

# PM&R ASSISTIVE TECHNOLOGY PROGRAM

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## Special points of interest:

- AT CARF  
Survey

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## 32nd National Veterans Wheelchair Games

— April Mizell, CTRS

Thirty-two years ago, a dedicated group of Veterans and volunteers from the Hunter Holmes McGuire Veterans Affairs Medical Center in Richmond, VA launched a landmark event with 74 participants that has continued to grow, and moves annually from city to city across the country.

This year, June 25-30, Richmond VAMC welcomed the Games back home. During this weeklong event, over 600 athletes from all over the United States, Puerto Rico, and Great Britain, competed



in 17 different events including track, field, swimming, air guns, archery, trapshooting, basketball, 9 ball, bowling, slalom, motor rally, hand-cycling, power soccer, weightlifting, swimming, quad rugby and softball.

Our Richmond team consisted of 50 athletes who brought home 80 medals: 43 gold, 25 silver, and 12 bronze. The

majority of participants who compete in the Games have spinal cord injuries. Other athletes have disabilities that include multiple sclerosis, amputations, or traumatic brain injuries.



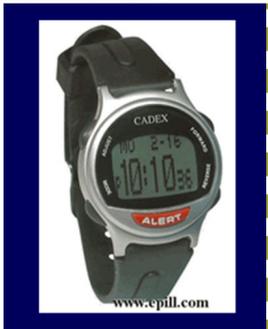
Some use their wheelchairs as their means of mobility and others can walk but may require use of a wheelchair to compete in sports.

The Veterans get classified and compete against others similar to their abilities. There are also different groups that they fall into for competition such as novice athletes (first-timers), open category (anyone), masters category (those 40 and over). For both spectators and participants, experiencing the Games is an unforgettable, life-changing event.



# What is a Cognitive Prosthetic Device?

...Katina Sokol, CCC, SLP



Cognitive prosthetic devices as defined by the Prosthetic and Sensory Aids Service (PSAS): "cognitive prosthetic device is any electronic based product or system, whether acquired as a retail item, a modified retail item, or a customized one, that is used by an individual to compensate for cognitive-communication impairments that affect his/her ability to participate in activities of daily living (ADLs) and higher level ADLs (IADLs) including work." Some examples of cognitive prosthetic devices are; smartpens, alarm watches, timers/alarms and ipod touch devices. <http://www.prosthetics.va.gov/CPR.asp>

Patients who have significant difficulty with memory, attention, problem solving, prioritizing, sequencing and/or organization could benefit from this type of AT. Patient often benefit from cognitive prosthetic devices because these devices have alarms and organizational features that help patient's compensate for the cognitive deficits they experience.

Cognitive prosthetic devices would be recommended by a speech language pathologists (SLP) and/or occupational therapists (OT) who have experience with AT when a patient has objective, standardized testing completed that indicates patients have cognitive deficits. In addition to objective testing, patients need to report that the cognitive deficits have a negative impact on their ability to function in daily life roles. An example of this would be if patients report forgetting if they have taken their medications or not, losing keys/wallet, forgetting appointments and being consistently late.

Evaluation includes completing formal, standardized cognitive assessment; which is done by a therapist or neuropsychologist. Also, a clinical interview is completed with the patient that includes asking patient about medical history, social history, patient goals and current difficulties. Once the clinical decision is made that a patient meets criteria and can benefit from a cognitive prosthetic device then the patient and therapist work together to select a device that meets the patient's needs. After selection is completed, training is provided by the therapist on the specific features and functions of the device. The patient uses the device for a trial period and provides feedback about the effectiveness of the device.

## Meet McGuire's AT Team...

Katina Sokol, CCC, SLP



**Katina Sokol**  
Speech Therapist

Katina Sokol has been a speech therapist since 2004 after she graduated from James Madison University. She has worked with the adult population since then and started at McGuire VA Medical Center 6 years ago. At McGuire, she has worked in both the Polytrauma Transitional Rehabilitation Program and Polytrauma Network Site as their speech therapist.

### What do you like about working at the VA?

I like that I am able to work with patients who have mild TBI.

### What areas of AT are you interested in and like working with? And Why?

I am interested in cognitive prosthetic devices (e.g. pulse smartpen, ipod touch, smartphones, day planners, etc.). I like cognitive prosthetic devices because they are often items that are commonly used by everyone and do not highlight cognitive deficits in patients.

### Why are you passionate about AT?

I am passionate about AT because of the results I see in treatment. Using alarms, calendar apps and

tasks apps helps patients be on time for work, remember ALL the items their spouses wanted them to get at the grocery store and to take their medication correctly.

### Tell us about other interests outside of the VA.

I am a foodie and I love to try new restaurants and foods. I play pool every Tuesday night. I enjoy reading non-fiction and science fiction books and watching action and science fiction movies.

# Andrew Putman...

## “SmartPen Revolution”

Corporal Putman is a 25 year old U.S. Army Corporal who was exposed to an IED blast in April 2012 resulting in multiple injuries including a brain injury and PTSD. Due to his brain injury, he has short term memory, processing speed and word finding deficits. He was seen by the inpatient polytrauma team followed by the STAR (Service Member Transitional Advanced Rehabilitation) team.

In the June of 2012, Corporal Putman was referred to the AT program.

### **Tell us about your experience with the Assistive Technology Program?**

*This program has been good specifically it was a need and they gave me a specific tool to assist.*

### **What Challenges were you having that resulted in you being referred to the program?**

*Cognition—my memory, word finding and processing speeds were bad.*

### **Who did you see?**

*Melissa Oliver in the AT Program.*

### **What device/program did you get?**

*APPS for my iPhone and the SmartPen*

### **How has the device changed your life or impacted your life?**

*I can recall information from my treatment session particularly when I need to go over things with my wife and family. It also helps me remember things my doctors tell me. The SmartPen is like magic—it is cool!*

### **What activities are you doing now that you were not able to do before?**

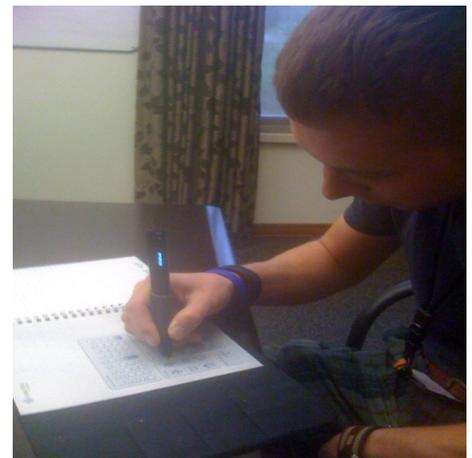
*Participate in my treatment sessions and meet with my healthcare providers and not worry that I am not going to remember what happened during that time. I am also planning on going back to school so it will help me study when I am in college.*

### **Would you say your quality of life has improved?**

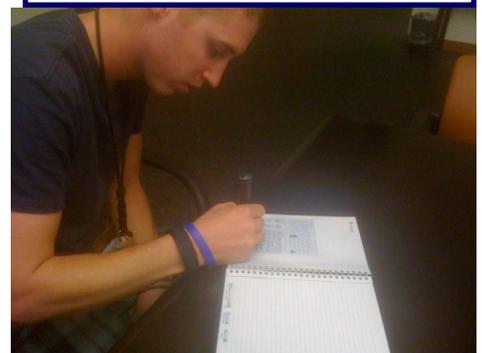
*Definitely!*

### **Is there anything we have not covered that you would like to include?**

*AT was like a guided missile—it got me to the thing I required*



Andrew Putman using his SmartPen





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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.

## **Nuts & Bolts of Rehab Engineering Working Toward a Universally Accessible Internet ...Ben Salatin, MS**

Exciting developments in the global assistive technology community are coming. It is important to first introduce a new acronym "ICT" which stands for "Information and Communication Technologies". This is a catch-all term that was coined to encompass information technology and also the areas of telephony, broadcast media and all types of audio and video processing and transmission (according to Dictionary.com). In 2006, the United Nations released the Convention on the Rights of Persons with Disabilities (CRPD) [www.un.org/disabilities](http://www.un.org/disabilities) which has since been ratified by 118 countries. Article 9 of the CRPD specifically requires a country to make its ICT accessible.

To this end, several organizations have sprung up to develop the global public and private collaborations necessary to implement this mandate and to do so in the most cost effective manner. The Global Initiative for Inclusive ICTs [g3ict.org](http://g3ict.org) is the main organization in this area. One of their exciting projects is called the M-Enabling Summit

which is a yearly global conference and showcase on mobile applications and services for seniors and persons with disabilities where they are bringing together people who use the Assistive Technology (AT), the manufacturers, service providers, and AT professionals to discuss ways of improving the quality of AT for ICT.

Another organization doing accessible web software development for ICT is called Raising the Floor [raisingthefloor.org](http://raisingthefloor.org). Their goal is "to create an infrastructure to facilitate the development, distribution, and support of a wider range of more affordable accessibility solutions internationally." One of their projects is called the Global Public Inclusive Infrastructure (GPII) [gpii.net](http://gpii.net) "The GPII will, for the first time, introduce automatic personalization of user interfaces and user context adaptation based on user preferences.

Each information and communication technology (ICT) device will be able to instantly change to fit users as they encounter the device, rather than requiring users to figure out how to adapt, configure or install access features

they need. It also introduces a system of shared components and services to reduce cost, increase interoperability, and foster innovation."

Some of these universal accessibility ideas are already being put into practice in mainstream software. In the upcoming release of Windows 8, users can sign up for an online Microsoft account which stores all their computer configuration settings. They will then be able to log into any Windows 8 computer that is connected to the internet and instantly have the setup change to your personal configuration [blogs.msdn.com/b/b8/archive/2012/02/14/enabling-accessibility.aspx](http://blogs.msdn.com/b/b8/archive/2012/02/14/enabling-accessibility.aspx). And then in the newest version of HTML (website programming language) there is a lot of attention being paid to creating built-in accessibility [html5accessibility.com](http://html5accessibility.com). Right now Firefox and Safari are the most AT friendly browsers on Windows and Mac computers respectively. As websites are updated with the new features and web browsers are updated to use them, we will see much more of the web multimedia content becoming more accessible to AT use.