

ESCN Studentship Update 2016-2021



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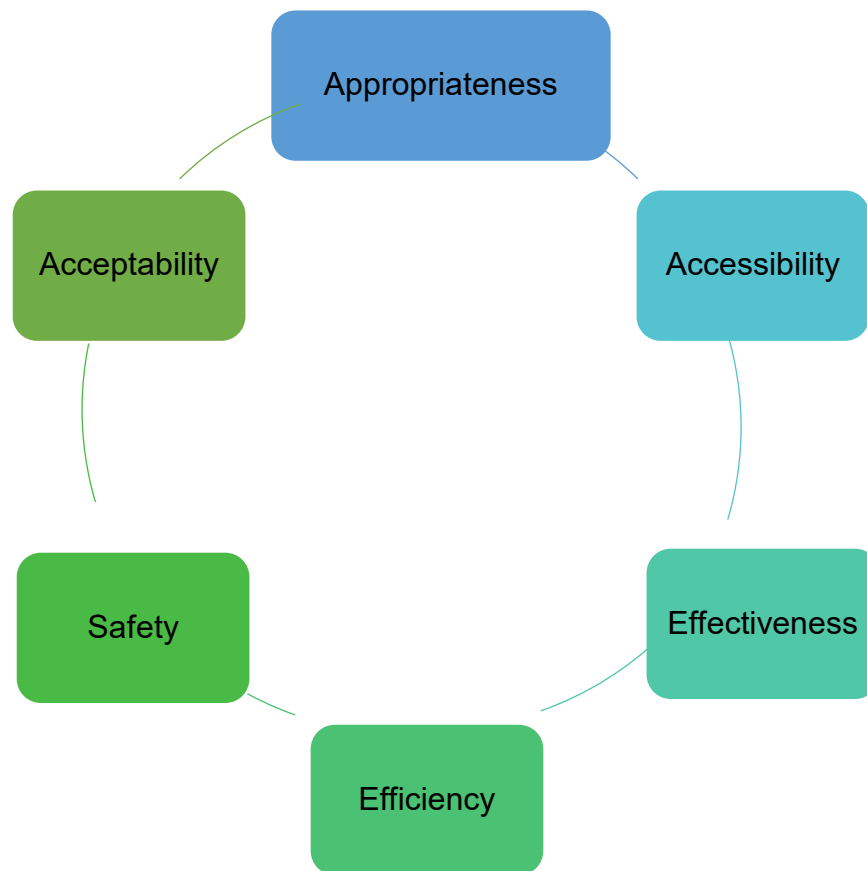
This report has been prepared by the Emergency Strategic Clinical Network.

Contact

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Introduction

A core function of the Emergency Strategic Clinical Network (ESCN) is to build research capacity in emergency medicine. The ESCN Summer Studentship Award is designed to foster research interest in emergency medicine and related disciplines among students at the undergraduate level of study. Through the results of the research projects conducted by the students, this initiative contributes to the quality of emergency medicine care delivery within the Health Quality Council of Alberta's six domains of quality:



Since 2016 the ESCN has funded **33 studentships** from a variety of undergraduate disciplines with a common interest in Emergency Medicine.

There have been 25 supervisors who supported student learning and fostered research interest in the field of emergency medicine.

All students funded by the ESCN from 2016-2021 have presented their work at conferences.

22 students have been published in a peer-reviewed academic journal with their supervisor for research conducted during their studentship.

The remainder of this document lists students funded, their supervisor, project title and publications as identified up to June 2022. For the interest of the reader, profile write ups are given on selected students.

2021 Studentships

Student: Satchel Krawchuk

Supervisor: Dr. Eddy Lang

Project Title: COVID19-related non-pharmacologic interventions are associated with reductions in hospitalizations for respiratory conditions but not other acute illnesses

Student: Jessica Knight

Supervisor: Dr. Jacob Jaremko

Project Title: Improving Diagnostic Accuracy for Wrist and Elbow Injuries Using 2D Ultrasound, 3D Ultrasound, and Machine Learning.

Student: Emily Ju

Supervisor: Dr. Brent Hagel

Project Title: Characteristics of Injured Child and Adolescent Bicyclists in Calgary, Alberta.

Student: Urouj Rashid

Supervisor: Dr. Stephanie Vandenberg

Project Title: Refractory ventricular fibrillation management in Calgary's adult emergency Departments

Student: Summer Hudson (Kavan)

Supervisor: Dr. Samina Ali

Project Title: A randomized controlled trial of virtual-reality based distraction for intravenous cannulation-related distress in children.

Citation: Ali S, Rajagopal M, Stinson J, et al. Virtual reality-based distraction for intravenous insertion-related distress in children: a study protocol for a randomised controlled trial. *BMJ Open*. 2022;12(3):e057892. Published 2022 Mar 30. doi:10.1136/bmjopen-2021-057892

2021 Student Spotlights

Satchel Krawchuk



The ESCN summer studentship built the foundation for my research career, as it was the first dedicated research experience I had outside of an academic setting. The studentship provided me with the chance to apply many of the skills I have developed during my undergraduate studies in a real-world setting, in an attempt to solve problems faced in the field of emergency medicine. I was able to work alongside numerous amazing colleagues who provided mentorship and have created a positive impact on the way I perceive health-based research. I now understand how research is an integral part of healthcare and how important it is to re-evaluate public health policies continually.

Jessica Knight

This experience has taught me a great deal about the overall process of research in medicine and has allowed me to put my knowledge of the scientific method into practice. It has also made me appreciate the amount of time and effort that goes into data collection and analysis prior to publication. Before I was given the opportunity to participate in this project, I hadn't had hands-on experience with research, so this was a very valuable learning experience for me.

2020 Studentships

Student: Sharan Preet Aulakh

Supervisor: Dr. Janani Kassiri and Dr. Samina Ali

Project Title: Understanding the characteristics of children with epilepsy who present to the emergency department

Student: Muna Mohamed

Supervisor: Dr. Lisa Hartling

Project Title: Cultural Adaptation of Knowledge Translation (KT) Tools for Parents of Children with Acute Illnesses

Citation: Elliott, S. A., Wright, K. S., Scott, S. D., Mohamed, M., Farah, A., & Hartling, L. (2022). Adapting child health knowledge translation tools for Somali parents: qualitative study exploring process considerations and stakeholder engagement. *JMIR Formative Research*, 6(4), e36354. <https://doi.org/10.2196/36354>

Student: Kate Ukrainetz

Supervisor: Dr. Shawn Dowling

Project Title: Exploring Computed Topography for Abdominal Pain (CTAP) usage across Emergency Departments in the Calgary Zone

Student: Anjola Adeboye

Supervisor: Dr. Brent Hagel, PhD

Project Title: Child Bicyclist Injuries and the Built Environment

2020 Student Spotlights

Muna Mohamed

As an immigrant myself, I have experienced and witnessed firsthand the struggles immigrants can face when attempting to access different services, including healthcare. This research opportunity has validated my own experiences and provided insight about the needs of vulnerable populations, and the reasons for this, such as limited health literacy, lack of familiarity with the local health system, and differences in cultural practices and values (e.g., in-person communications and oral traditions).

Sharan Aulakh

This research experience has been an invaluable learning opportunity...it has provided me with the skillset and exposure that will help me to pursue further research in wide range of disciplines, including emergency and pediatric medicine. I believe that this and future research experiences will complement my clinical practice and help me deliver the best possible care to my patients.

2019 Studentships

Student: Kiran Grant

Supervisor: Dr. Grant Innes

Project Title: Throughput interventions to reduce ED crowding: a systematic review

Citation: Grant, K. L., Bayley, C. J., Premji, Z., Lang, E., & Innes, G. (2020).

Throughput interventions to reduce emergency department crowding: A systematic review. In *CJEM* (Vol. 22, Issue 6). <https://doi.org/10.1017/cem.2020.426>

Student: Luke Green-Harrison

Supervisor: Dr. Catherine Patocka and Dr. Eddy Lang

Project Title: The emergency physician leader: A realist evaluation of the impact of a new physician role on ED overcrowding in the Calgary area

Citation: Dong, K. A., Lavergne, K. J., Salvalaggio, G., Weber, S. M., Xue, C. J., Kestler, A., Kaczorowski, J., Orkin, A. M., Pugh, A., & Hyshka, E. (2021). Emergency physician perspectives on initiating buprenorphine/naloxone in the emergency department: A qualitative study. *J Am Coll Emerg Physicians Open*, 2(2).

<https://doi.org/10.1002/emp2.12409>

Student: Magdalena Koziak

Supervisor: Dr. Allison Kirkham

Project Title: Identification of pediatric emergency department patients for referral to rapid-access substance use services: A retrospective chart review

Student: Fiona Tran

Supervisor: Dr. Brian Rowe and Dr. Daniella Junqueira

Project Title: Procainamide for the acute management of atrial fibrillation and flutter in the Emergency Department: A systematic review

Citation: Tran, F., Junqueira, D., Meyer, J., Zhou, K., Tan, M., & Rowe, B. (2020).

Procainamide for the acute management of atrial fibrillation and flutter in the emergency department: a systematic review. *J Emerg Nurs*, 43(2). <https://doi.org/10.29173/cjen40>

Student: Matthew Yeung

Supervisor: Dr. Rebecca Haines-Saah and Dr. Eddy Lang

Project Title: Cannabis in the Emergency Department: The impact of legalization on cannabis and opioid related presentations

Citation: Yeung, M. E. M., Weaver, C. G., Hartmann, R., Haines-Saah, R., & Lang, E. (2021). Emergency department pediatric visits in Alberta for cannabis after legalization. *Pediatrics*, 148(4). <https://doi.org/10.1542/peds.2020-045922>

Citation: Yeung, M., Janz, K., Weaver, C., Saah-Haines, R., & Lang, E. (2019). Cannabis in the Emergency Department: The impact of cannabis legalization on cannabis and opioid-related presentations. *Alberta Academic Review*, 2(3). <https://doi.org/10.29173/aar93>

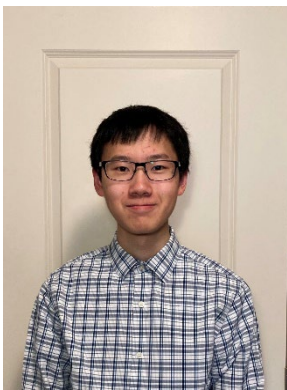
Student: Cindy Jiaxin Xue

Supervisor: Dr. Ginetta Salvalaggio

Project Title: ED Physician Attitudes Towards Buprenorphine Initiation in the ED

Citation: Dong, K. A., Lavergne, K. J., Salvalaggio, G., Weber, S. M., Xue, C. J., Kestler, A., Kaczorowski, J., Orkin, A. M., Pugh, A., & Hyshka, E. (2021). Emergency physician perspectives on initiating buprenorphine/naloxone in the emergency department: A qualitative study. *J Am Coll Emerg Physicians Open*, 2(2). <https://doi.org/10.1002/emp2.12409>

2019 Student Spotlights



Matthew Yeung

As a result of the ESCN studentship and subsequent support from supervisors Dr. Lang and Dr. Rebecca Haines-Saah, I have been able to publish three articles in the American Journal of Emergency Medicine, the Canadian Journal of Emergency Medicine, and Pediatrics. The experience developing original research projects have contributed to my success undergraduate coursework and honour's thesis. My understanding of basic and novel statistical methods, and of the time required for various components of research allowed me to effectively plan future research projects beyond Emergency Medicine and have allowed me to get the most out of my degree. Additionally, publications made with the Department of Emergency Medicine have contributed to my success applying for additional research grants, and for further education at the graduate level.

Fiona Tran

Prior to this project, I had limited clinical research experience and was unfamiliar with systematic review methods. I learned a lot this summer from the Emergency Research team...Conducting a systematic review provided me invaluable insight for future implications on how I will supplement my practice starting in clerkship and how I will process information coming from various sources. This knowledge will better equip me for the possibility of exploring research during residency.

Magdalena Koziak

This experience with clinical research will help me in my future career goals as it allowed me to learn more about the basics of research, exposed me to a variety of specialties, and provided me hands-on experience with patient charts. This experience has allowed me to have a more patient-centered understanding of healthcare, extending beyond the academic knowledge I obtained in my first two years of medical school.

2018 Studentships

Student: Lindsay Amatto

Supervisor: Dr. Jon Doan, PhD

Project Title: Biopsychosocial Determinates of Lifting Behavior in Emergency Health

Student: Janet Aucoin

Supervisor: Dr. Brent Hagel, PhD

Project Title: Bicycling Injury and Safety from the Perspective of the Child Bicyclist

Citation: Pitt, T. M., Aucoin, J., Hubkarao, T., Goopy, S., Cabaj, J., Hagel, B., & McCormack, G. R. (2021). The relationship of urban form on children and adolescent health outcomes: A scoping review of Canadian evidence. In *Int J Environ Res Public Health* (Vol. 18, Issue 8). <https://doi.org/10.3390/ijerph18084180>

Student: Dirk Chisholm

Supervisor: Dr. Eddy Lang

Project Title: A Multimodal Evaluation of an Emergency Department Electronic Tracking Board Utility Designed to Improve Throughput by Optimizing Stretcher Utilization

Citation: Chisholm D, Wang D, Rich TA, Grabove M, Sherlock K, Lang E. A multimodal evaluation of an emergency department electronic tracking board utility designed to optimize stretcher utilization. *Cureus*. 2020;12(11):e11810. Published 2020 Nov 30. doi: [10.7759/cureus.11810](https://doi.org/10.7759/cureus.11810)

Student: Thomas Kellner

Supervisor: Dr. Stephen Freedman

Project Title: Comparative Evaluation of Enteric Bacterial Culture and a Molecular Multiplex Syndromic Panel

Citation: Kellner, T., Parsons, B., Chui, L., Berenger, B. M., Xie, J., Burnham, C. A. D., Tarr, P. I., Lee, B. E., Nettel-Aguirre, A., Szelewicki, J., Vanderkooi, O. G., Pang, X. L., Zelyas, N., & Freedman, S. B. (2019). Comparative evaluation of enteric bacterial culture and a molecular multiplex syndromic panel in children with acute gastroenteritis. *J Clin Microbiol*, 57(6). <https://doi.org/10.1128/JCM.00205-19>

Student: A. Zohaib Siddiqi

Supervisor: Dr. Eddy Lang

Project Title: An Electronic Database for Assessing trends in Red Blood Cell Transfusion in Patients with Iron-deficiency Anemia

Citation: Siddiqi, A. Z., Grigat, D., Vatanpour, S., McRae, A., & Lang, E. S. (2021). Transfusions in patients with iron deficiency anemia following release of Choosing Wisely Guidelines. *CJEM*, 23(4). <https://doi.org/10.1007/s43678-021-00082-2>

Student: Howie Wu

Supervisor: Dr. Jessica Hann, Dr. Allison Kirkham

Project Title: Identification of Emergency Department Patients for Referral to Rapid-Access Addiction Services: A Retrospective Chart Review

Citation: Hann, J., Wu, H., Gauri, A., Dong, K., Lam, N., Bakal, J. A., & Kirkham, A. (2020). Identification of emergency department patients for referral to rapid-access addiction services. *CJEM*, 22(2). <https://doi.org/10.1017/cem.2019.453>

2018 Student Spotlights

Lindsay Amatto

This summer studentship allowed me the opportunity to learn and problem solve on my own, with many fellow research assistants and supervisors there to help and explain if need be. I learned so much about my specific project, other current projects, and research as a whole.

Zohaib Siddiqi

This was the first project of which I was a part that investigated clinical data as a means to foster quality improvement in the healthcare system. I learned about Choosing Wisely, the implementation of the organization's guidelines, as well as how effective these guidelines can be.

Leah Johnston

This experience has taught me about how the emergency department operates on a day-to-day basis, the variety in the ED patient population, and the role of clinical research in improving patient care. I learned about the importance of patient confidentiality and following ethical standards when completing *a clinical research project*

2017 Studentships

Student: Adrian Battiston

Supervisor: Dr. Cristina Villa-Roel

Project Title: Exploring health care connections and transitions in care for patients presenting to the emergency department with asthma and chronic obstructive pulmonary disease.

Citation: Rowe, B. H., Villa-Roel, C., Bhutani, M., Couperthwaite, S., & Runham, N. (2018). P154: Exploring health care connections and transitions in care for patients presenting to emergency departments with acute wheezing illnesses. *CJEM*, 20(S1), S112. <https://doi.org/10.1017/cem.2018.352>

Student: Daniel Dabbs

Supervisor: Dr. Kathryn Dong

Project Title: Access to Take Home Naloxone in The Royal Alexandra Hospital's Emergency Department for Patients at Risk of an Opioid Overdose

Citation: O'Brien, D. C., Dabbs, D., Dong, K., Veugelers, P. J., & Hyshka, E. (2019). Patient characteristics associated with being offered take home naloxone in a busy, urban emergency department: a retrospective chart review. *BMC Health Serv Res*, 19(1). <https://doi.org/10.1186/s12913-019-4469-3>

Student: Thomas Kellner

Supervisor: Dr. Stephen Freedman

Project Title: Comparing the Epidemiology of Acute Gastroenteritis in Children in Home Self Care and Emergency Department Populations

Citation: Kellner, T., Parsons, B., Chui, L., Berenger, B. M., Xie, J., Burnham, C. A. D., Tarr, P. I., Lee, B. E., Nettel-Aguirre, A., Szelewicki, J., Vanderkooi, O. G., Pang, X. L., Zelyas, N., & Freedman, S. B. (2019). Comparative evaluation of enteric bacterial culture and a molecular multiplex syndromic panel in children with acute gastroenteritis. *J Clin Microbiol*, 57(6). <https://doi.org/10.1128/JCM.00205-19>

Student: Carol Rizkalla

Supervisor: Dr. Elaine Gilfoyle

Project Title: Analyzing Distractions in a Simulated Pediatric Resuscitation Event

Citation: Gilfoyle, E., Koot, D. A., Annear, J. C., Bhanji, F., Cheng, A., Duff, J. P., Grant, V. J., St George-Hyslop, C. E., Delaloye, N. J., Kotsakis, A., McCoy, C. D., Ramsay, C. E., Weiss, M. J., & Gottesman, R. D. (2017). Improved Clinical Performance and Teamwork of Pediatric Interprofessional Resuscitation Teams with a Simulation-Based Educational Intervention*. *Pediatr Crit Care Med*, 18(2). <https://doi.org/10.1097/PCC.0000000000001025>

Student: Nicola Symonds

Supervisor: Dr. Paul Ronksley

Project Title: Effectiveness of hospital avoidance interventions among elderly patients: A systematic review

Citation: Ness, A., Symonds, N., Siarkowski, M., Broadfoot, M., McBrien, K., Lang, E. S., Holroyd-Leduc, J., & Ronksley, P. (2018). PL04: Effectiveness of hospital avoidance interventions among elderly patients: a systematic review. *CJEM*, 20(S1).

<https://doi.org/10.1017/cem.2018.62>

Student: Mairead Whelan

Supervisor: Dr. Brent Hagel

Project Title: Environmental Determinants of Youth Cyclist Injuries

Citation: Whelan M, Tate HubkaRao, Stang A, Freedman S, Macpherson A, Howard A, et al. Child bicyclist perspectives on danger and injury circumstances in the built environment. *Children, Youth and Environments* [Internet]. 2019 [cited 2023 May 2];29(2):77–91. Available from:

<https://www.journals.uc.edu/index.php/cye/article/view/4799>

2017 Student Spotlights

Adrian Battiston:

This summer experience has been invaluable in teaching me the necessary skills to understand, perform, evaluate, and interpret medical research. This will prove to be an extremely valuable skill as I pursue a future career as a physician at an academic institution and as I integrate evidence-based medicine into my future practice.

Daniel Dabbs

My summer research study has reminded me of how I would like to continue to perform research throughout my future career in medicine. Furthermore, I learned how important timely clinical research can be to shape current healthcare policies and medical decisions.

Mariead Whelan

My summer studentship in 2017 studying pediatric injury epidemiology at the Alberta Children's Hospital, funded by ESCN, was one of my first experiences with public health research and provided me with foundational skills in epidemiology, incredibly valuable mentorship and supervision, and a passion for research. After my BHSc, I completed my MSc at the University of Oxford funded by a full scholarship, studying environmental health and infectious disease. Many thanks to research experiences like this one which founded my passion to continue to graduate studies and connections with my mentor/supervisor that supported me to achieve this. I have been working full-time since 2020 as an infectious disease epidemiologist on the COVID-19 pandemic response with SeroTracker and the World Health Organization. Specifically, I support surveillance efforts to track SARS-CoV-2 antibody immunity globally.

2016 Studentships

Student: Shashwat Desai

Supervisor: Dr. Brian Rowe

Project: Effectiveness of Implementing Evidence Based Interventions to Reduce C-Spine Imaging in the Emergency Department: A systematic review

Citation: Desai, S., Liu, C., Kirkland, S. W., Krebs, L. D., Keto-Lambert, D., & Rowe, B. H. (2018). Effectiveness of Implementing Evidence-based Interventions to Reduce C-spine Image Ordering in the Emergency Department: A Systematic Review. In *Acad Emerg Med*. (Vol. 25, Issue 6). <https://doi.org/10.1111/acem.13364>

Student: Rashi Hiranandani

Supervisor: Dr. Eddy Lang

Project: Analysis of imaging practices for uncomplicated headaches and atraumatic back pain by ED physicians in the Calgary Zone

Citation: Atkinson, P., Lang, E., MacKenzie, M., Hiranandani, R., Lys, R., Laupacis, M., & Murray, H. (2018). CJEM Debate Series: #ChoosingWisely - The Choosing Wisely campaign will not impact physician behaviour and choices. In *CJEM* (Vol. 20, Issue 2). <https://doi.org/10.1017/cem.2017.402>

Student: Anne Kemp

Supervisor: Dr. Amy Metcalfe

Project: Postpartum utilization of the Emergency Department for women with a hypertensive disorder

Citation: Mahajan, A., Kemp, A., Hawkins, T. L. A., Metcalfe, A., Dowling, S., & Nerenberg, K. (2020). Postpartum hypertensive disorders in the Emergency Department – A retrospective review of local practice in Calgary, Alberta. *Pregnancy Hypertens*, 19. <https://doi.org/10.1016/j.pregphy.2019.11.009>

Student: Harry Liu

Supervisor: Brian Rowe

Project: Choosing Wisely: The role of imaging in low back pain management in the emergency department

Student: Shari Li

Supervisor: Dr. Eddy Lang

Project: Use of CT Angiography in Emergency Departments for Minor Strokes and Transient Ischemic Attacks (TIAs): A Systematic Review and Meta-analysis

Citation Li, S. (Shari), Trajkovski, A., Siarkowski, M., Santiago, C., Eng, K. A., Kishibe, T., Umakanthan, A., & Lang, E. (2020). Patient Outcomes With Use of Computed Tomography Angiography in Acute Ischemic Stroke and Transient Ischemic Attack: A Systematic Review and Meta-Analysis. *Cureus*. <https://doi.org/10.7759/cureus.8187>

Student: Catherine Stewart

Supervisor: Dr. Sarah Curtis

Project: Does breed specific legislation protect children from dog bites and associated trauma? Chart Reviews from a Sentinel Site

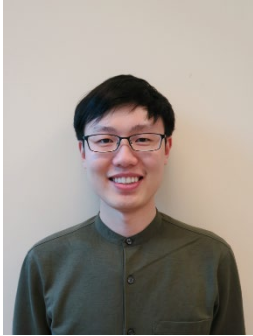
Student: Jonas Buttenschoen

Supervisor: Dr. Sander Veldhuyzen van Zanten

Project: A chart review of management of patients presenting with upper Gastro-Intestinal bleeding (UGIB) in the ED at the University of Alberta Hospital.

2016 Student Spotlight

Harry Liu



With the studentship for the summer of 2016, I was under the mentorship of Dr. Brian Rowe for my research project. I was fortunate to learn the methodology of systematic review from Dr. Rowe and his research team. Both of my projects were published in one of the top journals in Emergency Medicine (i.e., *Academic Emergency Medicine*). My first-author publication was the editor's pick and featured on the journal front cover. I appreciated the valuable studentship opportunities provided by ESCN. It has significantly enhanced my interests in research.

The research experience certainly inspired to pursue further research opportunities in the area of resource stewardship and systemic review. Currently, I have a third-year dermatology resident at the University of British Columbia in Vancouver. My studentship with ESCN is the starting point of lots of my research interests and skills. It has helped me to get where I am now and my achievements in the area of research.