

# Department of Pediatrics Research Report

Mar 2024



## Inside This Issue

Research Spotlight [P1] Dean's Summer Student Awards [P3] SHRF Awards [P4] Podcasts [P5] Upcoming Events [P6] Child Health Research Trainee Day [P6] Mingling Minds Events [P7] Publications [P8] CHRTF [P8] Our Partners [P8] Contact Us [8]



## Leveraging technology to improve pediatric care in Saskatchewan: a patient centered and multi-stakeholder collaborative approach.

**Dr. Susan Petryk**, a Regina-based pediatrician with a specialist interest in child development is making significant strides in the field of developmental pediatrics, medical education, and quality improvement, focusing on bringing advanced care and support closer to home for children and their families. This researcher spotlight takes a look at how Dr. Petryk is impacting the lives of those affected by Developmental disabilities and mental health issues.

Dr. Petryk and her team's recent project, "The Virtual Specialist and the Travelling Nurse Practitioner," explores the potential of Pediatric Virtual Consultation Models (Peds-VCM) to improve accessibility of healthcare delivery. By leveraging technology, this initiative seeks to understand how virtual consultations can enhance the well-being, hope, and resilience of families navigating neurodevelopmental and mental health concerns. This approach not only brings specialist care directly to



staff, integrating care within the natural settings of children's lives. This innovation offers the potential to reduce consultation wait times and deliver increased care within existing budget constraints. Another technology driven project is on virtual facial photography for screening

FASD. This innovative method aims to achieve virtual facial photographs that have adequate diagnostic accuracy when compared to traditional in-person facial photographic assessments. The method has the potential to streamline early identification and intervention for those at most risk for FASD and connect the highest risk patients more quickly to a full diagnostic assessment. By examining caregiver perspectives, the team is refining this virtual technique to improve access to diagnostic services, especially for families facing geographical or logistical barriers within Saskatchewan. Good quality virtual facial photos looking for the sentinel facial dysmorphism of FASD could create a path for effective screening of FASD in specific populations such as those who are overrepresented in foster care, and in the youth criminal justice system. Moreover, there is potential for this technique to be valuable for adult populations (e.g., incarcerated adults who have a higher reported incidence of FASD).

Continued on pg. 2...

...spotlight, continued from pg. 1

This technique could also be a powerful epidemiological tool for studies in FASD. As a next step, this research has the potential to inform future research in virtual standardized dysmorphology analysis, which could be applied more broadly to other genetic syndromes to pre-screen patients and triage them for expedited assessment, especially if there are known treatments, medical surveillance or supports that follow a specific diagnosis.

Understanding the impact of the Community Mental health Nurse service within Child and Youth Services, Regina was a 2023 Dean's summer student project completed with medical student Kacie Kushniruk. The study identified the most beneficial aspects of the CMHN service from the perspective of the families receiving Child Psychiatry services in Regina. The results will enhance the quality, efficiency, and effectiveness of this vital support system.

Dr Petryk offers several Dean's summer student projects each year for 1<sup>st</sup> and 2<sup>nd</sup> year medical students to get introduced to clinical research. With medical student Al Belisle, Dr Petryk is investigating how to optimize e-prescribing for all medication prescribers using the province wide Pharmaceutical Information Program (PIP) and learn why it has not been adopted by more prescribers. With medical student Sarah Durr, Dr. Petryk is piloting a 2 minute feedback form filled out by patients on medical student/ Resident performance following a clinical encounter. Dr. Petryk contributes data to the Canadian national FASD database to ensure data from southern Saskatchewan is included in the national database. With medical student Samantha Bundus, she has embarked on a study to explore southern Saskatchewan's profile of diagnosis and treatment patterns for FASD in comparison to the other prairie provinces. With medical student Mimi Moustapha, Dr Petryk will be using a N of 1 trial to explore a novel treatment in a child with a rare condition.

Through a combination of clinical research, patient feedback, and collaboration with a broad spectrum of healthcare professionals, the work of Dr Petryk and her team is characterized by its patient-centered approach and minimal disruption to standard care. Their research not only aims to improve individual patient outcomes but also to provide organizational and societal benefits. By developing models of care that can be scaled and adapted, they are working towards reducing wait times for specialist consultations and broadening access to essential services within budget constraints.

The potential impacts of these projects are vast, promising to enhance the quality of life for children and their families, inform future research, and foster innovative healthcare solutions that can be applied more globally. We are excited to follow Dr. Petryk and her team's progress!

### This research is funded by:

- USask CoM Dean's Summer Research Projects Award
- USask College of Medicine Research Award (CoMRAD)
- SHRF Innovation grant

### **Check out these recent publications:**

- Durr, MR.R., Petryk, S., Mela, M. et al. Utilization of psychotropic medications in children with FASD: a retrospective review. *BMC Pediatr* 21, 512 (2021). <https://doi.org/10.1186/s12887-021-02986-5>
- Petryk S, Newaz S, Marques Santos JD. [Virtual clinical teaching sessions in developmental-behavioural paediatrics](#). *Med Educ*. 2022 Nov;56(11):1127-1128. doi: 10.1111/medu.14889. Epub 2022 Aug 19. PMID: 35984358.

**Dr. Petryk would like to acknowledge her collaborators: Dr. Mansfield Mela, Dr. Jill Bally, Dr. Senthil Damodharan, Dr. Susan J Hemingway, Sanjida Newaz, Alex "Yuli" Chen. Special thanks to the support from the Research Support and Performance office in Regina.**

**Congratulations to Department of Pediatrics’ 2024 CoM Dean's Project Awardees**  
**Check out the full list of awardees [here](#)**

<b>Dr. Tim Bradley</b>	Canadian Aortopathy and Connective Tissues Disorder (Can-ACT) Registry
<b>Dr. Susan Petryk</b>	Comparing the diagnostic profile of Fetal Alcohol Spectrum Disorder in southern Saskatchewan with other provinces using our CanFASD national database
<b>Dr. Susan Petryk</b>	Optimizing E-Prescribing in Saskatchewan: An Analysis and Improvement Initiative
<b>Dr. Susan Petryk</b>	Asking the Parents: Implementing a Pediatric Patient feedback form in Medical Student’s Clinical Sessions
<b>Dr. Susan Petryk</b>	Feeding difficulties in children with Autism Spectrum disorder
<b>Dr. Polya Ninova</b>	Health outcome of young children born to antenatal COVID-19 positive mothers

**Congratulations** to Dept of Pediatric faculty, **Dr. Darryl Adamko** and **Dr. Daphne Yau** who are co-applicants of the RareKids-CAN: Pediatric Rare Disease Clinical Trials and Treatment Network. The network brings together pediatric health experts and is funded by a \$20 million grant from the Canadian Institute of Health Research’s Institute of Genetics. [More information](#)



**News release**  
 February 28, 2024 – Ottawa, ON  
 Canadian Institutes of Health Research



In Canada, 14,000 children under the age of 15 die each year from a rare disease. With more than 7,000 known rare diseases, it is essential for researchers from across the country to work together to improve the health outcomes of all children and teens living with a rare disease.

That is why today, the Honourable Mark Holland, Minister of Health, announced the Government of Canada is providing \$20 million over five years to Dr. Thierry Lacaze-Masmonteil and the Maternal Infant Child and Youth Research Network (MICYRN) team, to create RareKids-CAN: Pediatric Rare Disease Clinical Trials and Treatment Network.

The national Network will foster collaboration among researchers, patients, caregivers, health care providers, and policy makers; streamline clinical research; and support national and international clinical trials to advance discoveries, enable better prevention, diagnosis, and treatments, to improve health outcomes for children and adolescents affected by rare diseases.

This investment was funded through the Canadian Institutes of Health Research Rare Disease Research Initiative, one of many initiatives funded through the Government of Canada’s National Strategy for Drugs for Rare Diseases. The federal government will continue to make investments like these to support Canadian researchers who are working hard to improve health outcomes people living in Canada and elsewhere in the world.

## AWARDS

Congratulations to the recent Saskatchewan Health Research Foundation / Jim Pattison Children's Hospital Foundation Awardees from the Department of Pediatrics

### 2023/2024 Solutions - Impact Grant

Project Title: Development of a Culturally-Rooted Pediatric Virtual Care Program to Facilitate Care Closer to Home

PI: Ivar Mendez

Co-PI: Scott Adams, Stacey Lovo

Co-I: Luis Bustamante, **Gregory Hansen**, Fernanda DeMarzio, Veronica McKinney, **Tanya Holt**, Dray Bear, Kyla Royal, Lori Sparling

Funding Total: \$150,000.00

Project Title: A personalized medicine team for craniofacial and cardiovascular disorders affecting Saskatchewan's pediatric population

PI: Heather Szabo-Rogers

Co-PI: Michelle Collins

Co-I: **Bita Hashemi**

Funding Total: \$150,000.00

Project Title: Bolstering the impact of the Child Trauma Research Centre: Collaborative, community-driven approaches to translating child and youth well-being research on trauma-integrated practices for service providers in Saskatchewan

PI: Nathalie Reid

Co-PI: Lise Milne

Co-I: Amanda Kornaga, Michelle Goulden, Chantelle Priel, **Laurentiu Givelichian**, Nasir Sohail

Funding Total: \$149,308.00

### 2023-24 Solutions - Innovation Grant

Project Title: Pasteurized donor human milk for HIV-exposed infants: Evaluating acceptability and feasibility

PI: Kelsey Cochrane

Co-I: **Rupeena Purewal**, Saydi Harlton, Donna Nelson, Alexandra King

Funding Total: \$50,000.00

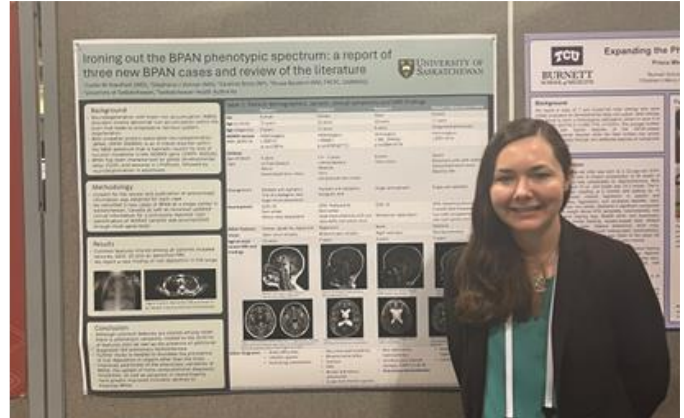
Project Title: Supporting the 'Forgotten Ones': Development and Evaluation of an Internet-Delivered Resource Program for Child and Youth Siblings of Children and Adolescents with Congenital Heart Disease

PI: Kristi Wright

Co-I: **Charissa Pockett**, Lynne Telfer, Marta Erlandson, Corey Tomczak, Anna Maton

Funding Total: \$49,996.00

Congratulations to Pediatric Resident, **Dr. Caitlin Goedhart** who presented her poster at the Annual Clinical Genetics Meeting last week in Toronto. Dr. Goedhart presented, Ironing out the BPAN phenotypic spectrum: a report of three new BPAN cases and review of the literature. Coauthored by Dr. Shuaa Basalom, Dr. Stephanie Skinner, and Caroline Brost



Check out **Dr. Daphne Yau** on the recent episode of Researchers Under the Scope. University of Saskatchewan, College of Medicine Office of Vice-Dean of Research



**Dr. Daphne Yau: Blood Sugars and Braine Health**

Daphne Yau can trace her interest in endocrinology back to a beta-cell physiology experiment during her master's degree, working with laboratory mice with Type 2 Diabetes. "It was the part of the pancreas that makes insulin," she said. "It was fascinating. It also made me realize that maybe pure laboratory research wasn't quite for me."



Check out **Dr. Susan Bobbitt** who was recently interviewed on the podcast, Peds Cases.

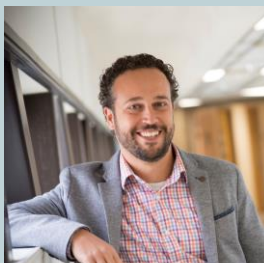


This [episode](#) will review Part 2 of the CPS anxiety position statements, which focuses on the treatment and management approach for children and adolescents with anxiety disorders. Listen to the podcast here. To read the position statement authored by Dr. Bobbitt check it out on the CPS website:

<https://cps.ca/en/documents/position/anxiety-in-children-and-youth-management>



Check out **Dr. Munier Nour** on the recent episode of Researchers Under the Scope. University of Saskatchewan, College of Medicine Office of Vice-Dean of Research



**Stronger Foundations: Dr. Munier Nour on Bone Development in Diabetic Youth**

Dr. Munier Nour said osteoporosis is often seen as a disease that affects older adults. But compared to their peers, kids with Type 1 diabetes grow into adults eight times as likely to suffer bone fractures. "Osteoporosis may actually have its origins during pediatric years," he said.



## Coming Events

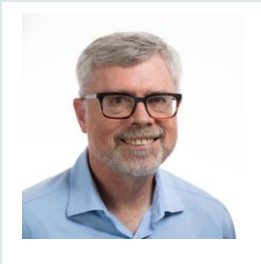
<b>April 4</b>	<u>Pediatric Grand Rounds</u> : Drs. Michael Heart & Francois Bernier – One Child Every Child
<b>April 11</b>	<u>Pediatric Grand Rounds</u> : Dr. Daniel Metzger - Type 1 Diabetes and Transgender Youth
<b>April 18</b>	<u>Child Health Research Trainee Day</u> : Dr. Terry Klassen – Pediatric Emergency Medicine: The Journey from single center study to international knowledge mobilization
<b>April</b>	<u>Pediatric Grand Rounds</u> : Dr. Lisa Broda - Saskatchewan Advocate for Children and Youth
<b>May 2</b>	National Pediatric Resident Research Competition
<b>May 9</b>	<u>Pediatric Grand Rounds</u> : Dr. Patrick Frosk - Founder Mutation in Hutterite and First Nations
<b>May 16</b>	<u>Pediatric Grand Rounds</u> : Dr. Darryl Adamko
<b>May 23</b>	<u>Pediatric Grand Rounds</u> : Dr. Andrew Wade
<b>May 30</b>	<u>Pediatric Grand Rounds</u> : Dr. Paul D’Alessandro - Constitutional Mismatch Repair Deficiency: Cancer Predisposition on the Prairie

### Department of Pediatrics Child Health Research Trainee Day

Thursday April 18<sup>th</sup>, 2024  
Louis’ Loft

#### Keynote Speaker presentation by **Dr. Terry Klassen**

#### Pediatric Emergency Medicine: The Journey from single center study to international knowledge mobilization



Dr. Terry Klassen is a Pediatric Emergency Physician and Clinician Scientist. He is focused on the design and conduct of randomized controlled trials and systematic reviews to improve the outcomes of acutely ill and injured children presenting to the emergency department. He is working to improve the methods and conduct of research in this area. For this work he has been selected to join National Academy of Medicine (US) and Canadian Academy of Health Science (Canada). He has held major academic leadership roles across Canada, including Professor and Chair at Department of Pediatrics, University of Alberta and Stollery Children’s Hospital (1999 to 2009). Most recently he was CEO and Scientific Director of Children’s Hospital Research Institute of Manitoba (2010 to 2024) and Head, Department of Pediatrics and Child Health, University of Manitoba (2014 to 2019). **He assumed the role as Provincial Department Head of Pediatrics, USask and SHA on April 1, 2024.**



RSVP

for lunch before April 10<sup>th</sup>!



PROMOTING AND FACILITATING  
INTERDISCIPLINARY COLLABORATIONS

## Collaborative Research Information Sharing and Strategic Planning

The [Mingling Minds Program](#), which promotes and facilitates transdisciplinary health research, is pleased to host a series of informal noon-hour sessions to exchange information and ideas relating to a variety of research themes. Five theme-specific sessions are planned for April 2024. **Lunch will be provided.** There is **no cost to attend but registration is required.** All sessions will be held from **12:00 p.m. to 1:00 p.m. in Room 1254, E Wing, Health Sciences Building, U of S campus.** We look forward to your participation in these knowledge-sharing, collaborative sessions.

Tuesday, April 9<sup>th</sup>, 2024

[Applying Quantum Computing to Analyze Saskatchewan Health Research Data Platform \(SK-HRDP\) Datasets](#)

Friday, April 12<sup>th</sup>, 2024

[Research Discoveries Using National and Global Birth Cohort Datasets](#)

Tuesday, April 16<sup>th</sup>, 2024

[Bioimaging from Man to Molecules: Current U of S Imaging Resources and Opportunities for Enhancements](#)

Friday, April 19<sup>th</sup>, 2024

[Opportunities for Conducting and Funding International Collaborative Research](#)

Friday, April 26<sup>th</sup>, 2024

[Engaging with Indigenous Communities – Saskatchewan Network Environments for Indigenous Health Research \(SK-NEIHR\) and the NEIHR National Coordinating Centre](#)

## 2024 Jan – March Publications

Malhotra N, **Yau D**, Cunjamalay A, Gunasekara B, S A, Gilbert C, Morgan K, Dattani M, Dastamani A. [Low-dose diazoxide is safe and effective in infants with transient hyperinsulinism](#). Clin Endocrinol (Oxf). 2023 Dec 7. doi: 10.1111/cen.14987.

**Parker M, Yau D**. [Treatment of hypoglycemia due to a rare pathogenic variant in AKT2 with waxy maize heat-modified starch](#). Clin Case Rep. 2024 Feb 8;12(2):e8473. doi: 10.1002/ccr3.8473. PMID: 38344362; PMCID: PMC10853053.

Dostie R, Dunn H, **Marks WN**, Camden C, Lovo S. [Use of telehealth for paediatric rehabilitation needs of Indigenous children - a scoping review](#). Int J Circumpolar Health. 2024 Dec;83(1):2308944. doi: 10.1080/22423982.2024.2308944. Epub 2024 Feb 6. PMID: 38320112; PMCID: PMC10848996.

**Baerg K**, Anderson T, Thiessen H. [Six ways to get a grip on patient and family centered care during the undergraduate medical years](#). Canadian Medical Education Journal. 2024 Feb 28; doi: <https://doi.org/10.36834/cmej.71342>

Dostie R, Dunn H, **Marks WN**, Camden C, Lovo S. [Use of telehealth for paediatric rehabilitation needs of Indigenous children - a scoping review](#). Int J Circumpolar Health. 2024 Dec;83(1):2308944. doi: 10.1080/22423982.2024.2308944. Epub 2024 Feb 6. PMID: 38320112; PMCID: PMC10848996.

**Holt T, Cyr A, Griffin O**, Reid J, **Hansen G**. [Experience of a therapeutic plasma exchange program in a pediatric intensive care unit: A single-center retrospective observational study from Canada](#). Journal of Pediatric Critical Care 11(2):p 60-64, Mar–Apr 2024. | DOI: 10.4103/jpcc.jpcc\_83\_23

Congratulations to **Dr. Mehul Jariwala** (Co-A and Saskatchewan Site Lead) for being awarded a [CIHR project grant](#) in the amount of \$1,402,244.

- This is a national project led by Dr. Brian Feldman at Sick Kids.
- Title: The role of diet, as mediated by the gut microbiome, on childhood arthritis disease activity: a feasibility intervention study.



Photo:

<https://www.pedrheumid.ealab.com/team>

Families of children with arthritis are highly interested in the benefits of diet to improve their child's disease and future health outcomes. We know from previous research that the germs - bacteria and other organisms - that live in our intestines (gut microbiome) are important to how well our immune systems work, and we know that what we eat changes our gut microbiome. We want to study whether a certain diet - the Mediterranean Diet - will improve arthritis for children and whether it was changes in the microbiome that led to improvement. Participants in this study will be asked to change their diet for an 8-12 week period and will follow the Mediterranean Diet. At three time points during the study (beginning, middle, and end), participants will provide stool and blood samples, will complete questionnaires about diet and other aspects of lifestyle and health, and will complete a disease assessment by a clinician. From collecting all these samples and information, we will be able to determine if the diet was successful in improving disease activity in children with arthritis and if the gut microbiome was changed as well. This study will help us figure out if a larger, and more definitive, study like this is possible to do in children with arthritis and will help us design a bigger multinational study to confirm how diet affects disease outcomes and the microbiome in children with arthritis. If successful, this research will provide scientific knowledge to help families make their way through this difficult-to-navigate topic.

The Children's Health Research Trust Fund (CHRTF) was established in 1983 to help raise funds to support child health research at the University of Saskatchewan. As all donated funds are endowed, the CHRTF has continued to grow to become an important part in helping advance research in the Department of Pediatrics. For further information about the CHRTF and to donate: <https://donate.usask.ca/online/chrtf.php>



Our Partners:

The Jim Pattison Children's Hospital has historically provided strong support for child health research in Saskatchewan. The recent \$50 million donation from Jim Pattison allows for a steady stream of revenue to help meet research and programming needs for generations to come. Groundbreaking opportunities for pediatric researchers in Saskatchewan are on the horizon!



Contact us

For more information about The Department of Pediatrics Research, SPRING, or to contribute content to the Department of Pediatrics Research Report, please contact: Monika Polewicz  
Department of Pediatrics Email: [tova.dybvig@usask.ca](mailto:tova.dybvig@usask.ca)