

# Arizona Data

HoW participants provided HSAG with 12 months of summary data to analyze the quality measure, “ACE-I prescribed at discharge for patients with left ventricular systolic dysfunction (LVSD) admitted with either AMI or HF.” Charlie Chapin, MS, CHCA, HSAG Director of Decision Support, presented the results of the analysis to HoW participants at their November 20, 2003, meeting.

Nineteen Arizona hospitals submitted medical records with discharge dates from July 2002 through June 2003. These 8,112 medical records contained 5,167 acute myocardial infarction (AMI) cases (63.7 percent), while the remaining 2,945 cases (36.3 percent) pertained to heart failure (HF). Of the 8,112 records, only 1,634 (20.1 percent) of the patients were eligible to receive ACE-I at discharge (Figure 1).

Of the 739 eligible AMI cases, 570 (77.1 percent) received ACE-I at discharge.<sup>1</sup> The HF rate was slightly higher, with 701 of 895 eligible cases (78.3 percent) receiving ACE-I at discharge.<sup>2</sup> At the hospital level, the correlation is weak between the ACE-I rate for eligible AMI cases and the corresponding HF rate (Figure 2). In other words, some hospitals have high ACE-I rates for AMI cases but low rates for HF cases, and vice versa. When AMI and HF cases are combined into an overall hospital ACE-I rate, the 19 hospital rates range from 62.1 percent to 97.9 percent (Figure 3).

<sup>1</sup>Compared to a national average of 71 percent (*Medicare Improvement Priorities*, August 2003, CMS Pub. No. 11041)

<sup>2</sup>Compared to a national average of 66 percent (*Medicare Improvement Priorities*, August 2003, CMS Pub. No. 11041)

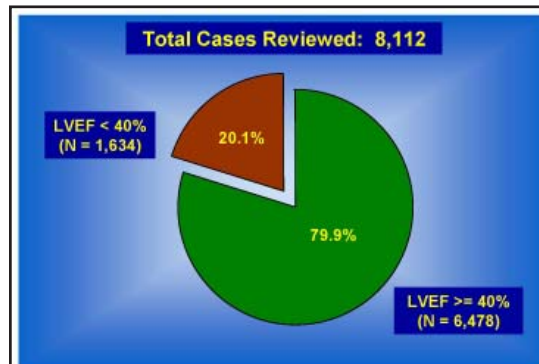


Fig. 1. Proportion of AMI and HF Cases Eligible for ACE-I at Discharge Among Total Reviewed by 19 Hospitals, July 2002 through June 2003

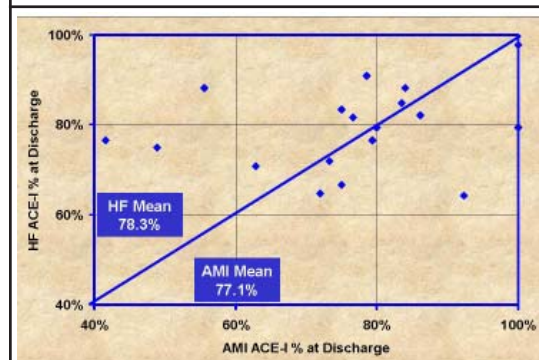


Fig. 2. HF vs. AMI: ACE-I at Discharge (One Point per Hospital, All Four Quarters Combined)

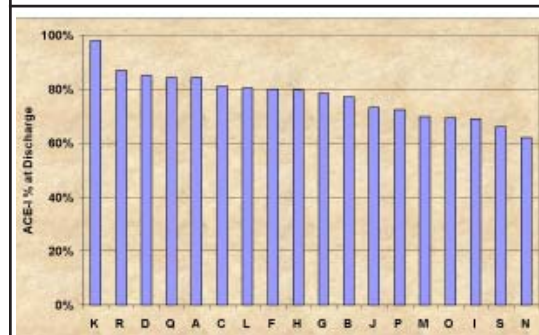


Fig. 3. ACE-I Percentage at Discharge by Hospital (Sorted from High to Low) (Both Clinical Topics and All Four Quarters Combined)

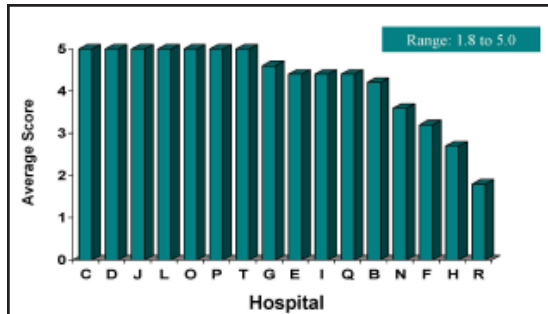


Fig. 4. Average Facility Assessment Scores by Hospital (N = 16)

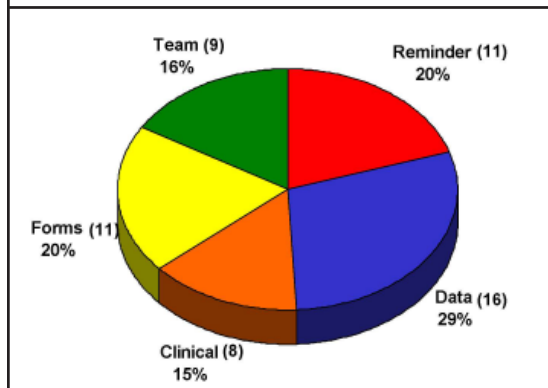


Fig. 5. Facility Assessment Survey (N = 16) Distribution of High Responses ("5s") by Category

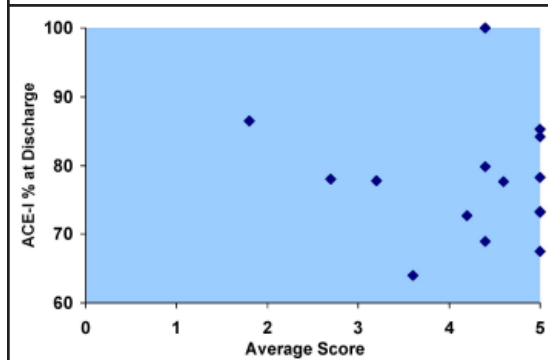


Fig. 6. Correlation of Average Survey Score and Combined ACE-E %

HoW participants wanted to see if there was any correlation between the ACE-I data results and administrative processes. Participants completed and submitted a Facility Assessment Survey, a tool that was adapted from the Momentum Assessment—developed by Andrea B. Silvey, PhD, MSN, HSAG Chief Quality Improvement Officer.

Sixteen hospitals completed a Facility Assessment Survey. Of these 16, all but one of them submitted data for the quality indicator (Figure 4). Intervention level scores from “1” to “5,” with “5” being the best score, were assigned to five separate categories: Team, Forms, Clinical Support, Data Collection, and Reminders. The five category scores were combined into an average assessment score for each hospital. These averages ranged from 1.8 to 5.0. All 16 hospitals were confident in their Data Collection interventions, as each assigned a score of 5 for this category (Figure 5).

The data revealed no correlation between the hospitals’ assessment scores and the percentage of eligible patients receiving ACE-I at discharge (Figure 6). This was true for all five individual score categories as well as the average score.

# Numerator/Denominator: Eligible Patient Population

## Quality Measure

The Quality Measure includes AMI or HF patients with left ventricular systolic dysfunction (LVSD), and without ACE-I contraindications, who are prescribed an ACE-I at hospital discharge.

Definition of LVSD:

- ♥ Documentation of a left ventricular ejection fraction (LVEF) less than 40 percent, *or*
- ♥ Narrative description of left ventricular function (LVF) consistent with moderate or severe systolic dysfunction.
- ♥ When there are two or more documented LVFs, the LVF closest to discharge is used.

Definition of ACE-I contraindications:

- ♥ The patient is participating in an ACE-I alternative clinical trial at the time of discharge.
- ♥ There is documentation of a potential contraindication/reason for not prescribing an ACE-I at discharge (ACE-I allergy, moderate or severe aortic stenosis, or other reason) documented by a physician, nurse practitioner, or physician assistant.

## Numerator Statement

The numerator includes all patients who are prescribed an ACE-I at hospital discharge.

## Denominator Statement

The denominator includes all AMI or HF patients with LVSD and without ACE-I contraindications.

## Eligible Patient Population

The eligible patient population includes those discharged with:

- ♥ A principal diagnosis of AMI (ICD-9-CM codes 410.01, 410.11, 410.21, 410.31, 410.41, 410.51, 410.61, 410.71, 410.81, 410.91)
  - o Chart documentation of an LVEF less than 40 percent or a narrative description of

LVF consistent with moderate or severe systolic dysfunction

- ♥ A principal diagnosis of heart failure (ICD-9-CM codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.9)
  - o Chart documentation of an LVEF less than 40 percent or a narrative description of LVF consistent with moderate or severe systolic dysfunction

Those excluded from the eligible population include:

- ♥ Patients less than 18 years of age.
- ♥ Patients transferred to another acute care hospital.
- ♥ Patients who expired.
- ♥ Patients who left against medical advice.
- ♥ Patients discharged to hospice.
- ♥ Patients with chart documentation of participation in a clinical trial testing alternatives to ACE-Is as first-line heart failure therapy.
- ♥ Patients with one or more of the following ACE-I contraindications/reasons for not prescribing ACE-I documented in the medical record:
  - o ACE-I allergy
  - o Moderate or severe aortic stenosis
  - o Other reasons documented by a physician, nurse practitioner, or physician assistant for not prescribing ACE-I at discharge

<b>Facility Assessment</b> <b>ACE-I at Discharge</b> Please rate your facility's status for each of the categories below on a 1–5 scale, and add comments as appropriate.	Interventions (actions) have not been identified as necessary by clinical staff or executive leadership	Intervention concept has been discussed in meetings but no official action has been taken	Intervention concept has been approved by clinicians and executive leadership, but has not been developed	Interventions in place, but are not accepted by clinical team members and/or not supported by executive leadership	Interventions in place are accepted by clinical team members, including physicians, and are supported by executive leadership
<b>Team</b> There is a multi-disciplinary team dedicated to improving care provided to cardiac patients. <i>EXAMPLE:</i> Cardiac Care Team comprised of physicians, nursing, executive leaders, and ancillary staff	1	2	3	4	5
<b>Forms</b> Cardiac protocols, guidelines, standing orders, or other forms are available for physician use or reference. These documents include the use of ACE-I at discharge for LVSD. <i>EXAMPLE:</i> Protocols, orders, guidelines	1	2	3	4	5
<b>Clinical Support</b> There is a position dedicated to the cardiac population. Tasks associated with the position <i>may</i> include overseeing the care provided to the individual patient while assuring that the entire population receives appropriate care. <i>EXAMPLE:</i> Case Manager	1	2	3	4	5
<b>Data Collection</b> Medical records are reviewed for compliance with the quality indicator, and results are shared and discussed with the medical staff either as a group or individually. <i>EXAMPLE:</i> Data results are discussed in cardiology committee	1	2	3	4	5
<b>Reminders</b> There are visual reminders about the use of ACE-I at discharge for LVSD for physicians and other clinical team members. <i>EXAMPLE:</i> Physician reminder stickers	1	2	3	4	5