SHIJE



The shadow pandemic

How COVID-19
is taking a toll on
kids' mental health

Also in this issue

A new approach to treating childhood cancers

Honouring the memory of a beautiful soul

Big hearts behind the wheel



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During a time when it feels like the ground is constantly shifting under our feet, our unchanging commitment to conquering childhood illness is more vital than ever before. I believe that amidst the many challenges around us, sustaining a laser-focus on the journey ahead will help create a firmer foundation for the future of our children.

In our feature story, our coverage on the emerging mental health "shadow pandemic" among kids is a reflection of this commitment. Daily living is especially difficult for children and youth struggling with their mental health, and the last two years of the pandemic has only heightened the magnitude of the problem.

As we face a rising tide of pediatric mental health challenges, never before has there been a greater need to find new, better and more innovative ways to support our kids. And as we continue to tackle

the problem, Dr. Roberto Sassi, our newly-arrived psychiatrist in chief at BC Children's Hospital, shares his initial insights on the impacts of the pandemic and the potential of technology to play a role in providing care. While there is much work to be done, the opportunities that technology tools offer us give us hope for the future.

Thank you for being part of our journey. Together, with your support, we're creating a solid foundation for our kids—and a healthier tomorrow.

With gratitude,

Malcolm Berry

Malcolm Berry President & CEO BC Children's Hospital Foundation

COVID-19 isn't the only pandemic that's disrupting the lives of children and youth across BC. After the virus caused widespread lockdowns and turned our lives upside-down, mental health care requests for kids skyrocketed, creating a "shadow pandemic" with effects that could linger long after pandemic restrictions have lifted.

"Even preceding the pandemic, the number of kids and young people asking for help for mental health and substance use issues had been increasing," said Dr. Roberto Sassi, psychiatrist in chief, BC Children's Hospital. "With all the data that we have so far, not only in BC but across the country and even in the US, the pandemic seems to be accelerating this even more."

COVID-19 has worsened an already difficult situation. Even before the pandemic, the numbers were staggering: in 2020 over 95,000 kids and youth in BC were impacted by mental health issues. That's almost 250 schools filled with children, and about 60 per cent of them were not getting the support they needed.

The impacts of the pandemic, including cancelled activities, social isolation, financial issues and the ever-present threat of the virus itself, have all put an incredible number of additional stressors on kids. For many young people already experiencing mental health challenges, the pandemic worsened their conditions, transforming a rising tide into a tidal wave.

Consequences that could last a lifetime

The shadow pandemic of mental health disorders won't simply disappear once COVID-19 is under control. Childhood and adolescence are crucial formative times, and disrupting the mental, emotional and social development during these phases of kids' lives can have harmful effects for years, and possibly generations, to come.

Children with mental health conditions like anxiety and depression are at a higher risk of harmful behaviours such as dropping out of school, self-harm, problematic substance use or more. As they grow into adulthood, they're more likely to experience long-term life challenges like unemployment or chronic social isolation, if these conditions are not treated earlier.

The stakes are high, but so is the commitment of experts here who are working tirelessly on new advances to help more kids and youth as the tidal wave grows.

Intervening early is crucial—we have a much better chance of restoring young people's health and preventing negative outcomes if we provide support and treatment as early as possible.

> - Dr. Roberto Sassi. psychiatrist in chief, BC Children's Hospital

Technology is lighting the way

Technology holds enormous potential to reach more children and families, gather more real-time data and feedback, and create more communication channels for kids to open up and share about their mental health challenges—ultimately, enabling them and their families to receive more support.

One example is in the area of novel smartphone apps, which can ask patients how they're feeling throughout the day, gathering data in real-time and in real-life situations. These apps allow medical experts to gather higher volumes of data over longer periods of time so they can work towards crafting more effective, personalized treatment options.

Chatbots, computer programs powered by artificial intelligence, can reach a wider number of young people and give them a non-intimidating way to talk about mental health. Designed according to evidence-based therapeutic techniques, these chatbots can start the conversation, then hand off to a human therapist if needed.



We're on the verge of a big explosion of very novel and interesting technologies being used in mental health.

- Dr. Roberto Sassi, pictured below



With the help of cutting-edge technology, mental health experts will be able to reach more kids and youth and provide more support through customized treatments, giving them the help they need—when and where they need it.

Shining a light on the shadows

COVID-19 has applied overwhelming pressure on young people for the past two years, pushing the growing pandemic of mental health issues out of the shadows and into the open. Despite these challenges, there's a bright light on the horizon. New tools and treatments will help kids and youth enjoy better lives—now and for years to come.

HERE TO HELP

The **Kelty Mental Health Resource Centre** at BC Children's Hospital provides training and resources to medical experts, school professionals, kids, youth and families across the province.

Learn about all the resources available, including the Breathr mindfulness app and the Where You Are podcast, at **keltymentalhealth.ca**. I feel privileged to have known Aisha and been part of her care team during some really incredibly challenging times. I was always impressed by her resilience and positivity in the face of some truly complex medical issues.

> - DR. ANDREA HUMAN, PEDIATRIC RHEUMATOLOGIST, BC CHILDREN'S HOSPITAL

Honouring Aisha's memory

An avid horseback rider and teacher, brimming with warmth, and always positive. And a beautiful soul. This is how Aisha's family will always remember her.

On February 15, 2021,
18-year-old Aisha passed
away due to complications
from a rare and life-threatening autoimmune disorder
known as Mixed Connective
Tissue Disease. Although
she was young, the impact she left on her family,
friends and the community—including her health
care team at BC Children's
Hospital—was profound.

"Though she was unwell, she always had a positive outlook, full of giggles and warmth," said her family. "We are so proud of our Aisha and the woman she had become."

To honour Aisha's memory, her parents, Helen and Joe, and siblings, Quinn and Liam, made a generous donation towards the

establishment of the
Family Endowment for
Rheumatology Research.
They were supported by
BC Children's Hospital's
Dr. Lori Tucker, division
head, division of
rheumatology, and
Dr. David Cabral,
attending rheumatologist.

"I would like to thank the Visram family on behalf of the many children

in BC with autoimmune and rheumatic diseases, and their families," said Dr. Tucker. "Research is their hope for the future."



In the business of helping others

Moving from Hong Kong in 1975, Donald Leung, like many new immigrants, started his life in Canada by working odd jobs, learning as he went and having a strong work ethic.

Even in those early days, Donald valued people and has always been passionate about taking care of those around him.

While working on the road as a truck driver, Donald often donated the spare change saved from buying lunch to those less fortunate. Philanthropy was a part of his DNA, even in those years with little money to his name. He still found small, impactful ways to help the community around him.

After years of hard work, Donald founded Donald's Meat Distribution in 1993, a company specializing in the procurement and delivery of quality meats. The company grew rapidly through the 1990s, expanding its lines of business to become a premier, state-of-the-art meat distribution and processing operation. The company was renamed "Donald's Fine Foods" in 2005 and today, employs over 800 people across the nation and exports to more than 25 countries.

After establishing his business in Canada, Donald continued to help others by supporting worthy causes. As the company grew, so too did the philanthropist within Donald. Inspired by their humble beginnings, Donald's Fine Foods and the Donald and Julia Leung Family Foundation have made transformational changes in their community through their generosity and compassion.



The family made an extraordinary commitment of \$1 million to BC Children's Hospital to help accelerate groundbreaking pediatric oncology research, helping to advance innovative research that is instrumental in the quest to conquer childhood cancers. This gift reflects Donald's legacy of caring for those around him. With this gift, his impact will shape future generations, ensuring a brighter future for children across the province and around the world.

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LATEST STRIDES

A closer look at how supporters like you are making strides in research and clinical care possible.

A NEW APPROACH TO TREATING CANCER IN KIDS

A growing area of research at BC Children's, called metabolomics, is drawing national and international attention in pediatric cancer research.

Metabolomics is focused on understanding how normal or diseased cells and tissues in our body work by studying small molecules, called "metabolites", that are present in blood, urine, and healthy or diseased cells. It is a powerful approach that has the potential to identify more effective treatments for childhood diseases like cancer that may offer new hope to families facing a devastating diagnosis.

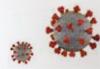
Dr. Seth Parker, investigator at BC Children's Hospital Research Institute, is leading efforts using metabolomics to identify more effective therapeutic targets for childhood cancers. By identifying the nutrients that are essential for cancer cell growth and understanding how they are transported into cells, this research may identify new therapies that target treatment-resistant childhood leukemia. Currently, there are few options for kids who face a relapse or don't respond to available treatment options.

An essential instrument in metabolomics research called a mass spectrometer arrived at BC Children's Hospital Research Institute at the end of 2021. This state-of-the-art equipment will be used to analyze patient samples and cells to help researchers identify metabolic patterns of cancer cells. "My research team will use the cutting-edge mass spectrometer that generous donations helped to provide to understand how cancer cells consume the many nutrients available to them and what each nutrient is used for," says Dr. Parker. "This information will help us identify and design better treatment strategies aimed at cutting off access to these key nutrients and effectively starve cancer cells."

While this research currently focuses on cancer, Dr. Parker hopes the mass spectrometer will also help catalyze research for other childhood diseases, including diabetes and other genetic disorders, giving new hope to families facing challenging diagnoses.



130 children in BC are diagnosed with cancer every year



INSIGHTS AND INNOVATIONS DURING THE PANDEMIC

As the world marks the two-year anniversary of the onset of the COVID-19 pandemic, researchers at BC Children's continue to uncover groundbreaking research discoveries around children and COVID-19. Two of these research areas focus on COVID-19 mental health impacts and vaccines.

A number of studies are evaluating the mental health impact of the pandemic on children and youth. One in particular was launched in 2021 as an online survey, and is still ongoing, with results pending. This online survey is seeking to better understand how the pandemic has affected kids' and youth's thoughts, actions and feelings over time and what resources can best support young people.



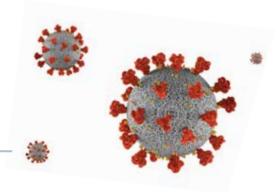
"This research has the potential to transform the lives of children and families across the province who are struggling with unmet mental health care needs," says study co-lead, Dr. S. Evelyn Stewart, director of psychiatry research at BC Children's. "We will provide decision-makers with rigorous evidence to guide clinical and policy decisions for this and future pandemics."

Researchers here have also been studying COVID-19 vaccines for children, with findings impacting kids and adults here in BC and beyond. Dr. David Goldfarb, medical microbiologist and pediatric infectious disease physician at BC Children's Hospital, provided crucial data in the first peer-reviewed study in North America examining the timing between first and second doses of mRNA vaccines. Results of the

study showed that a longer dose interval leads to a stronger immune response when compared with the initial shorter intervals recommended by the manufacturers.

These two areas represent just the tip of the iceberg when it comes to all of the world-leading research taking place here on COVID-19 and children.

Together with research in many other areas such as COVID-19 treatment, testing and transmission, researchers here have made discoveries that have informed public health policies, and created a healthier environment for children.



No stone left unturned

The odds were stacked against him. I'm really proud of him and feel really fortunate that he was able to overcome this.

> - FARIS, SCOTIABANK **BRANCH MANAGER**

There was a time when Faris did not know if his brother. William, would make it.

What started as flu-like symptoms guickly had the 15-year-old admitted to BC Children's Hospital. After thorough testing, William was diagnosed with hemophagocytic lymphohistiocytosis (HLH)-a rare immune disorder where white blood cells attack the body's organs. His family was devastated.

The disease had taken a toll on William's bone marrow. In September 2002, his care team began to consider a transplant. "It can be quite an extensive process to find a match," said Faris, "We were very fortunate that both my father and myself were matches for my brother."

One month later, Faris donated his bone marrow for a transfusion. However, that was just the beginning of his family's journey. William started chemotherapy after the transplant. Faris and the rest of the family were by his side throughout his treatment and they comforted him during the especially difficult moments.

In 2005, after a three-year battle, William completed his treatment at BC Children's Hospital. Faris attributes this outcome to the doctors and staff. "The care that we received from the hospital was second to none," said Faris, "The compassion, the empathy... they left no stone unturned."

Faris also credits William's survival to his resilience. Today, William is married and the dad of a four-year-old son, with another child on the way. For Faris, his love for the hospital has come full circle. Today, he is a Branch Manager at Scotiabank and one of the leaders of their employee fundraising campaign. Nothing gives him greater joy than giving back to the hospital that saved his brother.



Helping kids in all corners of BC

Inspired by the passion and dedication of employees like Faris, Scotiabank has committed \$750,000 towards the **Diabetes Transformation Project, which** is expanding expert diabetes care and resources for kids and families across the province. Diabetes is a rapidly growing epidemic among children and initiatives like this are vital to help families manage this lifelong condition.



A legacy of love

It was over 40 years ago when Barb Harris first walked through the doors of BC Children's Hospital. In 1974, her daughter, Gayle, was born with a tiny hole in her heart and was referred to a BC Children's Hospital pediatric cardiologist, Dr. Michael Patterson, now retired. Gayle became a regular patient of the hospital until she transitioned to adult care at age 19.

Gayle was Barb's only child, adopted by Barb and her husband Gregg, at birth. She grew to become a beloved librarian for the City of Surrey. Kind, warm and passionate about literacy, Gayle was one of the longest-serving children's librarians in the city. She dedicated her life's work to helping her community and building connections through books and learning.

On the morning of April 8, 2019, after walking her five-year-old son to school, Gayle suffered an unexpected cardiac arrest. She spent five weeks in a coma before passing away on May 12 at the age of 44. Doctors explained her cardiac arrest was likely caused by long QT syndrome (LQTS), a heart rhythm condition. While LQTS can be present at birth, it may not be found until later in life.

After losing her daughter to a sudden arrhythmic death, Barb made it her mission to honour Gayle by giving back to BC Children's Hospital. Inspired by the research work and care taking place at the hospital, Barb is giving hope to other families facing the same condition as her daughter. Her generosity will help ensure families across BC have access to the latest cardiac research and innovations.

Today, one in every 100 babies in BC is born with a congenital heart defect. Barb's contributions to the pediatric cardiac care at BC Children's Hospital is bringing new hope to families battling childhood heart disease and improving the odds of living a long and healthy life.

Long QT Syndrome (LQTS)

is the most common inherited cardiac heart rhythm condition, occurring in 1 in 2000 people.

It is caused by abnormalities in the genes that control the heartbeat.

LQTS can cause fainting, seizures and cardiac arrest.

Research into LQTS is one of the priorities of the cardiac electrophysiology team at BC Children's Hospital.



There's nothing sweeter

In the spring of 2019, an ultrasound appointment changed Jen's life forever. In utero, Jen's daughter Claira was diagnosed with multiple life-threatening heart defects.

Jen and her husband Ben did not know what to do with the weight of this news. "I broke down and even to this day thinking about it, that's one of the hardest memories." said Jen.

Claira was born with only one working ventricle and her two main arteries reversed. She also was diagnosed with pulmonary atresia, inhibiting blood flow to her lungs. While her conditions were complex, knowing about them ahead of Claira's

birth meant that a world-class team of medical experts awaited her when she entered the world.

At seven days old, Claira had her first open-heart surgery, where a shunt was put in to allow blood flow. Months later, she returned for another surgery that would help carry oxygen throughout her body.

These procedures were successful and today regular check-ups bring great relief to Jen and her family, ensuring Claira's condition is stable. In a few years, she will return for her last surgery to repair her heart ventricle.



Claira's journey has been an inspiration to her aunt, Becky, a District Manager at Purdys Chocolatier. Knowing the difference the hospital makes for children like Claira, the family was delighted to learn that Purdys was supporting BC Children's Hospital through its Dear Santa campaign, which raised over \$140,000 in 2021.

Jen hopes that Purdys and the campaign donors know they are changing lives. "I want anyone, not just heart families, but any family at BC Children's Hospital to know that they are in the right place... that these teams are doing the best for your kids."

Honouring exceptional care in Zach's memory

We are so grateful for the exceptional health care teams at BC Children's who dedicate their lives to caring for children.

Inspired by their expert and compassionate care, the Zach Prince Foundation made a generous gift to recognize Dr. Caron Strahlendorf, head of pediatric hematology, oncology and bone marrow transplantation, and the oncology team, for their unparalleled commitment and dedication.

"We are honoured to recognize Dr. Strahlendorf, a brilliant oncologist, and her extraordinary team for their care for BC's most vulnerable patients



and families," said Zach's father Dana Prince, who along with Zach's mother Elana, co-founded the organization, which funds education, training and programs to promote excellence in oncology care.

The Zach Prince Foundation has provided more than \$760,000 in support of BC Children's oncology programs.







JUNE 12

TAKE A STEP FOR BC'S KIDS

Register for BC's largest family fun run and race where you live to help raise funds to conquer childhood illnesses.

RacefortheKidsBC.ca

