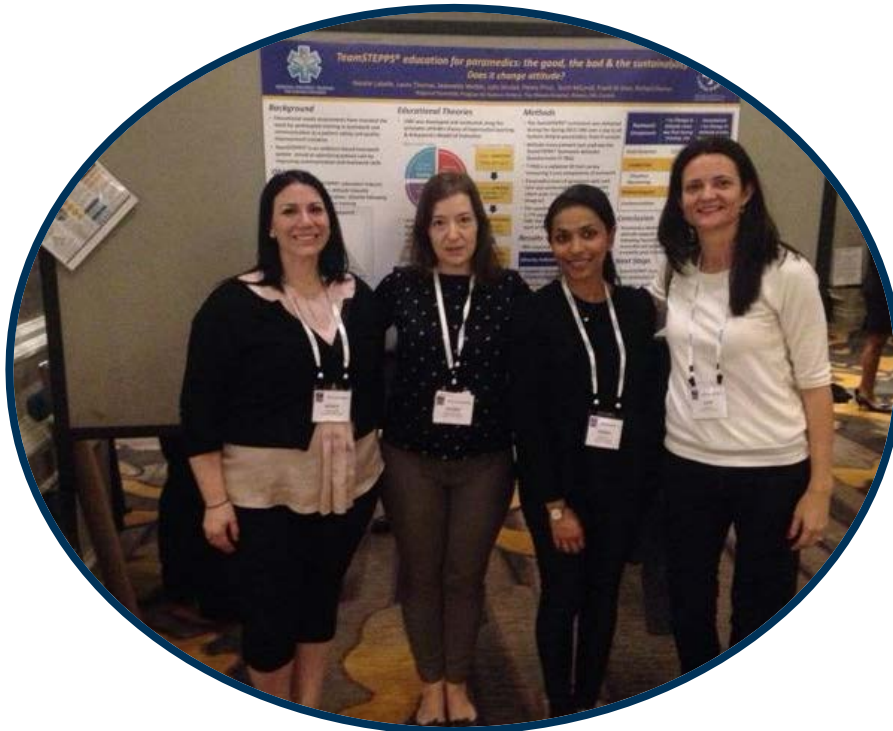


RPPEO ANNUAL DISSEMINATION ACTIVITIES REPORT: RESEARCH, EDUCATION & QUALITY

April 1, 2017
to March 31, 2018



Report created by Jane Marchand, Administrative Assistant at RPPEO

Inspired by research.
Driven by compassion.

Inspiré par la recherche.
Guidé par la compassion.

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Regional Paramedic Program for Eastern Ontario

Department: Planning and Support Services

Vice-President: Joanne Read

Director: Penny Price

Purpose

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

Inclusion Criteria

All RPPEO personnel and regional paramedics working in collaboration with RPPEO personnel, who are either primary investigator or a co-investigator on a prehospital 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*

Nicholas Costain, MD, (RCPSC-EM), *Resident*

Catherine Cox, ACP, *Data Analyst, Ottawa Paramedic Service*

Valerie Charbonneau, MD/MSc, FRCPC, *Resident*

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

Susan Duncan, PCP, *Quality Coordinator*

Ivanette Hargreaves, BHSc, RRT, AA, *Manager, Special Projects*

Peter Kelly, *Deputy Chief with Ottawa Paramedic Service*

Shannon Leduc, MSc(C), ACP, *Paramedic Researcher*

Jason Lewis, *Manager, Manager, CEC & Quality*

Justin Maloney, MD, FRCPC, CCFP-EM, FCFP, *Medical Director (past)*

Simeon Mitchell, PGY5 (RCPSC-EM), *Resident*

Penny Price, MMgt, ACP, *Program Director*

Andrew Reed, BSc, EMCA, BPE, MSc, MD, FRCPC, *Associate Medical Director*

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

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

Andrew Willmore, MD, FRCPC, *Associate Medical Director*

Ayesha Zia, MD, *Resident*

Stan Morrow, *Ottawa Paramedic Service*

Summary of Productivity

Number of current grants held: **1**
Total amount of research grants currently held: **\$ 111,024.00**
Number of books or book chapters: **0**
Number of abstracts published in the current year: **15**
Number of journal articles published in the current year: **5**
Number of journal articles under review: **2**
Number of internal oral presentations: **3**
Number of external oral presentations: **2**
Number of internal poster presentations: **2**
Number of external poster presentations: **17**
Number of non-physician led study presenters: **19**
Number of OHRI clinical investigator appointments: **2**

YEAR	ORAL PRESENTATIONS	POSTER PRESENTATIONS	PUBLISHED ABSTRACTS	PUBLISHED JOURNAL ARTICLES	JOURNAL ARTICLES UNDER REVIEW
2017-2018	5	19	15	5	2
2016-2017	2	12	11	8	1

(*) Denotes non-physician presenters

EXTERNAL GRANTS

Austin M, Sinclair J, Bouchard PA, Lellouche F. **Automated administration of oxygen (FreeO₂) in ambulances for COPD and trauma patients.** US Army. (\$106,000.00).

INTERNAL GRANTS

Sinclair J, Dionne R, Leduc S, Austin M, Froats M, Reed Andrew, Maloney J, Vaillancourt C. **Retrospective validation of a prehospital patient disposition tool for hypoglycemia patients.** DEM Academic Grants and Special Projects Grant. (\$5,024.00).

ORAL PRESENTATIONS (INTERNAL)

June

Zia A, Macdonald R, Moore S, Ducharme J, Vaillancourt C. (June 2017). **Assessment of Pain Management During Transport of Intubated Patients in a Prehospital Setting.** The University of Ottawa Department of Emergency Medicine Day, Ottawa, Ontario. (RESEARCH)

Christian Vaillancourt. (June 2017). **Implementation of an Educational Program to Improve the Cardiac Arrest Diagnostic Accuracy of Ambulance Communication Officers: a Concurrent Control Before-after Study**. The University of Ottawa Department of Emergency Medicine Day, Ottawa, Ontario. (RESEARCH)

Mitchell S, Dionne R, Maloney J, Austin M, Mok G, Sinclair J, Cox C, LeMay M, Vaillancourt C. (June 2017) **Safety and Clinically Important Events for PCP-Initiated STEMI Bypass in Ottawa**. The University of Ottawa Department of Emergency Medicine Day, Ottawa, Ontario. (RESEARCH)

ORAL PRESENTATIONS (EXTERNAL)

February

*LeBreton M, Hargreaves I, Grenier M, Theron S, Dionne R, Costain N, Lampron J. (February 2018). **Extension of the Trauma Bypass Protocol from 30 to 60 minutes time radius; How To Implement a System Change**. Trauma Association of Canada Conference (TAC), Toronto, Ontario. (RESEARCH)

January

*Sinclair JE, Austin M, Leduc S, Cantor Z, Dionne R, Price P, Maloney J, Reed A, Charbonneau V, Vaillancourt C. (January 2018). **Retrospective Refinement and Validation of a Hypoglycemia Decision Tool for Paramedics**. National Association of EMS Physicians (NAEMSP) Annual Conference, San Diego, United States. (RESEARCH)

POSTER PRESENTATIONS (INTERNAL)

October

*Hargreaves I, LeBreton M. (October 2017). **Collaboration between prehospital and regional trauma network: Implementing an innovative systemic feedback process**. *The Ottawa Hospital Patient Safety Conference*, Ottawa, Ontario. (QUALITY)

June

*Sinclair J, Price P, Austin M, Reed A, Kwok E. (June 2017). **Paramedic Safety Culture Across Eastern Ontario**. The University of Ottawa Department of Emergency Medicine Day, Ottawa, Ontario. (RESEARCH - *PARAMEDIC LED)

POSTER PRESENTATIONS (EXTERNAL)

February

*Sinclair J, Austin M, Leduc S, Cantor Z, Dionne R, Price P, Maloney J, Reed A, Willmore A, Charbonneau V, Vaillancourt C. (February 2018). **Retrospective refinement and validation of a hypoglycemia decision tool for paramedics**. Ontario Base Hospital (OBHG) Annual General Meeting, Toronto, Ontario. (RESEARCH)

*Hargreaves J, LeBreton M. (February 2018). **Collaboration between prehospital and regional trauma network: Implementing an innovative systemic feedback process.** Ontario Base Hospital (OBHG) Annual General Meeting, Toronto, Ontario. (QUALITY)

*Ramagnano S, Huiskamp M, Nathens A, Islam I, Lebreton M, Phillips A, Hargreaves Ivanette, Knight H. **Developing a Patient Outcome Report Between Pre-hospital and Level 1 Trauma Centres.** Trauma Association of Canada (TAC) Annual Scientific Meeting, Toronto, Ontario. (QUALITY)

*Farrell C, Teed S, Costain N, Austin M, Willmore A, Reed A, Maloney J, Dionne R. (February 2018). **EMS Boot Camp: A Real-World, Real-Time Educational Experience for Emergency Medicine Residents – Part 2.** (Ontario Base Hospital (OBHG) Annual General Meeting, Toronto, Ontario. (EDUCATION)

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. (February 2018). **TeamSTEPS® education for paramedics: the good, the bad, and the sustainability Does it change attitude.** Ontario Base Hospital (OBHG) Annual General Meeting, Toronto, Ontario. (EDUCATION)

January

*Sinclair J, Austin M, Leduc S, Cantor Z, Dionne R, Price P, Maloney J, Reed A, Willmore A, Charbonneau V, Vaillancourt C. (January 2018). **Retrospective refinement and validation of a hypoglycemia decision tool for paramedics.** National Association of EMS Physicians (NAEMSP) Annual Conference, San Diego, United States. (RESEARCH)

*Farrell C, Teed S, Costain N, Austin M, Willmore A, Reed A, Maloney J, Dionne R. (January 2018). **EMS Boot Camp: A Real-World, Real-Time Educational Experience for Emergency Medicine Residents – Part 2.** National Association of EMS Physicians (NAEMSP) Annual Conference, San Diego, United States. (EDUCATION)

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. (January 2018). **TeamSTEPS® education for paramedics: the good, the bad, and the sustainability Does it change attitude.** National Association of EMS Physicians (NAEMSP) Annual Conference, San Diego, United States. (EDUCATION)

October

*Hargreaves I, LeBreton M. (October 2017). **Collaboration between prehospital and regional trauma network: Implementing an innovative systemic feedback process.** The Ottawa Hospital Patient Safety Conference, Ottawa, Ontario. (QUALITY)

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. (January 2018). **TeamSTEPS® education for paramedics: the good, the bad, and the sustainability Does it change attitude.** The Ottawa Hospital Patient Safety Conference, Ottawa, Ontario. (EDUCATION)

June

*Farrell C, Teed S, Costain N, Austin M, Willmore A, Reed A, Maloney J, Dionne R. (June 2017). **EMS Boot Camp: A Real-World, Real-Time Educational Experience for Emergency Medicine Residents.** Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, British Columbia. (EDUCATION)

*Sinclair JE, Price P, Reed A, Austin M, Kwok ES. (June 2017). **Paramedic Safety Culture Across Eastern Ontario.** Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, British Columbia. (RESEARCH)

Vaillancourt C, Charette M, Sinclair J, Maloney J, Dionne R, Kelly P, Wells GA, Stiell IG. (June 2017). **Implementation of the Canadian C-Spine Rule by Paramedics: A Safety Evaluation *Top 4 Abstracts*.** Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, BC. (RESEARCH)

Zia A, Vaillancourt C, MacDonald R. (June 2017). **Assessment of Pain Management During Transport of Intubated Patients in a Prehospital Setting.** Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, BC. (RESEARCH)

Mitchell S, Dionne R, Maloney J, Austin M, Mok G, Sinclair J, Cox C, LeMay M, Vaillancourt C. **Safety and Clinically Important Events in PCP-Initiated STEMI Bypass in Ottawa: A Health Record Review.** (June 2017). Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, BC. (RESEARCH)

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. (June 2017). **Prehospital TeamSTEPPS® education & a measure of paramedics change in attitude.** Canadian Association of Emergency Physicians (CAEP) Annual Conference, Whistler, BC. (EDUCATION)

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. (June 2017). **Prehospital TeamSTEPPS® education & a measure of paramedics change in attitude.** Paramedics Chief of Canada Conference, Moncton, NB. (EDUCATION)

PUBLISHED ABSTRACTS

RPPEO ABSTRACTS

Hansen M, Schmicker R, Newgard C, Grunau B, Scheuemeyer F, Cheskes S, Vithalani V, Ainaji F, Rea T, Idris A, Herren H, Hutchison J, Austin M, Egan D, Daya M. **Time to epinephrine administration and survival from non-shockable out-of-hospital cardiac arrest among children and adults.** *Circulation.* 2018; 137 (10).

Hansen M, Schmicker R, Newgard C, Rea TD, Egan D, Herren H, Grunau B, Scheuermeyer F, Cheskes S, Hutchison J, Alnaji F, Austin M, Colella MR, Idris A, Vithalani V, Daya M. **Time to epinephrine administration and survival from out-of-hospital cardiac arrests presenting with non-shockable rhythms.** *Circulation.* 2017;136(Suppl 1).

Zia A, MacDonald R, Moore S, Ducharme J, Vaillancourt C. **MP34: Assessment of pain management during transport of intubated patients in a prehospital setting.** *Can J Emerg Med.* 2017;19(S1):S76-S77.

Mitchell S, Dionne R, Maloney J, Austin MA, Mok G, Sinclair JE, Cox C, Le May M, Vaillancourt C. **MP36: safety and clinically important events in PCP-initiated STEMI bypass in Ottawa: a health record review.** *Can J Emerg Med.* 2017;19(S1):S77-S77.

*Sinclair JE, Price P, Austin MA, Reed A, Kwok ES. **MP02: Paramedic safety culture across Eastern Ontario.** *Can J Emerg Med.* 2017;19(S1):S65-S65.

Sinclair J, Austin M, Leduc S, Cantor Z, Dionne R, Price P, Maloney J, Reed A, Willmore A, Charbonneau V, Vaillancourt C. **Retrospective refinement and validation of a hypoglycemia decision tool for paramedics.** *Prehosp Emerg Care* 2018;22(1):161.

*Farrell C, Teed S, Costain N, Austin M, Willmore A, Reed A, Maloney J, Dionne R. **EMS Boot Camp: A Real-World, Real-Time Educational Experience for Emergency Medicine Residents – Part 2.** *Can J Emerg Med.* 2017;19(S1): S96-S97

*Labelle N, Thomas L, Verdon J, Sinclair J, McLeod S, Price P, St-Jean F, Dionne R. **TeamSTEPPS® education for paramedics: the good, the bad, and the sustainability Does it change attitude.** *Prehosp Emerg Care.* 2017;22(1)

ROC ABSTRACTS

Okubo M, Schmicker M, Wallace D, Idris A, Nichol G, Austin M, Grunau B, Wittwer L, Richmond N, Morrison L, Kurz M, Cheskes S, Kudenchuk P, Zive D, Aufderheide T, Wang H, Herren H, Vaillancourt C, Davis D, Vilke G, Scheuermeyer F, Weisfeldt M, Elmer J, Colella R, Callaway C. **Variation in survival after out-of-hospital cardiac arrest emergency-medical-services agencies.** *Circulation.* 2017;136(Suppl 1): A13910-A13910.

Grunau BE, Kime N, Rea T, Van Belle G, Elmer J, Vaillancourt C, Leroux B, Menegazzi JJ, Morrison L, Kudenchuk P, Zive D, Le N, Herren H, Verbeek R, Austin M, Aufderheide T, Idris A, Richmond N, Colella R, Christenson J. **The relationship between intra-arrest transport and survival for refractory out-of-hospital cardiac arrest.** *Circulation.* 2017;136(Suppl 1): A13973-A13973.

Sawyer KN, Humbert A, Leroux BG, Nichol G, Kudenchuk PJ, Daya MR, Grunau B, Wang HE, Ornato JP, Rittenberger JC, Aufderheide TP, Wittwer L, Colella MR, Austin M, Kawano T, Egan D, Richmond N, Vithalani VD, Scales D, Baker AJ, Morrison LJ, Kurz MC. **Hypothermic to ischemic ration as a predictor of good functional outcome from out-of-hospital cardiac arrest in the resuscitation outcomes consortium amiodarone lidocaine or placebo study.** *Circulation.* 2017;136(Suppl 1):A18118-A18118.

Fernando S, Vaillancourt C, Morrow Stanley, Stiell I. **261: Analysis of bystander Cpr quality using data derived from automated external defibrillators.** *Crit Care Med.* 2018;46(1):113.

Pollack R, Brown S, Rea T, Aufderheide T, Barbic D, Buick J, Christenson J, Idris A, Jasti J, Kampp M, Kudenchuk P, May S, Muhr M, Nichol G, Ornato J, Sopko G, Vaillancourt C, Morrison L, Weisfeldt M, ROC investigators. **Impact of bystander automated external defibrillator use on survival and functional outcomes in shockable observed public cardiac arrests.** *Circulation*. 2018;137 (10).

Vaillancourt C, Kasaboski A, Charette M, Calder L, Boyle L, Nakao S, Crete D, Kline M, Souchuk R, Kristensen N, Wells GA, Stiell IG. **L072: Implementation of an educational program to improve the cardiac arrest diagnosis of accuracy of ambulance communication officers: a concurrent control before-after study.** *Can J Emerg Med*. 2017;19(S1):S52-S53.

OTHER ABSTRACTS

Vaillancourt C, Charette M, Sinclair JE, Maloney J, Dionne R, Kelly P, Wells GA, Stiell IG. **PL03: Implementation of the Canadian C-Spine Rule by paramedics: a safety evaluation.** *Can J Emerg Med*. 2017;19(S1):S26-S27.

JOURNAL ARTICLES

PUBLISHED RPPEO JOURNAL ARTICLES

N/A

PUBLISHED ROC JOURNAL ARTICLES

Pollack RA, Brown PB, Rea T, Aufderheide T, Barbic D, Buick JE, Christenson J, Idris AH, Jasti J, Kampp M, Kudenchuk P, May S, Muhr M, Nichol G, Ornato JP, Sopko G, Vaillancourt C, Morrison L, Weisfeldt M. **Impact of bystander automated external defibrillator use on Survival and Functional outcomes in shockable observed public Cardiac Arrests.** *Circulation*. 2018-117.030700

Kudenchuk PJ, Leroux BG, Daya M, Rea T, Vaillancourt C, Morrison LJ, Callaway CW, Christenson J, Ornato JP, Dunford JV, Wittwer L, Weisfeldt ML, Aufderheide TP, Vilke GM, Idris AH, Stiell IG, Colella MR, Kayea T, Egan D, Desvigne-Nickens P, Gray P, Gray R, Straight R, Dorian P. **Antiarrhythmic drugs for nonshockable-turned-shockable out-of-hospital cardiac arrest: The ALPS study (amiodarone, lidocaine, or placebo).** *Circulation*. 2017;136(22):2119-2131.

Ho ML, Gatien M, Vaillancourt C, Whitham V, Stiell IG. **Utility of prehospital electrocardiogram characteristics as prognostic markers in out-of-hospital pulseless electrical activity arrests.** *EMJ*. 2017;emermed:2017-206878.

Cheskes S, Schmicker RH, Rea T, Morrison LJ, Grunau B, Drennan IR, Leroux B, Vaillancourt C, Schmidt TA, Koller AC, Kudenchuk P, Aufderheide TP, Herren H, Flickinger KH, Charleston M, Straight R, Christenson J. **The association between AHA CPR quality guidelines compliance and clinical outcomes from out-of-hospital cardiac arrest.** *Resuscitation*. 2017;116,:39-45.

OTHER PUBLISHED JOURNAL ARTICLES

Ho M, Gatién M, Vaillancourt C, Whitham, Stiell IG. **Utility of prehospital electrocardiogram characteristics as prognostic markers in out-of-hospital pulseless electrical activity arrests.** *Emerg Med J.* 2018;35(2):89-95.

SUBMITTED RPPEO JOURNAL ARTICLES

*Sinclair J, Bourque C, Calder L, Austin M, Reed A, Kortko J, Maloney J. **Barriers to self-reporting of patient incidents by paramedics – A mixed method study.** *Submitted to PEC.* (Under Review)

*Sinclair J, Dionne R, Leduc S, Austin M, Froats M, Reed A, Maloney J, Vaillancourt C. **Characteristics, prehospital management, and outcomes in patients assessed for hypoglycemia: repeat access to prehospital or emergency care.** *Submitted to PEC.* (Under Review)

RPPEO CLINICAL OHRI INVESTIGATORS

Richard Dionne, MD, CCFP-EM

Medical Director Regional Paramedic Program for Eastern Ontario
Associate Professor Emergency Medicine

Austin, Michael MD, FRCPC

Emergency Physician, Department of Emergency Medicine
Assistant Professor, Department of Emergency Medicine
Clinical Investigator, Ottawa Hospital Research Institute
Associate Medical Director, Regional Paramedic Program for Eastern Ontario

NEW RPPEO CLINICAL OHRI INVESTIGATOR APPOINTMENTS

None