



REGIONAL  
PARAMEDIC  
PROGRAM  
FOR EASTERN  
ONTARIO



The Ottawa  
Hospital | L'Hôpital  
d'Ottawa

**RPPEO ANNUAL DISSEMINATION  
ACTIVITIES REPORT:  
RESEARCH, LEADERSHIP, QUALITY AND  
EDUCATION**

**April 1, 2020 to March 31, 2021**

**Inspired** by research.      **Inspiré** par la recherche.  
**Driven** by compassion.      **Guidé** par la compassion.

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## Regional Paramedic Program for Eastern Ontario

**Department: Clinical Operations**

**Executive Vice-President: Suzanne Madore**

**Director: Penny Price**

### Purpose

The purpose of the Regional Paramedic Program for Eastern Ontario (RPPEO) Annual Dissemination Activities Report: Research, Leadership, Quality and Education is to inform the senior management team, the paramedic community and paramedic stakeholders, of research, leadership, quality and education projects and dissemination activities in paramedicine that have been conducted over the last fiscal year.

### Inclusion Criteria

All RPPEO personnel or regional paramedics working in collaboration with RPPEO personnel, who are either a primary investigator or a co-investigator on a paramedicine study or project, including current EMS residents and RPPEO volunteers.

### PRIMARY & CO-INVESTIGATORS

**Michael Austin**, MD, FRCPC, *Associate Medical Director*

**Zachary Cantor**, PCP, *Paramedic Researcher*

**Harrison Carmichael**, HBSc, MD

**Valerie Charbonneau**, MD, MSc, FRCPC

**Richard Dionne**, MD, CCFP-EM, *Medical Director*

**Susan Duncan**, PCP, *Quality Coordinator*

**Shannon Leduc**, MSc, ACP, *Paramedic Researcher*

**Penny Price**, MMngt, *Program Director*

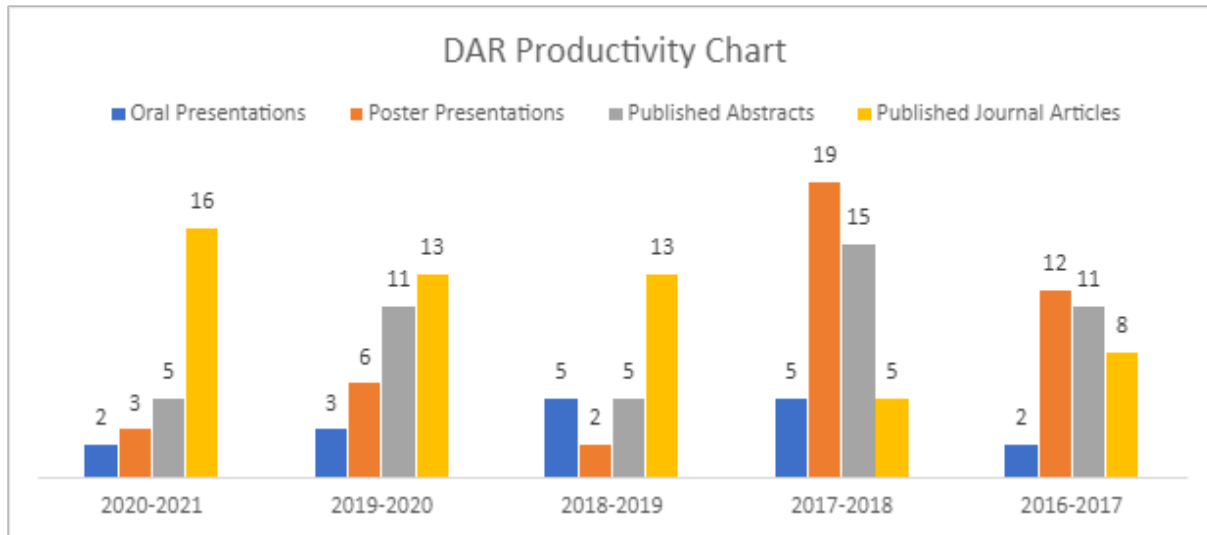
**Jason Rouleau**, B.Soc.Sc, *Paramedic Researcher*

**Julie Sinclair**, MScN, A-EMCA, RN, *Research Coordinator, Paramedic Researcher*

**Christian Vaillancourt**, MD, MSc, FRCPC, CSPQ, *Associate Medical Director*

## SUMMARY OF DISSEMINATION ACTIVITIES

YEAR	TOTAL PRESENTATIONS	ORAL PRESENTATIONS	POSTER PRESENTATIONS	PARAMEDIC/ ALLIED HEALTH CARE PROVIDER PRESENTER	PUBLISHED ABSTRACTS	PUBLISHED JOURNAL ARTICLES	PARAMEDIC/ALLIED HEALTH CARE PROVIDER PRIMARY AUTHOR
2020-2021	5	2	3	2	5	16	3
2019-2020	9	3	6	6	11	13	5
2018-2019	7	5	2	3	5	13	4
2017-2018	24	5	19	18	15	5	3
2016-2017	14	2	12	3	11	8	2



### EXTERNAL GRANTS

N/A

### INTERNAL GRANTS

N/A

## ORAL PRESENTATIONS (INTERNAL)

N/A

## ORAL PRESENTATIONS (EXTERNAL)

Leduc S\*, Wells G, Thiruganasambandamoorthy V, Cantor Z, Kelly P, Rietschlin M, Vaillancourt C. (May 2020). **The characteristics, clinical course and disposition of long-term care patients treated by paramedics during an emergency call: Exploring the potential impact of community paramedicine.** Canadian Association of Emergency Physicians (CAEP) - Accepted for oral presentation but orals didn't occur. Ottawa, Ontario (Research).

Leduc S\*, Cantor Z, Kelly P, Thiruganasambandamoorthy V, Wells G, Vaillancourt C. (June 2020). **LO15. Paramedic and allied health professional interventions at long-term care facilities to reduce emergency department visits: systematic review.** Canadian Association of Emergency Physicians (CAEP) – Accepted for oral presentation but orals didn't occur . (Research). Ottawa, Ontario.

## POSTER PRESENTATIONS (INTERNAL)

Drew D, O'Brien M, Cheung W.J, Krywenky A, McMurray, Nemnom M, Vaillancourt C. (September 2020). **Evaluating the impact of a CPR quality checklist on resuscitation during a simulated cardiac arrest.** – Accepted for presentation at Faculty of Medicine Research Symposium, uOttawa, Ontario. (Research)

## POSTER PRESENTATIONS (EXTERNAL)

Austin M, Sinclair J\*, Leduc S, Duncan S, Rouleau J, Price P, Vaillancourt, Evans C. (June 2020) **What happens to bypassed trauma patients meeting field trauma triage standards?** Canadian Association of Emergency Physicians (CAEP) – Accepted for presentation. Ottawa, Ontario. (Research)

Drennan I, Cheskes S, Snobelen P, Nolan M, Chan T, McLeod S, Dainty K, Vaillancourt C, Brooks S. (June 2020). **AED on the fly: A drone delivery feasibility study for rural and remote out-of-hospital cardiac arrest.** Canadian Association of Emergency Physicians (CAEP) – Accepted for presentation. Ottawa, Ontario (Research).

## INVITED PRESENTATIONS

Vaillancourt C. (October 2020) The Canadian Prehospital C-Spine Rule : Major impact for the emergency rooms . ASMUQ provincial conference. Québec – Virtual.

Vaillancourt C. (September 2020) Prehospital Research: Examples and Challenges: EMS month, Department of Emergency Medicine, uOttawa, Ontario.

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\* denotes RPPEO paramedic/allied health care provider primary author

## PUBLISHED ABSTRACTS

### RPPEO ABSTRACTS

Austin M, Sinclair J, Leduc S, Duncan S, Rouleau J, Price P, Evans C, Vaillancourt C. (May 2020). **136. What happens to bypassed trauma patients meeting Field Trauma Triage standards?** *Can J Emerg Med.* 2020;22(S1):S113-S113.

### CANADIAN RESUSCITATION OUTCOMES CONSORTIUM(CanROC) ABSTRACTS

Drennan I, Cheskes S, Snobelen P, Nolan M, Chan T, McLeod S, Dainty K, Vaillancourt C, Brooks S. (May 2020). **LO19. AED on the fly: A drone delivery feasibility study for rural and remote out-of-hospital cardiac arrest.** *Can J Emerg Med.* 2020;22(S1):S-13-14.

### OTHER ABSTRACTS

Drew D, O'Brien M, Cheung W.J, Krywenky A, McMurray, Nemnom M, Vaillancourt C. (September 2020). **Evaluating the impact of a CPR quality checklist on resuscitation during a simulated cardiac arrest.**

Leduc S\*, Cantor Z, Kelly P, Thiruganasambandamoorthy V, Wells G, Vaillancourt C. (May 2020). **LO15. Paramedic and allied health professional interventions at long-term care facilities to reduce emergency department visits: systematic review.** *Can J Emerg Med.* 2020;22(S1):S12-S12.

Leduc S\*, Wells G, Thiruganasambandamoorthy V, Cantor Z, Kelly P, Rietschlin M, Vaillancourt C. (May 2020). **LO20. The characteristics, clinical course and disposition of long-term care patients treated by paramedics during an emergency call: Exploring the potential impact of community paramedicine.** *Can J Emerg Med.* 2020;22(S1):S14-S14.

## JOURNAL ARTICLES

### PUBLISHED RPPEO JOURNAL ARTICLES

N/A

### OTHER PUBLISHED JOURNAL ARTICLES

Carmichael H, Vaillancourt C, Shrier I, Charette M, Hobden E, Stiell I.G. **Evaluating the paramedic application of the prehospital Canadian C-Spine Rule in sport-related injuries.** *CJEM.* 2021;23(3):356-364.

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Downer J, Arya A, Lalumiere G, Bercier G, Leduc S, Charbonneau V. **Practice Innovations: Rapid deployment of palliative care in clinical response teams to support long-term care facilities: The community paramedic perspective.** *Canadian Paramedicine*. December 2020/January 2021;44(1).

Vaillancourt C, Charette M, Naidoo S, Taljaard M, Church M, Hodges S, Leduc S, Christenson J et al. **Multi-centre implementation of an educational program to improve the cardiac arrest diagnostic accuracy of ambulance telecommunicators and survival outcomes for sudden cardiac arrest victims: the EduCATE study design and methodology.** *BMC Emergency Medicine*. 2021;21(1)26:1-12.

Carter J.E, Arab M, Cameron C, Harrison M, Pooler C, McEwan I, Austin M, Helmer J, Ozel G, Heathcote J, Reardon N, Anderson E, Carey M, Moxam R.S, Crick S. **A national collaborative to spread and scale paramedics providing palliative care in Canada: Breaking down silos is essential to success.** *Prehos Emerg Care*. 2021;29(2):59-65.

Drennan I.R, Geri G, Brooks S, Couper K, Hatanaka T, Kudenchuk P, Olasveengen T, Pellegrino J, Schexnayde S.M, Morley P, Mancini M.B, Travers A, Castren M, Considine J, Escalante R, Vaillancourt C et al. **Diagnosis of out-of-hospital cardiac arrest by emergency medical dispatch: a diagnostic systematic review.** *Resuscitation*. 2021;159:85-96.

Olasveengen T.M, Mancini M.E, Perkins G.D, Avis S, Brooks S, Castren M, Chung S.P, Considine J, Vaillancourt C, et al. **Adult Basic Life Support: International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations.** *Resuscitation*. 2020;156:A35-A79.

Olasveengen T.M, Mancini M.E, Perkins G.D, Avis S, Brooks S, Castren M, Chung S.P, Considine J, Vaillancourt C, et al. **Adult Basic Life Support: 2020 international consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations.** *Circulation*. 2020;142(16\_suppl\_1):S41-S91.

Cheskes S, McLeod S.L, Nolan M, Snobelen P, Vaillancourt C, Brooks S.C, Dainty K.N, Chan T.C.Y, Drennan I.R. **Rapid access to automated external defibrillators in rural and remote settings: A drone delivery feasibility study.** *Published electronically, J Am Heart Assoc*. 2020;9(14):1-8.

Tran A, Taljaard M, Absulaziz K.E, Matar M, Lampron J, Steyerberg E.W, Vaillancourt C. **Early Identification of the need for major intervention in patients with traumatic hemorrhage: development and internal validation of a simple bleeding score.** *Canadian J Surg*. 2020;63(5):e422-e430.

Vaillancourt C, Petersen A, Meier E.N, Christenson J, Menegazzi J.J, Aufderheide T.P, Nichol G, Berg R, Callaway C.W, Idris H.A, Davis D, Fowler R, Egan D, Andrusiek D, Buick J.E, Bishop T.J, Colella M.R, Sahni, R, Stiel I.G, Cheskes S and the Resuscitation Outcomes Consortium Investigators. **The impact of increased chest compression fraction on survival for out-of-hospital cardiac arrest patients with a non-shockable initial rhythm.** *Resuscitation*. 2020;154:93-100.

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Grunau B, Kime N, Leroux B, Rea T, Van Belle G, Menegazzi J.J, Kudenchuk P.J, Vaillancourt C, Morrison L, Elmer J, Zive D.M, Le N.M, Austin M, Richmond N.J, Herren H, Christenson J, and the Resuscitation Outcomes Consortium Investigators. **Association between intra-arrest transport and survival for refractory out-of-hospital cardiac arrest.** *J Am Heart Assoc.* 2020;324(11):1058-1067.

Tran A, Fernando S.M, Rochweg B, Vaillancourt C, Inaba K, Kyeremanteng K, Nolan J.P, McCredie V.A, Petrosoniak A, Hicks C, Haut E.R, Perry J.P. **Pre-arrest and intra-arrest prognostic factors associated with survival following traumatic out-of-hospital cardiac arrest—A systematic review and meta-analysis.** *Resuscitation.* 2020;153:119-135.

Leduc S\*, Cantor Z, Kelly P, Thiruanasambandamoorthy V, Wells G, Vaillancourt C. **The safety and effectiveness of on-site paramedic and allied health treatment interventions targeting the reduction of emergency department visits by long term care patients: Systematic review.** *Prehos Emerg Care.* 2020;25(4):556-565.

Heidet M, Fraticelli L, Grunau B, Cheskes S, Baert V, Vilhelm C, Hubert H, Tazarourte K, Vaillancourt C, Tallon J, Christenson J, El Khoury C. **ReACanROC: Towards the creation of a France–Canada research network for out-of-hospital cardiac arrest.** *Resuscitation.* 2020;152:133-140.

Cheskes S, McLeod S.L, Nolan M, Snobelen P, Vaillancourt C, Brooks S.C, Dainty K.N, Chan T.CY. Drennan I. **Improving access to automated external defibrillators in rural and remote settings: a drone delivery feasibility study.** *J Am Heart Assoc.* 2020;9(14):e016687.

Vaillancourt C, Charrette M, Taljaard M, Thavorn K, Hall E, McLeod B, Fergusson D, Brehaut J, Graham I, Calder L, Ramsay T, Tugwell P, Kelly P, Cheskes S, Saskin R, Plint A, Osmond M, Macarthur C, Straus S, Rochon P, Prud'homme D, Dahrouge S, Marlin S, Stiell I.G. **A pragmatic strategy empowering paramedics to assess low-risk trauma patients with the Canadian C-Spine rule and selectively transport them without immobilization: Study protocol for a stepped wedge cluster randomized trial.** *Published electronically, JMIR Res Protoc.* 2020;9(6):1-11.

## SUBMITTED RPPEO JOURNAL ARTICLES

N/A

## AWARDS ACHIEVED

**Julie Sinclair's** publication about prehospital hypoglycemia management was selected for inclusion in The American Board of Emergency Medicine's 2022 reading list, meaning hundreds of U.S. physicians will read it as part of their preparation for certification or re-certification.

### **Based on paper:**

Sinclair J.E, Austin M., Froats M., Leduc S., Maloney J., Dionne R., Reed A., Vaillancourt C.: **Characteristics, Prehospital Management, and Outcomes in Patients Assessed for Hypoglycemia: Repeat Access to Prehospital or Emergency Care.** *Prehosp Emerg Care.* 2019 May-June 23(3):364-376.

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**Plenary Presentation (3<sup>rd</sup> highest ranked)**

Canadian Association of Emergency Physicians (CAEP) research competition: National **Dr. Christian Vaillancourt's** Pragmatic cluster-randomized multi-center paramedic C-Spine implementation.

**Dr. Christian Vaillancourt** is locally nominated for The Ottawa Hospital Award of Excellence – Innovation and Creativity.

**Shannon Leduc** received the Award of Excellence in Graduate Studies, Epidemiology Program, Faculty of Medicine, University of Ottawa.

## RPPEO CLINICAL OHRI INVESTIGATORS

**Richard Dionne, MD, CCFP-EM**

Medical Director, Regional Paramedic Program for Eastern Ontario  
Emergency Physician, The Ottawa Hospital  
Clinician Investigator, Ottawa Hospital Research Institute  
Program Director, Prehospital and Transport Medicine Month, Emergency Medicine, University of Ottawa

**Michael Austin, MD, FRCPC**

Associate Medical Director, Regional Paramedic Program for Eastern Ontario  
Emergency Physician, The Ottawa Hospital  
Clinician Investigator, Ottawa Hospital Research Institute  
Program Director, Prehospital and Transport Medicine Diploma Program, Emergency Medicine, University of Ottawa  
Assistant Professor, Emergency Medicine, University of Ottawa

**Christian Vaillancourt, MD, MSc, FRCPC**

Associate Medical Director, Regional Paramedic Program for Eastern Ontario  
Senior Scientist, Clinical Epidemiology Program, Ottawa Hospital Research Institute  
Full Professor, Emergency Medicine, University of Ottawa  
Research Chair, Emergency Cardiac Resuscitation, Emergency Medicine, University of Ottawa