NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

Measure Information Form

Measure Set: Heart Failure (HF)

Set Measure ID#: HF-2

Performance Measure Name: Evaluation of LVS Function

Description: Heart failure patients with documentation in the hospital record that left ventricular systolic (LVS) function was evaluated before arrival, during hospitalization, or is planned for after discharge

Rationale: Appropriate selection of medications to reduce morbidity and mortality in heart failure requires the identification of patients with impaired left ventricular systolic function. National guidelines advocate the evaluation of left ventricular systolic function as the single most important diagnostic test in the management of all patients with heart failure (Jessup, 2009 and HFSA, 2006).

Type of Measure: Process

Improvement Noted As: An increase in the rate

Numerator Statement: Heart failure patients with documentation in the hospital record that LVS function was evaluated before arrival, during hospitalization, or is planned for after discharge

    Included Populations: Not Applicable

    Excluded Populations: None

    Data Elements:
    LVF Assessment

Denominator Statement: Heart failure patients

    Included Populations:
    Discharges with an *ICD-9-CM Principal Diagnosis Code* for heart failure as defined in Appendix A, Table 2.1

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 enrolled in clinical trials
- Patients discharged/transferred to another hospital for inpatient care
- Patients who left against medical advice or discontinued care
- Patients who expired
- Patients discharged/transferred to a federal health care facility
- Patients discharged/transferred to hospice
- Patients with *Comfort Measures Only* documented
- Patients with reasons documented by a physician/advanced practice nurse/physician assistant for no LVS function evaluation

Data Elements:
- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Status*
- *ICD-9-CM Other Procedure Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Principal Procedure Code*
- *LVF Assessment*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: None

Sampling: Yes, please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion
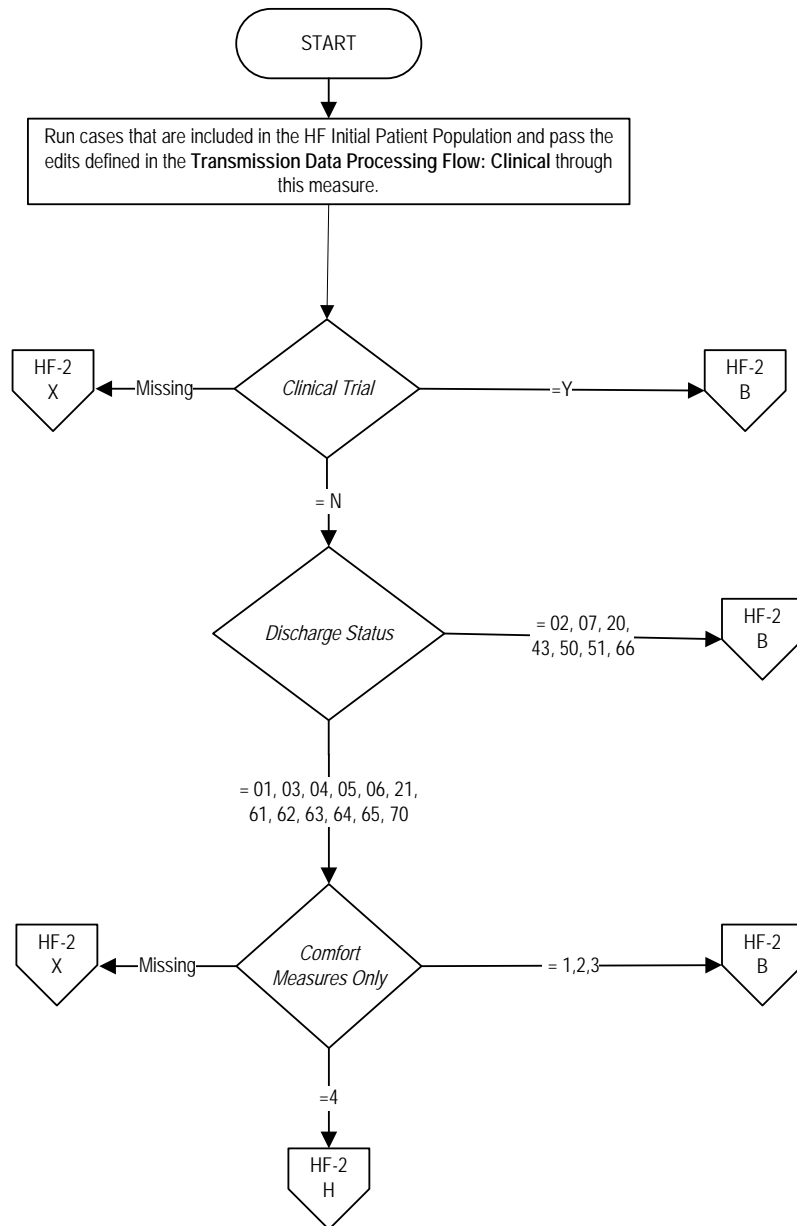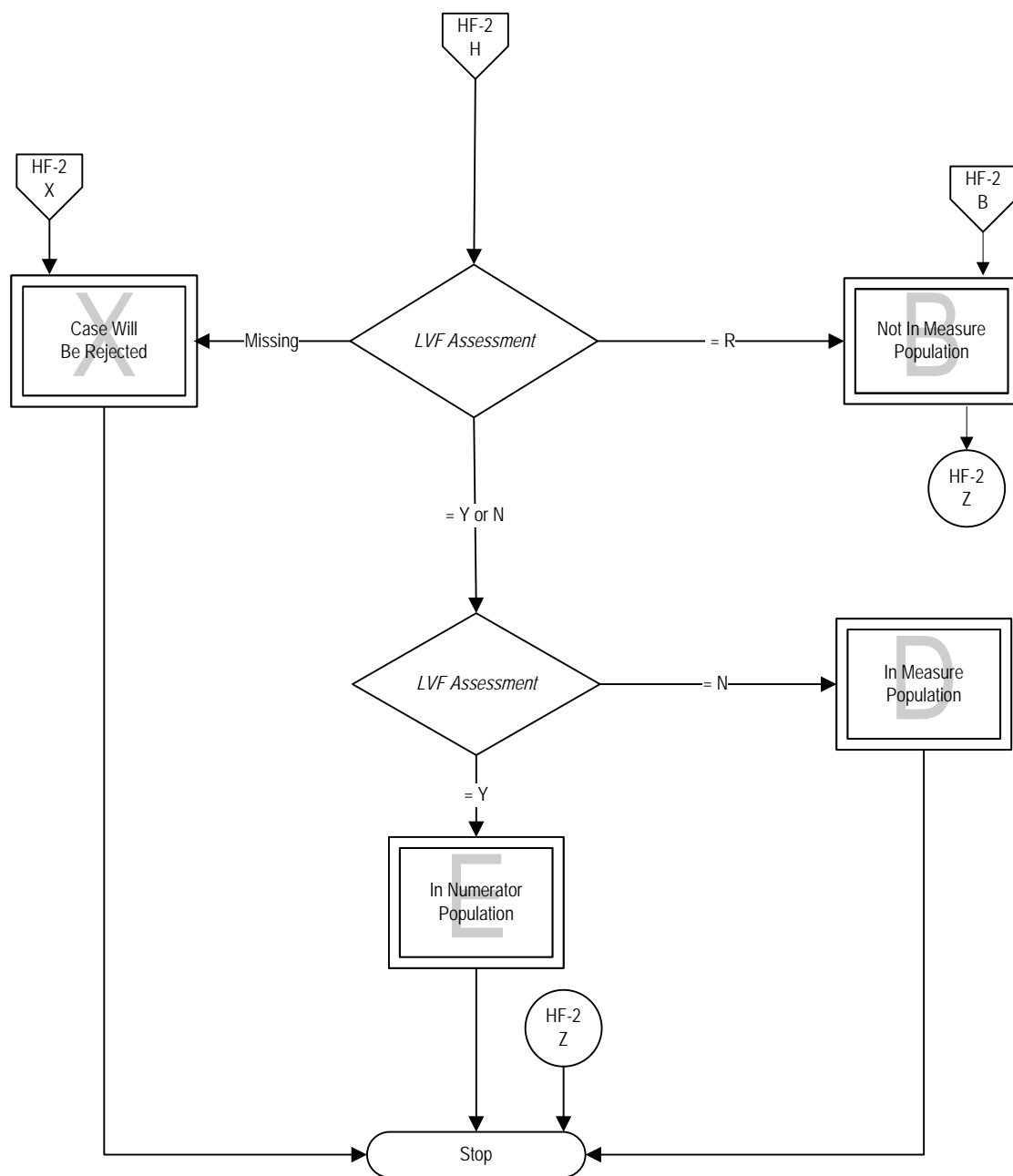
Selected References:
- Bonow RO, Bennett S, Casey DE, Ganiats TG, Hlatky MA, Konstam MA, et al. ACC/AHA Clinical Performance Measures for Adults With Chronic Heart Failure: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures (Writing Committee to Develop Heart Failure Clinical Performance Measures). *J Am Coll Cardiol.* 2005;46:1144–78. Available at http://www.acc.org and http://www.americanheart.org.
- Heart Failure Society of America. HFSA 2006 Comprehensive Heart Failure Practice Guideline. *J Card Fail.* 2006 Feb;12(1):e1-2.
- Jessup M, Abraham WT, Casey DE, Feldman AM, Francis GS, Ganiats TG, et al, writing on behalf of the 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult Writing Committee. 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol.* 2009;53:1343– 82.

HF-2: Evaluation of LVS Function

Numerator: Heart failure patients with documentation in the hospital record that LVS function was evaluated before arrival, during hospitalization, or is planned for after discharge.

Denominator: Heart failure patients.

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                              ┌──────────┐
                              │  START   │
                              └────┬─────┘
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                                   ▼
          ┌──────────────────────────────────────────────────┐
          │ Run cases that are included in the HF Initial      │
          │ Patient Population and pass the edits defined in    │
          │ the Transmission Data Processing Flow: Clinical     │
          │ through this measure.                              │
          └────────────────────────┬─────────────────────────┘
                                    │
                                    ▼
  ┌──────┐                      ◇ Clinical Trial ◇                      ┌──────┐
  │ HF-2 │ ◀── Missing ────────                     ──── =Y ────▶       │ HF-2 │
  │  X   │                                                              │  B   │
  └──────┘                          │ = N                              └──────┘
                                    ▼
                              ◇ Discharge Status ◇   = 02, 07, 20,      ┌──────┐
                                                     43, 50, 51, 66 ──▶ │ HF-2 │
                                                                        │  B   │
                                    │                                   └──────┘
                                    │ = 01, 03, 04, 05, 06, 21,
                                    │   61, 62, 63, 64, 65, 70
                                    ▼
  ┌──────┐                      ◇ Comfort       ◇                       ┌──────┐
  │ HF-2 │ ◀── Missing ────────   Measures Only    ──── = 1,2,3 ──▶     │ HF-2 │
  │  X   │                                                              │  B   │
  └──────┘                          │ =4                               └──────┘
                                    ▼
                                 ┌──────┐
                                 │ HF-2 │
                                 │  H   │
                                 └──────┘
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Heart Failure (HF)-2: Evaluation of Left Ventricular Systolic Function

Numerator: Heart failure patients with documentation in the hospital record that Left Ventricular Systolic function was evaluated before arrival, during hospitalization, or is planned for after discharge.

Denominator: Heart failure patients.

1. Start processing. Run cases that are included in the Heart Failure Initial Patient Population and pass the edits defined in the <mark>Transmission Data Processing Flow: Clinical</mark> 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 Status.

3. Check Discharge Status
   a. If Discharge Status equals 02, 07, 20, 43, 50, 51, or 66, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
   b. If Discharge Status equals 01, 03, 04, 05, 06, 21, 61, 62, 63, 64, 65, or 70, 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 Left Ventricular Function (LVF) Assessment.

5. Check LVF Assessment
   a. If LVF Assessment is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If LVF Assessment equals R, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

c.   If LVF Assessment equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

d.   If LVF Assessment equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.