



Karl White, a perfect fit to hold the Emma Eccles Jones Endowed Chair in Early Childhood Education.
Photo by Jared Thayne.

A CAREER GIANT IN A LAND OF LITTLE PEOPLE

FOR NEWEST ENDOWED CHAIR, THERE'S NO BETTER FIT THAN KARL WHITE

By JoLynne Lyon '92
Photos by Donna Barry

Cooper Williams was just hours old when his parents received their son's hearing test results. It was good news: he could hear.

"I think it's great to know how he's hearing this early," said his father, BJ, of Logan, Utah.

For five-year-old Khloe May, language development got off to a rougher start. When she was 15 months old her parents learned she had permanent hearing loss. That started them on a long road with some twists and turns. It took them from Las Vegas, Nev., to the Sound Beginnings Preschool at Utah State University.

While the two children's stories are very different, they have one thing in common: the influence of Dr. Karl White, who was recognized as the Emma Eccles Jones Endowed Chair in Early Childhood Education earlier this summer.

Following research White headed up at USU and elsewhere, the testing of infants' hearing became standard in the state of Utah in the 1990s. While the practice spread slowly, 98 percent of infants in the United States are now screened for hearing loss. Building on work done at USU, newborn hearing screening has also been implemented in many other countries around the world.

White's work has had a tremendous impact. This year, an estimated 12,000 babies will be born with hearing loss in the United States. Most of them are born to hearing parents. Without early identification and intervention they face social isolation, impaired language, struggles in school and poor job prospects. Early screening helps parents give their baby the best start possible.

At Logan Regional Hospital, the screening is done through two tests. The most common, otoacoustic emissions screening, uses a small earphone. It is placed in the baby's ear canal, where it sends out signals and measures the response from the inner ear.

The second test, which Cooper received, is administered to babies in the Newborn Intensive Care Unit at Logan Regional Hospital. The automated auditory brainstem response test involves attaching little sensors to the baby's head, where they measure the brain's response to sound.

BJ was glad to know that his son's hearing checked out, but if it hadn't, he said he'd want to know as soon as possible. "I'd like to be prepared and take the right steps, see the right doctors. Language is very important to children, even at this age."

White agrees: the hearing testing is performed so that parents can take action to encourage language development. How they do that — through American Sign Language, using hearing aids or a cochlear implant, or some other communication means — is up to them.





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“Parents need to learn what their options are, what their pros and cons are,” he said. After that, their choices need to be supported. The important thing is to give the child fluent language models as early and consistently as possible.

White currently is the founding director of the National Center for Hearing Assessment and Management (NCHAM) at Utah State University. NCHAM is the national resource center for implementing and improving early hearing detection and intervention. It is involved in applied research, managing and tracking data on infant hearing screening, graduate student training and international outreach.

It’s no wonder, then, that he was a good fit for the Emma Eccles Jones Foundation’s endowed chair, established to recognize leadership, support research and help train quality graduate students. An endowed chair is often used to attract world-class leadership to a university. In White’s case, it rewarded the talent that was already here.



Sound Beginnings: The foundation of Karl White's career has been implementing and improving hearing detection and intervention for kids, as early as possible.

"You couldn't find anyone better qualified than Karl to be named an endowed chair," said Beth Foley, dean of the Emma Eccles Jones College of Education and Human Services.

Foley headed up the Department of Communicative Disorders and Deaf Education when she teamed with White and NCHAM to found the Sound Beginnings program, again with the generous support of the Emma Eccles Jones Foundation. The preschool would help children who are deaf or hard of hearing learn to listen and speak. They deliberately chose a public preschool model so that tuition would not be an obstacle between children and services.

And for families who want their children with hearing loss to listen and speak, services are essential.

"You put glasses on a person with visual impairment and they can immediately see better," White said. For children with hearing aids or cochlear implants, it isn't as simple. They need to learn how to use the technology, and

their brains must learn how to process the input.

That's where a specialized preschool comes in. Two years ago, Khloe May was enrolled in a program in Nevada, but she seemed to be regressing. "We were in Vegas and she was going to the best school that they had for kids with hearing loss," said Taci, her mother. "It wasn't quite enough."

Taci and her husband, Phil, were worried. They had weighed all the options for their daughter when they learned of her hearing loss. Eventually they chose a cochlear implant. They wanted her to have as many options available to her as possible, and the technology would not prevent Khloe from using sign language later on, if she chose to. She wasn't progressing, though. Then, at a three-week summer school for children and their families in Los Angeles, they learned that Khloe wasn't hearing human speech unless it was at 60 decibels.

At that point the Mays decided to step up the services. They began a search

for programs, looking into sign language, telecommunication and listening and spoken language, but they still preferred to teach their girl to listen and talk.

"Then my husband found a place in Logan," Taci said. "And I said, 'No way. Logan?'"

Sound Beginnings is one of only two preschool programs in the country that is integrated with graduate training programs in deaf education, speech language pathology and audiology. An onsite visit impressed the Mays enough that they uprooted the whole family and moved to Utah so that Khloe could attend. Phil found work along the Wasatch Front, but it was far enough away from Logan that he only saw his family there on the weekends.

When Khloe started at the school, she didn't interact much with her peers and her language was severely delayed. She also had a terrible fear of having anything hooked up to her implant, which made it very hard for professionals to "map" how it was processing sound.



Because of research headed up by Karl White, today 98 percent of infants in the United States are screened for hearing loss.

For the first three weeks, they worked with her every day until she was ready to accept the mapping process.

Once she did and the implant was fine-tuned, it began working much better for her, and the changes came very fast.

“We noticed she started hearing little things that are just background noise to us,” Taci said. Khloe noticed that the door’s latch clicked when it closed, and that clocks ticked. “She was trying to tell us she hadn’t heard those things before.”

Uprooting and relocating a whole family was a big commitment for preschool services, but Taci has no regrets. “It’s just been amazing to watch Khloe’s attitude and her confidence. Our whole family has just had a boost from knowing that Khloe can do whatever she wants now. She can be whomever she wants to be.”

Being deaf or hard of hearing can be a big obstacle for a child, White said. “But once they get what they need, they soar.”

For Taci, the epiphany came when she took her children to Aggie Ice Cream. Khloe saw some boys run by and announced she could run faster. Taci stayed and watched them play for half an hour.

“I didn’t have to be her interpreter,” she said. “That’s when I knew that she was going to be okay.”

In May, Khloe graduated from Sound Beginnings. The day after that, the family moved to rejoin Phil on the Wasatch Front, where they all live under the same roof full-time.

“I will never regret moving my family,” Taci said. “I would do it again.”

Someday, she hopes everyone who wants similar services can have the same opportunity.

So does White. “Our hope is that by demonstrating what’s really possible, other schools will pick up and start doing the same thing,” he said.



The Finest Beginnings

Twenty-five years ago, the first large-scale clinical trial of newborn hearing screening began in Rhode Island. Karl White headed up the research team. The findings of that study prompted the National Institutes of Health to recommend that all newborns be screened for hearing loss before they left the hospital.

Those beginnings — coupled with programs to provide early intervention for children who are deaf or hard of hearing — have helped families from all over the nation communicate with their young children.

Today, the National Center for Hearing Assessment and Management (NCHAM) at USU continues working toward the goal of identifying all infants with permanent hearing loss so that their families can help them develop language early in life. While 98 percent of infants in the United States are screened, the center works to ensure that all babies will have that opportunity — and that the families of children with hearing loss can receive high-quality services from well-trained teachers and clinicians.

Designated by the federal government as the National Technical Resource Center for Newborn Hearing Screening and Intervention, NCHAM works with departments of health in every state and territory, and provides outreach and support to other countries. By collaborating with the Department of Communicative Disorders and Deaf Education and the Sound Beginnings program, the center also provides graduate student training and a model demonstration educational program for birth to five-year old children. These programs ensure that trained professionals will be available to support the families who choose listening and spoken language for their children with hearing loss.

NCHAM researchers are also studying ways to deliver deaf education and speech language pathology services over the Internet to families in rural areas. It all continues the dream of Emma Eccles Jones, who wanted all children to receive a quality, early education.

Thanks to the generosity of the Emma Eccles Jones foundation, the work of NCHAM and Sound Beginnings takes place in a state-of-the-art building.

“When our colleagues from around the country come to visit, their jaws hit the floor,” White said. “This is probably the finest facility in the country right now.”