

Chronic Heart Failure

Chronic heart failure affects 6 or 7 out of every 100 adults age 65-74, and these numbers are increasing. Hospital and resource use associated with heart disease is tremendous, with heavy utilization of both inpatient and outpatient services. CHF is a lethal disease: approximately two-thirds of those veterans with CHF die within five years of their initial hospitalization. Because of the seriousness and prevalence among veterans, CHF was identified as an important QUERI group. Therapies that can relieve or control symptoms of these heart conditions are available, yet are often underused. For example, national surveys have repeatedly shown that life-prolonging treatment with angiotensin converting enzyme agents is underused in people with CHF. In addition, significant proportions of patients do not receive advice on salt restrictions and/or have poorly controlled high blood pressure.

The Chronic Heart Failure Quality Enhancement Research Initiative (CHF QUERI) was created to employ the QUERI process (see back page) to create measurable, rapid and sustainable improvements in quality of care and in the health outcomes of veterans with chronic heart failure. Since its inception in 1998, CHF QUERI has focused on creating the infrastructure for the CHF Coordinating Center, investigating best practices, and creating a presence as a resource for heart failure research and practice within VA. For FY 2001, CHF QUERI is focused on translating results of current research into practice.

Translating Research into Practice

The CHF QUERI Coordinating Center, in collaboration with VISN 16, will conduct a two-year project to develop, implement and monitor a case management and educational intervention at several VISN 16 facilities designed to improve the care of patients with CHF and to reduce hospital readmission rates. Outcomes to be measured include weight management, medication compliance, reductions in hospital readmission rates, use of urgent care, multi-stay ratio, and one-year survival.

CHF is a high-utilization condition for VHA. For example, in 1997 nearly 14 percent of all CHF discharges from VA hospitals were followed by a readmission within 14 days. In that same year, more than half (53.7 percent) of the patients discharged with a diagnosis of CHF were readmitted within 180 days. From the viewpoint of the health care system, this heavy use of services should be a major financial concern. From the viewpoint of the patient, it signifies frequent cyclical decompensation in a disease that is already associated with poor functional status, an inability to pursue normal daily activities, and constant disruption of home and family life.

It is important to recognize that a growing body of literature suggests that many of these admissions are preventable. Prior work conducted by CHF QUERI shows that 1 in 5 of these readmissions is attributable to substandard care, in that patients are discharged before readiness for discharge criteria (i.e., clinical stability, education of the patient and family, and plan for follow-up medical care) are met. Therefore, measures to insure readiness for discharge prior to hospital discharge may be the first in a series of steps toward reducing heart failure readmissions. Other work suggests that comprehensive care programs can reduce the risk of hospital admission, improve functional status, and possibly lower medical costs. The central intent of most of these programs has been to emphasize compliance with recommended therapy, to enhance patient education (including self-weight monitoring and salt restriction), and to provide careful outpatient surveillance and follow up.

CHF QUERI is developing strategies that will facilitate the sustainability of this project so that it may continue after QUERI investigators have completed their specific work. In addition, we will facilitate a national roll-out of this successful program. This program is expected to generate savings because of

The CHF QUERI Executive Committee:

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The Research Coordinator is **Nelda Wray, MD** and the Clinical Coordinator is **Mark Dunlap, MD**. CHF QUERI's Executive Committee includes 11 other experts in the field of chronic heart failure: Inderjit Anand, MD, Donald Chang, MD, Guillermo Cintron, MD, Anita Deswal, MD, Eric Eichhorn, MD, Catarina Kiefe, MD, PhD, Barry Massie, MD, Freny Mody, MD, Mara Slawsky, MD, PhD, David Whellan, MD, and **Mary J. York, PhD** (Translation Coordinator).

reduced hospital stays, thus VISN and facility leadership will see the value in providing continued support for the program.

Additional CHF QUERI Projects

The following are just a few of the exciting CHF QUERI projects:

- *CHF Database Cohort:* This database contains demographic, clinical, and VA resource utilization information from FY97 through FY00 on over 285,000 veterans with heart failure. Information is available on hospital use (i.e., bed days of care in acute and extended care facilities, multi-stay rate), outpatient use (i.e., total visits as well as visits to primary care, cardiology, urgent care, and other specialists), diagnostic and therapeutic cardiac procedures, and mortality. The database can also be used to monitor patient and system outcomes. As facilities obtain performance feedback reports, they can modify care to improve such measures as readmissions, which can lead to cost savings.
- *Validating CHF diagnostic accuracy in outpatient clinic (OPC) file:* The results will be posted on the CHF QUERI website and disseminated to CHF researchers and clinicians through peer-reviewed manuscripts and

various presentations. This study includes 13 VA hospitals and 600 medical charts. The significance of this study is that it will be the first study to document the validity of CHF diagnoses in the OPC file. The results will be posted on the CHF QUERI website and disseminated to CHF researchers and clinicians through a peer-reviewed manuscript.

- *Costs of care:* The CHF QUERI Coordinating Center will design and conduct a study of the cost of treating patients with CHF. The Allocation Resource Center reports monthly costs of care for all patients in VHA. The costs of patients in the CHF cohort will be extracted from the Austin database that stores these data. Total and average costs for CHF patient costs will then be calculated for each facility.
- *Appropriate use of medication:* The CHF QUERI Coordinating Center is conducting a study to evaluate the appropriate use of spironolactone in patients with heart failure. In addition to standard pharmacological therapy, spironolactone had been reported to substantially reduce the risk of morbidity and death among patients with severe heart failure. However, there have been some reports that this drug is associated with serious hyperkalemia. The CHF QUERI study is utilizing data

in the CHF database that is being merged with the PBM (Pharmacy Benefits Management) database to further assess this possible side effect of spironolactone.

Quality Enhancement Research Initiative

QUERI currently focuses on eight conditions that are prevalent and high-risk among veteran patients: Colorectal Cancer, Chronic Heart Failure, Diabetes, HIV/AIDS, Ischemic Heart Disease, Mental Health, Spinal Cord Injury, and Substance Abuse.

The QUERI Process

The QUERI process includes six steps:

- 1) identify high-risk/high-volume diseases or problems;
- 2) identify best practices;
- 3) define existing practice patterns and outcomes across VA and current variation from best practices;
- 4) identify and implement interventions to promote best practices;
- 5) document that best practices improve outcomes; and
- 6) document that outcomes are associated with improved health-related quality of life and systems improvements.

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VA's Research and Development QUERI Website: <http://www.va.gov/resdev/queri.htm>

CHF QUERI direct web link: <http://www.hsr.d.houston.med.va.gov/chfqueri/>