



From the Baseball Diamond to Surgery

The headaches came and went, but they didn't seem to be any cause for great concern.

When 12-year-old Cooper from St. Catharines then started experiencing coordination and balance issues while playing baseball, everyone assumed it was the result of a growth spurt.

"Then I had really bad flu-like symptoms," explains Cooper. "After I became disoriented and lethargic, my mom took me to the local emergency department." While checking in, the triage nurse noticed that Cooper had difficulty walking straight.

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(Continued from page 1) “It was as though he was intoxicated,” recalls his mother, Whitney. “Cooper’s CT scan showed a large tumour on the right side of his brain. We were completely shocked. It’s a parent’s worst nightmare – hearing that your child has a tumour and feeling so helpless.”

Cooper was immediately transferred to the Pediatric Intensive Care Unit (PICU) at McMaster Children’s Hospital. Urgent surgery was performed to remove a large portion of the tumour and a cyst that had developed in his brain.

“We couldn’t be more grateful for the level of care Cooper received,” says Whitney. “The whole team made our family feel safe during such a scary and difficult time.”

Cooper’s surgery went well and he recovered at the Hospital for five days before being discharged. The next phase of his treatment involved weekly chemotherapy treatments beginning in May 2019.

“When I heard I’d need chemotherapy, I thought it was going to be horrible,”

says Cooper. “I was really upset about having to go in for chemo and not feeling like a normal teenager, but everyone at the clinic made my treatments so much easier than I’d expected.”

During this time, the cyst in Cooper’s brain returned and continued to grow. He underwent another surgery in May 2020 to remove the cyst, although it was decided to leave the remaining portion of the tumour and continue treatment with chemotherapy.

Cooper had his final chemo appointment in August 2020. The remaining growth in his brain had stabilized. While he doesn’t require further treatment, he will continue to be monitored by the team that has come to know him so well.

“I feel good nowadays,” says Cooper. “I’m back to all my normal activities and I’m really excited to be starting high school soon with a clean slate.”

Whitney is extremely proud of how her son has handled the experience:

“He adjusted to his ‘new normal’ of regular appointments and treatments with such grace, determination and the most positive attitude. Our hope is that he can put this chapter behind him and enjoy his life as a teenager.”



To watch a video about Cooper’s story or to make a donation, visit hamiltonhealth.ca/cooper

Infection Control and Prevention during the Pandemic



Long before COVID-19 was officially declared a global pandemic by the World Health Organization, the teams at Hamilton Health Sciences were preparing for the expected crisis.

“We’ve been closely following the situation since December and planning initiatives for patient safety and infection control since January,” says Dr. Sarah Khan, Associate Medical Director in Infection Prevention and Control. “As we kept learning more about the virus and the situation evolved, we’ve had to evolve with it.”

The use of PPE (personal protective equipment) such as masks, gloves, gowns and face shields became a reality for health care workers. More frequent and deeper cleaning of public

areas was adopted, and restrictions on hospital visits helped to reduce the chances of community spread.

“We’re ensuring that our infection-control policies are based on the best available evidence,” says Dr. Khan. “It may be months before we have a vaccine or an effective treatment for COVID-19, so it’s important that we keep the number of infections within a range that our health care infrastructure can sustainably handle.”

When it comes to reducing the risk of contracting the virus or spreading it to others, it really comes down to basics: “Wash your hands frequently, avoid touching your face, stay at least two metres apart from people outside of your bubble and wear a mask.”

Coping with Childhood Diabetes

Dr. M. Constantine Samaan was grateful when proceeds from Hamilton Health Sciences Foundation's 2019 gala supported his important work with survivors of pediatric brain tumours.

"These patients are more likely to develop metabolic conditions such as diabetes as they grow older," explains Dr. Samaan, a pediatric endocrinologist at McMaster Children's Hospital. "Funding from The Foundation helped develop a website that provides virtual lifestyle interventions to help patients stay healthy physically and mentally after their cancer journey."

When the COVID-19 crisis arose, Dr. Samaan realized that an expansion of the virtual platform would greatly benefit pediatric patients and families trying to manage childhood diabetes at home.

"The covid19childhooddiabetes.com website was created to include high-quality information to deal with childhood diabetes, as well as resources about coping with the pandemic and staying safe," says Dr. Samaan. "We regularly track information from credible national and international sources and then distill that information for easy access in one location."

The website continues to grow as new research is conducted and insights are gained into childhood

diabetes and COVID-19 across the globe. Information is currently available in several different languages, which helps to make the site a valuable resource for visitors from around the world.

"We have received very positive feedback from people in Canada and internationally, and are excited about expanding the scope of this online platform. We are thankful to Hamilton Health Sciences Foundation for providing seed funding that helped us make these virtual education and advocacy platforms a reality."



Dr. M. Constantine Samaan

Investing in the Mental Health of Tomorrow's Adults

Mental health is important for everyone, including children and youth who will grow up to be the leaders of tomorrow and shape society for years to come.

Recognizing the importance of supporting mental health services for pediatric patients and their families, Sobeys Inc. and The Sobey Foundation announced its national partnership with Canada's Children's Hospital Foundations on a new program called *A Family of Support: Child and Youth Mental Health Initiative*.

A Family of Support will fund local mental health programs to support specific provincial needs at 13 Canadian children's hospitals, including McMaster Children's Hospital. Sobeys Inc. and The Sobey Foundation will be investing millions in this long-term initiative to drive meaningful change in the lives of young people and their families.

At McMaster Children's Hospital, *A Family of Support* will fund a project called Intervening in the Acute Management for Suicidal Adolescents and Families in the Emergency Department (I AM SAFE). This six-week psychotherapy intervention for individuals and families is provided by a trained therapist, and it focuses on improving family communication, reducing family conflict

and increasing coping skills for youth. Enrollment for the project will begin in the next few months.

If this multi-site clinical trial proves effective, I AM SAFE will provide an innovative and accessible intervention that can be used by any trained outpatient therapist to help prevent youth suicide.



Child & Youth Mental Health
A family of support
Visit afamilyofsupport.com

The Next Level of Spine Surgery

Lower radiation doses for many patients and surgical teams. More accurate placement of screws. Smaller incisions and faster procedures requiring less anesthetic.

Advancements in technology used during spinal surgery are providing numerous benefits for patients and surgical teams. Orthopedic surgeons at Hamilton Health Sciences, specifically those at Hamilton General Hospital and McMaster Children's Hospital, now have the critical equipment to take advantage of those advancements.

Whether surgery is required as a result of trauma, bone or disc compression, cancer or a spinal deformity such as scoliosis (spinal curvature) or kyphosis (exaggerated rounding of the back), the new O-arm and accompanying navigation system are helping surgical teams and patients of all ages.

Previously, spine surgery required a lot of imaging in the form of either an X-ray or CT scan. This imaging took place before, during and after surgery. The radiation exposure of traditional surgery was high for both patients and surgical teams, especially when some procedures require an image for every screw and some procedures require as many as 30 screws. With the O-arm, each image covers a number of screws, so repetitive imaging is not required.

Precision placement of screws is imperative. Being off by a fraction of a millimetre can result in severe damage to the spinal cord or nerve roots. The 3D visualization offered by the O-arm's navigation system can reduce that risk as surgeons have a significantly higher level of detail of the entire surgical field. This translates into greater precision and better outcomes for patients.

"While Hamilton Health Sciences had a strong spine program before, this technology takes us to the next level of sophistication," says pediatric orthopedic surgeon Dr. Devin Peterson.

For major spinal deformities such as scoliosis and kyphosis, where surgery is typically performed on children, Dr. Peterson is excited about the enhanced safety profile of the surgery. This new equipment enables improvements to the patient's quality of life, while also lowering the dose of radiation.

For orthopedic surgeon Dr. Brian Drew, removing a cancerous tumour or treating a trauma patient often involves removing vertebrae. A patient may also need a vertebra removed to relieve pressure from the nerves or spinal cord.

"Once the vertebra is removed, the spine needs to be stabilized using screws and rods," explains Dr. Drew. "The O-arm helps ensure placement accuracy. This helps reduce the risk of infection and speeds healing."

This new technology is helping the team at Hamilton Health Sciences provide the best possible care to adult and pediatric patients from across the region.



Dr. Devin Peterson



Dr. Brian Drew



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PO Box 739 LCD 1
Hamilton, ON L8N 3M8
905-522-3863 | hamiltonhealth.ca
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