Improving the Oral Health Landscape for First Nations Children: How Dr. Sheri McKinstry is Walking the Walk

Dr. Sheri McKinstry is Anishinaabekwe from Treaty 1 territory, and a proud member of Sagkeeng First Nation in Manitoba. Before arriving to Treaty 6 territory as an assistant professor in the College of Dentistry at the University of Saskatchewan she completed her Bachelor of Science (2001), Bachelor of Science in Dentistry and a Doctor of Dental Medicine (2005), all from the University of Manitoba. For the first 12 years of her dental career, she provided dental care to First Nation communities. It was this experience that led her to pursue a Bachelor of Arts in Native Studies (in process) and a Master of Public Health (2017) in Indigenous Peoples’ Health from the University of Victoria with a focus on Reconciliation and Cultural Safety in Dentistry. She recently completed the Master of Dentistry / Paediatric Dentistry Residency program at the University of Manitoba, where her research focus was on the oral health experience of First Nations children. Her master’s research, using grounded theory instead of preconceived ideas and biases, explored the oral health experience of First Nations (FN) children and their families. It was her goal to identify barriers they may have had accessing dental care, and to determine the contributing factors to early childhood caries (ECC) which is defined as tooth decay in any primary tooth in a child younger than age 6 years. Caries are the most prevalent pediatric infectious disease and the most common chronic disease of children. A recent article, “Early Childhood Caries in Indigenous Communities” co-authored by American Academy of Pediatrics, Committee on Native American Child Health, Canadian Paediatric Society, and the First Nations, Inuit and Métis Committee, highlights that the prevalence of ECC in 3- to 5-year-old FN and Inuit children was 85%. Sheri’s research identified many of the same factors that contribute to increase risk of ECC in FN children that are already listed in the literature including, poverty, household crowding, family size, nutrition, community water fluoridation, exposure to tobacco, and access to care in rural and remote communities. Other barriers FN children and their families faced that Sheri recognized through her research included structural racism, social justice issues and other more direct obstacles to accessing dental care.

Continued on pg. 2...
Quoting from Sheri’s editorial titled, “Indigenous oral health inequity: An Indigenous provider perspective.” in Can J Public Health, she emphasizes the importance of overcoming the many barriers First Nation communities face: “There was not just one experience, thought or epiphany that brought me to where I am today. It was years of inquiring and asking questions, and years of listening and learning that taught me that oral health cannot be considered in isolation if we are to be successful in making change in the future. In public health, we are aware of the social determinants of health and how this pertains to Indigenous Peoples’ health. This is not just a phenomenon that occurs in Canadian society, however. What causes Indigenous health inequity? Acknowledging and saying out loud that colonialism impacts contemporary Indigenous health is not enough to address health inequity. There is one saying from an elder that always comes to me: If we are going to talk the talk, we also have to walk the walk” (McKinstry, 2017).

As a First Nations woman, she is concerned by what First Nations families and children endure daily, not only the healthcare system, but in society as well. Sheri’s work with families impacted her profoundly. Because of this she decided that the voices of her participants would not go unheard, and she developed the Indigenous Dental Association of Canada (IDAC) in support of Reconciliation.

While early in its conception, this association will give Indigenous individuals and communities a voice, and ultimately improve the oral health landscape for Indigenous people in Canada. Her vision for this, involves creating a network where other Indigenous oral health providers and supporters will join IDAC and help guide this endeavor. Sheri’s journey to learning and understanding the needs of the First Nation communities began with listening to what these communities had to say. It was this first step that has led her to her goal which is to use her knowledge and expertise for the benefit of First Nation children and communities all while weaving this into an academic and research career. Dr. McKinstry recently was accepted into the PhD program in Community Health & Epidemiology at USask under the supervision of Drs. Holly Graham and Carrie Bourassa. Dr. McKinstry’s advocacy to improve the lives of First Nation communities is an inspiring example of the scholars we need. We look forward to following her vibrant future successes.

Sheri would like to acknowledge the following who contributed to her research thesis: Dr. Robert Schroth, Dr. Andrew Hatala, Dr. Bradley Klus. This study was funded by: The Gerald Niznick Endowment Fund

To read more on this topic and from Dr. McKinstry please check out the following publications:

Colten Molnar is a M.D. candidate
1st Place Undergraduate Category – Lightning Round

M.D. Candidate Colten Molnar completed his B.Sc.(Hons.) in Physiology and Pharmacology at USask in 2019 and is currently entering his third year of medicine in Saskatoon.

He placed first in the Lightning Category at the 2021 Child Health Research Day for his project titled, “Survey of Staff Satisfaction and Barriers to Use of Numbing Cream and Nitrous Oxide for Pediatric Inpatients in Tertiary Care”. Pediatric pain management is an area of research that he hopes to pursue, specifically how pain management for minor procedures.

Colten’s study aimed to identify barriers to the use of numbing cream and nurse-administered nitrous oxide by health professionals and to determine health professionals’ satisfaction with their use for simple procedures. To approach this problem, he and his supervisor Dr. Krista Baerg engaged in a quality improvement study that anonymously surveyed health professionals involved in the care of children admitted to the PIPD (2nd floor) of JPCH. After the project was complete, Colten began to develop accessible resources for caregivers and health professionals on PIPD.

This research has the potential to benefit many different stakeholders. By identifying barriers that health professionals encounter when accessing and using nitrous oxide and numbing cream, this research addresses health professional’s needs so that patients can benefit from the use of these effective and safe procedural pain management tools. Previous research suggests that undertreated pain in childhood can follow children throughout their lives and manifest in negative ways, therefore it is very important to provide effective analgesia during painful interventions. Effective analgesia may help to save costs and conserve resources by reducing the number of failed interventions and the need for repeated attempts. JPCH is a Canadian leader regarding bedside nitrous oxide administration, and improved implementation here is likely to influence successful program development in other centers therefore having a national impact.

Colten would like to thank Dr. Krista Baerg, Casey McMahon, and Ha Le for supporting this project. He would also like to acknowledge funding received from OVDR Summer Deans Project Program and the assistance of the Chronic Pain Network and SHA.


Trainee Spotlight continued on pg.4…
Elyse Proulx-Cullen is a MSc candidate
1st Place Graduate Category – Lightning Round

Elyse Proulx-Cullen is a MSc candidate in Health Sciences at USask. Prior to her pursuing an MSc she completed a Master of Business Administration (MBA) and Bachelor of Arts (BA). Her current research interest is studying children that present twice-exceptionality (2e) and their families and how to improve their overall health outcomes and school journeys. Her future research goal is to pursue research while working in collaboration with local schools and health professionals in Saskatchewan and Quebec to develop approaches that improve health and life outcomes for 2e children. She plans to contribute to a national working group for developing guidelines that improve social and health outcomes for 2e children. The overarching research question of her qualitative health research project is: what are the lived experiences of mothers of twice-exceptional children during their child’s journey specifically when it comes to recognizing their child’s exceptionalities? This study will inform the research project she intends to develop at the doctoral level. Guided by the findings from this narrative inquiry, she will employ a mixed methods approach to explore bridging the gap between the health care and education systems while integrating the voices of twice-exceptional families. This original qualitative health research will be conducted through narrative inquiry, the most relevant approach for health care professionals to understand the experiences and life journeys of individuals who are challenged by disability and discrimination.

Using snowball and later purposive sampling, mothers of 2e children are recruited and invited to share their story. Considering the mounting evidence of the importance of early screening to a successful life journey for 2e children, by eliciting the lived experiences of mothers of 2e children, and by listening to these critical steps in their journey, this research has the potential to transform the delivery of services.

Families face a long waitlist for health care providers who might not be specifically trained in assessing and handling twice-exceptionality, and school resources are no longer readily available to assist 2e students, teachers, and parents. Compounded by the current world crisis, the austerity economy, and mental health and addiction crises, there is a critical need to advance all levels of learning and knowledge and move beyond gendered roles and discrimination. Working locally with a focus of leaving no one behind. This study intends to shift current practice using evidence-based knowledge to forge a path which engages all partners equally for making the best decisions for these children (knowledge users, schools, health care professionals, occupational therapists, speech therapists, psychologists and communities). The goal of the project is to uncover the acquired knowledge of mothers in raising their 2e children and to use this knowledge to inform the delivery of services and resources that such mothers will need to access. More specifically, the goal is to inform health care professionals, educators and different support programs. Furthermore, this study aims to build on seven of the 17 United Nations’ Sustainable Development Goals (#3-4-5-8-9-10-17) by developing a model of sustainable engagement whereby the dyad child-parent would become a key partner and decision-maker as well as a bridge between the education sector and the health care system.

Elyse would like to acknowledge her Academic Supervisor, Dr. Anne Leis, Department Head Community, Health and Epidemiology. College of Medicine, USask and her Committee Members: Dr. Lilian Thorpe (USask), Dr. Michel Desjardins (USask), Dr. Kalubi-Lukusa (Université de Sherbrooke) and Dr. Brigitte Stanké (Université de Montréal). Interview transcription services are funded by the Official Languages Health Program which aims to improve access to health services for official language minority communities.
Yuwen completed her Bachelor and Master degrees in Kinesiology at USask. She is currently a PhD candidate in the College of Kin. Her current focus is looking at the musculoskeletal health in children with type 1 diabetes (DM1). Individuals, including children with DM1 have higher fracture risk and this may relate to deficits in bone and muscle development during growth. Her thesis is part of the Saskatchewan Bone Strength Development Study (BSDS). BSDS will address the following research questions: 1) Does bone and muscle development differ between children with DM1 and typically developing children? 2) What factors (e.g., related to DM1, lifestyle) are associated with musculoskeletal development in children with DM1? Yuwen’s thesis research will assess musculoskeletal health in children with type 1 diabetes using advanced imaging tools.

The BSDS study team image bone size and structure, including geometry, and estimate strength using computational modeling. They assess both cortical and trabecular bone micro-architecture and densities, as well as muscle size and strength, physical activity level, and nutrition. In addition to cross-sectional comparisons, they also monitor musculoskeletal growth annually in children with type 1 diabetes and compare this data with typically developing children. This research will impact children with type 1 diabetes and their families as well as improve the knowledge of health care providers about bone health and related factors. This research can also improve organizations’ understanding of musculoskeletal health and complications related to bone development in children with type 1 diabetes. As this research progresses it will be important to share the data with national and international communities so they are aware of the bone health of children with type 1 diabetes.

Yuwen would like to acknowledge Drs. Saija Kontulainen and Munier Nour who are the co-leaders of BSDS. The study team includes several researchers and trainees. Her mentoring committee includes Drs., Kontulainen (supervisor), Nour, Johnston and Lanovaz. This research is funded by CIHR, SHRF and College of Medicine (CoMRad) and the Saskatchewan center of patient-oriented research (SCPOR).

The BSDS team have recently developed two educational videos for the Bone Strength Development Study.

https://youtu.be/5prh98Wsrq4

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Coming Events

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<td>June 15</td>
<td>CHEER Workshop: Community Members on REBs: What is their role and how do we effectively engage their perspective?</td>
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<td>June 16</td>
<td>Single Patient Protocols in Paediatrics - Opportunities and Challenges</td>
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<td>June 21</td>
<td>National Indigenous Peoples Day</td>
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<td>June 21-25</td>
<td>REACH Resident Research Day</td>
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<td>June 23</td>
<td>Learning Health System Series: PROMs, PREMs and Patient-Centered Care - SK Centre of Patient-Oriented Research (SCPOR)</td>
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<td>June 24</td>
<td>CRC Tier II iDOHaD Candidate Presentation - Dr. Amanda Froehlich Chow</td>
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<tr>
<td>July 19</td>
<td>CIHR Fall 2021 Project Grant Workshop – Save the Date</td>
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<tr>
<td>Nov 22 - 26</td>
<td>Children’s Healthcare Canada Call for Abstracts for the 2021 Annual Conference –</td>
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Madison Hall is a resident in Pediatrics
1st Place Resident Category – Lightning Round

Dr. Madison Hall is a pediatric resident at USask. Prior to her residency in Saskatchewan she completed a BSc in cellular biology and a MD both from the University of Calgary. Her research is in the field of Quality Improvement. Her interest in research directly relates to its applicability to her clinical work. She finds it helpful to identify and implement practice changes and hopes to incorporate this into her career. Her winning project assessed the frequency of blood pressure screening and identification of elevated blood pressure measurements amongst pediatric patients with diabetes in Saskatchewan, with the goal to meet yearly screening thresholds for her patients as well as improve detection of patients with elevated blood pressure. From this study, they have found that blood pressure elevation is more likely to be unrecognized in younger patients or those with diastolic elevation. Because of this, her team are working towards adding blood pressure screening tables to the outpatient clinic rooms to help identify these elevations earlier. This research will impact the patient directly. The hope is that patients will benefit from earlier detection of elevated blood pressure, in order to reduce the potential long-term complications of hypertension.

Madison would like to acknowledge her supervisors Drs. Munier Nour, Daphne Yau, Mark Inman
## 2021 Child Health Research Trainee Day Standings

### Lightening Rounds Presentations (3 mins)

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<tr>
<td>Undergraduate</td>
<td>Colten Molnar</td>
<td>Survey of Staff Satisfaction and Barriers to Use of Numbing Cream and Nitrous Oxide for Pediatric Inpatients in Tertiary Care</td>
<td>Colten Molnar, Casey McMahon, and Krista Baerg</td>
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<td>Sarah Moroziuk</td>
<td>Preliminary analysis of coping strategies utilized in pediatric patients with complex pain</td>
<td>Sarah Moroziuk, Casey McMahon, Krista Baerg</td>
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<tr>
<td>Graduate</td>
<td>Elyse Proulx-Cullen</td>
<td>The voices of mothers of twice-exceptional children: a narrative inquiry.</td>
<td>Elyse Proulx-Cullen, Anne Leis</td>
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<td></td>
<td>Valerie Caron</td>
<td>Go, Dog. Go! A rehabilitation dog for walking and balance training for children living with cerebral palsy.</td>
<td>Valerie Caron, Alison Oates, Colleen Dell, Joel Lanovaz, Sarah Oosman, Romany Pinto, Sarah Donkers</td>
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<tr>
<td>Resident</td>
<td>Madison Peaker</td>
<td>Hypertension amongst pediatric patients with diabetes in Saskatchewan: improving detection and follow up</td>
<td>Madison Peaker, Mark Inman, Daphne Yau, Munier Nour</td>
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<td></td>
<td>Astrid Lang, Netusha Thevaranjan</td>
<td>Incidence of pediatric eating disorders during Covid-19 in Saskatchewan</td>
<td>Astrid Lang, Netusha Thevaranjan, Ayisha Kurji, Oluwafemi Oluwole</td>
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<td>Ruchika Sharma</td>
<td>Fatal disseminated varicella and measles vaccine strain infection in a one year-old child with unsuspected IL-7R severe combined immunodeficiency (SCID)</td>
<td>Ruchika Sharma, Kayla Parker, Ben Tan, Anna Donovan, Matthew Bradshaw, Luis Marguia Favela, Candace Rypien, Sneha Suresh</td>
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### Long Presentations (8 mins)

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<tr>
<td>Yuwen Zheng</td>
<td>Lower Bone Mineral Mass and Areal Bone Mineral Density in Children with Type 1 diabetes – A Systematic Review and Meta-analysis</td>
<td>Yuwen Zheng, Mahdi Rostami Haji Abadi, Zahra Ghafouri, Suelen Goes, Munier Nour, Saija Kontulainen</td>
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<tr>
<td>Poonam Jariwala</td>
<td>Bone health in adolescents with type 2 diabetes</td>
<td>Poonam Jariwala, Marta Erlandson, Munier Nour</td>
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### Photo Submission

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<tr>
<td>Astrid Lang</td>
<td>Atretic Encephalocele Mimicking Ectopic Lips</td>
<td>Astrid Lang, Kaarthigeyan Kalaniti, Veronica Samedi, Julia Radic</td>
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Farewell to Dr. Ben Tan and Dr. William Bingham

The Department of Pediatrics would like to honor and acknowledge the tremendous contributions over the years from two of our faculty, Drs. Ben Tan (Associate Professor, Pediatric Infectious Disease) and William Bingham (Associate Professor, Neonatology).

Dr. Ben Tan moved to Saskatchewan and joined the Department of Pediatrics as our first Pediatric Infectious Disease Specialist in Saskatoon in 1992. He worked very hard in this role to create our Provincial Infectious Disease service. He also headed the RSV prophylaxis program for many years. Dr. Tan represented Saskatchewan nationally at many Pediatric Infectious disease meetings and committees. He developed a national reputation and became an Associate Professor here at the University of Saskatchewan. Under his leadership, the Pediatric Infectious Disease Division has grown to a thriving Division of four members. Throughout his career, he was also noted for his exceptional photography talent. Having a “Ben Tan” on your wall is a coveted piece of art. He has been an outstanding teacher and was also program director for the Residents for many years. Ben was great to work with; so collegial and smart, yet so humble with common sense. Dr. Ben Tan’s retirement marks the end of a remarkable career and he will be missed.

Dr. William (Bill) Bingham graduated from medical school at the University of Saskatchewan, and then completed his Neonatology Fellowship at the University of Hawaii. For some reason, he left Hawaii and came to join Drs. Sankaran and Ninan in the Saskatchewan NICU in 1980. In those days, he also stepped up to help Dr. Kasiyan start and maintain our first PICU. Throughout all this he continued ward coverage with the residents. Like Dr. Tan, he was also program director for a time. Dr. Bingham was active in published research. Subsequently, he took on the job of Postgraduate Dean in the College of Medicine during which time he faced the challenge of the Resident strike. He then, went on to become Head of the Department of Pediatrics. Dr Bingham brought his dream of a hospital dedicated to only children and their mothers. It was his vision that was a key driver of the site selection and the hospital we have today. As Department Head, Dr. Bingham was astute about budget issues. He fought for and created new funding models that enabled our ability to expand service. For example, Social Pediatrics with Dr Mehtar (first of its kind in Canada), and Dr. Adamko as the first clinician on an ACFP given dedicated research time. He developed undergraduate and postgraduate coordinator positions. He created progressive new global budgets for other Divisions as well.

Given the tremendous contributions by these distinguished faculty members, it is a poignant reminder of the pandemic that we cannot celebrate their career finales in person. It’s disappointing. For the amount of time that they have devoted to our department and to the people of this Province, this simple farewell is but a token of our gratitude. Their contributions in academia, research, and clinical service provide a legacy upon which we stand. We wish them well on their retirements and next adventures!

Thank you to Drs. Darryl Adamko and Laurence Givelichian for their contributions to this article.
Congratulations

To Dr. Ron Siemens for the completion of three policy briefs from his work in Mozambique

This research was carried out with a grant from the Innovating for Maternal and Child Health in Africa Initiative (IMCHA) – a partnership of Global Affairs Canada (GAC), the Canadian Institutes of Health Research (CIHR), and Canada’s International Development Research Centre (IDRC).

2021 April - June Publications

- Samedi VM, Kalamiti K, Daspal S. Bedside Lung Ultrasound as a Predictor Of The Extubation Readiness In Preterm Infants Pediatrics. 2021 147 (3 Meeting Abstract) 686-687

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: Tova Dybvig Department of Pediatrics Email:Tova.dybvig@usask.ca