

Thursday, June 25, 1998

## ENDING THE SILENCE

**A 2-year-old boy is the first child in the state to receive a special hearing implant.**

**By Tanya Flanagan**  
[Review-Journal](#)

Noah Frizzell looked like any other child when he was born, but as the months passed his parents noticed that something was different about him. He babbled, smiled and made the cooing sounds typical of an infant, but nothing startled him.

Noah visited Dr. Ashley **Sikand**'s office Thursday afternoon and an audiologist said the 2-year-old is recovering well.

Most newborns dart their eyes in every direction to see where noise is coming from, but not Noah. Ken and Barbara Frizzell suspected that their son, born August 1996 with no indication of hearing loss, might be deaf.

"At four months, we could go and clap right next to his ear and there was nothing," Frizzell said. "We talked to the family doctor, and she suggested we wait another month. At six months, we went to Dr. **Sikand** and got an official diagnosis."

Dr. Ashley **Sikand** told the Frizzells that Noah was profoundly deaf, meaning he could not hear in either ear.

On Wednesday, **Sikand** performed a three-hour surgery to place a cochlear implant device in Noah's left ear to enable the 2-year-old to hear.

The surgery is the first of its kind to be done on a child in Nevada. It is the seventh that **Sikand**, who specializes in ear, nose and throat surgery, has performed in Southern Nevada since last year. Four other children are scheduled to receive implants.

With the multi-strategy cochlear implant system in place, sounds will bypass the damaged parts of Noah's inner ear and be translated into electrical signals to reach his hearing nerve. The device sends 104,000 pieces of information per second, allowing for a detailed interpretation of sounds, according to CLARION, the company that manufactures the device.

For a person with normal hearing, sound waves strike the eardrum, causing it to vibrate and send a message to three tiny bones in the middle of the ear. This message moves fluid in the snail-shaped cochlea, which makes thousands of tiny hair cells stimulate the hearing nerve. That nerve then sends the current to the brain where the signal is interpreted as sound.

"Every since we heard about this we have been excited for him to be able to say Mommy, Daddy and Anne, and to know what that means," Frizzell said Wednesday before the procedure. Anne is Noah's 4-year-old sister.

Implanting the device while Noah is young increases the success rate, **Sikand** said.

"A child born congenitally deaf has a certain window of opportunity where he can hear and learn to understand speech," he said. "The longer you wait, it lessens the chance of success or effectiveness of an implant."

Children develop speech patterns and learn language ideally between the ages of 1 and 4. About the time they reach 5 or 6, it becomes increasingly difficult for them to grasp concepts or make a connection between sound and speech, said an audiologist who works with **Sikand**.

Despite not being able to hear, Noah has always been verbal and often talked into the family telephone or babbled into his toy microphone, Frizzell said. He seems to understand that the mouth moves for a reason. He just doesn't know what is being said or why -- something the Frizzells said they hope the implant will correct.

The procedure has been successful, said **Sikand**, who performed 23 similar operations in California on adults and children before coming to Las Vegas.

Locally, his first implant was done in April 1997 on a woman who now can talk on a telephone and converse with her husband and friends. **Sikand** said the family had feared for the woman's life because she couldn't hear things like fire alarms.

Noah could only hear sounds at 90 decibels, which is comparable to the roar of jet airplane engines, he said.

Noah has been preparing for the implant for almost a year by working with audiologists and speech therapists at Sunrise Children's Hospital, 3186 S. Maryland Parkway, where Wednesday's surgery was performed.

The procedure involved cutting the skin behind the ear using an electrical cautery tool that reduces bleeding. The skin is held open with small metal-like clamps. **Sikand** then uses a drill to chip away the skull and create a tunnel into which a 4-inch tube, attached to the device, is inserted until it wraps around the cochlea.

After the device is securely nestled into the skull, in a space about one-fourth of an inch deep, **Sikand** covers the opening and stitches the skin.

Two weeks will pass before Noah's head heals, but immediately after the surgery a special signal-tracking technique called reverse telemetry confirmed that stimulants were being picked up in the hearing canal.

Once Noah has healed, **Sikand** will turn on the device. Noah then will make several trips to the doctor to have the instrument tuned so it properly deciphers sounds at different pitches. He also will

have several sessions with specialists who will help him adapt to wearing the implant.

Frizzell decided to have his son undergo the operation because he wanted to give the boy a choice.

"If he gets older and wants to identify with his deaf culture, that is fine, but I didn't want him to be 12 and then ask me why didn't I do anything," Frizzell said.

Having their second child born with a defect did not sadden them, Ken Frizzell said. He said he battled a childhood cancer that left him with an artificial leg, and having a special-needs child is a privilege.

"We have total faith that the Lord has everything in his hands," Frizzell said.