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## Audiology Service at Sidra Transforming the Lives of Hearing Impaired Children

Sidra and Cochlear Middle East collaborate to give the gift of sound to young patient

**11 April, 2017 (Doha, Qatar)** — A child's senses of sight, taste, touch, smell and hearing play a critical role in their journey of discovery and development of their motor skills. However, if one of the sensory organs is damaged and left undiagnosed and untreated for a long time, it can impact their physical, emotional and cognitive development.

Hearing loss is one such sensory impairment that can impact a child's ability to verbally communicate – resulting in delays in spoken language development and academic performance. Children who are hard of hearing find it much more difficult than their hearing peers to learn vocabulary, grammar, word order, idiomatic expressions, and other aspects of verbal communication. This can have a significant impact on the child's options for early learning, long-term academic preferences, and social development.

Further, many parents in different communities grapple with a lack of medical and therapy services, as well as the social and educational support that can enable the child to fully integrate within their community.

Most children with congenital hearing loss have hearing impairment at birth and are potentially identifiable by newborn and infant hearing screening. However, some congenital hearing loss may not become evident until later in childhood, which is why early screening, including during preschool and school age, is of paramount importance for both the child and parents. Research shows that the earlier intervention is started, the better the prospects for the child to develop at a rate aligned with their hearing peers.

Sidra Medical and Research Center (Sidra) recently launched a new hearing aid program to help provide the gift of sound for hearing impaired children in Qatar. Pediatric patients will be referred to the Audiology Clinic at Sidra from the Primary Health Care Corporation (PHCC) and other referral sources.

The hearing aid program at Sidra offers:

- The identification, assessment and rehabilitation of hearing disorders in children
- The utilization of comprehensive behavioral and electrophysiological measures to determine type, degree and severity of hearing loss
- The management of the selection, fitting, and dispensing of hearing devices
- Audiologic rehabilitation through a comprehensive program of assessment services, amplification devices, counseling, and other hearing management strategies
- Access to surgical implantable hearing aid technology
- Follow up and ongoing monitoring

Dr. Nel Govender, Manager of Audiology and Interim Manager of Speech Language Therapy at Sidra said, "Hearing is essential to childhood learning and language development. The sooner hearing loss is identified and effectively managed, the sooner verbal communication development for the child can begin. It is important that as a healthcare provider we work closely with the families to develop treatment and care options that are in the best interests of the child's development. Ultimately, it is about giving sound back to children – a feat that is now more possible than ever thanks to early intervention and advances in technology and surgery."

## Sidra and Cochlear™: providing the gift of sound

Sidra, in collaboration with Cochlear Middle East, recently demonstrated a new milestone with a life changing moment for a young patient born with Treacher Collins Syndrome. The child, Osman, was [able to hear conversational speech and quiet sounds for the first time](#) – giving him a renewed chance towards improving his learning and developmental skills to be in line with other children his age.

Treacher Collins syndrome is a rare, inherited condition that stunts the growth of the bones and other tissues of the face, resulting in underdeveloped cheekbones and jawbones. Most children also have underdeveloped ear canals and abnormally shaped ears which contributes to hearing loss. The condition affects approximately 1 in 10,000 births worldwide<sup>1</sup>. Approximately 30 per cent of children with the syndrome have a cleft palate, and half of all affected children suffer from hearing loss<sup>2</sup>.

Osman's treatment and care relies on a multidisciplinary approach involving the support and expertise of a number of different healthcare teams across Sidra – including audiology, ENT, plastics craniofacial and child life development. He was first referred to Dr. Patrick Sheehan, Sidra's Division Chief of Pediatric Otolaryngology, Head and Neck surgery. Following which, Osman was referred to the Audiology Clinic where his hearing loss levels were assessed.

Commenting on the case, Dr. Sheehan said, "Osman's condition meant that he was unable to hear properly as he had a 60 decibel moderate to severe hearing loss. A conventional behind-the-ear hearing aid would not have been effective. He needed a proven solution that has successfully helped children who are born with the same condition. In his case, it was a Baha<sup>®</sup> 5 sound processor fitted with the Softband which is manufactured by Cochlear."

Osman was Sidra's first audiology patient to be fitted with the Baha Softband device. To watch the video of his reaction after having the device fitted at the Sidra Audiology Clinic, please click [here](#).

The Cochlear Baha System with Baha Softband can be used by those with conductive hearing loss, mixed hearing loss and single-sided deafness. It can also be used by people of all ages, in particular, infants and toddlers who are not yet ready for an implant. Specific to Treacher Collins syndrome, the Baha System bypasses conditions in the outer or middle ear by rerouting sound through the skull bone directly to the functioning inner ear.

Brendan Murray, General Manager of Cochlear Middle East and Africa, said, "It was an honour to collaborate with Sidra in this child's treatment. The Baha Softband was designed as an ideal first step for infants and young children with conductive hearing loss, mixed hearing loss, and single-sided deafness. The Softband is a non-surgical solution which makes use of the body's natural ability to hear sound through slight vibrations of the skull bone. It does so by snugly holding a sound processor against the skin on the side of the head using a soft, gentle band. It provides excellent hearing performance and the amplification needed to facilitate language development in line with the recipient's hearing peers."

Osman will require regular follow up and care until he is physically ready for surgery and further monitoring. He will wear his Baha Softband for another six to nine months, after which he will be eligible for surgery to progress from a Baha Softband to a Baha Attract - an implantable solution. The simple two-step day surgery process involves the surgeon putting a small implant and internal magnet behind the ear, all under the skin. The internal magnetic connection will then allow the external sound processor to attach through the skin, removing the need for a Softband. The last and final stages of the surgery will happen when Osman turns eight years old. He will be offered plastic surgery for the surgical correction of his ear deformities and jaw bones.

"Osman's ability to hear conversational speech and quiet sounds for the first time, thanks to our collaboration with Cochlear Middle East, is also testament to the leading edge quality of care and treatment at Sidra. As we progress with his medical journey and plan his future surgeries, his case is what we hope will continue to be one of the many life transforming opportunities that Sidra will provide for the children of Qatar and beyond," concluded Dr. Sheehan.

- ENDS -

**Notes to the editor:**

1 - Argenta LC, Iacobucci JJ. Treacher Collins syndrome: present concepts of the disorder and their surgical correction. World journal of surgery. 1989 Jul-Aug;13(4):401-9.

2 - Pron G, Galloway C, Armstrong D, Posnick J. Ear malformations and hearing loss in patients with Treacher Collins Syndrome. Cleft Palate Craniofacial Journal. 1993 Jan 30,1:97-103.

**About Sidra Medical and Research Center**

Sidra Medical and Research Center will be a groundbreaking hospital, research and education institution, focusing on the health and wellbeing of children and women regionally and globally.

Sidra represents the vision of Her Highness Sheikha Moza bint Nasser who serves as its Chairperson. The high-tech facility will not only provide world-class patient care but will also help build Qatar's scientific expertise and resources.

Sidra will be a fully digital facility, incorporating the most advanced information technology applications in all its functions. Designed by renowned architect Cesar Pelli, Sidra features a main hospital building and a separate outpatient clinic. The main hospital will initially have 400 beds with infrastructure to enable expansion to 550 beds in a subsequent phase.

Sidra opened its Outpatient Clinic on 1 May 2016 and offers outpatient services for women and children through a referral based system in partnership with other healthcare providers in Qatar.

Sidra is also part of a dynamic research and education environment in Qatar and through strong partnerships with leading institutions around the world, Sidra is creating an intellectual ecosystem to help advance scientific discovery through investment in medical research.

For more information please visit [www.sidra.org](http://www.sidra.org).

**About Cochlear Limited (ASX: COH)**

Cochlear is the global leader in implantable hearing solutions. The company has a global workforce of over 3,000 people and invests more than AUS\$100 million a year in research and development. Products include hearing systems for cochlear, bone conduction and acoustic implants. Over 450,000 people of all ages, across more than 100 countries, now hear because of Cochlear. [www.cochlear.com](http://www.cochlear.com)

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