August 2015 McGuire VA Medical Center

McGuire Monthly

Serving Our Nation's Heroes

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Volunteer Designers Develop Solutions for Vets at Tech Event

The McGuire VA Medical Center hosted a grand finale Make-A-Thon event, July 28-29, inviting the area's brightest engineering minds to work hand-in-hand with facility clinicians to solve issues experienced by a panel of disabled Veterans.

More than 100 participants of all ages attended the VA Innovation Creation Series, Prosthetics and Assistive Technology Challenge, a capstone event in which design teams sought to improve care and quality of life for disabled Veterans through the development of personalized prostheses and equipment.

Veteran Eric Young kicked off the Veteran's panel. It was his chance to take the stage and personally challenge the engineers to provide him a personal solution. He asked the room to close their eyes while he painted a serene picture of the sun rising in the distance, and for each person to imagine themselves moving through that beautiful landscape.

He loves to ride motorcycles, but it is still a dream for him because his amputation prohibits him from riding. He wants an arm brace that he can feel confident enough to take a bike out West to visit his daughter in California.

One of the younger designers at the event, 13-year old Kayleigh Childress, and her career and technology education teacher, Ed Levis, worked diligently to try and turn that dream into a reality.

They 3-D printed a prosthetic device capable of attaching a prosthetic arm to a motorcycle handlebar.

While riding a motorcycle, a rider relies on the push and pull of the handlebar to turn and balance, said

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Clockwise from top: Team "Crew 2013" members Connor Brock and Becky Button refine the design of their pill box, a challenge put forth by Veteran Michel Nash.

Edward McCarron, MD, was awarded the $1000 Google prize for his entry in the "Grip Strength + Speed Upper Extremity Prosthetic Challenge." Dr. McCarron previously came with the idea for his device while treating a patient and took advantage of the technological expertise available at the Make-A-Thon to construct a working prototype.

A representative from the Girl's Lounge goes over a sheath design with Army Sergeant Lisamarie Wiley during the first day of the Make-A-Thon. The McGuire prosthetics lab built her a sheath for her brace using laser measurements.

A set of open-source prosthetics designed by Peter Binkley of e-Nable sit on a table for the participants to use as templates for their own designs.

Levis. The design can be attached with relative ease, but not lock into place. This, they explained, was essential in the event of an accident or emergency, the hand would break away at a predetermined stress point.

The winning group, Team Spline, received the $20,000 first prize donated by Google. The team's game-changing design is a 3-piece coupler that allows a lower leg prosthesis to be quickly removed and replaced within minutes without having to switch the socket or full prosthetic leg.

This wasn't the first time Childress built a prosthetic device. When she was in the 7th grade she helped a boy in her class born without fingers on his left hand. She found an existing 3-D hand design online and modified it to suit her design needs. All the pieces were printed and assembled using fishing line and elastic bands.

"He had wrist movement and when he moved his wrist down, the elastic would pull, and the fingers would close and he could grasp objects," Childress said.

Childress added that she has grown to like 3-D printing and its applications and intends to pursue a career in aerospace technologies.

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The Veterans' stories and issues with tasks that most in the crowd complete daily inspired the designers. The Veterans themselves were in awe at the innovation and compassion shown to them from such a large and diverse group of brilliant philanthropists.

Michel Nash, who has trouble tracking the multiple medications she must take, first debuted her problem on a video that was shot at McGuire months earlier. It is on that video where California engineers David He and Jie Hu first saw Nash. "We decided to build a custom pill box after we saw the video," Hu said. "We saw the video at Palo Alto, and began designing a [pill] case for Michel," he added. "It took about two months to build."

Nash was overwhelmed at the level of support not only from her new California friends, but the Innovation Creation process. "I didn't know they were going to make my video into one of the challenges," Nash said. "What that tells me is that they [VA] were listening."

Nash said the Make-A-Thon just reinforced what she already thought about the McGuire VAMC. She originally was receiving care in Alabama, but relocated her family near her surgeon, McGuire physician, Douglas Boardman, who performed a shoulder-fusion takedown to reverse shoulder replacement (the first-ever in the country.)

Her outcome improved her life so drastically; she knew she had to return. Now she receives all of her care at McGuire.

Engineers He and Hu thought the trip to McGuire from the West Coast was well worth it. "It was really great to get to speak directly with the doctors and patients and get their perspectives," said He. "That's what makes the Innovation Creation so good."

The doctors and patients in attendance weren't by happenstance. Two dozen engineers, physicians and providers were there as official mentors from a variety of disciplines representing organizations like McGuire, Walter Reed, Google and Virginia Commonwealth University.

That diversity fueled collaboration and a successful event. "Bringing together individuals from various backgrounds and expertise allows for this synergy of creativity," Melissa Oliver, assistive technologies program manager, said. "The Veteran is at the center of this process and as a result, innovative solutions evolve and the Veteran benefits."

Some of those evolutionary processes happened rapidly, like in the case of Army Sergeant Lisamarie Wiley, who lost her left leg below the knee in a bomb blast in Pain Kalay, Afghanistan. Wiley took to the stage, showcasing several of the dozen prostheses she has been fitted for since she was injured. She explained to the participants that she runs into problems transporting all of those prostheses while traveling. Her request was a single, interchangeable coupler for all of them.

That led to her vehemently exclaiming, "If you can figure out how to see a smiley face on Mars, surely it's not impossible to develop a coupler for a prostheses."

Team Spline members Matthew Kelly, Mihir Shelke, Jason Suh, Ausvin Khanna, Matt Baker and Rod Goode took on her challenge.

The judging panel that included design engineers and executives from Toyota, 3-D Systems, Google and Dr. Lucille Beck, Chief Consultant of the Rehabilitation and Prosthetic Service for Veterans Affairs selected their coupler device as the overall Google.org winner and the $20,000 prize.

All of the designs produced will be placed on the National Institutes of Health 3-D Exchange. An online, open source biomedical repository for 3-D designs.

COMPETITION RESULTS

$20,000 PRIZE - GOOGLE.ORG WINNER
Team Spline – Spline Coupler - (Make-A-Thon and GrabCad online Challenges)

1ST PLACE - $2,000
Glucose Tester

2ND PLACE - $1,000
Camo Cup

GIRLS LOUNGE PERSONALIZED PROSTHETIC and ASSISTIVE TECHNOLOGY FOR WOMEN CHALLENGE - $1,000
Makeup Glove

$1,000
Drug Pushers (Water Bottle) – Pillbox Challenge

$1,000
Dr. McCarran – Grip Strength and Speed Upper Extremity Prosthetic Challenge

SPOTLIGHT AWARD FOR 18 AND UNDER TEAM
Duck and Cover

Construction CORNER

Construction on the Fredericksburg and Charlottesville CBOCs continue with the Charlottesville site having a completion date in November 2015 and the Fredericksburg site having a completion date in December 2015. Each clinic will effectively double in size after their additions, making Fredericksburg approximately 20,000 square feet, and Charlottesville approximately 10,000 square feet.

"These additional Primary Care and Mental Health clinic spaces will definitely improve access to care and expand specialty services for area Veterans," said Sandy Markert, CBOC Practice Manager.

As of now, Markert added, both CBOCs are scheduled to gain audiology services with more specialty services expected to be named in the near future.

The Mental Health Recovery Addition is completed and is set to open in early September. The 19,353 square-foot addition brings the total footprint of mental health services to approximately 50,000 square feet.

Top: new Mental Health Expansion, below: Charlottesville construction site

Clinical Pastoral Education

The McGuire Veterans Affairs Medical Center (VAMC) Chaplain's Service recently started a Clinical Pastoral Education (CPE) program. The full roster of six students has been selected for the first session of instruction that begins September 28.

CPE students will augment chaplain's service resources to provide pastoral care, sacramental ministry and worship to a population of 52,000 patients and nearly 3,000 staff members.

CPE Associate Supervisor Kenneth Linder explains the two-fold purpose for the program. "We use the program to educate new chaplains and also provide increased manpower to provide more patient visitation," Linder said.

Ministry availability is mandated and governed by the Joint Commission, the primary governing body for health care organizations. Visitation and pastoral ministry to individual patients is just a small portion of what VA chaplains provide. They work closely with patients and families in crises, end of life care, counseling and worship services.

Chief of Chaplain Services, O. Dewane Stone, said serving the 3,000 employees and almost 30,000 patients weekly with seven chaplains drove a need for the program.

Stone says the program also helps meet the unique needs of Veterans. "I needed more clinically-trained chaplains to minister to the wide variety of Veteran needs like combat injuries, spirit/moral injuries and homelessness," Stone said.

Chaplain Mark Flores, who participated in CPE at the University of Virginia in 2005, says it is challenging, but worth the individual effort. "CPE will broaden one's experience and bring a sense of maturity that will carry them far in other forms of ministry."

Prospective students can receive internships in two formats; a full-time, 11-week summer internship from May to August, or a part-time, 30-week extended internship that runs from September to May.

Chaplain Service from left: Chaplains Simmons, Downs, Linder, Secretary Keiona Nuckles, Chaplains Connolly, Stone and Flores

Linder said the program looks for students with a minimum of a bachelor's degree and some graduate level theological course work. McGuire has partnered with Virginia Commonwealth University accredited by the Association for Clinical Pastoral Education. "Because they are geographically close, it makes the relationship work from a logistical standpoint," Linder said.

He added that there were other schools McGuire could have partnered with, but VCU was really interested, and a good fit for the VA.

Linder received a large number of applicants for the first class, and that allows McGuire to be very selective. Many applicants have a master's degree similar to the McGuire chaplains. This not only provides the chaplain service with clinically trained, professional chaplains, it also provides a pipeline for the future of the VA Chaplain Service.

"This program gives us a good candidate pool for future chaplains," Linder said. "If we have a well performing student and good fit for our chaplain service, we might try to hire that student."

Recently at McGuire

CULTURAL DIVERSITY FAIR

On July 16, the McGuire multipurpose room was transformed into a World's Fair with music, dress, and of course food from several countries and regions at the annual McGuire Cultural Diversity Fair. The fair was sponsored by the Equal Employment Opportunity office as part of their diversity program.

Music was also on the menu of the diversity fair. McGuire staff member Vasuki Sethuraman sang an inspirational song from her native India, followed by a traditional dance performance by Kultura Pilipino club from Richmond, Virginia.

In addition to their dance performance, the Kultura Pilipino Center for Performing Arts brought with them many authentic dishes like tapa (cured beef), and kaldereta (a type of stew), for patients and staff to experience.

Representing the Caribbean, Nicole Rosario-Torres, a receptionist in the eye clinic, displayed a Guiro, a serrated gourd instrument native to her Puerto Rico.

Veteran Johnny Brown really enjoyed learning about the linguistic traditions around the world from the board of common phrases spoken around the world. He said the event was really nice and although his military career took him overseas for 14 years and he experienced many of the cuisines at the fair, the food at the event was all delicious.

At left, McGuire staff member Vasuki Sethuraman sang a traditional song from her native India. Top photo, members of the Kultura Pilipino Center for Performing Arts performed a traditional dance. Bottom photo, a group representing African culture displays (from left), an akupa and the feather-like odu enyi.

LOOKING FORWARD

September 9...Suicide Prevention Walk
NATIONAL SUICIDE PREVENTION MONTH

September 23....TOWN HALL MEETING
6:00 PM

October.....BREAST CANCER AWARENESS MONTH
WORLD STROKE DAY - OCTOBER 29

CONGRATULATIONS to LDI, NLD AND MAP CLASS OF 2015

Below left, certificates were presented to Leadership Development Institute (LDI) graduates by Medical Center Director, John Brandecker and Associate Chief of Staff-Education, Dr. Lenore Joseph. Graduates in center from left; Diana Saintfleur, Mary Dameron and Lynn Anderson. Below right photo, Alan Lombardo, Assistant Director along with Dr. Joseph presented certicates to Non-Supervisory Leadership Development (NLD) and Mid-Atlantic Advancement Program (MAP) graduates. The graduates are from left: Holly Black, Lynsie Thomas, Dayna Moody, Keishonna Barrett and Natashia Moore

WARRIOR TO WARRIOR

Recently, McGuire VAMC and the Washington Redskins joined forces to provide Veterans and service members a unique encounter called "Warrior to Warrior." On July 31 and August 5, McGuire VAMC patients and staff were given VIP access to the team's training camp. During these meetings, McGuire VAMC patients were given first-class treatment which included a private tent fitted with refreshments, front-row seats to practice sessions and special access to players.

Along with numerous players, Robert Lee Griffin III, nicknamed RG3 and Hall of Fame Quarterback Joe Theisman stopped by to greet patients, sign autographs and pose for photos. In addition, USAA gave McGuire Veterans and service members complimentary Redskins merchandise. The Redskins featured a photo from one of the sessions on the team's official Instagram page, and this photo aired on a local newscast. "It is an honor to host those who protect our freedoms," President Bruce Allen said. "All of us at the Washington Redskins are deeply appreciative and thankful of the work they do, and it is our privilege to welcome them to training camp."

Top photo: Hall of Fame Quarterback Joe Theisman signs autographs for McGuire patients. Photo left: Service member Damion Hedington and his fellow Sailors are greeted by Washington Redskins quarterback, Robert Lee Griffin III, nicknamed RG3. The quarterback has a personal connection to the military; both of his parents are Army Veterans. Photo right: Redskins tight end, Logan Paulsen, takes time to pose for a picture with McGuire patients.

Korean War Veteran Awarded Honorary Diploma

On July 20, Korean War Veteran George Flippen was presented an honorary diploma by Chaplain Mark Flores at the McGuire VA Medical Center. Flippen, who humbly accepted the recognition is part of Virginia's Honorary Diploma Program. George was joined by his son Ted, and grandson Thomas for the presentation.

According to the Virginia Department of Education website, the honorary diploma program began in 2001, and has issued over 2,000 diplomas to Veterans of World War II, The Korean and Vietnam Wars.

The certificate and diploma recognizes the sacrifices of young Veterans that went off to serve their country before finishing high school.

At an early age, Flippen took the responsibility of providing for his family. That responsibility included service in the U.S. military. Flippen enlisted in 1953 and went off to Japan, where U.S. troops were staging for the Korean War.

The certificate reads, "In grateful recognition of the personal sacrifices made to ensure the safety and security of our country and all mankind; and in an acknowledgement of learning and achievement that has enriched our community and our country."

We thank and honor George Flippen for his service to the country.

George Flippen joined by his son, Ted and grandson, Thomas, shows his diploma.