

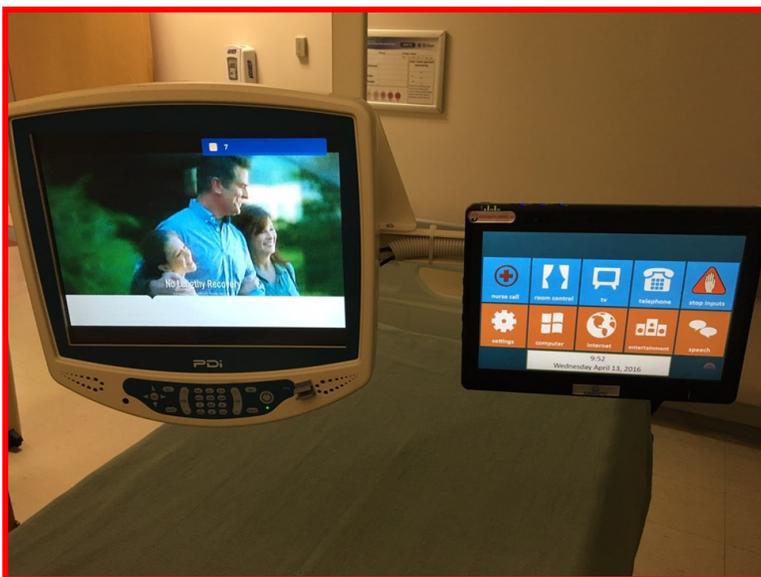
Innovation comes to SCI with the AutoNoMe

...Brian Burkhardt, MS, ATP

Spring is upon us, a time for renewal, growth, and welcomed freedom from cold winter days. The Spinal Cord Injury Service (SCI) has embraced this time of year with an exciting new addition to the in-patient experience. Now, every Veteran staying on an SCI unit will experience dramatically improved independence and quality of life through the usage of the AutoNoMe ECU. This system began in 2011 at the Memphis, TN VA Medical Center as a VA Employee Innovation Program pilot. With the help of the VA Center for Innovation the AutoNoMe has been very successful. It has currently been implemented in 12 VA Medical Centers across the country, with the potential of 10 more. This equates to over 1000 Veterans enjoying an unparalleled level of access and control during their inpatient stay. The AutoNoME from Accessibility Services Inc. (ASI) gives Veterans access to the nurse call, television, telephone, hospital bed, and the internet no matter the severity of their injury. The system can use touch, voice, switch, head tracking, or eye tracking as inputs which represents the full spectrum of alternative access methods currently available.

The need for independence in daily activities doesn't stop when a Veteran leaves the hospital. If barriers at home prevent a Veteran from achieving their goals of environmental independence and safety the McGuire VA Assistive Technology (AT) Program can help. Through evaluating the Veteran's goals and abilities the AT Program can provide an appropriate solution for the home environment. During the evaluation process, either as an inpatient or outpatient, the Veteran has the opportunity

to trial the AutoNoMe as well as other ECU systems to find the best match of technology to the Veteran. The AutoNoMe provides an immeasurable increase in the quality of life of inpatient's and is a welcomed addition to the toolkit of the McGuire VA AT Program.



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FY16 AT EDUCATIONAL OPPORTUNITIES WITH EES



When: 1st Friday of the month

Time: 1pm EST

Continuing Education is offered for AOTA and ASHA.

Registration is always through TMS.

Program Description:

This live – meeting program is designed for Rehabilitation Services physicians and rehabilitation clinicians to address the knowledge gap in providing assistive technology that addresses current health care requirements of Veterans with specific rehabilitative needs. This course will cross many areas of disability including, Polytrauma, Visual impairments, Physical limitations, Cognitive and communication deficits that may limit Activities of Daily Living. There are 5 Assistive Technology (AT) labs located at the Polytrauma Rehabilitation Centers; however, this training would expand that knowledge and skills of providers beyond those 5 AT centers. The training will assist in increasing Veterans’ level of function, independence and safety while providing consistency and care across the VHA system.

Audience: Health care professionals including physicians, speech-language pathologists, occupational therapists and other clinical staff such as physical therapists, recreation therapists, blind rehabilitation specialists and kinesiotherapists.

Topics:

- ◆ May 6, 2016—Wheeled Mobility’s Best Practices
- ◆ June 3, 2016—Executive Functioning
- ◆ July 1, 2016—Mounting Options for various devices
- ◆ August 5, 2016—Cognitive Applications
- ◆ September 2, 2016—Problem Solving and Technology Solutions for Blindness and Comorbid Conditions
- ◆ October 7, 2016—Adaptive Sports Options for recreation activities
- ◆ November 4, 2016—TBD
- ◆ December 2, 2016—Blind Rehabilitation Technology for Wayfinding for Vision Impairments

Meet McGuire’s AT Team

...Seth Hills



Seth Hills
Rehabilitation Engineer

Seth Hills joined the Assistive Technology Team on March 7, 2016 as an additional Rehabilitation Engineer. He will be splitting his time with the AT Program and the PM&R/VCU Gait Research Lab.

In his own words, here is some information about him.

My professional career began with a BS in Mechanical Engineering from Utah State University. While there, I interned at Walter Reed, and became aware of the many healthcare related opportunities for engineering. I decided I wanted to get involved with Brain Machine Interfacing, so I pursued graduate school at the University of Utah, where I obtained a ME in Bioengineering.

While studying in grad-school, I worked as an engineer for a medical device manufacturer and volunteered at Shriners Hospital in Salt Lake City, UT in their Prosthetics De-

partment. This got me interested in patient care, so I spent the next 7 years as a prosthetics and orthotics practitioner.

Private practice did not afford me the time for creative and innovative endeavors, so when I got the Rehabilitation Engineer position I was really excited to be able to do both patient care and Research and Development.

I’ve been at the VA since the beginning of March, 2016, and really enjoy it. The areas of AT that I find most interesting are the patient specific adaptations where we create unique solutions, as well as Environmental Controls.

I like to be creative and make things, and I’ve always been fascinated by technology, so having access to a 3-D printer, and a mad scientist co-worker or two, and getting to ride a tricycle are what get me up in the morning. And then there’s

the added benefit that I work with Veterans- I love to help people, and I’m really grateful for the chance to help those who have served our country.

At home I’m busy with our 5 kids, fixing toys, helping my wife, and trying to have energy for it all. I enjoy mountain biking, soccer, camping, hiking, and reading.

SmartDrive MX2—Wheelchair Power Assist

...John Moossa, OTR/L

The SmartDrive Mx2 Power assist is an exciting new option for high level cognitive manual wheelchair users. Sleek, affordable, light and powerful this innovative power assist is easy to use and transport. Once familiar with the product, a user can install it within seconds. A total weight of less than 15 pounds makes SmartDrive a viable choice for power mobility that reduces the need for costly and cumbersome vehicle lifts.



SmartDrive Power assist is available as an add-on to most rigid and folding frame manual wheelchairs. SmartDrive is indicated for manual wheelchair users with high level cognition who have bilateral arm strength and range of motion within functional limits. Power assist relieves the stress of long term use and long distance propulsion. A manual wheelchair user is able to conserve energy formerly spent on propulsion for activities of daily living, work, leisure, recreation et al.



The SmartDrive consists of a lightweight unit (<13lbs) that attaches to the camber tube on the underside of the wheelchair (for folding frame users Max MOBILITY offers an adjustable tube that attaches to the axles) . The unit is powered on and off by a Bluetooth wristband. Users trigger the SmartDrive unit with a clap of a bluetooth wristband and initiate propulsion with a firm push of both arms. The unit comes with a user manual that is easy to follow as well as a training certification guide that is handy for dealer, clinician and caregiver alike.

With a VA price tag of less than \$3,500 the SmartDrive is less expensive than many other power assist options including E-Fix, E-motion and the Quickie Extender.



KEY FACTS (from SmartDrive MX2 specification sheet)

- ◆ Bluetooth powered Communication between wrist band and drive unit
- ◆ Total Weight 13.5 lbs
Range 12.3 mi
- ◆ Max Speed (Level surface):5.5mph
- ◆ Maximum Speed (6 degree incline) 5.3 mph
- ◆ Expected Lifetime// service life 5 years
- ◆ Battery: Best life Charged Nightly



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Assistive Technology Program Mission

- To enhance the ability of Veterans and Active Duty members with disabilities to fulfill life goals through the coordination and provision of appropriate interdisciplinary assistive technology services.
- To serve as an expert resource to support the application of assistive technology within the VA health care system.

Veteran's Story.... Peter Leibundguth

- Stacy Gross, CCC, SLP

Mr. Leibundguth is a 69 year old Veteran. He served in the U.S. Navy for 26 years with his highest rank being Captain. He also worked at the National Counterterrorism Center in operation planning. He is married and lives with his wife in Northumberland County. He was diagnosis with ALS pseudobulbar palsy in 2010.

Tell us about your experience with the Assistive Technology Program.

I was diagnosed with ALS in 2010. In my case the disease started by taking my ability to speak and eat (bulbar onset). The resulting communication challenges were complex and constantly changing as ALS constantly affected other parts of my body. Assistive Technology has provided constant support as my needs have changed. Initially this support ensured I could communicate using my iPad. This expanded to innovative call bells and a Tobii/Dynavox device as my fingers and wrists lost strength. Currently the Tobii is setup with future expansion capability as ALS begins to affect my ability to move my head.

As my ability to communicate declined other physical capabilities were also deteriorating. The equipment and expertise supplied through Occupational and Physical Therapy simultaneously addressed these problems as they developed. From power chair to various wedges these have helped

me to cope with ALS and continue to function at home as normally as possible.

What challenges were you having that had you referred to the program?

Speech, mobility, interface with environment (controlling light, tv, etc), non-verbal communication (email),

Who did you see?

*Stacy Gross
Brian Burkhardt
Jessica MCElmurray
Al Goodwin
Shawn (new HBPC Team OT)*

What device/program did you get?

Although there have been several device's as ALS has gradually affected my capabilities, the stand out that's had the greatest impact has been the Tobii/Dynavox Communicator.

How has this device changed or impacted my life?

The Tobii/Dynavox has permitted me to continue to communicate with both loved ones and caregivers. The device is designed to combine email with verbal communications which makes it very convenient and adapted to my current condition. It also provides me access to the world of Kindle books as well as control of my TV and DVR. And it enables me to access the Internet with a

switch added by Assistive Technology. The combined capabilities of this device has made my living with ALS and allowed me to remain connected with the world around me.

What activities (things) are you doing now that you were not able to do before?

Tobii/Dynavox has prevented ALS from robbing me of communication with family and friends; it also allows me to keep in touch with the world at large; and has permitted reading books (hands too weak to hold a book), access to news, investments, etc.

Would you say your quality of life has improved?

Certainly this device has prevented ALS from severing and isolating me from the world around me. This connection is essential to being a human.