2018 **Special Olympics USA Games**

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Faculty, students and alumni from the University of Washington Speech and Hearing Sciences Department volunteered in a unique way during the 2018 Special Olympics USA Games held on the UW campus. As part of the Healthy Athletes initiative, volunteers from our department joined forces with professionals from the community (spanning three decades of UW graduates), to screen the hearing of close to 1,000 athletes over the course of six days.

Healthy Athletes, launched by Special Olympics in 1997, educates athletes with intellectual disabilities about healthy lifestyle choices and identifying health problems that may need further follow-up. According to the Special Olympics website, "Despite a mistaken belief that people with intellectual disabilities receive the same or better health care than others, they typically receive sub-standard care, or virtually no health care at all" (resources.specialolympics.org).

Seven Healthy Athlete disciplines were represented during the USA Games: Strong Minds (mental health), Special Smiles (dental), FunFitness (physical therapy), Health Promotion (healthy living), Fit Feet (podiatry), Opening Eyes (vision) and Healthy Hearing (audiology).

UW's audiology program has been proud to be a part of this effort in Washington state since 1997. This partnership has been mutually beneficial between the two entities as students receive valuable experience working with diverse populations, while providing a needed volunteer resource. Given the number of alumni volunteers at this year's games, clearly the experience has made a long-lasting impact.

It was an inspirational week as volunteers met athletes, their coaches and in some cases their family members from all over the country. Everyone was there to cheer on these amazing athletes and promote the ideals of inclusion. As one of four state clinical directors for the Healthy Hearing discipline, I was especially pleased that many of our students who are entering the field of audiology volunteered to screen the hearing of these amazing athletes.

One student, Courtney Nguyen, offers the following insight:

When I was a former head coach of a Special Olympics swim team in Southern California, I watched Chapman University's speech-language pathology students with envy as they performed Healthy Hearing procedures, such as otoscopy and tympanometry.

Courtney Nguyen Lisa Illich

As a graduate student of University of Washington's Doctor of Audiology program, I finally was able to combine two of my loves – audiology and Special Olympics – for the National Special Olympics Summer Games here in Seattle. I was given the opportunity for many days to look into athletes' ears, perform otoacoustic emissions and tympanometry, and conduct hearing screenings.

I was amazed to see how many individuals reached out to help and volunteer their time for these athletes on such a national level. From medical doctors specializing in otolaryngology to high school students, these people offered up their time to be a part of Healthy Hearing. It was fascinating to see all different roles come together to help the athletes, from checking them in at the front desk to performing cerumen management behind the curtains.

Our team worked hard and screened a countless number of athletes whose hearing loss sometimes had gone undiagnosed. Regarding my overall experience that week, I interacted with athletes, coaches and family members from all states, and I must say that it was the most rewarding experience that I have had. The happiness that flowed from the athletes, coaches and families was palpable.

Furthermore, working closely with my colleagues and supervisors, I found such joy in being a part of the audiology team, while also incorporating my past experience with Special Olympics as a coach. This has been a very special part of my program experience here at the University of Washington. If given the opportunity to do it again, I would in a heartbeat. In fact, I hope to be even more involved with Special Olympics once I graduate.

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IMPROVING THE LISTENING EXPERIENCE OF COCHLEAR IMPLANT USERS

written by Kelly N. Jahn, Au.D., CCC-A and Julie G. Arenberg, Ph.D., CCC-A

For the past decade, Dr. Julie Arenberg (Bierer) has been working with adult cochlear implant recipients to understand why performance with an implant varies. Many years of study led Dr. Arenberg to conclude that the quality of the electrode-to-neuron interface – the link between the physical cochlear implant electrodes and a listener's hearing nerve – could play a major role.

Studies in the Arenberg Lab assess this link using tests of electrode position, electrical nerve stimulation, and pitch perception. Using information from these tests, we have investigated different ways to optimize the interface for individual adult listeners.

However, it is unlikely that the optimal programming strategies for adults are also the best for children! Recently, we began to make similar measures in children who were born deaf and received an implant within the first few years of life.

So far, we have found that the children have better responses than adults on some metrics of the electrode-to-neuron interface. For example, one measure requires listeners to detect the softest level for different sounds using a special type of focused electrical fields. In response to that measure, children can hear at softer levels than adults. One possible interpretation for this finding is that the children have a healthier auditory nerve than our adult listeners.

Building on this discovery, ongoing studies in the Arenberg Lab are aimed at investigating differences in the electrode-to-neuron interface in patients with different hearing histories. In the coming months, Dr. Arenberg and her team will use this information to explore ways to improve speech and music perception for cochlear implant listeners across the life span.

Please visit the website for the Arenberg Lab at https://sphsc.washington.edu/research-labs/cochlear-implant-psychophysics-lab/ to learn more. If you are interested in being involved in this exciting research, you can sign up to participate by contacting Dr. Arenberg directly at jbierer@uw.edu.

GETTING HELP FOR YOUR HYPERACUSIS

Hyperacusis, simply put, is a heightened sensitivity to everyday sounds that most people can tolerate easily. A person suffering from hyperacusis may find sounds like a running dishwasher, a nearby conversation or even the shuffling of papers unpleasantly loud or even painful.

Hyperacusis is rare, affecting only one in 50,000 people. This number is higher among tinnitus sufferers, however, affecting about one in 1,000. Hyperacusis can affect people of any age, and it can occur in one or both ears. Untreated hyperacusis can cause social isolation, phonophobia (fear of sounds), depression and more.

It is extremely uncommon for someone to be born with hyperacusis. Hyperacusis can be caused by a number of diseases including Bell's palsy, Lyme disease, Meniere's disease, head injury, temporomandibular joint (TMJ) syndrome and noise induced hearing loss. Hyperacusis is also linked with neurologic conditions such as PTSD, epilepsy, depression, migraines, cerebral palsy and autism.

For those whose hyperacusis is the result of trauma to the head or hearing system, symptoms may go away as the injury heals. Identifying the underlying cause is always the first step in treating hyperacusis.

Some suffering from hyperacusis may seek relief by wearing earplugs or earmuffs. While this may help in the short-term, it actually decreases the already poor tolerance of noise, increasing sensitivity in the long run.

An effective treatment option is called sound desensitization, wherein a specialist works with the patient and exposes them to white noise at initially a very low volume, increasing it over time to improve tolerance.

Those who suspect they may have hyperacusis should seek an evaluation by an audiologist. A hearing specialist will conduct a full audiologic evaluation, including a hearing test, and take a record of your medical history to accurately diagnose your condition and determine your loudness discomfort levels (LDL). An audiologist can also guide your treatment and counsel you about the latest hearing solutions available. For assistance, call us at (206) 543-5440.

If you or your loved ones participate in loud activities, get protection against hearing loss!

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**Offer expires 12/1/18*