

Carter's story: Canadian surgery and audiology first at London Health Sciences Centre

00:00:00:000 - 00:00:08:041

Marzena McDonald, Carter's mother

Carter's hearing was tested the day he was born. And a few days later, we had the official diagnosis, which was atresia.

00:00:08:041 - 00:00:12:278

Dr. Sumit Agrawal, Otolologist Neurotologist and Interim Physician Department
Head of Otolaryngology/Head & Neck Surgery, LHSC

When he was born without an ear canal with him, his inner ear is actually working fine.

00:00:12:278 - 00:00:14:014

Dr. Sumit Agrawal, Otolologist Neurotologist and Interim Physician Department
Head of Otolaryngology/Head & Neck Surgery, LHSC

We knew that he would have a very good result.

00:00:14:014 - 00:00:19:419

Dr. Sumit Agrawal, Otolologist Neurotologist and Interim Physician Department
Head of Otolaryngology/Head & Neck Surgery, LHSC

So as long as we could bypass that ear canal with this bone bridge device.

Action: Dr. Agrawal holds the internal component.

Kim Zimmerman, Audiologist, LHSC

There's an internal component

00:00:19:419 - 00:00:25:025

Kim Zimmerman, Audiologist, LHSC

that's implanted surgically, and then there's the external component that the patients wear behind their ears.

00:00:25:025 - 00:00:32:065

Dr. Lorne Parnes, Otologist Neurotologist, Site Chief and Implant Program Director, LHSC

The vibrations transmit through the screws to the skull, then ultimately to the inner ear, where it's decoded as

00:00:32:065 - 00:00:36:803

Dr. Lorne Parnes, Otologist Neurotologist, Site Chief and Implant Program Director, LHSC

sound. It basically bypasses the outer ear

00:00:36:803 - 00:00:40:340

Dr. Lorne Parnes, Otologist Neurotologist, Site Chief and Implant Program Director, LHSC

and the middle ear and directly stimulates the inner ear.

Action: Carter McDonald shows how he puts on and hooks up the device. He attaches the magnetic external component to the internal component and attaches the wire to his shirt collar.

00:00:40:340 - 00:00:45:478

Kim Zimmerman, Audiologist, LHSC

It's opened up a world of other opportunities in terms of technology for the, for the children.

Action: Carter and his sister swing on a swing set together.

00:00:45:478 - 00:00:50:717

Reid McDonald, Carter's father

I had to, to see him go off into a surgery. I put a lot of trust in the doctors.

Action: Carter and his sister play on a zip line together.

00:00:50:717 - 00:00:55:789

Reid McDonald, Carter's father

It was really exciting to see that everything was successful. Safety is improved,

Action: Carter and his sister, both wearing helmets, ride on a motorized scooter together.

00:00:55:789 - 00:00:58:258

Reid McDonald, Carter's father

and, it's improved his life tremendously.

Action continues: Carter and his sister, both wearing helmets, ride on a motorized scooter together.

00:00:58:258 - 00:01:00:226

Carter McDonald, patient

When I take it off, I can't really hear.

Action continues: Carter and his sister, both wearing helmets, ride on a motorized scooter together.

00:01:00:226 - 00:01:02:262

Carter McDonald, patient

But when I put it on, I can hear better.

Action continues: Carter and his sister, both wearing helmets, ride on a motorized scooter together.

00:01:02:262 - 00:01:04:731

Carter McDonald, patient

I can hear the teacher more in math and stuff.

00:01:04:731 - 00:01:0:967

Carter McDonald, patient

The pictures on this, like, you can change them.

Action: Carter shows the external component and how the picture on the external component can be added.

00:01:07:967 - 00:01:12:238

Carter McDonald, patient

The pirate is the best one.

Action: Close up of Carter's external device while he wears it. The photo on the external component is a symbol of a pirate skull and crossbones.

Reid McDonald, Carter's father

He's done really well. He's done a great job.

Action: The McDonald family waves in front of their house.

00:01:12:238 - 00:01:13:773

Reid McDonald, Carter's father

We're really proud of him.

Action continues: The McDonald family waves in front of their house.

00:01:13:773 - 00:01:20:447

Dr. Lorne Parnes, Otologist Neurotologist, Site Chief and Implant Program Director, LHSC

It's really a miracle for these kids to be able to, to have this technology change their lives.