



# Evidence-based Innovations for Supporting the Mental Health of Public Safety Personnel



# Presenter Disclosure

- R. Nicholas Carleton, Ph.D., R.D. Psych.
  - Professor of Psychology
  - Director of the Psychological Trauma and Stress Systems Lab
  - No relationships with commercial interests



# Background

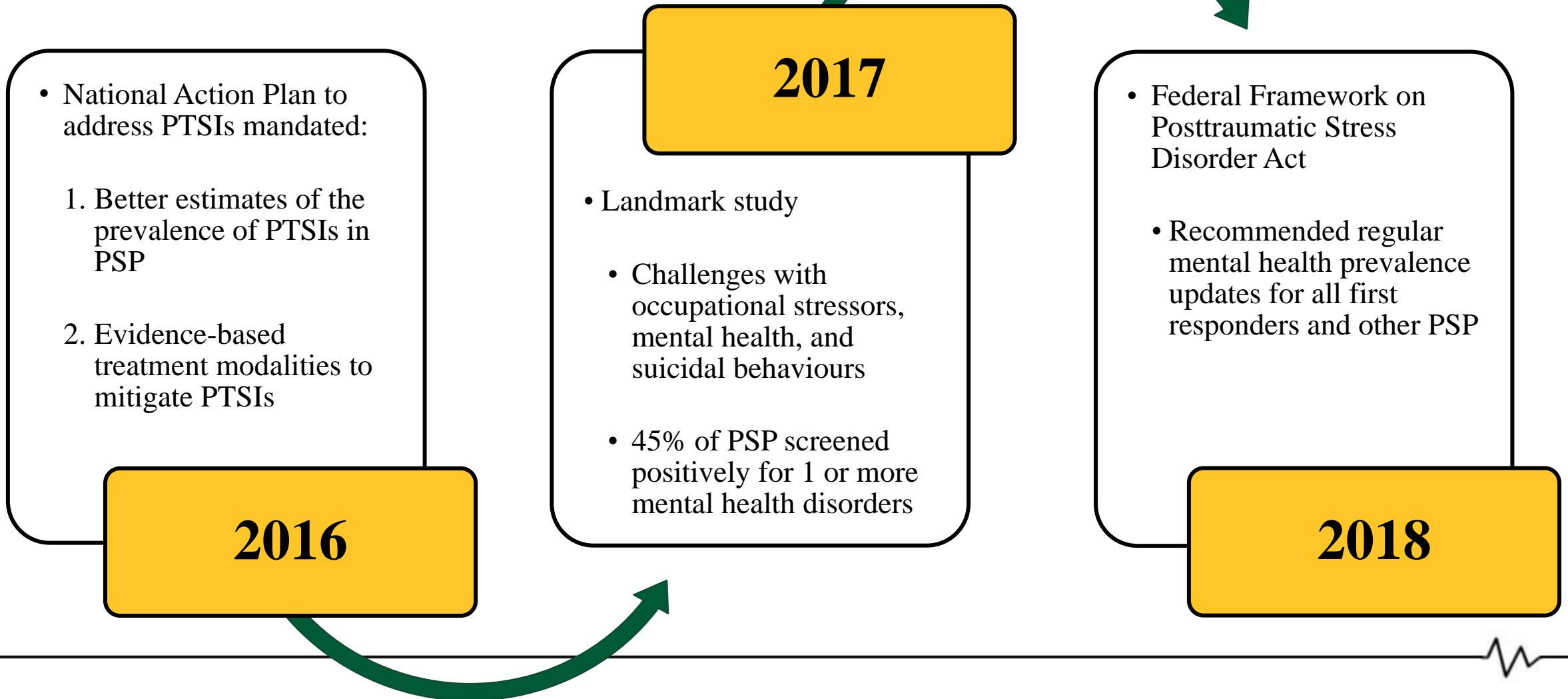
- WWI
  - Shell Shock
    - An individual weakness not found in “good” units – Lord Gort
    - Psychologically healthy men would not develop shell shock – Lord Moran
    - A “manifestation of childishness and femininity” or “cowardice” – MacPhail
- WWII
  - Combat Stress Reaction



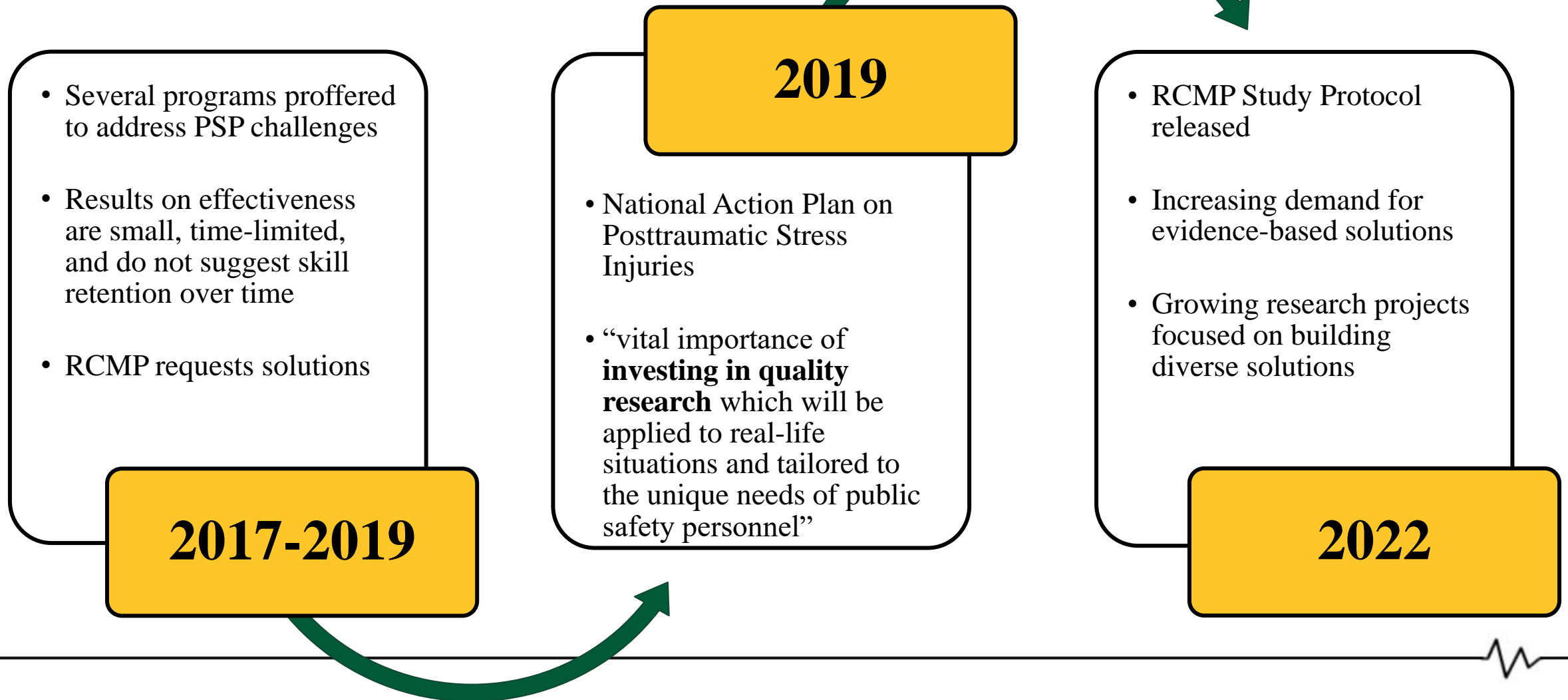
# Background

- DSM-I (1952) – Gross Stress Reaction
- DSM-II (1968) – Gross Stress Reaction Removed
- DSM-III (1980) – Post-Traumatic Stress Disorder (PTSD)
  - Events outside the range of usual human experience
- DSM-IV (1994) and DSM-IV-TR (2000)
  - Events involving actual or threatened death or serious injury
- DSM-5 (2013)
  - Repeated or extreme exposures to traumatic events in the course of professional duties

# Brief History



# Brief History

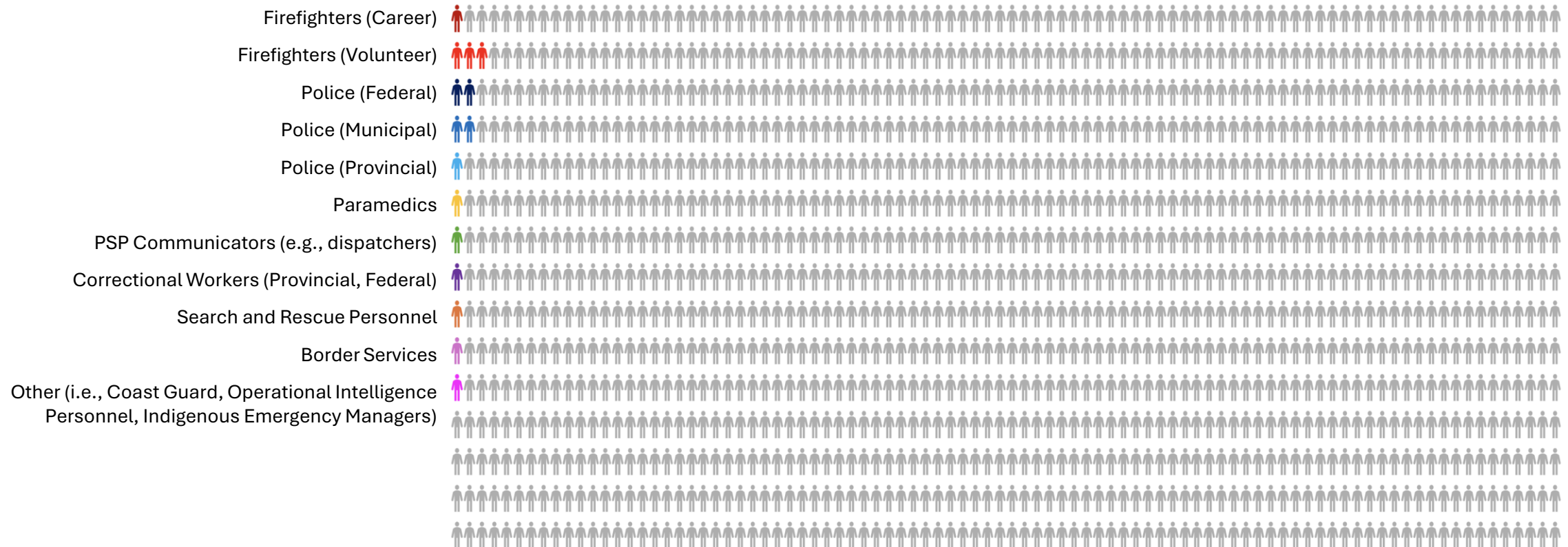


# Public Safety Personnel (PSP)

- Trauma-exposed professionals including, but not limited to
  - Border services officers
  - Coast guard
  - Correctional workers
  - Firefighters (career and volunteer)
  - Indigenous emergency managers
  - Operational intelligence personnel
  - Paramedics
  - Police (municipal, provincial, federal)
  - Public safety communicators (e.g., dispatchers)
  - Search and rescue personnel

# Public Safety Personnel (PSP)

- Trauma-exposed professionals 15/1500 Canadians



# Unique Challenges

- Relative to the General Public
  - Frequency of exposures to potentially psychologically traumatic events
- Relative to Military
  - Deployment to “unsafe” zone
  - Deployment length
- Relative to each other
  - Protection, Enforcement, Rehabilitation
  - Deployment, Exposure, Responsibility, Certainty
- Relative to History
  - Increasingly required to fulfill multiple roles

# Current Challenges

**Positive Screening Percentages for Recent Mental Disorders Based on Self-Report Measures**

	2023*	2023	2018 to 2023	2017*	2017						
	CDN Public	RCMP	Prov / Terr Corr Wrks	CDN Public	All PSP	RCMP	Corr Wrks	Mun /Prov Police	Fire-fighters	Para-medics	Public Safety Comms
PTSD	8	48	29	2	23	30	29	20	14	25	18
Major Depressive Disorder	8	45	37	2	26	32	31	20	20	30	33
Gen. Anxiety Disorder	5	34	28	6	19	23	24	15	12	21	18
Panic Disorder	2	21	19	4	9	12	12	6	5	10	8
Alcohol Use Disorder	2	5	6	3	6	4	7	6	8	6	7
Any mental disorder	18	65	58	10	45	50	55	37	34	49	48

# Current Challenges

## Prevalence of Past-Year and Lifetime Self-Reported Suicidal Behaviour

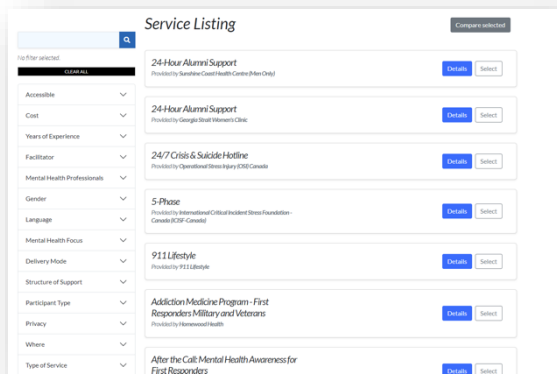
	2020*	2023	2018 to 2023	2017*	2017						
	CDN Public	RCMP	Prov / Terr Corr Wrks	CDN Public	All PSP	RCMP	Corr Wrks	Mun /Prov Police	Fire-fighters	Para-medics	Public Safety Comms
<b>Past-Year</b>											
Suicidal Ideation	4	11	9	2%	10	10	11	8	9	15	10
Suicidal Planning	1	5	4	1%	4	4	5	3	3	7	3
Suicidal Attempt	<1	<1	1	<1%	<1	<1	<1	<1	<1	1	<1
<b>Lifetime</b>											
Suicidal Ideation	12	34	29	12%	28	26	35	21	25	41	29
Suicidal Planning	4	26	15	5%	13	11	20	9	9	24	14
Suicidal Attempt	3	4	7	3%	5	2	8	2	3	10	9

# Programming Options



## Extensive Programming, Minimal Research

- [www.pspmentalhealth.ca](http://www.pspmentalhealth.ca)
  - Irrespective of evidence base
- Single-session resiliency interventions
  - Small, temporary changes in mental health symptoms, resilience, work engagement, mental health knowledge, mental health stigma
- Peer Support and Crisis-Focused Psychological Interventions
  - Limited strength of evidence
- The trouble with training...
  - Skills grow and decay based on intentional practice and ongoing use



# HEALTHY MINDS HEALTHY MOUNTIES

## The Royal Canadian Mounted Police Study: An Overview with Recent Results

# The RCMP PTSD Study

- Large-scale investment in developing state-of-the-art infrastructure
  - Ongoing self-monitoring, screening
  - State-of-the-art evidence-based Emotional Resilience Skills Training program (ERST) for proactive support and mental health maintenance
  - Leading edge biometric evaluations
- Tools and training support positive proactive mental health activities and skills, as well as early intervention

# The RCMP PTSD Study

Kelly J. Abrams  
Murray P. Abrams  
Olabisi Adesina  
Tracie O. Afifi  
Billea Ahlgrim  
Katie Andrews  
Andréanne Angehrn  
Gordon J. G. Asmundson  
Seerat Bassi  
Chris Beckett  
Brad Berezowski  
Jonathan Burry  
Alain Brunet  
R. Nicholas Carleton  
Tanner Charlton  
Murray Daku  
Keith Dobson  
Michael Edmunds  
Myles Ferguson

Amelie Fournier  
Amber J. Fletcher  
Krysten Forbes  
David Gerhard  
Jennifer Gordon  
Jolene Goulden  
Sally Gray  
Lis Hansen  
Karen S. Hamelin  
Chet Hembroff  
Orland Hoeber  
Kadie Hozempa  
Xiaoqian Huang  
Laleh Jamshidi  
Nicholas A. Jones  
Maria Kamil  
Terence M. Keane  
Jeff Keshen  
Aryan Khanna

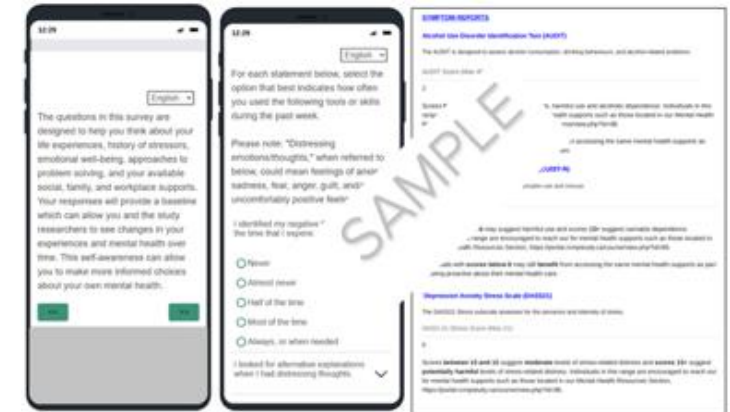
Juliana Khoury  
Donna King  
Kayla Kirby  
Bridget Klest  
Anita Kohl  
Stephanie Korol  
Gregory P. Krätzig  
Caeleigh Landry  
Lisa M. Lix  
Jordan MacNeil  
David Malloy  
George B. Magalong  
Kirby Q. Maguire  
Akiff Maredia  
Ronald R. Martin  
Katherine Mazenc  
Michelle McCarron  
Kathy McNutt  
Megan Milani

Renee Molesky  
Sara Moradizadeh  
Sajid Naseem  
J. Patrick Neary  
Umanga Nepal  
Jolan Nisbet  
Obimma Onuegbu  
Abimbola Ogunkoyode  
Steve Palmer  
Michelle Paluszek  
Sirvan Parasteh  
Vanessa Peynenburg  
Geoff Rachor  
Cynthia Sanders  
Jitender Sareen  
Shannon Sauer-Zavala  
Shimona Sekhar  
Mikhail Shchukin  
Lakshay Sharma

Shubham Sharma  
Mikhail Shchukin  
Robyn Shields  
Joelle Soucy  
Sherry H. Stewart  
Dennis Tenchavez  
Laurie Sykes-Tottenham  
Rudra Thakkar  
Emilie Thomas  
Vianne Timmons  
Taylor A. Teckchandani  
Vivian Tran  
Preeti Tyagi  
Keyur Variya  
Abinyah Walker  
Kristi Wright  
Christopher Yost  
Zhe Zhang

# The RCMP PTSD Study – Milestones

- Baselines and anniversaries
  - Multimodal self-assessment
    - Clinical Interview
    - Survey
      - Broad spectrum of mental health symptoms
      - Environmental factors and individual differences
        - » Including PPTe and other Occupational Stressors
  - Responses consistent with one or more mental disorders are flagged for participants and include recommendations



# The RCMP PTSD Study – Check-Ins

- Monthly Self Check-Ins and Trend Reports
  - Brief self-report questionnaires that allow participants to report on 20 clinically validated measures of mental health
- Key Features
  - ~20 minutes to complete
  - Immediate feedback in live reports
  - Symptom tracking and trending information



# The RCMP PTSD Study – Check-Ins

- Daily Self Check-Ins and Trend Reports
  - Ultra-brief self-report questionnaires that allow participants to reflect and report on 13 factors from mood and physical activity, to sleep patterns and substance use
- Key Features
  - ~60 seconds to complete
  - Immediate feedback in live reports
  - Symptom tracking and trending information



NOTE: Additional personal protective measures can be used to de-identify or anonymize data.

# The RCMP PTSD Study – Check-Ins

- Significant Event Self Check-Ins
  - Ultra-brief tool for recording exposures to PPTe and other significant stressors
- Key Features
  - ~60 seconds to complete
  - Creates an independent record of stressful exposures
    - Can help inform novel tools to mitigate stressors

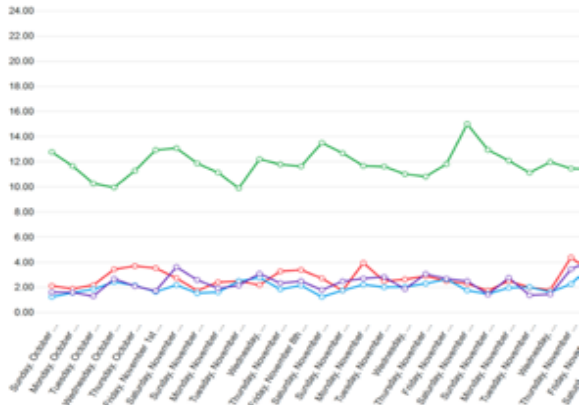


NOTE: Additional personal protective measures can be used to de-identify or anonymize data.

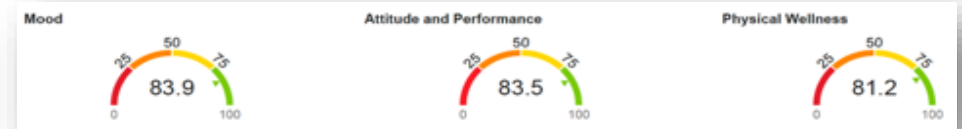
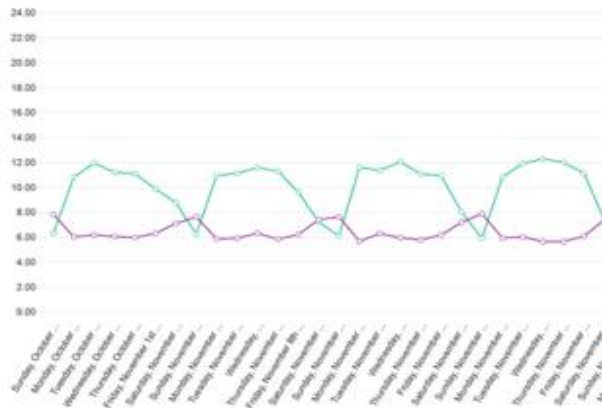
# The RCMP PTSD Study – Dashboard Reports

- Individualized Reports

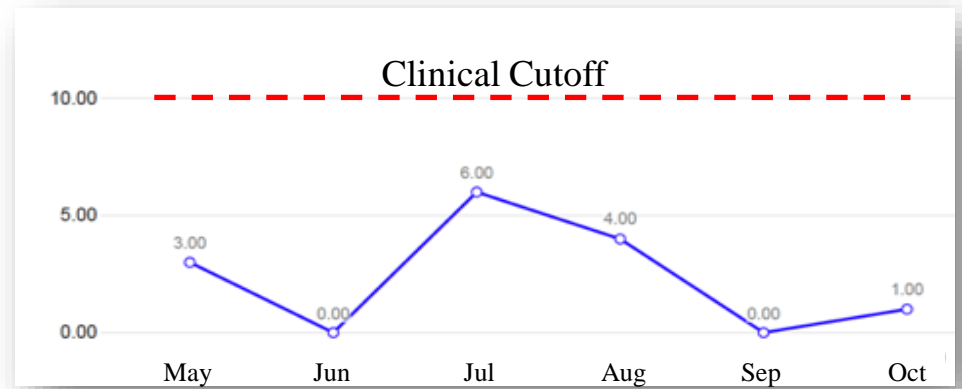
- Joyful and Content
- Anxious or Fearful
- Irritated or Angry
- Sad or Depressed



- Work Hours
- Sleep

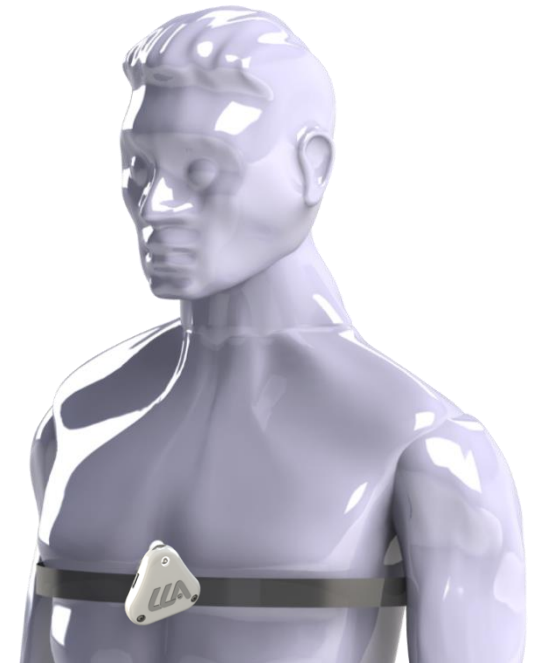


## Symptoms of Major Depressive Disorder

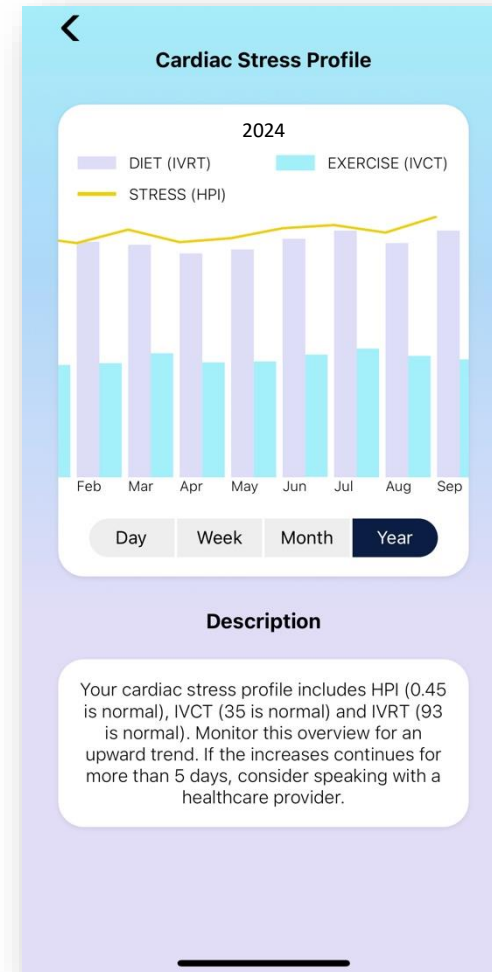
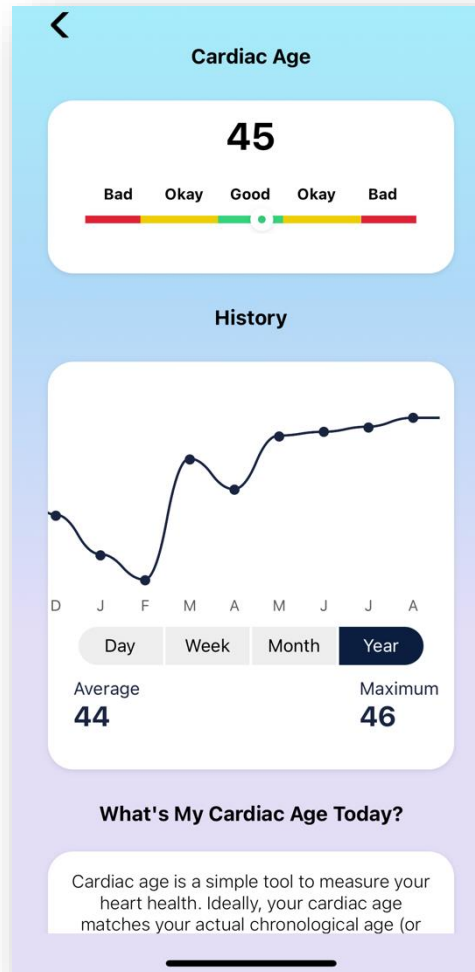
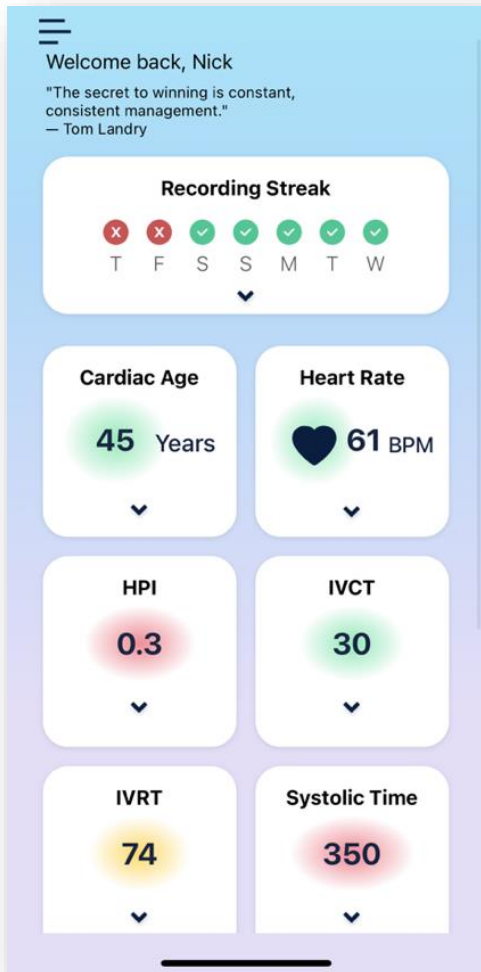


# Study Technology

Your heart as a physical indicator of physical health and mental health



# Study Technology



# The RCMP PTSD Study

## Emotional Resilience Skills Training (ERST)

- Design
  - Team 1 – Standard Training ( $n \sim 480$ )
  - Team 2 – Augmented Training ( $n \sim 480$ )
- The Unified Protocol for Transdiagnostic Treatment of Emotional Disorders
  - Launched June 6, 2022
  - 10 weeks, modified for RCMP training
  - Robustly evidenced as a very effective treatment
  - Preliminary support for proactive mitigation of PTSIs
  - Now required components of the Cadet Training Program

# The RCMP PTSD Study

## **E**mootional **R**esilience **S**kills **T**raining (ERST V2.0)

- Can be fully integrated into training and broadly deployed with train-the-trainer solutions
- Ongoing efforts to manage skill decay

# The RCMP PTSD Study

## Emotional Resilience Skills Training (ERST V2.0)

CTP	ERST	Lesson Content
Week 2	Lesson 1	Introduction and Goal Setting: Attitudes around Mental Health, SMART Goals, Motivation
Week 3	Lesson 2	Three Components of an Emotion
Week 4	Lesson 3	The ARC of an Emotion
Week 5	Lesson 4	Mindful Emotion Awareness: Mindfulness, Meditation
Week 7	Lesson 5	Applying Mindful Emotion Awareness
Week 8	Lesson 6	Cognitive Flexibility
Week 9	Lesson 7	What are Emotional Behaviours
Week 10	Lesson 8	Countering Emotional Behaviours and Avoidance
Week 12	Lesson 9	Physical Sensations and Emotional Exposure
Week 13	Lesson 10	Emotional Exposure and Moving Forward
Week 25	Lesson 11	Review of ERST and ERST in the field



# The RCMP PTSD Study

## Emotional Resilience Skills Training (ERST V2.0)

- Facilitators reported clear opportunities to incorporate ERST into
  - Applied Police Sciences
  - Firearms
  - Police Driving
  - Police Defensive Tactics
  - Fitness
  - Drill and Department

# The RCMP PTSD Study

## Early Results



The RCMP Longitudinal PTSD Study

HOME ABOUT TOUCH RESEARCH PRIVACY FAQ CONTACT

The RCMP Longitudinal PTSD Study

A longitudinal study on operational stress injuries in the RCMP

MENTAL HEALTH OF CADETS STARTING RCMP TRAINING

SUICIDAL IDEATION, PLANNING, AND ATTEMPTS AMONG NEW RCMP CADETS

TRAUMA EXPOSURE AMONG THE RCMP

# Early Results – [www.rcmpstudy.ca](http://www.rcmpstudy.ca)

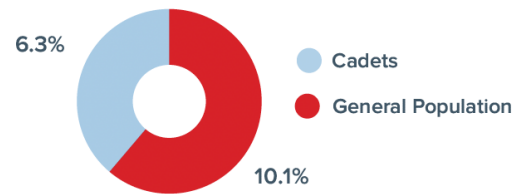
- Cadets reported exposure to more PPTE types than the general population, but fewer than serving RCMP and other PSP
  - A relationship may exist between more frequent PPTE exposures and choosing policing as a career

Group	Exposure rate (out of 17)
General population	2.31
Cadets	5.81
RCMP	13.40
Public safety personnel (PSP)	11.08

Type of PPTE	Exposure rate in cadets (%)
Physical assault	58.2
Serious transportation accident	52.2
Serious accident at work, home or during recreational activity	45.2
Sudden accidental death	41.6

# Early Results – [www.rcmpstudy.ca](http://www.rcmpstudy.ca)

- Mental Health and Suicidal Behaviours



Based on clinical interviews, participants were less likely to screen positively for any CURRENT mental disorder compared to current rates among the general population.

### Cadets' suicidal thoughts and behaviours compared to serving RCMP and the general population

	Cadets (past month)	RCMP (lifetime)	General population (lifetime)
Suicidal ideation	1.6%	25.7%	11.8%
Planning	0%	11.2%	4.0%
Attempts	0%	2.4%	3.1–3.5%

- Comparable to, or better than, the general population at pre-training
- Improves at pre-deployment
- Decays after 1 year of service\*

# Early Results – [www.rcmpstudy.ca](http://www.rcmpstudy.ca)

- Mental Health Risk and Resilience

Cadet scores - lower risk and higher resiliency



## Resiliency

Associated with mental health strength

## Risk variables

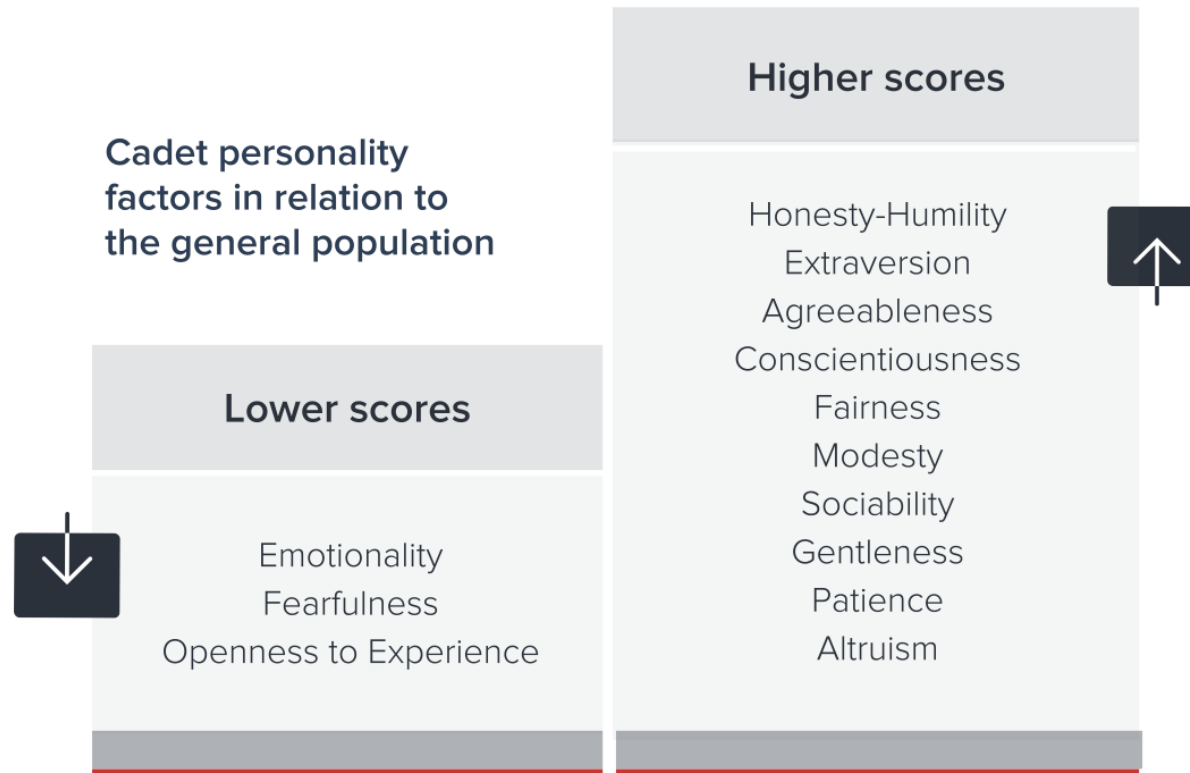
Associated with mental health challenges

Anxiety sensitivity  
Fear of negative evaluation  
Pain anxiety  
Illness and injury sensitivity  
Intolerance of uncertainty  
State anger



# Early Results – [www.rcmpstudy.ca](http://www.rcmpstudy.ca)

- Personality



# Early Results – [www.rcmpstudy.ca](http://www.rcmpstudy.ca)

- Self-monitoring and Safeguard Programming
  - Evidence for Daily Self-Monitoring
    - As little as 2 times per week (more is better)
    - Evidence of early self-referrals
    - Mitigates the impact of PPTe on PTSD
  - Evidence for Monthly Self-Monitoring
    - As few as 1 every 2-3 months (more is better)

Among cadets reporting mental health symptoms at the start of training



Daily survey use was associated with decreased severity of mental health disorder symptoms by the end of training

The therapeutic benefits of self-monitoring



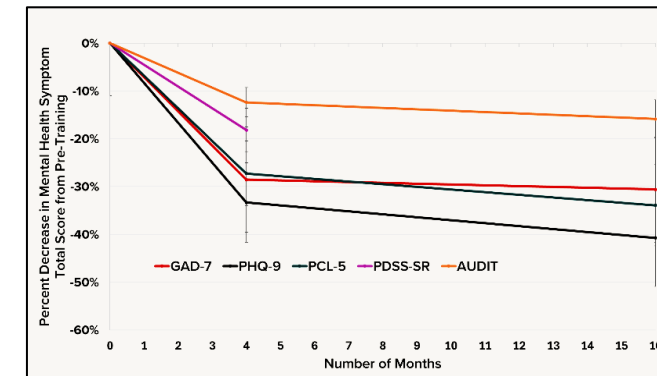
Increased emotional awareness, knowledge of mood patterns, and self-management of symptoms

# Take Home

- Regular self-monitoring and periodic health screening appears broadly beneficial, which is **consistent with safe-guarding models** and contemporary requests
- **Independent electronic mental health records** stored safely within the University system
- Potentiates aggregated independent mental health dashboards that can help all stakeholders

# Scaling Up the RCMP Protocol

- The ERST and MHM have been successfully adapted for diverse currently-serving PSP
  - Up to large effect size improvements in positive screens for PTSD and other PTSI from pre- to post-training ( $ps < 0.05$ ), sustained or improved at 1-year follow-up
- Reductions in risk variables, increases in resilience
- Reductions in suicidal ideation and planning from pre- to post-training and at 1-year follow-up
- Self-monitoring results were similar to RCMP Study results\*



# Scaling Up the RCMP Protocol

- ERST and MHM with diverse currently-serving PSP
  - Practicing the evidence-based skills was crucial
  - Participant completers
    - Retained knowledge of ERST skills at 1-year follow-up
    - Reported decreased behavioural avoidance
    - Reported increased cognitive coping
    - Reduced behavioural avoidance and increased cognitive coping, which have been previously associated with decreases in PTSD symptoms



# Dashboard Systems

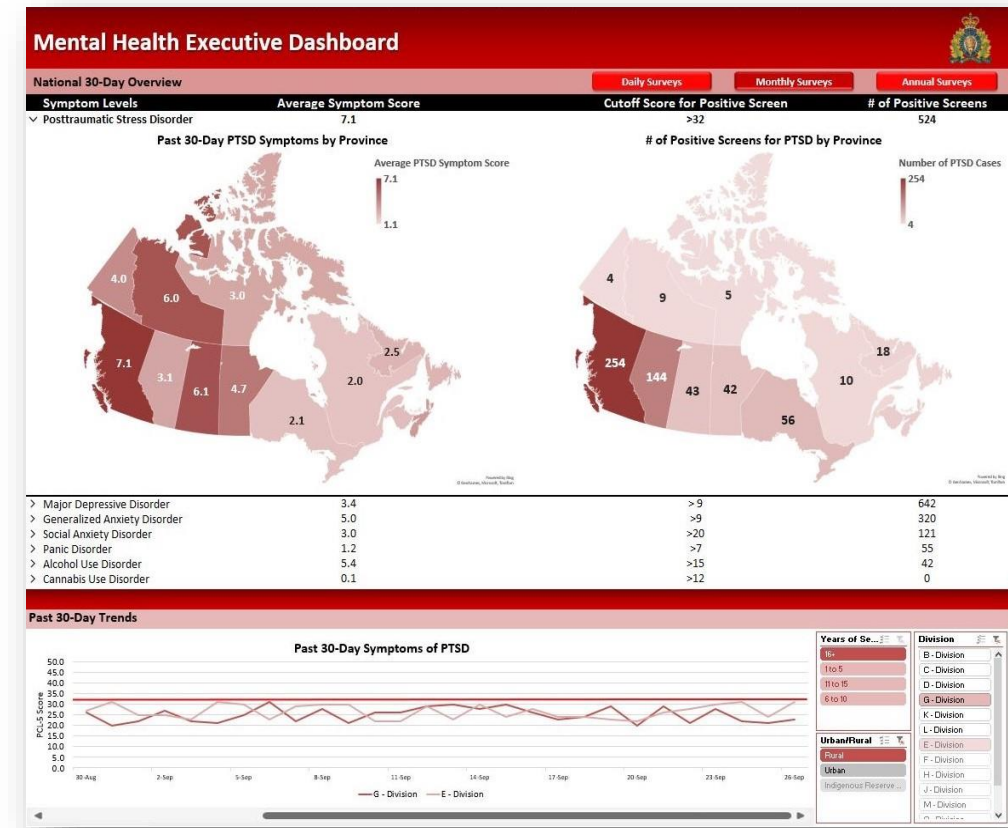
- Facilitates clinical supports, proactive efforts, independent evaluations of interventions
- Offers an electronic mental health record that can facilitate mental health assessments by giving providers robustly evidenced standardized symptom profiles and histories

The image shows a screenshot of a web-based dashboard for clinicians. The main dashboard is titled "Clinician Dashboard" and features a "Filter Data Here" section with dropdown menus for "Team" (set to "All"), "Troop #", and "Removed from Study" (set to "All"). To the right, there is a "Troop Number" table showing survey counts for Troop 1 (2025: 5), Troop 19 (2021: 1), Troop 19 (2023: 1), Troop 11 (2021: 2), and Troop 11 (2025: 1), with a total of 217. Below this is a table of "Participant Number", "EndDate", "Last Activity", "Team", and "Troop No". Two participants are listed with dates 10/7/2024 12:00:00 AM and activities "T1 initial survey" and "T2 pradeployment survey". Action buttons for "View Psychometrics" and "Message" are present.

Overlaid on the dashboard is a "Psychometrics Details" window. It includes a "Survey Chart" table with columns for "Psychometric", "T1", and "T2". The chart lists various assessment tools such as ASQ, AUDIT, BEAQ, BRS, BFNES, BRS, CUOP, DARS, DASL, DASS21, EMSS, ERQ, GAD7, and HEXACO48. The "Response for" window is also overlaid, showing a "Response" section with a "Please Select a Response" radio button and a "Send Response" button. The response text includes a thank you message and several bullet points providing feedback and resources.

# Dashboard Systems

- Supports systematic data collection, regular reporting, potentiating unprecedented insights while protecting user privacy
- Helps to balance individual, organizational, and government responsibilities
- Provides data to inform and iteratively improve recruitment, support, and retention efforts



# Self-Monitoring and Dashboards

- Benefits for
  - Frontline members
  - Families
  - Associations
  - Chiefs and Executive
  - Insurers
  - Governments
  - Communities





# Other Current Tools





Dr. Heather  
Hadjistavropoulos

<https://www.pspnet.ca>

## PTSD

Therapist-guided  
SK, ON, QC, NB, NS, PEI

## Wellbeing

Therapist-guided  
SK, ON, QC, NB, NS, PEI

Self-guided  
Canada-Wide

PSPNET  
FAMILIES



## Free online resources



[www.pspnetfamilies.ca](http://www.pspnetfamilies.ca)

1-833-317-7233

[pspnetfamilies@uregina.ca](mailto:pspnetfamilies@uregina.ca)

### WHY FAMILIES MATTER

The families of first responders and public safety personnel (PSP) experience unique lifestyle demands that challenge them everyday. Families serve alongside those who ensure the safety and security of our communities.

### HOW WE SUPPORT PSP FAMILIES

We provide information, resources, and skill-building strategies to help you navigate your unique life circumstances.

Spouses or significant others may also access a free, self-guided ICBT (internet-delivered cognitive behavioural therapy) course anytime that will help them understand and manage their mental health.



*Financial contribution from*



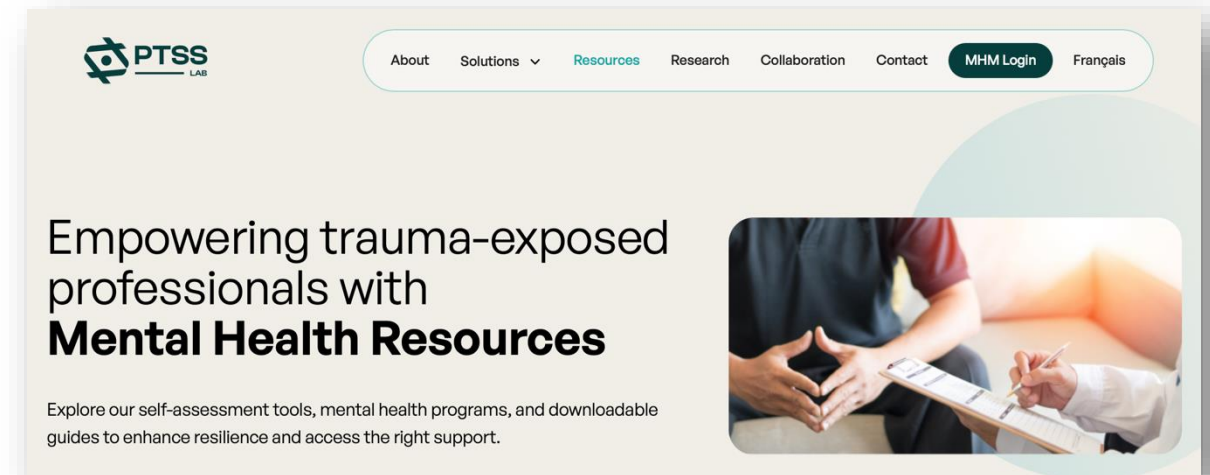
Public Health  
Agency of Canada

Agence de la santé  
publique du Canada



# Evidence-Informed Tools

- Self-Assessment Tools
- Six Steps to Finding a Clinician
- How to Support a Co-worker Experiencing Mental Health Issues
- Suicide Fact Sheet
- Evaluating Wellness Products and Services Intended for Public Safety Personnel



The screenshot shows the PTSS LAB website. The navigation menu includes: About, Solutions (with a dropdown arrow), Resources (highlighted in blue), Research, Collaboration, Contact, MHM Login (in a dark button), and Français. The main content area features a featured article with the title "Empowering trauma-exposed professionals with **Mental Health Resources**". Below the title is a sub-headline: "Explore our self-assessment tools, mental health programs, and downloadable guides to enhance resilience and access the right support." To the right of the text is an image of a person in a white lab coat sitting on a couch, talking to another person whose hands are clasped in their lap. The person in the lab coat is holding a clipboard and a pen.



Coming Soon...



# Coming Soon... New Research

## **FACETS**

CALL FOR PAPERS

### **Public Safety Personnel Health and Wellbeing**

**FACETS** is:

- an open access, multidisciplinary journal
- published by a not-for-profit, Canadian Science Publishing
- the official journal of the Royal Society of Canada's Academy of Science

### **Guest Editors**

**R. Nicholas Carleton**

*Department of Psychology*  
University of Regina, Saskatchewan

**Andrée-Ann Deschênes**

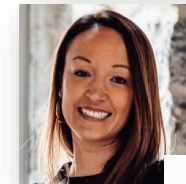
*Department of Management*  
Université du Québec à Trois-Rivières, Québec

**Margaret McKinnon**

*Department of Psychology, Neuroscience & Behaviour*  
McMaster University, Ontario

**Joy MacDermid**

McMaster University



# Coming Soon... New Results

- 2025 - A Contextualized Assessment of Duty-Related Bodily Harm Associated with Canadian Police Services



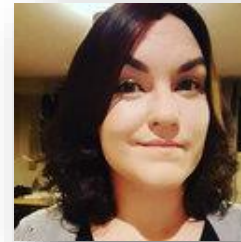
# Coming Soon... Expanded Pilot Tests

- 2025-2028 – Multi-agency collaborative provincial mental health monitoring pilot project
  - Saskatchewan Workers' Compensation Board
- 2025-2028 – ERST and MHM Integration Pilots
  - Saskatchewan Police College
  - Saskatchewan Marshals Service
  - Regina Police Service
  - Regina Fire and Protective Services
  - Saskatchewan Health Authority
  - Winnipeg Community Safety Team



# Coming Soon... the AX3 Project

- Updating national prevalence numbers for municipal police, provincial police, self-administered indigenous police service, and firefighters
  - Current partners
    - Canadian Association of Chiefs of Police
    - Canadian Police Association
    - Indigenous Police Chiefs of Ontario
    - International Association of Firefighters
    - Ministry of the Solicitor General
    - Ontario Association of Chiefs of Police
    - Ontario Provincial Police
    - Sûreté du Québec
    - Wounded Warriors Canada



Dr. Katie  
Andrews



Dr. Andrée-Ann  
Deschênes



Dr. Nick A.  
Jones



Dr. Joy  
MacDermid



# Specific Recommendations

- Evidence-informed and evidence-based content is almost always complementary
- Support and promote continuously improved ongoing evidence-based assessments, training, support, and interventions
- Stay informed and use research to counter mis-information



# Specific Recommendations

- Subject matter expertise is crucial
- Carefully consider tailored clinical assessments, treatments, and recommendations
- Many experienced clinicians using evidence-based practices – choose wisely



# Specific Recommendations

- We need collaborations to build and support “cradle to grave” evidence-based solutions and systems
- Individual, family, organizational, systemic



# Thank you!

Making Differences Together, One Person and One Solution at a Time



University  
of Regina

