

CANADIAN PARAMEDICINE



ENTER

In This Issue

The McNally Project: Supporting Research Capacity Building
An Unexpected Journey Into Research



stryker

Power-LOAD®

A legacy of trusted performance

Power-LOAD, the industry's first and only powered cot-fastening system, hasn't just stood the test of time – it's evolved to meet our customers' needs. A decade of insights has contributed to continuous safety and quality enhancements that help reduce caregiver injuries– all designed with you, the healer, in mind.

Learn more
stryker.com/morepowertoyou

Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: Power-LOAD, Stryker. All other trademarks are trademarks of their respective © 2019 Stryker. Mkt Lit-1733 14 JAN 2019 Rev A



Volume 42, No. 4

Members of the B.C. Ambulance Provincial Honour Guard took part in a 24-hour vigil in memory of fallen paramedics at the BC legislature in Victoria on Tuesday, May 7, 2019.

Photo Courtesy Deborah Price Photography.

JUNE / JULY 2019

TABLE OF CONTENTS (TofC)

Click Titles to Navigate

FEATURES

The McNally Project: Supporting Advances Through Research Capacity Building	6
McNally Project: Students Are Our Future	12
McNally Project: A Paramedic And Medical Director Walk Into A Bar	16
McNally Project: On The Ethics Of Research	20
McNally Project: Understanding Statistical Significance	22
McNally Project: What Counts As 'Evidence'?	26
McNally Project: Paramedics Don't Develop PTSD	30
An Unexpected Journey Into Paramedic Research	33
Evidence Based Practice Moving Paramedicine Forward	36
ECG Interpretation: The Current Reality	38
Research Drives Improvements AT BCEHS	41
What Do Paramedics Really Need to Know About Cannabis?	44
Navigating Ontario's Provincial Government Announcement	48
Paramedic Self-Assessment	50
EMS Exemplary Service Medal: A Quarter Century Of Honours	53
COPR 2018 Award Recipients	55
Paramedic Self-Assessment Answer Key	68

ASSOCIATIONS

Corporation des Paramédics du Québec	56
Paramedic Association of Manitoba	58
Ontario Paramedic Association	62

CANADIAN PARAMEDICINE

The Voice of Canadian Paramedicine for 42 Years

Publisher/Editor
 Lyle Blumhagen: lyle@emsnews.com

Contributing Writers

Alan Batt	Mike Billingham
Madison Brydges	Trevor Hines Duncliffe
Lynea Finn	Charles Humphrey
C William Johnstorn	David Klein
Justin Mausz	Paige Mason
Brad McArthur	Duncan McConnell
BT Murray	Ron Oswald
John Prno	Dugg Steary
Walter Tavares	David Wolff

Editorial Board

Alan Batt	Mike Billingham
Dean DiMonte	Becky Donelon
Eric Glass	Judah Goldstein
Tim Hillier	Chris Hood
Peter O'Meara	Kelly Sheppard
Walter Tavares	Robin Young

How to Contact us:
 PO Box 579
 Drumheller, AB T0J 0Y0
 Website: www.CanadianParamedicine.ca
 E-mail: cp@emsnews.com
 Toll Free: 1-800-567-0911
 Fax: 1-888-264-2854

Advertising Sales
 Canadian Paramedicine and
www.CanadianParamedicine.ca
 Lyle Blumhagen: lyle@emsnews.com

Graphic Design/Layout
 Steve Speer

Information Systems
 Dean DiMonte
premergency.com

Subscription Inquiries:
subscriptions@emsnews.com
 Canadian Paramedicine is published by Pendragon Publishing Ltd.

CANADIAN PARAMEDICINE
 The magazine for Canada's paramedicine professions. The opinions and views expressed in this magazine are those of the writers and not necessarily those of the publisher.

Contents Copyright 2019 By Pendragon Publishing Ltd., may not be reprinted without permission.
 ISSN 1927-6729 (Online)

PO Box 579
 DRUMHELLER AB T0J 0Y0
 E-mail: cp@emsnews.com

PARAMEDICS DON'T DEVELOP PTSD!

By David Wolff

INTRODUCTION

I am sure the title of this article got your attention. Maybe even made you a little angry. Eliciting both reactions was intentional; to start you on the process of examining the statement in light of your beliefs. The truth is, it is hard to determine how many paramedics are experiencing Posttraumatic Stress Disorder (PTSD). According to one recent study, 14.6 per cent (1). The grey literature, fuelled by media discourse, suggests paramedic PTSD rates upwards of 25 per cent (2, 3), but a closer examination reveals that the grey literature data was gathered through paramedic self-declared PTSD symptomology, which potentially could have included burnout syndrome as the causes and symptoms are similar. Regardless of what it is, burnout syndrome or PTSD, the point is that paramedics experience both to some extent, and the potential outcomes can be serious. But that is not what this study is about.

CONTEXT

The context of this study is why do the other 75 per cent to 85.4 per cent of paramedics not experience PTSD? This differs from the predominant research about the effects of critical incidents paramedics experience and the mitigation of the potential onset of PTSD. The focus of this study is resilience as a resistance factor to the day to day critical stress paramedics experience. Critical stress that could lead to burnout syndrome, or in extreme cases, PTSD. The concept is resilience as a resistance strategy; a strategy used in preparation for adversity from a preventative and proactive point of view, viewed through the lens of adult education.

PURPOSE

The purpose of this study is to reveal a new perspective on continuing mental health education. I am interested how the use of reflective practice can improve resilience to occupational stress injury in paramedics. As stressful events are inherent in the role of a paramedic, building resilience skills can assist in psychological processing of the experiences, facilitating growth where there is usually

distress (4). A qualitative case-study methodology is being used to help me understand; a) if and how paramedics use reflective practice to learn in order to navigate the daily, potentially traumatic, experiences they are presented with; b) how learning from reflective practice helps them identify barriers and how they come to strategies that enable them to build resilience; and c) I am also interested if this reflective learning is transformative.

POSITION OF THE RESEARCHER

My recent employment history includes roles such as Paramedic Field Superintendent, Paramedic Commander of Training, and Paramedic Deputy Chief. I have over 30 years of experience in the field of paramedicine as a primary care paramedic, a manager and educator, and related industries, and have personally overcome the effects of occupational stress injury. In addition to my personal experience, since 2005 I have had the privilege of facilitating courses for paramedics on Emergency Medical Services (EMS) stress, occupational stress injury, and resilience strategies, and led in the design of a paramedic service's PTSD prevention plan, stimulating my interest in investigating the topic further; examining how I successfully navigated my own daily critical stressors and seeking ways to help improve the resiliency of fellow first responders.

REVIEW OF THE LITERATURE

We know that resilience has an inverse relationship to stress (4), is adaptive in nature (1), can reduce levels of distress resulting from critical incidents (5), and can possibly facilitate more positive outlooks (4). It has been suggested that stress and hardship can lead to higher psychological functioning (4), but no linkages have been made to being an occupational stress injury preventative factor. What can be inferred from the literature is two components of higher psychological functioning, critical introspection and critical reflexivity, can contribute to the development of resilience, and that critical reflection on experience, the type of reflection that can potentially lead to transformational

learning, is potentially a key to paramedic resiliency to occupational stress injury (6).

The significance of learning to think critically, to use reflective practices and to critically reflect, is to see our own beliefs and values in action, to become aware of possible distortions in our perceptions and of those around us, and to act on the new interpretations of our reality arising from our reflection. It usually starts with a disequilibrium; a 'disorienting dilemma' (7), where individuals encounter unexpected situations that challenge their previous knowledge acquired through past experiences and which causes them to consider their beliefs or perceptions that initiates the process of critical reflection (7-13). It is through systematic reflection that we make new meanings of experience, we change, we transform (7, 14). Critical reflection changes the way an individual sees themselves in the world, changing their perspective of their constructed reality, ultimately changing the way an individual thinks, feels, and behaves, (7, 9, 15, 16). This is transformative learning; where it is not just the meaning itself that changes, but the way we know that changes (14, 15, 17), changing the lenses through which we view the world.

There is more to be resilient to than just critical incidents. Paramedics watch life and death unfold daily, which becomes inherent disorienting dilemmas that may challenge each individual paramedic's beliefs (5, 6), possibly creating or altering their lenses. For transformational learning to occur, an openness to change in the individual must exist (7, 15, 17, 18). Only then can critical thinking resolve the anomalies between the belief of what is supposed to be happening and what appears to be taking place (8).

The heart of learning is "engaging in, reflecting upon, and making meaning of our...physical, emotional, cognitive, social or spiritual [experiences]" (14, p. 105). Through interpreting and encoding our experiences in such a holistic manner, we make meanings; we make sense, create our own realities. The meanings we have applied to our personal past experiences serve as our unique lens through which we view the world (7), but these same prior experiences can also act as barriers blocking learning (14, 19), which can lead to additional or continuing stress. By encouraging reflection on experiences from different perspectives, challenging the individual's beliefs and values, new ways of knowing can be created, contributing to resiliency (16, 20, 21).

As a stress resiliency strategy, the question the literature leaves is whether or not an individual can learn how to prepare for potential critical stressors. The literature suggests that it is the influence or the lens of the individual's beliefs that create the reality they respond to. Facilitating or guiding an individual to become a self-directed critically reflective learner; to become more open to transformational learning, may serve as a self-directed resiliency strategy.

OBJECTIVE

The objective of this study is to identify if paramedics can become transformational learners, self-initiating their own cognitive restructuring, seeking out opportunities to change, and adapting to accommodate new meanings derived from experiences into their belief structures. The central question is; How can paramedics be trained to think critically in order to prepare for critical stressors as an occupational stress resiliency strategy? To answer this question, I need to understand if and how paramedics use reflective practice to learn in order to navigate the daily, potentially traumatic, experiences they are presented with.

PRELIMINARY ANALYSIS OF THE DATA

The study is currently ongoing. Six paramedics from a rural, Northeastern Ontario Paramedic Service were interviewed. Three female and three male, ranging in experience from 11 years to 30 years. The results of my own interview was added as a self-study, not only to make any bias explicit, but also to contribute to the data.

The preliminary analysis has revealed some commonalities. All paramedics in the study, after experiencing critical stressors, had dialogue with peers; talked about perceptions resulting from calls; bounced things around, and thought about things in a reflective way; logically thought things through, trying to understand them. The definition of critical thinking is reflecting on assumptions underlying our beliefs and contemplating alternative ways of thinking (8). The preliminary results suggest that this type of reflection is occurring, but what is not clear at this point is evidence of new ways of thinking.

Some barriers to reflection were identified such as mentally dwelling on calls, trigger-calls where paramedics have some sort of emotional connection to the call due to similarities to the circumstances, and not knowing facts or outcomes causing a lack of closure. Strategies used to overcome barriers included acceptance of circumstances (don't own it), attitude (contextualize, positive outlook) and past experience. The latter may be the most important as the new experiences (critical stressors) are reflected upon using the lens of the meanings each individual created from past experiences.

The participants of this study all indicated change in themselves; a new norm, as a result of their experiences. Some indicated a hardening, desensitization, and less patience, where others indicated a new outlook, a new openness, empathy, and a new appreciation for life. Further interviews are planned to delve deeper into this topic searching for evidence of new ways of thinking, to link transformation to the reflection, as well as the follow up question; how might reflective practice be used to foster transformational learning as a resiliency strategy?

CONCLUSION

The preliminary analysis suggests that reflective practice is being used by paramedics to learn in order to navigate the daily, potentially traumatic, experiences they are presented with, and helps them identify barriers and strategies that enable them to build resilience. There is also some evidence that this reflective practice may be fostering learning that is transformative, changing the lenses through which paramedics view the world. It is hoped that additional interviews and further analysis will link reflective practice to new ways of thinking and positive transformations, as well as strategies to foster critical reflection and transformational learning as a resiliency strategy. **CP**

ABOUT THE AUTHOR.



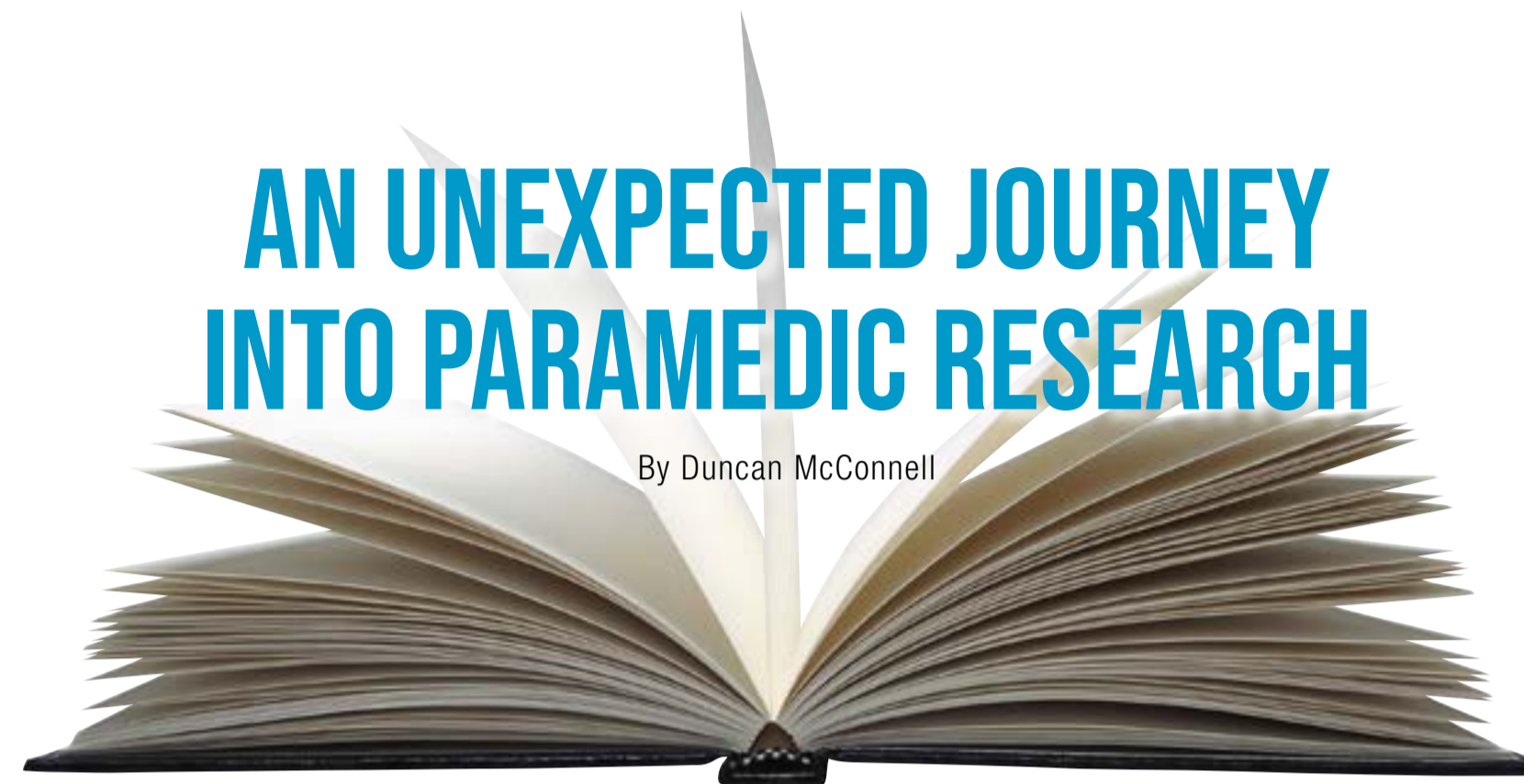
David Wolff completed his undergraduate in 2009 and is currently a full-time Master's of Adult Education student at St. Francis Xavier University, Antigonish, NS. An AEC graduate in 1986, David has worked as a Primary Care Paramedic, owned/operated a Patient Transportation Service, and was a Paramedic Program Coordinator. More recent experience includes Paramedic QA Manager, Field Superintendent, Commander of Training, and finally Deputy Chief. David currently serves as a User Experience and Design Specialist, and Educator for Premergency Inc.

REFERENCES

- 1 Streb M, Haller P, Michael T. PTSD in paramedics: Resilience and sense of coherence. *Behav Cog Psychother*. 2014;42:452-11.
- 2 Public Services Health and Safety Association. #firstrespondersfirst. [Internet] Retrieved Oct 14, 2018 from <http://www.firstrespondersfirst.ca>
- 3 Tema Conter Memorial Trust. Prevalence of PTSD in Canada's public safety occupations. [Internet] Retrieved Oct 14, 2018 from https://infogram.com/prevalence_of_ptsd_in_canadas_public_safety_occupations
- 4 Austin C, Pathak M, Thompson, S. Secondary traumatic stress and resilience among EMS. *J Para Prac*. 2018;10(6):240-7.
- 5 Pietrantonio L, Prati G. (2008). Resilience among first responders. *Afric Health Sci*. 2008;8:S14-4.
- 6 Hayes C. Building psychological resilience in the paramedic. *J Para Prac*. 2018;10(4):147-5.
- 7 Mezirow J. Learning to think like an adult. In: Taylor E, Cranton P, editors. *The handbook of transformational learning. Theory, research and practice*. San Francisco, CA: Jossey-Bass; 2012. p. 73-23.
- 8 Brookfield S. *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco, CA: Jossey-Bass; 1987.
- 9 Cranton P. *Understanding and promoting transformative learning: A guide to theory and practice 3rd ed* [Kindle version]. Sterling, Virginia: Stylus Publishing; 2016.
- 10 Kreber C. Critical reflection and transformative learning. In Taylor E, Cranton P editors. *The handbook of transformational learning. Theory, research and practice*. San Francisco, CA: Jossey-Bass; 2012. p. 323-17
- 11 Ochoa C, Casellas-Grau A, Vives J, Font A, Borràs J. Positive psychotherapy for distressed cancer survivors: Posttraumatic growth facilitation reduces posttraumatic stress. *Int J of Clin Health Psychol*. 2017;17(1):28-9.
- 12 Pretorius L, Ford A. Reflection for learning: Teaching reflective practice at the beginning of university study. *Int J Teach Learn High Educ*. 2016;28(2):241-12.
- 13 Walinga J, Rowe W. Transforming stress in complex work environments. *Int J Workplace Health Manag*. 2013;6(1):66-24.
- 14 Merriam S, Bierema L. *Adult learning: Linking theory and practice*. San Francisco, CA: Jossey-Bass; 2014
- 15 Brookfield S. Critical theory and transformative learning. In Taylor E, Cranton P editors. *The handbook of transformational learning. Theory, research and practice*. San Francisco, CA: Jossey-Bass; 2012. p. 131-14.
- 16 Fazio-Griffith L, Ballard M. Transformational learning theory and transformative teaching: A creative strategy for understanding the helping relationship. *J Creat Ment Health*. 2016;11(2):225-9.
- 17 Charaniya N. Cultural-spiritual perspective of transformational learning. In Taylor E, Cranton P, editors. *The handbook of transformational learning. Theory, research and practice*. San Francisco, CA: Jossey-Bass; 2012. p. 231-13.
- 18 Taylor E, Cranton P. A theory in progress? Issues in transformative learning theory. *Eur J Res Educ Learn Adult*. 2013;4(1):35-12.
- 19 Toblin R, Adler A. Resilience training as a complementary treatment for PTSD. In Benedek D, Wynn G, editors. *Complementary and alternative medicine for PTSD*. New York, NY: Oxford University Press; 2016. p. 263-27.
- 20 Coady M. Adult health learning and transformation: A case study of a Canadian community-based program. *Adult Educ Q: J Res Theory*. 2013;63(4):321-16.
- 21 Heddy B, Sinatra G, Seli H, Taasobshirazi G, Mukhopadhyay A. Making learning meaningful: Facilitating interest development and transfer in at-risk college students. *Educ Psychol*. 2017;37(5):565-16.

AN UNEXPECTED JOURNEY INTO PARAMEDIC RESEARCH

By Duncan McConnell



If someone had asked me 22 years ago about paramedic research, I think my initial reaction would have included a very blank look on my face, followed by comments along the line of, "What on earth for? We are just ambulance officers that follow guidelines". Fast forward to now, apply a little reflection to what I have seen and what I have done, the younger version of myself could not have possibly imagined the journey I have taken within the paramedicine profession. Over the past 22 years I have witnessed in both Australia and Internationally, as a participant, observer, leader and innovator, the development and change within this profession. When I first qualified, I started off with seven drugs, a cardiac monitor/defibrillator that we took the power cord with us, and a response kit that weighted about five kilograms (11 lbs) – fully stocked. Now I carry around 35 to 52 drugs depending on the location/role I'm working in, a cardiac monitor/defibrillator that no longer requires me to plug it after two shocks and I carry more equipment across multiple bags and hardwired into the different vehicles (air, land and sea) I operate out of than I can list within the word count of this article.

My journey into paramedicine is an unusual one and, in some ways, an accidental one. This journey began in the Australian Army, while I was serving in the infantry. I didn't apply myself as well as I could in high school and as a result, didn't achieve the grades I needed to be accepted as a pilot. So while I worked on increasing my grades for acceptance into aviation training, I accepted a position in the infantry. There was opportunity during this time to work as a combat medic within my unit and as my grandfather had served on ambulances in World War II in the

Pacific Theatre and had worked in that capacity, I thought what a nice way to follow in his footsteps. Part of our training required us to train with local ambulance services to increase our exposure to medical related cases, which were completely different to the typical trauma related work we would see deployed. We were also required to become Honorary Ambulance Officers (HAOs), which is how I first became involved with Queensland Ambulance Service (QAS), in Australia. After 12 months I had done enough to increase my candidature as a pilot applicant and was in the process of going through the various pilot screening tests. During this screening process I was also preparing for a significant joint exercise when I had an accident that tore off the lateral, medial and anterior cruciate ligaments from my right knee. The door into pilot training suddenly shut, however the QAS learnt of my injury and offered me employment with them after my recovery. It was a time of significant recruitment and anyone on their volunteer list that wanted a job was sucked up into their fulltime positions, hence my nonplanned, accidental employment into an ambulance service after my injury and the paramedicine journey that is still ongoing.

From here I worked across many areas within the QAS, starting off as a patient transport officer (PTO) driving patients from home to hospital appointments and back home again. During that period of work I began my diploma studies to become a paramedic. Back in the early to mid 1990s, long before many of the students I now teach were even born, all paramedic training like I completed was done internally. I completed my training within the QAS Education Centre, QASEC as it is known today. It