

# Heart Failure (HF) Analytic Flowchart

## General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period where at least two visits had a documented diagnosis of heart failure (see Appendix A.1, and A.2)

**AND**

Patient is 18 years or older at the beginning of the measurement period

[HFCONFIRMED] = 1  
(see Appendix A.1 and A.2)

**AND**

Beginning of measurement period

– [DATEOFBIRTH] ≥ 18

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

# Heart Failure (HF) Analytic Flowchart

## HF Clinical Performance Measures

**LVF Assessment (\*HF-1): Percentage of patients with quantitative or qualitative results for LVF assessment**

**Denominator: All patients with HF  $\geq$  18 years of age**

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)

Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

### Denominator Exclusions

None

None

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

### Numerator Inclusions

Patients who have quantitative or qualitative results of LVF assessment recorded (see Appendix B.1, B.2, B.3)

[HFLVFRESULT] = 1  
(see Appendix B.1, B.2, B.3)

## Heart Failure (HF) Analytic Flowchart

**Left Ventricular Function (LVF) Testing (<sup>^</sup>HF-2): Percentage of patients with LVF testing during the current year for patients hospitalized with a principal diagnosis of HF during the current year**

**Denominator: All patients with a principal diagnosis of HF  $\geq$  18 years of age hospitalized during the measurement period**

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who were hospitalized during the measurement period for HF (see Appendix C.1)

Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

**AND**

[HFHOSPITAL] = 1

(see Appendix C.1)

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

Any visit where:  
Excluded for Medical Reason(s)  
Excluded for Patient Reason(s)  
(see Appendix D.1)

[HFLVFYEAR] = 3

**OR**

[HFLVFYEAR] = 4

(see Appendix D.1)

**Numerator: Patients with LVF testing during the measurement period**

### Numerator Inclusions

Patients who had LVF testing during the measurement period (see Appendix C.1, C.2, C.3)

[HFLVFYEAR] = 1

(see Appendix C.1, C.2, C.3)

## Heart Failure (HF) Analytic Flowchart

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

**Denominator: All patient visits for patients with HF  $\geq$  18 years of age**

#### Denominator Inclusions

All visits meeting the inclusion criteria  
(page 1)

Each [HFPCVISITDATE] = one case in  
the denominator

**AND**

Meeting inclusion criteria (page 1)

**AND**

[HFPCINVALID] = 0

Denominator Exclusions (Exclusions only applied if the patient weight measurement was not recorded)

Each HF visit where:

Excluded for Medical Reason(s):

- Patient visits in which physician was unable to weigh patient (see Appendix E.1)

Each [HFPCVISITDATE]

**WITH**

[HFWEIGHT] = 3

(see Appendix E.1)

**Numerator: Patient visits with weight measurement recorded**

#### Numerator Inclusions

Patient visits with a weight measurement recorded  
(see Appendix F.1, F.2)

Each [HFPCVISITDATE]

**WITH**

[HFWEIGHT] = 1

(see Appendix F.1, F.2)

## Heart Failure (HF) Analytic Flowchart

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

**Denominator: All patients with HF  $\geq$  18 years of age**

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)
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Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

### Denominator Exclusions

None
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None

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

### Numerator Inclusions

Patients provided with patient during one or more visit(s) (see Appendix G.1, G.2)
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[HFPTEDUCATION] = 1  
(see Appendix G.1, G.2)

## Heart Failure (HF) Analytic Flowchart

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

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

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have LVSD (defined as LVEF < 40% or with moderately or severely depressed left ventricular systolic function) (see Appendix H.1, H.2, H.3)

Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

**AND**

[HFCADLVSD] = 1

(see Appendix H.1, H.2, H.3)

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

Any visit where:  
Excluded for Medical Reason(s)  
Excluded for Patient Reason(s)  
Excluded for System Reason(s)  
(see Appendix I.1, I.2, I.3)

[HFBBLOCKDRUG] = 3

**OR**

[HFBBLOCKDRUG] = 4

**OR**

[HFBBLOCKDRUG] = 5

(see Appendix I.1, I.2, I.3)

**Numerator: Patients who were prescribed beta-blocker therapy**

### Numerator Inclusions

Patients who were prescribed beta-blocker therapy  
(see Table 1 and Appendix H.4)

[HFBBLOCKDRUG] = 1

(see Table 1 and Appendix H.4)

## Heart Failure (HF) Analytic Flowchart

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

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

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have LVSD (defined as LVEF  $<$  40% or with moderately or severely depressed left ventricular systolic function) (see Appendix J.1, J.2, J.3)

Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

**AND**

[HFCADLVSD] = 1

(see Appendix J.1, J.2, J.3)

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

Any visit where:  
Excluded for Medical Reason(s)  
Excluded for Patient Reason(s)  
Excluded for System Reason(s)  
(see Appendix K.1, K.2, K.3)

[HFACEARBDRUG] = 3

**OR**

[HFACEARBDRUG] = 4

**OR**

[HFACEARBDRUG] = 5

(see Appendix K.1, K.2, K.3)

**Numerator: Patients who were prescribed ACE inhibitor or ARB therapy**

### Numerator Inclusions

Patients who were prescribed ACE inhibitor or ARB therapy  
(see Tables 2, 3 and Appendix J.4)

[HFACEARBDRUG] = 1

(see Tables 2, 3 and Appendix J.4)

## Heart Failure (HF) Analytic Flowchart

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

**Denominator: All patients with heart failure  $\geq$  18 years of age with paroxysmal or chronic atrial fibrillation**

### Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have paroxysmal or chronic atrial fibrillation (see Appendix L.1)

Each unique [PATIENTID] = one case in the denominator

**AND**

Meeting inclusion criteria (page 1)

**AND**

[HFAFIB] = 1 (see Appendix L.1)

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

Any visit where:  
Excluded for Medical Reason(s)  
Excluded for Patient Reason(s)  
Excluded for System Reason(s)  
(see Appendix M.1, M.2, M.3)

[HFWARFDRUG] = 3

**OR**

[HFWARFDRUG] = 4

**OR**

[HFWARFDRUG] = 5

(see Appendix M.1, M.2, M.3)

**Numerator: Patients who were prescribed warfarin therapy**

### Numerator Inclusions

Patients who were prescribed warfarin therapy  
(see Table 4 and Appendix L.2)

[HFWARFDRUG] = 1

(see Table 4 and Appendix L.2)