Spinal Cord Injury

BACKGROUND

Spinal cord injuries and disorders (SCI/D) are lifelong conditions that impact all aspects of functioning, abilities, and health. Approximately 250,000 people in the U.S. have some type of spinal cord injury (SCI) that significantly affects their life activities; many more have spinal cord disorders such as myelopathy from spinal stenosis, multiple sclerosis, and transverse myelitis. VA provides care for approximately 26% of individuals with SCI/D in the U.S., making it the single largest network of care for persons with SCI/D. In 2013, VA provided care to more than 27,000 Veterans with SCI/D. Although the number of SCI/D cases is relatively small compared to many other chronic conditions, SCI/D is a complex condition with costs that are 6.5 times greater than the average Veteran receiving VA healthcare.

VA’s SCI/D System of Care includes 24 regional SCI Centers, providing comprehensive, coordinated life-long care delivered by interdisciplinary teams. Within these Centers exist five SCI long-term care centers. The SCI Centers (known as “hubs”) are linked with the remaining 135 VA facilities, referred to as “spoke” facilities. Patient aligned care teams (PACTs) are located at spoke facilities, and are typically comprised of an SCI/D coordinator (usually a social worker), a nurse, and physician. They deliver primary care and facilitate efficient, coordinated, and appropriate delivery of care with the SCI Centers. This system is often called the “hub and spokes” system of care.

Spinal Cord Injury Quality Enhancement Research Initiative (QUERI)

The Spinal Cord Injury (SCI)-QUERI’s central mission is to promote optimal health, independence, functioning, quality of life, and productivity of Veterans with SCI/D, through the implementation of evidence-based findings. This is primarily accomplished through the following objectives:

- Enhancing patient self-management and promoting an informed, empowered patient;
- Focusing on disease prevention and early detection of, and intervention for common comorbid conditions and impairments;
- Recognizing the importance of health, function, activities, and participation contributing to overall quality of life;
- Offering provider education, advanced training, and decision-support strategies to advance a prepared, proactive healthcare team; and
- Improving access and delivery of services through new technologies.

SCI-QUERI Priority Areas

Pressure Ulcer Prevention and Treatment

Pressure ulcers (PrUs) are a serious, costly, and lifelong complication that often follows SCI/D. Risks of developing PrUs are higher in people with SCI/D due to impaired sensation and mobility. SCI-QUERI’s work is focused on improved prevention and treatment of community-acquired PrUs in Veterans with SCI/D. Because of the critical need for an assessment tool to monitor PrU healing, the SCI Pressure Ulcer Management Tool (SCI-PUMT) was developed

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.

VA Office of Research and Development
HSR&D Quality Enhancement Research Initiative

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FACT SHEET
Influenza vaccination rates increasing from 28% in 2000 to 79% in 2010, and pneumococcal pneumonia vaccination rates increasing from 40% in 2000 to 94% in 2010 in Veterans with SCI/D;

• Developing and disseminating educational materials that clarify misconceptions regarding respiratory infections and vaccinations in Veterans with SCI/D and HCWs;

• Facilitating the modification of the VA computerized clinical reminder for vaccination to include all Veterans with SCI/D regardless of age; and

• The identification of individuals with SCI/D as being a high-risk population by VA and the Centers of Disease Control and Prevention (CDC).

Ongoing research is focused on improving HCW’s vaccination rates in collaboration with SCI/D Services and the Office of Public Health, to implement a declination form program to improve influenza vaccination acceptance among VA healthcare workers.

Enhanced Implementation of Virtual Health

Veterans with SCI/D may frequently use healthcare to prevent and treat complications from their SCI/D, and for prevention and management of chronic diseases (e.g., diabetes). Veterans with SCI/D have significant mobility limitations that create challenges for accessing care; additionally, many travel long distances and often experience transportation barriers. SCI-QUERI is currently focused on enhancing the implementation of virtual health in two critical areas: clinical video telehealth (CVT) and secure messaging. Across VA, clinical video telehealth (CVT) programs have been implemented to allow Veterans to access services in their home and/or at local VA facilities without an SCI center. By increasing the ability of Veterans with SCI/D to communicate with their healthcare team, secure messaging has the potential to increase access, engagement in care, and care coordination. Ongoing SCI-QUERI research is focused on characterizing provider and Veteran experiences with CVT and secure messaging, and developing tools to increase and enhance their use.

Improving function and participation

Following a spinal cord injury, an individual’s function and ability to participate in life activities are significantly impaired. SCI-QUERI is addressing three areas to remove barriers and improve function: 1) implementation of a supported employment program for Veterans with SCI/D; 2) evaluation of the implementation of environmental control units (i.e., electronic, assistive technology devices to control the environment) in VA SCI units; and 3) wheelchair seating and mobility interventions to optimize function.

The SCI-QUERI Executive Committee

Each QUERI Center is led by a research expert and a clinician. The research experts and Co-Directors for SCI-QUERI are Charlesnika T. Evans, Ph.D., M.P.H., and Bridget Smith, Ph.D. The clinical coordinator is Barry Goldstein, M.D., Ph.D. The Executive Committee includes other experts, representatives of service organizations, and consumers in the field of spinal cord injury: Leigh Anderson, M.D.; Barbara Bates-Jensen, Ph.D.; Stephen Burns, M.D.; Martin Evans, M.D.; Gail Powell-Cope, Ph.D.; Sunil Sabharwal, M.D.; Arthur Sherwood, P.E., Ph.D. (National Institute on Disability and Rehabilitation Research); and Carol VanDeusen Lukas, Ed.D.

QUERI web link:
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