



Research Report

April 2025



DESIGNING AND IMPLEMENTING A PERINATAL DATABASE FOR SASKATCHEWAN

In December 2023, the Departments of Pediatrics and Obstetrics and Gynecology partnered to establish a Working Group to develop a Perinatal Database for Saskatchewan. Currently, Saskatchewan lacks comprehensive, standardized perinatal records and readily accessible province-wide clinical data, resulting in gaps in maternal and neonatal care. The absence of cohesive and accessible patient data is a significant barrier to informed perinatal healthcare decision-making and research.

Dr. Tim Bradley and Dr. Sarah Smith co-lead the Perinatal Database for the Saskatchewan Planning Team and have proposed a multiphase approach, beginning with the development and implementation of standardized electronic health records for the “Prenatal Record,” the “Delivery Record,” and the “Neonatal Discharge Record.”

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BE WHAT THE WORLD NEEDS

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Designing and Implementing a Perinatal Database

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Dr. Bradley (above, left), originally from New Zealand, began working as a Pediatric Cardiologist in Saskatoon in 2016, now at Jim Pattison's Children's Hospital. His clinical interests include Fetal Cardiology and optimizing the care of children with congenital heart disease. His research focuses include increasing the fetal detection of congenital heart disease in Saskatchewan and developing pediatric disease registries and care teams to facilitate best care practices, regardless of where children live or the socioeconomic barriers they may face.

Dr. Smith (above, right), originally from Unity, Saskatchewan, completed her BSc in Chemical Engineering in Saskatoon before entering medical school at the University of Saskatchewan. She completed her residency in Obstetrics and Gynecology in Regina and now practices high-risk Obstetrics and Gynecology at Regina General Hospital. Her research interests include quality improvement in obstetrics, family planning, and minimally invasive gynecological procedures.

One of the most significant challenges in Saskatchewan is the lack of cohesive data on pregnant patients and delivery outcomes. Without reliable data, it is impossible to assess maternal and neonatal health outcomes adequately. Dr. Bradley and Dr. Smith are working towards creating a comprehensive perinatal database, similar to those already existing in Nova Scotia, Ontario, and British Columbia. Such a database will enable local clinicians and researchers to analyze maternal and neonatal outcomes more effectively.

Under the umbrella of the Saskatchewan Perinatal Database, Dr. Smith and Dr. Bradley are leading two major projects. The Maternal Database for Saskatchewan (MAT-SK), led by Dr. Smith, is addressing the critical component of developing standardized prenatal, delivery, and neonatal discharge electronic health records that will be readily accessible province-wide. This will improve communication between healthcare providers throughout pregnancy, ensuring that maternal patients receive consistent and well-coordinated care. Funded by a \$10,000 SHRF Align Grant, the Perinatal Database Planning Team is currently developing a province-wide survey of obstetric and neonatal care providers to inform the development of these standardized electronic health records that will populate the MAT-SK database.

The Congenital Anomalies Database for Saskatchewan (CASK), led by Dr. Bradley, aims to develop a comprehensive database of congenital anomalies for Saskatchewan and utilize it as a stepping stone to facilitate the development of provincial pediatric disease registries, disease care teams, and disease management plans. Funded in part by a \$150,000 SHRF Impact Grant, the creation of the CASK database will be informed using de-identified patient data, in partnership with the Health Research Data Platform – Saskatchewan, in a separate stand-alone project titled Assessment Based on Available data for Congenital anomalies Uploaded already in datasets in Saskatchewan (ABACUS).

On November 28, 2024, maternal and child health stakeholders from across Saskatchewan, funded by a \$1,000 USask College of Medicine Conference Fund Grant, convened to discuss the creation of the Perinatal Database for Saskatchewan. This strategic planning meeting brought together an interdisciplinary team of researchers, healthcare providers, knowledge users, administrators, and digital health specialists.

A key consensus from the meeting was

the importance of first developing a standardized electronic clinical perinatal dataset in collaboration with Digital Health and eHealth. It was agreed that universal access to this dataset would optimize patient care and enable province-wide quality assurance and improvement initiatives. Additionally, that prospective collection of standardized data will also serve as a valuable resource for healthcare decision-making and research.

The Planning Team's primary goals are to develop and implement a provincial perinatal database that will enhance prenatal care, streamline communication among healthcare providers, and provide maternal patients with access to their records.

Across the province, healthcare providers will experience improved coordination, while researchers can leverage comprehensive data to advance maternal and neonatal health outcomes. The Saskatchewan Health Authority and its hospitals will benefit from improved communication and data-driven decision-making, resulting in more effective resource allocation and enhanced patient care. Rural and remote communities will see reduced healthcare disparities, and Saskatchewan's participation in national research will strengthen maternal and perinatal health policies across Canada.

Through the leadership of Dr. Smith and Dr. Bradley and in collaboration with healthcare providers, researchers, and policymakers, this initiative will bridge critical gaps in patient care, enhance healthcare decision-making, and foster research that benefits families across the province.

Initiative Collaborators: Leah Thorp, Jessica Bailey, Dr. Darryl Adamko

Funders: Jim Pattison Children's Hospital Foundation, Saskatchewan Health Research Foundation, USask College of Medicine

Rare Disease Day

February 28th is World Rare Disease Day. To mark the 2025 Rare Disease Day, Daislyn Vidal, the Clinical Research Coordinator for the Department of Pediatrics and Rare Kids Canada (RareKids-CAN) Clinical Navigator, [recorded a video](#) for the College of Medicine and [spoke to the hosts of the Morning Edition](#) radio shows on CBC Saskatoon and CBC Regina.

Rare Disease Day was launched in 2008 by Rare Disease Europe. The day has been adopted by more than 100 countries across the globe, bringing awareness to those living with a rare disease and advocating for more equitable access to for increased research and the development of new treatments and interventions.

More than 300 million people worldwide have a rare disease. Right now, only 25 percent of Canadian children diagnosed with a rare disease live to see their 10th birthday. Only five percent of the over 7,000 known rare diseases have a treatment available, and only 60 percent of those treatments are currently available in Canada.

RareKids-CAN connects 16 health institutions and pediatric hospitals across Canada to a network that works towards providing treatment for children as well as providing access to clinical trials for new treatments and interventions. They provide support to children, adolescents, young adults, and their families, connecting them with cutting-edge treatment options while advocating for increased support and broader awareness of rare diseases.

For more information on Rare Disease Day and the work of RareKids-CAN, go to www.rarediseaseday.org or www.rarekidscan.com.



UNIVERSITY OF SASKATCHEWAN
College of Medicine
DEPARTMENT OF PEDIATRICS
MEDICINE.USASK.CA

University of Saskatchewan
College of Medicine
Department of Pediatrics
Royal University Hospital
103 Hospital Drive
Saskatoon, SK S7N 0W8

Phone: 306-844-1068
Email: peditrics@usask.ca

CONTRIBUTORS

Editor:

Tova Dybvig

Designer:

Dallas Carpenter

Photography:

Submitted

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:

Tova Dybvig, Department of
Pediatrics

Email: tova.dybvig@usask.ca

We acknowledge that we live and
work on Treaty 6 Territory and the
Homeland of the Métis. We pay
our respect to the First Nations
and Métis ancestors of this place
and reaffirm our relationship
with one another.

Our Partners



The Jim Pattison Children's Hospital provides 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!



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: donate.usask.ca/online/chrtf.php

Awards

October 2024 to March 2025



Dr. Nita Chauhan



Congratulations to Dr. Nita Chauhan who is a co-applicant on the funded CIHR Spring Project Grant: [Facial photogrammetry to predict obstructive sleep apnea in a diverse paediatric population](#)

Principal investigator(s): Narang, Indra

Co-investigator(s): Au, Chun Ting; Buchanan, Francine; **Chauhan, Nita**; Fishman, Haley; Kendzerska, Tetyana; Li, Albert; Lui, Ronald Lok Ming; McLaren-Barnett, Anya T; St Laurent, Aaron; Xiao, Lena J

Amount: \$677,026

She is also co-applicant for the recent CIHR Fall Project Grant:

Title: [Continuous Positive Airway Pressure vs High Flow Nasal Cannula for the Treatment of OSA in Children \(CHOSA Trial\)](#)

Principal investigator(s): Narang, Indra; Mahant, Sanjay; Xiao, Lena J

Co-investigator(s): Au, Chun Ting; Baker, Adele; Barrowman, Nicholas J; Buchanan, Francine; **Chauhan, Nita**; Ersu, Refika; Han, Mei; McFadyen, Isaac; Minhas, Ripudaman; Moretti, Myla; St Laurent, Aaron; Zielinski, Dawid

Amount: \$952,425

Dr. Ghita Wiebe



Congratulations to Dr. Ghita Wiebe who was recently added as a co-investigator and site lead for CIHR funded grant, "Project ECHO Autism Diagnosis and Integrated care Opportunities (ECHO AuDIO)".

Principal investigator(s): Penner, Melanie; Robeson, Paula; Flynn, Rachel; Ip, Angie

Co-investigator(s): Christian, Erin; Dever, Maddy; Khilji, Munira; Lai, Jonathan; Richardson, Anamaria; Singal, Deepa; Anagnostou, Evdokia; Brian, Jessica A; Hartling, Lisa A; Kubow, Anna; Lai, Meng-Chuan; Munce, Sarah E; Scorah, Julie; Smith, Isabel M; Wijekoon, Sachindri; Zwaigenbaum, Lonnie

Amount: \$2 million

Awards (continued)

Dr. Tim Bradley



Congratulations to Dr. Tim Bradley who is a co-applicant on the funded CIHR Fall Project Grant: Title: [Connective Tissue Syndromes and the Genetics of Aortopathy](#)

Principal investigator(s): Hallgrimsson, Benedikt; Bernier, Francois P; Claes, Peter; Marcucio, Ralph S; McBride, Kim

Co-investigator(s): Andelfinger, Gregor U; Bodnar, Tamara S; **Bradley, Timothy J**; Caluseriu, Oana; Cavalle-Garrido, Tiscar; Childs, Sarah J; Dallaire, Frederic; Graf, Daniel; White, James A

Amount: \$1,071,000

He is also PI for the recent SHRF Impact Grants for the study entitled, "Assessment Based on Available data for Congenital anomalies Uploaded already in datasets in Saskatchewan (ABACUS)"

Principal Investigator: Tim Bradley

Co-Principal Investigator: Darryl Adamko

Co-Investigator(s): Sarah Smith Leah Thorp

Amount: \$149,840.00

DEAN'S PROJECTS

Dr. Susan Petryk



Dr. Susan Petryk with student, Alejandra Van Dusen: "Evaluating the use of Parent Feedback Forms during Pre-Clerkship Pediatric Clinical Skills Sessions"

Co-investigator(s): Dr. Mita Manna

Dr. Paul D'Alessandro



Dr. Paul D'Alessandro with student, Marina Liu: "Verbatim theatre in medical education: participatory versus passive learner engagement"

Co-investigator(s): Dr. Mita Manna

Dr. Paul D'Alessandro with student, Dawson Holt: "Testicular tissue cryopreservation needs assessment/caregiver attitudes"

Dr. Tim Bradley



Dr. Tim Bradley with student, Lorynn Labbie: "The Saskatchewan Fetal Echocardiography Database Project"

Dr. Basmah Ishteivi



Dr. Basmah Ishteivi with student, Andreea Ababei: "Well-appearing febrile young infants aged ≤ 90 days, a retrospective analysis of our clinical practice in Regina."

Awards (continued)

Drs. Ayisha Kurji and Ali Markland



Congratulations to Drs. Ayisha Kurji (pictured left) & Ali Markland who are Saskatchewan site leads for the project entitled, “National Implementation of Highly Efficient Evidence-Informed Treatment for Youth with Eating Disorders”. The National Women’s Health Research Initiative (NWHRI), a joint initiative between the Canadian Institutes of Health Research and Women and Gender Equality Canada, was announced as part of the 2021 federal budget to advance a coordinated research program that addresses under-researched and high-priority areas of women’s health and to ensure new evidence improves women’s, girls’, and gender-diverse people’s care and health outcomes. The initiative aims to ensure that all people in Canada navigating the health system have access to gender-sensitive, culturally appropriate, trauma-informed, non-stigmatizing, evidence-based, high-quality health care throughout their lives.

NPI: Jennifer L Couturier McMaster University

Funding Call: National Women’s Health Research Initiative – Translational and Implementation Science Grants

Amount: \$599,126

Drs. Mehul Jariwala and Tristan Kerr



Drug Trial:

PI: Mehul Jariwala (pictured left)

Sub-I: Tristan Kerr (pictured right)

Title: Open-label, single-arm trial to evaluate the pharmacokinetics and safety of bimekizumab in pediatric study participants from 2 to less than 18 years of age with active juvenile idiopathic arthritis subtypes enthesitis-related arthritis (including juvenile-onset ankylosing spondylitis) and juvenile psoriatic arthritis.

Ethics Approved: 5029

The Division of Pediatric Rheumatology is excited to contribute to this important drug trial, which aims to assess the safety and efficacy of bimekizumab in JIA subtypes. The study is set to commence by mid-April 2025.

Dr. Bilal Marwa



Congratulations to Dr. Bilal Marwa on being awarded the Saskatchewan Cancer Agency 2024-25 Research Grant (\$100,000). His project is entitled, “Patterns of Locoregional Treatment and Clinical Outcomes in Pediatric and Adult Patients with Ewing Sarcoma and Other Undifferentiated Round Blue Cell Sarcomas – A Canadian Multicenter Retrospective CanSaRCC Study”

Awards (continued)



Congratulations to Dr. Munier Nour on being awarded the Saskatoon Medical Staff Association Exceptional Service Award 2025.

Dr. Nour is pictured with Dr. Roona Sinha.

Resident Research Corner



[The Emerging Scholar Podcast](#)

The Emerging Scholar podcast is designed for graduate students, medical trainees, residents and fellows and graduate students to help them on their journey towards their first scientific project.

Season One is specially crafted to support you through the first year of your research training. Whether you're just starting out or refining your skills, we're here to guide you every step of the way. This season will help you develop essential research competencies, including crafting compelling research questions, discovering the best evidence for tailoring your inquiries, how to prepare and understand your data before you dive into analysis, exploring methods to answer your questions using both quantitative and qual-

itative approaches, and most importantly laying the groundwork to integrate equity, inclusion, and diversity into your research.

Join us as we embark on this journey to strengthen your foundation and help you navigate the exciting world of research with confidence!

Publications - December 2024 to February 2025

Hansen, G., Shaw, A., Bolt, K., Verity, R., Nataraj, R.T. and Schellenberg, K.L. (2025), Thoracic Electric Impedance Tomography Detects Lung Volume Changes in Amyotrophic Lateral Sclerosis. Muscle & Nerve. <https://doi.org/10.1002/mus.28354>

Bev Wudel, **Rupeena Purewal**, Todd F Hatchette, Derek Stein, Muhammad Morshed, Jessica Minion, Maud Vallée, Kristy Hayden, Camille Hamula. [Canadian Public Health Laboratory Network \(CPHLN\) diagnostic recommendations for neurosyphilis in Canada](#). Journal of the Association of Medical Microbiology and Infectious Disease Canada. December 19, 2024 Volume 9:4 Pages 219-228

Imran AA, Bajwa JS, Daspal S, Adamko DJ. Determining Optimal Home Oxygen Flow Rate For Infants With Bronchopulmonary Dysplasia (BPD) Using Near Infrared Spectroscopy. Research and Reports in Neonatology. December 6, 2024 Volume 2024:14 Pages 109—115 DOI <https://doi.org/10.2147/RRN.S482241>

D'Alessandro PR, Homanick CE, Cooper BD, Ferguson K, Rutan H, Pressey JG. “From Drowning to Treading Water”: Adolescents and Young Adults Living with Incurable and Indolent Metastatic Soft Tissue Sarcoma for More than Two Years. Cancers. 2025; 17(3):442. <https://doi.org/10.3390/cancers17030442>

Gridsale CJ, Silverberg RV, **Marwa BM**, Loback TJ, Poulin AA, Chatoorgoon KK, **Alvi S**, Rassekh SR, Deyell RJ, **D'Alessandro PR.** Osteosarcoma in an Adolescent With Germline DYNC1H1-Related Disorder: A Novel Association With Whole Genome and Transcriptome Tumour Analysis. Pediatr Blood Cancer. 2025 Feb 14:e31592. doi: [10.1002/pbc.31592](https://doi.org/10.1002/pbc.31592). Epub ahead of print. PMID: 39953669.

Bradley, T.J. (2024). Marfan Syndrome, Loeys-Dietz Syndrome and Related Aortopathies. In: Dipchand, A.I., Barron, D.J., Floh, A.A. (eds) Manual of Cardiac Care in Children. Springer, Cham. https://doi.org/10.1007/978-3-031-70973-9_45

Wang, Jing, Li Wang, Shuang Liu, Yuling Han, **Darryl J. Adamko**, Lu Cheng, Jingjing Gao, Yun Zhang, Xiang Ma, & Aihua Cao. “[A prospective clinical study of allergy progression in identical and fraternal twin pairs of children](#).” Translational Pediatrics [Online], 14.2 (2025): 298-310. Web. 11 Mar. 2025

Durr, S.-M., Newaz, S., & **Petryk, S.** (2025). Ask the Parent: Developing a Pediatric Feedback Form for Medical Learners. Journal of Medical Education and Curricular Development, 12. <https://doi.org/10.1177/23821205251327375> (Original work published 2025)

Check out the [Department of Pediatrics Google Scholar Page](#). There, you can find publications from all faculty and trainees in the department

Onion Lake Diabetes Education and Screening Project - Video

Congratulations to **Dr. Daphne Yau** and her research team for creating a one-of-a-kind educational video that is based on the community-based project, “Hemoglobin A1c measurement via dried blood spot in youth at-risk for Type 2 diabetes in Saskatchewan”. This project provided health education and diabetes screening opportunities for at-risk youth in Onion Lake Cree Nation. It was co-led by the community of Onion Lake. More information can be found in the December issue of the [Pediatric Research Newsletter](#). The video was produced by www.onefivefivefilms.com.



[Onion Lake Diabetes Project - January 20, 2025](#)

Coming Events

- April 10: [Department of Pediatrics Journal Club](#) with Drs. Sarah White and Susan Bobbitt
- April 17: [Pediatric Grand Rounds](#) - Drs. Erin Woods & Mark Inman Competence by Design /Fatigue Risk Management
- May 4: Anesthesiology Resident Research Day
- May 5: [Emergency Medicine Research Day](#) - Keynote address: Dr. Terry Klassen
- May 8: [Department of Pediatrics Journal Club](#) - Resident Journal Club: Drs. Jessie Pappin and Sibasis Daspal
- May 15: [Pediatric Grand Rounds](#) - Dr. Kristina Joyal