



Quality Enhancement Research Initiative

Spinal Cord Injury
Hines, IL/Seattle, WA

QUERI Fact Sheet

December 2008

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.

Recent estimates in the United States indicate that between 225,000 and 296,000 persons have some type of spinal cord injury and/or disorder (SCI&D) that significantly affects their life activities. Of these, more than 25,000 receive care within the VA health care system, making it the largest integrated health care system in the world serving persons with SCI&D. Spinal cord injury and/or disorder is not a single health care problem nor a specific disease, but a lifelong condition. Persons with SCI&D live with an incurable condition that requires ongoing management of impairments, and demands prevention of secondary complications.

The VA health care system is facing challenges related to the growth and aging of the SCI&D veteran population. Most spinal cord injuries occur prior to typical retirement age—average age at onset is 39. Today, people with SCI&D are living longer; more than half of veterans with SCI&D have had their injury for 20 years or more, and approximately 80% are 50 years of age or older. This increased life expectancy coupled with the aging of the SCI&D veteran population is associated with greater prevalence of chronic diseases common in older life. Therefore, in addition to providing specialty medical services for the chronic impairments associated with SCI&D, it is essential to provide preventive care to promote healthy aging and quality of life among veterans with SCI&D.

Spinal Cord Injury Quality Enhancement Research Initiative

The Spinal Cord Injury Quality Enhancement Research Initiative (SCI-QUERI) uses the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with SCI&D. The mission of SCI-QUERI is to identify and address knowledge gaps, promote research, and conduct activities that improve lifelong medical care, health related quality of life, and community integration of veterans with SCI&D.

SCI-QUERI Projects and Findings

Following are some examples of current SCI-QUERI projects that focus on health issues of critical importance to veterans with spinal cord injury and/or disorder.

Pressure ulcer

Factors such as lack of sensation and immobility increase the risk of pressure ulcer

(PrU) development in persons with SCI, making PrUs a serious, costly, and life-long complication of SCI. Most evidence in this area has been developed in nursing home patients. SCI-QUERI currently has several projects focused on PrU in veterans with SCI. A new proposal builds on previous work in the area of prevention. “Self-management of PrU in Veterans with SCI” will focus on changing behaviors believed to play a role in occurrence/recurrence of PrUs. A second study, and collaboration, examines a device used in the geriatric population that was predictive of the development of a Stage I PrU one week before it could be identified using visual inspection techniques. SCI-QUERI investigators also have been funded to develop a wound assessment tool specific to SCI. Currently, we are working with the VHA Office of Care Coordination to develop and test an evidence-based telehealth disease management protocol (DMP) for pressure ulcer prevention. After the DMP has been tested within a single SCI hub-and-spoke system of care in VISN

The SCI-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for SCI-QUERI is **Frances Weaver, PhD**, and the clinical co-coordinators are **Barry Goldstein, MD, PhD** and **Margaret Hammond, MD**. This Executive Committee includes other experts, representatives of service organizations, and consumers in the field of spinal cord injury: Vivian Beyda, DrPH (United Spinal Association); Stephen Burns, MD; Fred Cowell, BS (Paralyzed Veterans of America); Susan Garber, MS, OTR; David Gater, MD, PhD; Chester Ho, MD; Helen Hoenig, MD; Audrey Nelson, PhD, RN; Arthur Sherwood, PE, PhD (National Institute on Disability and Rehabilitation Research), Ann Spungen, EdD; and **Philip Ullrich, PhD** (Implementation Research Coordinator).

10 and modifications are made, we will submit a study to assess its implementation at several VA sites, with the goal of making it available nationally.

Respiratory impairments

Work is focused on understanding current practices and barriers to best practice in the diagnosis and treatment of sleep apnea, community-acquired pneumonia (CAP), and chronic obstructive pulmonary disease (COPD). The prevalence of sleep apnea in persons with SCI&D is high and is more difficult to manage due to adherence issues with recommended treatment. Persons with SCI&D who contract influenza or pneumonia are significantly more likely to be hospitalized and to die than the general population. Pilot data suggest that management of CAP could be improved by greater use of practice guidelines. Finally, the fact that most persons with SCI&D have respiratory impairments as a result of their injury indicates that we need to better understand the prevalence and management of COPD in this population. The results of this work will serve as the basis for developing quality improvement interventions to increase the use of evidence-based care and to improve patient outcomes.

Respiratory vaccinations

SCI-QUERI completed efforts to increase the proportion of veterans with SCI&D who receive annual influenza vaccinations and a single pneumococcal pneumonia vaccination. Improvement strategies included activating patients (using mailed reminders and targeted education), reminding providers (using computerized clinical reminders), and system changes (VA policy for vaccination now includes all persons with SCI&D). Vaccination rates improved from approximately 26% in the late 1990s to 74% for influenza and 89% for pneumonia vaccines in 2007.

Tobacco use reduction

Almost one-third of veterans with SCI&D smoke, and this represents an additional

risk factor for respiratory impairments and other health problems. A grant is being developed that will focus on efforts to improve the delivery of smoking-cessation care. The goal is to increase the number of veterans with SCI&D who quit smoking.

Obesity

Approximately 65% of individuals with SCI&D are either overweight or obese. Despite recognition that obesity is a common problem, the clinical assessment and treatment of obesity in this population present unique challenges. Our overarching goal in this area is to develop a weight management program for veterans with SCI. Thus, SCI-QUERI has formed a close working relationship with the VA National Center for Health Promotion and Disease Prevention (VA NCP). A study is underway to evaluate simple bedside tools for assessing obesity in veterans with SCI. This study also will investigate the association between obesity, comorbid conditions, function, and quality of life in veterans with SCI. In addition, we are working on a Rapid Response Project in collaboration with VA NCP to develop patient education materials for veterans with SCI who are overweight or obese, and are participating in the VA's MOVE!—a national weight management program. Additional studies in this area include surveys to better understand provider and system level barriers and weight self-management practices of individuals with SCI.

Psychosocial issues

More than half of patients with SCI&D experience chronic pain, with one-third of all pain problems being described as "severe." Multidisciplinary intervention is recommended as the best approach for treating pain following SCI&D. The SCI-QUERI team is examining current pain management practices for veterans with SCI&D in the VA health care system, and projects are underway to assess the applicability of multidisciplinary models of pain care. Persons with SCI&D are three times as likely to experience clinical depression as healthy persons.

Therefore, SCI-QUERI also is examining the prevalence of depression, comorbidity of depression and pain, and current depression management practices for veterans with SCI&D. This will set the stage for implementation projects designed to improve care for depression among veterans with SCI&D.

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.

Contact information for SCI-QUERI:

Dolores Ippolito, MPH
Administrative Coordinator
Tel: (708) 202-5896
E-mail:
Dolores.Ippolito2@va.gov

Contact for general QUERI information:

Linda McIvor, MHS, MS
QUERI Program Manager
Health Services Research
and Development Service
Tel: (202) 461-1516
E-mail: linda.mcivor@va.gov

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