HEAR AND NOW

A Carrollton teen’s bionic ear, 15 years after the implant

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After many years in speech and auditory therapy, Michael Noble knows the benefits of one-on-one help. He volunteers at Charlie C. McKamy Elementary School, which he attended as a child. Here he shows Olivia Glosson the meaning of the word “strong.”

Life with a bionic ear

15 years after historic surgery, Carrollton teen thrives

By CASEY REIVICH
Special Contributor

CARROLLTON — Michael Noble leans in closer to hear his classmates as the din of the room grows louder in his AP English class.

“Is there anything I need to do to make that clearer?” the 18-year-old Newman Smith High School senior asks. Discussion today focuses on political allegories. Two students critique Michael’s work. He listens and takes notes.
“Without the cochlear implant I wouldn’t be where I am today,” Michael says.

Everything about this exchange seems ordinary except for the fact that Michael was born profoundly deaf. By age 2, he had not heard his dad’s voice. But a historic operation 15 years ago changed his life.

In 1991, Michael was among the first children in the Dallas area to receive a cochlear implant — an electronic device placed in and around the ear to convert sound waves into electrical signals. The procedure, once considered too experimental for children, is now much more common.

Michael’s story, however, is not over.

Not only was the operation a success, but today Michael is a thriving senior at the International Business Academy at Newman Smith. He has an almost perfect GPA and is ranked among the top 10 students in his class of about 500. He is taking Advanced Placement classes and Brookhaven College courses. And he is a leader among his peers.

“We were devastated,” says Mr. Noble. The Nobles feared that deafness would limit their son’s ability to interact and communicate with others.

Although they didn’t know it at the time, deafness is the most common birth defect in babies. According to the National Institute on Deafness and Other Communication Disorders, one in every 1,000 infants is born with a hearing impairment.

Today many states, including Texas, require that hospitals check infants’ hearing.

A possible solution

The Nobles went searching for answers. Through their research they discovered Callier Center for Communication Disorders at the University of Texas at Dallas. There they learned about a cochlear implant, a new technology for deaf children. Cochlear implant surgery had been performed on adults since the 1980s, but did not receive FDA approval for children ages 2 and older until 1990.

Cochlear implants consist of three components — an external processor, a receiver and an electrode. To an untrained eye, the device can look like a hearing aid. But unlike a traditional hearing aid, which typically amplifies sound, the implant converts sound waves into electronic signals.

While the implants do not completely restore hearing, it can help patients who have profound hearing loss and have not benefited from the use of hearing aids. The then-$40,000 implant surgery was being performed on children in Houston, but was not yet available to deaf children in Dallas.

“We had seen the successes of the children,” says Mr. Noble. “We wanted to do it.”

The controversy

Since its inception, cochlear implant surgery has been controversial in the deaf community.

While some may regard deafness as a handicap or disability, some in the deaf community view deafness as a culture one is born into, just like someone’s ethnicity.

“The deaf community sees ‘cochlear implant’ as a tool of genocide to the deaf culture. Because when parents and doctors find that babies were born deaf, they immediately proceed to implant them with cochlear implants,” says Steven Gene Whittworth, president of the Dallas Association of the Deaf.

“The cochlear implants remove the children’s opportunity to be exposed to the American Sign Language and the deaf culture,” he says.

Right place, right time

A series of favorable events soon fell into place. The Nobles learned that the Callier Center and UT Southwestern Medical Center were teaming up as the North Texas Cochlear Implant Program to perform surgery on children.

In June 1991, Michael became one of the first children in the DFW area to receive the cochlear implant.

“He was an ideal candidate,” says Dr. Ross J. Rooser, executive director emeritus of the Callier Center. “He was profoundly deaf, and he wasn’t gaining very much from traditional devices,” such as hearing aids.

The Nobles, while determined, were also nervous. Their 2-year-old was going to be a pioneer. Although they were sure he would benefit, they didn’t know to attribute his success to more than just science. “It requires a tremendous amount of family support,” says Dr. Ross J. Rooser. Here Michael plays a card game with his parents, Cheree and Kerry, and sister, Christen (right).

Medical experts who have followed Michael’s case
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what degree.

After the surgery, Michael began rigorous auditory and verbal therapy with local audiologist and auditory-verbal therapist Linda Daniel.

“It took him about three weeks to integrate the new signal with the limited information already in the hearing center of his brain,” says Ms. Daniel. “Then he started taking off.”

For eight years, Michael received private auditory and speech therapy from Ms. Daniel, he practiced rigorously at home with his parents, and also received therapy at school. By the fourth grade, he had surpassed all school requirements and no longer needed therapy.

A high bar

Michael still returns to the elementary school he attended as a boy.

At Charlie C. McKamy Elementary School one Friday, he sits out in the hallway at a desk with two third-graders and helps them with their reading and writing.

Because of his many years in speech and auditory therapy, Michael knows the benefits of one-on-one help, and he tutors with a maturity and gentleness beyond his years.

The students are happy to be with Michael. They are gleeful when they get an answer right and he gives them a thumbs-up.

In addition to volunteering at his elementary school, Michael is on the board of directors at his high school’s International Business Academy. He is also president of the marketing club at his school, DECA (Distributive Education Clubs of America). He placed first in a statewide marketing competition last year.

“He’s definitely a leader,” said Kathi Long, a teacher at Newman Smith’s business academy. “A lot of students respect his opinion. I think they really look to him to pave the way.”

A life changed

Dr. Peter Roland, chairman of Otolaryngology and Head and Neck Surgery at UT Southwestern, who performed Michael’s surgery, says Michael’s life could have been very different without the implant.

“Twenty years ago, Michael would have been in deaf education, and would have been limited to communicating with people with sign language.”

Medical experts who have followed Michael’s case attribute his success to more than just science.

“It requires a tremendous amount of family support,” says Dr. Roesser. “If I ever have to come back,” he says about the Nobles, “I would want them to be my parents.”

Michael knows he is blessed.

These days, like many seniors, he is contemplating colleges. Michael hopes to attend Southern Methodist University and eventually earn a master’s degree in business administration from its Edwin L. Cox School of Business.

He says the implant is allowing him to fulfill his dreams. “I have a desire to be the best.”

Some statistics on deafness and cochlear implant surgery:

- According to the Food and Drug Administration’s 2005 data, nearly 100,000 people worldwide have received cochlear implants.
- In the United States, roughly 22,000 adults and nearly 15,000 children have received them.
- Cochlear implants were first approved by the FDA in the United States in 1985 for adults and in 1990 for children.
- Since 1990, the North Texas Cochlear Implant Program has given about 350 children cochlear implants.
- About 1 in every 1,000 infants is born deaf. Another 1 in every 1,000 infants has a hearing impairment significant enough to make speaking difficult.
- More than half of all deafness or hearing impairment is believed to have genetic cause(s).
- Recessive hearing impairment accounts for the largest portion of deafness or hearing impairment.
- About 90 percent of infants who are born deaf are born to hearing parents.

SOURCES: Callier Center for Communication Disorders and the National Institute on Deafness and Other Communication Disorders

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Links: More about cochlear implants

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Cover Story

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By the Numbers

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