

**HEART FAILURE NATIONAL HOSPITAL INPATIENT QUALITY MEASURES**

<b>Set Measure ID #</b>	<b>Measure Short Name</b>
<b>HF-1</b>	Discharge Instructions
<b>HF-2</b>	Evaluation of LVS Function
<b>HF-3</b>	ACEI or ARB for LVSD
<b>HF-4</b>	Adult Smoking Cessation Advice/Counseling

## HF DATA ELEMENT LIST

General Data Element Name	Collected For:
<i>Admission Date</i>	All Records
<i>Birthdate</i>	All Records
<i>Discharge Date</i>	All Records
<i>Discharge Status</i>	All Records (Used in Algorithm for All HF Measures)
<i>First Name</i> <sup>1</sup>	All Records <sup>1</sup>
<i>Hispanic Ethnicity</i> <sup>1</sup>	All Records <sup>1</sup>
<i>Hospital Patient Identifier</i> <sup>1</sup>	All Records <sup>1</sup>
<i>ICD-9-CM Other Diagnosis Codes</i>	All Records
<i>ICD-9-CM Other Procedure Codes</i>	All Records (Used in Algorithm for All HF Measures)
<i>ICD-9-CM Other Procedure Dates</i>	All Records
<i>ICD-9-CM Principal Diagnosis Code</i>	All Records
<i>ICD-9-CM Principal Procedure Code</i>	All Records (Used in Algorithm for All HF Measures)
<i>ICD-9-CM Principal Procedure Date</i>	All Records
<i>Last Name</i> <sup>1</sup>	All Records <sup>1</sup>
<i>Patient HIC #</i>	All Records Collected by CMS for patients with a <b>standard HIC#</b>
<i>Payment Source</i>	All Records
<i>Physician 1</i> <sup>1</sup>	Optional for All Records <sup>1</sup>
<i>Physician 2</i> <sup>1</sup>	Optional for All Records <sup>1</sup>
<i>Point of Origin for Admission or Visit</i>	All Records
<i>Postal Code</i> <sup>1</sup>	All Records <sup>1</sup>
<i>Race</i> <sup>1</sup>	All Records <sup>1</sup>
<i>Sample</i> <sup>3</sup>	Used in transmission of the Joint Commission's aggregate data file and the Hospital Clinical Data file <sup>3</sup>
<i>Sex</i>	All Records

Algorithm Output Data Element Name	Collected For:
<i>Measure Category Assignment</i> <sup>2,3</sup>	Used in the calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file <sup>2,3</sup>

## HF DATA ELEMENT LIST

HF Data Element Name	Collected For:
<i>ACEI Prescribed at Discharge</i>	HF-3
<i>Adult Smoking Counseling</i>	HF-4
<i>Adult Smoking History</i>	HF-4
<i>ARB Prescribed at Discharge</i>	HF-3
<i>Clinical Trial</i>	All HF Measures
<i>Comfort Measures Only</i>	All HF Measures
<i>Discharge Instructions Address Activity</i>	HF-1
<i>Discharge Instructions Address Diet</i>	HF-1
<i>Discharge Instructions Address Follow-up</i>	HF-1
<i>Discharge Instructions Address Medications</i>	HF-1
<i>Discharge Instructions Address Symptoms Worsening</i>	HF-1
<i>Discharge Instructions Address Weight Monitoring</i>	HF-1
<i>LVF Assessment</i>	HF-2
<i>LVSD</i>	HF-3
<i>Reason for No ACEI and No ARB at Discharge</i>	HF-3

<sup>1</sup>CMS ONLY

<sup>2</sup>The Joint Commission ONLY

<sup>3</sup>Transmission Data Element

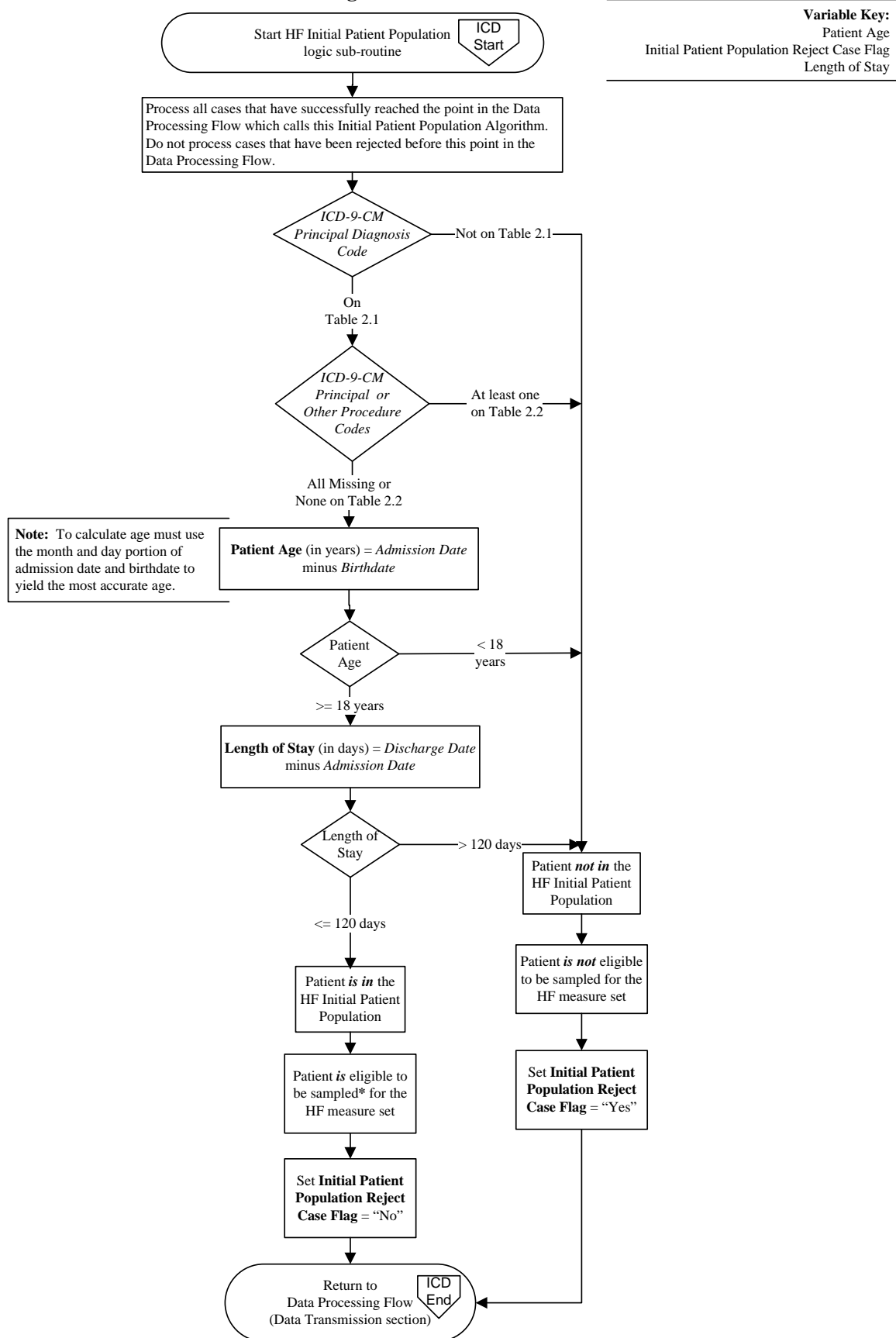
## Heart Failure (HF) Initial Patient Population

The population of the HF measure set is identified using 6 data elements:

- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Principal Procedure Code*
- *ICD-9-CM Other Procedure Codes*
- *Admission Date*
- *Birthdate*
- *Discharge Date*

Patients admitted to the hospital for inpatient acute care with an *ICD-9-CM Principal Diagnosis Code* for HF as defined in Appendix A, Table 2.1, no *ICD-9-CM Principal or Other Procedure Code* of Left Ventricular Assistive Device (LVAD) or Heart Transplant as defined in Appendix A, Table 2.2, a Patient Age (*Admission Date – Birthdate*)  $\geq$  18 years , and a Length of Stay (*Discharge Date - Admission Date*)  $\leq$  120 days are included in the HF Initial Patient Population and are eligible to be sampled.

## HF Initial Patient Population Algorithm



## HF Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample. Hospitals that have five or fewer HF discharges (both Medicare and non-Medicare combined) in a quarter are not required to submit HF patient level data to the QIO Clinical Warehouse and Joint Commission’s Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Because the sample for a measure set will rarely be equal to the effective sample due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

### *Quarterly Sampling*

Hospitals performing quarterly sampling for HF must ensure that its Initial Patient Population and effective sample size meet the following conditions:

- *The effective sample size for HF is at least 35 cases per quarter; and*
- *The required sample size is at least 20% of the Initial Patient Population for the quarter.*

**Quarterly Sample Size  
Based on Initial Patient Population Size for the HF Measure Set**

<i>Hospital’s Measure</i>	
Average Quarterly Initial Patient Population Size “N”	Minimum Required Sample Size “n”
≥ 1516	304
381 - 1515	20% of Initial Patient Population size
76 – 380	76
6 - 75	No sampling; 100% Initial Patient Population required
0 - 5	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required

### Monthly Sampling

Hospitals performing monthly sampling for HF must ensure that its Initial Patient Population and effective sample size meet the following conditions:

- The effective sample size for HF is at least 12 cases per month; and
- The required sample size is at least 20% of the Initial Patient Population for the month.

**Monthly Sample Size  
Based on Initial Patient Population Size for the HF Measure Set**

<i>Hospital's Measure</i>	
<b>Average Monthly Initial Patient Population Size "N"</b>	<b>Minimum Required Sample Size "n"</b>
≥ 506	102
131 – 505	20% of Initial Patient Population size
26 – 130	26
< 26	No sampling; 100% Initial Patient Population required

### Sample Size Examples

- *Quarterly sampling:*
  - The HF Initial Patient Population size for a hospital has been 500 patients per quarter during the past year. The required quarterly sample size would be 100 (twenty percent of 500) heart failure patients per quarter -- as this number is smaller than the maximum condition (i.e., 304 cases) and larger than the minimum condition (i.e., 76 cases).
  - A hospital's HF Initial Patient Population size is 1,482 patients during the third quarter. The required sample size is 20% of the patient population or 297 cases for the quarter (twenty percent of 1,482 equals 296.4 rounded to the next highest whole number = 297).
  - A hospital's HF Initial Patient Population size is 5 patients during the first quarter. Submission of patient level data is not required. If the hospital chooses to submit patient level data, the required quarterly sample size would be 100% of the patient population or 5 cases for the quarter.
- *Monthly sampling*
  - A hospital's HF Initial Patient Population size is 25 patients during March. Since this is less than the minimum condition (i.e., 26 cases), no sampling is allowed or 100% of the patient population of 25 cases is required.
  - A hospital's HF Initial Patient Population size is 503 patients during July. The required sample size is 20% of the patient population or 101 cases for the month (twenty percent of 503 equals 100.6 rounded to the next highest whole number = 101).