

NQF-Endorsed Measures for Cardiovascular Conditions 2014-2015: Phase 2

FINAL REPORT

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Executive Summary

Cardiovascular disease (CVD) is the leading cause of death for men and women in the United States. Although death rates attributable to cardiovascular disease (CVD) have declined by 31% from 2000 to 2010, CVD still accounts for 1 in 3 deaths in Americans.¹ Considering the overall toll of cardiovascular disease, measures that assess the performance of clinical care and patient outcomes are paramount to reducing the negative impacts of CVD.

NQF's cardiovascular measures portfolio is one of the largest, with measures for primary prevention and screening, coronary artery disease (CAD) or ischemic heart disease (IHD), heart attacks or acute myocardial infarction (AMI), percutaneous coronary intervention (PCI), cardiac catheterization, cardiac rehabilitation, cardiac imaging, high blood pressure, heart failure (HF), rhythm disorders, Implantable Cardioverter Defibrillator (ICDs), and other cardiovascular conditions. The vast majority of these measures are currently implemented in a variety of public and/or private accountability and quality improvement programs. Despite the large number of endorsed measures, gaps still remain including patient-reported outcomes and patient-centric composite measures.

Due to the large number of cardiovascular measures, maintenance review of endorsed measures and consideration of new measures took place over several phases in 2014-2015. This report presents measure evaluations performed during phase 2. A description of the project is found in the [phase 1 report](#) detailing the methods and approach taken by NQF in all phases of the cardiovascular project. In phase 1, NQF endorsed 8 new measures and 6 measures undergoing maintenance review. In phase 3, initiated during the summer of 2015, an additional 24 measures are scheduled for review.

In phase 2 of this project, the Cardiovascular Standing Committee evaluated 8 new measures and 8 measures undergoing maintenance review against NQF's standard evaluation criteria. Eleven of these measures were recommended for endorsement by the Committee, 4 were not recommended, and 1 was withdrawn by the developer. These measures are listed by endorsement status below:

Endorsed:

- 0090: Emergency Medicine: 12-Lead Electrocardiogram (ECG) Performed for Non-Traumatic Chest Pain
- 0670: Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients
- 0671: Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention
- 0672: Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients

- 0715: Standardized Adverse Event Ratio for Children < 18 Years of Age Undergoing Cardiac Catheterization
- 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy
- 2438: Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge
- 2439: Post-Discharge Appointment for Heart Failure Patients
- 2443: Post-Discharge Evaluation for Heart Failure Patients
- 2461: In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device (CIED)
- 2474: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation

Not Recommended:

- 1524: Atrial Fibrillation: Assessment of Thromboembolic Risk Factors (CHADS2)
- 2440: Care Transition Record Transmitted
- 2441: Discussion of Advance Directives/Advance Care Planning
- 2442: Advance Directive Executed

Withdrawn:

- 0543: Adherence to Statin Therapy for Individuals with Cardiovascular Disease

Brief summaries for each measure are included in the body of this report. Detailed summaries of the Committee's discussion and ratings of the criteria are included in [Appendix A](#).

Introduction

Cardiovascular disease (CVD) is the leading cause of death for men and women in the United States. Although death rates attributable to cardiovascular disease have declined by 31% from 2000 to 2010, CVD still accounts for 1 in 3 deaths in Americans.¹ Considering the overall toll of cardiovascular disease, measures that assess the performance of clinical care and patient outcomes are paramount to reducing the negative impacts of CVD. The vast majority of measures in NQF's portfolio for cardiovascular conditions are currently implemented in a variety of public and/or private accountability and quality improvement programs.

Due to the large number of cardiovascular measures, maintenance review of endorsed measures and consideration of new measures took place over several phases in 2014-2015. This report presents measure evaluations performed during phase 2. A description of the project is found in the [phase 1 report](#) detailing the methods and approach taken by NQF in all phases of the cardiovascular project. In phase 1, NQF endorsed 8 new measures and 6 measures undergoing maintenance review. In phase 3, initiated during the summer of 2015, an additional 24 measures are scheduled for review.

National Quality Strategy and NQF's Cardiovascular Portfolio of Measures

The National Quality Strategy (NQS)² serves as the overarching framework for guiding and aligning public and private efforts across all levels (local, state, regional, and national) to improve the quality of healthcare in the U.S. The NQS establishes the "triple aim" of better care, affordable care, and healthy people/communities, focusing on 6 priorities to achieve those aims: Safety, Person- and Family-Centered Care, Communication and Care Coordination, Effective Prevention and Treatment of Illness, Best Practices for Healthy Living, and Affordable Care.²

NQF's cardiovascular portfolio supports the NQS triple aim and aligns with many of the NQS priorities, including:

- *Effective Prevention and Treatment of Illness* – beginning with cardiovascular conditions.
- *Communication and Care Coordination* – Care coordination is a priority because the prevention, diagnosis and treatment of cardiovascular disease occurs across providers (e.g., primary care, cardiologists, imaging, interventionalists), and often requires communication across both acute and post-acute settings (e.g., emergency department, inpatient facilities, rehabilitation facilities). Improving communication and care coordination for patients with cardiovascular disease may reduce complications, as well as hospital admissions, readmissions, and healthcare costs.
- *Best Practices for Healthy Living* – Engaging Americans in healthy behaviors (e.g., healthy diet to achieve normal cholesterol levels) and accessing preventive services are critical for the prevention and management of cardiovascular conditions.
- *Person- and Family-Centered Care* – Ensuring that persons and families are engaged as partners in care improves the quality of healthcare and health outcomes, while lowering costs.
- *Safety* – Making care safer and reducing the harm caused by healthcare delivery is a priority.
- *Affordable Care* – Making healthcare more affordable and encouraging the appropriate use of healthcare resources is a priority for individuals, families, employers, and governments.

NQF Portfolio of Performance Measures for Cardiovascular Conditions

NQF's portfolio ([Appendix B](#)) of cardiovascular measures includes measures for *primary prevention* ("specific practices for the prevention of disease or mental disorders in susceptible individuals or populations"); *screening* ("organized periodic procedures performed on large groups of people for the purpose of detecting disease"); and *secondary prevention* ("the prevention of recurrences or exacerbations of a disease or complications of its therapy").³ It also contains measures for the evaluation, on-going management, acute care, hospitalization, and cost and resource use in cardiovascular diseases and conditions. This portfolio contains 56 measures: 37 process measures, 17 outcome measures, and 2 composite measures (see the table below). Eight endorsed measures were evaluated for maintenance of endorsement by the Cardiovascular Standing Committee during this phase of the project.

Table 1. NQF Cardiovascular Portfolio of Measures

	Process	Outcome	Composite
Primary prevention and screening	2		
CAD/IHD	6	3	
AMI	6	4	
Cardiac Catheterization/ PCI	4	6	1
Heart failure	8	2	
Rhythm disorders	1	1	
ICDs	4	1	1
Cardiac imaging	4		
Cardiac Rehab	2		
Total	37	17	2

Additionally, there are measures related to cardiovascular conditions that have been assigned to other topic area projects. These include readmissions for AMI and HF (readmissions project), measures for coronary artery bypass graft (CABG) (surgery project), cost and resource use measures (resource use project), and primary prevention (health and well-being project).

Endorsement of measures by NQF is valued not only because the evaluation process itself is both rigorous and transparent, but also because evaluations are conducted by multistakeholder committees comprised of clinicians, patients and families, consumers, and other experts from hospitals and other healthcare providers, employers, health plans, public agencies, and community coalitions—many of whom use measures on a daily basis to ensure better care. Moreover, NQF-endorsed measures undergo routine "maintenance" (i.e., re-evaluation) to ensure that they are still the best available measures and reflect the current science and measurement methodologies. Importantly, legislative mandates require that preference be given to NQF-endorsed measures for use in federal public reporting and performance-based payment programs. NQF measures are also used by a variety of stakeholders in the private sector, including hospitals, health plans, and communities, to assess and improve patient care and outcomes.

As with all measures in NQF's portfolio, some previously endorsed cardiovascular measures have been removed from the NQF portfolio for various reasons, including retirement by measure stewards. Measures may also lose endorsement upon maintenance review. Loss of endorsement may occur for many different reasons including—but not limited to—a change in evidence without an associated change in specifications, discovery of unintended consequences while using the measure, and endorsement of a superior measure.

A large part of the cardiovascular portfolio ([Appendix B](#)) is organized by NQF's episode-of-care framework (for coronary artery disease/AMI and heart failure) because of the large number of measures related to these conditions. The episode-of-care model for acute myocardial infarction (AMI) was developed in 2009 by a panel of experts in healthcare and measurement in an effort to propose a responsible evaluation of a healthcare delivery system to consider the efficiency with which each patient with an AMI received care and the frequency with which AMI occurred in the community. This patient-centric framework is broadly applicable to both acute and chronic conditions, and may be used to identify existing performance measures, as well as highlight gaps in measurement.

Use of Measures in the Portfolio

Many of the measures in NQF's cardiovascular portfolio are extensively utilized in a variety of federal, state, regional, local, public, clinical, private, and other measurement programs, as well as local improvement activities and settings with a variety of measure types (e.g., process, outcome) and reporting modalities (e.g., administrative claims, clinical registry, electronic clinical quality measures). See [Appendix C](#) for details of federal program use for the measures in the portfolio that are currently under review.

Gaps in the Portfolio

Although new measure submissions are evaluated with each project phase, significant gaps still remain within the cardiovascular portfolio, and opportunities also exist within the measure portfolio to harmonize related measures across sites and settings of care. During this phase, the Committee identified numerous areas where additional measure development is needed, including:

- Care coordination measures that assess timeliness and communication of cardiovascular disease- or condition-specific outcomes based on the patient's course of treatment, rather than setting-specific measures.
- Advance care planning and advance directive measures for patients with heart failure.
- Risk-adjusted and risk-stratified outcome measures to better understand socioeconomic barriers and disparities that impede equitable care access and health outcomes across patient populations and settings.
- Patient-centric composite measures incorporating outcome, intermediated clinical outcomes, process, and patient-reported outcome performance measures within the composite constructs when applicable.
- Measures that are meaningful to the spectrum of measurement stakeholders (e.g., patients/families, populations, consumers, clinicians/facilities, and other measurement users and supports), recognizing that not all stakeholders prioritize measures similarly (e.g.,

patients/families may prioritize quality-of-life and functional status measures, while clinicians may prioritize core clinical process measures).

- New and innovative measures facilitated by the evolution of measurement science that reduce the burden of data collection and performance calculation when applicable.

Measures in the “Pipeline”

NQF recently launched a Measure Inventory Pipeline—a virtual space for developers to share information on measure development activities. Developers can use the Pipeline to display data on current and planned measure development and to share successes and challenges. Information shared via the Pipeline is available in real time and can be revised at any time. NQF expects that developers will use the Pipeline as a tool to connect and collaborate with peers on measurement development ideas. To date, no measure concepts addressing cardiovascular conditions have been submitted.

Cardiovascular Conditions Considered in Phase 2

Measures addressing a variety of cardiovascular conditions were evaluated including:

- **Heart rhythm disorders and Cardiovascular Implantable Electronic Devices (CIED):** The heart beats in a regular, rhythmic fashion due to natural pacemakers in the heart. Damage to the heart can affect these pacemakers and cause abnormal heart rhythms or arrhythmias. Atrial fibrillation (AF) is the most common heart rhythm disorder and affects 2.7 million people. Some serious rhythm disorders cause the heart to fibrillate (i.e., beat very fast and irregularly) or even stop beating. Devices such as pacemakers and Implantable Cardioverter Devices (ICDs) may be used to treat severe rhythm abnormalities.⁴
- **Heart failure:** Damage to the heart muscle affects the heart’s ability to pump blood effectively throughout the body. Heart failure is a chronic progressive disease that affects more than 5.8 million Americans and is the leading cause of hospitalization in patients over age 65.⁵
- **Acute myocardial infarctions (AMI) or heart attacks** occur when blood flow in the arteries of the heart is blocked. When blood is not able to reach parts of the heart muscle, it begins to die, with greater damage occurring the longer the arteries remain blocked.⁶
- **Cardiac imaging** refers to noninvasive tests or scans of cardiac anatomy and function.
- **Congenital heart disease** refers to abnormalities in cardiovascular structures that occur before birth and affects 1 in 100 infants.⁷ Cardiac catheterization for congenital heart disease, once only used as a diagnostic procedure to visualize blood flowing through the heart chambers and arteries, is now also used to correct some abnormalities.
- **Statin medications:** High cholesterol is a risk factor for stroke and heart attacks that affects 1 in 3 American adults. Two-thirds of those affected do not have the condition under control, and about half of adults with high cholesterol do not get treatment. Measures that assess the control of this risk factor, including the use of statin medications for high cholesterol, could reduce risk of heart attack or stroke by more than 80%.⁸

Cardiovascular Measure Evaluation

The [Cardiovascular Standing Committee](#) oversees NQF's cardiovascular portfolio of measures, evaluates new measures, and conducts maintenance reviews of endorsed measures. On December 4-5, 2014, the Committee evaluated 8 new measures and 8 measures undergoing maintenance review against NQF's standard evaluation criteria. The Committee's discussion and ratings of the criteria are detailed in the evaluation tables in [Appendix A](#).

Table 2. Cardiovascular Phase 2 Summary

	Maintenance	New	Total
Measures under consideration	8	8	16
Measures endorsed	8	3	11
Measure withdrawn by developer	1	0	1
Measures not recommended	1	3	4
Reasons measures not recommended (# of measures)	Scientific Acceptability (1)	Importance (2) Competing Measure (1)	4
Measures withdrawn from consideration	5*	N/A	5

*Four measures were withdrawn from consideration by the measure stewards prior to evaluation.

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments prior to the evaluation of the measures via an online tool located on the project webpage. During the pre-evaluation comment period, no comments were received.

Overarching Issue – Harmonization

Because many cardiovascular measures are in use, harmonization of measures is a critical aspect of the evaluation, particularly for similar measures at different levels of analysis (e.g., individual clinician measures versus inpatient facility measures) or similar measures specified for different settings of care (e.g., ambulatory measures versus hospital measures). The Committee raised the issue of harmonization within the cardiovascular portfolio, as well as harmonization with measures in other topic areas in other CDP projects. Though not always possible, due to priorities of the measurement enterprise (e.g., evidence shifts and program implementer requests), developer constraints, and other stakeholder needs, NQF makes every attempt to review related and competing measures together. The Committee considered related and competing measures as part of its recommendation for endorsement.

Summary of Measure Evaluations

The following brief summaries of the measure evaluations highlight the major issues that were considered by the Committee. Details of the Committee's discussion and ratings of the criteria are included in [Appendix A](#).

Heart Rhythm Disorders and Implantable Cardioverter Defibrillator (ICD)

Two previously NQF-endorsed measures and two newly submitted measures addressing heart rhythm disorders and ICDs were reviewed.

1524 Atrial Fibrillation: Assessment of Thromboembolic Risk (American College of Cardiology [ACC]): Not Recommended

Description: *Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter in whom assessment of all the specified thromboembolic risk factors using the Congestive heart failure, Hypertension, Age (≥ 75), Diabetes, prior Stroke or Thromboembolism (CHADS2) risk criteria is documented;* **Measure Type:** Process ; **Level of Analysis:** Clinician: Individual; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic; **Data Source:** Electronic Clinical Data: Registry

This process measure—currently being used for public reporting and quality improvement in the ACC's Cardiology Practice Improvement Pathway (CPIP)/Bridges to Excellence (BTE), and PQRS Qualified Clinical Data Registry (QCDR) as part of the PINNACLE registry—calculates the percentage of adult patients with known nonvalvular atrial fibrillation or atrial flutter in whom assessment of all the specified thromboembolic risk factors using the CHADS2 risk criteria is documented. Significant performance gaps were identified in PINNACLE with a mean performance of 22.8% in 2012 and 25.4% in 2011, with blacks one-third less likely to know of their atrial fibrillation diagnosis than whites, reducing treatment likelihood and increasing stroke risk for blacks. The Committee was concerned that the method used to determine thromboembolic risk was a “yes/no” or “check box” question, rather than calculating risk using the specific CHADS2 risk questions. The developer confirmed that both data collection methodologies are present in the PINNACLE data collection tool. The Committee also questioned the specification of CHADS2 as the only validated atrial fibrillation assessment tool, as other validated tools, such as the congestive heart failure, hypertension, age (≥ 75), diabetes, prior stroke or thromboembolism, vascular disease, age (65-74), sex category (CHA2DS2-VASc) risk criteria are also recommended by the evidence. Due to these concerns, the Committee did not recommend the measure for endorsement.

1525 Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy (American College of Cardiology): Endorsed

Description: *Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification, who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism;* **Measure Type:** Process; **Level of Analysis:** Clinician: Individual; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic; **Data Source:** Electronic Clinical Data: Registry

This process measure—currently being used for public reporting and quality improvement along with measure #1524—calculates the percentage of adult patients with moderate or high thromboembolic risk who were identified by the CHADS2 risk assessment tool, who are prescribed warfarin or another FDA approved oral anticoagulant drug to reduce the risk of stroke. Significant performance gaps were identified in PINNACLE with a mean performance of 59.4% in 2012 and 57.2% in 2011. Data from Medicare Part D beneficiaries also found decreased warfarin use by age and increasing comorbidity, in blacks, and among those with low income. Although some Committee members raised concerns regarding the patient preference/patient refusal exclusion, the Committee recommended the measure for continued endorsement. During the Consensus Standards Approval Committee (CSAC) evaluation, the Committee was asked to reconsider its recommendation on the measure due to its broad, nonspecific patient reason exclusions/exceptions. After additional reconsideration, the Committee upheld its original recommendation for endorsement.

2461 In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device (CIED) (Heart Rhythm Society): Endorsed

Description: Proportion of adult patients with a new CIED with an in-person evaluation within 2 to 12 weeks following implantation; **Measure Type:** Process; **Level of Analysis:** Facility, Clinician: Individual; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic, Hospital/Acute Care Facility; **Data Source:** Administrative Claims

This new process measure—submitted to PQRS for clinician-level public reporting and payment programs—calculates the percentage of adult patients with an in-person evaluation within 2 to 12 weeks following implantation of a cardiovascular implantable electronic device (CIED), including pacemakers (PMs), implantable cardioverter-defibrillators (ICDs), and cardiac resynchronization devices (CRTs). Numerous studies find an association with the lack of follow-up after device implantation and increased risks of heart failure (HF) and death, and that inappropriate shocks are more likely to occur when patients are not appropriately monitored. Data from a large claims database found in-person follow-up visits within 2 to 12 weeks in only 42.4% of persons with newly implanted CIEDs. The Committee asked whether the measure could also be used in children, and also questioned the exclusion of patients with a previously placed cardiovascular implantable electronic device. The Committee recommended this new measure for endorsement. During the Consensus Standards Approval Committee (CSAC) evaluation, the Committee was asked to reconsider its recommendation on the measure due to its broad, nonspecific patient reason exclusions/exceptions. After additional reconsideration, the Committee upheld its original recommendation for endorsement.

2474 Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation (Heart Rhythm Society): Endorsed

Description: Rate of cardiac tamponade and/or pericardiocentesis following atrial fibrillation (AF) ablation; **Measure Type:** Outcome; **Level of Analysis:** Facility, Clinician: Individual; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic, Hospital/Acute Care Facility; **Data Source:** Administrative Claims

This new risk-stratified outcome measure—submitted to CMS for clinician- and facility-level public reporting and payment programs—calculates the rate of complications (cardiac tamponade and/or pericardiocentesis) for adult patients within 30 days following atrial fibrillation (AF) ablation.

Complications after AF ablation include atrial perforation, pericarditis, and other bleeding complications that can lead to pericardial tamponade and a need for urgent/emergent pericardiocentesis, and in some cases, emergency cardiac surgery. Complications range between 1.2% and 2.4% across various studies, with approximately 6% for cardiac tamponade within 30 days after atrial fibrillation ablation, with men and persons with increased age having slightly higher rates. Although some Committee members found limited opportunity for improvement as some complications will occur following atrial fibrillation ablation, this measure was recommended for endorsement.

Heart Failure (HF)

The Joint Commission submitted 6 new process measures addressing heart failure from their Advanced Certification in Heart Failure (ACHF) program that started in 2014 with approximately 70-80 facilities participating to date. The measure data elements for these measures are also included in the American Heart Association Get With The Guidelines® (GWTG) HF data collection tool.

2438 Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge (The Joint Commission): Endorsed

Description: *Proportion of heart failure patients age 18 and older with LVSD for whom beta-blocker therapy (i.e., bisoprolol, carvedilol, or sustained-release metoprolol succinate) is prescribed at discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction; Measure Type: Process; Level of Analysis: Facility; Setting of Care: Hospital/Acute Care Facility; Data Source: Electronic Clinical Data: Electronic Health Record, Paper Medical Records*

This measure calculates the percentage of hospitalized adult HF patients with LVSD for whom beta-blocker therapy is prescribed at hospital discharge. The developer cited evidence that taking one of the three beta-blocker drugs, Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate, reduces morbidity and mortality for HF patients, with mortality lowered by 27-34% in clinical trials. The Committee expressed concerns over the dated age and strength of the evidence, and some members were concerned with the extensive list of exclusions. Evidence also demonstrates that patient outcomes improve when patients take beta-blockade prior to hospital admission and continue throughout hospitalization and discharge, unless contraindications are present. The Committee also cited studies not submitted by developers that demonstrate that if beta-blockade is not prescribed at hospital discharge, it is less likely to be ordered in the outpatient setting. The developer clarified that the ACHF implementation guide defines “prescribed” at discharge to also include beta-blockade documentation on the “discharge summary’s discharge medication list” for patients continuing pre-hospitalization beta blockade therapy. Committee members noted that the measure would be useful in an eMeasure format. Although some Committee members suggested measure modifications, the measure was recommended for endorsement.

2439 Post-Discharge Appointment for Heart Failure Patients (The Joint Commission): Endorsed

Description: *Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and*

*documented; **Measure Type:** Process; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Paper Medical Records*

The measure calculates the percentage of hospitalized adult heart failure patients with documentation of a follow-up appointment at the time of hospital discharge. This includes location, date, and time of appointment for an office or home health visit and whether it has been scheduled within 7 days of discharge. The Committee held a robust discussion on the differences between having an appointment scheduled at the time of discharge and an actual follow-up visit occurring within 7 days from hospital discharge. To improve patient outcomes and reduce hospital readmissions, the developer stated that the first step for post-hospitalization re-evaluation is scheduling an appointment, and that an evaluation of worsening symptoms and treatment compliance within 72 hours of hospital discharge is measured with #2443: Post-Discharge Evaluation for Heart Failure Patients. Suggestions were provided on the characteristics of a follow-up appointment (e.g., face-to-face, home care, telemedicine, electronic communication), and whether more visit types should be included within the measure. Some Committee members questioned the appropriateness of some measure exclusions, specifically patients with left ventricular assist devices, patient location relative to hospital for follow-up after discharge, or patients who refuse follow-up, though the measure only assesses documentation of a scheduled appointment and not an actual visit. The Committee recommended the measure for endorsement.

2440 Care Transition Record Transmitted (The Joint Commission): Not Recommended

Description: *A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following: reason for hospitalization; procedures performed during this hospitalization; treatment(s)/service(s) provided during this hospitalization; discharge medications, including dosage and indication for use; follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment); **Measure Type:** Process; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Paper Medical Records*

The measure calculates the percentage of hospitalized adult heart failure patients with a transmitted care transition record containing the reason, procedures, and treatments performed during the hospitalization, discharge medications (including dose and indication for use), and follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, DMEs) to the next provider within 7 days of discharge. The developer explained that the timing of 7 days post-discharge is directly correlated to the post-discharge appointment and re-evaluation of HF worsening of symptoms between 7 to 10 days. Some Committee members questioned limiting the denominator only to heart failure patients, while other Committee members suggested 7 days is too long, given that many hospitals request care transition record transmission within 24 hours or instantaneously upon discharge with increased EMR use. The evidence was accepted with exception, and the measure recommended for endorsement pending the completion of measure evaluation along with #0648: Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)—a facility level measure in the care coordination portfolio. Measure #0648 requires the transmission of more treatment information, as well as transmission <24 hours after discharge for all hospitalized patients

(not just HF patients). After a review of the competing measures, the Committee elected not to recommend measure #2440, as competing measure #0648 was determined to be “best in class.”

2441 Discussion of Advance Directives/Advance Care Planning (The Joint Commission): Not Recommended

Description: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider; **Measure Type:** Process; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Paper Medical Records

The measure calculates the percentage of adult heart failure patients with documentation in the medical record of a one-time discussion of advance directives/advanced care planning with a healthcare provider. The Committee had significant concerns that this measure was a “documentation exercise” or checkbox measure, and insisted the advance directives/advance care planning discussion should be conducted by a trained healthcare professional with pivotal a role in patient care. Committee members questioned the lack of shared communication and decisionmaking with the patient in advance care planning, the appropriateness of including all heart failure patients in the denominator, specifically those with mild conditions, and the extensive list of measure exclusions (specifically LVAD patients). A few Committee members asked whether the measure is also appropriate for the pediatric population, and whether the measure should be expanded beyond the HF patients. The Committee strongly disagreed with a one-time discussion, as patients’ wishes change over time, especially with progressive and worsening symptoms as well as during and after hospitalization for acute episodes. Overall, the Committee found the performance data provided was dated, missing patient input, and did not differentiate between documentation of the presence of advance directives/advance care planning and discussions by healthcare providers about advance directives/advance care planning. Committee members acknowledged that while advance directives are an important aspect to consider for patient-focused care, the evidence provided did not support improved patient outcomes or increased adherence to patients’ advance planning or advance directives. Noting concerns with evidence, the Committee did not recommend the measure for endorsement. During its evaluation, the CSAC asked the Committee to reconsider its decision not to recommend the measure for endorsement as heart failure is a progressive and worsening condition. The CSAC also stated that a measurement gap exists for assessing HF patients’ end-of-life wishes. After additional reconsideration, the Committee upheld its original decision not to recommend the measure for endorsement.

2442 Advance Directive Executed (The Joint Commission): Not Recommended

Description: Patients who have documentation in the medical record that an advance directive was executed; **Measure Type:** Process; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Paper Medical Records

The measure calculates the percentage of hospitalized adult HF patients with documentation of an executed advance directive in the medical record. Though the developer presented general information on advance directives/advance care planning, the Committee found scarce evidence on the relationship of the executed advance directive documentation options and patient outcomes, and questioned the ability of this measure to improve performance. The Committee received further clarification on the

definition of “executed” as documentation in the medical record of an advance directive, along with the acceptable forms and locations of advance directives documentation. With this additional clarification, the Committee agreed that the measure did not pass the evidence criterion. During its evaluation, the CSAC asked the Committee to reconsider its decision not to recommend the measure for endorsement, as heart failure is a progressive and worsening condition. The CSAC also stated that a measurement gap exists for assessing heart failure patients’ end-of-life wishes. After additional reconsideration, the Committee upheld its original decision not to recommend the measure for endorsement.

2443 Post-Discharge Evaluation for Heart Failure Patients (The Joint Commission): Endorsed

Description: Patients who receive a re-evaluation for symptoms worsening and treatment compliance by a program team member within 72 hours after inpatient discharge; **Measure Type:** Process; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Paper Medical Records

The measure calculates the percentage of hospitalized adult heart failure patients who receive a re-evaluation for worsening heart failure symptoms and treatment compliance by a program team member within 72 hours after hospital discharge by phone, home care, or scheduled office visit. The Committee discussed varying guideline recommendations for follow-up of 3 days and 7 days after discharge. It was noted that 7 days after discharge displayed slightly higher evidence ratings for improving patient outcomes and reducing hospital readmission. The Committee agreed that the results of 38% compliance in the measure developer’s pilot study demonstrated a significant performance gap, though also suggested that the 9 denominator data elements to determine the measure population were cumbersome. The Committee further questioned the inclusion of “unsuccessful attempts to contact patients” as a “yes” for the numerator, and also questioned why observation patients are not included in the measure. The developer clarified that the observation patients were not included in the denominator due to the complexities of billing constraints with the emergency department that is designated an outpatient setting. The Committee recommended the measure for endorsement.

Acute Myocardial Infarction (AMI) or Heart Attack

One previously NQF-endorsed measure addressing heart attack was reviewed and recommended for endorsement by the Standing Committee.

0090 Emergency Medicine: 12-Lead Electrocardiogram (ECG) Performed for Non-Traumatic Chest Pain (American Medical Association - Physician Consortium for Performance Improvement [AMA-PCPI]): Endorsed

Description: Percentage of patients aged 40 years and older with an emergency department discharge diagnosis of non-traumatic chest pain who had a 12-lead electrocardiogram (ECG) performed; **Measure Type:** Process; **Level of Analysis:** Clinician: Group/Practice; **Setting of Care:** Hospital/Acute Care Facility, Other; **Data Source:** Electronic Clinical Data: Electronic Health Record

This process eMeasure assesses whether 12-Lead Electrocardiogram (ECG) was performed for a diagnosis of nontraumatic chest pain (CP) in adult patients of at least 40 years of age discharged from an emergency room. The non-eMeasure claims/registry measure (not submitted for endorsement evaluation) was implemented in PQRS and the American Board of Emergency Physicians (ABEP) and

Maintenance of Certification (MOC) and recognition programs. Committee members had conflicting views on existing performance gaps, some noting the current high performance with the 50th percentile reporting 100% performance, 25th percentile at 96%, and 10th percentile at 88%. Consensus was not reached for the performance gap criterion. The developer clarified that the denominator includes the spectrum of patients discharged to home through those admitted for emergent care. Despite varying opinions among the Committee members regarding opportunity for improvement and high priority, the Committee recommended the eMeasure for endorsement. During its evaluation, the CSAC asked the Committee to reconsider its recommendation on the measure due to its broad, nonspecific patient reason exclusions/exceptions. After additional reconsideration, the Committee upheld its original decision to recommend this measure for endorsement.

Cardiac Imaging

Three previously NQF-endorsed measures addressing the appropriate use of cardiac imaging were reviewed. The Appropriate Use Criteria (AUC) utilized by the developer for each measure was the RAND Appropriateness Method (RAM), which assists in determining the need for cardiovascular procedures. Though the Committee acknowledged the AUC or RAM as an evidence-based framework for determining the appropriateness or inappropriateness for completing cardiac imaging, and favored the underpinnings of the 3 measures, they sought additional clinical evidence for each of the measures. The 3 measures are used in PQRS public reporting, FOCUS payment program, IAC regulatory and accreditation program, FOCUS professional certification and recognition program, and FOCUS quality improvement program.

0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients (American College of Cardiology): Endorsed

Description: Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation; **Measure Type:** Efficiency; **Level of Analysis:** Facility, Clinician: Group/Practice; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic, Imaging Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Registry

This imaging-facility-level process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed preoperatively in low risk surgery patients, a population for which the evidence does not support such imaging. The developer presented evidence for the measure and performance gaps from a clinical practice guideline, systematic review, and multiple studies utilizing the AUC method in determining appropriateness of cardiac imaging. Performance gaps exist between 2-17% and are often based on facility referral characteristics (e.g., referrals affiliated with cardiovascular procedure and surgical facilities) and patient populations. Recent studies using administrative data report smaller performance gaps, though the clinical reasons for performing a cardiac imaging test are not collected and may result in higher identified gaps. Inter-rater reliability testing showed substantial agreement, and validity testing demonstrated the specifications are consistent with the evidence. Having met the requirements of the evaluation criteria, the Committee recommended the measure for endorsement.

0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI) (American College of Cardiology): Endorsed

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed routinely after PCI, with reference to timing of test after PCI and symptom status; **Measure Type:** Efficiency; **Level of Analysis:** Facility, Clinician : Group/Practice; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic, Imaging Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Registry

This imaging-facility-level process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed routinely within 2 years after percutaneous coronary intervention (PCI) in asymptomatic patients, a population for which the evidence does not recommend such imaging. The developer presented evidence for the measure and performance gaps from a clinical practice guideline, systematic review, and multiple studies utilizing the AUC method in determining appropriateness of cardiac imaging. The Committee asked if patients with left main stenting and incomplete revascularization during the PCI were included in the denominator, as these are 2 populations for which cardiac imaging would be appropriate within 2 years after PCI in asymptomatic patients. The developer confirmed that they were not included. Significant performance gaps were identified in patients from 2005-2013 in various urban and rural settings and patient populations, with varying results based on facility referral characteristics. The Committee stated that the specifications are consistent with the evidence. The Committee recommended this measure for endorsement.

0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients (American College of Cardiology): Endorsed

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed in asymptomatic, low CHD risk patients for initial detection and risk assessment; **Measure Type:** Efficiency; **Level of Analysis:** Facility, Clinician: Group/Practice; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic, Imaging Facility; **Data Source:** Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Registry

This imaging-facility-level process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed in asymptomatic, low risk patients, a population in which the evidence does not recommend such imaging. The developer presented evidence for the measure and performance gaps from a clinical practice guideline, systematic review, and multiple studies utilizing the AUC method in determining appropriateness of cardiac imaging. The Committee accepted the evidence indicating that patient outcomes are not improved for asymptomatic, low risk patients who receive cardiac imaging compared to those who do not. Significant performance gaps were identified, and some Committee members questioned how a facility-level measure would improve referral practices. Inter-rater reliability testing detailed substantial agreement, and the Committee found the specifications consistent with the evidence. The Committee recommended this measure for endorsement.

Congenital Heart Disease and Cardiac Catheterization

One previously NQF-endorsed outcome measure addressing congenital heart disease and cardiac catheterization was reviewed and recommended for endorsement by the Standing Committee.

0715 Standardized Adverse Event Ratio for Children <18 Years of Age Undergoing Cardiac Catheterization (Boston Children's Hospital): Endorsed

Description: Ratio of observed to expected clinically important adverse events, risk-adjusted using the Catheterization for Congenital Heart Disease Adjustment for Risk Method (CHARM); **Measure Type:** Outcome; **Level of Analysis:** Facility; **Setting of Care:** Hospital/Acute Care Facility; **Data Source:** Electronic Clinical Data, Paper Medical Records, Electronic Clinical Data: Registry

This outcome measure, risk-stratified by age and procedure risk, is used for internal quality improvement in 15 children's hospitals. The developer may submit the measure for the Congenital Cardiac Catheterization Project on Outcomes-Quality Improvement (C3PO-QI). The measure provides a ratio of observed to expected clinically important adverse events, risk-adjusted using the Catheterization for Congenital Heart Disease Adjustment for Risk Method (CHARM) in patients less than 18 years old for institutions performing a minimum of 50 cardiac catheterizations per year. Since pediatric interventional cardiology is a newer specialty, with increasing new interventional procedures and surgical techniques for this population, adverse events during cardiac catheterization rates vary widely and lack uniformity in outcome definitions. This measure outlines standardized moderate, major, and catastrophic adverse event definitions, and standardizes the reporting of methods to adjust for case mix complexity to allow for meaningful comparisons of performance among institutions. Adverse event rates in 8 pediatric hospitals used in testing ranged from 1.71% to 7.86% from 2007 to 2010. The Committee found that the measure met the evaluation criteria, that the risk model appropriate, and recommended continued endorsement.

Heart Disease and Statins

One previously NQF-endorsed measure addressing heart disease and statins was reviewed and recommended by the Standing Committee. However, the developer decided to withdraw this measure from further endorsement consideration.

0543 Adherence to Statin Therapy for Individuals with Cardiovascular Disease (Centers for Medicare & Medicaid Services): Withdrawn

Description: The percentage of individuals with cardiovascular disease (CVD), including coronary artery disease, cerebrovascular disease, and peripheral artery disease presumed to be of atherosclerotic origin, who are prescribed statin therapy that had a Proportion of Days Covered (PDC) for statin medications of at least 0.8 during the measurement period (12 consecutive months); **Measure Type:** Process; **Level of Analysis:** Clinician: Group/Practice, Health Plan, Integrated Delivery System, Population: State; **Setting of Care:** Ambulatory Care: Clinician Office/Clinic; **Data Source:** Administrative claims

This process measure—used in CMS's Physician Feedback Quality and Resource Use Report (QRUR)—calculates the percentage of individuals with cardiovascular disease (CVD), who are prescribed statin therapy with sufficient medication dispensed for 80% of days for 12 consecutive months. The measure is intended to encourage providers to develop communication, education tools, and processes to improve adherence to statins in their patients with CVD. The developer provided Medicare Part B FFS and Medicare Part D adherence rates for 10 states (range 65-76%); 38 prescription drug plans (range 59-78%); 434 physician groups (range 53-77%); and 31 ACOs (60-76%), noting significant disparities (70.4% for all patients, 58% for African Americans, and 60.4% for Hispanics.) The Committee questioned

whether providers have control over medication adherence and considered public reporting consequences for clinicians with small populations, the capture of patient choice, medication contraindications (such as allergies and patient refusal), and the role of EHR interoperability in data capture. Some Committee members questioned whether the cholesterol value should be included, though as an administrative claims measure, clinical information is not available. The Committee also stated that the shifting of clinical recommendations away from cholesterol presents an additional measurement challenge. During the Committee's evaluation, the developer withdrew the measure from consideration.

References

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Appendix A: Details of Measure Evaluation

Endorsed Measures

Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable; Y=Yes; N=No

0090 Emergency Medicine: 12-Lead Electrocardiogram (ECG) Performed for Non-Traumatic Chest Pain (eMeasure)

[Submission](#) | [Specifications](#)

Description: Percentage of patients aged 40 years and older with an emergency department discharge diagnosis of non-traumatic chest pain who had a 12-lead electrocardiogram (ECG) performed

Numerator Statement: Patients who had a 12-Lead ECG performed

Denominator Statement: All patients aged 40 years and older with an emergency department discharge diagnosis of non-traumatic chest pain

Exclusions: Medical reasons for not performing a 12-lead ECG

Patient reasons for not performing a 12-lead ECG

Adjustment/Stratification:

Level of Analysis: Clinician : Group/Practice

Setting of Care: Hospital/Acute Care Facility, Other

Type of Measure: Process

Data Source: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record

Measure Steward: American Medical Association - Physician Consortium for Performance Improvement (AMA-PCPI)

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-10; M-6; L-1; I-0; IE-0**; 1b. Performance Gap: **H-0; M-10; L-7; I-0**; 1c. Impact: **H-1; M-8; L-8; I-0**

Rationale:

- The Committee agreed that the evidence presented from the summary of two clinical practice guidelines, 1) 2013 ACCF/AHA Guidelines for the Management of ST-Elevation Myocardial Infarction and 2) ACCF/AHA Task Force on Practice Guidelines Class I recommendation and from additional recent research studies is sufficient.
- One Committee member was concerned that the measure does not address importance of detecting a STEMI patient rather only to not performing an ECG in a patient with non-traumatic chest pain.
- The developer provided electronic clinical data from 2010 PQRS claims data from 69,602 providers with 97.05% aggregate performance rate and 95.16% mean performance rate. The 25th percentile is 96.55%, which the Committee agreed does not leave much room for improvement.

- The developer noted that the performance data may be skewed upward as it is from a voluntary reporting program and could imply that most of the participants who are reporting are already performing well on this type of care.
- Some Committee members questioned the priority of this measure as it identifies only missed myocardial infarction (MI) patients at discharge. Considering the improvements in MI care within the past few years, the missed MI rate being captured is low.
 - The developer highlighted the importance of chest pain as it is a very high prevalent issue and if an MI is missed, the consequences can be severe and costly.
- The Committee did not come to consensus with both performance gaps (58.8%) and priorities (52.9%) in the gray zone.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-3; M-14; L-0; I-0**; 2b. Validity: **H-11; M-6; L-0; I-0**

Rationale:

- The Committee agreed the specifications presented were clearly defined and consistent with the evidence. The eMeasure specifications capture the data elements and measure logic needed for the automated measure calculation. The developer value sets and the applicable ICD-9 and ICD-10 codes were provided. The developer submitted the appropriate eMeasure documentation, except the “eMeasure XML” due to anticipated updates and unavailability of the Measure Authoring Tool (MAT). The developer agreed to submit the missing documentation in the 1st quarter of 2015.
- Reliability testing was performed at the data element level with data abstracted from one EHR in 2010 and tested at both the individual and group levels of analysis, with data from one urban academic center in a large Midwestern city in 50 charts in 3416 eligible patients. Kappa reliability testing was conducted on critical data elements in the measure, the results of the testing found 100% agreement for the numerator and exceptions and 94% agreement for the denominator (kappa score was not provided).
- The developer submitted the appropriate eMeasure documentation, except the “eMeasure XML” due to anticipated updates and unavailability of the Measure Authoring Tool (MAT). The developer agreed to submit the missing documentation in the 1st quarter of 2015.
- Empiric reliability testing on the data element level counts for empiric validity testing. Validity testing was also with a systematic assessment of face validity of performance scores using an ACEP (Quality and Performance Committee – 2013-2014) expert panel. The results indicated the majority of the expert panel was in agreement that the measure’s performance score could be used to distinguish good and poor quality. Additionally kappa validity testing conducted showed a score of 1.00 indicates the measure exceptions demonstrate almost perfect agreement.

3. Feasibility: **H-5; M-11; L-1; I-0**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Data for the eMeasure was abstracted from one EHR with an eMeasure feasibility score provided on the testing site. Overall, the Committee agreed the measure is moderately feasible.

4. Use and Usability: H-1; M-14; L-1; I-1

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- The measure is currently not publicly reported although the developer stated it would be submitted for public reporting and maintenance of certification programs. Additionally the claims and registry complements to this measure that were not included for the endorsement submission, were included in PQRS and in professional certification/recognition with the American Board of Emergency Physicians.

5. Related and Competing Measures

- This measure is related to facility-level measure NQF #0289 Median Time to ECG. Median time from emergency department arrival to ECG (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or Chest Pain patients (with Probable Cardiac Chest Pain).
- The Committee agreed there is minimal overlap between the two measures.

Standing Committee Recommendation for Endorsement: Y-15; N-2

6. Public and Member Comment [03/24/15-04/07/15]

- Comments received showed general support for this measure. However, commenters highlighted that there is still a performance gap with timely EKGs in sub-populations.
- “Despite some concerns of a performance gap from the standing Committee, there are still many eligible professionals not reporting on this measure and the current literature reveals some inequalities in the timing of EKG received by sex and minority status, further demonstrating the importance of this measure maintaining endorsement.”
- Committee Response:
 - While the Committee recognized the narrow window for improvement and considered the voluntary reporting programs that could skew the data, the Committee agrees with the commenter, that this measure should continue to be part of the Cardiovascular portfolio.

7. Consensus Standards Approval Committee (CSAC) Review (May 12, 2015): Y-13; N-2; A-0

- Decision: Approved for continued endorsement
 - During the April 8 CSAC meeting, the CSAC requested the Standing Committee reconsider the measure based on its broad patient reason exclusions, possibly allowing for large numbers of patient to be inappropriately excluded from the measure.
 - CSAC members noted that this could be accounted for by removing all patient reason exclusions, or narrowing patient reason exclusions to only measure applicable reasons.
 - Concern was raised about measure performance attainment negatively impacting providers and collecting patient-reason data required for stratification was not possible for the developer. However, some CSAC members felt broad patient reason exclusions is patient centric, and should be included, with the possibility of stratifying this data.
 - On April 20, the Committee deliberated on the impacts of patient reason exclusions: the impact of these exclusions on patient outcomes is currently unknown; restriction of exclusions could

be interpreted as not supporting patient choice and does not indicate the reason for declining treatment; provider communication skills can overcome barriers related to this decision; and broad exclusions are better suited for accountability and pay-for-performance programs.

- Some Committee members disagreed and felt defined patient reason exclusions should be measure specific.
- The developer responded that collecting patient-reason data required for stratification was not available, but noted that patient reasons are harmonized across all PCPI measures to allow for systematic implementation.
- Based on the Committee upholding their previous endorsement recommendation, the CSAC subsequently voted to approve endorsement.

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued endorsement**

1525 Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy

[Submission](#) | [Specifications](#)

Description: Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification, who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism

Numerator Statement: Patients who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism

Denominator Statement: All patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification

Exclusions: Denominator Exclusions:

- Patients with mitral stenosis or prosthetic heart valves
- Patients with transient or reversible causes of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery)

Denominator Exceptions:

Documentation of medical reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, allergy, risk of bleeding, other medical reason)

Documentation of patient reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason)

Adjustment/Stratification:

Level of Analysis: Clinician : Individual

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Electronic Clinical Data : Registry

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-16; M-2; L-0; I-0; IE-0**; 1b. Performance Gap: **H-17; M-0; L-0; I-0**; 1c. Impact: **H-17; M-0; L-0; I-0**

Rationale:

- The Committee agreed that there is strong evidence to support the use of chronic anticoagulation therapy in the prevention of thromboembolism stroke and the reduction of stroke morbidity and mortality rates from two Clinical Practice Guidelines 1) ACCF/AHA/HRS 2013 Guideline and 2) the ACCP 2012 Guideline studies.
- Data presented by the developer showed significant variability in the use of oral anticoagulation for the prevention of thromboembolism with the overall mean performance rate for 2011 and 2012 at 57.2% and 59.4% respectively. Committee members concluded there is a strong performance gap and opportunity for improvement.
- The Committee agreed the measure is disparities sensitive with the data suggesting at risk populations (women, older patients, African Americans and those with low income) are less likely to be treated with warfarin.
- Atrial fibrillation is a prevalent disease associated with high morbidity, mortality and cost.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-8; M-8; L-1; I-0** 2b. Validity: **H-3; M-14; L-0; I-0**

Rationale:

- The Committee determined that the measure specifications are clearly defined and consistent with the evidence presented, noting that all codes necessary to calculate the measure are present.
- The Committee concluded the test sample was adequate with a sample size of 225,446 patients with atrial fibrillation/flutter in the PINNACLE registry for CY2012. Reliability testing was conducted at the performance measure score level. For the performance measure level, the developer conducted a signal-to-noise reliability test with an overall score of 0.99.
- Face validity was assessed by various experts serving on ACC and AHA Committees to establish agreement that the measure's performance score could be used to distinguish quality. The majority (88.2%) of these experts either agreed or strongly agreed that the measure's performance score could be used to distinguish quality. Moreover the developers elicited content validity assessments from the development workgroup members, from a public comment process, and other various review and approval processes.
- Overall, the Committee agreed that exclusions are consistent with the evidence provided. However, one Committee member raised concerns with the exclusions of the measure such as religious preference, patient preference and compliance, suggesting it could be a potential

threat to validity. With further discussion, the Committee came to a consensus that this exception is acceptable as patient refusal to anticoagulants is common in the field.

3. Feasibility: H-5; M-12; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented) Rationale:

- Overall, the Committee agreed the measure was feasible to implement. Some raised concerns with the feasibility of extracting some data elements (i.e. mitral stenosis, economic, social, religious issues, and noncompliance) via EMRs.

4. Use and Usability: H-7; M-10; L-0; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- This measure is currently publicly reported in PQRS and in professional certification and recognition in ACC's Cardiology Practice Improvement Pathway (CPIP)/Bridges to Excellence (BTE). This measure will also be included in the 2014 PQRS Qualified Clinical Data Registry as part of the PINNACLE registry.
- Concerns were raised regarding the use and access to the PINNACLE Registry as not all providers use the registry.

5. Related and Competing Measures

- This measure directly is related to:
- 1524: Assessment of Thromboembolic Risk Factors (CHADS2)
- 0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge
- 0436 : STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter The Committee discussed that although these measures address the same focus , the target populations are slightly different, justifying the need for both measures

Standing Committee Recommendation for Endorsement: Y-17; N-0

6. Public and Member Comment [03/24/15-04/07/15]

Comments Received:

- The comments received for this measure had three major themes:
 - A request to include all "at risk" atrial fibrillation (AF) patients in the numerator statement.
 - A request to use CHA2DS2 VASc instead of CHADS2, according to the 2014 AHA/ACC/HRS Guideline for the Management of Patients with Atrial Fibrillation
 - Addressing the exclusion of patients who refuse treatment

Developer Response:

- We are in the process of convening the writing committee to update the entire atrial fibrillation measure set, and will share with them your feedback regarding “at risk” versus high risk.

As noted in our comment for 1525, The reason why this measure does not include the CHA2DS2-VASc was that the NQF deadline for measure submission (December 23, 2013) did not align with the updated Atrial Fibrillation guidelines were not yet released. As a result, modifications to the measure could not be made, and tested utilizing the NQF evaluation criteria in time for the measure review. The reason we cannot modify this measure to include CHA2DS2-VASc during the NQF endorsement process is twofold. NQF requires that measures tested given the existing measure specification. Given that at the time of submission the guideline had not yet been released, the measure reflected the previous guideline recommendations of CHADS2, as well as the testing data provided to NQF that shows that the measure is feasible, reliable, and valid. Second, as measure developers we try to ensure an open process to providing feedback on all measures included in a measure set. Therefore, we have not only a peer review process, but also an open comment period where we encourage the public to comment on our draft measure set prior to it being finalized. We would provide such a process even for changes such as changes CHADS2 to CHA2DS2-VASc. We are in the process of convening the writing committee to update our atrial fibrillation measure set and do plan to look at replacing CHADS2 with CHA2DS2-VASc. With regards to considering the role or non-role of percutaneous, we will share your feedback with the writing committee as they review this measure and start the process of updating the entire measure set. Thank you again for your comment.

- Measure #1525 does include both medical and patient reason exceptions for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism. Patient reason exceptions include economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason. Given the importance in engaging consumers in their care decisions, we believe in some instances the patients may choose not to have a prescription issued by the physician.

Committee Response:

- Thank you for your comment. Although some Committee members raised concerns regarding the exclusion for patient refusals, the Committee recommended the measure for continued endorsement.

7. Consensus Standards Approval Committee (CSAC) Review (May 12, 2015): Y-12; N-3; A-0

- Decision: Approved for continued endorsement
 - During the April 8 CSAC meeting, the CSAC requested the Standing Committee reconsider the measure based on its broad patient reason exclusions, possibly allowing for large numbers of patient to be inappropriately excluded from the measure.
 - CSAC members noted that this could be accounted for by removing all patient reason exclusions, or narrowing patient reason exclusions to only measure applicable reasons.
 - Concern was raised about measure performance attainment negatively impacting providers and collecting patient-reason data required for stratification was not possible for the developer. However, some CSAC members felt broad patient reason exclusions is patient centric, and should be included, with the possibility of stratifying this data.
 - On April 20 the Committee deliberated the impacts of patient reason exclusions: the impact of these exclusions on patient outcomes is currently unknown; restriction of exclusions could be interpreted as not supporting patient choice and does not indicate the reason for declining

treatment; provider communication skills can overcome barriers related to this decision; and broad exclusions are better suited for accountability and pay-for-performance programs.

- Some Committee members disagreed and felt defined patient reason exclusions should be measure specific.
- The developer did not have the data available to show the use of patient reason exclusions, and preferred to look at the impact of the reasons across a set of measures.
- Based on the Committee upholding their previous endorsement recommendation, the CSAC subsequently voted to approve endorsement.

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued endorsement**

2461 In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device (CIED)

[Submission](#) | [Specifications](#)

Description: Proportion of adult patients with a new CIED with an in-person evaluation within 2 to 12 weeks following implantation.

Numerator Statement: This measures assess the number of patients from the denominator with an in-person evaluation within 2-12 weeks following implantation. For the purposes of this measure, an “in-person evaluation” is defined as an in-person interrogation device evaluation either with or without iterative adjustment, as clinically indicated. The in-person evaluation can be provided by any trained physician or Clinically Employed Allied Professional (CEAP) in a designated CIED follow-up clinic, medical institution, or physician office.

Denominator Statement: All Medicare FFS patients with implantation of a new CIED during the reporting period. CIEDs encompassed for this measure are the following devices:

- Pacemakers (PMs)
- Implantable Cardioverter Defibrillators (ICDs)
- Cardiac resynchronization devices (CRTs)

Exclusions: Exclude patients with any of the following diagnoses/conditions:

- Patients with Implantable Loop Recorders or Implantable Cardiovascular Monitors.
- Patients with pulse generator exchange only.
- Patients with prior CIED implantation.
- Patient preference for other or no treatment.

Adjustment/Stratification:

Level of Analysis: Clinician : Individual

Setting of Care: Ambulatory Care : Clinician Office/Clinic, Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Administrative claims

Measure Steward: Heart Rhythm Society

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-6; M-10; L-0; I-0; IE-0**; 1b. Performance Gap: **H-13; M-3; L-0; I-0**; 1c. Impact: **H-11; M-5; L-0; I-0**

Rationale:

- Evidence provided by the developer includes a clinical practice guideline, an Expert Consensus Statement by the Heart Rhythm Society & European Heart Rhythm Association, and additional publications that support the recommendation of patients with newly implanted devices should have an in-person follow-up appointment 2-12 weeks from implantation, and yearly in-person evaluations from the time of implantation.
- Using data from the Ingenix (now OptumInsight) anonymized database of claims information, the developer highlights various performance gaps in follow up evaluations for newly implanted CIEDs with only 42.4% having had an initial in-person visit within 2 to 12 weeks. Additionally data provided illustrates only 19.62% receiving recommended follow up evaluation, with performance rates ranging from 14.07-27.27%.
- The Committee acknowledged the measure to be disparities sensitive with minorities having lower incidence for follow up visits.
- Approximately 200,000 Americans now receive a CIED annually, representing a substantial number of patients with implantable cardiac device, and a NQS priority, the Committee acknowledged this is a high priority.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-8; M-8; L-0; I-0**; 2b. Validity: **H-12; M-4; L-0; I-0**

Rationale:

- The data source is from both administrative and electronic clinical data and is specified at the clinician level of analysis. Overall, the Committee determined that the measure specifications were precise, noting that all codes necessary to calculate the measure were present and the specifications were consistent with the evidence presented.
- Some Committee members raised concerns with the measure's exclusion of patients with prior CIED implants as those patients are still vulnerable to complications. The developer explained that this helps to minimize the variability.
- Reliability testing was conducted at the data element level using data derived from administrative claims.
- Validity testing was conducted at the data element level comparing data from administrative claims to patient charts, results of this testing indicate sensitivities in the 95-100% range; specificities in the 92-93% range; positive predictive values were greater than 89% and negative predictive values were greater than 91%.

3. Feasibility: **H-5; M-11; L-0; I-0**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Overall the Committee agreed the measure is feasible to implement as it is collected through electronic administrative claims.

4. Use and Usability: H-5; M-11; L-0; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- Although the measure is currently not publicly reported, it has been submitted to CMS for public reporting and payment programs for 2015.
- The Committee acknowledged the measure demonstrates usability toward achieving the goal of high quality, efficient healthcare for individuals or populations.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: Y-16; N-0

6. Public and Member Comment [03/24/15-04/07/15]

- The comment received requested that the range of in-person follow up visits be stratified by time.

Developer Response:

- As noted in the measure submission application, appropriate device programming can impact patient outcomes following CIED implantation. Intermediate outcomes include optimizing cardiac device function to meet the patient's clinical needs, along with detection and treatment of arrhythmias. Health outcomes include improving the patient's quality of life. For example, optimizing ICD programming may reduce unnecessary device therapy and could potentially reduce mortality (as suggested by MADIT-RIT). "It has also been recently demonstrated that follow-up within 2-12 weeks after CIED placement is independently associated with improved survival at 1 year (Hess 2013). In addition, the HRS/EHRA expert consensus on the monitoring of cardiovascular implantable electronic devices (CIEDs): description of techniques, indications, personnel, frequency and ethical considerations states that device interrogations should continue every 3-6 months after the initial outpatient face-to-face visit that occurs within the first 2-12 weeks post-implantation (Heart Rhythm. 2008;5(6):907-925). The timeframe for the performance measure should align with the timeframe specified in the clinical evidence and the consensus statement and should not be further delineated or stratified.

Committee response:

- The developer may consider these suggestions for future iterations of the measure.

7. Consensus Standards Approval Committee (CSAC) Review (May 12, 2015): Y-13; N-2; A-0

- Decision: Approved for continued endorsement

- During the April 8 CSAC meeting, the CSAC requested the Standing Committee reconsider the measure based on its broad patient reason exclusions, possibly allowing for large numbers of patient to be inappropriately excluded from the measure.
- CSAC members noted that this could be accounted for by removing all patient reason exclusions, or narrowing patient reason exclusions to only measure applicable reasons.
- Concern was raised about measure performance attainment negatively impacting providers and collecting patient-reason data required for stratification was not possible for the developer. However, some CSAC members felt broad patient reason exclusions is patient centric, and should be included, with the possibility of stratifying this data.
- On April 20 the Committee deliberated the impacts of patient reason exclusions: the impact of these exclusions on patient outcomes is currently unknown; restriction of exclusions could be interpreted as not supporting patient choice and does not indicate the reason for declining treatment; provider communication skills can overcome barriers related to this decision; and broad exclusions are better suited for accountability and pay-for-performance programs.
 - Some Committee members disagreed and felt defined patient reason exclusions should be measure specific.
 - The developer did not have this data available and noted that patient reason exclusions allowing patients to opt out of care is not solely impacted by the provider or facility. These reasons could exclude patients in the same manner in which they were included for choosing CIED placement
 - Based on the Committee upholding their previous endorsement recommendation, the CSAC subsequently voted to approve endorsement.

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for endorsement**

2474 Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation

[Submission](#) | [Specifications](#)

Description: Rate of cardiac tamponade and/or pericardiocentesis following atrial fibrillation (AF) ablation.

Numerator Statement: The number of patients from the denominator with cardiac tamponade and/or pericardiocentesis occurring within 30 days following atrial fibrillation ablation.

Denominator Statement: All patients aged 18 years and older with atrial fibrillation ablation performed during the reporting period.

Exclusions: No exclusions.

Adjustment/Stratification:

Level of Analysis: Facility, Clinician : Individual

Setting of Care: Ambulatory Care : Clinician Office/Clinic, Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Heart Rhythm Society

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **16-Y; 1-N**; 1b. Performance Gap: **H-1; M-8; L-6; I-2**; 1c. Impact: **H-2; M-9; L-4; I-1**

Rationale:

- The Committee acknowledged the importance of this outcome measure, noting the correlation between the health outcomes to processes of care.
- One Committee member questioned whether there is an alternative to ablation. The developer acknowledged an alternative of the use of medication therapy and discussed on the two approaches, highlighting that although there are other alternatives, ablation is the last effective option for this patient group.
- The mean performance rate ranges from 1.2-2.4% reported across literature reviews. Some Committee members interpreted the results as moderate due to low incidence rates, while others did not view this as an opportunity for improvement.
- The Committee agreed with the high severity impact of the measure. However, the Committee noted the low prevalence of cardiac tamponade and/or pericardiocentesis with the incidence of cardiac tamponade at 2 cases per 10,000 population in the United States.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-6; M-9; L-1; I-0**; 2b. Validity: **H-1; M-10; L-4; I-1**

Rationale:

- The Committee found the measure specifications to be clearly defined. The data source is specified as administrative claims various levels of analysis (individual clinician, and hospital/facility/agency).
- Reliability testing was conducted at the performance measure score level through beta-binomial model measuring signal-to-noise ratio for individual clinicians and facilities, and the results demonstrated high reliability analysis, which the Committee stated was sufficient.
- Face validity was assessed by an expert committee review during the measure development phase and agreed that the measure was valid as specified.
- Empiric validity testing was conducted at the performance measure score level to minimize variability by setting (i.e., provider level data vs. hospital level data).

3. Feasibility: **H-9; M-7; L-0; I-0**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is feasible for implementation as data elements are routinely generated and obtained through administrative data claims; additionally there are electronic forms readily available.

4. Use and Usability: **H-7; M-9; L-0; I-0**

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- The measure is currently publicly reported in PQRS since 2015. The Committee encourages the use of this measure to better understand the trends for quality improvement initiatives.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: Y-13; N-3

6. Public and Member Comment [03/24/15-04/07/15]

- The comment received raised the issue of a lack in performance gap.
- The Committee reviewed the performance gap concern and agreed that although the performance rates were low across literature reviews, cardiac tamponade is critical to patient safety in cardiovascular care.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- Decision: Approved for endorsement

8. Board of Directors Vote: Yes (June 29, 2015)

- Decision: Ratified for endorsement

0715 Standardized adverse event ratio for children < 18 years of age undergoing cardiac catheterization

[Submission](#) | [Specifications](#)

Description: Ratio of observed to expected clinically important adverse events, risk-adjusted using the Catheterization for Congenital Heart Disease Adjustment for Risk Method (CHARM)

Numerator Statement: Number of diagnostic and interventional cardiac catheterization cases for children < 18 years of age resulting in a clinically important adverse event, performed by an institution performing at least 50 cases per year in pediatric patients < 18 years of age.

Denominator Statement: Number of diagnostic and interventional cardiac catheterization cases for children < 18 years of age, performed by an institution performing at least 50 cases per year in pediatric patients < 18 years of age.

Exclusions: Primary electrophysiology cases, ablation cases, pericardiocentesis only, thoracentesis only.

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Electronic Clinical Data, Paper Medical Records, Electronic Clinical Data : Registry

Measure Steward: Boston Children's Hospital

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **15-Y; 1-N**; 1b. Performance Gap: **H-2; M-12; L-0; I-1**; 1c. Impact: **H-10; M-6; L-0; I-0**

Rationale:

- The Committee agreed that there is evidence to support the correlation between the occurrence of adverse clinical outcomes during a cardiac catheterization, which result in harm or potential patient injury and require assessment of causality to focus improvement efforts.
- Observed adverse event rates from eight pediatric hospitals used in testing are included with rates from these facilities ranging from 1.71% to 7.86%; however it was not clear whether these rates reflect primarily moderate or severe events.
- Congenital heart disease is a leading cause of morbidity/mortality, affecting 1% of infants. Cardiac catheterization has become a common quote interventional procedure with therapeutic goals complementing surgical strategies helping to eliminate the need for surgery.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-2; M-11; L-2; I-1** 2b. Validity: **H-4; M-11; L-0; I-1**

Rationale:

- A sample of 3,359 pediatric patients from 11 pediatric hospitals with a total of 784 cases was abstracted from EHRs and paper records entered into the database registry. The Committee agreed that the specifications were detailed and consistent with the evidence presented.
- Reliability testing was assessed using a statistical risk model using three risk factors included in the specifications (procedure type risk group, number of indicators of hemodynamic vulnerability, and age. The c-statistic reported for the risk-adjustment model was 0.72.
- The data element validity testing indicates that 85% of the 149 adverse events included in the medical record were captured in the registry.

3. Feasibility: **H-6; M-9; L-0; I-1**

- (3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is feasible to implement, as all of the data elements are used in electronic sources.

4. Use and Usability: **H-5; M-10; L-1; I-0**

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- The Committee noted that the measure is currently being used internally for quality improvement in the Congenital Cardiac Catheterization Project on Outcomes-Quality Improvement (C3PO-QI) program.
- The developer stated they would like to include in future public reporting though concrete plans are not in place. They are, however, tracking on the progress of participating institutions and providing reporting to participants.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: Y-15; N-1

6. Public and Member Comment [03/24/15-04/07/15]

- The comments received showed support for this measure.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for Continued endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued endorsement**

2438 Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge

[Submission](#) | [Specifications](#)

Description: Proportion of heart failure patients age 18 and older with LVSD for whom beta-blocker therapy (i.e., bisoprolol, carvedilol, or sustained-release metoprolol succinate) is prescribed at discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

Numerator Statement: Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD at hospital discharge.

Denominator Statement: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age

- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-4; M-11; L-1; I-0; IE-0**; 1b. Performance Gap: **H-7; M-11; L-0; I-1**; 1c. Impact: **H-11; M-7; L-1; I-0**

Rationale:

- Evidence provided by the developer included four large randomized trials indicating that using one of three specific beta blocker drugs (Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) reduces morbidity and mortality for patients with heart failure by 27-34%.
- Although guidelines from the ACCF/AHA was classified as a Class 1 recommendation, it was emphasized by the Committee that this evidence does not support the prescription of the three specific beta blockers at the time of discharge but rather the benefits of these drugs are for long-term therapy and compliance.
- During pilot testing in nine sites (878 patients), the performance rates varied from 61.5 – 100%, displaying an opportunity for improvement.
- Approximately 5.1 million Americans have heart failure, and all Americans have a 20% lifetime risk of developing heart failure, making it a national health priority.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-2; M-13; L-3; I-1**; 2b. Validity: **H-2; M-11; L-5; I-1**

Rationale:

- Empiric validity testing was performed for both the data elements and the measure score, however did not show statistical significance as a result of small sample sizes.
- Developers provided the % agreement and Kappa scores for three data elements: Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge (88.55%; 0.72); LVSD < 40% (70.15%; 0.77); Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge (84.58%; 0.33) , showing fair to substantial agreement

3. Feasibility: H-1; M-11; L-6; I-1

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is feasible for implementation, however voiced concerns that using data elements from paper medical records can contribute to administrative and cost burdens.

4. Use and Usability: H-2; M-9; L-8; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

- N/A

Standing Committee Recommendation for Endorsement: Y-17; N-2

6. Public and Member Comment [03/24/15-04/07/15]

- The comments received for this measure included an overall theme to consider the burden of data collection.

Developer Response:

- The designated setting for this measure is: Hospital/Acute Care Facility and this measure was not intended to be a claims based measure, nor do hospitals have access to pharmacy claims. The measure requires documentation that bisoprolol, carvedilol, or sustained-release metoprolol succinate was prescribed at discharge. With consideration of burden of abstraction, the Hospital/Acute Care Facility has the flexibility in using a number of available sources in order to abstract this information. These sources include but are not limited to: Medication Administration Record (MAR), Discharge Summary, Discharge Instruction Sheet, Nursing Notes, Progress Notes, Physician Orders, Physician's Notes, Transfer Sheet, and Medication Reconciliation Form.

Committee Response:

- The Committee recognizes the commenters' concerns with paper medical records and its potential burden to the end users. However, the Committee agreed during the in-person meeting the data collection methods are based on the program the measures are used, and that they are feasible for implementation.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for endorsement**

2439 Post-Discharge Appointment for Heart Failure Patients

[Submission](#) | [Specifications](#)

Description: Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

Numerator Statement: Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care.

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-0; M-4; L-4; I-3; IE-6**; 1b. Performance Gap: **H-3; M-12; L-2; I-0**; 1c. Impact: **H-11; M-4; L-2; I-0**

Rationale:

- The Committee agreed that the evidence presented from a systematic review of two clinical practice guidelines, 1) 2013 ACCF/AHA: Scheduling an early follow-up visit (within 7 to 14 days) and early telephone follow-up (within 3 days) of hospital discharge is reasonable and 2) 2010 HFSA: Plans for post-discharge management (scale present in home, visiting nurse or telephone follow up generally no longer than 3 days after discharge) demonstrate evidence to support post-op evaluation performed. However, no evidence is presented to clearly demonstrate how an appointment scheduled is related to patient outcomes.
- Based on the data presented from two studies in 2005-2007, results demonstrate that 19.6% of patients hospitalized for heart failure were hospitalized within 30 days of discharge. It was noted by the Committee that there was no associated bill for an outpatient visit for 52% of the patients who were re-hospitalized within 30 days after discharge for heart failure.
- Approximately 5.1 million Americans are currently suffering from heart failure. The impact of heart failure increases with age, rising from approximately 20 per 1,000 individuals 65 to 69 years of age to more than 80 per 1,000 individuals among those over 85 years of age, thus making this measure a high priority.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0; M-13; L-3; I-1**; 2b. Validity: **H-0; M-12; L-5; I-0**

Rationale:

- The Committee determined that the measure specifications were precise, noting that the all codes necessary to calculate the measure were present and the specifications were consistent with the evidence presented.
- Empiric reliability testing was performed at the data element level using data from nine hospitals submitted for 878 inpatient records. Inter-rater reliability was assessed with two different abstractions compared to the medical record. The % agreement scores (82.1% and 96.2%) and Kappa scores (0.63 and 0.43) for two data elements are reported, showing moderate or substantial agreement.
- Empiric validity of the measure score was assessed correlating the results with other heart failure transition measures of performance. Due to the small sample sizes, none of the correlations reached statistical significance.

3. Feasibility: **H-1; M-15; L-1; I-0**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Overall the Committee agreed the measure is feasible as it uses defined elements in electronic sources and paper records.

4. Use and Usability: H-4; M-11; L-2; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

This measure is directly related with NQF # 2455 Heart Failure: Post-discharge Appointment for Heart Failure Patients (measure reviewed during the Cardiovascular Phase 1 project)

- Generally, the Committee agreed that these measures are similar but noted key differences in the timing of the appointment and the exclusions. Committee members strongly emphasized the importance of a quality measure that assessed whether a patient had a post-discharge follow-up rather than an appointment scheduled. The developers will request that their Cardiovascular Writing Committee and Technical Advisory Panel (TAP) modify the measure to incorporate the visit concept, or add an additional measure accounting for an actual patient visit.
- Both measures NQF# 2439 and NQF# 2455 include patients admitted as inpatients from observation. However, the measure steward clarified NQF# 2439 does not incorporate observation patients discharged as outpatients as they are often difficult to identify as a group due to billing constraints. NQF# 2455 does include discharge observation patients. NQF #2439 also has denominator exclusions, which are standardized across the ACHF measure set.
- As both measures are newly implemented, #2439 implemented in CY2014 and #2455 receiving endorsement in Phase 1 of the project, the Committee could not come to consensus on a superior measure without reported implementation data, and both measures were recommended for endorsement.

Standing Committee Recommendation for Endorsement: Y-12; N-6

6. Public and Member Comment [03/24/15-04/07/15]

- There were two main themes to the comments received for this measure:
 - The burden of data collection
 - Emphasis on care coordination and outcome measurement

Developer Response:

- The designated setting for this measure is: Hospital/Acute Care Facility and it was not developed for use by health plans. Additionally, this measure was not intended to be a claims-based measure. The Joint Commission develops performance measures based upon Attributes of Performance Measures and Associated Evaluation Criteria. One of these attributes requires

that the measure is: Under Provider Control - refers to the extent to which the provider has the ability to influence the processes and/or outcomes being measured.

- The criterion for this attribute is that the measure addresses processes or outcomes over which the health care organization has responsibility, substantial control, and the ability to effect change. Given that designated setting for this measure is Hospital/Acute Care Facility, it is within provider control to secure an appointment for follow-up care within 7 days of discharge. The Hospital/Acute Care Facility however would have no control over patient attendance for the appointment. Therefore this would be an unreasonable burden to place on a hospital/Acute Care Facility for performance measurement. With respect to this measure being utilized for other conditions, it was developed and tested for use specifically for heart failure patients. Expansion to other clinical conditions would require further testing in those populations.

Committee Response:

- The Committee recognizes the commenters' concerns with paper medical records and its potential burden to the end users. However, the Committee agreed during the in-person meeting the data collection methods are based on measure program requirements, and that they are feasible for implementation.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-10; N-6; A-0

- **Decision: Approved for endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for endorsement**

9. Appeals

2443 Post-Discharge Evaluation for Heart Failure Patients

[Submission](#) | [Specifications](#)

Description: Patients who receive a re-evaluation for symptoms worsening and treatment compliance by a program team member within 72 hours after inpatient discharge.

Numerator Statement: Patients who have a documented re-evaluation conducted via phone call or home visit within 72 hours after discharge.

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care AND patients leaving against medical advice (AMA).

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days

- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care or law enforcement.

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-1; M-5; L-1; I-0; IE-7**; 1b. Performance Gap: **H-11; M-3; L-0; I-0**; 1c. Impact: **H-13; M-1; L-0; I-0**

Rationale:

- The Committee raised concerns on the lack of evidence provided, but agreed the practical application of this measure is beneficial to patient outcomes. The 2012 Cochrane review of 25 clinical trials where post-hospital early follow-up was discussed as being relevant, although not originally cited. While the cited study only analyzed a 7 day reevaluation, the recommendation to reevaluate within 3 days is aligned with the two cited guidelines from ACCF/AHA and HFSA.
- The Committee agreed that the results of the measure developer's pilot study demonstrated a significant performance gap of 38% compliance with the indicator.
- It was reported that there is a correlation to high costs and morbidity and a 20% lifetime risk of Americans over 40 years of age to develop heart failure deeming this to be a high priority.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-2; M-12; L-0; I-0**; 2b. Validity: **H-1; M-9; L-3; I-1**

Rationale:

- The Committee determined that the measure specifications were precise, noting that all codes necessary to calculate the measure were present and the specifications were consistent with the evidence presented.
- Empiric reliability testing was performed at the data element level using data from nine hospitals and 878 inpatient records. Re-abstraction was provided for one data element, Post-Discharge Evaluation Conducted within 72 Hours: which resulted in a 95% agreement rate and a Kappa score of 0.75, indicating suboptimal reliability.
- Empiric validity testing showed an overall adherence rate of 9.5%. This measure was positively correlated with post-discharge appointments for heart failure patients, not proven statistically significant. However, the Committee agreed the validity provided was adequate.

3. Feasibility: H-2; M-11; L-1; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is feasible to implement. However, concerns were raised over the ability to capture telephone follow-up. The cost was estimated to be \$10.34 to abstract the data for each measure, depending on the level of personnel, by either electronic or paper charts. Developer also mentioned plans to develop this into an e-measure.

4. Use and Usability: H-4; M-10; L-0; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

This measure is related to:

- 2438 Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge;
- 2439 Post-Discharge Appointment for Heart Failure Patients;
- 2440 Care Transition Record Transmitted;
- 2441 Discussion of Advance Directives/Advance Care Planning; and
- 2442 Advance Directive Executed.

Standing Committee Recommendation for Endorsement: Y-14; N-0

6. Public and Member Comment [03/24/15-04/07/15]

- The comment received for this measure raised the issue of the burden of chart review and capturing patients treated through observation stays or in the emergency department.

Developer Response:

- The designated setting for this measure is: Hospital/Acute Care Facility with a focus on patients admitted to the hospital for heart failure. Therefore, it does include those patients who entered the inpatient setting via the observation unit or Emergency Department. With respect to the burden of abstraction, the Hospital/Acute Care Facility has the flexibility in using data sources that are not a part of the inpatient medical record as this information would be captured after the patient is discharged. The data sources include but are not limited to: home health forms, logs from follow-up phone calls, or other logs that record follow-up information. This measure was developed and tested prior to implementation and has been in use for over a year by programs who have been awarded Advanced Certification in Heart Failure. The Joint Commission has not received feedback respecting undue burden of

data abstraction for this measure. The measure is specified to capture patients only with a principal discharge diagnosis of Heart Failure. There are exclusions considered for the following: Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay, patients with comfort measures only, and patients enrolled in a clinical trial.

Committee response:

- The Committee agrees that effective care coordination and outcome measures are critical components to improving care transitions for cardiovascular patients. Thank you for your comment.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for endorsement**

9. Appeals

0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients

[Submission](#) | [Specifications](#)

Description: Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients as a part of the preoperative evaluation

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

Exclusions: None.

Adjustment/Stratification:

Level of Analysis: Facility, Clinician : Group/Practice

Setting of Care: Ambulatory Care : Clinician Office/Clinic, Imaging Facility

Type of Measure: Efficiency

Data Source: Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING [3/23/2015]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap, 1c. High Priority)

1a. Evidence: **H-1 ; M-12 ; L-2 ; I-1; IE-0** ; 1b. Performance Gap: **H-3; M-7; L-6; I-0** ✕ 1c. High Priority: **H-4; M-9 ; L-3 ; I-0**

Rationale:

- This imaging facility level process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed preoperatively in low risk surgery patients, a population in which the evidence does not recommend.
- This measure is one of three similar measures from this developer (#0670, #0671 and #0672). The developer defines appropriate use criteria (AUC) as “when to do” and “how often to do” a given procedure in the context of scientific evidence, the health care environment, the patient’s profile and a physician’s judgment, stating the criteria are designed to examine the use of diagnostic and therapeutic procedures to support efficient use of medical resources, while also providing patients with quality, appropriate care.
- The developer references the evidence-based RAND Delphi process or the RAND Appropriateness Method (RAM) for AUC for use of cardiovascular procedures, detailing over-use and under-use characteristics. AUC provides practical tools to measure this variability and to look at utilization patterns. The criteria are designed to examine the use of diagnostic and therapeutic procedures to support efficient use of medical resources, while also providing patients with quality, appropriate care.
- Although the Committee found evidence for AUC or RAM sufficient, favored the underpinnings of the measure, and believed it supported the tenets the NQS Triple Aim, the evidence for cardiac stress imaging preoperatively in low risk surgery patients was not summarized. An updated submission from the developer was submitted to the Standing Committee for review at the Post Comment Call on March 18, 2015. Below includes highlighted discussions from the meeting:
- The 2014 ACC/AHA Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and multiple other studies in a systematic review of the clinical evidence supporting the measure, and additional studies on the use of AUC in determining appropriateness for cardiac imaging were summarized.
- Evidence on performance gaps demonstrated between 2% and 17% of cardiac imaging tests are performed preoperatively in asymptomatic patients having low risk surgeries, which the evidence does not recommend. Multiple studies using the RAND AUC for determining appropriateness of cardiac imaging were also provided.
- The Committee accepted the evidence stating that patient outcomes are not improved for patients receiving cardiac imaging prior to low risk surgeries versus those who do not.
- The Committee discussed low performance gaps in newer data, yet older data does provide performance gaps, though they also reported the newer studies could not collect the reason the patient was having the study, which may increase reported performance gaps.
- The Committee agreed this measure meets a high priority, as tests are costly and contribute to costly downstream effects.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-4; M-12; L-0; I-0** 2b. Validity: **H-5; M-11; L-0; I-0**

Rationale:

- The measure performance is calculated using clearly defined administrative data on the facility level of analysis from ACC's FOCUS Clinical Registry.
- Reliability testing was performed using inter-rater reliability testing in a mid-western acute care hospital in 298 patient records detailed kappa of 0.72 which is as "substantial agreement" or acceptable reliability. The Committee reported they would prefer more recent testing than the 2005 data provided.
- Validity specifications were consistent with the evidence. Empiric evidence for AUC showed no difference with or without testing. No threats are evident and data is not risk adjusted.
- The developer recommended the use of data collection prospectively. Also, they have not identified issues related to missing data elements.

3. Feasibility: H-3; M-13; L-0; I-0

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- The Committee agreed that reasonable data sources are used in this measure by the registry or paper records are routinely generated with reasonable abstraction efforts. There was agreement that the information was acceptable.

4. Use and Usability: H-3; M-12; L-1; I-0

(4a. Accountability/transparency; and 4b. Improvement – progress demonstrated; and 4c. Benefits outweigh evidence of unintended negative consequences)

Rationale:

- The developer stated the measure is currently being used in the PQRS, FOCUS- ACC lab accreditation, quality improvement and utilization management
- The Committee noted that coordinated reporting efforts would be necessary.

5. Related and Competing Measures

- 0669, 0671 and 0672.
- The developer demonstrated variability between the 3 measures, based on patient populations, including provider and institutional size of referring entities and referrals for cardiac imaging tests.

Standing Committee Recommendation for Endorsement: Y-13; N-3

6. Public and Member Comment

- There were no comments received for this measure.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for continued endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued Endorsement**

9. Appeals

0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI)

[Submission](#) | [Specifications](#)

Description: Percentage of all stress SPECT MPI, stress echo, CCTA and CMR performed routinely after PCI, with reference to timing of test after PCI and symptom status.

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA and CMR performed in asymptomatic patients within 2 years of the most recent PCI

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA and CMR performed

Exclusions: None

Adjustment/Stratification:

Level of Analysis: Facility, Clinician : Group/Practice

Setting of Care: Ambulatory Care : Clinician Office/Clinic, Imaging Facility

Type of Measure: Efficiency

Data Source: Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING [3/23/2015]

1. Importance to Measure and Report:

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-1; M-13; L-2; I-0; IE-0**; 1b. Performance Gap: **H-4; M-11; L-1; I-0**; 1c. Impact: **H-3; M-11; L-2; I-0**

Rationale:

- This imaging level focused process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed routinely (within 2 years) in asymptomatic patients after percutaneous coronary intervention (PCI), a population in which the evidence does not recommend.
- This measure is one of three similar measures from this developer (#0670, #0671, and #0672). The Committee initiated a discussion on evidence and favored the underpinnings of the three measures, and believed it supports the tenets the NQS Triple Aim, though evidence questions for routine cardiac stress imaging within 2 years of PCI persisted. An updated submission from the developer was provided for Committee review at the Post Comment Call on March 18, 2015. Below includes highlighted discussions from the meeting:
- The 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS *Guideline for the Diagnosis and Management of Patients with Stable Ischemic Heart Disease* and multiple other studies in a systematic review of

the clinical evidence supporting the measure, and additional studies on the use of AUC in determining appropriateness for cardiac imaging were summarized.

- Select Committee members questioned if patients with left main stenting and incomplete revascularization during the PCI were included in the denominator, 2 populations where cardiac imaging would be appropriate within 2 years after PCI in asymptomatic patients. The developer confirmed the FOCUS data collection tool captures information on patients with the 2 findings, and they are not included in the measure denominator.
- The Committee accepted the evidence stating that patient outcomes are not improved when cardiac imaging is performed for asymptomatic patients within 2 years of PCI versus patients without cardiac imaging during that time.
- Significant performance gaps were demonstrated in up to one half of asymptomatic patients undergoing cardiac imaging within 24 months PCI in patients from 2005-2013 from various urban and rural settings and patient populations, with varying results based on facility referral characteristics (e.g., cardiologist referrals affiliated with cardiovascular procedure and surgical facilities versus primary care referrals).
- The Committee agreed that the measure developer indicated the necessary performance gap because this is an NQS priority area; tests are expensive and can lead to risky procedures with significant downstream effects.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-4; M-11; L-1; I-0**; 2b. Validity: **H-4; M-10; L-1; I-1**

Rationale:

- Select Committee members questioned the measure denominator, stating they would prefer the measure calculate performance with only the patients as defined for assessing the numerator activity, rather than all cardiac imaging completed at the facility though they recognized the constraints of registry collected data. The developer stated modification to the denominator would also represent challenges in benchmarking performance across facilities due to varying facility characteristics, and that local quality improvement activities are based on facility-specific performance.
- Inter-rater reliability testing was performed using data from 298 patients from the Mayo Clinic. The developer reported substantial agreement with a kappa=0.72 for stress echocardiography
- The developers report that “in the inappropriate group, there were no statistically significant differences in major adverse coronary event rates between subjects with abnormal versus normal [imaging test].”
- The committee questioned the degree individuals tested were truly asymptomatic, but did not see any threats to validity.
- The Committee stated the specifications are consistent with the evidence, and empiric validity testing of the measure score evaluated the appropriate use score and the predictive value of SPECT MPI cardiac imaging test. This testing compared clinical outcomes for patients classified as having an appropriate or inappropriate stress imaging test and found no statistically significant differences in major adverse coronary events between the 2 groups.

3. Feasibility: H-4; M-12; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Select Committee members raised the question of ACC's Registry cost to end users and the developer reported all data collection tools are open access without restriction or fee.
- The Committee agreed that reasonable data sources are used in this measure by the registry or paper records are routinely generated with reasonable abstraction efforts. There was agreement that the information was acceptable.

4. Use and Usability: H-4; M-10; L-2; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- The developer stated the measure is used in the PQRS, FOCUS- ACC lab accreditation, quality improvement and utilization management.
- Public reporting is anticipated in 2017 as a mandate by CMS.
- No unintended consequences are reported. On a national scale, elimination of 3-5% of unnecessary imaging in post PCI patients would result in significant savings without compromise of quality and patient outcome the data presented.

5. Related and Competing Measures

- The developer demonstrated variability between the 3 measures, based on patient populations, including provider and institutional size of referring entities and referrals for cardiac imaging tests.

Standing Committee Recommendation for Endorsement: Y-13; N-3

6. Public and Member Comment

- There were no comments received for this measure.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for continued endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued endorsement**

9. Appeals

0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients

[Submission](#) | [Specifications](#)

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed in asymptomatic, low CHD risk patients for initial detection and risk assessment

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed for asymptomatic, low CHD risk patients for initial detection and risk assessment*

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

Exclusions: None

Adjustment/Stratification:

Level of Analysis: Facility, Clinician : Group/Practice

Setting of Care: Ambulatory Care : Clinician Office/Clinic, Imaging Facility

Type of Measure: Efficiency

Data Source: Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING [3/23/2015]

1. Importance to Measure and Report:

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-1; M-12; L-3; I-X; IE-X**; 1b. Performance Gap: **H-3; M-10; L-3; I-0**; 1c. Impact: **H-4; M-10; L-1; I-1**

Rationale:

- This imaging facility level process measure assesses whether cardiac stress imaging (by stress SPECT MPI, stress echo, CCTA, or CMR) was performed in asymptomatic, low risk patients, a population in which the evidence does not recommended.
- This measure is one of three similar measures from this developer (#0670, #0671, and #0672, though the measure was not discussed at the in-person meeting. The Committee favored the underpinnings of the measure, believed it supported the tenets the NQS Triple Aim. Although the Committee accepted the evidence for AUC or RAM, favored the underpinnings of the measure, and believed it supported the tenets the NQS Triple Aim, the evidence for cardiac stress imaging preoperatively in low risk surgery patients was not summarized. An updated submission from the developer was submitted to the Committee for review at the Post Comment Call on March 18, 2015. Below includes highlighted discussions from the meeting:
- The 2010 ACCF/AHA Guideline for Assessment of Cardiovascular Risk in Asymptomatic Adults: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guideline, multiple other studies in a systematic review of the clinical evidence supporting the measure, and additional studies on the use of AUC in determining appropriateness for cardiac imaging were summarized.
- The Committee accepted the evidence stating that patient outcomes are not improved for asymptomatic, low risk patients receiving cardiac imaging versus those who do not.
- Significant performance gaps were identified in patients from 2005-2013 in various urban and rural settings and patient populations, with varying results based on facility referral

characteristics (e.g., cardiologist referrals affiliated with cardiovascular procedure and surgical facilities versus primary care referrals).

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-3; M-11; L-2; I-0**; 2b. Validity: **H-4; M-10; L-2; I-0**

Rationale:

- Select Committee members questioned if patients with left main stenting and incomplete revascularization during the PCI were included in the denominator, 2 populations where cardiac imaging would be appropriate within 2 years after PCI in asymptomatic patients. The developer confirmed the FOCUS data collection tool captures information on patients with the 2 findings, and they are not included in the measure denominator.
- Reliability testing was conducted using data from 298 patients from the Mayo Clinic (Rochester, MN) in 2005. Reliability testing at the data element level was conducted, the developer reported the “agreement kappa=0.72 for stress echocardiography.”
- The developer conducted empiric validity testing of the measure score to study the “relationship between appropriate use score and predictive value of SPECT MPI” by comparing the clinical outcome of patients classified as having an appropriate or inappropriate stress imaging test. The developers reported that “in the inappropriate group, there were no statistically significant differences in major adverse coronary event rates between subjects with abnormal versus normal [imaging test].”

3. Feasibility: H-4; M-11; L-0; I-1

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Select Committee members raised the question of ACC’s Registry cost to end users and the developer reported all data collection tools are open access without restriction or fee.
- The committee agreed that reasonable data sources are used in this measure by the registry or paper records are routinely generated with reasonable abstraction efforts. There was agreement that the information was acceptable.

4. Use and Usability: H-3; M-11; L-2; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- The developer stated the measure is currently being used in the following programs: PQRS, FOCUS-ACC/lab accreditation and IAC- lab accreditation, additionally the developer highlighted no unintended consequences were identified.

5. Related and Competing Measures

OR

- The Committee acknowledged that although there were related measures, no competing measures were identified.

Standing Committee Recommendation for Endorsement: Y-14; N-2

6. Public and Member Comment

- There were no comments received for this measure.

7. Consensus Standards Approval Committee (CSAC) Review (April 8, 2015): Y-14; N-0; A-0

- **Decision: Approved for continued endorsement**

8. Board of Directors Vote: Yes (June 29, 2015)

- **Decision: Ratified for continued Endorsement**

9. Appeals

Measures Not Recommended

1524 Atrial Fibrillation: Assessment of Thromboembolic Risk Factors (CHADS2)

[Submission](#) | [Specifications](#)

Description: Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter in whom assessment of all the specified thromboembolic risk factors using the CHADS2 risk criteria is documented

Numerator Statement: Patients in whom assessment of all of the specified thromboembolic risk factors using the CHADS2 risk criteria is documented

Denominator Statement: All patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter

Exclusions: Denominator exclusions include patients with mitral stenosis or prosthetic heart valves, patients with transient or reversible cause of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery).

Adjustment/Stratification:

Level of Analysis: Clinician : Individual

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Electronic Clinical Data : Registry

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap, 1c. High Priority)

1a. Evidence: **H-16; M-1; L-0; I-0; IE-0**; 1b. Performance Gap: **H-17; M-0; L-0; I-0** 1c. High Priority: **H-17; M-0; L-0; I-0**;

Rationale:

- The Committee agreed that there is strong evidence to support this measure as the developer presented two clinical practice guidelines that recommend validated CHADS2 risk assessment: Class I recommendation in the ACCF/AHA/HRS 2013 Guideline and the ACCP 2012 guidelines with 17 randomized controlled trials.
- Based on the PINNACLE registry which includes over 700 providers, the mean performance rate was 20.5% in 2011 and 22.8% in 2012, illustrating a significant opportunity for improvement
- It is estimated that of 1.25 million (55%) patients currently not receiving appropriate stroke prophylaxis in the United States suffer approximately 58,000 strokes annually with an associated total direct cost to Medicare of \$ 4.8 billion, making it a high priority.

2. Scientific Acceptability of Measure Properties: The measure does not meet the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0; M-3; L-5; I-10** 2b. Validity: **H-X; M-X; L-X; I-X**

Rationale:

- Reliability testing was conducted at the measure score level using a signal-to-noise analysis.
- Committee found the reliability of identifying all specified risk factors with a “checkbox methodology” rather than the calculation of the individual CHADS2 scoring elements to be weak.
- The Committee additionally questioned CHADS2 as the only validated AF assessment tool, as the measure does not include CHA2DS2-VASc or other validated assessments.

3. Feasibility: H-X; M-X; L-X; I-X

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- N/A

4. Use and Usability: H-X; M-X; L-X; I-X

(4a. Accountability/transparency; and 4b. Improvement – progress demonstrated; and 4c. Benefits outweigh evidence of unintended negative consequences)

Rationale:

- N/A

5. Related and Competing Measures

- This measure directly competes with NQF # 1525 Chronic Anticoagulation Therapy. The Committee discussed that although these measures address the same focus, the target populations are slightly different, justifying the need for both measures

Standing Committee Recommendation for Endorsement: Y-X; N-X

6. Public and Member Comment [03/24/15-04/07/15]

Comments Received:

- Generally the comments received for this measure agreed with the Committee’s decision to not recommend endorsement, emphasizing the use of CHA2DS2-VASc instead of CHADS2.

Developer Response:

- We appreciate your support of this measure as we agree that it is an important measure associated with improving care of Atrial Fibrillation patients. The reason the measure reflects CHADS2 and not CHA2DS2-VASc is as follows. NQF requires that measures tested given the existing measure specification. Given that at the time of submission the guideline had not yet been released, the measure reflected the previous guideline recommendations of CHADS2, as well as the testing data provided to NQF that shows that the measure is feasible, reliable, and valid. Additionally, as measure developers we try to ensure an open process to providing

feedback on all measures included in a measure set. Therefore, we have not only a peer review process, but also an open comment period where we encourage the public to comment on our draft measure set prior to it being finalized. The reason why this measure does not include the CHA2DS2-VASc was that the NQF deadline for measure submission (December 23, 2013) did not align with the updated Atrial Fibrillation guidelines which were in fact released after the NQF deadline had passed. As a result, modifications to the measure could not be made, and tested utilizing the NQF evaluation criteria in time for the measure review, since the guideline was not yet released and we could not provide any notice of the proposed change to the measure to the public. However, we are in the process of convening the writing committee to update the atrial fibrillation measure set and do plan to look at replacing CHADS2 with CHA2DS2-VASc which is recommended in the guidelines.

2441 Discussion of Advance Directives/Advance Care Planning

[Submission](#) | [Specifications](#)

Description: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Numerator Statement: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider

Denominator Statement: All heart failure patients.

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure does not meet the Importance criteria

(1a. Evidence: 1b. Performance Gap, 1c. High Priority)

1a. Evidence: **H-1; M-0; L-3; I-6; IE-8**; 1b. Performance Gap: **H-1; M-4; L-4; I-8** 1c. High Priority: **H-X; M-X; L-X; I-X**;

Rationale:

- The developer referenced five studies and provided a diagram to support the execution of how advanced directives can lead to “Decreased anxiety for patients/caregivers regarding end-of-life decision making” and “Coordinated end-of-life care.” However, no systematic review of the evidence was presented.
- The Committee questioned the qualifications of the healthcare worker assessing patients’ end-of-life preferences, stating it should not be “passed off” function, rather one who is appropriately trained, cares about the patient and has a focal role in their care. Some Committee members were concerned the measure may lead to psychological unintended consequences as it only focuses on one-time discussions.
- Select Committee members stated this measure is additionally appropriate for the pediatric population, and questioned the list of measure exclusions (specifically LVAD and comfort-care patients), while others questioned the limited denominator of the measure to HF-only patients.
- The Committee questioned the appropriateness of all HF patients in the denominator, specifically those with EF \geq 40%, and questioned the relevance of a one-time discussion as patients wished change over time, especially after an acute hospitalization.
- Committee members acknowledged that while advanced directives is an important aspect to consider for patient-focused care, the evidence provided by the developers that such discussions can influence outcome in heart failure is not present. The Committee did not reach consensus on evidence.
- As a new measure, there are no direct data for performance. However, the developer provided data from a 2004 study that shows less than 50% of patients had an advanced directive in their medical record. Moreover, a pilot testing done at nine hospitals revealed a rate of 66.6%.
- The Committee found the data provided by the developer to be dated, missing patient input and questioned whether 100% performance was an appropriate goal for the measure. The measure did not pass on performance gap criteria.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-X; M-X; L-X; I-X** 2b. Validity: **H-X; M-X; L-X; I-X**

Rationale:

- N/A

3. Feasibility: H-X; M-X; L-X; I-X

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- N/A

4. Use and Usability: H-X; M-X; L-X; I-X

(4a. Accountability/transparency; and 4b. Improvement – progress demonstrated; and 4c. Benefits outweigh evidence of unintended negative consequences)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

- N/A

Standing Committee Recommendation for Endorsement: Y-X; N-X

6. Public and Member Comment [03/24/15-04/07/15]

Comments Received:

- One comment received noted the burden of one-time documentation for medical record review and agreed with the Committee's recommendation to not endorse this measure.
- Another comment submitted did not support the Committee's recommendation to not endorse this measure, stressing the need for advance directive incentive measurement to address end of life issues facing patients and families. The commenter recommended the importance of having an early discussion to engage providers with patients' families before a patient is unable to decide on their own end of life care.

Committee response:

- The Committee questioned the qualifications of the healthcare worker assessing patients' end-of-life preferences, stating it should not be "passed off" function, rather one who is appropriately trained, cares about the patient and has a focal role in their care. The Committee discussed the potential psychological unintended consequences as it only focuses on one-time discussions. Additionally, during in-person meeting, there were several concerns raised regarding the lack of direct evidence relating process of care of executing an advanced directive to improved outcome in care.

Consensus Standards Approval Committee (CSAC) Review (May 12, 2015): Y-10; N-5;

- Although the Standing Committee did not review this measure for related and competing criterion, during the April 8 CSAC meeting, the CSAC noted that measure #0326 is competing with measure 2441, and requested the Standing Committee reconsider this measure based on gaps in the heart failure population.
- Measure 0326 is a broader measure, but limited to the patients over 65. However, the CSAC highlighted the extent to which it is the responsibility of healthcare professionals to address advanced care planning with their patients where the heart failure patient measure gap exists.
- On April 20 the Committee deliberated on the importance of advance directives and surrogate decision making for advance care planning, and ultimately upheld the original recommendation

to not endorse this measure based on the Importance: Performance Gap criteria. While Committee members recognized that advance directives are important, the evidence provided by the developers for this measure was not sufficient.

- There was discussion of level of analysis, patient population and timing of advance care planning as compared to measure #0326. Currently, this measure is within the Care Coordination project and the Committee did not believe it was within their purview to adequately compare the measures.
- The measure developer noted that minimal evidence for this population exists, indicating the gap in care planning in heart failure patients, and an increased need for an advance care planning measures.
- Based on the Committee's decision to uphold their previous recommendation to not endorse this measure, the CSAC also voted to uphold this recommendation.

2442 Advance Directive Executed

[Submission](#) | [Specifications](#)

Description: Patients who have documentation in the medical record that an advance directive was executed.

Numerator Statement: Patients who have documentation in the medical record that an advance directive was executed.

Denominator Statement: All heart failure patients.

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure does not meet the Importance criteria

(1a. Evidence: 1b. Performance Gap, 1c. High Priority)

1a. Evidence: **H-0; M-1; L-7; I-7; IE-2**; 1b. Performance Gap: **H-X; M-X; L-X; I-X** 1c. High Priority: **Y-X; N-X**;

Rationale:

- No systematic review was provided, however several citations highlighted the importance of initiating advance directives leads to favorable patient outcomes, and decreased anxiety for patients/caregivers regarding end-of-life decision making and coordinated end-of-life care.
- The Committee stated several concerns that there is no direct evidence relating process of care of executing an advanced directive with improved care.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-X; M-X; L-X; I-X** 2b. Validity: **H-X; M-X; L-X; I-X**

Rationale:

- N/A

3. Feasibility: **H-X; M-X; L-X; I-X**

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- N/A

4. Use and Usability: **H-X; M-X; L-X; I-X**

(4a. Accountability/transparency; and 4b. Improvement – progress demonstrated; and 4c. Benefits outweigh evidence of unintended negative consequences)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

- N/A

Standing Committee Recommendation for Endorsement: **Y-X; N-X**

6. Public and Member Comment [03/24/15-04/07/15]

Comments received:

- The two comments received for this measure disagreed with the Committee's recommendation to not endorse this measure. The comments highlighted the cost of end-of-life care and capturing patient wishes as reasons why an advance directive is important

Committee Response:

- The Committee questioned the qualifications of the healthcare worker assessing patients' end-of-life preferences, stating it should not be "passed off" function, rather one who is appropriately trained, cares about the patient and has a focal role in their care. The Committee discussed the potential psychological unintended consequences as it only focuses on one-time discussions. As part of our portfolio of endorsed measures, 0326: Advance Care Plan addresses documentation of a discussion regarding advance care plan or surrogate decision maker documentation for patients 65 and older regardless of diagnosis in the ambulatory, home health, hospice, acute care facility, post-acute/long term care inpatient rehab and nursing facilities.

Consensus Standards Approval Committee (CSAC) Review (May 12, 2015): Y-10; N-5;

- Although the Standing Committee did not review this measure for related and competing criterion, during the April 8 CSAC meeting, the CSAC noted that measure #0326 is competing with measure 2441, and requested the Standing Committee reconsider this measure based on gaps in the heart failure population.
- Measure 0326 is a broader measure, but limited to the patients over 65. However, the CSAC highlighted the extent to which it is the responsibility of healthcare professionals to address advanced care planning with their patients where the heart failure patient measure gap exists.
- On April 20 the Committee deliberated on the importance of advance directives and surrogate decision making for advance care planning, and ultimately upheld the original recommendation to not endorse this measure based on the Importance: Performance Gap criteria. While Committee members recognized that advance directives are important, the evidence provided by the developers for this measure was not sufficient.
- There was discussion of level of analysis, patient population and timing of advance care planning as compared to measure #0326. Currently, this measure is within the Care Coordination project and the Committee did not believe it was within their purview to adequately compare the measures.
- The measure developer noted that minimal evidence for this population exists, indicating the gap in care planning in heart failure patients, and an increased need for an advance care planning measures.
- Based on the Committee's decision to uphold their previous recommendation to not endorse this measure, the CSAC also voted to uphold this recommendation.

2440 Care Transition Record Transmitted

[Submission](#) | [Specifications](#)

Description: A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization

- Discharge medications, including dosage and indication for use
- Follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment)

Numerator Statement: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

Denominator Statement: All heart failure patients discharged from a hospital inpatient setting to home or home care.

Exclusions: Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement

Adjustment/Stratification:

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Electronic Health Record, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [12/04/2014-12/05/2014]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap, 1c. High Impact)

1a. Evidence: **H-0; M-4; L-1; I-0; IE-13**; 1b. Performance Gap: **H-10; M-8; L-0; I-0**; 1c. Impact: **H-12; M-4; L-2; I-0**

Rationale:

- The Committee agreed the evidence for this measure is insufficient, but acknowledged the importance of care transition record communication and agreed on an exception to the evidence criteria. Five citations for evidence were included, generally resulting in recommendations. Where empirical evidence was lacking, committee members recognized the difficulty in retrieving this data, and correlated practical application of this transmission with the ability to reduce hospital readmissions. Additionally, it was pointed out that transition evidence exists in the care coordination projects. The significance of the 7 day requirement compared to a

shorter time frame of 3 days was raised, as well as the ability to meet this expectation with a fragmented healthcare communication system.

- The Committee concluded there was sufficient performance gap evidence. Multiple literature references were provided of studies where transmission of the care record occurred in fewer than 50% of cases, or were delayed beyond 7 days. Measure testing showed overall rate of adherence 48.7%, min=0%, max=86.2%, median=57.1% showing significant gaps in care and room for improvement.
- The measure addresses the significant burden of heart failure as a high-cost, high-risk disease, directly related to hospital readmission rates.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-3; M-13; L-2; I-0**; 2b. Validity: **H-0; M-15; L-3; I-0**

Rationale:

- The Numerator Statement clearly defines 5 data points. Reason for hospitalization, Procedures performed, Treatments/Services provided, Discharge medications, including dosages and indication for use, and follow-up treatments and services needed. One committee member raised a concern about the importance of including LVAD (left ventricular assistive device) patients to the numerator. Those patients are at risk of complications if they are not properly evaluated within one week post-discharge.
- The Committee determined that the measure specifications were precise, noting that all codes necessary to calculate the measure were present and the specifications were consistent with the evidence presented.
- Empiric reliability testing was performed at the data element level using data from nine hospitals and 878 inpatient records. Re-abstraction was provided for one data element, Post-Discharge Evaluation Conducted within 72 Hours: which resulted in a 95% agreement rate and a Kappa score of 0.75, indicating suboptimal reliability.
- Empiric validity testing showed an overall adherence rate of 9.5%. This measure was positively correlated with post-discharge appointments for heart failure patients, not proven statistically significant. However, The Committee agreed the validity provided was adequate. Exclusion population amounted to >50% of the 1372 admissions and concluded the value of exclusion outweighs the burden of increased data collection and analysis.

3. Feasibility: **H-7; M-9; L-1; I-1**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

Rationale:

- Similar to Measure # 2443, the Committee agreed the measure is feasible to implement. However, concerns were raised over the ability to capture telephone follow-up. The cost was estimated to be \$10.34 to abstract the data for each measure, depending on the level of personnel, by either electronic or paper charts.

4. Use and Usability: H-4; M-10; L-1; I-3

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

Rationale:

- This new process measure is one of six HF measures from TJC Advanced Certification in Heart Failure (ACHF) program starting in 2014, with approximately 70-80 facilities participating as of the time of the meeting. The measure data elements are also part of the GWTG HF data collection tool.

5. Related and Competing Measures

- This measure is directly related or competes with the following measures:
- 0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge
- 0648 : Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care) - facility level measure
- 0647 : Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)- facility level measure

Endorsed measure pair #0648 and #0647 applies to all patients discharged from an inpatient facility. In measures # 0648 and 0647 the information is provided to the patient in printed or electronic format at each transition of care, and transmitted to the facility/physician/other health care professional providing follow-up care within 24 hours.

- Measure 0648 and 2440 are competing measures though 2440 targets a subset of patients captured in measure 0648. The Committee emphasized the delayed transmission of patient records (7 days), and agreed that a target of <24 hours is ideal. The developers of NQF# 2440 agreed to recommend the change to the Heart Failure TAP.
- The Committee also noted that the data elements included: inpatient, post-discharge/patient self-management, advance care plan, and contact information/plan for follow-up care are similar/comparable to measure # 0648. Additionally, the denominator outlined in measure # 2440 included only heart failure patients, while 0648 assesses all inpatient care transition records.
- Overall, the Committee decided to remove their recommendation of endorsement for Measure # 2440, as measure # 0648 was determined to be “best in class” and will remain endorsed within the Care Coordination portfolio

Standing Committee Recommendation for Endorsement: Y-6; N-12

6. Public and Member Comment [03/24/15-04/07/15]

- The comments received for this measure agreed with the Committee’s recommendation to not endorse this measure reiterating the concern of a 7 day window for the transmission of records.

Measures Withdrawn from Consideration

The following 6 previously endorsed measures were withdrawn from endorsement consideration by the developer prior to the measure evaluation period.

Measure	Measure Steward	Reason for Retirement
0092 Aspirin at Arrival of AMI	American Medical Association - Physician Consortium for Performance Improvement	Developer decided not to submit the measure based on programmatic use in the current claims and registry format.
0543 Adherence to Statin Therapy for Individuals with Coronary Artery Disease	Centers for Medicare & Medicaid Services	Developer will no longer be maintaining the measure as it is not being utilized in the CMS Quality and Resource Use Report (QRUR).
0569 Adherence to Lipid-Lowering Medication	Health Benchmarks, Inc.	Developer will not be maintaining the measure.
0639 Statin Prescribed at Discharge	Centers for Medicare & Medicaid Services	Developer will not be maintaining the measure.
1552 Blood Pressure Screening by Age 13	National Committee for Quality Assurance	Developer will no longer be maintaining the measure.
1553 Blood Pressure Screening by Age 18	National Committee for Quality Assurance	Developer will no longer be maintaining the measure.

Appendix B: NQF Cardiovascular Portfolio and Related Measures

Patient-Focused Episode of Care for Coronary Artery Disease and Acute Myocardial Infarction (AMI)

* Measures applicable to patients within the CAD/AMI episode of care frameworks that are not in the cardiovascular portfolio.

^ Measures reviewed within phase 2 of the Cardiovascular project.

‡ Measures applicable to multiple topic areas are listed more than once.

NQF-Endorsed Measures for Patients with CAD/AMI

Population at Risk: Primary Prevention

- 2020 Adult Current Smoking Prevalence*
- 0028 Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention*
- 0018 Controlling High blood Pressure‡
- 1927 Cardiovascular Health Screening for People with Schizophrenia or Bipolar Disorder Who Are Prescribed Antipsychotic Medications*
- 1933 Cardiovascular Monitoring for People with Cardiovascular Disease and Schizophrenia*

Cardiac Imaging

- 0669 Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery
- 0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients^**
- 0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI) ^**
- 0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients^**

Population at Risk: Secondary Prevention

- 0066 Chronic Stable Coronary Artery Disease: ACE Inhibitor or ARB Therapy--Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%)
- 0067 Chronic Stable Coronary Artery Disease: Antiplatelet Therapy
- 0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic
- 0073 IVD: Blood Pressure Management
- 0074 Chronic Stable Coronary Artery Disease: Lipid Control
- 0075 IVD: Complete Lipid Profile and LDL Control <100
- 0076 Optimal Vascular Care [composite]

Acute Phase

Acute Myocardial Infarction

- 0090 Electrocardiogram Performed for Non-Traumatic Chest Pain [clinician] ^**
- 0163 Primary PCI Received Within 90 Minutes of Hospital Arrival
- 0164 Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival
- 0288 Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival [hospital for patients being transferred]
- 0290 Median Time to Transfer to Another Facility for Acute Coronary Intervention
- 2377 Defect free care for AMI [composite measure]

Outcomes

- 0230 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Acute Myocardial Infarction (AMI) Hospitalization for Patients 18 and Older
- 0505 Hospital 30-Day All-Cause Risk-Standardized Readmission Rate (RSRR) Following Acute Myocardial Infarction (AMI) Hospitalization*
- 0704 Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (During the Index Stay or in the 30-day Post-Discharge Period)
- 0730 Acute Myocardial Infarction (AMI) Mortality Rate
- 2473 Hospital 30-Day Risk-Standardized AMI Mortality eMeasure

Percutaneous Coronary Intervention (PCI)

- 0535 30-day All-Cause Risk-Standardized Mortality Rate Following PCI for Patients Without STEMI and Without Cardiogenic Shock
- 0536 30-Day All-Cause Risk-Standardized Mortality Rate Following PCI for Patients with STEMI or Cardiogenic Shock
- 2411 Comprehensive Documentation for Indications for PCI
- 2459 In-hospital Risk Adjusted Rate of Bleeding Events for Patients Undergoing PCI
- 0133 In-hospital Risk-Adjusted Rate of Mortality for Patients Undergoing PCI

Coronary Artery Bypass Graft Surgery (These related measures are in NQF's surgery portfolio.)

- 0114 Risk-Adjusted Post-operative Renal Failure
- 0115 Risk-Adjusted Surgical Re-exploration
- 0116 Anti-Platelet Medication at Discharge
- 0117 Beta Blockade at Discharge
- 0118 Anti-Lipid Treatment Discharge
- 0119 Risk-Adjusted Operative Mortality for CABG
- 0122 Risk-Adjusted Operative Mortality MV Replacement + CABG Surgery
- 0123 Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR) + CABG Surgery

- 0126 Selection of Antibiotic Prophylaxis for Cardiac Surgery Patients
- 0127 Preoperative Beat Blockade
- 0128 Duration of Antibiotic Prophylaxis for Cardiac Surgery Patients
- 0129 Risk-Adjusted Prolonged Intubation (Ventilation)
- 0130 Risk-Adjusted Deep Sternal Wound Infection Rate
- 0131 Risk-Adjusted Stroke/Cerebrovascular Accident
- 0134 Use of Internal Mammary Artery (IMA) in Coronary Artery Bypass Graft (CABG)
- 0696 The STS CABG Composite Score
- 1502 Risk-Adjusted Operative Mortality for MV Repair + CABG Surgery

Post-Acute/Rehabilitation Phase

- 0642 Cardiac Rehabilitation Patient Referral From an Inpatient Setting
- 0643 Cardiac Rehabilitation Patient Referral From an Outpatient Setting
- 0964 Therapy with Aspirin, P2Y12 Inhibitor, and Statin at Discharge Following PCI in Eligible Patients [facility]
- 2379 Adherence to Antiplatelet Therapy after Stent Implantation
- 2452 PCI: Post-procedural Optimal Medical Therapy [clinician]

Population at Risk: Secondary Prevention

- 0070 Chronic Stable Coronary Artery Disease: Beta-Blocker Therapy--Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
- 0071 Persistence of Beta-Blocker Treatment After a Heart Attack
- 0116 Anti-Platelet Medication at Discharge
- 0117 Beta-Blocker at Discharge
- 0118 Anti- Lipid Treatment Discharge
- 0137 ACEI or ARB for Left Ventricular Systolic Dysfunction- AMI Patients
- 0141 Aspirin Prescribed at Discharge for AMI
- 0142 Aspirin Prescribed at Discharge for AMI
- 0594 Post MI: ACE Inhibitor or ARB Therapy

Cost and Resource Use

- 1558: Relative Resource Use for People with Cardiovascular Conditions*

Patient-Focused Episode of Care for Heart Failure

NQF-Endorsed Measures for Heart Failure Patients

Population at Risk

- 0018 Controlling High Blood Pressure

- 0028 Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention*
- 0421 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up
- 2020 Adult Current Smoking Prevalence*

Evaluation and On-Going Management

- 0079 Left Ventricular Ejection Fraction Assessment (Outpatient Setting)
- 0081 Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction
- 0083 Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction
- 0521 Heart Failure Symptoms Assessed and Addressed [home health]
- 2450 Heart Failure: Symptom and Activity Assessment

Acute Phase/ Hospitalization

- 0135 Evaluation of Left Ventricular Systolic Function (LVS) [hospital]
- 0277 Heart Failure Admission Rate (PQI 8)*
- 0229 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following heart failure (HF) hospitalization for patients 18 and older
- 0330 Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following heart failure hospitalization*
- 0358 Congestive Heart Failure (CHF) Mortality Rate (IQI 16)
- 2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Heart Rhythm Disorders

Atrial Fibrillation

- 1525 Chronic Anticoagulation Therapy^**

Implantable Cardioverter Defibrillator (ICD)

- 0694 Hospital Risk-Standardized Complication Rate following Implantation of Implantable Cardioverter-Defibrillator (ICD)
- 0965 Patients with an ICD Implant Who Receive Prescriptions for All Medications (ACE/ARB and beta-blockers) for Which They Are Eligible for at Discharge

Cardiac catheterization

- 0355 Bilateral Cardiac Catheterization Rate (IQI 25)
- 0715 Standardized Adverse Event Ratio for Children and Adults Undergoing Cardiac Catheterization for Congenital Heart Disease^**

Hypertension

- 0018 Controlling High Blood Pressure

Appendix C: Cardiovascular Portfolio—Use in Federal Programs

NQF #	Title	Federal Programs: Finalized as of 2013-2014
0018	Controlling High Blood Pressure	Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults; Meaningful Use (EHR Incentive Program) - Eligible Professionals; Medicare Part C Plan Rating; Medicare Shared Savings Program; Physician Quality Reporting System (PQRS)
0066	Chronic Stable Coronary Artery Disease: ACE Inhibitor or ARB Therapy--Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%)	Medicare Shared Savings Program; Physician Feedback; Physician Quality Reporting System (PQRS)
0067	Chronic Stable Coronary Artery Disease: Antiplatelet Therapy	Physician Compare; Medicare Shared Savings Program; Value-Based Payment Modifier Program
0068	Ischemic Vascular Disease (IVD): Use of Aspirin or another Antithrombotic	Physician Compare; Value-Based Payment Modifier Program
0070	Chronic Stable Coronary Artery Disease: Beta-Blocker Therapy--Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	Medicare Shared Savings Program; Value-Based Payment Modifier Program
0074	Chronic Stable Coronary Artery Disease: Lipid Control	Medicare Shared Savings Program; Physician Feedback; Physician Quality Reporting System (PQRS)
0079	Heart Failure: Left Ventricular Ejection Fraction Assessment (Outpatient Setting)	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Compare

NQF #	Title	Federal Programs: Finalized as of 2013-2014
0081	Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction	Physician Compare; Value-Based Payment Modifier Program
0083	Heart Failure : Beta-blocker therapy for Left Ventricular Systolic Dysfunction	Value-Based Payment Modifier Program; Physician Compare
0090	Electrocardiogram Performed for Non-Traumatic Chest Pain	Physician Feedback; Physician Quality Reporting System (PQRS)
0142	Aspirin prescribed at discharge for AMI	Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
0163	Primary PCI received within 90 minutes of Hospital Arrival	Hospital Inpatient Quality Reporting; Hospital Value-Based Purchasing; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
0164	Fibrinolytic Therapy received within 30 minutes of hospital arrival	Hospital Inpatient Quality Reporting; Hospital Value-Based Purchasing; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs; HRSA
0229	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following heart failure (HF) hospitalization for patients 18 and older	Hospital Inpatient Quality Reporting; Hospital Value-Based Purchasing
0230	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute myocardial infarction (AMI) hospitalization for patients 18 and older	Hospital Inpatient Quality Reporting; Hospital Value-Based Purchasing

NQF #	Title	Federal Programs: Finalized as of 2013-2014
0288	Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival	Hospital Outpatient Quality Reporting; HRSA
0290	Median Time to Transfer to Another Facility for Acute Coronary Intervention	Hospital Outpatient Quality Reporting; HRSA
0643	Cardiac Rehabilitation Patient Referral From an Outpatient Setting	Hospital Outpatient Quality Reporting; Physician Quality Reporting System (PQRS)
0669	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery	Hospital Outpatient Quality Reporting
0670	Cardiac stress imaging not meeting appropriate use criteria: Preoperative evaluation in low risk surgery patients	Physician Quality Reporting System (PQRS)
0671	Cardiac stress imaging not meeting appropriate use criteria: Routine testing after percutaneous coronary intervention (PCI)	Physician Quality Reporting System (PQRS)
0672	Cardiac stress imaging not meeting appropriate use criteria: Testing in asymptomatic, low risk patients	Physician Quality Reporting System (PQRS)
1525	Chronic Anticoagulation Therapy	Physician Quality Reporting System (PQRS)

Appendix D: Project Standing Committee and NQF Staff

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Appendix E: Measure Specifications

Measures Endorsed

1525 Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy

STATUS

Submitted

STEWARD

American College of Cardiology

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification, who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Registry See 'Registry Supplemental Resources' attached in appendix field A.1.

Available in attached appendix at A.1 No data dictionary

LEVEL

Clinician : Individual

SETTING

Ambulatory Care : Clinician Office/Clinic

TIME WINDOW

Measurement period may vary by implementation program.

For the Pinnacle registry:

Denominator: during the 3 month (quarterly) measurement period

Numerator: at one or more visits during the measurement period

[evaluate every visit during quarter – evaluate that each patient got numerator intervention at one or more visits in quarter]

NUMERATOR STATEMENT

Patients who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism

NUMERATOR DETAILS

For the purposes of this measure, anticoagulant therapy is considered to be the following medications: warfarin, dabigatran, rivaroxaban, apixaban

See 'Registry Supplemental Resources' attached in appendix field A.1.

DENOMINATOR STATEMENT

All patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification

DENOMINATOR DETAILS

The assessment of patients with nonvalvular AF for thromboembolic risk factors should include the following criteria:

[Risk Factors]	[Weighting]
Prior Stroke, TIA, or Systemic Embolism	High Risk
Age \geq 75 Years	Moderate Risk
Hypertension	Moderate Risk
Diabetes Mellitus	Moderate Risk
Heart Failure or Impaired Left Ventricular Systolic Function	Moderate Risk

See 'Registry Supplemental Resources' attached in appendix field A.1.

For the denominator ?

Atrial Flutter:

ICD-9-CM: 427.32

ICD-10-CM: I48.1

SNOMED-CT: 5370000, 195080001, 425615007, 427665004

Atrial Fibrillation:

ICD-9-CM: 427.31

ICD-10-CM: I48.0

SNOMED-CT: 7141000047109, 49436004, 195080001, 233910005, 233911009, 282825002, 314208002, 426749004, 440028005, 440059007

Encounters:

CPT: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

SNOMED-CT: 4525004, 12843005, 18170008, 19681004, 87790002, 90526000, 185349003, 185463005, 185465003, 207195004, 270427003, 270430005, 308335008, 390906007, 406547006, 439708006

EXCLUSIONS

Denominator Exclusions:

- Patients with mitral stenosis or prosthetic heart valves

- Patients with transient or reversible causes of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery)

Denominator Exceptions:

Documentation of medical reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, allergy, risk of bleeding, other medical reason)

Documentation of patient reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason)

EXCLUSION DETAILS

The ACCF, AHA, and PCPI distinguish between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For measure 1525, exclusions include patients with mitral stenosis or prosthetic heart valves, and patients with transient or reversible causes of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery). Exclusions, including applicable value sets, are included in the measure specifications.

Measure Exceptions

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The ACCF, AHA, PCPI exception methodology uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure 1525, exceptions may include medical reason(s) (eg, allergy, risk of bleeding, other medical reason) or patient reason(s) (eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason). Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.

Additional details are included in 'Registry Supplemental Resources' attached in appendix field A.1.

RISK ADJUSTMENT

No risk adjustment or risk stratification

No risk adjustment or risk stratification.

STRATIFICATION

We encourage the results of this measure be stratified by race, ethnicity, administrative sex, and payer, consistent with the data elements collected by the Pinnacle Registry.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

To calculate performance rates:

- 1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address).
- 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator. (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.
- 3) Find the patients who qualify for exclusions and subtract from the denominator.
- 4) From the patients within the denominator (after exclusions have been subtracted from the denominator), find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator
- 5) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s)(eg, allergy, risk of bleeding, other medical reason) or patient reason(s)(eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage of patients with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

For calculation algorithm, see 'Registry Supplemental Resources' attached in appendix field A.1. Available in attached appendix at A.1

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5.1 Identified measures: 0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge

0436 : STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0241 and 0436 focus on the provision of anticoagulant therapy in patients hospitalized with stroke who also have atrial fibrillation. These measures focus on secondary prevention of stroke, while our measure focuses on the primary prevention of stroke.

5b.1 If competing, why superior or rationale for additive value: Not applicable, no competing measures.

2461 In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device (CIED)

STATUS

Submitted

STEWARD

Heart Rhythm Society

DESCRIPTION

Proportion of adult patients with a new CIED with an in-person evaluation within 2 to 12 weeks following implantation.

TYPE

Process

DATA SOURCE

Administrative claims Not applicable.

Available at measure-specific web page URL identified in S.1 Attachment xIHRS4ICD-9to-10CodeCrosswalk01-15-13FINAL.xls

LEVEL

Clinician : Individual

SETTING

Ambulatory Care : Clinician Office/Clinic, Hospital/Acute Care Facility

TIME WINDOW

12 months.

NUMERATOR STATEMENT

This measures assess the number of patients from the denominator with an in-person evaluation within 2-12 weeks following implantation. For the purposes of this measure, an “in-person evaluation” is defined as an in-person interrogation device evaluation either with or without iterative adjustment, as clinically indicated. The in-person evaluation can be provided by any trained physician or Clinically Employed Allied Professional (CEAP) in a designated CIED follow-up clinic, medical institution, or physician office.

NUMERATOR DETAILS

Patients to be included in the numerator are identified using the following interrogation and programming device evaluation CPT codes:

- Pacemaker Systems: 93288, 93279, 93280, or 93281
- ICD Systems: 93289, 93282, 93283, or 93284

DENOMINATOR STATEMENT

All Medicare FFS patients with implantation of a new CIED during the reporting period. CIEDs encompassed for this measure are the following devices:

- Pacemakers (PMs)
- Implantable cardioverter-defibrillators (ICDs)
- Cardiac resynchronization devices (CRTs)

DENOMINATOR DETAILS

The patients to be included in the denominator population are identified when any of the following CIED placement codes are included in their administrative claims:

- ICD-9 Procedure Codes: 00.50, 00.51, 37.8, 37.80—37.83, 37.94
- CPT Codes: 33206—33208, 33249

EXCLUSIONS

Exclude patients with any of the following diagnoses/conditions:

1. Patients with Implantable Loop Recorders or Implantable Cardiovascular Monitors.
2. Patients with pulse generator exchange only.
3. Patients with prior CIED implantation.
4. Patient preference for other or no treatment.

EXCLUSION DETAILS

Patients with any of the following exclusion codes are removed from denominator population:

- ICD-9 Procedure Codes: V45.01, V45.02, V53.31, V53.32, V62.6, 37.85—37.87, 37.89, 37.98,
- CPT Codes: 33214, 33227-33229, 33232, 33236, 33237, 33240, 33241, 33244, 33262-33264

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not applicable.

STRATIFICATION

The measure does not require stratification.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

1. Search records to build file of all Medicare FFS patients. The “fixed” fields that should be a part of the file are patient name/identifier, physician, procedure code, date of procedure, date of evaluation. You will calculate the time elapsed between procedure and evaluation with a formula once the data are obtained.
2. The denominator is determined by narrowing search file by retaining only those with an implantation of a new CIED (i.e., pacemakers, implantable cardioverter-defibrillators, cardiac resynchronization devices) from mm/dd/yyyy through mm/dd/yyyy (365 days). Include in the cohort all patients with hospital claims with any of the following CPT or ICD-9 procedure codes:
 - ICD-9 Procedure Codes: 00.50, 00.51, 37.8, 37.80—37.83, 37.94
 - CPT Codes: 33206—33208, 33249

[Note: If a patient has more than one of any denominator code only use the first one.]

3. Capture the date of the CIED implantation.
4. Exclude patients with hospital or physician office claims for any of the following diagnoses/conditions: patients with Implantable Loop Recorders or Implantable Cardiovascular Monitors; patients with pulse generator exchange only; patients with prior CIED implantation; and patients with preference for other or no treatment.
 - ICD-9 Procedure Codes: V45.01, V45.02, V53.31, V53.32, V62.6, 37.85—37.87, 37.89, 37.98,
 - CPT Codes: 33214, 33227-33229, 32322, 33236, 33237, 33240, 33241, 33244, 33262-33264
5. Next, exclude patients if the implementation of a new CIED occurs during the last 83 days of the 12-month report period. If records for the period mm/dd/yyyy to mm/dd/yy are used, exclude patients where one of the above procedure codes occurs on or after 12 weeks prior end date.
6. The number of patients left constitutes the denominator.
7. To obtain the numerator, use a copy of the aforementioned denominator file less the exclusions. Identify all patients with physician office claims with any of the following codes, indicating that an interrogation or programming device evaluation occurred:
 - Pacemaker Systems: 93288, 93279, 93280, or 93281
 - ICD Systems: 93289, 93282, 93283, or 93284
8. Capture the date of the interrogation/programming device evaluation.
9. Convert the dates for the procedures into the appropriate Excel format to calculate elapsed time between the CIED implantation and the interrogation/programming device evaluation. See for example: <http://support.microsoft.com/kb/214094>
10. Exclude all patients whose elapsed time is >84 days. The remaining patients are those who meet the numerator criteria.
11. The performance is calculated as numerator/denominator. No diagram provided

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- 5.1 Identified measures:
 - 5a.1 Are specs completely harmonized?
 - 5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable.
 - 5b.1 If competing, why superior or rationale for additive value: Not applicable.

2474 Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation

STATUS

Submitted

STEWARD

Heart Rhythm Society

DESCRIPTION

Rate of cardiac tamponade and/or pericardiocentesis following atrial fibrillation (AF) ablation.

TYPE

Outcome

DATA SOURCE

Administrative claims Not applicable.

Available at measure-specific web page URL identified in S.1 Attachment xIHRS12ICD-9to-10CodeCrosswalk01-15-13FINAL.xls

LEVEL

Facility, Clinician : Individual

SETTING

Ambulatory Care : Clinician Office/Clinic, Hospital/Acute Care Facility

TIME WINDOW

The performance results are calculated using a three-year rolling average. The average is calculated by summing the numerators for three consecutive years and dividing by the sum of the denominators for the same three consecutive years.

NUMERATOR STATEMENT

The number of patients from the denominator with cardiac tamponade and/or pericardiocentesis occurring within 30 days following atrial fibrillation ablation.

NUMERATOR DETAILS

The following CPT codes should be used:

- Diagnosis = Cardiac tamponade (ICD-9 423.3)

AND/OR any of the following ICD-9 or CPT Procedure Codes

- Procedure = Pericardiocentesis (ICD-9 37.0; CPT 33010, 33011)

DENOMINATOR STATEMENT

All patients aged 18 years and older with atrial fibrillation ablation performed during the reporting period.

DENOMINATOR DETAILS

Include in the cohort patients with any one or more of the following CPT code or ICD-9 procedure codes:

- Procedure = Atrial Fibrillation Ablation (ICD-9 37.33, 37.34; CPT 33250, 33251, 33254, 33255, 33256, +33257, +33258, +33259, 33265, 33266, 93650, 93651, 93653, +93655, 93656, +93657; HCPCS C1886)

AND

- Diagnosis on date of procedure = Atrial Fibrillation (ICD-9 427.31); the presence of any additional ablation-related diagnosis code(s) is immaterial for purpose of inclusion in the denominator population.

EXCLUSIONS

No exclusions.

EXCLUSION DETAILS

Not applicable.

RISK ADJUSTMENT

Stratification by risk category/subgroup

Not applicable; not risk adjusted.

STRATIFICATION

Stratify measure by the following categories: age and gender.

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

Determine rate of cardiac tamponade and/or pericardiocentesis following atrial fibrillation ablation.

1. Search records to build file of all patients who are 18 years or older as of event start date.

2. The denominator is determined by narrowing search file by retaining only those with an Atrial Fibrillation Ablation during the three-year study period. Include in the cohort patients with any one or more of the following CPT code or ICD-9 procedure codes:

- Procedure = Atrial Fibrillation Ablation (ICD-9 37.33, 37.34; CPT 33250, 33251, 33254, 33255, 33256, +33257, +33258, +33259, 33265, 33266, 93650, 93651, 93653, +93655, 93656, +93657; HCPCS C1886)

AND

- Diagnosis on date of procedure = Atrial Fibrillation (ICD-9 427.31); the presence of any additional ablation-related diagnosis code(s) is immaterial for purpose of inclusion in the denominator population.

If there is no diagnosis code present on the date of the ablation procedure, identify all of the following procedure codes (and corresponding dates) coded in the 30-days prior to the procedure:

- Diagnosis = Atrial Fibrillation (ICD-9 427.31)
- Diagnosis = Paroxysmal Supraventricular Tachycardia (ICD-9 427.0)
- Diagnosis = Paroxysmal Ventricular Tachycardia (ICD-9 427.1)
- Diagnosis = Paroxysmal Tachycardia, Unspecified (ICD-9 427.2)
- Diagnosis = Atrial Flutter (ICD-9 427.32)
- Diagnosis = Wolf-Parkinson-White Syndrome (ICD-9 426.7)
- Diagnosis = Nonparoxysmal Atrioventricular Nodal Tachycardia (ICD-9 426.89)
- Diagnosis = Atrioventricular Nodal Reentrant Tachycardia (ICD-9 427.89)

Include in the denominator only those patients whose most recent diagnosis code (i.e., the code dated most proximal to the ablation procedure) is Atrial Fibrillation (ICD-9 427.31); when Atrial Fibrillation is the most recent diagnosis code, the presence of any additional ablation-related diagnosis code(s) on the same date is immaterial for purpose of inclusion in the denominator population.

3. To calculate the numerator, select the patients retained in the denominator, and identify the patients who had cardiac tamponade and/or pericardiocentesis occurring within 30 days following atrial fibrillation ablation. The following CPT codes should be used:

- Diagnosis = Cardiac tamponade (ICD-9 423.3)

AND/OR any of the following ICD-9 or CPT Procedure Codes

- Procedure = Pericardiocentesis (ICD-9 37.0; CPT 33010, 33011)

4. The performance is calculated as numerator/denominator. Available in attached appendix at A.1

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable.

5b.1 If competing, why superior or rationale for additive value: Not applicable.

0715 Standardized Adverse Event Ratio for Children < 18 Years of Age Undergoing Cardiac Catheterization

STATUS

Submitted

STEWARD

Boston Children's Hospital

DESCRIPTION

Ratio of observed to expected clinically important adverse events, risk-adjusted using the Catheterization for Congenital Heart Disease Adjustment for Risk Method (CHARM)

TYPE

Outcome

DATA SOURCE

Electronic Clinical Data, Paper Medical Records, Electronic Clinical Data : Registry Multi-center registry for congenital cardiac catheterization procedures.

Attachment 2a1.30_Data_Dictionary-634828755893693057-635216662178470422-635421392122638298.doc

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

TIME WINDOW

Not pre-specified, but a minimum of one year is recommended.

NUMERATOR STATEMENT

Number of diagnostic and interventional cardiac catheterization cases for children < 18 years of age resulting in a clinically important adverse event, performed by an institution performing at least 50 cases per year in pediatric patients < 18 years of age.

NUMERATOR DETAILS

Clinically important events are defined as follows: Moderate adverse event (transient change in condition may be life-threatening if not treated, condition returns to baseline, required monitoring, required intervention such as reversal agent, additional medication, transfer to the intensive care unit for monitoring, or moderate transcatheter intervention to correct condition); major adverse event (change in condition, life-threatening if not treated, change in condition may be permanent, may have required an intensive care unit admission or emergent re-admit to hospital, may have required invasive monitoring, required interventions such as electrical cardioversion or unanticipated intubation or required major invasive procedures or transcatheter interventions to correct condition); or catastrophic adverse event (any death or emergent surgery or heart lung bypass support to prevent death with failure to wean from bypass support).

Types of cardiac catheterization procedures eligible for this measure are listed below:

Any diagnostic catheterization within 72 hours of surgery

Any interventional catheterization within 72 hours of surgery

Atrial septostomy / BAS

Atrial septostomy / dilation and stent

Atrial septostomy / static balloon dilation

Balloon angioplasty / aorta

Balloon angioplasty / lobar segment LPA RPA

Balloon angioplasty / native RVOT

Balloon angioplasty / proximal LPA or RPA

Balloon angioplasty / RV to PA conduit

Balloon angioplasty / RVOT s/p surgery (no conduit)

Balloon angioplasty / systemic artery (not aorta)

Balloon angioplasty / systemic shunt

Balloon angioplasty / systemic vein

Balloon angioplasty or stent / pulmonary vein(s)

Coil / coronary fistula

Coil occlusion / device / systemic arterial collaterals

Coil occlusion / LSVC

Coil occlusion / PDA

Coil occlusion / systemic shunt

Coil occlusion / veno-veno collaterals

Device closure / ASD

Device closure / baffle leak

Device closure / fenestration

Device closure / PDA
 Device closure / perivalvar leak
 Device closure / PFO
 Device closure / venous collateral
 Device closure / VSD
 Diagnostic catheterization with EPS
 Hemodynamic catheterization
 Interventional techniques / atherectomy catheter
 Interventional techniques / atretic valve perforation
 Interventional techniques/ recanalization of jailed vessel in stent
 Interventional techniques / recanalization of occluded peripheral vessels
 Interventional techniques / snare foreign body
 Interventional techniques / trans-septal puncture
 Invasive procedure / central line placement
 Invasive procedure / elective chest tube pericardiocentesis
 Invasive procedure / pericardiocentesis
 Other intended hemodynamic alteration / oxygen-nitric trial or ionotropes
 Other procedures: bronchoscopy, drains, echo, TEE
 RV biopsy diagnostic
 RV biopsy elective post transplant
 Stent placement / aorta
 Stent placement / intracardiac / atria
 Stent placement / intracardiac / ventricular
 Stent placement / lobar segment LPA or RPA
 Stent placement / native RVOT
 Stent placement / proximal LPA or RPA
 Stent placement / RV to PA conduit
 Stent placement / RVOT s/p surgery (no conduit)
 Stent placement / systemic artery (not aorta)
 Stent placement / systemic shunt
 Stent placement / systemic vein
 Stent redilation / aorta
 Stent redilation / intracardiac / atria
 Stent redilation / intracardiac / ventricular
 Stent redilation / lobar segment LPA or RPA
 Stent redilation / proximal LPA or RPA
 Stent redilation / pulmonary vein
 Stent redilation / RV to PA conduit
 Stent redilation / systemic artery not aorta

Stent redilation / systemic vein

Ultrasound / IVUS

Valvuloplasty / aorta

Valvuloplasty / mitral

Valvuloplasty / pulmonary

Valvuloplasty / tricuspid

ASD = atrial septal defect, BAS = balloon atrial septostomy, EPS = electrophysiology study, IVUS = intravascular ultrasound, LPA = left pulmonary artery, LSVC = left superior vena cava, PA = pulmonary artery, PDA = patent ductus arteriosus, PFO = patent foramen ovale, RPA = right pulmonary artery, RV = right ventricle, RVOT = right ventricular outflow tract, TEE = transesophageal echocardiogram, VSD = ventricular septal defect.

DENOMINATOR STATEMENT

Number of diagnostic and interventional cardiac catheterization cases for children < 18 years of age, performed by an institution performing at least 50 cases per year in pediatric patients < 18 years of age.

DENOMINATOR DETAILS

Types of cardiac catheterization procedures eligible for this measure are listed below:

Diagnostic case

Device or coil closure: venous collateral; LSVC; PDA; ASD or PFO; Fontan fenestration; system to pulmonary artery collaterals; systemic surgical shunt; baffle leak; coronary fistula; VSD; perivalvar leak

Valvuloplasty: pulmonary valve; aortic valve; tricuspid valve; mitral valve

Balloon angioplasty: RVOT, aorta dilation; pulmonary artery, systemic artery (not aorta); systemic surgical shunt; systemic to pulmonary collaterals; systemic vein; pulmonary vein

Stent placement: systemic vein; RVOT; aorta; systemic artery (not aorta); ventricular septum, pulmonary artery, pulmonary vein; systemic surgical shunt; systemic pulmonary collateral

Stent redilation: RVOT; atrial septum; aorta; systemic artery (not aorta); systemic vein; pulmonary artery; pulmonary vein; ventricular septum

Other: myocardial biopsy; snare foreign body; trans-septal puncture; atrial septostomy; recanalization of jailed vessel in stent; recanalization of occluded vessel; atrial septum dilation and stent; any catheterization <4 days after surgery; atretic valve perforation

ASD = atrial septal defect, ATM = atmospheres, CB = Cutting Balloon, LSVC = left superior vena cava, PA = pulmonary artery, PDA = patent ductus arteriosus, PFO = patent foramen ovale, RV = right ventricle, RVOT = right ventricular outflow tract (RVOT includes RV to PA conduit or status post RVOT surgery with no conduit), VSD = ventricular septal defect

EXCLUSIONS

Primary electrophysiology cases, ablation cases, pericardiocentesis only, thoracentesis only.

EXCLUSION DETAILS

Primary electrophysiology cases, ablation cases, pericardiocentesis only, thoracentesis only.

RISK ADJUSTMENT

Statistical risk model

The measure is a standardized adverse event ratio for children < 18 years undergoing cardiac catheterization. It is defined as the ratio of observed to expected rates of clinically important adverse events occurring during or following cardiac catheterization. This technique allows computation of an overall risk-adjusted measure of outcome for groups of patients.

A logistic regression model is used for risk adjustment to calculate the expected adverse event rate for each group; the outcome variable is occurrence of a clinically important adverse event. The three factors in the adjustment model are: procedure type risk group, number of indicators of hemodynamic vulnerability, and age <1 year versus ≥ 1 year.

1) Procedure type risk group has 4 categories; categories 2, 3 and 4 are included in the model as binary covariates, with group 1 as the reference category.

The procedure type risk group is based on the intervention performed as defined below. Group 1 has the lowest risk of an adverse event and group 4 the highest risk.

Risk Category 1

Diagnostic case: age ≥ 1 year

Device or coil closure: venous collateral, LSV

Other: myocardial biopsy

Risk Category 2

Diagnostic case: age ≥ 1 month and <1 year

Valvuloplasty: pulmonary valve ≥ 1 month

Device or coil closure: PDA, ASD or PFO, Fontan fenestration, system to pulmonary artery collaterals

Balloon angioplasty: RVOT, aorta dilation <8 ATM

Stent placement: systemic vein

Stent redilation: RVOT, atrial septum, aorta, systemic artery (not aorta), systemic vein

Other: snare foreign body, trans-septal puncture

Risk Category 3

Diagnostic case: age <1 month

Valvuloplasty: aortic valve ≥ 1 month, pulmonary valve <1 month, tricuspid valve

Device or coil closure: systemic surgical shunt, baffle leak, coronary fistula

Balloon angioplasty: pulmonary artery <4 vessels, pulmonary artery ≥ 4 vessels all <8 ATM, aorta >8 ATM or CB, systemic artery (not aorta), systemic surgical shunt, systemic to pulmonary collaterals, systemic vein

Stent placement: RVOT, aorta, systemic artery (not aorta)

Stent redilation: pulmonary artery, pulmonary vein

Other: atrial septostomy, recanalization of jailed vessel in stent, recanalization of occluded vessel

Risk Category 4

Valvuloplasty: mitral valve, aortic valve <1 month

Device or coil closure: VSD, perivalvar leak

Balloon angioplasty: pulmonary artery ≥ 4 vessels, pulmonary vein

Stent placement: ventricular septum, pulmonary artery, pulmonary vein, systemic surgical shunt, systemic pulmonary collateral

Stent redilation: ventricular septum

Other: atrial septum dilation and stent, any catheterization <4 days after surgery, atretic valve perforation

ASD = atrial septal defect, ATM = atmospheres, CB = Cutting Balloon, LSVC = left superior vena cava, PA = pulmonary artery, PDA = patent ductus arteriosus, PFO = patent foramen ovale, RV = right ventricle, RVOT = right ventricular outflow tract (RVOT includes RV to PA conduit or status post RVOT surgery with no conduit), VSD = ventricular septal defect

2) Hemodynamic vulnerability is defined as 0, 1, or ≥ 2 of the indicators below present at the time of catheterization. The presence of 1 or ≥ 2 indicators are included in the model as binary covariates, with 0 indicators as the reference category.

Systemic ventricle end diastolic pressure ≥ 18 mm Hg

Systemic arterial saturation <95% if not single ventricle, <78% if single ventricle

Mixed venous saturation <60% if not single ventricle, <50% if single ventricle

Main pulmonary artery systolic pressure ≥ 45 mm Hg if not single ventricle, mean pressure ≥ 17 mm Hg if single ventricle

3) Age at catheterization <1 year versus ≥ 1 year is included in the model as a binary covariate.

References:

Bergersen L, Gauvreau K, Marshall A, Kreutzer J, Beekman R, Hirsch R, Foerster S, Balzer D, Vincent J, Hellenbrand W, Holzer R, Cheatham J, Moore J, Lock J, Jenkins K. Procedure-type risk categories for pediatric and congenital cardiac catheterization. *Circ Cardiovasc Interv.* 2011 Apr 1;4(2):188-94. Epub 2011 Mar 8.

Bergersen L, Gauvreau K, Foerster SR, Marshall AC, McElhinney DB, Beekman RH, Hirsch R, Kreutzer J, Balzer D, Vincent J, Hellenbrand WE, Holzer R, Cheatham JP, Moore JW, Burch G, Armsby L, Lock JE, Jenkins KJ. Catheterization for congenital heart disease adjustment for risk method (CHARM). *Journal of the American College of Cardiology: Cardiovascular Interventions* 2011; 4:1037-1046.

Available in attached Excel or csv file at S.2b

STRATIFICATION

N/A

TYPE SCORE

Ratio better quality = lower score

ALGORITHM

The measure is a standardized adverse event ratio for children < 18 years of age undergoing cardiac catheterization for congenital heart disease.

It is defined as the ratio of observed to expected rates of clinically important adverse events (AE) occurring during or following cardiac catheterization for congenital heart disease. This technique allows computation of an overall risk-adjusted measure of performance for groups of patients.

To begin, the observed AE rate is calculated for each group. This is defined as the number of diagnostic and interventional cardiac catheterization cases performed in a pediatric cardiac catheterization lab resulting in a clinically important adverse event divided by the total number

of hemodynamic and interventional cardiac catheterization cases performed in the pediatric cardiac catheterization lab. All cases must be in patients < 18 years of age.

Next, the expected AE rate is calculated for each group. To do this, a multivariable logistic regression model with outcome any clinically important AE is fitted. Three clinical characteristics are incorporated as covariates: procedure type risk groups 2, 3, and 4 as binary covariates, with group 1 as the reference category; presence of 1 or =2 indicators of hemodynamic vulnerability as binary covariates, with 0 indicators as the reference category; and age < 1 year as a binary covariate. This logistic model is used to calculate the predicted probability of an AE for each individual case in the data set. The average predicted probability of AE for all cases, calculated by summing the predicted probabilities for each case and dividing by the total number of cases, represents the expected AE rate for the group, adjusting for case mix.

The standardized adverse event ratio (SAER) is then calculated as the observed AE rate divided by the expected AE rate.

If the observed AE rate for a group is higher than expected, meaning that the group performs worse than would be expected given its case mix, the SAER is greater than 1. If the observed AE rate for a group is lower than would be expected, indicating better than anticipated performance, the SAER is less than 1.

The measure calculation algorithm can be accessed through the following link:

<https://c3po-qi.chboston.org/#/SiteContent/QIResources>

Reference:

Bergersen L, Gauvreau K, Foerster SR, Marshall AC, McElhinney DB, Beekman RH, Hirsch R, Kreutzer J, Balzer D, Vincent J, Hellenbrand WE, Holzer R, Cheatham JP, Moore JW, Burch G, Armsby L, Lock JE, Jenkins KJ. Catheterization for congenital heart disease adjustment for risk method (CHARM). Journal of the American College of Cardiology: Cardiovascular Interventions 2011; 4:1037-1046.

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value: N/A

0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients

STATUS

Submitted

STEWARD

American College of Cardiology

DESCRIPTION

Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation

TYPE

Efficiency

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry Optimization of Patient Selection for Cardiac Imaging

Available in attached appendix at A.1 Attachment Imaging-Efficiency-Measures-Micro-specifications_Measure_Maintenance-635231526161153276.doc

LEVEL

Facility, Clinician : Group/Practice

SETTING

Ambulatory Care : Clinician Office/Clinic, Imaging Facility

TIME WINDOW

Sample of all SPECT MPI, stress echo, CCTA, or CMR test orders during a calendar year using a single, consecutive 60 day time period

NUMERATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA, or CMR performed in patients undergoing low risk surgery as a part of the preoperative evaluation

NUMERATOR DETAILS

Patients qualify this measure if:

-an upcoming surgery is the recorded reason for the imaging test AND

-no other reason is recorded for the imaging

AND

Surgery risk is low

The following will be used to determine whether the risk of the surgery recorded is low:

Surgical Risk Categories

- Low-Risk Surgery– cardiac death or MI less than 1% including endoscopic procedures, superficial procedures, cataract surgery, breast surgery.

Surgeries meeting this definition to be included in the measure are listed by

CPT 4 Codes below. While additional surgeries may fit the low risk definition, only those surgeries listed below will be considered in determining inclusion in the numerator for this measure.

Surgery/Integumentary System: Breast

19100 Biopsy of breast

19101 Biopsy of breast

19102 Bx breast percut w/image

19103 Bx breast percut w/device

Surgery/Respiratory System: Accessory Sinuses

31231 Nasal endoscopy, dx

31233 Nasal/sinus endoscopy, dx
 31235 Nasal/sinus endoscopy, dx
 31237 Nasal/sinus endoscopy, surg
 31238 Nasal/sinus endoscopy, surg
 31239 Nasal/sinus endoscopy, surg
 31240 Nasal/sinus endoscopy, surg
 31267 Endoscopy, maxillary sinus
 31276 Sinus surgical endoscopy
 31299 Sinus surgery procedure
 Surgery/Respiratory System: Larynx
 31505 Diagnostic laryngoscopy
 31510 Laryngoscopy with biopsy
 31511 Remove foreign body, larynx
 31513 Injection into vocal cord
 31515 Laryngoscopy for aspiration
 31520 Diagnostic laryngoscopy
 31525 Diagnostic laryngoscopy
 31526 Diagnostic laryngoscopy
 31527 Laryngoscopy for treatment
 31528 Laryngoscopy and dilatation
 31529 Laryngoscopy and dilatation
 31530 Operative laryngoscopy
 31531 Operative laryngoscopy
 31535 Operative laryngoscopy
 31536 Operative laryngoscopy
 31540 Operative laryngoscopy
 31541 Operative laryngoscopy
 31560 Operative laryngoscopy
 31561 Operative laryngoscopy
 31570 Laryngoscopy with injection
 31571 Laryngoscopy with injection
 31575 Diagnostic laryngoscopy
 31576 Laryngoscopy with biopsy
 31577 Remove foreign body, larynx
 31578 Removal of larynx lesion
 31579 Diagnostic laryngoscopy
 Surgery/Respiratory System: Trachea and Bronchi
 31615 Visualization of windpipe
 31620 Endobronchial us add-on

31622 Diagnostic bronchoscopy
 31623 Dx bronchoscope/brush
 31624 Dx bronchoscope/lavage
 31625 Bronchoscopy with biopsy
 31628 Bronchoscopy with biopsy
 31629 Bronchoscopy with biopsy
 31632 Bronchoscopy/lung bx, add'l
 31633 Bronchoscopy/needle bx add'l
 31645 Bronchoscopy, clear airways
 31646 Bronchoscopy, reclear airways
 Surgery/Respiratory System: Lungs and Pleura
 33508 Endoscopic vein harvest
 37500 Endoscopy ligate perf veins
 37501 Vascular endoscopy procedure
 39400 Visualization of chest
 Surgery/Digestive System: Esophagus
 43200 Esophagus endoscopy
 43201 Esophagus endoscopy, w/submucous injection
 43202 Esophagus endoscopy, biopsy
 43204 Esophagus endoscopy & inject
 43205 Esophagus endoscopy/ligation
 43215 Esophagus endoscopy
 43216 Esophagus endoscopy/lesion
 43217 Esophagus endoscopy
 43219 Esophagus endoscopy
 43220 Esophagus endoscopy, dilation
 43226 Esophagus endoscopy, dilation
 43227 Esophagus endoscopy, repair
 43228 Esophagus endoscopy, ablation
 43231 Esoph endoscopy w/us exam
 43232 Esoph endoscopy w/us fn bx
 43234 Upper GI endoscopy, exam
 43235 Upper GI endoscopy, diagnosis
 43236 Upper GI scope w/submuc inj
 43237 Endoscopic us exam, esoph
 43238 Upper GI endoscopy w/us fn bx
 43239 Upper GI endoscopy, biopsy
 43241 Upper GI endoscopy with tube
 43242 Upper GI endoscopy w/us fn bx

43243 Upper GI endoscopy & inject.
 43244 Upper GI endoscopy/ligation
 43246 Place gastrostomy tube
 43247 Operative upper GI endoscopy
 43248 Upper GI endoscopy/guidewire
 43249 Esophagus endoscopy, dilation
 43260 Endoscopy, bile duct/pancreas
 43261 Endoscopy, bile duct/pancreas
 43262 Endoscopy, bile duct/pancreas
 43263 Endoscopy, bile duct/pancreas
 43264 Endoscopy, bile duct/pancreas
 43265 Endoscopy, bile duct/pancreas
 43267 Endoscopy, bile duct/pancreas
 43268 Endoscopy, bile duct/pancreas
 43269 Endoscopy, bile duct/pancreas
 43271 Endoscopy, bile duct/pancreas
 43272 Endoscopy, bile duct/pancreas
 Surgery/Digestive System: Intestines (Except Rectum)
 44360 Small bowel endoscopy
 44361 Small bowel endoscopy, biopsy
 44363 Small bowel endoscopy
 44383 Ileoscopy w/stent
 44385 Endoscopy of bowel pouch
 44386 Endoscopy, bowel pouch, biopsy
 44388 Colon endoscopy
 44389 Colonoscopy with biopsy
 44390 Colonoscopy for foreign body
 44391 Colonoscopy for bleeding
 44392 Colonoscopy & polypectomy
 44393 Colonoscopy, lesion removal
 44397 Colonoscopy w stent
 Surgery/Digestive System: Rectum
 45300 Proctosigmoidoscopy
 45303 Proctosigmoidoscopy
 45305 Proctosigmoidoscopy; biopsy
 45307 Proctosigmoidoscopy
 45308 Proctosigmoidoscopy
 45309 Proctosigmoidoscopy
 45315 Proctosigmoidoscopy

45317 Proctosigmoidoscopy
 45320 Proctosigmoidoscopy
 45321 Proctosigmoidoscopy
 45327 Proctosigmoidoscopy w/stent
 45330 Sigmoidoscopy, diagnostic
 45331 Sigmoidoscopy and biopsy
 45332 Sigmoidoscopy
 45333 Sigmoidoscopy & polypectomy
 45334 Sigmoidoscopy for bleeding
 45335 Sigmoidoscope w/submuc inj
 45337 Sigmoidoscopy, decompression
 45338 Sigmoidoscopy
 45339 Sigmoidoscopy
 45340 Sig w/balloon dilation
 45341 Sigmoidoscopy w/ultrasound
 45342 Sigmoidoscopy w/us guide bx
 45345 Sigmoidoscopy w/stent
 45378 Diagnostic colonoscopy
 45379 Colonoscopy
 45380 Colonoscopy and biopsy
 45381 Colonoscope, submucous inj
 45382 Colonoscopy, control bleeding
 45383 Colonoscopy, lesion removal
 45384 Colonoscopy
 45385 Colonoscopy, lesion removal
 45387 Colonoscopy w/stent
 45391 Colonoscopy w/endoscope us
 45392 Colonoscopy w/endoscopic fnb
 Surgery/Digestive System: Anus
 46600 Diagnostic anoscopy
 46604 Anoscopy and dilation
 46606 Anoscopy and biopsy
 46608 Anoscopy; remove foreign body
 46610 Anoscopy; remove lesion
 46612 Anoscopy; remove lesions
 46614 Anoscopy; control bleeding
 Surgery/Digestive System: Biliary Tract
 47561 Laparo w/cholangio/biopsy
 Surgery/Digestive System: Abdomen, Peritoneum and Omentum

49322 – Laparoscopy, aspiration
 Surgery/Urinary System: Kidney
 50551 Kidney endoscopy
 50553 Kidney endoscopy
 50555 Kidney endoscopy & biopsy
 50557 Kidney endoscopy & treatment
 50559 Renal endoscopy; radiotracer
 50561 Kidney endoscopy & treatment
 • Surgery/Urinary System: Ureter
 50951 Endoscopy of ureter
 50953 Endoscopy of ureter
 50955 Ureter endoscopy & biopsy
 50970 Ureter endoscopy
 50972 Ureter endoscopy & catheter
 50974 Ureter endoscopy & biopsy
 50976 Ureter endoscopy & treatment
 50978 Ureter endoscopy & tracer
 50980 Ureter endoscopy & treatment
 Surgery/Urinary System: Bladder
 51715 Endoscopic injection/implant
 52000 Cystoscopy
 52001 Cystoscopy, removal of clots
 52005 Cystoscopy & ureter catheter
 52007 Cystoscopy and biopsy
 52010 Cystoscopy & duct catheter
 52204 Cystoscopy
 52282 Cystoscopy, implant stent
 52327 Cystoscopy, inject material
 52330 Cystoscopy and treatment
 52351 Cystouretero & or pyeloscope
 52352 Cystouretero w/stone remove
 52353 Cystouretero w/lithotripsy
 52354 Cystouretero w/biopsy
 52355 Cystouretero w/excise tumor
 52402 Cystourethro cut ejacul duct
 Surgery/Female Genital System: Cervix Uteri
 57452 Examination of vagina
 57454 Vagina examination & biopsy
 57455 Biopsy of cervix w/scope

57456 Endocerv curettage w/scope
 57460 Cervix excision
 57461 Konz of cervix w/scope, leep
 Surgery/Female Genital System: Corpus Uteri
 58555 Hysteroscopy, dx, sep proc
 58558 Hysteroscopy, biopsy
 58559 Hysteroscopy, lysis
 58560 Hysteroscopy, resect septum
 58562 Hysteroscopy, remove fb
 58565 Hysteroscopy, sterilization
 Surgery/Female Genital System: Oviduct/Ovary
 58670 Laparoscopy, tubal cautery
 58671 Laparoscopy, tubal block
 Surgery/Eye and Ocular Adnexa: Anterior Segment
 66820 Incision, secondary cataract
 66821 After cataract laser surgery
 66830 Removal of lens lesion
 66982 Cataract surgery, complex
 66983 Remove cataract, insert lens
 Other Surgeries:
 14301 Skin Tissue Rearrangement
 21011 Exc Face Les Sc < 2 cm
 21012 Exc Face Les Sc = 2 cm
 21013 Exc Face Tum Deep < 2 cm
 21014 Exc Face Tum Deep = 2 cm
 21552 Exc Neck Les Sc = 3 cm
 21554 Exc Neck Tum Deep = 5 cm
 21558 Resect Neck Tum = 5 cm
 21931 Exc Back Les Sc = 3 cm
 21932 Exc Back Tum Deep < 5 cm
 21933 Exc Back Tum Deep = 5 cm
 22901 Exc Back Tum Deep = 5 cm
 22902 Exc Abdomen Les Sc < 3 cm
 22903 Exc Abdomen Les Sc > 3 cm
 23071 Exc Shoulder Les Sc > 3 cm
 23073 Exc Shoulder Tum Deep > 5 cm
 24071 Exc Arm/Elbow Les Sc = 3 cm
 24073 Exc Arm/Elbow Tum Deep > 5 cm
 25071 Exc Forearm Les Sc > 3 cm

25073 Exc Forearm Tum Deep = 3 cm
 26111 Exc Hand Les Sc > 1.5 cm
 26113 Exc Hand Tum Deep > 1.5 cm
 27043 Exc Hip Pelvis Les Sc > 3 CM
 27045 Exc Hip/Pelvis Tum Deep > 5 CM
 27337 Exc Thigh/Knee Les Sc > 3 CM
 27339 Exc Thigh/Knee Tum Deep >5CM
 27632 Exc Leg/Ankle Les Sc > 3cm
 27634 Exc Leg/Ankle Tum Deep >5 cm
 28039 Exc Foot/Toe Tum Sc > 1.5 cm
 28041 Exc Foot/Toe Tum Deep >1.5cm
 29581 Apply Multilay Compr Lower Leg
 31626 Bronchoscopy w/ Markers
 32552 Remove Lung Catheter
 36147 Access AV Dial Grft for Eval
 36148 Access AV Dial Grft for Proc
 37761 Ligate Leg Veins Open
 51727 Cystometrogram w/UP
 51728 Cystometrogram w/VP
 51729 Cystometrogram w/VP&UP
 53855 Insert Prost Urethral Stent
 63661 Remove Spine El Trd Perq Aray
 63662 Remove Spine El Trd Plate
 63663 Revise Spine El Trd Perq Aray
 63664 Revise Spine El Trd Plate Revised
 64490 Inj Paravert F Jnt C/T 1 LEV
 64493 INJ Paravert F JNT L/S 1 LEV
 0213T US Facet JT INJ CERV/T 1 LEV
 0216T US Facet JT INJ LS 1 LEVEL

DENOMINATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

DENOMINATOR DETAILS

All consecutive stress SPECT MPI, stress echocardiography, CCTA, and CMR orders

Measurement Entity: Imaging laboratory prospectively measured on test requisition forms and/or patient charts

Level of Measurement/Analysis: Imaging laboratory*

*Attribution for inappropriate use is shared between the ordering physician and imaging laboratory. In an ideal world, attribution to the ordering physician or institution, as well as the imaging laboratory, would be reflected in the reporting of these measures. However, there are

numerous complexities that prevent assignment of these measures to individual ordering physicians. For example, ordering volumes from individual physicians and institutions are insufficient to make meaningful comparisons to allow such attribution. Thus, these measures will be reported at the level of the imaging laboratory. However, the extent to which the institution housing the imaging laboratory can impact these measures will be dependent upon cooperation of ordering physicians with the imaging laboratory.

EXCLUSIONS

None.

EXCLUSION DETAILS

None.

RISK ADJUSTMENT

No risk adjustment or risk stratification

None

STRATIFICATION

None

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

Locate all stress SPECT MPI, stress echocardiography, CCTA, and CMR orders performed during the sampling period.

Record the total number of tests during the sampling period as the denominator.

From this sets of test orders, identify orders containing the criteria listed in the numerator No diagram provided

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5.1 Identified measures: 0669 : Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac, Low Risk Surgery

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Different populations and data sources used

5b.1 If competing, why superior or rationale for additive value: This measure provides an additional level of analysis that applies not only to hospitals but also outpatient physician clinics. The data source also provides a richer source of clinical information to distinguish between testing ordered for preoperative assessment and other cardiovascular causes co-existing at the same time.

0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI)

STATUS

Public and Member Commenting

STEWARD

American College of Cardiology

DESCRIPTION

Percentage of all stress SPECT MPI, stress echo, CCTA and CMR performed routinely after PCI, with reference to timing of test after PCI and symptom status.

TYPE

Efficiency

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry Optimization of Patient Selection for Cardiac Imaging

Available in attached appendix at A.1 Attachment Imaging-Efficiency-Measures-Micro-specifications_Measure_Maintenance-635231485653419342.doc

LEVEL

Facility, Clinician : Group/Practice

SETTING

Ambulatory Care : Clinician Office/Clinic, Imaging Facility

TIME WINDOW

Sample of all SPECT MPI, stress echo, CCTA and CMR test orders during a calendar year using a single, consecutive 60 day time period

NUMERATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA and CMR performed in asymptomatic patients within 2 years of the most recent PCI

NUMERATOR DETAILS

For all orders post PCI, determine all orders that were in asymptomatic patients:

Among asymptomatic patients, subtract date of most recent PCI from date of test requisition and categorize into orders less than two years since most recent PCI and orders placed greater than or equal to two years since most recent PCI

Patients qualify for this measure if:

- Asymptomatic AND
- Less than two years since most recent PCI

NOTE: Data collection from patient requisition is required to adequately determine patient's symptom status. Determination with only administrative data is not possible for these measures.

DENOMINATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA and CMR performed

DENOMINATOR DETAILS

All consecutive stress SPECT MPI, stress echocardiography, CCTA and CMR orders

Measurement Entity: Imaging laboratory prospectively measured on test requisition forms and/or patient charts

Level of Measurement/Analysis: Imaging laboratory*

*Attribution for inappropriate use is shared between the ordering physician and imaging laboratory. In an ideal world, attribution to the ordering physician or institution, as well as the imaging laboratory, would be reflected in the reporting of these measures. However, there are numerous complexities that prevent assignment of these measures to individual ordering physicians. For example, ordering volumes from individual physicians and institutions are insufficient to make meaningful comparisons to allow such attribution. Thus, these measures will be reported at the level of the imaging laboratory. However, the extent to which the institution housing the imaging laboratory can impact these measures will be dependent upon cooperation of ordering physicians with the imaging laboratory.

EXCLUSIONS

None

EXCLUSION DETAILS

None

RISK ADJUSTMENT

No risk adjustment or risk stratification

None

STRATIFICATION

None

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

Locate all stress SPECT MPI, stress echocardiography, CCTA and CMR orders performed during the sampling period.

Record the total number of tests during the sampling period as the denominator.

From this sets of test orders, identify orders containing the criteria listed in the numerator

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value:

0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients

STATUS

Submitted

STEWARD

American College of Cardiology

DESCRIPTION

Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed in asymptomatic, low CHD risk patients for initial detection and risk assessment

TYPE

Efficiency

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry Optimization of Patient Selection for Cardiac Imaging

Available in attached appendix at A.1 Attachment Imaging-Efficiency-Measures-Micro-specifications_Measure_Maintenance.doc

LEVEL

Facility, Clinician : Group/Practice

SETTING

Ambulatory Care : Clinician Office/Clinic, Imaging Facility

TIME WINDOW

Sample of all SPECT MPI, stress echo, CCTA, and CMR test orders during a calendar year using a single, consecutive 60 day time period

NUMERATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA, and CMR performed for asymptomatic, low CHD risk patients for initial detection and risk assessment*

NUMERATOR DETAILS

For all orders in asymptomatic patients, determine orders for initial diagnosis and risk assessment. In doing so, patients with known CHD, prior PCI or prior CABG and the following exclusions are not included.

Patients qualify for this numerator if:

- Asymptomatic AND

- Low CHD risk based on clinician estimate AND NOT any of the following:
 - Known CAD, including
 - prior MI
 - prior ACS
 - prior CABG
 - prior PCI or
 - CHD on prior diagnostic test
 - Exercise stress treadmill
 - Non-invasive imaging
 - Stress echo
 - Stress SPECT MPI
 - CT Angiography
 - Calcium Scoring
 - Invasive imaging (cardiac catheterization)
 - Ischemic equivalent
 - Undergone prior CHD assessment by one the following methods no matter the test result:
 - o Exercise stress treadmill
 - o Non-invasive imaging
 - Stress echo
 - Stress SPECT MPI
 - CT Angiography
 - Calcium Scoring
 - o Invasive imaging (cardiac catheterization)
 - Patients for whom preoperative testing is the primary reason for imaging

Submission of individual clinical data variables required for Framingham risk (ATP III criteria) calculation for asymptomatic patients is recognized to place a significant data collection burden upon institutions and may not be possible based on data elements that are readily available at the imaging laboratory. As such, a clinician estimate of CHD risk will be collected for all asymptomatic patients who are being seen for initial detection and risk assessment without known coronary heart disease. However, in making their estimate, clinicians should consider the maximum number of available patient factors used to estimate risk based on Framingham (ATP III criteria), typically age, gender, diabetes, smoking status, and use of blood pressure medication, and integrate age appropriate estimates for missing elements, such as LDL or standard blood pressure. While calculation of the estimate does not require submission of the actual clinical data elements other than the clinician estimate of CHD risk, clinicians are attesting to the accuracy of the estimate by submitting it. An audit of clinician estimates should be completed on a subset of clinicians to verify their estimates as being accurate based on the data that was available.

NOTE: Data collection from patient requisition is required to adequately determine patient's symptom status and clinical risk. Determination with only administrative data is not possible for this measure.

DENOMINATOR STATEMENT

Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

DENOMINATOR DETAILS

All consecutive stress SPECT MPI, stress echocardiography, CCTA, and CMR orders

Measurement Entity: Imaging laboratory prospectively measured on test requisition forms and/or patient charts

Level of Measurement/Analysis: Imaging laboratory*

*Attribution for inappropriate use is shared between the ordering physician and imaging laboratory. In an ideal world, attribution to the ordering physician or institution, as well as the imaging laboratory, would be reflected in the reporting of these measures. However, there are numerous complexities that prevent assignment of these measures to individual ordering physicians. For example, ordering volumes from individual physicians and institutions are insufficient to make meaningful comparisons to allow such attribution. Thus, these measures will be reported at the level of the imaging laboratory. However, the extent to which the institution housing the imaging laboratory can impact these measures will be dependent upon cooperation of ordering physicians with the imaging laboratory.

EXCLUSIONS

None

EXCLUSION DETAILS

None.

RISK ADJUSTMENT

No risk adjustment or risk stratification

N/A

STRATIFICATION

None.

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

Locate all stress SPECT MPI, stress echocardiography, CCTA, and CMR orders performed during the sampling period.

Record the total number of tests during the sampling period as the denominator.

From this sets of test orders, identify orders containing the criteria listed in the numerator No diagram provided

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value:

0090 Emergency Medicine: 12-Lead Electrocardiogram (ECG) Performed for Non-Traumatic Chest Pain

STATUS

Submitted

STEWARD

American Medical Association - Physician Consortium for Performance Improvement (AMA-PCPI)

DESCRIPTION

Percentage of patients aged 40 years and older with an emergency department discharge diagnosis of non-traumatic chest pain who had a 12-lead electrocardiogram (ECG) performed

TYPE

Process

DATA SOURCE

Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record Not applicable.
Available in attached appendix at A.1 Attachment S2b_ECG_VALUESETS_ACEP-AMA-PCPI.xlsx

LEVEL

Clinician : Group/Practice

SETTING

Hospital/Acute Care Facility, Other Emergency Department

TIME WINDOW

At each visit within the 12-month measurement period

NUMERATOR STATEMENT

Patients who had a 12-Lead ECG performed

NUMERATOR DETAILS

12-Lead ECG:

LOINC: 34534-8- EKG 12 channel panel

See eSpecification attached in appendix field A.1.

DENOMINATOR STATEMENT

All patients aged 40 years and older with an emergency department discharge diagnosis of non-traumatic chest pain

DENOMINATOR DETAILS

Diagnosis:

ICD-9 CM: 413.0, 413.1, 413.9, 786.50, 786.51, 786.52, 786.59

ICD-10 CM: I20.1, I20.8, I20.9, I25.111, I25.118, I25.119, I25.701, I25.708, I25.709, I25.711, I25.718, I25.719, I25.721, I25.728, I25.729, I25.731, I25.738, I25.739, I25.751, I25.758, I25.759, I25.761, I25.768, I25.769, I25.791, I25.798, I25.799, R07.1, R07.2, R07.81, R07.82, R07.89, R07.9

Descriptors are included in code table attached in S2b.

SNOMED-CT: Code list is longer than 1 page; see Code table attached in S2b; also included in eSpecification in Appendix A.1.

AND:

Encounter

CPT: 99281, 99282, 99283, 99284, 99285

SNOMED-CT: 4525004-Emergency department patient visit (procedure)

Also, see eSpecification attached in appendix field A.1.

See eSpecification attached in appendix field A.1.

EXCLUSIONS

Medical reasons for not performing a 12-lead ECG

Patient reasons for not performing a 12-lead ECG

EXCLUSION DETAILS

The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure #0090, exceptions may include medical reason(s), patient reason(s), or system reason(s) for the patient not receiving a 12-lead ECG when presenting with non-traumatic chest pain. Where examples of exceptions are included in the measure language, value sets for these examples are developed and included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.

Additional details by data source are as follows:

Denominator exceptions:

Code list longer than 1 page; see excel file attached in S2b.

See also eSpecification attached in appendix field A.1.

Denominator exclusions:

None

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not applicable.

STRATIFICATION

Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, payer and primary written and spoken language, and have included these variables as recommended data elements to be collected.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

To calculate performance rates:

- 1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address).
- 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.
- 3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator
- 4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s) or patient reason(s). If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. - Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm is included in attachment A.1. Available in attached appendix at A.1

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5.1 Identified measures: 0665 : Patient(s) with an emergency medicine visit for non-traumatic chest pain that had an ECG.

0289 : Median Time to ECG

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0289 is related to this measure, but differs, as it addresses time to ECG, wherein this measure addresses performance of ECG.

5b.1 If competing, why superior or rationale for additive value: Measure 0665 competes with this measure, #0090. We have developed and will maintain specifications for multiple data

sources, including Electronic Health Records (EHRs) and Claims-Based Reporting. Our specifications for EHRs are developed in accordance with the terminology standards (eg, SNOMED, RxNorm, LOINC) named in the Meaningful Use Program (CMS EHR Incentive Program). The competing measure appears to utilize clinical enriched data including data from claims and pharmacy which is potentially limiting in that the measure could only be used by those groups/settings with access to that type of information (ie, pharmacy data).

2438 Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge

STATUS

Submitted

STEWARD

The Joint Commission

DESCRIPTION

Proportion of heart failure patients age 18 and older with LVSD for whom beta-blocker therapy (i.e., bisoprolol, carvedilol, or sustained-release metoprolol succinate) is prescribed at discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230560443297553.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

TIME WINDOW

Monthly by discharge date.

NUMERATOR STATEMENT

Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD at hospital discharge.

NUMERATOR DETAILS

One data element used to calculate numerator: Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge

Data element defined: Documentation that bisoprolol, carvedilol, or sustained-release metoprolol was prescribed at discharge. Beta-blockers are agents which block beta-adrenergic receptors, thereby decreasing the rate and force of heart contractions, and reducing blood pressure. Over time beta-blockers improve the heart's pumping ability. The marked beneficial effects of beta blockade has been well demonstrated in large-scale clinical trials of symptomatic patients with New York Heart Association (NYHA) class II-IV heart failure and reduced LVEF using bisoprolol, carvedilol, and sustained-release metoprolol succinate.

DENOMINATOR STATEMENT

Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- Documentation of LVSD < 40%

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL

428.40: SYST/DIAST HRT FAIL NOS

428.41: AC SYST/DIASTOL HRT FAIL

428.42: CHR SYST/DIASTL HRT FAIL

428.43: AC/CHR SYST/DIA HRT FAIL

428.9: HEART FAILURE NOS

11 data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).
- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.
- LVSD < 40%: Left ventricular systolic dysfunction (LVSD) documented in medical record. LVSD is defined as a left ventricular ejection fraction less than 40% or a narrative description consistent with moderate or severe systolic dysfunction.
- Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge: Reasons for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge:
 - o Beta-blocker allergy
 - o Second or third-degree heart block on ECG on arrival or during hospital stay and does not have a pacemaker
 - o Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation

- x Order for consultation or evaluation by a hospice care service
- x Patient or family request for comfort measures only
- x Plan for comfort measures only
- x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to another hospital
 - o Determined by the data element Discharge Disposition, allowable value #4 Acute Care Facility
- Patients who left against medical advice
 - o Determined by the data element Discharge Disposition, allowable value #7 Left Against Medical Advice/AMA
- Patients who expired
 - o Determined by the data element Discharge Disposition allowable value #6 Expired
- Patients discharged to home for hospice care
 - o Determined by the data element Discharge Disposition allowable value #2 Hospice-Home
- Patients discharged to a healthcare facility for hospice care
 - o Determined by the data element Discharge Disposition allowable value #3 Hospice-Health Care Facility
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge
 - o Reasons for not prescribing bisoprolol, carvedilol, or sustained-release metoprolol succinate at discharge:
 - x Beta-blocker allergy
 - x Second or third-degree heart block on ECG on arrival or during hospital stay and does not have a pacemaker
 - x Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial

Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.

2. Check ICD-9-CM Principal Diagnosis Code

a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.

3. Check ICD-9-CM Principal or Other Procedure Codes

a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.

4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.

5. Check Patient Age

a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.

6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.

7. Check Length of Stay

a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-01: Beta-Blocker Therapy (i.e., Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate) for LVSD Prescribed at Discharge

Numerator: Patients who are prescribed bisoprolol, carvedilol, or sustained-release metoprolol succinate for LVSD at hospital discharge.

Denominator: Heart failure patients with current or prior documentation of left ventricular ejection fraction (LVSD) < 40%.

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Check Clinical Trial
 - a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.
3. Check Discharge Disposition
 - a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. Discharge Disposition equals 2, 3, 4, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Discharge Disposition equals 1, 5 or 8, continue processing and proceed to Comfort Measures Only.
4. Check Comfort Measures Only
 - a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Comfort Measures Only equals 4, continue processing and proceed to LVSD <40%.
5. Check LVSD <40%
 - a. If LVSD <40% is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If LVSD <40% equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If LVSD <40% equals Yes, continue processing and proceed to Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge.
6. Check Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge
 - a. If Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
 - c. If Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge equals No, continue processing and proceed to Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge.
7. Check Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge

- a. If Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Prescribed for LVSD at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1

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5.1 Identified measures: 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: The numerator and denominator statements are harmonized. Principal differences in measure specifications are noted below, and are thought to be artifacts of the different levels of measurement (organization vs. practitioner) addressed by the 2 measures. Differences ACHF-01 Denominator Exclusions:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days • Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to another hospital
- Patients who left against medical advice • Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a healthcare facility for hospice care
- Patients with a documented Reason for No Bisoprolol, Carvedilol, or Sustained-Release Metoprolol Succinate Prescribed for LVSD at Discharge 0083 Denominator Exceptions:
 - Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, low blood pressure, fluid overload, asthma, patients recently treated with an intravenous positive inotropic agent)
 - Documentation of patient reason(s) for not prescribing beta-blocker therapy
 - Documentation of system reason(s) for not prescribing beta-blocker therapy Impact on interpretability and data collection burden: These two measures are specified to different levels of measurement (facility vs. practitioner). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden.

5b.1 If competing, why superior or rationale for additive value: Not applicable

2439 Post-Discharge Appointment for Heart Failure Patients

STATUS

Submitted

STEWARD

The Joint Commission

DESCRIPTION

Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230561263712071.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

TIME WINDOW

Monthly by discharge date.

NUMERATOR STATEMENT

Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

NUMERATOR DETAILS

One data element used to calculate numerator: Post-Discharge Appointment Scheduled Within 7 Days

Data element defined: Documentation that a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

DENOMINATOR STATEMENT

All heart failure patients discharged from a hospital inpatient setting to home or home care.

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL

428.40: SYST/DIAST HRT FAIL NOS

428.41: AC SYST/DIASTOL HRT FAIL

428.42: CHR SYST/DIASTL HRT FAIL

428.43: AC/CHR SYST/DIA HRT FAIL

428.9: HEART FAILURE NOS

10 data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort.

It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).

- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.
- Reason for No Post-Discharge Appointment Within 7 Days:
 - o Patient is a visitor from another state or region outside of the provider's scope of referral
 - o Patient is a resident of a country other than the United States

Scheduling of the initial follow-up appointment with the primary care provider is a first-step to ensuring continuity of care.

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to locations other than home, home care, or law enforcement
 - o Determined by the data element Discharge Disposition, allowable values:
 2. Hospice - Home
 3. Hospice – Health Care Facility
 4. Acute Care Facility
 5. Other Health Care Facility
 6. Expired
 7. Left Against Medical Advice/AMA
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days
 - o Reason for No Post-Discharge Appointment Within 7 Days:
 - x Patient is a visitor from another state or region outside of the provider’s scope of referral
 - x Patient is a resident of a country other than the United States

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.

2. Check ICD-9-CM Principal Diagnosis Code

a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.

3. Check ICD-9-CM Principal or Other Procedure Codes

a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.

4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.

5. Check Patient Age

a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.

6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.

7. Check Length of Stay

a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-02: Post-Discharge Appointment for Heart Failure Patients

Numerator: Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Check Clinical Trial

a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.

3. Check Discharge Disposition

a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only.

4. Check Comfort Measures Only

a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Comfort Measures Only equals 4, continue processing and proceed to Post-Discharge Appointment Scheduled Within 7 Days.

5. Check Post-Discharge Appointment Scheduled Within 7 Days

a. If Post-Discharge Appointment Scheduled Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Post-Discharge Appointment Scheduled Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If Post-Discharge Appointment Scheduled Within 7 Days equals No, continue processing and proceed to Reason for No Post-Discharge Appointment Within 7 Days.

6. Check Reason for No Post-Discharge Appointment Within 7 Days

a. If Reason for No Post-Discharge Appointment Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Reason for No Post-Discharge Appointment Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

If Reason for No Post-Discharge Appointment Within 7 Days equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

Available at measure-specific web page URL identified in S.1

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value: Not Applicable

2443 Post-Discharge Evaluation for Heart Failure Patients

STATUS

Submitted

STEWARD

The Joint Commission

DESCRIPTION

Patients who receive a re-evaluation for symptoms worsening and treatment compliance by a program team member within 72 hours after inpatient discharge.

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230565750261999.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

TIME WINDOW

Monthly by discharge date.

NUMERATOR STATEMENT

Patients who have a documented re-evaluation conducted via phone call or home visit within 72 hours after discharge.

NUMERATOR DETAILS

One data element used to calculate numerator: Post-Discharge Evaluation Conducted Within 72 Hours

Data element defined: Documentation that the post-discharge evaluation was conducted with the patient and/or caregiver(s) within 72 hours following hospital discharge.

DENOMINATOR STATEMENT

All heart failure patients discharged from a hospital inpatient setting to home or home care AND patients leaving against medical advice (AMA).

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement
- Patients who left against medical advice (AMA)

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL
428.40: SYST/DIAST HRT FAIL NOS
428.41: AC SYST/DIASTOL HRT FAIL
428.42: CHR SYST/DIASTL HRT FAIL
428.43: AC/CHR SYST/DIA HRT FAIL
428.9: HEART FAILURE NOS

Nine data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).
- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial

- Patients discharged to locations other than home, home care or law enforcement.

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to locations other than home, home care, or law enforcement
 - o Determined by the data element Discharge Disposition, allowable values:
 - 2 Hospice-Home
 - 3 Hospice-Home Care Facility
 - 4 Acute Care Facility
 - 6 Expired

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Check ICD-9-CM Principal Diagnosis Code
 - a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.
3. Check ICD-9-CM Principal or Other Procedure Codes
 - a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.
4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
5. Check Patient Age
 - a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
7. Check Length of Stay

- a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
- b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section. Available at measure-specific web page URL identified in S.1

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value: Not applicable

Measures Not Recommended

2440 Care Transition Record Transmitted

STATUS

Submitted

STEWARD

The Joint Commission

DESCRIPTION

A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment)

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230563372547107.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

TIME WINDOW

Monthly by discharge date.

NUMERATOR STATEMENT

Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization

- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

NUMERATOR DETAILS

Six data elements used to calculate numerator. Data elements and definitions:

Care Transition Record Transmitted: A care transition record is a document or set of documents containing standardized components specific to the patient's diagnosis, treatment, and care. A care transition record is transmitted to the next level of care provider no later than the seventh post-discharge day.

- **Care Transition Record-Discharge Medications:** Documentation in the care transition record includes the discharge medications, dosage and indication for use or that no medications were prescribed at discharge. Medications are defined as any prescription medications, sample medications, herbal remedies, vitamins, nutraceuticals, over-the-counter drugs and any product designated by the Food and Drug Administration.
- **Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed:** Documentation in the care transition record includes follow-up treatment(s) and service(s) needed. Follow-up treatments and services include treatments and services to be initiated or continued to manage the patient's heart failure after discharge from the hospital.
- **Care Transition Record-Procedures Performed During Hospitalization:** Documentation in the care transition record includes procedures performed during hospitalization. Procedures may be diagnostic (e.g., echocardiogram), therapeutic (e.g., thoracentesis), or surgical (e.g., pacemaker insertion).
- **Care Transition Record-Reason for Hospitalization:** Documentation in the care transition record includes the reason for hospitalization. The reason for hospitalization should be a short synopsis describing the events the patient experienced prior to this hospitalization. The reason for hospitalization may be listed as the triggering or precipitating event prior to the patient's admission to the hospital.
- **Care Transition Record-Treatment(s)/Service(s) Provided:** Documentation in the care transition record includes treatment(s) and service(s) provided during hospitalization. Treatments and services include anything offered to or done for the patient during the hospital stay to manage his/her heart failure.

DENOMINATOR STATEMENT

All heart failure patients discharged from a hospital inpatient setting to home or home care.

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF
 402.91: HYP HT DIS NOS W HT FAIL
 404.01: MAL HYP HT/KD I-IV W HF
 404.03: MAL HYP HT/KD STG V W HF
 404.11: BEN HYP HT/KD I-IV W HF
 404.13: BEN HYP HT/KD STG V W HF
 404.91: HYP HT/KD NOS I-IV W HF
 404.93: HYP HT/KD NOS ST V W HF
 428.0: CHF NOS
 428.1: LEFT HEART FAILURE
 428.20: SYSTOLIC HRT FAILURE NOS
 428.21: AC SYSTOLIC HRT FAILURE
 428.22: CHR SYSTOLIC HRT FAILURE
 428.23: AC ON CHR SYST HRT FAIL
 428.30: DIASTOLC HRT FAILURE NOS
 428.31: AC DIASTOLIC HRT FAILURE
 428.32: CHR DIASTOLIC HRT FAIL
 428.33: AC ON CHR DIAST HRT FAIL
 428.40: SYST/DIAST HRT FAIL NOS
 428.41: AC SYST/DIASTOL HRT FAIL
 428.42: CHR SYST/DIASTL HRT FAIL
 428.43: AC/CHR SYST/DIA HRT FAIL
 428.9: HEART FAILURE NOS

Nine data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).
- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.

- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant
Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.

- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to locations other than home, home care, or law enforcement
 - o Determined by the data element Discharge Disposition, allowable values:
 - 2 Hospice-Home
 - 3 Hospice-Home Care Facility
 - 4 Acute Care Facility
 - 5 Other Health Care Facility
 - 6 Expired
 - 7 Left Against Medical Advice

RISK ADJUSTMENT

No risk adjustment or risk stratification
Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Check ICD-9-CM Principal Diagnosis Code
 - a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.

3. Check ICD-9-CM Principal or Other Procedure Codes

a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.

4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.

5. Check Patient Age

a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.

6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.

7. Check Length of Stay

a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-03: Care Transition Record Transmitted

Numerator: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.

Variable Key: Discharge Counter and Missing Flag

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Check Clinical Trial

- a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.

3. Check Discharge Disposition

- a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only.

4. Check Comfort Measures Only

- a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Comfort Measures Only equals 4, continue processing and proceed to Initialize Discharge Counter and Set Missing Flag.

5. Initialize Discharge Counter to equal zero. Set Missing Flag to equal No. Continue processing and proceed to Care Transition Record-Discharge Medications.

6. Check Care Transition Record-Discharge Medications

- a. If Care Transition Record-Discharge Medications is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.
- b. If Care Transition Record-Discharge Medications equals No, continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.
- c. If Care Transition Record-Discharge Medications equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.

7. Check Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed

- a. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.
- b. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals No, continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.
- c. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.

8. Check Care Transition Record-Procedures Performed During Hospitalization

- a. If Care Transition Record-Procedures Performed During Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.
 - b. If Care Transition Record-Procedures Performed During Hospitalization equals No, continue processing and proceed to Care Transition Record-Reason for Hospitalization.
 - c. If Care Transition Record-Procedures Performed During Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.
9. Check Care Transition Record-Reason for Hospitalization
- a. If Care Transition Record-Reason for Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
 - b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
 - c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
10. Check Care Transition Record-Treatment(s)/Service(s) Provided
- a. If Care Transition Record-Treatment(s)/Service(s) Provided is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Missing Flag.
 - b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Missing Flag.
 - c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Missing Flag.
11. Check Missing Flag
- a. If Missing Flag equals Yes, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Missing Flag equals No, continue processing and proceed to Discharge Counter.
12. Check Discharge Counter
- a. If Discharge Counter is not equal to 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - b. If Discharge Counter equals 5, continue processing and proceed to Care Transition Record Transmitted.
13. Check Care Transition Record Transmitted
- a. If Care Transition Record Transmitted is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Care Transition Record Transmitted equals 2 or 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If Care Transition Record Transmitted equals 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Available at measure-specific web page URL identified in S.1

5.1 Identified measures: 0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge

0648 : Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: All three measures focus on transmission of care information to the next level of care provider following hospital discharge. Principal differences in measure specifications are noted below, and are thought to be artifacts of the different patient populations (heart failure, psychiatric vs. all patients) and levels of measurement (organization vs. practitioner) addressed by the 3 measures. The measure specifications for ACHF-03 were written to be consistent with The Joint Commission Advanced Certification in Heart Failure standard DSPR.3 which requires: "The program [to provide] care coordination services across inpatient and outpatient settings." Requirements specific to heart failure care certification include:

- The program identifies an individual to coordinate the care of participants.
- The program provides participants with access to a practitioner 24 hours a day, 7 days a week (access may include use of the telephone and the internet, and referral to urgent care settings).
- The program communicates important information regarding co-occurring conditions and co-morbidities to appropriate practitioner(s) to treat or manage conditions.
 - o The program care coordinator(s) is responsible for the communication of relevant information among practitioners and across settings.
 - o The program care coordinator(s) is responsible for sharing information among practitioners in a timeframe that meets the participant's needs.
 - o The program care coordinator(s) is responsible for confirming practitioner receipt of information and actions taken. and DSPR.8 which requires: that care, treatment, and services are provided in a planned and timely manner, which includes the arrangement of a follow-up appointment with a health care provider to occur within seven days after discharge. Differences include: Patient focus:
 - 0558: pertains to patients discharged from a hospital-based inpatient psychiatric setting
 - 0648: pertains to ALL patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care
 - ACHF-03 pertains to: all heart failure patients discharged from a hospital inpatient setting to home or home care Time frame for transition of the record:
 - 0558: Within 5 days of discharge
 - 0648: Within 24 hours of discharge
 - ACHF-03: Within 7 days of discharge – based upon ACC/AHA guidelines Numerator Data Elements: It is noted that the data elements are titled differently. 0558 and ACHF-01 specify each of the required components in a separate data element where 0648 includes all components in the definition of Transition Record. Numerator Data Elements 0558:
 - Continuing Care Plan-Discharge Medications
 - Continuing Care Plan-Next Level of Care

- Continuing Care Plan-Principal Discharge Diagnosis
 - Continuing Care Plan-Reason for Hospitalization Numerator Data Elements 0648:
 - Transition record
 - Transmitted
 - Primary physician or other health care professional designated for follow-up care Numerator Data Elements ACHF-03
 - Care Transition Record Transmitted
 - Care Transition Record-Discharge Medications
 - Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed
 - Care Transition Record-Procedures Performed During Hospitalization
 - Care Transition Record-Reason for Hospitalization
 - Care Transition Record-Treatment(s)/Service(s) Provided The data elements for ACHF-03 were harmonized to the extent possible with the data elements of measure 0558. The exclusions are slightly different between the 3 measures. This can be attributed to characteristics of the different patient populations. In addition, ACHF-03 is specified to be consistent with Joint Commission measures that are aligned with CMS. Exclusions 0558:
 - Patients who expired
 - Patients with an unplanned departure resulting in discharge due to elopement
 - Patients or their guardians who refused aftercare
 - Patients or guardians who refused to sign authorization to release information
 - Patients with an unplanned departure resulting in discharge due to failing to return from leave Exclusions 0648:
 - Patients who died
 - Patients who left against medical advice or discontinued care Exclusions ACHF-03:
 - Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
 - Patients less than 18 years of age
 - Patient who have a Length of Stay greater than 120 days
 - Patients with Comfort Measures Only documented
 - Patients enrolled in a Clinical Trial
 - Patients discharged to locations other than home, home care, or law enforcement
- Impact on interpretability and data collection burden: These measures are specified to different patient populations and levels of measurement (facility vs. practitioner). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden.

5b.1 If competing, why superior or rationale for additive value: Not applicable

2441 Discussion of Advance Directives/Advance Care Planning

STATUS

CSAC Not Approved

STEWARD

The Joint Commission

DESCRIPTION

Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230564694508055.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

NUMERATOR STATEMENT

Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider

NUMERATOR DETAILS

One data element used to calculate numerator: Discussion of Advance Directives/Advance Care Planning

Data element defined: Documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider. An advance directive includes instructions given by individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and appoints a person to make such decisions on their behalf.

DENOMINATOR STATEMENT

All heart failure patients.

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1
- Patients who left against medical advice (AMA)
- Patients enrolled in a Clinical Trial

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL

428.40: SYST/DIAST HRT FAIL NOS

428.41: AC SYST/DIASTOL HRT FAIL

428.42: CHR SYST/DIASTL HRT FAIL

428.43: AC/CHR SYST/DIA HRT FAIL

428.9: HEART FAILURE NOS

Eight data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).

- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients discharged to another hospital
 - o Determined by the data element Discharge Disposition, allowable value #4 Acute Care Facility
- Patients discharged to home for hospice care
 - o Determined by the data element Discharge Disposition allowable value #2 Hospice-Home
- Patients discharged to a healthcare facility for hospice care
 - o Determined by the data element Discharge Disposition allowable value #3 Hospice-Health Care Facility
- Patients who expired
 - o Determined by the data element Discharge Disposition allowable value #6 Expired

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this

Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.

2. Check ICD-9-CM Principal Diagnosis Code

a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.

3. Check ICD-9-CM Principal or Other Procedure Codes

a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.

4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.

5. Check Patient Age

a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.

6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.

7. Check Length of Stay

a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-04: Discussion of Advance Directives/Advance Care Planning

Numerator: Patients who have documentation in the medical record of a one-time discussion of advance directives/advance care planning with a healthcare provider.

Denominator: All heart failure patients.

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Check Discharge Disposition

- a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. Discharge Disposition equals 2, 3, 4 or 6, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Discharge Disposition equals 1, 5, 7 or 8, continue processing and proceed to Comfort Measures Only.
3. Check Comfort Measures Only
 - a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Comfort Measures Only equals 4, continue processing and proceed to Discussion of Advance Directives/Advance Care Planning.
4. Check Discussion of Advance Directives/Advance Care Planning
 - a. If Discussion of Advance Directives/Advance Care Planning is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Discussion of Advance Directives/Advance Care Planning equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
 - c. If Discussion of Advance Directives/Advance Care Planning equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1

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5.1 Identified measures: 0326 : Advance Care Plan

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Principal differences in measure specifications are noted below, and are thought to be artifacts of the different levels of measurement (organization vs. health plan) addressed by the 2 measures. Patient focus:

- 0326 All patients 65 and older
- ACHF-04 All heart failure patients 18 years and older Measure focus:
- 0326 Patients who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan
- ACHF-04: Single focus of Discussion of Advance Directives/Advance Care Planning The exclusions are different. This can be attributed to characteristics of the different patient populations. In addition, ACHF-04 is specified to be consistent with Joint Commission measures that are aligned with CMS. Exclusions 0326: N/A Exclusions ACHF-04:
 - Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
 - Patients less than 18 years of age
 - Patient who have a Length of Stay greater than 120 days

- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire Impact on interpretability and data collection burden: The two measures are specified to different levels of measurement (facility vs. health plan). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden.

5b.1 If competing, why superior or rationale for additive value: Not applicable

2442 Advance Directive Executed

STATUS

CSAC Not Approved

STEWARD

The Joint Commission

DESCRIPTION

Patients who have documentation in the medical record that an advance directive was executed.

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230568683286982.xlsx

LEVEL

Facility

SETTING

Hospital/Acute Care Facility

NUMERATOR STATEMENT

Patients who have documentation in the medical record that an advance directive was executed.

NUMERATOR DETAILS

One data element used to calculate numerator: Advance Directive Executed

DENOMINATOR STATEMENT

All heart failure patients.

DENOMINATOR DETAILS

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1
- Patients who left against medical advice (AMA)
- Patients enrolled in a Clinical Trial

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL

428.40: SYST/DIAST HRT FAIL NOS

428.41: AC SYST/DIASTOL HRT FAIL

428.42: CHR SYST/DIASTL HRT FAIL

428.43: AC/CHR SYST/DIA HRT FAIL

428.9: HEART FAILURE NOS

Eight data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.

- **Comfort Measures Only:** Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).
- **Discharge Disposition:** The final place or setting to which the patient was discharged on the day of discharge.
- **ICD-9-CM Other Procedure Codes:** The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- **ICD-9-CM Principal Diagnosis Code:** The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- **ICD-9-CM Principal Procedure Code:** The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- **ICD-9-CM Principal Procedure Date:** The month, day, and year when the principal procedure was performed.

EXCLUSIONS

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients discharged to another hospital
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients who expire

EXCLUSION DETAILS

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant
Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients discharged to another hospital
 - o Determined by the data element Discharge Disposition, allowable value #4 Acute Care Facility
- Patients discharged to home for hospice care
 - o Determined by the data element Discharge Disposition allowable value #2 Hospice-Home
- Patients discharged to a healthcare facility for hospice care
 - o Determined by the data element Discharge Disposition allowable value #3 Hospice-Health Care Facility
- Patients who expired
 - o Determined by the data element Discharge Disposition allowable value #6 Expired

RISK ADJUSTMENT

No risk adjustment or risk stratification

Not Applicable

STRATIFICATION

Not Applicable

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Check ICD-9-CM Principal Diagnosis Code
 - a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.
3. Check ICD-9-CM Principal or Other Procedure Codes
 - a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.
4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
5. Check Patient Age
 - a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
7. Check Length of Stay
 - a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient

Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-05: Advance Directive Executed

Numerator: Patients who have documentation in the medical record that an advance directive was executed.

Denominator: All heart failure patients.

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Check Discharge Disposition
 - a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. Discharge Disposition equals 2, 3, 4 or 6, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Discharge Disposition equals 1, 5, 7 or 8, continue processing and proceed to Comfort Measures Only.
3. Check Comfort Measures Only
 - a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Comfort Measures Only equals 4, continue processing and proceed to Advance Directive Executed.
4. Check Advance Directive Executed
 - a. If Advance Directive Executed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Advance Directive Executed equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

If Advance Directive Executed equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1

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5.1 Identified measures: 0326 : Advance Care Plan

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Principal differences in measure specifications are noted below, and are thought to be artifacts of the different levels of measurement (organization vs. health plan) addressed by the 2 measures. Patient focus:

- 0326 All patients 65 and older
- ACHF-05 All heart failure patients 18 years and older Measure focus:
- 0326 Patients who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan

- ACHF-05: Single focus of Advance Directives Executed The exclusions different. This can be attributed to characteristics of the different patient populations. In addition, ACHF-05 is specified to be consistent with Joint Commission measures that are aligned with CMS. Exclusions 0326: N/A Exclusions ACHF-05:
 - Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
 - Patients less than 18 years of age
 - Patient who have a Length of Stay greater than 120 days
 - Patients with Comfort Measures Only documented • Patients discharged to another hospital
 - Patients discharged to home for hospice care
 - Patients discharged to a health care facility for hospice care
 - Patients who expire Impact on interpretability and data collection burden: These three measures are specified to different levels of measurement (facility vs. practitioner vs. health plan). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden.
- 5b.1 If competing, why superior or rationale for additive value: Not applicable

1524 Atrial Fibrillation: Assessment of Thromboembolic Risk Factors (CHADS2)

STATUS

Ratification of Non-Endorsement

STEWARD

American College of Cardiology

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter in whom assessment of all the specified thromboembolic risk factors using the CHADS2 risk criteria is documented

TYPE

Process

DATA SOURCE

Electronic Clinical Data : Registry PINNACLE registry
No data collection instrument provided No data dictionary

LEVEL

Clinician : Individual

SETTING

Ambulatory Care : Clinician Office/Clinic

NUMERATOR STATEMENT

Patients in whom assessment of all of the specified thromboembolic risk factors using the CHADS2 risk criteria is documented

NUMERATOR DETAILS

The assessment of patients with nonvalvular AF for thromboembolic risk factors should include the following criteria:

[Risk Factors]	[Weighting]
Prior Stroke, TIA, or Systemic Embolism	High Risk
Age \geq 75 Years	Moderate Risk
Hypertension	Moderate Risk
Diabetes Mellitus	Moderate Risk
Heart Failure or Impaired Left Ventricular Systolic Function	Moderate Risk
See 'Registry Supplemental Resources' attached in appendix field A.1.	

DENOMINATOR STATEMENT

All patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter

DENOMINATOR DETAILS

For the denominator -->

Atrial Flutter:

ICD-9-CM: 427.32

ICD-10-CM: I48.1

SNOMED-CT: 5370000, 195080001, 425615007, 427665004

Atrial Fibrillation:

ICD-9-CM: 427.31

ICD-10-CM: I48.0

SNOMED-CT: 7141000047109, 49436004, 195080001, 233910005, 233911009, 282825002, 314208002, 426749004, 440028005, 440059007

Encounters:

CPT: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

SNOMED-CT: 4525004, 12843005, 18170008, 19681004, 87790002, 90526000, 185349003, 185463005, 185465003, 207195004, 270427003, 270430005, 308335008, 390906007, 406547006, 439708006

EXCLUSIONS

Denominator exclusions include patients with mitral stenosis or prosthetic heart valves, patients with transient or reversible cause of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery).

EXCLUSION DETAILS

See 'Registry Supplemental Resources' attached in appendix field A.1.

For measures with exclusions and exceptions:

The ACCF/AHA/PCPI distinguishes between measure exceptions and measure exclusions.

Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For this measure, exclusions include patients with mitral stenosis or prosthetic heart valves, patients with transient or reversible cause of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery). Exclusions, including applicable value sets, are included in the measure specifications.

Measure Exceptions

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The ACCF/AHA/PCPI exception methodology uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions may include medical reason(s): allergy to warfarin and all other oral anticoagulant drugs that are FDA approved for the prevention of thromboembolism, risk of bleeding, or other medical reason.

Although this methodology does not require the external reporting of more detailed exception data, ACCF/AHA/PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.

RISK ADJUSTMENT

No risk adjustment or risk stratification

No risk adjustment or risk stratification.

STRATIFICATION

We encourage the results of this measure be stratified by race, ethnicity, administrative sex, and payer consistent with data elements collected by PINNACLE registry.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

For measures with an exception and an exclusion:

To calculate performance rates:

- 1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address).
 - 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator. (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.
 - 3) Find the patients who qualify for exclusions and subtract from the denominator.
 - 4) From the patients within the denominator (after exclusions have been subtracted from the denominator), find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator
 - 5) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s) (eg, allergy to warfarin and all other oral anticoagulant drugs that are FDA approved for the prevention of thromboembolism, risk of bleeding, other medical reason)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage of patients with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.
- If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm is included in data dictionary/code table attachment (see A.1). Available in attached appendix at A.1

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5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value:

Appendix F1: Related and Competing Measures (tabular format)

Comparison of NQF #2439 and NQF #2455

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
Steward	The Joint Commission	American College of Cardiology
Description	Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.	Percentage of patients, regardless of age, discharged from an inpatient facility to ambulatory care or home health care with a principal discharge diagnosis of heart failure for whom a follow up appointment was scheduled and documented prior to discharge (as specified)
Type	Process	Process
Data Source	Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230561263712071.xlsx	Electronic Clinical Data : Registry The data collection instrument is the Get With The Guidelines®-Heart Failure Patient Management Tool. Available in attached appendix at A.1 Attachment S2b_HF_PostDischarge_ValueSets_Dec2013.xls
Level	Facility	Facility
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.	Patients for whom a follow up appointment was scheduled and documented prior to discharge including either: - an office visit for management for heart failure with a physician OR advanced practice nurse OR physician assistant OR - a home health visit for management of heart failure
Numerator Details	One data element used to calculate numerator: Post-Discharge Appointment Scheduled Within 7 Days Data element defined: Documentation that a follow-up appointment for an office or home health visit for management of heart failure	Numerator Note: Due to the nature of scheduling home health visits, the location and date of the follow-up appointment is sufficient for meeting the measure.

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	was scheduled within 7 days post-discharge and documented including location, date, and time.	For EHR options: eSpecification developed and is included in this submission.
Denominator Statement	All heart failure patients discharged from a hospital inpatient setting to home or home care.	All patients, regardless of age, discharged from an inpatient facility (ie, hospital inpatient or observation) to ambulatory care (home/self care) of home health care with a principle discharge diagnosis of heart failure
Denominator Details	<p>Included Populations:</p> <ul style="list-style-type: none"> • Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and • A discharge to home, home care, or court/law enforcement <p>ICD-9-CM Table 2.1 Heart Failure (HF)</p> <p>Code: Shortened Description</p> <p>402.01: MAL HYPERT HRT DIS W HF</p> <p>402.11: BENIGN HYP HT DIS W HF</p> <p>402.91: HYP HT DIS NOS W HT FAIL</p> <p>404.01: MAL HYP HT/KD I-IV W HF</p> <p>404.03: MAL HYP HT/KD STG V W HF</p> <p>404.11: BEN HYP HT/KD I-IV W HF</p> <p>404.13: BEN HYP HT/KD STG V W HF</p> <p>404.91: HYP HT/KD NOS I-IV W HF</p> <p>404.93: HYP HT/KD NOS ST V W HF</p> <p>428.0: CHF NOS</p> <p>428.1: LEFT HEART FAILURE</p> <p>428.20: SYSTOLIC HRT FAILURE NOS</p> <p>428.21: AC SYSTOLIC HRT FAILURE</p> <p>428.22: CHR SYSTOLIC HRT FAILURE</p> <p>428.23: AC ON CHR SYST HRT FAIL</p> <p>428.30: DIASTOLC HRT FAILURE NOS</p> <p>428.31: AC DIASTOLIC HRT FAILURE</p> <p>428.32: CHR DIASTOLIC HRT FAIL</p> <p>428.33: AC ON CHR DIAST HRT FAIL</p>	For EHR options: eSpecification developed and is included in this submission.

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>428.40: SYST/DIAST HRT FAIL NOS 428.41: AC SYST/DIASTOL HRT FAIL 428.42: CHR SYST/DIASTL HRT FAIL 428.43: AC/CHR SYST/DIA HRT FAIL 428.9: HEART FAILURE NOS</p> <p>10 data elements are used to calculate the denominator. Data elements and definitions:</p> <ul style="list-style-type: none"> • Admission Date: The month, day, and year of admission to acute inpatient care. • Birthdate: The month, day, and year the patient was born. • Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. • Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR). • Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge. • ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure. • ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. • ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD- 	

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.</p> <ul style="list-style-type: none"> • ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed. • Reason for No Post-Discharge Appointment Within 7 Days: <ul style="list-style-type: none"> o Patient is a visitor from another state or region outside of the provider's scope of referral o Patient is a resident of a country other than the United States <p>Scheduling of the initial follow-up appointment with the primary care provider is a first-step to ensuring continuity of care.</p>	
Exclusions	<p>Excluded Populations:</p> <ul style="list-style-type: none"> • Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2) • Patients less than 18 years of age • Patient who have a Length of Stay greater than 120 days • Patients with Comfort Measures Only documented • Patients enrolled in a Clinical Trial • Patients discharged to locations other than home, home care, or law enforcement • Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days 	<p>Denominator exclusions include:</p> <p>Patient was discharged to a health care facility for hospice care, to home for hospice care, or to a rehabilitation facility.</p> <p>Patient left against medical advice.</p> <p>Patient expired.</p> <p>Denominator exceptions include:</p> <p>Documentation of medical reason(s) for not documenting that a follow up appointment was scheduled</p> <p>Documentation of patient reason(s) for not documenting that a follow up appointment was scheduled (eg, international patients, patients from state and/or local corrections facilities for whom scheduling the appointment is prohibited)</p>
Exclusion Details	<p>Exclusion Details:</p> <ul style="list-style-type: none"> • Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2): <p>ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant</p> <p>Code: Shortened Description</p>	<p>The ACCF/AHA and PCPI distinguishes between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For this measure, exclusions include patients discharged to a health care facility for hospice care, to home for hospice care, or to a</p>

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>33.6: COMB HEART/LUNG TRANSPLA 37.51: HEART TRANSPLANTATION 37.52: IMP TOT INT BI HT RP SYS 37.53: REPL/REP THR UNT TOT HRT 37.54: REPL/REP OTH TOT HRT SYS 37.60: IMP BIVN EXT HRT AST SYS 37.62: INSRT NON-IMPL CIRC DEV 37.63: REPAIR HEART ASSIST SYS 37.65: IMP VENT EXT HRT AST SYS 37.66: IMPLANTABLE HRT ASSIST 37.68: PERCUTAN HRT ASSIST SYST</p> <ul style="list-style-type: none"> • Patients less than 18 years of age. <ul style="list-style-type: none"> o Patient age (in years) equals Admission Date minus Birthdate. • Patients who have a Length of Stay greater than 120 days. <ul style="list-style-type: none"> o Length of Stay (in days) equals Discharge Date minus Admission Date. • Patients with Comfort Measures Only documented: <ul style="list-style-type: none"> o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure: <ul style="list-style-type: none"> x Comfort measures only recommendation x Order for consultation or evaluation by a hospice care service x Patient or family request for comfort measures only x Plan for comfort measures only x Referral to hospice care service • Patients enrolled in a Clinical Trial. <ul style="list-style-type: none"> o Patients are excluded if “Yes” is selected for Clinical Trial. • Patients discharged to locations other than home, home care, or law enforcement <ul style="list-style-type: none"> o Determined by the data element Discharge Disposition, allowable values: <ul style="list-style-type: none"> 2. Hospice - Home 	<p>rehabilitation facility. Exclusions also include patients that left against medical advice, and patients who expired. Exclusions, including applicable value sets, are included in the measure specifications.</p> <p>Measure Exceptions</p> <p>Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions may include medical reason(s), patient reason(s) (eg, international patients, patients from state and/or local corrections facilities for whom scheduling the appointment is prohibited), or system reason(s) for the patient not receiving a post-discharge appointment. Where examples of exceptions are included in the measure language, value sets for these examples are developed and are included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the ACCF/AHA and PCPI recommend that physicians document the specific reasons for exception in patients’ medical records for purposes of optimal patient management and audit-readiness. The ACCF/AHA and PCPI also advocate the systematic review and analysis of each physician’s exceptions data to identify practice patterns and opportunities for quality improvement. Additional details by data source are as follows:</p> <p>For EHR options:</p>

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	3. Hospice – Health Care Facility 4. Acute Care Facility 5. Other Health Care Facility 6. Expired 7. Left Against Medical Advice/AMA • Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days o Reason for No Post-Discharge Appointment Within 7 Days: x Patient is a visitor from another state or region outside of the provider’s scope of referral x Patient is a resident of a country other than the United States	eSpecification: developed and is included in this submission.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable	No risk adjustment or risk stratification No risk adjustment or risk stratification.
Stratification	Not Applicable	Consistent with CMS’ Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, payer and primary written and spoken language, and have included these variables as recommended data elements to be collected.
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag 1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical. 2. Check ICD-9-CM Principal Diagnosis Code a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be	To calculate performance rates: 1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address). 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical. 3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs).

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.</p> <p>3. Check ICD-9-CM Principal or Other Procedure Codes</p> <p>a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.</p> <p>4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.</p> <p>5. Check Patient Age</p> <p>a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.</p> <p>6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.</p> <p>7. Check Length of Stay</p> <p>a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p>	<p>Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator</p> <p>4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s) (eg, patients who expired or patients who left against medical advice) or patient reason(s) (eg, international patients). If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.</p> <p>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.</p> <p>Calculation algorithm is included in attachment (see A.1). Available in attached appendix at A.1</p>

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>ACHF-02: Post-Discharge Appointment for Heart Failure Patients</p> <p>Numerator: Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.</p> <p>Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.</p> <p>1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.</p> <p>2. Check Clinical Trial</p> <p>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.</p> <p>3. Check Discharge Disposition</p> <p>a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only.</p> <p>4. Check Comfort Measures Only</p> <p>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop</p>	

	2439 Post-Discharge Appointment for Heart Failure Patients	2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients
	<p>processing.</p> <p>b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>c. If Comfort Measures Only equals 4, continue processing and proceed to Post-Discharge Appointment Scheduled Within 7 Days.</p> <p>5. Check Post-Discharge Appointment Scheduled Within 7 Days</p> <p>a. If Post-Discharge Appointment Scheduled Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. If Post-Discharge Appointment Scheduled Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.</p> <p>c. If Post-Discharge Appointment Scheduled Within 7 Days equals No, continue processing and proceed to Reason for No Post-Discharge Appointment Within 7 Days.</p> <p>6. Check Reason for No Post-Discharge Appointment Within 7 Days</p> <p>a. If Reason for No Post-Discharge Appointment Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. If Reason for No Post-Discharge Appointment Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>If Reason for No Post-Discharge Appointment Within 7 Days equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1</p>	
Submission items	<p>5.1 Identified measures:</p> <p>5a.1 Are specs completely harmonized?</p> <p>5a.2 If not completely harmonized, identify difference, rationale, impact:</p> <p>5b.1 If competing, why superior or rationale for additive value: Not Applicable</p>	<p>5.1 Identified measures:</p> <p>5a.1 Are specs completely harmonized?</p> <p>5a.2 If not completely harmonized, identify difference, rationale, impact:</p> <p>5b.1 If competing, why superior or rationale for additive value:</p>

Comparison of NQF #2440 and NQF #0648

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
Steward	The Joint Commission	American Medical Association - Physician Consortium for Performance Improvement (AMA-PCPI)
Description	<p>A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:</p> <ul style="list-style-type: none"> Reason for hospitalization Procedures performed during this hospitalization Treatment(s)/Service(s) provided during this hospitalization Discharge medications, including dosage and indication for use Follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment) 	Percentage of patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home or any other site of care for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge
Type	Process	Process
Data Source	<p>Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.</p> <p>No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230563372547107.xlsx</p>	<p>Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Medical Records See attached data collection tool.</p> <p>Attachment 0648_AMA PCPI_CARETRANS TimelyTransmissionTransitionRecord_DataCollectionTool-635319482343680585.pdf</p>
Level	Facility	Facility, Integrated Delivery System
Setting	Hospital/Acute Care Facility	Ambulatory Care : Ambulatory Surgery Center (ASC), Hospital/Acute Care Facility, Post Acute/Long Term Care Facility : Inpatient Rehabilitation Facility, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility
Numerator Statement	<p>Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:</p> <ul style="list-style-type: none"> Reason for hospitalization 	Patients for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<ul style="list-style-type: none"> Procedures performed during this hospitalization Treatment(s)/Service(s) provided during this hospitalization Discharge medications, including dosage and indication for use Follow-up treatment(s) and service(s) needed 	
Numerator Details	<p>Six data elements used to calculate numerator. Data elements and definitions:</p> <p>Care Transition Record Transmitted: A care transition record is a document or set of documents containing standardized components specific to the patient's diagnosis, treatment, and care. A care transition record is transmitted to the next level of care provider no later than the seventh post-discharge day.</p> <ul style="list-style-type: none"> Care Transition Record-Discharge Medications: Documentation in the care transition record includes the discharge medications, dosage and indication for use or that no medications were prescribed at discharge. Medications are defined as any prescription medications, sample medications, herbal remedies, vitamins, nutraceuticals, over-the-counter drugs and any product designated by the Food and Drug Administration. Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed: Documentation in the care transition record includes follow-up treatment(s) and service(s) needed. Follow-up treatments and services include treatments and services to be initiated or continued to manage the patient's heart failure after discharge from the hospital. Care Transition Record-Procedures Performed During Hospitalization: Documentation in the care transition record includes procedures performed during hospitalization. Procedures may be diagnostic (e.g., echocardiogram), therapeutic (e.g., thoracentesis), or surgical (e.g., pacemaker insertion). Care Transition Record-Reason for Hospitalization: Documentation in the care transition record includes the reason for hospitalization. The reason for hospitalization should be a short synopsis describing the events the patient experienced prior to this 	<p>Numerator Definitions:</p> <p>a. Transition record: a core, standardized set of data elements related to patient's diagnosis, treatment, and care plan that is discussed with and provided to patient in printed or electronic format at each transition of care, and transmitted to the facility/physician/other health care professional providing follow-up care. Electronic format may be provided only if acceptable to patient.</p> <p>b. Transmitted: transition record may be transmitted to the facility or physician or other health care professional designated for follow-up care via fax, secure e-mail, or mutual access to an electronic health record (EHR)</p> <p>c. Primary physician or other health care professional designated for follow-up care: may be designated primary care physician (PCP), medical specialist, or other physician or health care professional</p> <p>For EHR:</p> <p>This measure does not lend itself to a "traditional specification" for EHR reporting, where data elements, logic and clinical coding are identified to calculate the measure, due to the fact that every facility may have a different template for a transition record and the information required for this measure is based on individualized patient information unique to one episode of care (ie, inpatient stay). We have provided guidance on how a facility should query the electronic health record for the information required for this measure.</p> <p>Transmitting the Transition Record with Specified Elements</p> <p>The Transition Record should be transmitted to the next provider(s) of care in accordance with current recommended standards for interoperability as determined by the Meaningful Use (CMS EHR</p>

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>hospitalization. The reason for hospitalization may be listed as the triggering or precipitating event prior to the patient's admission to the hospital.</p> <ul style="list-style-type: none"> Care Transition Record-Treatment(s)/Service(s) Provided: Documentation in the care transition record includes treatment(s) and service(s) provided during hospitalization. Treatments and services include anything offered to or done for the patient during the hospital stay to manage his/her heart failure. 	<p>Incentive) requirements. The use of industry standards for the transmission of the Transition Record information will ensure that the information can be received into the destination EHR.</p> <p>Systematic External Reporting that the Transition Record was transmitted within 24 hours of discharge</p> <p>To systematically identify the transition records that were transmitted within 24 hours of discharge, a discrete data field and code may be needed in the EHR. This discrete data field will facilitate external reporting of the information.</p> <p>For Claims/Administrative:</p> <p>Numerator Elements to be identified through medical record abstraction:</p> <p>See Sample Data Collection Tool attached.</p>
Denominator Statement	All heart failure patients discharged from a hospital inpatient setting to home or home care.	All patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care
Denominator Details	<p>Included Populations:</p> <ul style="list-style-type: none"> Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and A discharge to home, home care, or court/law enforcement <p>ICD-9-CM Table 2.1 Heart Failure (HF)</p> <p>Code: Shortened Description</p> <p>402.01: MAL HYPERT HRT DIS W HF</p> <p>402.11: BENIGN HYP HT DIS W HF</p> <p>402.91: HYP HT DIS NOS W HT FAIL</p> <p>404.01: MAL HYP HT/KD I-IV W HF</p> <p>404.03: MAL HYP HT/KD STG V W HF</p> <p>404.11: BEN HYP HT/KD I-IV W HF</p> <p>404.13: BEN HYP HT/KD STG V W HF</p> <p>404.91: HYP HT/KD NOS I-IV W HF</p> <p>404.93: HYP HT/KD NOS ST V W HF</p> <p>428.0: CHF NOS</p>	<p>For EHR:</p> <p>Eligible discharges for the denominator should be identified through the Admission, Discharge, Transfer (ADT) system, or from another electronic system where this information is stored.</p> <p>For Claims/Administrative:</p> <p>Identify patients discharged from inpatient facility using the following:</p> <p>UB-04 (Form Locator 04 - Type of Bill):</p> <ul style="list-style-type: none"> 0111 (Hospital, Inpatient, Admit through Discharge Claim) 0121 (Hospital, Inpatient - Medicare Part B only, Admit through Discharge Claim) 0114 (Hospital, Inpatient, Last Claim) 0124 (Hospital, Inpatient - Medicare Part B only, Interim-Last Claim) 0211 (Skilled Nursing-Inpatient, Admit through Discharge Claim) 0214 (Skilled Nursing-Inpatient, Interim, Last Claim) 0221 (Skilled Nursing-Inpatient, Medicare Part B only, Admit

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>428.1: LEFT HEART FAILURE 428.20: SYSTOLIC HRT FAILURE NOS 428.21: AC SYSTOLIC HRT FAILURE 428.22: CHR SYSTOLIC HRT FAILURE 428.23: AC ON CHR SYST HRT FAIL 428.30: DIASTOLC HRT FAILURE NOS 428.31: AC DIASTOLIC HRT FAILURE 428.32: CHR DIASTOLIC HRT FAIL 428.33: AC ON CHR DIAST HRT FAIL 428.40: SYST/DIAST HRT FAIL NOS 428.41: AC SYST/DIASTOL HRT FAIL 428.42: CHR SYST/DIASTL HRT FAIL 428.43: AC/CHR SYST/DIA HRT FAIL 428.9: HEART FAILURE NOS</p> <p>Nine data elements are used to calculate the denominator. Data elements and definitions:</p> <ul style="list-style-type: none"> • Admission Date: The month, day, and year of admission to acute inpatient care. • Birthdate: The month, day, and year the patient was born. • Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. • Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR). • Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge. • ICD-9-CM Other Procedure Codes: The International Classification 	<p>through Discharge Claim)</p> <ul style="list-style-type: none"> • 0224 (Skilled Nursing- Interim, Last Claim) • 0281 (Skilled Nursing-Swing Beds, Admit through Discharge Claim) • 0284 (Skilled Nursing-Swing Beds, Interim, Last Claim) <p>AND</p> <p>Discharge Status (Form Locator 17)</p> <ul style="list-style-type: none"> • 01 (Discharged to home care or self care (routine discharge) • 02 (Discharged/transferred to a short term general hospital for inpatient care) • 03 (Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of skilled care) • 04 (Discharged/transferred to an intermediate care facility) • 05 Discharged/transferred to a designated cancer center or children's hospital • 06 (Discharged/transferred to home under care of organized home health service org. in anticipation of covered skilled care) • 21 (Discharged/transferred to court/law enforcement) • 43 (Discharged/transferred to a federal health care facility) • 50 (Hospice – home) • 51 (Hospice - medical facility (certified) providing hospice level of care) • 61 (Discharged/transferred to hospital-based Medicare approved swing bed) • 62 (Discharged/transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital) • 63 (Discharged/transferred to a Medicare certified long term care hospital (LTCH)) • 64 (Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare) • 65 (Discharged/transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital) • 66 (Discharged/transferred to a Critical Access Hospital (CAH))

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.</p> <ul style="list-style-type: none"> • ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. • ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. • ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed. 	<ul style="list-style-type: none"> • 70 (Discharged/transferred to another type of health care institution not defined elsewhere in this code list) <p>OR</p> <p>UB-04 (Form Locator 04 - Type of Bill):</p> <ul style="list-style-type: none"> • 0131 (Hospital Outpatient, Admit through Discharge Claim) • 0134 (Hospital Outpatient, Interim, Last Claim) <p>AND</p> <p>UB-04 (Form Locator 42 - Revenue Code):</p> <ul style="list-style-type: none"> • 0762 (Hospital Observation) • 0490 (Ambulatory Surgery) • 0499 (Other Ambulatory Surgery) <p>AND</p> <p>Discharge Status (Form Locator 17)</p> <ul style="list-style-type: none"> • 01 (Discharged to home care or self care (routine discharge)) • 02 (Discharged/transferred to a short term general hospital for inpatient care) • 03 (Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of skilled care) • 04 (Discharged/transferred to an intermediate care facility) • 05 Discharged/transferred to a designated cancer center or children's hospital • 06 (Discharged/transferred to home under care of organized home health service org. in anticipation of covered skilled care) • 21 (Discharged/transferred to court/law enforcement) • 43 (Discharged/transferred to a federal health care facility) • 50 (Hospice – home) • 51 (Hospice - medical facility (certified) providing hospice level of care) • 61 (Discharged/transferred to hospital-based Medicare approved swing bed) • 62 (Discharged/transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital)

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
		<ul style="list-style-type: none"> • 63 (Discharged/transferred to a Medicare certified long term care hospital (LTCH)) • 64 (Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare) • 65 (Discharged/transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital) • 66 (Discharged/transferred to a Critical Access Hospital (CAH)) • 70 (Discharged/transferred to another type of health care institution not defined elsewhere in this code list)
Exclusions	<p>Excluded Populations:</p> <ul style="list-style-type: none"> • Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2) • Patients less than 18 years of age • Patients who have a Length of Stay greater than 120 days • Patients with Comfort Measures Only documented • Patients enrolled in a Clinical Trial • Patients discharged to locations other than home, home care, or law enforcement 	<p>Patients who died</p> <p>Patients who left against medical advice (AMA) or discontinued care</p>
Exclusion Details	<p>Exclusion Details:</p> <ul style="list-style-type: none"> • Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2): <p>ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant</p> <p>Code: Shortened Description</p> <p>33.6: COMB HEART/LUNG TRANSPLA</p> <p>37.51: HEART TRANSPLANTATION</p> <p>37.52: IMP TOT INT BI HT RP SYS</p> <p>37.53: REPL/REP THR UNT TOT HRT</p> <p>37.54: REPL/REP OTH TOT HRT SYS</p>	<p>The PCPI methodology uses three categories of reasons for which a patient may be excluded from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. Where examples of exceptions are included in the measure language, these examples are coded and included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions</p>

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>37.60: IMP BIVN EXT HRT AST SYS 37.62: INSRT NON-IMPL CIRC DEV 37.63: REPAIR HEART ASSIST SYS 37.65: IMP VENT EXT HRT AST SYS 37.66: IMPLANTABLE HRT ASSIST 37.68: PERCUTAN HRT ASSIST SYST</p> <ul style="list-style-type: none"> • Patients less than 18 years of age. <ul style="list-style-type: none"> o Patient age (in years) equals Admission Date minus Birthdate. • Patients who have a Length of Stay greater than 120 days. <ul style="list-style-type: none"> o Length of Stay (in days) equals Discharge Date minus Admission Date. • Patients with Comfort Measures Only documented: <ul style="list-style-type: none"> o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure: <ul style="list-style-type: none"> x Comfort measures only recommendation x Order for consultation or evaluation by a hospice care service x Patient or family request for comfort measures only x Plan for comfort measures only x Referral to hospice care service • Patients enrolled in a Clinical Trial. <ul style="list-style-type: none"> o Patients are excluded if “Yes” is selected for Clinical Trial. • Patients discharged to locations other than home, home care, or law enforcement <ul style="list-style-type: none"> o Determined by the data element Discharge Disposition, allowable values: <ul style="list-style-type: none"> 2 Hospice-Home 3 Hospice-Home Care Facility 4 Acute Care Facility 5 Other Health Care Facility 6 Expired 7 Left Against Medical Advice 	<p>data to identify practice patterns and opportunities for quality improvement. For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exception. Additional details by data source are as follows.</p> <p>For Claims/Administrative Data: UB-04 (Form Locator 17 - Discharge Status):</p> <ul style="list-style-type: none"> • 07 – Left against medical advice or discontinued care • 20 – Expired • 40 – Expired at home • 41 – Expired in a medical facility • 42 – Expired-place unknown

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
Risk Adjustment	No risk adjustment or risk stratification Not Applicable	No risk adjustment or risk stratification No risk adjustment or risk stratification.
Stratification	Not Applicable	We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	<p>Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm</p> <p>Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag</p> <p>1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.</p> <p>2. Check ICD-9-CM Principal Diagnosis Code</p> <p>a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.</p> <p>3. Check ICD-9-CM Principal or Other Procedure Codes</p> <p>a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.</p>	<p>To calculate performance rates:</p> <p>1) Find the patients who meet the initial patient population (ie, the general group of patients that the performance measure is designed to address).</p> <p>2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.</p> <p>3) From the patients within the denominator, find the patients who qualify for the numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator.</p> <p>4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for denominator exception when exceptions have been specified. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. – Although exception cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.</p> <p>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.</p>

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.</p> <p>5. Check Patient Age</p> <p>a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.</p> <p>6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.</p> <p>7. Check Length of Stay</p> <p>a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.</p> <p>ACHF-03: Care Transition Record Transmitted</p> <p>Numerator: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:</p> <ul style="list-style-type: none"> • Reason for hospitalization • Procedures performed during this hospitalization • Treatment(s)/Service(s) provided during this hospitalization • Discharge medications, including dosage and indication for use • Follow-up treatment(s) and service(s) needed <p>Denominator: All heart failure patients discharged from a hospital</p>	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>inpatient setting to home or home care.</p> <p>Variable Key: Discharge Counter and Missing Flag</p> <ol style="list-style-type: none"> 1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check Clinical Trial <ol style="list-style-type: none"> a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition. 3. Check Discharge Disposition <ol style="list-style-type: none"> a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only. 4. Check Comfort Measures Only <ol style="list-style-type: none"> a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. c. If Comfort Measures Only equals 4, continue processing and proceed to Initialize Discharge Counter and Set Missing Flag. 5. Initialize Discharge Counter to equal zero. Set Missing Flag to equal No. Continue processing and proceed to Care Transition Record-Discharge Medications. 	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>6. Check Care Transition Record-Discharge Medications</p> <p>a. If Care Transition Record-Discharge Medications is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.</p> <p>b. If Care Transition Record-Discharge Medications equals No, continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.</p> <p>c. If Care Transition Record-Discharge Medications equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.</p> <p>7. Check Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed</p> <p>a. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.</p> <p>b. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals No, continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.</p> <p>c. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.</p> <p>8. Check Care Transition Record-Procedures Performed During Hospitalization</p> <p>a. If Care Transition Record-Procedures Performed During Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.</p> <p>b. If Care Transition Record-Procedures Performed During Hospitalization equals No, continue processing and proceed to Care Transition Record-Reason for Hospitalization.</p>	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>c. If Care Transition Record-Procedures Performed During Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.</p> <p>9. Check Care Transition Record-Reason for Hospitalization</p> <p>a. If Care Transition Record-Reason for Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.</p> <p>b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.</p> <p>c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.</p> <p>10. Check Care Transition Record-Treatment(s)/Service(s) Provided</p> <p>a. If Care Transition Record-Treatment(s)/Service(s) Provided is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Missing Flag.</p> <p>b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Missing Flag.</p> <p>c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Missing Flag.</p> <p>11. Check Missing Flag</p> <p>a. If Missing Flag equals Yes, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. If Missing Flag equals No, continue processing and proceed to Discharge Counter.</p> <p>12. Check Discharge Counter</p> <p>a. If Discharge Counter is not equal to 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>b. If Discharge Counter equals 5, continue processing and proceed to Care Transition Record Transmitted.</p>	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>13. Check Care Transition Record Transmitted</p> <p>a. If Care Transition Record Transmitted is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b. If Care Transition Record Transmitted equals 2 or 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>c. If Care Transition Record Transmitted equals 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Available at measure-specific web page URL identified in S.1</p>	
Submission items	<p>5.1 Identified measures: 0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge</p> <p>0648 : Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)</p> <p>5a.1 Are specs completely harmonized? No</p> <p>5a.2 If not completely harmonized, identify difference, rationale, impact: All three measures focus on transmission of care information to the next level of care provider following hospital discharge. Principal differences in measure specifications are noted below, and are thought to be artifacts of the different patient populations (heart failure, psychiatric vs. all patients) and levels of measurement (organization vs. practitioner) addressed by the 3 measures. The measure specifications for ACHF-03 were written to be consistent with The Joint Commission Advanced Certification in Heart Failure standard DSPR.3 which requires: “The program [to provide] care coordination services across inpatient and outpatient settings.” Requirements specific to heart failure care certification include:</p> <ul style="list-style-type: none"> • The program identifies an individual to coordinate the care of participants. • The program provides participants with access to a practitioner 24 hours a day, 7 days a week (access may include use of the telephone and the internet, and referral to urgent care settings). • The program communicates important information 	<p>5.1 Identified measures: 0338 : CAC-3: Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver</p> <p>0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge</p> <p>0136 : Heart Failure (HF): Detailed discharge instructions</p> <p>5a.1 Are specs completely harmonized? No</p> <p>5a.2 If not completely harmonized, identify difference, rationale, impact: Our measure has a broader target population since the three measures above are for the psychiatric, heart failure and pediatric asthma populations, respectively.</p> <p>5b.1 If competing, why superior or rationale for additive value: N/A</p>

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>regarding co-occurring conditions and co-morbidities to appropriate practitioner(s) to treat or manage conditions.</p> <ul style="list-style-type: none"> o The program care coordinator(s) is responsible for the communication of relevant information among practitioners and across settings. o The program care coordinator(s) is responsible for sharing information among practitioners in a timeframe that meets the participant's needs. o The program care coordinator(s) is responsible for confirming practitioner receipt of information and actions taken. and DSPR.8 which requires: that care, treatment, and services are provided in a planned and timely manner, which includes the arrangement of a follow-up appointment with a health care provider to occur within seven days after discharge. Differences include: Patient focus: <ul style="list-style-type: none"> • 0558: pertains to patients discharged from a hospital-based inpatient psychiatric setting • 0648: pertains to ALL patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care • ACHF-03 pertains to: all heart failure patients discharged from a hospital inpatient setting to home or home care Time frame for transition of the record: • 0558: Within 5 days of discharge • 0648: Within 24 hours of discharge • ACHF-03: Within 7 days of discharge – based upon ACC/AHA guidelines Numerator Data Elements: It is noted that the data elements are titled differently. 0558 and ACHF-01 specify each of the required components in a separate data element where 0648 includes all components in the definition of Transition Record. Numerator Data Elements 0558: • Continuing Care Plan-Discharge Medications • Continuing Care Plan-Next Level of Care 	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<ul style="list-style-type: none"> Continuing Care Plan-Principal Discharge Diagnosis Continuing Care Plan-Reason for Hospitalization Numerator Data Elements 0648: Transition record Transmitted • Primary physician or other health care professional designated for follow-up care Numerator Data Elements ACHF-03 Care Transition Record Transmitted Care Transition Record-Discharge Medications Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed Care Transition Record-Procedures Performed During Hospitalization Care Transition Record-Reason for Hospitalization Care Transition Record-Treatment(s)/Service(s) Provided <p>The data elements for ACHF-03 were harmonized to the extent possible with the data elements of measure 0558. The exclusions are slightly different between the 3 measures. This can be attributed to characteristics of the different patient populations. In addition, ACHF-03 is specified to be consistent with Joint Commission measures that are aligned with CMS. Exclusions 0558:</p> <ul style="list-style-type: none"> Patients who expired Patients with an unplanned departure resulting in discharge due to elopement Patients or their guardians who refused aftercare Patients or guardians who refused to sign authorization to release information Patients with an unplanned departure resulting in discharge due to failing to return from leave Exclusions 0648: Patients who died Patients who left against medical advice or discontinued care Exclusions ACHF-03: Patients who had a left ventricular assistive device (LVAD) 	

	2440 Care Transition Record Transmitted	0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)
	<p>or heart transplant</p> <ul style="list-style-type: none"> • procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2) • Patients less than 18 years of age • Patient who have a Length of Stay greater than 120 days • Patients with Comfort Measures Only documented • Patients enrolled in a Clinical Trial • Patients discharged to locations other than home, home care, or law enforcement Impact on interpretability and data collection burden: These measures are specified to different patient populations and levels of measurement (facility vs. practitioner). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden. <p>5b.1 If competing, why superior or rationale for additive value: Not applicable</p>	

Appendix F2: Related and Competing Measures (narrative format)

Comparison of NQF #2439 and NQF #2455

2439 Post-Discharge Appointment for Heart Failure Patients

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Steward

2439 Post-Discharge Appointment for Heart Failure Patients

The Joint Commission

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

American College of Cardiology

Description

2439 Post-Discharge Appointment for Heart Failure Patients

Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Percentage of patients, regardless of age, discharged from an inpatient facility to ambulatory care or home health care with a principal discharge diagnosis of heart failure for whom a follow up appointment was scheduled and documented prior to discharge (as specified)

Type

2439 Post-Discharge Appointment for Heart Failure Patients

Process

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Process

Data Source

2439 Post-Discharge Appointment for Heart Failure Patients

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230561263712071.xlsx

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Electronic Clinical Data : Registry The data collection instrument is the Get With The Guidelines®-Heart Failure Patient Management Tool.

Available in attached appendix at A.1 Attachment
S2b_HF_PostDischarge_ValueSets_Dec2013.xls

Level

2439 Post-Discharge Appointment for Heart Failure Patients

Facility

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Facility

Setting

2439 Post-Discharge Appointment for Heart Failure Patients

Hospital/Acute Care Facility

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Hospital/Acute Care Facility

Numerator Statement

2439 Post-Discharge Appointment for Heart Failure Patients

Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Patients for whom a follow up appointment was scheduled and documented prior to discharge including either:

- an office visit for management for heart failure with a physician OR advanced practice nurse OR physician assistant OR
- a home health visit for management of heart failure

Numerator Details

2439 Post-Discharge Appointment for Heart Failure Patients

One data element used to calculate numerator: Post-Discharge Appointment Scheduled Within 7 Days

Data element defined: Documentation that a follow-up appointment for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented including location, date, and time.

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Numerator Note:

Due to the nature of scheduling home health visits, the location and date of the follow-up appointment is sufficient for meeting the measure.

For EHR options:

eSpecification developed and is included in this submission.

Denominator Statement

2439 Post-Discharge Appointment for Heart Failure Patients

All heart failure patients discharged from a hospital inpatient setting to home or home care.

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

All patients, regardless of age, discharged from an inpatient facility (ie, hospital inpatient or observation) to ambulatory care (home/self care) or home health care with a principle discharge diagnosis of heart failure

Denominator Details

2439 Post-Discharge Appointment for Heart Failure Patients

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF

402.11: BENIGN HYP HT DIS W HF

402.91: HYP HT DIS NOS W HT FAIL

404.01: MAL HYP HT/KD I-IV W HF

404.03: MAL HYP HT/KD STG V W HF

404.11: BEN HYP HT/KD I-IV W HF

404.13: BEN HYP HT/KD STG V W HF

404.91: HYP HT/KD NOS I-IV W HF

404.93: HYP HT/KD NOS ST V W HF

428.0: CHF NOS

428.1: LEFT HEART FAILURE

428.20: SYSTOLIC HRT FAILURE NOS

428.21: AC SYSTOLIC HRT FAILURE

428.22: CHR SYSTOLIC HRT FAILURE

428.23: AC ON CHR SYST HRT FAIL

428.30: DIASTOLC HRT FAILURE NOS

428.31: AC DIASTOLIC HRT FAILURE

428.32: CHR DIASTOLIC HRT FAIL

428.33: AC ON CHR DIAST HRT FAIL

428.40: SYST/DIAST HRT FAIL NOS

428.41: AC SYST/DIASTOL HRT FAIL

428.42: CHR SYST/DIASTL HRT FAIL

428.43: AC/CHR SYST/DIA HRT FAIL

428.9: HEART FAILURE NOS

10 data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
 - Birthdate: The month, day, and year the patient was born.
 - Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
 - Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).
 - Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
 - ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
 - ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
 - ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
 - ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.
 - Reason for No Post-Discharge Appointment Within 7 Days:
 - o Patient is a visitor from another state or region outside of the provider’s scope of referral
 - o Patient is a resident of a country other than the United States
- Scheduling of the initial follow-up appointment with the primary care provider is a first-step to ensuring continuity of care.

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

For EHR options:

eSpecification developed and is included in this submission.

Exclusions

2439 Post-Discharge Appointment for Heart Failure Patients

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patient who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Denominator exclusions include:

Patient was discharged to a health care facility for hospice care, to home for hospice care, or to a rehabilitation facility.

Patient left against medical advice.

Patient expired.

Denominator exceptions include:

Documentation of medical reason(s) for not documenting that a follow up appointment was scheduled

Documentation of patient reason(s) for not documenting that a follow up appointment was scheduled (eg, international patients,

patients from state and/or local corrections facilities for whom scheduling the appointment is prohibited)

Exclusion Details

2439 Post-Discharge Appointment for Heart Failure Patients

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION

37.52: IMP TOT INT BI HT RP SYS

37.53: REPL/REP THR UNT TOT HRT

37.54: REPL/REP OTH TOT HRT SYS

37.60: IMP BIVN EXT HRT AST SYS

37.62: INSRT NON-IMPL CIRC DEV

37.63: REPAIR HEART ASSIST SYS

37.65: IMP VENT EXT HRT AST SYS

37.66: IMPLANTABLE HRT ASSIST

37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to locations other than home, home care, or law enforcement
 - o Determined by the data element Discharge Disposition, allowable values:
 - 2. Hospice - Home
 - 3. Hospice – Health Care Facility
 - 4. Acute Care Facility
 - 5. Other Health Care Facility
 - 6. Expired
 - 7. Left Against Medical Advice/AMA
- Patients with a documented Reason for No Post-Discharge Appointment Within 7 Days
 - o Reason for No Post-Discharge Appointment Within 7 Days:
 - x Patient is a visitor from another state or region outside of the provider’s scope of referral
 - x Patient is a resident of a country other than the United States

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

The ACCF/AHA and PCPI distinguishes between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For this measure, exclusions include patients discharged to a health care facility for hospice care, to home for hospice care, or to a rehabilitation facility. Exclusions also include patients that left against medical advice, and patients who expired. Exclusions, including applicable value sets, are included in the measure specifications.

Measure Exceptions

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions may include medical reason(s), patient reason(s) (eg, international patients, patients from state and/or local corrections facilities for whom scheduling the appointment is prohibited), or system reason(s) for the patient not receiving a post-discharge appointment. Where examples of exceptions are included in the measure language, value sets for these examples are developed and are included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the ACCF/AHA and PCPI recommend that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The ACCF/AHA and PCPI also advocate the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. Additional details by data source are as follows:

For EHR options:

eSpecification: developed and is included in this submission.

Risk Adjustment

2439 Post-Discharge Appointment for Heart Failure Patients

No risk adjustment or risk stratification

Not Applicable

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

No risk adjustment or risk stratification

No risk adjustment or risk stratification.

Stratification

2439 Post-Discharge Appointment for Heart Failure Patients

Not Applicable

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, payer and primary written and spoken language, and have included these variables as recommended data elements to be collected.

Type Score

2439 Post-Discharge Appointment for Heart Failure Patients

Rate/proportion better quality = higher score

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

Rate/proportion better quality = higher score

Algorithm

2439 Post-Discharge Appointment for Heart Failure Patients

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Check ICD-9-CM Principal Diagnosis Code
 - a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.
3. Check ICD-9-CM Principal or Other Procedure Codes
 - a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.
4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
5. Check Patient Age
 - a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
7. Check Length of Stay

- a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
- b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-02: Post-Discharge Appointment for Heart Failure Patients

Numerator: Patients for whom a follow-up appointment, including location, date, and time, for an office or home health visit for management of heart failure was scheduled within 7 days post-discharge and documented.

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Check Clinical Trial

- a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.

3. Check Discharge Disposition

- a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only.

4. Check Comfort Measures Only

- a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Comfort Measures Only equals 4, continue processing and proceed to Post-Discharge Appointment Scheduled Within 7 Days.

5. Check Post-Discharge Appointment Scheduled Within 7 Days

- a. If Post-Discharge Appointment Scheduled Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Post-Discharge Appointment Scheduled Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If Post-Discharge Appointment Scheduled Within 7 Days equals No, continue processing and proceed to Reason for No Post-Discharge Appointment Within 7 Days.

6. Check Reason for No Post-Discharge Appointment Within 7 Days

a. If Reason for No Post-Discharge Appointment Within 7 Days is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Reason for No Post-Discharge Appointment Within 7 Days equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

If Reason for No Post-Discharge Appointment Within 7 Days equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

To calculate performance rates:

1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address).

2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.

3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s) (eg, patients who expired or patients who left against medical advice) or patient reason(s) (eg, international patients). If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm is included in attachment (see A.1). Available in attached appendix at A.1

Submission items

2439 Post-Discharge Appointment for Heart Failure Patients

5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value: Not Applicable

2455 Heart Failure: Post-Discharge Appointment for Heart Failure Patients

5.1 Identified measures:

5a.1 Are specs completely harmonized?

5a.2 If not completely harmonized, identify difference, rationale, impact:

5b.1 If competing, why superior or rationale for additive value:

Comparison of NQF #2440 and NQF #0648

2440 Care Transition Record Transmitted

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Steward

2440 Care Transition Record Transmitted

The Joint Commission

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

American Medical Association - Physician Consortium for Performance Improvement (AMA-PCPI)

Description

2440 Care Transition Record Transmitted

A care transition record is transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment and services needed (e.g., post-discharge therapy, oxygen therapy, durable medical equipment)

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Percentage of patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home or any other site of care for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge

Type

2440 Care Transition Record Transmitted

Process

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Process

Data Source

2440 Care Transition Record Transmitted

Electronic Clinical Data : Electronic Health Record, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot process. Moving forward, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide.

No data collection instrument provided Attachment ACHF_Appendix_ICD-9_and_ICD-10_Codes-635230563372547107.xlsx

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Medical Records See attached data collection tool.

Attachment 0648_AMA PCPI_CARETRANS

TimelyTransmissionTransitionRecord_DataCollectionTool-635319482343680585.pdf

Level

2440 Care Transition Record Transmitted

Facility

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Facility, Integrated Delivery System

Setting

2440 Care Transition Record Transmitted

Hospital/Acute Care Facility

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Ambulatory Care : Ambulatory Surgery Center (ASC), Hospital/Acute Care Facility, Post Acute/Long Term Care Facility : Inpatient Rehabilitation Facility, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility

Numerator Statement

2440 Care Transition Record Transmitted

Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization

- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Patients for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge

Numerator Details

2440 Care Transition Record Transmitted

Six data elements used to calculate numerator. Data elements and definitions:

Care Transition Record Transmitted: A care transition record is a document or set of documents containing standardized components specific to the patient's diagnosis, treatment, and care. A care transition record is transmitted to the next level of care provider no later than the seventh post-discharge day.

- Care Transition Record-Discharge Medications: Documentation in the care transition record includes the discharge medications, dosage and indication for use or that no medications were prescribed at discharge. Medications are defined as any prescription medications, sample medications, herbal remedies, vitamins, nutraceuticals, over-the-counter drugs and any product designated by the Food and Drug Administration.
- Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed: Documentation in the care transition record includes follow-up treatment(s) and service(s) needed. Follow-up treatments and services include treatments and services to be initiated or continued to manage the patient's heart failure after discharge from the hospital.
- Care Transition Record-Procedures Performed During Hospitalization: Documentation in the care transition record includes procedures performed during hospitalization. Procedures may be diagnostic (e.g., echocardiogram), therapeutic (e.g., thoracentesis), or surgical (e.g., pacemaker insertion).
- Care Transition Record-Reason for Hospitalization: Documentation in the care transition record includes the reason for hospitalization. The reason for hospitalization should be a short synopsis describing the events the patient experienced prior to this hospitalization. The reason for hospitalization may be listed as the triggering or precipitating event prior to the patient's admission to the hospital.
- Care Transition Record-Treatment(s)/Service(s) Provided: Documentation in the care transition record includes treatment(s) and service(s) provided during hospitalization. Treatments and services include anything offered to or done for the patient during the hospital stay to manage his/her heart failure.

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Numerator Definitions:

- a. Transition record: a core, standardized set of data elements related to patient's diagnosis, treatment, and care plan that is discussed with and provided to patient in printed or electronic format at each transition of care, and transmitted to the

facility/physician/other health care professional providing follow-up care. Electronic format may be provided only if acceptable to patient.

b. Transmitted: transition record may be transmitted to the facility or physician or other health care professional designated for follow-up care via fax, secure e-mail, or mutual access to an electronic health record (EHR)

c. Primary physician or other health care professional designated for follow-up care: may be designated primary care physician (PCP), medical specialist, or other physician or health care professional

For EHR:

This measure does not lend itself to a “traditional specification” for EHR reporting, where data elements, logic and clinical coding are identified to calculate the measure, due to the fact that every facility may have a different template for a transition record and the information required for this measure is based on individualized patient information unique to one episode of care (ie, inpatient stay). We have provided guidance on how a facility should query the electronic health record for the information required for this measure.

Transmitting the Transition Record with Specified Elements

The Transition Record should be transmitted to the next provider(s) of care in accordance with current recommended standards for interoperability as determined by the Meaningful Use (CMS EHR Incentive) requirements. The use of industry standards for the transmission of the Transition Record information will ensure that the information can be received into the destination EHR.

Systematic External Reporting that the Transition Record was transmitted within 24 hours of discharge

To systematically identify the transition records that were transmitted within 24 hours of discharge, a discrete data field and code may be needed in the EHR. This discrete data field will facilitate external reporting of the information.

For Claims/Administrative:

Numerator Elements to be identified through medical record abstraction:

See Sample Data Collection Tool attached.

Denominator Statement

2440 Care Transition Record Transmitted

All heart failure patients discharged from a hospital inpatient setting to home or home care.

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

All patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care

Denominator Details

2440 Care Transition Record Transmitted

Included Populations:

- Discharges with ICD-9-CM Principal Diagnosis Code for HF as defined in Appendix A, Table 2.1, and
- A discharge to home, home care, or court/law enforcement

ICD-9-CM Table 2.1 Heart Failure (HF)

Code: Shortened Description

402.01: MAL HYPERT HRT DIS W HF
 402.11: BENIGN HYP HT DIS W HF
 402.91: HYP HT DIS NOS W HT FAIL
 404.01: MAL HYP HT/KD I-IV W HF
 404.03: MAL HYP HT/KD STG V W HF
 404.11: BEN HYP HT/KD I-IV W HF
 404.13: BEN HYP HT/KD STG V W HF
 404.91: HYP HT/KD NOS I-IV W HF
 404.93: HYP HT/KD NOS ST V W HF
 428.0: CHF NOS
 428.1: LEFT HEART FAILURE
 428.20: SYSTOLIC HRT FAILURE NOS
 428.21: AC SYSTOLIC HRT FAILURE
 428.22: CHR SYSTOLIC HRT FAILURE
 428.23: AC ON CHR SYST HRT FAIL
 428.30: DIASTOLC HRT FAILURE NOS
 428.31: AC DIASTOLIC HRT FAILURE
 428.32: CHR DIASTOLIC HRT FAIL
 428.33: AC ON CHR DIAST HRT FAIL
 428.40: SYST/DIAST HRT FAIL NOS
 428.41: AC SYST/DIASTOL HRT FAIL
 428.42: CHR SYST/DIASTL HRT FAIL
 428.43: AC/CHR SYST/DIA HRT FAIL
 428.9: HEART FAILURE NOS

Nine data elements are used to calculate the denominator. Data elements and definitions:

- Admission Date: The month, day, and year of admission to acute inpatient care.
- Birthdate: The month, day, and year the patient was born.
- Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied.
- Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a

physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).

- Discharge Disposition: The final place or setting to which the patient was discharged on the day of discharge.
- ICD-9-CM Other Procedure Codes: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.
- ICD-9-CM Principal Diagnosis Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.
- ICD-9-CM Principal Procedure Code: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
- ICD-9-CM Principal Procedure Date: The month, day, and year when the principal procedure was performed.

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

For EHR:

Eligible discharges for the denominator should be identified through the Admission, Discharge, Transfer (ADT) system, or from another electronic system where this information is stored.

For Claims/Administrative:

Identify patients discharged from inpatient facility using the following:

UB-04 (Form Locator 04 - Type of Bill):

- 0111 (Hospital, Inpatient, Admit through Discharge Claim)
- 0121 (Hospital, Inpatient - Medicare Part B only, Admit through Discharge Claim)
- 0114 (Hospital, Inpatient, Last Claim)
- 0124 (Hospital, Inpatient - Medicare Part B only, Interim-Last Claim)
- 0211 (Skilled Nursing-Inpatient, Admit through Discharge Claim)
- 0214 (Skilled Nursing-Inpatient, Interim, Last Claim)
- 0221 (Skilled Nursing-Inpatient, Medicare Part B only, Admit through Discharge Claim)
- 0224 (Skilled Nursing- Interim, Last Claim)
- 0281 (Skilled Nursing-Swing Beds, Admit through Discharge Claim)
- 0284 (Skilled Nursing-Swing Beds, Interim, Last Claim)

AND

Discharge Status (Form Locator 17)

- 01 (Discharged to home care or self care (routine discharge))
- 02 (Discharged/transferred to a short term general hospital for inpatient care)

- 03 (Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of skilled care)
- 04 (Discharged/transferred to an intermediate care facility)
- 05 Discharged/transferred to a designated cancer center or children's hospital
- 06 (Discharged/transferred to home under care of organized home health service org. in anticipation of covered skilled care)
- 21 (Discharged/transferred to court/law enforcement)
- 43 (Discharged/transferred to a federal health care facility)
- 50 (Hospice – home)
- 51 (Hospice - medical facility (certified) providing hospice level of care)
- 61 (Discharged/transferred to hospital-based Medicare approved swing bed)
- 62 (Discharged/transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital)
- 63 (Discharged/transferred to a Medicare certified long term care hospital (LTCH))
- 64 (Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare)
- 65 (Discharged/transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital)
- 66 (Discharged/transferred to a Critical Access Hospital (CAH))
- 70 (Discharged/transferred to another type of health care institution not defined elsewhere in this code list)

OR

UB-04 (Form Locator 04 - Type of Bill):

- 0131 (Hospital Outpatient, Admit through Discharge Claim)
- 0134 (Hospital Outpatient, Interim, Last Claim)

AND

UB-04 (Form Locator 42 - Revenue Code):

- 0762 (Hospital Observation)
- 0490 (Ambulatory Surgery)
- 0499 (Other Ambulatory Surgery)

AND

Discharge Status (Form Locator 17)

- 01 (Discharged to home care or self care (routine discharge))
- 02 (Discharged/transferred to a short term general hospital for inpatient care)
- 03 (Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of skilled care)
- 04 (Discharged/transferred to an intermediate care facility)
- 05 Discharged/transferred to a designated cancer center or children's hospital
- 06 (Discharged/transferred to home under care of organized home health service org. in anticipation of covered skilled care)

- 21 (Discharged/transferred to court/law enforcement)
- 43 (Discharged/transferred to a federal health care facility)
- 50 (Hospice – home)
- 51 (Hospice - medical facility (certified) providing hospice level of care)
- 61 (Discharged/transferred to hospital-based Medicare approved swing bed)
- 62 (Discharged/transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital)
- 63 (Discharged/transferred to a Medicare certified long term care hospital (LTCH))
- 64 (Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare)
- 65 (Discharged/transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital)
- 66 (Discharged/transferred to a Critical Access Hospital (CAH))
- 70 (Discharged/transferred to another type of health care institution not defined elsewhere in this code list)

Exclusions

2440 Care Transition Record Transmitted

Excluded Populations:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in a Clinical Trial
- Patients discharged to locations other than home, home care, or law enforcement

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Patients who died

Patients who left against medical advice (AMA) or discontinued care

Exclusion Details

2440 Care Transition Record Transmitted

Exclusion Details:

- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2):

ICD-9-CM Table 2.2 Left Ventricular Assistive Device (LVAD) and Heart Transplant

Code: Shortened Description

33.6: COMB HEART/LUNG TRANSPLA

37.51: HEART TRANSPLANTATION
 37.52: IMP TOT INT BI HT RP SYS
 37.53: REPL/REP THR UNT TOT HRT
 37.54: REPL/REP OTH TOT HRT SYS
 37.60: IMP BIVN EXT HRT AST SYS
 37.62: INSRT NON-IMPL CIRC DEV
 37.63: REPAIR HEART ASSIST SYS
 37.65: IMP VENT EXT HRT AST SYS
 37.66: IMPLANTABLE HRT ASSIST
 37.68: PERCUTAN HRT ASSIST SYST

- Patients less than 18 years of age.
 - o Patient age (in years) equals Admission Date minus Birthdate.
- Patients who have a Length of Stay greater than 120 days.
 - o Length of Stay (in days) equals Discharge Date minus Admission Date.
- Patients with Comfort Measures Only documented:
 - o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices to exclude a case from the measure:
 - x Comfort measures only recommendation
 - x Order for consultation or evaluation by a hospice care service
 - x Patient or family request for comfort measures only
 - x Plan for comfort measures only
 - x Referral to hospice care service
- Patients enrolled in a Clinical Trial.
 - o Patients are excluded if “Yes” is selected for Clinical Trial.
- Patients discharged to locations other than home, home care, or law enforcement
 - o Determined by the data element Discharge Disposition, allowable values:
 - 2 Hospice-Home
 - 3 Hospice-Home Care Facility
 - 4 Acute Care Facility
 - 5 Other Health Care Facility
 - 6 Expired
 - 7 Left Against Medical Advice

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

The PCPI methodology uses three categories of reasons for which a patient may be excluded from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. Where examples of exceptions

are included in the measure language, these examples are coded and included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exception. Additional details by data source are as follows.

For Claims/Administrative Data:

UB-04 (Form Locator 17 - Discharge Status):

- 07 – Left against medical advice or discontinued care
- 20 – Expired
- 40 – Expired at home
- 41 – Expired in a medical facility
- 42 – Expired-place unknown

Risk Adjustment

2440 Care Transition Record Transmitted

No risk adjustment or risk stratification

Not Applicable

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

No risk adjustment or risk stratification

No risk adjustment or risk stratification.

Stratification

2440 Care Transition Record Transmitted

Not Applicable

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.

Type Score

2440 Care Transition Record Transmitted

Rate/proportion better quality = higher score

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

Rate/proportion better quality = higher score

Algorithm

2440 Care Transition Record Transmitted

Advanced Certification Heart Failure (ACHF) Initial Patient Population Algorithm

Variable Key: Patient Age, Length of Stay and Initial Patient Population Reject Case Flag

1. Start ACHF Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Check ICD-9-CM Principal Diagnosis Code
 - a. If ICD-9-CM Principal Diagnosis Code is not on Table 2.1, the patient is not in the ACHF Topic Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If ICD-9-CM Principal Diagnosis Code is on Table 2.1, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.
3. Check ICD-9-CM Principal or Other Procedure Codes
 - a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 2.2, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none are on Table 2.2, continue processing and proceed to the Patient Age Calculation.
4. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.
5. Check Patient Age
 - a. If the Patient Age is less than 18 years, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.
6. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
7. Check Length of Stay
 - a. If the Length of Stay is greater than 120 days, the patient is not in the ACHF Initial Patient Population and is not eligible to be sampled for the ACHF measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Length of Stay is less than or equal to 120 days, the patient is in the ACHF Initial Patient Population and is eligible to be sampled for the ACHF measure set. Set Initial

Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

ACHF-03: Care Transition Record Transmitted

Numerator: Care transition record transmitted to a next level of care provider within 7 days of discharge containing ALL of the following:

- Reason for hospitalization
- Procedures performed during this hospitalization
- Treatment(s)/Service(s) provided during this hospitalization
- Discharge medications, including dosage and indication for use
- Follow-up treatment(s) and service(s) needed

Denominator: All heart failure patients discharged from a hospital inpatient setting to home or home care.

Variable Key: Discharge Counter and Missing Flag

1. Start processing. Run cases that are included in the ACHF Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Check Clinical Trial
 - a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.
3. Check Discharge Disposition
 - a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Discharge Disposition equals 1 or 8, continue processing and proceed to Comfort Measures Only.
4. Check Comfort Measures Only
 - a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Comfort Measures Only equals 4, continue processing and proceed to Initialize Discharge Counter and Set Missing Flag.
5. Initialize Discharge Counter to equal zero. Set Missing Flag to equal No. Continue processing and proceed to Care Transition Record-Discharge Medications.
6. Check Care Transition Record-Discharge Medications
 - a. If Care Transition Record-Discharge Medications is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.

- b. If Care Transition Record-Discharge Medications equals No, continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.
 - c. If Care Transition Record-Discharge Medications equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed.
7. Check Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed
- a. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.
 - b. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals No, continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.
 - c. If Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Procedures Performed During Hospitalization.
8. Check Care Transition Record-Procedures Performed During Hospitalization
- a. If Care Transition Record-Procedures Performed During Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.
 - b. If Care Transition Record-Procedures Performed During Hospitalization equals No, continue processing and proceed to Care Transition Record-Reason for Hospitalization.
 - c. If Care Transition Record-Procedures Performed During Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Reason for Hospitalization.
9. Check Care Transition Record-Reason for Hospitalization
- a. If Care Transition Record-Reason for Hospitalization is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
 - b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
 - c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Care Transition Record-Treatment(s)/Service(s) Provided.
10. Check Care Transition Record-Treatment(s)/Service(s) Provided
- a. If Care Transition Record-Treatment(s)/Service(s) Provided is missing, set the Missing Flag to equal Yes. Continue processing and proceed to Missing Flag.
 - b. If Care Transition Record-Reason for Hospitalization equals No, continue processing and proceed to Missing Flag.
 - c. If Care Transition Record-Reason for Hospitalization equals Yes, add one to the Discharge Counter. Continue processing and proceed to Missing Flag.
11. Check Missing Flag
- a. If Missing Flag equals Yes, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Missing Flag equals No, continue processing and proceed to Discharge Counter.

12. Check Discharge Counter

a. If Discharge Counter is not equal to 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b. If Discharge Counter equals 5, continue processing and proceed to Care Transition Record Transmitted.

13. Check Care Transition Record Transmitted

a. If Care Transition Record Transmitted is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Care Transition Record Transmitted equals 2 or 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If Care Transition Record Transmitted equals 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

Available at measure-specific web page URL identified in S.1

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

To calculate performance rates:

1) Find the patients who meet the initial patient population (ie, the general group of patients that the performance measure is designed to address).

2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.

3) From the patients within the denominator, find the patients who qualify for the numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator.

4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for denominator exception when exceptions have been specified. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. –Although exception cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Submission items

2440 Care Transition Record Transmitted

5.1 Identified measures: 0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge

0648 : Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: All three measures focus on transmission of care information to the next level of care provider following hospital discharge. Principal differences in measure specifications are noted below, and are thought to be artifacts of the different patient populations (heart failure, psychiatric vs. all patients) and levels of measurement (organization vs. practitioner) addressed by the 3 measures. The measure specifications for ACHF-03 were written to be consistent with The Joint Commission Advanced Certification in Heart Failure standard DSPR.3 which requires: “The program [to provide] care coordination services across inpatient and outpatient settings.” Requirements specific to heart failure care certification include:

- The program identifies an individual to coordinate the care of participants.
- The program provides participants with access to a practitioner 24 hours a day, 7 days a week (access may include use of the telephone and the internet, and referral to urgent care settings).
- The program communicates important information regarding co-occurring conditions and co-morbidities to appropriate practitioner(s) to treat or manage conditions.
 - o The program care coordinator(s) is responsible for the communication of relevant information among practitioners and across settings.
 - o The program care coordinator(s) is responsible for sharing information among practitioners in a timeframe that meets the participant’s needs.
 - o The program care coordinator(s) is responsible for confirming practitioner receipt of information and actions taken. and DSPR.8 which requires: that care, treatment, and services are provided in a planned and timely manner, which includes the arrangement of a follow-up appointment with a health care provider to occur within seven days after discharge. Differences include: Patient focus:
 - 0558: pertains to patients discharged from a hospital-based inpatient psychiatric setting
 - 0648: pertains to ALL patients, regardless of age, discharged from an inpatient facility (eg, hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care
 - ACHF-03 pertains to: all heart failure patients discharged from a hospital inpatient setting to home or home care Time frame for transition of the record:
 - 0558: Within 5 days of discharge
 - 0648: Within 24 hours of discharge
 - ACHF-03: Within 7 days of discharge – based upon ACC/AHA guidelines Numerator Data Elements: It is noted that the data elements are titled differently. 0558 and ACHF-01 specify each of the required components in a separate data element where 0648 includes all components in the definition of Transition Record. Numerator Data Elements 0558:
 - Continuing Care Plan-Discharge Medications
 - Continuing Care Plan-Next Level of Care
 - Continuing Care Plan-Principal Discharge Diagnosis
 - Continuing Care Plan-Reason for Hospitalization Numerator Data Elements 0648:
 - Transition record
 - Transmitted

- Primary physician or other health care professional designated for follow-up care
- Numerator Data Elements ACHF-03
- Care Transition Record Transmitted
 - Care Transition Record-Discharge Medications
 - Care Transition Record-Follow-Up Treatment(s) and Service(s) Needed
 - Care Transition Record-Procedures Performed During Hospitalization
 - Care Transition Record-Reason for Hospitalization
 - Care Transition Record-Treatment(s)/Service(s) Provided
- The data elements for ACHF-03 were harmonized to the extent possible with the data elements of measure 0558. The exclusions are slightly different between the 3 measures. This can be attributed to characteristics of the different patient populations. In addition, ACHF-03 is specified to be consistent with Joint Commission measures that are aligned with CMS. Exclusions 0558:
- Patients who expired
 - Patients with an unplanned departure resulting in discharge due to elopement
 - Patients or their guardians who refused aftercare
 - Patients or guardians who refused to sign authorization to release information
 - Patients with an unplanned departure resulting in discharge due to failing to return from leave
- Exclusions 0648:
- Patients who died
 - Patients who left against medical advice or discontinued care
- Exclusions ACHF-03:
- Patients who had a left ventricular assistive device (LVAD) or heart transplant
 - procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)
 - Patients less than 18 years of age
 - Patient who have a Length of Stay greater than 120 days
 - Patients with Comfort Measures Only documented
 - Patients enrolled in a Clinical Trial
 - Patients discharged to locations other than home, home care, or law enforcement
- Impact on interpretability and data collection burden: These measures are specified to different patient populations and levels of measurement (facility vs. practitioner). As such they are specified in order to be effectively and efficiently collected by the systems developed for each type of measure. Therefore, measure results should be easily interpretable with no adverse impact on data collection burden.
- 5b.1 If competing, why superior or rationale for additive value: Not applicable

0648 Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

5.1 Identified measures: 0338 : CAC-3: Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver

0558 : HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge

0136 : Heart Failure (HF): Detailed discharge instructions

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Our measure has a broader target population since the three measures above are for the psychiatric, heart failure and pediatric asthma populations, respectively.

5b.1 If competing, why superior or rationale for additive value: N/A

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