



Each edition of the newsletter highlights the initiatives of one of the three trauma centres in the GTA that make up the U of T Trauma Program. This newsletter focuses on St. Michael's Hospital.

Updates from the Trauma Program at St. Michael's Hospital

The St. Michael's Hospital Trauma Program has seen many exciting additions and innovations to the program over the last two years, despite challenges from the ongoing pandemic. Our trauma volumes have also increased with 1,253 trauma team activations in fiscal year 2021/2022.

To better meet the needs of our patients, we added a number of new positions which have strengthened the program, improved the quality of care, and enhanced the overall trauma patient experience by providing *wrap around trauma care*.

We have added a Trauma Mental Health Nurse to the program to better care for the mental health needs of patients, addressing both pre-existing mental health issues and the acute and long term effects of traumatic injury. To better facilitate transition to post-acute-care services, we have recruited a Care & Transitions Facilitator (Trauma Navigator) to ensure a smooth journey from hospital, rehabilitation or home. We are also pleased to report that we now have a full-time Trauma Quality Improvement Specialist, to ensure we meet our goal of being a World Class Trauma Program.

The St. Michael's Hospital Trauma Program is now offering two new high-yield internationally recognized trauma surgery courses, the Definitive Surgery for Trauma Course (DSTC) and the Advanced Surgical Skills for Exposure in Trauma (ASSET) course. These courses are in high demand and add to our existing ATLS and ATCN course offerings. The St. Michael's Trauma program is known for its commitment to trauma education, and we have not only been able to maintain our normal trauma education programs, but have been able to expand them.

Trauma research continues to grow at St. Michael's Hospital and we have continued to publish and innovate in many areas of trauma research. We have published 164 peer-reviewed papers over the last four years and continue to attract large funding grants. We have also recruited our first Trauma Post-Doctoral Research Fellow, Dr. Asad Naveed, who is already publishing and presenting his work at international conferences.

We have also added two new exciting clinical skill sets to our repertoire. We have partnered with US based Prytime Medical on their partial resuscitative endovascular balloon occlusion of the aorta (pREBOA-PRO) centres of excellence program, which allows us to quickly address bleeding in the abdomen or pelvis. We are proud to be the only non-US centre to participate in the Prytime centres of excellence program. We have also increased our volume of operations for surgical stabilization of rib fractures, including the reconstruction of chest walls that have been badly deformed from injury.

Finally, we are thrilled to have received a positive review from our recent American College of Surgeons Committee on Trauma (ACS-COT) Level 1 Trauma Centre consultative visit. The support from St. Michael's Hospital staff, and clinical and executive leadership was tremendous, and we are excited to implement the ACS-COT recommendations in preparation for our verification visit in 2023. In summary, the St. Michael's Trauma Program continues to grow, innovate, and lead in trauma care. We are investing in people and our patient care programs and are seeing amazing results!

THE U OF T TRAUMA PROGRAM IS A COLLABORATIVE OF THE DEPARTMENTS OF SURGERY OF ST. MICHAEL'S HOSPITAL, SUNNYBROOK HEALTH SCIENCES CENTRE, AND THE HOSPITAL FOR SICK CHILDREN. IT IS DESIGNED TO PROMOTE QUALITY PATIENT CARE, EDUCATION, AND RESEARCH ACROSS THE THREE SITES AND TO INTEGRATE TRAUMA RELATED ACTIVITIES IN THE AREAS OF EDUCATION, QUALITY AND RESEARCH.



Our Trauma Fellow, Dr. Marc-Antoine Fortin, ready to put in a pREBOA-PRO Catheter



Dr. Najma Ahmed, Dr. Asad Naveed, and Dr. David Gomez at the Pan-American Trauma Association meeting in Cartagena, Columbia

University of Toronto Tile Lecturer 2022



The poster for the University of Toronto Tile Lecture in Trauma features a background image of surgeons in an operating room. On the left, a vertical banner reads "UNIVERSITY ROUNDS + UNIVERSITY ROUNDS". The top left corner includes the University of Toronto logo and "Surgery UNIVERSITY OF TORONTO". A circular portrait of Dr. Avery Nathens is positioned on the left. The main title "TILE LECTURE in Trauma" is centered. Below the title, the text reads: "Avery Nathens MD PhD FRCS, FACS, Surgeon-in-Chief, Sunnybrook Health Sciences Centre, Professor, Department of Surgery, University of Toronto, Medical Director, Trauma Quality Programs, American College of Surgeons". A quote follows: "Getting to zero: reducing preventable deaths in trauma care". Below this, it says "LIVE ZOOM WEBINAR" and "Please register in advance for this webinar. After registering, you will receive a confirmation email containing information about joining the webinar." The date and time are "Friday, June 3rd, 2022 7:30 - 8:30AM". A QR code is provided with the text "SCAN ME". On the right, "Learning Objectives:" are listed: 1. To highlight the aspirational goal of zero preventable deaths. 2. To review causes of preventable deaths in trauma care and findings from the TQIP mortality study. 3. To provide a framework for understanding human error in surgical care. 4. To outline effective strategies to improve the systems in which we deliver care to reduce the risk of error. At the bottom right, a bio for Dr. Marvin Tile is included: "Dr. Marvin Tile is a world authority on the treatment of pelvic and acetabular trauma and has trained clinicians from around the world in the care of patients with critical orthopaedic injuries. Dr. Tile has published two books and 59 manuscripts that have shaped the practice of orthopaedics across the globe."

The 2022 U of T Visiting Professor was very well known to the Toronto trauma community, Sunnybrook Health Sciences Centre's own Surgeon-in-Chief, Dr. Avery Nathens. Dr. Nathens is also a Professor in the Department of Surgery at the University of Toronto and the Medical Director of Trauma Quality Programs at the American College of Surgeons. He is a general surgeon with a focus on trauma care, performance improvement, and health system design. His research interests include trauma system effectiveness and quality of trauma care.

For the third year in a row the U of T Department of Surgery Tile (named after the renowned orthopedic surgeon Dr. Marvin Tile) was held virtually. At 7:30 am on June 3rd, 2022 Dr. Nathens spoke on the topic 'Getting to zero: reducing preventable deaths in trauma care' live on Zoom. As in 2020 and 2021 the annual City-Wide Journal Club and Trauma Research Symposium held in conjunction with the Visiting Professor in Trauma were canceled in line with COVID protocols. It was a privilege to have Dr. Nathens as our 2022 Visiting Professor in Trauma.

U of T Trauma Fellows 2022



Dr. Marc-Antoine Fortin trained in general surgery at the University of Montreal and joined our fellowship in July 2022. Next year, Marc-Antoine plans to do another trauma fellowship in a busy trauma center in South Africa for enhanced surgical exposure. In July 2024, he will join the trauma and acute care surgery team in Sacré-Coeur Hospital in Montreal and begin his academic career there. His focus will be on resident teaching, trauma related research, global surgery and enhancement of Quebec's trauma system.

Dr. Chantalle Grant is joining the Trauma and Acute Care Surgery fellowship after graduating from General Surgery residency and medical school in Edmonton (University of Alberta). During her residency, she also completed a Master's of Science in Public Health (Clinical epidemiology) with a thesis focused on the sustainable development of trauma registries in low and middle-income countries, and is continuing her involvement in global surgery this year with enrollment in the U of T Global Surgical Scholars Program. Together with her husband Wes and three year old daughter Eowyn she has been enjoying exploring the city of Toronto, and when she is not at work she enjoys hiking, eating ice cream, crocheting, and taking Eowyn to the park.

Welcome New Staff



Dylan Pannell CD, MD, PhD, CCFP, FRCS, FACS

Dr. Dylan Pannell is an attending trauma surgeon at Sunnybrook Health Sciences Centre (SHSC), and an Assistant Professor of Surgery at the University of Toronto. He is also a Lieutenant-Colonel in the Canadian Armed Forces. He served overseas during the War in Afghanistan and was decorated for his actions. After returning, he completed his General Surgery residency at the University of Toronto, followed by a Fellowship in Trauma at SHSC. He established Canada's first Trauma Video Review Program at SHSC to improve performance and education in trauma resuscitation and patient-centered care. His academic focus is on combat casualty care and surgical education. Dr. Pannell's military areas of expertise are in austere and forward-deployed trauma care as well as prolonged field care.

2022 GRANTS, ARTICLES & ACCOMPLISHMENTS

GRANTS:

Dr. David Gomez

- 2022 – 2025 Co-Principal Applicant. The THRIVE study: Toronto Hospital Reducing Injury from Violence – A feasibility intervention and evaluation study. Co-PI(s): Snider C, Bailey A, Sharpe T. Co-Invest(s): Alsefaou A, De Silva TA, Ginocchio G, Hibbert DD, McFarlan A, Newman GA, Nisenbaum R, Strauss R, Xiao S. Canadian Institutes of Health Research (CIHR) Project Grant. (\$677,026 CAD)
- 2022 Principal Applicant. Firearm related injury and death in Canada: Identifying research priorities. Co-Invest(s): Bailey A, Baxter NN, Cukier W, Gill C, Saunders NR, Snider C, Yakubovich AR. Canadian Institutes of Health Research (CIHR) Meeting Grant. (\$20,000 CAD)
- 2022 – 2024 Co-applicant. Development and validation of a prehospital score to predict blood transfusion requirements for injured patients: The Prehospital Transfusion Prediction (PTP) Score. Pls: Nolan B, Cheskes S. Co-Invest(s): Dainty K, Da Luz L, Drennan I, Gomez D, Lebovic G, Lin S, Lin Y, Pavenski K, Petrosoniak A, Shis A, Smith O. Canadian Institutes of Health Research (CIHR) Project Grant. (\$218,026 CAD)
- 2021 – 2022 Principal Applicant. The Surgical EQUITY initiative: Establishing equitable access to surgery following the pandemic. Co-PIs: Gomez D, Sankar A, Chan, T. Co-invest(s): Baxter NN, Hwang S, Simpson A, de Mestral C, Stukel T, Urbach D, Wijeyesundera D, Sarhangian V. Canadian Institutes of Health Research Operating Grant: Emerging COVID-19 Research Gaps & Priorities July 2021. (\$220,596 CAD)

ARTICLES:

Dr. Suzanne Beno

Beno S, Paluck F, Greenspoon T, Rosenfield D, Principi T. Safely reducing abdominal/pelvic computed tomography imaging in pediatric trauma: a quality improvement initiative. *CJEM*. 2022 Aug;24(5):535-543. doi: 10.1007/s43678-022-00311-2. Epub 2022 May 4. PMID: 35505179. PA

Moore L, Freire G, Ben Abdeljelil A, Berube M, Tardif PA, Gnanvi E, Stelfox HT, Beaudin M, Carsen S, Stang A, Beno S, Weiss M, Labrosse M, Zemek R, Gagnon IJ, Beaulieu E, Berthelot S, Klassen T, Turgeon AF, Lauzier F, Pike I, Macpherson A, Gabbe BJ, Yanchar N. Clinical practice guideline recommendations for pediatric injury care: protocol for a systematic review. *BMJ Open*. 2022 Apr 27;12(4):e060054. CA

El Tawil C, LeBlanc PA, Beno S, Nemeth J. Traumatic cardiac arrest: unique considerations for the pediatric patient. *CJEM*. 2022 Feb 21. doi: 10.1007/s43678-022-00283-3. Epub ahead of print. CA

Dr. Matthew Guttman

Guttman MP, Tillmann BW, Nathens AB, Bronskill SE, Saskin R, Huang A, Haas B. Not all is lost: Functional recovery in older adults following emergency general surgery. *J Trauma Acute Care Surg*. 2022 Jul 1;93(1):66-73. doi: 10.1097/TA.0000000000003613. Epub 2022 Mar 22. PMID: 35319547.

Guttman MP, Haas B, Kim M, Mador B, Nathens AB, Ahmed N, Wheeler S, Gotlib Conn L. Innovative curriculum is needed to address residents' attitudes toward older adults: the case of geriatric trauma. *BMC Med Educ*. 2022 Feb 26;22(1):130. doi: 10.1186/s12909-022-03196-y. PMID: 35219294.

Brandy Tanenbaum

Miles, A., Tanenbaum, B., & Thompson-Ricci, S. (2022). Transforming injury prevention for youth (TriPY): an intersectionality model for youth injury prevention. *Injury prevention*. Special feature. *BMJ Injury Prevention*.

Dr. Aaron Nauth

Niloofer Dehghan, MD; Aaron Nauth, MD; Emil Schemitsch, MD; Milena Vicente, RN; Richard Jenkinson, MD; Hans Kreder, MD; Michael McKee, MD; Operative vs Nonoperative Treatment of Acute Unstable ChestWall Injuries: A Randomized Clinical Trial for the Canadian Orthopaedic Trauma Society and the Unstable ChestWall RCT Study Investigators. *JAMA Surg*. doi:10.1001/jamasurg.2022.4299.

Dr. Najma Ahmed

Engels P, Lee J, Rice Tim, Nenshi R, Ball C, Hameed M, Widder S, Minor S, Ahmed N, Parry N, Voght K. The Next Frontier of Acute Care General Surgery: Fellowship Training, *Canadian Journal of Surgery*, Accepted for Publication.

Engels P, Rice T, Lee J, Nenshi R, Ball C, Hameed M, Widder S, Minor S, Ahmed N, Parry N, Vogt K, The Next Frontier of Acute Care General Surgery: Fellowship Training, Accepted for publication, *Canadian Journal of Surgery*

McLeod R, Keshavjee S, Ahmed N, Richards R, Nathens A, Rotstein O, Rutka J, History of the Department of Surgery at the University of Toronto: celebrating a centennial of progress and innovation. *Can J Surg*, February 3; 65(1). doi: 10.1503/cjs.013621, Contributing author

Shariff F, Nadler A, Wright F, Ahmed N, Dossa F, Nadler A, Hallet J, Ensuring stability in surgical training program leadership: a survey of program directors, In press, *CMAJ Open*.

Mikhail A, Connor A, Ahmed N, Impact of Research Training on Performance in General Surgery Residency, *Journal of Surgical Education*, Nov 23, 2021, <https://doi.org/10.1016/j.jsurg.2021.10.006> trainee publication, senior author 10.1016/j.jsurg.2021.10.006, March 2022

Bradley N, Leeper B, Roberts, D, Ball C, Beckett A, Engels P, Joos E, Khwaja K, Kirkpatrick A, Lampron J, Minor S, Parry N, Rezende J, Widder S, Ahmed A, Gillman L, Gomez D, Hameed M, Kim M, Murphy P, Nenshi R, Rice R and Vogt K, Resuscitative Endovascular Balloon Occlusion of The Aorta (REBOA) in Canada: A Context specific Consensus statement from the Canadian Collaborative on Urgent Care Surgery (CANUS), *Can J Surg* 2022 May 11.

Dr. David Gomez

Gomez D, Acuña S, Nantais J, Santiago R, Calzavara A, Saskin R, Kim SJ, Baxter NN. Incidence and Mortality of Emergency General Surgery Conditions among Solid-Organ Transplant Recipients in Ontario, Canada: A population-based analysis. *Transplantation*. 2022 Sep 19 Online ahead of print.

Strauss R, Menchetti I, Nantais J, Saunders N, Snider C, Lightfoot D, Gomez D. Repeat assault injuries: A scoping review of the incidence and associated risk factors. *Injury*. 2022 Oct;53(10):3078-3087.

Fu R, Kamalraj P, MMath LQ, Hallet J, Gomez D, Sutradhar R, Eskander A. The changing face of cancer surgery during multiple waves of COVID-19. *JNCI Cancer Spectrum*. 2022 Sep 1;6(5):pkac062.

Schellenberg M, Ball CG, Owattanapanich N, Emigh B, Murphy PB, Moffat B, Mador B, Beckett A, Lee J, Joos E, Minor S, Strickland M, Inaba K; TAC Bile Leaks Study Group. Diagnosis and Management of Bile Leaks after Severe Liver Injury: A Trauma Association of Canada (TAC) Multicenter Study. *J Trauma Acute Care Surg*. August 2022, Online ahead of print.

Nantais J, Mansour M, de Mestral C, Jayaraman S, Gomez D. Administrative codes may have limited utility in diagnosing biliary colic in emergency department visits: A validation study. *Ann Hepatobiliary Pancreat Surg*. 2022 Aug 31;26(3):277-280.

de Oliveira C, Machpherson A, Hepburn CM, Huang A, Strauss R, Liu N, Fiksenbaum L, Pageau P, Gomez D, Saunders NR. Healthcare utilization and costs following nonfatal firearm injuries for children and youth. *Eur J Pediatr*. 2022 Jun;181(6):2329-2342.

Bradley NL, Leeper RJ, Roberts DJ, Ball C, Beckett A, Engels P, Joos E, Khwaka K, Kirkpatrick A, Lampron J, minor S, Parry N, Rezende JB, Widder S, Ahmed N, Gomez D, Kim MJ, Murphy PB, Rice T, Vogt K. -Resuscitative Endovascular Balloon Occlusion of the Aorta in Canada: A Context-Specific Consensus Statement from the Canadian Collaborative for Urgent Care Surgery (CANUCS) of the Canadian Association of General Surgeons. *Can J Surg*. 2022 May 11;65(3),E310-E316.

Gomez D, Nantais J, Telesnicki T, de Mestral C, Wilton A, Stukel TA, Urbach DR, Baxter NN. A population-based analysis of the COVID-19 generated surgical backlog and associated emergency department presentations for inguinal hernias and gallstone disease. *Ann Surg*. 2022, 275 (5), 836-841.

de Mestral C, Gomez D, Wilton A, Lee S, Albalawi Z, Austin P, Jacob-Brassard J, Urbach D, Al-Omran M, Baxter NN. A Population-based Analysis of the Impact of COVID-19 on Diabetes-related Leg Amputation. *JAMA Network Open*, 2022 Jan 4;5(1):e2142354

Gabbe B, Veicht W, Mather A, Curtis K, Holland AJ, Gomez D, Civil I, Nathens AB, Fitzgerald M, Martin K, Teague WJ, Josph A. Review of the requirements for effective mass casualty preparedness for trauma systems. A disaster waiting to happen? *Br J Anaesth*. 2022 Feb;128(2)e158-e167.

Simpson A, Gomez D, Baxter NN, Miazaga E, Urbach D, Ramlakhan J, Sherif A, Gagliardi AR. Resumption of elective surgery during the COVID-19 pandemic – evaluation and recommendations: a qualitative study. *CMAJ Open*. Accepted May 2022.

Fu R, Sutradhar R, MMatth QL, Hanna TP, Chan KKW, Irish JC, Coburn N, Hallet J, Dare A, Singh S, Parmar A, Earle CC, Lapointe-Shaw L, Krzyzanowska MK, Finelli A, Louie AV, Look Hong, NJ, Witterick IJ, Mahara A, Gomez D, Mclsaac DI, Enepekides D, Urbach DR, Eskander A. Incident cancer detection during multiple waves of COVID-19: the tsunami after the earthquake. *JNCCN*. Accepted September 2022.

Nantais N, Larsen K, Skelhorne-Gross G, Beckett A, Nolan B, Gomez D. Potential access to emergency surgical care in Ontario. *IJERPH*. Accepted October 2022.

Dr. Priscilla Chiu

Ramjist J, Chiu PPL. "Thoracic Trauma in Children" in *Kendig's Disorders of the Respiratory Tract in Children*, 10th Ed., editors Wilmott R, Bush A, Ratjen F, Deterding R, Zar H, Sly P Li A. Elsevier, Philadelphia. In press.

INVITED LECTURES:

Dr. Najma Ahmed

2022 Jun 30 Ahmed N, Leading through difficult times. Podcast: Federation of Medical Women of Canada

2022 Jun 24 Ahmed N, Leading for Change. Visiting Professor, Research Day, Department of Surgery, Western University, London, Canada

2022 Aug 28 Maggi J, Giddens J, Baker L, Ahmed N, Zirkle M, Ng S, Workshop: Organizational Drivers of Fatigue in Postgraduate Medical Trainees: Identifying Opportunities for Change, Workshop, AIMEE, Lyon, France, Virtual presentation

2022 Oct 6 Ahmed N, Brasch T, March L, Hunter M. Damage of a Gun. Panel discussion will touch upon the impact of gun violence in our city and the solutions and strategies that can be made to effect change. Moderated by Neil Donaldson on the occasion of the artist Thomas Brasch taking up the role of Artist in Residence at the Clark Centre for the Arts, Toronto. Hosted by Cultural Outreach Office, City of Toronto, Canada

2022 Oct 6 Ahmed N, Women in Leadership. The RAFT, PeakMD, a facilitated discussion by Dr. Mamta Gautam

2022 Oct 14 Ahmed N, Gun Violence is a Public Health Issue: Turing Advocacy to Impact. Golden Scalpel Speaker Canadian Association of Research Chairs, Montreal, Canada

2022 Oct 18 Ahmed N, testified at the House of Commons Committee studying Bill C-21, Ottawa, Canada

2022 Nov 2 Naveed A, Beckett A, Ahmed N, Rezende J, Lawless B, Gomez D. Can we predict failure of non-operative splenic injuries? A comparison of predictors of immediate splenectomy vs splenectomy secondary to non-operative management failure. Annual Scientific Meeting of the Pan American Trauma Society, Cartagena, Colombia

2022 Nov 2 Naveed A, Beckett A, Ahmed N, Rezende J, Lawless B, Gomez D.. Pain Management for Flail vs Non-Flail Rib Fractures: Are we Doing Better: Annual Scientific Meeting of the Pan American Trauma Society, Cartagena, Colombia

2022 Oct 27 Maggi J, Giddens J, Baker L, Ahmed N, Zirkle M, Ng S, Workshop: Organizational Drivers of Fatigue in Postgraduate Medical Trainees: Identifying Opportunities for Change, oral presentation, ICRE, Montreal, Canada

Dr. David Gomez

2022 Aug 26 Keynote Speaker. Emergency general surgery research: challenges and opportunities. General Surgery Acute Care Surgery Symposium, University of British Columbia, Canada, Virtual presentation

2022 Nov 2 Panel Member. Massive thoracic wall injury: How to fix it? XXXIV Pan-American Congress of Trauma and 48 National Congress Advances in Surgery, Cartagena, Colombia

2022 Nov 3 Panel Chair. Failure in non-operative management of solid organ injury: How to avoid it and what to do when it happens XXXIV Pan-American Congress of Trauma and 48 National Congress Advances in Surgery, Cartagena, Colombia

THE U OF T TRAUMA PROGRAM AIMS TO PROVIDE LEADERSHIP IN THE DELIVERY OF SPECIALIZED CARE TO SEVERELY INJURED PATIENTS, INJURY RELATED RESEARCH, AND EDUCATION AND INJURY PREVENTION. PROVIDE COORDINATED PATIENT-FOCUSED CARE RECOMMENDATIONS IN CLOSE COLLABORATION WITH EMS, REFERRING INSTITUTIONS, AND FACILITIES PROVIDING PRE AND POST-ACUTE CARE

