

QUERI currently focuses on nine conditions that are prevalent and high-risk among veterans: Chronic Heart Failure, Diabetes, HIV/Hepatitis, Ischemic Heart Disease, Mental Health, Polytrauma and Blast-Related Injuries, Spinal Cord Injury, Stroke, and Substance Use Disorders.

Human Immunodeficiency Virus (HIV) infection causes a chronic, progressive disease that leads to early death if untreated. HIV infection is characterized by persistent viral replication over an extended period of time, during which patients experience few or no symptoms even though the immune system is under siege. Over the course of 5–10 years without proper treatment, HIV infection typically results in significant immune depletion and dysfunction that leads to chronic symptoms and greatly increased vulnerability to a variety of opportunistic conditions (i.e., pneumonia, tuberculosis, and various cancers) that characterize AIDS (Acquired Immune Deficiency Syndrome). According to the Centers for Disease Control and Prevention, in 2002 there were an estimated 800,000 to 900,000 individuals known to be living with AIDS or HIV infection in the U.S. In the same year, 19,346 patients received HIV care in the Veterans Health Administration (VHA). This makes VHA the largest single provider of HIV care in the U.S.

Hepatitis C virus (HCV) is spread similarly to HIV, through infected blood and other body fluids. One of every four persons diagnosed with HIV is co-infected with hepatitis C, the most common form of viral hepatitis. These 458,000 veterans account for 10% of those enrolled in the VA system. Hepatitis C is one of the most important causes of chronic liver disease; it accounts for about 15% of acute viral

hepatitis, 60%–70% of chronic hepatitis, and up to 50% of cirrhosis, end-stage liver disease, and liver cancer.

HIV/Hepatitis Quality Enhancement Research Initiative

The HIV/Hepatitis Quality Enhancement Research Initiative (QUERI-HIV/Hepatitis) employs the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with HIV and/or HCV. QUERI-HIV/Hepatitis also produces critical information on best practices deemed essential for the effective care of veterans with HIV. QUERI-HIV/Hepatitis' mission is to make evidence-based HIV and HCV care more accessible, optimize the application of evidence-based HIV therapies, and improve the delivery of collaborative and comprehensive treatment of comorbid conditions in order to ensure better health for veterans who live with HIV and/or HCV.

QUERI-HIV/Hepatitis Projects and Findings

QUERI-HIV/Hepatitis activities include the development of an implementation research portfolio, as well as the completion and dissemination of earlier projects. For example, QUERI-HIV/Hepatitis research has shown that 55% of HIV patients in VA care during 2001 received acceptable combinations of antiretroviral (ARV) drugs where clearly indicated, ranging from 27% to 82% per facility. However, 4% received single drugs or combinations of drugs that are not recommended, ranging from 0% to 21% of patients per site. These findings led to the development of several research projects that emphasize the importance of optimizing therapy by addressing gaps in provider adherence to evidence-based guidelines for appropriate HIV care. These data also revealed that while total encounters for HIV-positive patients in primary care or infectious disease clinics have remained steady, the frequency of these encounters

The QUERI-HIV/Hepatitis Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The co-research coordinators for HIV/Hepatitis-QUERI are **Allen Gifford, MD**, and **Steven Asch, MD, MPH**; the clinical coordinator is **Matthew Goetz, MD**. This Executive Committee includes other experts in the field of HIV/AIDS: Jane Burgess, RN; Jason Dominitz, MD, MHS; Hashem El-Serag, MD, MPH; James Halloran, MSN, RN, CNS; **Randal Henry, DrPH, MPH** (Implementation Research Coordinator); Mark Holodniy, MD; Amy Justice, MD, PhD; Don MacIver; Larry Mole, PharmD; Douglas Owens, MD, MSc; David Rimland, MD; Michael Simberkoff, MD; Joel Tsevat, MD, MPH; and Paul Volberding, MD.

has declined, as has the number of hospital stays. However, there was a rapid and dramatic increase in the percentage of primary discharge diagnoses for acute Hepatitis C—up from approximately 8% in 1993 to 43% in 2001.

Other projects include:

- *VISN QI* includes a clinical reminder that alerts primary care physicians to order an HIV test for veterans at risk.
- *Rapid Test* incorporates a method for integrating rapid HIV tests into primary and urgent care.
- *Homeless Veterans HIV Testing* offers rapid HIV testing to homeless VA-eligible veterans in urban shelters.
- *Comprehensive Care* compares viral suppression outcomes among veterans who attend clinics with integrated services to those who do not.
- *HCV Self-Management* is a three-year randomized trial comparing a patient self-management intervention for veterans with Hepatitis C to that of usual care.
- *HI-TIDES* is a project conducted in collaboration with the Mental Health QUERI, which aims to adapt and test a collaborative care model for coordinated depression care in HIV treatment settings.
- *Computer Adherence Care Enhancement* is evaluating a patient touch-screen computer system with which HIV-positive veterans answer questions about how well they understand their medications, how consistently they're taking them, and what barriers they face in adhering to the medications.

QUERI-HIV/Hepatitis continues to seek out and develop durable partnerships with stakeholders throughout the VA, including: (1) across organizational entities, (2) in dispersed geographic areas, and (3) with related disease-focused groups.

Improving access to HIV care

Not all veterans at risk for HIV within the VA are being appropriately screened, and some that actually are HIV-positive are not receiving evidence-based care. In

order to increase access to care, QUERI-HIV/Hepatitis investigators have reviewed screening policies and have suggested reforms where needed. This is part of a comprehensive effort to accurately identify all veterans with probable HIV infection and examine their potential barriers to accessing appropriate HIV care.

Optimizing HIV drug therapy

Even when combination ARV drugs are appropriately prescribed for HIV, patient adherence to medication regimens is a serious clinical concern, and a major QUERI-HIV/Hepatitis focus. Although adherence can be difficult, non-adherence can lead to ineffective viral suppression, substantial risk of drug-resistant HIV, and waste of pharmaceutical resources. The Adherence Care Enhancement (ACE) Clinic is an intensive clinical pharmacist education and support program aimed at improving adherence to combination ARV medications among HIV-infected veterans. A pilot adherence project is utilizing computer surveys, which may prove more effective for collecting this information directly from patients regarding their medication adherence.

Improving treatment of comorbid conditions

Over the past several years, lipodystrophy (abnormal change in fat distribution) has been recognized as a complication of HIV disease and treatment, particularly treatment with protease inhibitors. In addition, there is now increasing concern regarding hyperlipidemia, osteoporosis, and the potential for an increased risk of cardio/cerebrovascular events (i.e., myocardial infarction and stroke). QUERI-HIV/Hepatitis recently completed a study of the short-term association of highly active antiretroviral therapy (HAART) and cardio/cerebrovascular events that showed no relationship. The same investigators are now assessing the hazard ratios of inpatient stay and/or mortality for cardio- or cerebrovascular disease among those patients who have received various classes

of HAART versus those who have not, as well as time-varying measures of ever or cumulative exposure to classes of HAART therapy as covariates.

THE QUERI PROCESS

QUERI utilizes a six-step process to diagnose gaps in performance and identify and implement interventions to address them:

- 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.

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For more information about the QUERI program in general, and to link to all of the individual QUERI Centers, please go to www.queri.research.va.gov