



ANNUAL REPORT 2021

Pediatric Emergency Research Canada

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A MESSAGE FROM THE PERC CHAIR



Dear PERC members,

It has been a challenging past two years, as most of the members of our network have been on the leading edge of treating infants, children and adolescents and their families in the emergency department during this unrelenting pandemic. Further, this is in the context of the additional responsibilities such as becoming experts in home-schooling or in home renovations.

Despite the myriad of clinical and domestic responsibilities, our PERC network has been at the forefront of advancing the knowledge for pediatric emergency medicine in Canada and the world. PERC had another outstanding year in securing peer review grants

of over \$21 million (the highest funding year in PERC's history) and publishing our findings in the highest impact journals.

PERC has a long tradition of embracing collaboration, and one of the highlights for the past year was how our network established new partnerships with national agencies (e.g., Health Canada and Public Health Agency of Canada) in order to conduct novel COVID research. In fact, PERC led two COVID-19 studies that prospectively enrolled patients in all 15 PERC sites. We have also strengthened collaborations with other pediatric networks (Pediatric Emergency Research Network, Canadian Clinical Care Trials Group, etc.).

We are so grateful for our entire PERC network, including all of our clinician-investigators, research coordinators, research assistants, and the thousands of patients and families who have participated in PERC studies.

Thank you,

Roger Zemek, MD, FRCPC

Professor, Dept of Pediatrics and Emergency Medicine, University of Ottawa
Director, Clinical Research Unit, and Senior Scientist, Children's Hospital of Eastern Ontario (CHEO) Research Institute
Clinical Research Chair in Pediatric Concussion, CHEO RI and uOttawa Brain and Mind Research Institute
Chief Science and Research Officer, 360 Concussion Care
Chair, Pediatric Emergency Research Canada (PERC) Network

PERC EXECUTIVE 2021



PERC PAST CHAIR
DR. STEPHEN FREEDMAN



PERC CURRENT CHAIR
DR. ROGER ZEMEK



PERC VICE-CHAIR
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EXECUTIVE BOARD MEMBER
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FELLOWS' REPRESENTATIVE
DR. CATHIE-KIM LE



COORDINATORS' REPRESENTATIVE
CANDICE MCGAHERN



NATIONAL COORDINATOR
BECKY EMERTON

PUBLICATIONS

PERC Network Publications – 2021

A novel preference-informed complementary trial (PICT) design for clinical trial research influenced by strong patient preferences. Samina Ali, Gareth Hopkin, Naveen Poonai, Lawrence Richer, Maryna Yaskina, Anna Heath, Terry Paul Klassen, Chris McCabe, Amy Drendel, Gareth Hopkin, Jeff Round, Martin Offringa, Petros Pechlivanoglou, Eleanor Pullenayegum, Juan David Rios, Marie-Christine Auclair, Kelly Kim, Lise Bourrier, Lauren Dawson, Kamary Coriolano DaSilva, Pamela Marples, Rick Watts, Jennifer Thull-Freedman, Patrick McGrath, Timothy A D Graham, Lisa Hartling, Tannis Erickson, Brendon Foot, Kurt Schreiner, Julie Leung, Jeff Round. *Trials*. 2021 Jan; 22(1): 206. PMID: 33712062 DOI: [10.1186/s13063-021-05164-1](https://doi.org/10.1186/s13063-021-05164-1)

A survey of Canadian emergency physicians' experiences and perspectives during the COVID-19 pandemic. Nathalie Gaucher, Evelyne D Trottier, Anne-Josée Côté, Huma Ali, Bertrand Lavoie, Claude-Julie Bourque, Samina Ali. *CJEM*. 2021 Jan PMID: 33999397
<https://pubmed.ncbi.nlm.nih.gov/33999397/>

An observational cohort study comparing ibuprofen and oxycodone in children with fractures. Samina Ali, Robin Manaloor, David W Johnson, Rhonda J Rosychuk, Sylvie LeMay, Bruce Carleton, Patrick J McGrath, Amy L Drendel, Pediatric Emergency Research Canada. *PLoS One*. 2021 Sep 9;16(9):e0257021. doi: 10.1371/journal.pone.0257021. eCollection 2021. PMID: 34499688 DOI: [10.1371/journal.pone.0257021](https://doi.org/10.1371/journal.pone.0257021)

Anxiolysis for laceration repair in children: a survey of pediatric emergency providers in Canada. Kumar K, Ali S, Sabhaney V, Trottier E, Drendel A, Bhatt M, Boisvert L, Poonai N; Pediatric Emergency Research Canada. *CJEM*. 2021 Nov 8. PMID: 34746980 doi: [10.1007/s43678-021-00210-y](https://doi.org/10.1007/s43678-021-00210-y)

Association Between Diarrhea Duration and Severity and Probiotic Efficacy in Children With Acute Gastroenteritis. David Schnadower, Karen J O'Connell, John M VanBuren, Cheryl Vance, Phillip I Tarr, Suzanne Schuh, Katrina Hurley, Alexander J Rogers, Naveen Poonai, Cindy G Roskind, Seema R Bhatt, Serge Gouin, Prashant Mahajan, Cody S Olsen, Elizabeth C Powell, Ken Farion, Robert E Sapien, Thomas H Chun, Stephen B Freedman, Pediatric Emergency Care Applied Research Network and Pediatric Emergency Research Canada. PMID: 34183579. *Am J Gastroenterol*. 2021 Jul 1;116(7):1523-1532. DOI: [10.14309/ajg.0000000000001295](https://doi.org/10.14309/ajg.0000000000001295)

Association Between Intravenous Magnesium Therapy in the Emergency Department and Subsequent Hospitalization Among Pediatric Patients With Refractory Acute Asthma: Secondary Analysis of a Randomized Clinical Trial. Suzanne Schuh, Stephen B Freedman, Roger Zemek, Amy C Plint, David W Johnson, Francine Ducharme, Jocelyn Gravel, Graham Thompson, Sarah Curtis, Derek Stephens, Allan L Coates, Karen J Black, Darcy Beer, Judy Sweeney, Maggie Rumantir, Yaron Finkelstein, Stephen B Freedman, Roger Zemek, Samina Ali, Maala Bhatt, Amanda Mandi Newton, Garth Meckler, Naveen Poonai, Candice McGahern, Kate Maki, Rebecca Emerton. *JAMA Netw Open*. 2021 Jan; 4(7): e2117542. PMID: 34279646 <https://pubmed.ncbi.nlm.nih.gov/34279646/>

Association Between Preinjury Symptoms and Post-concussion Symptoms at 4 Weeks in Youth.

Andrée-Anne Ledoux, Ken Tang, **Isabelle Gagnon**, **Martin H Osmond**, **Keith O Yeates**, Katherine Healey, Gerard A Gioia, **Roger L Zemek**, Pediatric Emergency Research Canada (PERC) Concussion Team. *J Head Trauma Rehabil.* 2021 Apr 30. doi: 10.1097/HTR.0000000000000681. PMID: 33935222. DOI: [10.1097/HTR.0000000000000681](https://doi.org/10.1097/HTR.0000000000000681)

Comparing Pediatric Gastroenteritis Emergency Department Care in Canada and the United States.

Stephen B Freedman, Cindy G Roskind, **Suzanne Schuh**, John M VanBuren, Jesse G Norris, Phillip I Tarr, **Katrina Hurley**, Adam C Levine, Alexander Rogers, Seema Bhatt, **Serge Guin**, Prashant Mahajan, Cheryl Vance, Elizabeth C Powell, **Ken J Farion**, Robert Sapien, Karen O'Connell, **Naveen Poonai**, David Schnadower. *Pediatrics.* 2021 Jan. PMID: 34016656. DOI: [10.1542/peds.2020-030890](https://doi.org/10.1542/peds.2020-030890)

Convergent Validity of Myheartsmap: A Pediatric Psychosocial Health Screening Tool.

Erik Lamoureux, Takuro Ishikawa, **Keith Owen Yeates**, Brian L Brooks, **Miriam H Beauchamp**, **William Craig**, **Jocelyn Gravel**, **Roger Zemek**, **Quynh Doan**, Pediatric Emergency Research Canada (PERC) A-CAP concussion team. *Child Psychiatry Hum Dev.* 2021 Aug 4. PMID: 34350505 DOI: [10.1007/s10578-021-01221-7](https://doi.org/10.1007/s10578-021-01221-7)

Effect of the COVID-19 Pandemic on Patient Volumes, Acuity, and Outcomes in Pediatric Emergency Departments: A Nationwide Study.

Yaron Finkelstein, Bryan Maguire, **Roger Zemek**, **Eslı Osmanlıu**, **April J Kam**, **Andrew Dixon**, **Neil Desai**, **Scott Sawyer**, **Jason Emsley**, **Tim Lynch**, **Ahmed Mater**, **Suzanne Schuh**, **Maggie Rumantir**, **Stephen B Freedman**, Pediatric Emergency Research Canada (PERC). *Pediatr Emerg Care.* 2021 Aug 1;37(8):427-434. PMID: 34074990. DOI: [10.1097/PEC.0000000000002484](https://doi.org/10.1097/PEC.0000000000002484)

Electrocardiogram in Pediatric Syncope: Practice Variation Among Pediatric Emergency Physicians.

Anas Manouzi, Shubhayan Sanatani, **Quynh Doan**. *Pediatr Emerg Care.* 2021 Jan. PMID: 34101684. DOI: [10.1097/PEC.0000000000002469](https://doi.org/10.1097/PEC.0000000000002469)

Examining brain white matter after pediatric mild traumatic brain injury using neurite orientation dispersion and density imaging: An A-CAP study.

Ayushi Shukla, Ashley L Ware, Sunny Guo, Bradley Goodyear, **Miriam H Beauchamp**, **Roger Zemek**, **William Craig**, **Quynh Doan**, Christian Beaulieu, **Keith O Yeates**, Catherine Lebel. *Neuroimage Clin.* 2021 Dec; 32: 102887. PMID: 34911193. DOI: [10.1016/j.nicl.2021.102887](https://doi.org/10.1016/j.nicl.2021.102887)

Hematochezia in Children with Acute Diarrhea Seeking Emergency Department Care- a Prospective Cohort Study.

Madeleine Böhrer, **Eleanor Fitzpatrick**, **Katrina Hurley**, **Jianling Xie**, Bonita E Lee, Xiao-Li Pang, Ran Zhuo, Brendon D Parsons, Byron Berenger, Linda Chui, Phillip I Tarr, **Samina Ali**, Otto G Vanderkooi, **Stephen B Freedman**, Alberta Provincial Pediatric Enteric Infection TEam (APPETITE), Pediatric Emergency Research Canada (PERC). *Acad Emerg Med.* 2021 Dec 28. doi: 10.1111/acem.14434. Online ahead of print. PMID: 34962688. DOI: [10.1111/acem.14434](https://doi.org/10.1111/acem.14434)

Impact of young age on outcomes of emergency department procedural sedation.

Michael Schlegelmilch, Mark G Roback, **Maala Bhatt**, **David W Johnson**, **Ken J Farion**, **Samina Ali**, **Suzanne Beno**, **Andrew Dixon**, **Michelle McTimoney**, Gabino Travassos, **Candice McGahern**, Zach Cantor, **Eleanor Fitzpatrick**, Nadia Dow, Taline Naranian, Gabrielle Allard, Sedation Safety Study Group of Pediatric Emergency Research Canada (PERC). *Am J Emerg Med.* 2021 Mar 10;46:116-120. doi: 10.1016/j.ajem.2021.03.014. PMID: 33744747 <https://pubmed.ncbi.nlm.nih.gov/33744747/>

Is early activity resumption after paediatric concussion safe and does it reduce symptom burden at 2 weeks post injury? The Pediatric Concussion Assessment of Rest and Exertion (PedCARE) multicentre randomized clinical trial. Andrée-Anne Ledoux, Nick Barrowman, Vid Bijelić, Michael M Borghese, **Adrienne Davis, Sarah Reid**, Gurinder Sangha, **Keith Owen Yeates**, Mark S Tremblay, **Candice McGahern**, Kevin Belanger, Joel D Barnes, **Ken J Farion**, Carol A DeMatteo, Nick Reed, **Roger Zemek**, PERC PedCARE Concussion team. **British Journal of Sports Medicine**. Published Online First: 26 November 2021. doi: [10.1136/bjsports-2021-105030](https://doi.org/10.1136/bjsports-2021-105030)

Lack of Association of Household Income and Acute Gastroenteritis Disease Severity in Young Children: A Cohort Study. Thomas Chun, David Schnadower, T Charles Casper, Robert Sapién, Phillip I Tarr, Karen O'Connell, Cindy Roskind, Alexander Rogers, Seema Bhatt, Prashant Mahajan, Cheryl Vance, Cody Olsen, Elizabeth C Powell, **Stephen B Freedman**, Pediatric Emergency Care Applied Research Network (PECARN). **Acad Pediatr**. 2021 Jul 15;S1876-2859(21)00362-4. PMID: 34274521 DOI: [10.1016/j.acap.2021.07.009](https://doi.org/10.1016/j.acap.2021.07.009)

Management of pediatric allergic reaction: Practice patterns of Canadian pediatric emergency physicians. Caitlin Prendergast, Amy C Plint, Ken Tang, Tyrus Crawford, Gina Neto, Waleed Alqurashi. **CJEM**. 2021 Jan; 22(6): 802-810 PMID: 33448918 <https://pubmed.ncbi.nlm.nih.gov/33448918/>

Management of Pediatric Post-Concussion Headaches: National Survey of Abortive Therapies Used in the Emergency Department. Kristen Lambrinakos-Raymond, Alexander Sasha Dubrovsky, Isabelle Gagnon, Roger Zemek, Brett Burstein. **J Neurotrauma**. 2021 Jan PMID: 33787343 <https://pubmed.ncbi.nlm.nih.gov/33787343/>

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Pathogen-Specific Effects of Probiotics in Children with Acute Gastroenteritis Seeking Emergency Care: A Randomized Trial. Freedman SB, Finkelstein Y, Pang XL, Chui L, Tarr PI, VanBuren JM, Olsen C, Lee BE, Sapien R, O'Connell K, Levine AC, **Poonai N**, Roskind C, **Schuh S**, Rogers A, Bhatt S, **Gouin S**, Mahajan P, Vance C, **Hurley K**, Powell EC, **Farion KJ**, Schnadower D; Pediatric Emergency Research Canada (PERC) and the Pediatric Emergency Care Applied Research Network (PECARN). **Clin Infect Dis**. 2021 Oct 1:ciab876. PMID: 34596225 DOI: [10.1093/cid/ciab876](https://doi.org/10.1093/cid/ciab876)

PRagMatic Pediatric Trial of Balanced vs nOrmal Saline FLUId in Sepsis: study protocol for the PRoMPT BOLUS randomized interventional trial. Weiss SL, Balamuth F, Long E, Thompson GC, Hayes KL, Katcoff H, Cook M, Tsemberis E, Hickey CP, Williams A, **Williamson-Urquhart S**, Borland ML, Dalziel SR, Gelbart B, **Freedman SB**, Babl FE, Huang J, Kuppermann N; Pragmatic Pediatric Trial of Balanced Versus Normal Saline Fluid in Sepsis (PRoMPT BOLUS) Investigators of the PECARN, PERC, and PREDICT Networks. **Trials**. 2021 Nov 6;22(1):776 DOI: [10.1186/s13063-021-05717-4](https://doi.org/10.1186/s13063-021-05717-4)

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Prevalence of Bacterial Meningitis Among Febrile Infants Aged 29-60 Days With Positive Urinalysis Results: A Systematic Review and Meta-analysis. Brett Burstein, Vikram Sabhaney, Jeffrey N Bone, Quynh Doan, Fahad F Mansouri, Garth D Meckler *JAMA Netw Open.* 2021 Jan; 4(5): e214544 PMID: 33978724 pubmed.ncbi.nlm.nih.gov/33978724/

Probiotic stool secretory immunoglobulin: A modulation in children with gastroenteritis: a randomized clinical trial. Stephen B Freedman, Rachael Horne, Kathene Johnson-Henry, Jianling Xie, Sarah Williamson-Urquhart, Linda Chui, Xiao-Li Pang, Bonita Lee, **Suzanne Schuh**, Yaron Finkelstein, Serge Gouin, Ken J Farion, Naveen Poonai, Katrina Hurley, David Schnadower, Philip M Sherman, Pediatric Emergency Research Canada Probiotic Regimen for Outpatient Gastroenteritis Utility of Treatment (PROGUT) Trial Group. Randomized Controlled Trial, *Am J Clin Nutr.* 2021 Apr 6;113(4):905-914. PMID: 34269370 DOI: [10.1093/ajcn/nqaa369](https://doi.org/10.1093/ajcn/nqaa369)

Prospective cohort study of children with suspected SARS-CoV-2 infection presenting to paediatric emergency departments: a Paediatric Emergency Research Networks (PERN) Study Protocol. Anna L Funk, Todd A Florin, Stuart R Dalziel, Santiago Mintegi, Marina I Salvadori, Daniel Joseph Tancredi, Mark I Neuman, Daniel C Payne, **Amy C Plint**, **Terry P Klassen**, Richard Malley, Lilliam Ambroggio, **Kelly Kim**, Nathan Kuppermann, **Stephen B Freedman**. Observational Study. *BMJ Open.* 2021 Jan 15;11(1):e042121. PMID: 33452195 doi: <https://bmjopen.bmj.com/content/11/1/e042121>

Remote expert elicitation to determine the prior probability distribution for Bayesian sample size determination in international randomized controlled trials: Bronchiolitis in Infants Placebo Versus Epinephrine and Dexamethasone (BIPED) Study. Jingxian Lan, **Amy C Plint**, Stuart R Dalziel, **Terry P Klassen**, **Martin Offringa**, Anna Heath. 02 November 2021. <https://doi.org/10.21203/rs.3.rs-952484/v1>

Risk of asthma in children diagnosed with bronchiolitis during infancy: protocol of a longitudinal cohort study linking emergency department-based clinical data to provincial health administrative databases. Abdullah K, Fell DB, Radhakrishnan D, Hawken S, **Johnson DW**, Mandhane P, To T, **Joubert G**, **Plint AC**; for Pediatric Emergency Research Canada. *BMJ Open.* 2021 May 3;11(5):e048823. PMID: 33941638 <https://pubmed.ncbi.nlm.nih.gov/33941638/>

Short-Course Antimicrobial Therapy for Pediatric Community-Acquired Pneumonia: The SAFER Randomized Clinical Trial. Jeffrey M Pernica, Stuart Harman, **April J Kam**, **Redjana Carciumaru**, Thuva Vanniyasingam, **Tyrus Crawford**, Dale Dalglish, Sarah Khan, Robert S Slinger, Martha Fulford, Cheryl Main, Marek Smieja, Lehana Thabane, Mark Loeb. *JAMA Pediatr.* 2021 Jan; 175(5): 475-482. PMID: 33683325 DOI: [10.1001/jamapediatrics.2020.6735](https://doi.org/10.1001/jamapediatrics.2020.6735)

Structural connectome differences in pediatric mild traumatic brain and orthopedic injury. Ashley L Ware, Keith Owen Yeates, Bryce Geeraert, Xiangyu Long, **Miriam H Beauchamp**, **William Craig**, **Quynh Doan**, **Stephen B Freedman**, Bradley G Goodyear, **Roger Zemek**, Catherine Lebel. *Hum Brain Mapp.* 2021 Jan. PMID: 34748258 <https://pubmed.ncbi.nlm.nih.gov/34748258/>

The Pediatric Emergency Research Network (PERN): A decade of global research cooperation in paediatric emergency care. Klassen TP, Dalziel SR, Babl FE, Benito J, Bressan S, Chamberlain J, Chang TP, **Freedman SB**, Kohn Loncarica G, Lyttle MD, Mintegi S, Mistry RD, Nigrovic LE, Oostenbrink R, **Plint AC**, Rino P, Roland D, **Van de Mosselaer G**, Kuppermann N. *Emerg Med Australas.* 2021 Jul 3. PMID: 34218513 doi: [10.1111/1742-6723.13801](https://doi.org/10.1111/1742-6723.13801)

The Pediatric Emergency Research Network: a decade old and growing. Bressan S, Klassen TP, Dalziel SR, Babl FE, Benito J, Chamberlain J, Chang TP, **Freedman SB**, Kohn Loncarica G, Lyttle MD, Mintegi S, Mistry RD, Nigrovic LE, **Plint AC**, Rino P, Roland D, **Van De Mosselaer G**, Oostenbrink R, Kuppermann N. *Eur J Emerg Med.* 2021 Oct 1;28(5):341-343. PMID: 34433789 doi: [10.1097/MEJ.0000000000000847](https://doi.org/10.1097/MEJ.0000000000000847)

Utility of MyHEARTSMAP in Youth Presenting to the Emergency Department with Mental Health Concerns. Brian C M Li, **Bruce Wright**, Tyler Black, **Amanda S Newton**, **Quynh Doan**. *J Pediatr.* 2021 Jan. PMID: 33819465. DOI: [10.1016/j.jpeds.2021.03.062](https://doi.org/10.1016/j.jpeds.2021.03.062)

Variables Associated With Intravenous Rehydration and Hospitalization in Children With Acute Gastroenteritis: A Secondary Analysis of 2 Randomized Clinical Trials. Naveen Poonai, Elizabeth C Powell, David Schnadower, T Charles Casper, Cindy G Roskind, Cody S Olsen, Philip Tarr, Prashant Mahajan, Alexander J Rogers, **Suzanne Schuh**, **Katrina F Hurley**, **Serge Guoin**, Cheryl Vance, **Ken J Farion**, Robert E Sapien, Karen J O'Connell, Adam C Levine, Seema Bhatt, **Stephen B Freedman** *JAMA Netw Open.* 2021 Jan; 4(4): e216433. PMID: 33871616 <https://pubmed.ncbi.nlm.nih.gov/33871616/>

FUNDING, GRANTS & AWARDS

CAEP Grants and Awards

Junior Investigator Grants:

- Dr. **Gabrielle Freire** was awarded \$5,000 for her “Impact of gender on research leadership and productivity in emergency medicine (GIRL-PEM): a cross-sectional descriptive study of Pediatric Emergency Research Canada.” Dr. Freire’s team consisted of **Stevi Golden-Plotnik, Kelly Kim**, Kelly Cobey, Angela Jarman, **Rebecca Emerton, Samina Ali, Amy Plint, Roger Zemek**.
- Dr. **Stevi Golden-Plotnik** was awarded \$5,000 for her “Perspectives on gender impact on research in academic emergency medicine in Canada: a mixed methods study.” Dr. Golden-Plotnik’s team consisted of **Gabrielle Freire, Kelly Kim**, Kelly Cobey, Angela Jarman, **Rebecca Emerton, Samina Ali, Amy Plint, Roger Zemek**.
- Dr. **Maya Harel-Sterling’s** “A target population derived method for establishing a performance based competency standard for point-of-care ultrasound image interpretation.”

CAEP-SREMI Grants

- Dr. **Natalie Bresee’s** “Is social marginalization associated with the administration of opioid analgesics to children presenting with pain in the emergency department?”

CIHR Fall 2020 Project Grant

Congratulations to Dr. **Waleed Alqurashi** and team who were awarded \$726,749 over three years for the CIHR Fall 2020 Project Grant for their study “Canadian Anaphylaxis Network-Predicting Recurrence after Emergency Presentation for Allergic REactions (CAN-PREPARE)”. The main objective of this study is to determine which combination of risk factors identify children with allergic reactions who are at risk of developing delayed reactions. From this knowledge, they can develop appropriate guidelines so that children at high risk are monitored appropriately, whereas those at no or low risk can be discharged from the ER once they became asymptomatic. These guidelines will be highly beneficial to our community and to the healthcare system.

CIHR Spring 2021 Project Grant

- Congratulations to Drs. **Lynne Moore, Gabrielle Freire** and Natalie Yanchar for being awarded \$608,176 for a 4-year study on “Improving the quality of Canadian pediatric injury care: identifying priorities based on evidence, practice variations and stakeholder needs and preferences”. Approximately 35,000 children require hospitalisation following preventable injury each year in Canada and with a cost of over \$4 billion. Recognising that injuries, treatments and patient/family needs in children are different from those in adults, most

Canadian health authorities have developed regionalized trauma systems specific to pediatric injury care. Canadian regional trauma systems have established quality improvement programs and routinely collect detailed clinical data. However, they lack guidance on which aspects of quality improvement are most likely to provide benefit. Dr. Moore and team's study aim to identify priorities for the improvement of Canadian pediatric injury care and assess how providers can best implement these improvements. This research will lead to an increase in equitable access to appropriate pediatric injury care, greater adherence to evidence-based clinical practices and better patient outcomes. This will contribute to alleviating the burden of childhood injuries for patients, families, caregivers and society. Partnerships with national child health and injury organisations, provincial/regional trauma programs and trauma care quality and accreditation stakeholders will facilitate the production of results that will lead to improvements in pediatric injury care across Canada.

- Congratulations to Drs. Kho, Rewa, **Freedman** and Choong on their PERC endorsed study "REVIVE – Frailty, Rehabilitation, and Hospitalization Outcomes in Adult and Pediatric Survivors of COVID-19" which received \$738,224 in funding. This 3-year observational study aims to investigate the prevalence of and factors associated with frailty at hospital discharge in 750 adult (18+ years) and 150 pediatric (<18 years of age) ICU survivors of COVID-19 from 35 Canadian centres (25 adult and 10 pediatric) between January 1, 2020 and December 31, 2021. Secondary aims are to examine the association between baseline frailty and function at time of discharge, discharge destination, and quality of life post-discharge. Due to the global pandemic, we need to understand how COVID-19 critical illness affects groups of people who are at higher risk, and the impact on outcomes that are important to patients, like functioning and QOL. The results will help policy makers plan post-hospital services for survivors, help healthcare workers understand the importance of rehabilitation practice for patients with COVID-19, and researchers develop treatments to improve QOL after COVID-19.

COVID-19 Research

Dr. **Stephen Freedman** led teams from across Canada to conduct SARS-CoV-2 research. Dr. Freedman was awarded the following funding:

- **Safe Restart Agreement Contribution Program:** \$1,007,000 from Health Canada for "A Multi-Center Evaluation of Buccal Swabs with the Abbott ID NOW COVID-19 for Point-of-Care Detection SARS-CoV-2 in Pediatric Emergency Departments". The objective of the COVID-19 Safe Restart Agreements (SRA) Contribution Program Testing Stream is to spread and scale evidence-based approaches to national testing, screening and surveillance capacity to help contain the virus and support economic restart. This particular study will aim to evaluate the clinical sensitivity of buccal swab testing using the Abbott ID NOW TM device to detect SARS-CoV-2 infection among children aged 0-<18.0 years old presenting to the emergency department with an indication for SARS-CoV-2 testing as determined by the clinical care team.
- **CIHR Operating Grant: Emerging COVID 19 Research Gaps and Priorities Funding:** \$465,120 from the Operating Grant: Emerging COVID-19 Research Gaps and Priorities – Variants for "A Prospective Pan-Canadian Cohort Assessment of SARS-CoV-2 Variant of Concern Disease Severity and Association with Long-Term Symptoms in Children." This research aims to describe the clinical characteristics of COVID in children, identify predictors of severe

outcomes, quantify the burden of long COVID and quantify the secondary household attack rate from asymptomatic children. The work builds on two prospective studies. 1. PHAC-COVID: recruiting symptomatic children presenting at ED who test positive and negative (n=3184 and 320 with COVID). 2. Asymptomatic-COVID study: recruiting 400 asymptomatic positive and 1200 asymptomatic negative subjects. New features are that they will sequence the COVID to identify variants of concern and will follow up at 6 and 12 months. They will recruit an additional 3000 kids to the PHAC-COVID study.

Dr. **Roger Zemek** and team have been awarded \$6,000,000 for a 3-year observational study which aims to investigate the prevalence of and factors associated with frailty at hospital discharge in 750 adult (18+ years) and 150 pediatric (<18 years of age) ICU survivors of COVID-19 from 35 Canadian centres (25 adult and 10 pediatric) between January 1, 2020 and December 31, 2021. Secondary aims are to examine the association between baseline frailty and function at time of discharge, discharge destination, and quality of life post-discharge. Due to the global pandemic, we need to understand how COVID-19 critical illness affects groups of people who are at higher risk, and the impact on outcomes that are important to patients, like functioning and QOL. The results will help policy makers plan post-hospital services for survivors, help healthcare workers understand the importance of rehabilitation practice for patients with COVID-19, and researchers develop treatments to improve QOL after COVID-19.

National Institutes of Health: National Institute of Allergy and Infectious Diseases

Congratulations to Drs. **Stephen Freedman**, David Schnadower and Phillip Tarr on their funding success for their *“Hyperhydration to Improve Kidney Outcomes in Children with Shiga Toxin-Producing E. Coli Infection (HIKO STEC): A Multinational, Embedded, Cluster, Crossover, Randomized Trial”*. They received ~9 million USD and runs until August 31, 2027. They will conduct a multinational, open-label, cluster-randomized crossover, superiority trial in 26 emergency departments. Participating sites will be randomly allocated to a two-period, two-intervention trial design to formally test the prediction that hyperhydration before advanced HUS ensues, decisively reduces the microangiopathic and ischemic renal injuries that lead to morbidity and mortality in STEC-infected children. They posit that early hyperhydration will lead to a significant reduction in the occurrence and severity of serious extrarenal events. Embedding the intervention into clinical care will enable the intervention to commence as soon as microbiological diagnosis is made, thereby maximizing the therapeutic benefit. If positive, the results from this study will provide the first causal evidence of an effective intervention for pediatric STEC-infection and spur a change in clinical practice.

Amy Plint PERC Mentorship Award

Congratulations to Dr. **Jocelyn Gravel** from Ste. Justine for being the inaugural recipient for the Amy Plint PERC Mentorship Award. This is awarded to a mentor demonstrating excellence in clinical research. Mentoring is the foundation for development of the next generation of scientists and health researchers. This annual award has been designed to recognize outstanding performance in the mentoring of research trainees and junior colleagues in the PERC network. Dr. Gravel is a brilliant scientist and exemplary clinician and has an unparalleled ability to give meaning to clinical research and how it impacts patient care. When mentoring, he adapts to his mentees’ clinical interests to find feasible projects that motivate and engage them. This results in an extremely effective mentorship style where mentees are empowered to lead and understand their own projects, and subsequently

motivated and able to pursue further research endeavors and careers. With these attributes, Dr. Gravel has an unmatched ability to encourage his colleagues, collaborators and students, scientific curiosity, methodological rigor, and a love for research, making him a natural leader and mentor for all who have had the pleasure of working with him in their careers.

David Johnson Award for Best Fellow's Presentation

Congratulations to Dr. **Francois Gagnon** from CHEO who was awarded the 2022 David Johnson Award for Best Fellow's Presentation for his RCT *"XyloFUNS: Xylocaine to Freeze during Unpleasant Nasopharyngeal Swabs in Children"*. Francois presented with the two other finalists during the PERC 2022 virtual annual meeting and was selected as the winning candidate for scientific strength, clinical relevance and importance to pediatric emergency medicine. Francois joins a prestigious list of recipients who have won since the award's inception in 2012.

Ian Steill Researcher of the Year Award

Congratulations to Dr. **Samina Ali** on being awarded the Ian Steill Researcher of the Year Award from CAEP. Dr. Stiell is an internationally recognized researcher and mentor in emergency medicine. Candidates for this award are CAEP member physicians who have distinguished themselves through their scholarship, specifically producing important clinical or education research in emergency medicine within the past three years. Thank you, Samina for your excellence in emergency medicine and your devotion to improving pain.

Robyn Allen Leadership Award

The Food Allergy Canada and the family of Robyn Allen selected Dr. **Waleed Alqurashi** as the winning recipient of their 2021 Robyn Allen Leadership Award. Congratulations on this prestigious honour. The Robyn Allen Leadership Award recognizes an individual who has made a unique contribution to the lives of Canadians with food allergy through their efforts in education, advocacy, community building, leadership, or fundraising. Dr. Alqurashi joins an elite group of past award winners who have made significant contributions in the food allergy space.

Do you have publications, grants, awards or PERC news you would like included in next year's annual report? Email the PERC Coordinator Becky Emerton via rebecca.emerton@ahs.ca