

# HIV/Hepatitis

BEDFORD, MA; PALO ALTO, CA; LOS ANGELES, CA

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## Background

Human Immunodeficiency Virus (HIV) infection causes a chronic, progressive disease that leads to Acquired Immune Deficiency Syndrome (AIDS) and early death if left untreated. VA is the single largest provider of HIV/AIDS care in the United States. Veterans with HIV infection receive HIV care at all 152 VA Medical Centers and throughout all 21 Veterans Integrated Service Networks (VISNs). In 2013, nearly 27,000 Veterans with HIV were receiving HIV care in VA. Of these individuals, 6,605 (25%) also were infected with Hepatitis C virus.

Hepatitis C Virus (HCV) infection is the most common chronic blood-borne infection in the U.S. and is the leading cause of liver failure, cirrhosis, liver cancer, liver transplantation, and liver-related death. With approximately 3.2 million people infected nationally, HCV is three times as common as HIV. The HCV disease burden is even greater among U.S. Veterans, who have a risk of infection more than twice that of the general public. Of the 8.76 million Veterans in care, 208,000 (2.4%) have active, chronic HCV, and are being cared for by the VA. Accordingly, VA is the largest provider of HCV and HIV care in the U.S.

## HIV/Hepatitis Quality Enhancement Research Initiative (QUERI)

The mission of HIV/Hepatitis-QUERI is to implement evidence-based research into practice to improve the identification and care of Veterans infected with HIV and HCV. HIV/Hepatitis-QUERI has adopted the care continuum framework of diagnosis, linkage to and retention in care, prescription of antiviral or antiretroviral

therapy, adherence to treatment, and viral suppression. HIV/Hepatitis-QUERI utilizes QUERI's six-step process (see side bar) to guide three primary goals:

- Improve disease identification;
- Improve linkage, retention, and adherence to care; and
- Reorganize care for improved value and coordination.

## HIV/Hepatitis-QUERI Projects and Findings

### Goal 1: Improve Disease Identification

The ability to confer benefits from chronic illness care and treatment depends on identifying infected Veterans and linking them to care. Thus, timely disease identification remains a priority of HIV/Hepatitis-QUERI. HIV/Hepatitis-QUERI has several ongoing projects that work to expand HIV testing by promoting routine screening in novel settings such as primary care clinics, substance use disorder clinics, and the ER, including:

HIV Rapid Testing in Substance Use Disorders Clinic, a joint project with the Substance Use Disorder-QUERI, extends this QUERI center's previous work in nurse rapid-testing across VISNs 5, 6, 7, and 8. The goals of this project are to:

- Further spread the Nurse-Initiated Rapid Test model for increasing HIV testing to VA SUD clinics;
- Identify previously undiagnosed Veterans and link them to effective medical care; and
- Evaluate the differences in linkage to care in SUD clinics between blood-based and oral HIV rapid testing.

## About QUERI

VA/HSR&D's Quality Enhancement Research Initiative (QUERI) currently focuses on ten areas of great importance related to healthcare for Veterans: Chronic Heart Failure, Diabetes, eHealth, HIV/Hepatitis, Ischemic Heart Disease, Mental Health, Polytrauma and Blast-Related Injuries, Spinal Cord Injury, Stroke, and Substance Use Disorder.

Working with health system partners to develop research that speeds improvements in Veterans' healthcare, QUERI utilizes a six-step process to diagnose gaps in performance and identify and implement interventions to address them.

- Identify priority conditions and opportunities for improving the health of Veterans.
- Identify effective practices for improving outcomes for priority conditions.
- Examine variations in existing practices, the sources of variation, and their relation to health outcomes.
- Identify and test interventions to improve the delivery of best practices.
- Evaluate the feasibility, adoption, and impact of coordinated improvement programs to spread best practices.
- Evaluate the effects of improvement programs on Veterans' health outcomes, including quality of life.

*The New HIV Diagnoses* project is creating, validating, and refining an algorithm decision tool to identify Veterans with new HIV diagnoses. VISN-, facility-, and patient-level distributions (e.g., gender, age, marital status, ethnicity) of newly diagnosed Veterans will be examined as a proportion of all patients who are offered testing. A second goal of this project is to determine the timeliness with which Veterans newly diagnosed with HIV are linked to medical care, and to evaluate patient-, provider- and facility-level variations in linkage.

The HIV/Hepatitis-QUERI also has studies that will work to expand Hepatitis C testing in the Baby Boomer Birth Cohort and in other at-risk populations, including:

*The HCV Antibody Testing in Birth Cohort* project will assess primary care providers' knowledge, attitudes, and beliefs about HCV testing and treatment, and about clinical, organizational, and contextual barriers and facilitators to the implementation of VA HCV testing programs. Because of the recent change in national HCV antibody testing guidelines, this project also will guide VA policy about how to adopt these guidelines.

### **Goal 2: Improve Linkage, Retention, and Adherence to Care**

Medication therapy for Hepatitis C is undergoing a dramatic change, with vastly improved antivirals yielding over 90% cure rates and reducing the burden of treatment, but at substantially increased costs. Experts predict a sharp rise in HCV-related illness and death over the next two decades as Baby Boomers with Hepatitis C continue to age. QUERI investigators use methods such as peer-based, technology-based, patient-based, and organization/systems change to reach and be responsive to Veteran needs.

*The HCV Self-Management via the Internet* project will adapt HIV/Hepatitis-QUERI's previous HCV self-management program to a web-supported platform to provide greater access for Veterans. A cross-QUERI project with SUD-QUERI, "Referral Method in HCV Clinics," will involve implementing a three-step mutual

help referral method in three HCV clinics. The project aims to identify system- and provider-level barriers to implementing the intervention, solicit feedback from patients, and estimate costs of delivering the intervention.

*The Living with HCV* study seeks to characterize the experience of retention in active Hepatitis C surveillance by evaluating the perceptions Veterans with Hepatitis C have of their illness, their changing treatment options, and their relationships with Hepatitis C specialists, primary care and other clinicians as they wait for treatment.

### **Goal 3: Reorganize Care for Improved Value and Coordination**

Much of HIV/Hepatitis QUERI's recent work has focused on disparities related to the rural/urban divide among Veterans with HIV and/or HCV. Investigators also continue research to explore the geographic and socioeconomic disparities that exist among Veterans, including homelessness. Studies of cost-effectiveness, service utilization, process of care, and health outcomes among Veterans continue.

*HCV Specialty Care Access Networks Extension for Community Health Outcomes, (SCAN-ECHO)*, is a healthcare delivery model of providing primary care physicians with access to consultation and training from HCV specialists through a telemedicine infrastructure. A recently funded study will compare HCV SCAN-ECHO sites to structurally similar control sites in order to examine quality of care and to evaluate barriers and facilitators to collaboration between participating specialists and generalists.

*The Hepatitis C Translating Initiatives for Depression into Solutions* project aims to implement depression screening interventions, which were previously studied and successful in HIV treatment, to improve care for Veterans with HCV and depression.

*The Telehealth Collaborative Care (TCC)* program has enabled medical homes to be created for Veterans with HIV

living in rural settings. Mixed methods evaluations at seven community-based outpatient clinics revealed that most Veterans were interested in participating in the TCC program, and that the TCC is a feasible model for rural Veterans living with HIV.

Cost studies are also being conducted through a collaboration of the Health Economics Resource Center (HERC) and the HIV/Hepatitis QUERI investigators on a study to determine the cost-effectiveness of novel direct-acting antivirals (DAA) in Hepatitis C therapy, as well as strategies for tailoring use of DAAs including genotyping.

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### **The HIV/Hepatitis-QUERI Executive Committee**

Each QUERI Center is led by a research expert and a clinician. Co-Research Directors for HIV/Hepatitis-QUERI are **Allen Gifford, M.D.** and **Steven Asch, M.D., M.P.H.**; the Clinical Coordinator is **Matthew Goetz, M.D.**; and the Implementation Research Coordinators are **A. Rani Elwy, Ph.D.** and **Amanda Midboe, Ph.D.** The Executive Committee includes other experts in the field of HIV/AIDS and hepatitis: Pamela Belperio, PharmD.; Jason Dornitz, M.D., M.H.S.; Hashem El-Serag, M.D., M.P.H.; James Halloran, M.S.N., R.N., C.N.S.; Christine Engstrom, Ph.D., C.R.N.P., A.O.C.N.; Amy Justice, M.D., Ph.D.; Antonio S. McDonald; David Rimland, M.D.; Michael Simberkoff, M.D.; Samuel Ho, M.D.; and Susan Zickmund, Ph.D..

**QUERI web link:**  
[www.hsr.d.research.va.gov/queri](http://www.hsr.d.research.va.gov/queri)