



## THE PAIN CENTRE

### **Your Investment. Your Impact.**

SickKids is profoundly grateful for your gift through SickKids Innovators, which continues to enable cutting-edge research, innovative education and exemplary care. Through your support, the Pain Centre was able to further advance pain assessment and management at SickKids in an effort to prevent and minimize pain in children.

We are delighted to report on the impact of your gift over the past year.

# Preventing and minimizing pain for all children.

The Pain Centre strives to prevent and reduce pain for all children in a family-centred care environment. Through the integration of evidence-based practice and knowledge translation, the Centre is providing children experiencing pain with an improved quality of life.

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**1 in 5**  
Canadian children  
have weekly or  
more frequent  
chronic pain

**~5%**  
of these children  
suffer from  
chronic pain so  
severe that it  
interferes with  
daily activities

## Pain Centre

Pain is one of the most common, debilitating and perplexing symptoms experienced by children of all ages, and it is frequently not well managed. Most children being treated at SickKids experience some form of pain due to their illness, injury or treatment—as many as 77 per cent. Pain is reported as one of the worst aspects of hospitalization, and causes anxiety and discomfort. It can impair a child's every day functions, compromise immune function and healing and influence health care access in the future. Through the integration of research, education and care, the Pain Centre seeks to prevent and minimize pain for all children.

SickKids Innovators are committed to advancing child health, and through your generosity Pain Centre members are having a transformative effect on pain management and prevention across the hospital.

## Seed Funding Competitions

Research has tremendous potential to impact child health by transforming novel ideas into tangible results. Exploring new, radical ideas can enable an abundance of opportunities to uncover revolutionary outcomes. Seed funding allows researchers, clinicians and educators to seize upon these radical ideas—ideas that can have a major impact on child health, but are inherently risky. Supporting a scientist's research in the early stages of their study allows them to become more productive sooner, and enables them to

continue developing and leveraging their ideas to impact child health in Canada and around the world.

Your gift enabled the support of two seed grants competitions for the Pain Centre, one in partnership with the Garron Family Cancer Centre and the other is a General Pain Research Seed Grant. The winners were selected through a rigorous selection process where a number of reviewers with relevant knowledge in research, pain and oncology evaluated the applications.

## Pain and Cancer Research Seed Funding Grants

**Using a Humanoid Robot to Reduce Procedural Pain and Distress in Children with Cancer: A Pilot Randomized Controlled Trial** (Stinson JN, Nathan PC, Jibb LA, Beran T).

This project will strive to answer the question, “What is the feasibility of the trial protocol to evaluate the impact of the humanoid robot (Medi-Port) on pain intensity and distress during SCP needle insertion compared to usual care in children (four to nine years) with cancer?”; and the secondary question, “In four to nine-year olds with cancer undergoing SCP needle insertion, does Medi-Port use reduce pain intensity and distress compared to usual care?”

Data will be collected and analyzed, and the knowledge gained from the study will

*“Today, I don’t have any pain and I can do everything that I want to. And, if I have pain again, I’ll now know what to do.”*

*~Elise, SickKids Patient*



be disseminated with key stakeholders, including families, the Canadian public, clinicians, scientists, and non-governmental organizations. Findings will also be presented at key international oncology conferences and published in open-access paediatric or oncology journals.

**Magnetic Resonance-Guided High Intensity Focused Ultrasound for Palliation of Painful Skeletal Metastases in Children** (James Drake, Joao Amaral, Michael Temple, Fiona Campbell, Joost de Ruiter, Meredith Irwin, Alisha Kassam, Sevan Hopyan, Thomas Looi and Adam Waspe).

This project strives to determine whether magnetic resonance-guided high intensity focused ultrasound (MRgHIFU) has a positive impact on health-related quality of life (HRQL) in paediatric cancer patients. Dr. Drake and his team will work to prove their two hypotheses, the first being that bone metastases can be targeted noninvasively using MRgHIFU without adverse event, and the other being the treatment of bone metastases using MRgHIFU will reduce pain, improve HRQL and reduce analgesion (pain killer) requirement (opioids and non-opioid adjuvants).

In collaboration with Sunnybrook Health Sciences Centre, the team will perform a single-arm pilot examining patients with new paediatric bone metastasis cases of an estimated six patients in the year. Though there will not be enough patients accrued in this pilot to conduct a quantitative analysis of the results, the team does intend to follow

all patients for the duration of the study to record pain, medication usage and HRQL and provide a descriptive analysis to inform future studies. Through the collection of data, the team will set design a multicentre study to validate the hypothesis that MRgHIFU will be an effective intervention in this population. Dr. Drake and his team will ultimately translate their recommendations into policy and best-practice guidelines to inform adoption of an MRgHIFU treatment platform into appropriate cancer pain programs.

#### General Seed Funding Grant

**A Pilot Study of Lidocaine Infusions for the Management of Chronic Pain in Children** (Lisa Isaac, Shinya Ito, Carolyn Pehora and Mark Crawford).

The primary objective of this project is to determine the effect of intravenous lidocaine by short term infusion on pain scores in children and adolescents with chronic pain.

The team will develop an open label study that will include 21 children aged eight to 18 with refractory chronic pain. Data from the study will be collected and the results will be presented at institutional rounds, local, national and international meetings and the finding will be published in a peer-reviewed journal.

#### Education for Improved Pain Outcomes

SickKids is one of the world’s leading paediatric educational institutions where

#### Meet Elise

When Elise was 11-years-old, she sprained her ankle during dance class. The doctor said it would heal in six weeks, however, the pain continued. Her parents took her to different doctors and therapists, but they weren’t able to say why the injury persisted. Elise loved being active and tried to keep up with her dancing, skiing and school teams, but when she would put pressure on her foot she felt stabbing pain. “I didn’t know why this was happening to me,” Elise said. “Some people didn’t even believe I was in pain, they didn’t understand that pain is real even if you can’t see it.”

The pain continued for six months, until she came to SickKids to visit the Chronic Pain Team. The team assessed Elise and recommended she be treated with a combination of medication, physiotherapy and psychological support. She underwent two hours of intense physiotherapy every day for four months. It was very difficult, but with the support of her family, dance studio, local physiotherapist and the SickKids team she was able to overcome the pain. Elise is now pain-free and able to enjoy her dance classes again.

trainees from around the world come to learn each year. Your generosity supported the following significant educational initiatives:

- Pain Awareness Week took place on November 10–14th, 2014. SickKids employees and families had the chance to learn about ongoing pain-related educational and quality improvement initiatives, promising new research and new pain management strategies. The week featured educational clinics for children and their families, interactive multimedia activities and various lectures from renowned leaders in the Pain industry.
- The Pain Conference is a one day inter-professional conference that focused on practical approaches to paediatric pain management. The purpose of this conference is to raise awareness and explore innovative strategies in managing pain and was designed for health-care professionals who work with children in all health care settings allowing for networking and interactive learning.
- The development of the international educational initiative, Online Paediatric Pain Curriculum, is in the final stages of approval and is targeted to go live this year. The 10 web-based modules include topics such as pain assessment and chronic pain management. Looking forward, the Pain Centre will be using funding from SickKids Innovators to hire someone to operationalize the curriculum for global access.

### Thank You

We are incredibly grateful for your support through SickKids Innovators. Your commitment to the Pain Centre is having a transformative effect on pain management and prevention as we work to eliminate pain in children. Thank you for your remarkable generosity.

**Dr. Bonnie Stevens and  
Dr. Fiona Campbell,**  
*Pain Centre Co-Directors*



# SickKids®

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