACTION
000003	HF	6	D (a)	Ejection Fraction	Diagnostic Study	SNM	250908004	LEFT VENTRICULAR EJECTION FRACTION
000003	HF	6	D (a)	Ejection Fraction	Diagnostic Study	SNM	250907009	LEFT VENTRICULAR FUNCTION
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78414	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78451	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78452	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78453	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78454	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78468	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78472	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78473	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78481	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78483	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78494	

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Heart Failure - Beta Blocker Therapy for LVSD

value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	78496	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93303	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93304	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93306	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93307	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93308	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93312	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93313	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93314	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93315	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93316	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93317	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93350	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93351	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93352	
000004	HF	6	D (a)	LVF Assessment	Diagnostic Study	CPT	93543	
000248	HF	6	D (b)	LVSD : Moderate or Severe Dysfunction	Diagnostic Study	SNM	10189741000046100	Moderate left ventricular systolic dysfunction (disorder)
000248	HF	6	D (b)	LVSD : Moderate or Severe Dysfunction	Diagnostic Study	SNM	10189751000046100	Severe left ventricular systolic dysfunction (disorder)
000244	HF	6	D (b)	LVSD	Diagnosis/Condition/Problem	SNM	134401001	Left Ventricular Systolic Dysfunction
000247	HF	6	D (b)	Severity Status	Result	SNM	6736007	Moderate (severity)
000247	HF	6	D (b)	Severity Status	Result	SNM	24484000	Severe (Severity)
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	200031	carvedilol 6.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	200032	carvedilol 12.5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	200033	carvedilol 25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	212388	Coreg 6.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	212389	Coreg 12.5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	212390	Coreg 25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	686924	carvedilol 3.125 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	686926	Coreg 3.125 Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854901	Bisoprolol Fumarate 10 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854903	Zebeta 10 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854905	Bisoprolol Fumarate 5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854907	Zebeta 5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854908	bisoprolol fumarate 10 MG / HCTZ 6.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854910	Ziac 10/6.25 Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854916	bisoprolol fumarate 2.5 MG / HCTZ 6.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854918	Ziac 2.5/6.25 Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854919	bisoprolol fumarate 5 MG / HCTZ 6.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	854921	Ziac 5/6.25 Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860510	carvedilol phosphate 10 MG 24 HR Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860512	24 HR Coreg 10 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860513	carvedilol phosphate 10 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860514	Coreg 10 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860516	carvedilol phosphate 20 MG 24 HR Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860518	24 HR Coreg 20 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860519	carvedilol phosphate 20 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860520	Coreg 20 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860522	carvedilol phosphate 40 MG 24 HR Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860524	24 HR Coreg 40 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860525	carvedilol phosphate 40 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860526	Coreg 40 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860532	carvedilol phosphate 80 MG 24 HR Extended Release Capsule

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value_set_id	clinical_topic	topic_indicator	measure_component	standard_concept	standard_category	standard_taxonomy	code	code_description
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860534	24 HR Coreg 80 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860535	carvedilol phosphate 80 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	860536	Coreg 80 MG Extended Release Capsule
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	865154	Bisoprolol Fumarate 1.25 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	865155	Bisoprolol Fumarate 2.5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	865157	Bisoprolol Fumarate 3.75 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	865159	Bisoprolol Fumarate 7.5 MG Oral Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866412	metoprolol tartrate 100 MG (as metoprolol succinate 95 MG) 24 HR Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866414	24 HR Toprol XL 100 MG Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866419	metoprolol tartrate 200 MG (as metoprolol succinate 190 MG) 24 HR Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866421	24 HR Toprol XL 200 MG Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866436	metoprolol tartrate 50 MG (as metoprolol succinate 47.5 MG) 24 HR Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866452	hydrochlorothiazide 12.5 MG / metoprolol tartrate 100 MG (as metoprolol succinate 95 MG) 24 HR Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866455	Dutoprol 100/12.5 MG 24 HR Extended Release Tablet
000211	HF	6	N	Beta Blocker Therapy for LVSD	Medication	RxNorm	866846	HCTZ 25 MG / metoprolol tartrate 200 MG (as metroprolol succinate 190 MG) 24 HR Extended Release Tablet
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	I9	426.0	AV BLOCK COMPLETE
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	I9	426.12	AV BLOCK-MOBITZ II
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	I9	426.13	AV BLOCK-2ND DEGREE NOS
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	I10	I44.2	Atrioventricular block, complete
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	I10	I44.1	Atrioventricular block, second degree
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	2374000	Monofascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	4554005	intraventricular conduction defect (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	4973001	left bundle branch hemiblock (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	6180003	complete left bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	6374002	bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	9651007	long QT syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	13620007	Stokes-Adams-Morgagni syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	20143001	bilateral bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	20852007	Romano-Ward syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	27885002	complete atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	28189009	Mobitz type II atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	30667004	right bundle branch block AND left anterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	32425009	right bundle branch block, anterior fascicular block AND posterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	32758004	right bundle branch block with left bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	37760005	left anterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	41863008	right bundle branch block, anterior fascicular block AND incomplete posterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	43906007	right bundle branch block AND incomplete left bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	44103008	postoperative sinoatrial disease (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	46319007	right bundle branch block AND left posterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	46619002	congenital heart block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	46935006	Stokes-Adams syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	50799005	atrioventricular dissociation (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	54016002	Mobitz type I incomplete atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	59118001	right bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	62026008	left posterior fascicular block (disorder)

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value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	63467002	left bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	64872007	congenital incomplete atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	66568003	right bundle branch block, posterior fascicular block AND incomplete anterior fascicular block
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	71792006	nodal rhythm disorder (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	73459006	right branch block, incomplete anterior fascicular block AND incomplete posterior fascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	74021003	Bifascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	76887001	anterior fascicular block, posterior fascicular block AND incomplete right bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	77221000	incomplete atrioventricular block with atrioventricular response (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	82226007	diffuse intraventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	82580003	congenital complete atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	86014007	trifascicular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	93130009	Lenegre's disease (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	129575004	pacemaker twiddler's syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	195039008	partial atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	195042002	second degree atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	195046004	left main stem bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	204383001	congenital complete atrioventricular heart block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	204384007	congenital incomplete atrioventricular heart block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	233917008	atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	233918003	postoperative complete heart block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	233919006	familial isolated complete right bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251114004	intermittent second degree atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251120003	incomplete left bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251123001	complete right bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251124007	incomplete right bundle branch block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251125008	minor intraventricular conduction defect (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	251152003	marked sinus arrhythmia (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	270492004	first degree atrioventricular block (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	276513001	neonatal dysrhythmia (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	283645003	lev's syndrome (disorder)
000094	HF	6	E	Atrioventricular Block	Diagnosis/Condition/Problem	SNM	302944009	congenital complete heart block (disorder)
000095	HF	6	E	Cardiac Pacer in Situ	Diagnosis/Condition/Problem	I10	Z95.0	Presence of cardiac pacemaker
000095	HF	6	E	Cardiac Pacer in Situ	Diagnosis/Condition/Problem	I9	V45.01	STATUS-POST PACEMAKER
000095	HF	6	E	Cardiac Pacer in Situ	Device	SNM	14106009	cardiac pacemaker
000095	HF	6	E	Cardiac Pacer in Situ	Device	SNM	56961003	cardiac transvenous pacemaker
000095	HF	6	E	Cardiac Pacer in Situ	Device	SNM	360127006	intravenous cardiac pacemaker system
000113	HF	6	E	Heart Rate	Diagnosis/Condition/Problem	SNM	364075005	Heart Rate
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.00	EXTRINSIC ASTHMA UNSPEC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.01	EXTRINSIC ASTHMA W STATUS ASTH
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.02	EXTRINSIC ASTHMA W (AC) EXAC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.10	INTRINSIC ASTHMA NOS
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.11	INTRINSIC ASTHMA W STATUS ASTH
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.12	INTRINSIC ASTHMA W (AC) EXAC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.20	CHR OBST ASTHMA UNSPEC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.21	CHR OBST ASTHMA W STAT ASTH
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.22	CHR OBST ASTHMA W (AC) EXAC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.81	EXERCSE IND BRONCHOSPASM
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.82	COUGH VARIANT ASTHMA
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.90	ASTHMA NOS

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value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.91	ASTHMA NOS W STATUS ASTHT
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I9	493.92	ASTHMA NOS W (AC) EXAC
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.22	Mild intermittent asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.32	Mild persistent asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.42	Moderate persistent with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.52	Severe persistent with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.90	Unspecified asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.901	Unspecified asthma with (acute) exacerbation
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.902	Unspecified asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.990	Exercise induced bronchospasm
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	I10	J45.991	Cough variant asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	11641008	millers' asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	12428000	intrinsic asthma without status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	13151001	flax-dressers' disease
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	30352005	allergic-infective asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	31387002	exercise-induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	55570000	asthma without status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	56968009	wood asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	57546000	asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	59327009	intrinsic asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	59786004	weavers' cough
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	63088003	extrinsic asthma without status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	67415000	hay asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	85761009	byssinosis
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	91340006	extrinsic asthma with status asthmaticus
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	92807009	chemical-induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	93432008	drug-induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	195949008	chronic asthmatic bronchitis
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	195967001	asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	195977004	mixed asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	195979001	asthma unspecified
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	196013003	pneumopathy due to inhalation of other dust
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	225057002	brittle asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233672007	byssinosis grade 3
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233678006	childhood asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233679003	late onset asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233681001	extrinsic asthma with asthma attack
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233683003	hay fever with asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233685005	intrinsic asthma with asthma attack
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	233688007	sulfite-induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	266361008	intrinsic asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	266364000	asthma attack
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	281239006	exacerbation of asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	304527002	acute asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	370218001	mild asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	370219009	moderate asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	370220003	occasional asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	370221004	severe asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	389145006	allergic asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	405944004	asthmatic bronchitis
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	407674008	aspirin-induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	409663006	cough variant asthma

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value_set_id	clinical_topic	topic_indicator	measure_component	standard_concept	standard_category	standard_taxonomy	code	code_description
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	423889005	Non-IgE mediated allergic asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	424199006	substance induced asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	424643009	igE-mediated allergic asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	425969006	exacerbation of intermittent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	426656000	severe persistent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	426979002	mild persistent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	427295004	moderate persistent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	427354000	exacerbation of persistent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	427603009	intermittent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	427679007	mild intermittent asthma
000257	HF	6	E	Asthma	Diagnosis/Condition/Problem	SNM	442025000	acute exacerbation of chronic asthmatic bronchitis
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	29894000	vagal autonomic bradycardia (disorder)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	42177007	BRADYCARDIA - PULSE SLOW
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	44273001	reflex bradycardia (finding)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	44602002	PERSISTENT SINUS BRADYCARDIA
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	47101004	cardiotachometry
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	48867003	SLOW HEART BEAT - BRADYCARDIA
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	49044005	SEVERE SINUS BRADYCARDIA
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	49710005	sinus bradycardia (disorder)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	162988008	on examination - pulse rate - bradycardia (finding)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	251162005	atrio-ventricular-junctional (nodal) bradycardia (disorder)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	278085001	baseline bradycardia (finding)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	309746001	[D]Sinus bradycardia (situation)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	397841007	drug-induced bradycardia (disorder)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	426177001	electrocardiogram: sinus bradycardia (finding)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	SNM	426627000	electrocardiogram: bradycardia (finding)
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	I9	427.89	other specified cardiac dysrrhythmias
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	I9	427.81	sinoatrial node dysfunction
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	I9	337.09	Other idiopathic peripheral autonomic neuropathy
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	I10	G90.09	Other idiopathic peripheral autonomic neuropathy
000258	HF	6	E	Bradycardia	Diagnosis/Condition/Problem	I10	R00.1	Bradycardia unspecified
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21745	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21747	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21703	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21704	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	22855	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21990	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21738	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	22259	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	21815	
000160	HF	6	E	Medical reason	Negation Rationale	HL7	22261	
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-9	458.0	ORTHOSTATIC HYPOTENSION
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-9	458.1	CHRONIC HYPOTENSION
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-9	458.29	IATROGENC HYPOTENSION
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-9	458.8	HYPOTENSION NEC
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-9	458.9	HYPOTENSION NOS
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-10	R03.1	Nonspecific low blood-pressure reading
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-10	I95.0	Idiopathic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-10	I95.1	Orthostatic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-10	I95.2	Hypotension due to drugs
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	ICD-10	I95.8	Other hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	45007003	Low blood pressure
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	77545000	Chronic hypotension

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value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	286963007	Chronic hypotension - idiopathic
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	75181005	Chronic orthostatic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	84438001	Pure autonomic failure
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	234171009	Drug-induced hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	429561008	Exertional hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	408667000	Hemodialysis-associated hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	67763001	Hypotensive episode
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	195506001	Idiopathic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	271870002	Low blood pressure reading
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	88887003	Maternal hypotension syndrome
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	200112003	Maternal hypotension syndrome - delivered with postnatal problem
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	200111005	Maternal hypotension syndrome - delivered
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	200113008	Maternal hypotension syndrome with antenatal problem
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	200114002	Maternal hypotension syndrome with postnatal problem
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	28651003	Orthostatic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	75181005	Chronic orthostatic hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	84438001	Pure autonomic failure
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	61933008	Hyperadrenergic postural hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	70247006	Hypoadrenergic postural hypotension
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	371073003	Postural orthostatic tachycardia syndrome
000250	HF	6	E	Hypotension	Diagnosis/Condition/Problem	SNM	230664009	Sympathotonic orthostatic hypotension
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	ICD-9	276.6	Fluid overload
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	ICD-10	E87.7	Fluid overload
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	21639008	Hypervolemia
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	43498006	Body fluid retention
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	234176004	Idiopathic fluid retention
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	56977002	Idiopathic edema
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	1794009	Idiopathic corneal edema
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	402866002	Periodic edema
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	234177008	Excess interdialytic weight gain
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	42669007	Hyponatremia with excess extracellular fluid volume
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	61688009	Overhydration
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	276644000	Neonatal overhydration
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	35633007	Transfusion reaction due to excess volume
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	52139007	Volume excess, disturbed Starling forces
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	32442003	Volume excess, primary hormone excess
000251	HF	6	E	Fluid Overload	Diagnosis/Condition/Problem	SNM	77624000	Volume excess, primary renal sodium retention
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	347930	milrinone 1 MG/ML (as milrinone lactate) Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	311705	milrinone 200 MCG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	545299	Primacor 0.2 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	807270	Primacor 1 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	251225	Enoximone 5 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	204504	Digoxin 0.1 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	104208	digoxin 250 MCG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	208135	Lanoxin 0.1 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	208137	Lanoxin 0.25 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	412888	Ouabain 0.25 MG/ML Injectable Solution
000253	HF	6	E	Intravenous Positive Inotropic Agent	Medication - Administered	RxNorm	901047	Levosimendan 2.5 MG/ML Injectable Solution
000174	HF	6	E	Patient reason	Negation Rationale	HL7	19729	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	21741	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	21746	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	21743	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	21710	

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value_set_id	clinical_ topic	topic_ indicator	measure_ component	standard_concept	standard_category	standard_ta xonomy	code	code_description
000174	HF	6	E	Patient reason	Negation Rationale	HL7	21708	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	22851	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	14880	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	22260	
000174	HF	6	E	Patient reason	Negation Rationale	HL7	15985	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22168	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22169	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22165	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22166	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22167	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21493	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19731	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19730	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19733	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19735	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19734	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19736	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21744	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22024	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22023	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21706	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21709	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21707	
000200	HF	6	E	System Reason	Negation Rationale	HL7	21732	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	21731	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	21729	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	22867	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	22866	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22865	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	22911	
000200	HF	6	E	System Reason	Negation Rationale	HL7	22913	
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000200	HF	6	E	System Reason	Negation Rationale	HL7	19990	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19988	
000200	HF	6	E	System Reason	Negation Rationale	HL7	19987	