

## Discharging Our Responsibility

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### The Case

A 75-year-old man with a history of hypertension, coronary artery disease, and congestive heart failure (CHF) presented to the emergency department (ED) with shortness of breath and fatigue. He had a long history of CHF exacerbations requiring hospitalization and was known to the ED as a "frequent flyer." In fact, he had been discharged from the hospital just 3 days prior. On physical examination, the patient had a low oxygen saturation level with elevated neck veins and crackles on chest auscultation, all consistent with an exacerbation of his CHF.

When asked by the admitting physician what happened, the patient replied, "You know, I was feeling pretty good when I left here, but my breathing just got worse and worse." Upon further questioning, it became clear that the patient had been eating bags of potato chips, not restricting his fluid intake, and only intermittently taking his diuretics. Since discharge, he had gained 6 pounds.

The admitting physician realized that the patient had a poor understanding of his disease and how to care for himself outside of the hospital. In reviewing prior admissions, the physician discovered that the patient had never been given explicit discharge instructions about CHF and had received only a generic medical-surgical discharge instructions handout.

In the hospital, the patient was treated with diuretics, an angiotensin-converting enzyme (ACE) inhibitor, and a beta-blocker, and he improved clinically. At the time of discharge, he was counseled on appropriate activity, diet, medications, his follow-up appointment, and weight monitoring. Subsequently, he did well and was not readmitted to the hospital for more than 2 months.

### The Commentary

Heart failure (HF) is the leading cause of hospitalization in persons older than 65 years, with almost 3.6 million hospitalizations attributed to HF as the primary or secondary discharge diagnosis each year.<sup>(1)</sup> Patients with HF face a substantial risk for recurrent exacerbations of their disease: up to 20% of discharged patients are rehospitalized within 30 days and 50% have one or more rehospitalizations within 6

months.(1,2) Uniform high-quality health care might reasonably be expected to reduce this burden of frequent readmissions and the mortality associated with HF. The above case highlights one of the Joint Commission/Center for Medicare and Medicaid Services (CMS) Core Measures of quality: providing specific instructions to patients with HF at the time of discharge from the hospital. The case also illustrates how HF care is frequently less than optimal.

Randomized clinical trials have established a number of effective therapies and care strategies for patients with HF. Professional societies have developed evidence-based guidelines for the diagnosis and treatment of patients with HF.(1,3) To facilitate the measurement of and improvement in quality of care in HF, components of these guidelines have been adapted by various organizations, including the Joint Commission/CMS, as performance measures.(4,5) These performance measures are based on practice guidelines but are confined to those processes of care for which the evidence is so strong that the failure to perform them reduces the likelihood of optimal patient outcomes.(4) The Joint Commission/CMS hospital performance measures incorporate elements of diagnosis, patient education, treatment, and self-management (Table).(4,5) Measures are applied only to eligible patients without contraindications, documented intolerance, or other documented health care provider reason for not providing the recommended element of care. The hospital discharge period has been a focus of HF performance measures due to the ease of access to patients and the opportunity to implement, manage, and measure intervention strategies. Conformity with the specific discharge instruction measure requires that written instructions or educational material be given to the HF patient or caregiver at discharge or during the hospital stay addressing *all* of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.

The rationale for providing discharge instructions has been derived from expert opinion, observational studies, and randomized trials comparing conventional management to HF disease management programs that included patient counseling on diet, exercise, medications, and monitoring.(4) One randomized controlled trial of 223 systolic HF patients compared the effects of a 1-hour, one-on-one teaching session with a trained nurse educator to the standard discharge process.(6) Patients in the education arm of the study were also given a copy of the guidelines for HF treatment written in layman's terms. Patients receiving the education intervention had a 35% lower risk of rehospitalization or death. Rich and colleagues randomized 282 elderly HF patients to usual care versus a nurse-directed multidisciplinary intervention.(7) The intervention in this study included not only intensive education about HF but also nurse participation in the medical management of the patients as well as home visits, including in some cases visiting homes to administer intravenous diuretics. This study reported that the intervention group had a 56% reduction in HF readmissions.(7)

It is important to note that these studies involved elements of care beyond those assessed in the Joint Commission discharge instruction performance measure. It not yet known whether the discharge instruction performance measure as extracted from hospital medical records truly reflects whether the patient did or did not receive and comprehend each defined component. Patient education may be documented in the medical record even if it was done in a rushed or superficial manner at discharge, making it less likely that the patient would retain the information. To be counted as conforming to the performance measure, hospitals are required to provide instructions in all six domains listed above.(4,5) It has not been established that conforming to the measure truly reduces the risk for rehospitalization or

mortality in HF patients.(8) It is also not known if all of the discharge instruction components are equally important or if certain elements should receive particular attention. Thus, it is essential that complete, high-quality discharge instructions be provided to patients and their family members in a way that the instructions will be well comprehended and retained.

During acute care hospitalization, education should focus on assisting patients to understand HF, the goals of treatment, and the posthospitalization medication and follow-up regimen. Successful patient education is an interactive process in which patients and caregiver participate by asking questions and by demonstrating that they have comprehended and retained what they were told.(3) Counseling emphasizes individualized delivery of important information, taking into account factors that interfere with successful understanding and participation in self care, as well as a patient's readiness to receive the education. It is important for health care teams to plan HF education so that it takes place over the course of the hospitalization and that simpler or acute topics of importance supersede complex or chronic-care topics. If HF education is left entirely until the day of hospital discharge, information saturation will likely occur and little information will be retained. Patient education may be provided by bedside nurses, advance practice nurses, pharmacists, and physicians.(3) Verbal education should also be supplemented by written educational materials such as HF educational booklets and other means such as videos. HF-trained nurse educators and multidisciplinary disease management programs have been shown to be particularly effective in providing inpatient HF teaching and discharge instructions, resulting in fewer HF readmissions.(6,7) Ideally, education begun during hospitalization should be supplemented and reinforced within 1–2 weeks after discharge, continued for 3–6 months, and reassessed periodically.(3)

A well-documented treatment gap exists for patients with HF despite readily accessible national guidelines and publicly reported hospital performance measures. As in this patient's case, many HF patients are discharged from the hospital without having received important or adequate instructions in HF self care, symptoms, medications, and follow-up. For HF patients discharged in 2002 from US hospitals, Joint Commission and national HF registry data indicate that only 20%–30% received complete discharge instructions. Hospitals face substantial challenges in providing this important element of HF care. Effective models of HF education are time intensive, no matter the provider or system used. Currently, education is bundled into the diagnosis-related group (DRG) payment; insurers do not reimburse for education programs that have been demonstrated to improve postdischarge outcomes.

Several state and national initiatives have been undertaken to improve the quality of care for patients hospitalized with HF.(9,10) The Joint Commission performed an uncontrolled quality-of-care improvement project looking at the change in recognized performance measures over time for several diseases, including HF.(9) A total of 1864 accredited hospitals were required to submit data relating to their performance on the core HF measures over a 2-year period (2002–2004). Participating hospitals received comparative feedback data on a quarterly basis; otherwise, no specific behavior-modification techniques or performance-enhancement incentives were used. Over the 2-year study period, the discharge instruction HF performance measure improved significantly, increasing from 29% to 55%, an absolute change of 26%.(9)

Building on features of previous programs, the American Heart Association's Get With The Guidelines (GWTG) Program aimed to increase adherence to evidence-based guideline recommendations and

performance measures for hospitalized HF patients. The GWTG program employed a web-based patient registry that facilitated feedback of performance data, provided specific process-of-care improvement tools, and promoted in-hospital initiation of recommended therapies. Discharge instruction use increased to 78.7% by the fourth quarter of hospital participation in GWTG.<sup>(11)</sup> The results of GWTG-HF and other health care-improvement programs demonstrate that the quality of care provided to patients with HF can be enhanced by the use of patient data submission, performance feedback, and use of process-of-care improvement tools like discharge checklists.

The patient's experience in this case illustrates several key points about HF discharge instructions, common gaps in providing HF patient education, and the need to enhance the quality of care for patients hospitalized with HF. Deficiencies in HF patient education may contribute to early readmission, whereas provision of evidence-based HF treatment and discharge instructions is more likely to be associated with better clinical outcomes. Hospital teams should make every effort to improve the delivery of high-quality HF care, including complete discharge instructions.

#### Take-Home Points

- Hospitalization for HF is common and readmission rates are high.
- Randomized controlled trials of focused patient education in HF have shown benefits in mortality and readmission rates.
- According to the Joint Commission and Medicare, providing HF education in six key domains at discharge is a marker of hospital quality.
- HF teaching should be a continuous process that is started at the time of admission, involves verbal and written education, and is reinforced after discharge.

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## Table

Table. Joint Commission/CMS Heart Failure Inpatient Performance Measure Descriptions.

<b>Performance Measure Name</b>	<b>Measure Description</b>
Discharge instructions	Heart failure patients discharged home with written instructions or educational material given to patient or caregiver at discharge or during the hospital stay addressing <i>all</i> of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.
Evaluation of left ventricular systolic function	Heart failure patients with documentation in the hospital record that left ventricular systolic function was assessed before arrival, during hospitalization, or is planned after discharge.

ACE inhibitor or ARB at discharge for left ventricular systolic dysfunction	Heart failure patients with left ventricular systolic dysfunction and without both ACE inhibitor and ARB contraindications who are prescribed an ACE inhibitor or ARB at hospital discharge.
Adult smoking cessation advice/counseling	Heart failure patients with a history of smoking cigarettes, who are given smoking cessation advice or counseling during hospital stay.

ACE, angiotensin-converting enzyme; ARB, angiotensin receptor blocker.

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