



## **What is Rehabilitation Engineering?**

Rehabilitation Engineering is the “systematic application of engineering sciences to design, develop, adapt, test, evaluate, apply, and distribute technological solutions to problems confronted by individuals with disabilities in functional areas, such as mobility, communications, hearing, vision, and cognition, and in activities associated with employment, independent living, education, and integration into the community” (Rehabilitation Act of 1973).

A rehabilitation engineer’s responsibilities can be loosely divided up into two general categories:

- Research
  - Design and develop new products using custom fabrication machinery and tools
  - Adapt and test existing or new products
- Application
  - Maintain technical knowledge of, evaluate, apply, and distribute Assistive Technology solutions

Rehabilitation engineers in the Assistive Technology Program here at the Richmond VAMC work with your doctors and therapists to provide technical expertise, service, and innovation for the different Assistive Technology devices you may require. Common services include

- Installing alternative drive methods and/or programming powered wheelchairs
- Addressing complex manual wheelchair seating and positioning and accessory needs
- Installing and/or programming Augmentative & Alternative Communication (AAC) devices
- Providing software on patient’s personal laptop to increase accessibility
- Mounting devices on wheelchairs, beds, desks, etc.
- Setting up Electronic Aids to Daily Living (EADLs) for evaluation/trial
- Training patients to use assistive technology devices
- Programming electronic cognitive devices
- Designing one-of-a-kind solutions for rehabilitation problems not yet addressed by industry

## **PROCESS:**

1. The Veteran’s therapist places a rehabilitation engineering consult for technical assistance.
2. A rehabilitation engineer receives the consult and completes the requested task while working together with the therapist and the patient.
3. If required the Veteran will receive training on the equipment and/or software provided.

