SOLITUDE, SUFFERING & STRESS

A White Paper Series focused on the causes, symptoms and impacts of, as well as solutions to, the global pandemic of mental health injuries in public safety communications

BAPCO WHITE PAPER SERIES

No 01:2020: Causes of a silent pandemic

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ABOUT THE AUTHORS

Cindy Sparrow, Director, Consort Strategy Ltd

Cindy is an international consultant, speaker, coach, trainer and writer. During her 24-year career in Emergency Services she worked frontline as a paramedic in ground and flight Emergency Medical Services (EMS); in the 9-1-1 Emergency Communications Centre as a Dispatcher for police, fire and EMS; and from 2006 to 2020 in senior leadership roles within the industry.

Before retiring in March 2020, she served for six years as Deputy Chief with Red Deer Emergency Services (RDES). She remains involved with industry associations and is the Immediate Past President of the Association of Public Safety Communications Officials Canada (APCO Canada); a former Director with the Alberta E9-1-1 Advisory Association; and is a member of the Canadian NextGen 9-1-1 Coalition; the Collaborative Coalition of International Public Safety (CCIPS); and is a Trustee of UK charity, Embrace Child Victims of Crime.

Cindy's passion is people and is committed to inspiring and facilitating human transformation and creating positive change by empowering and supporting people in realizing excellence. She is the newest Director and Partner of international consulting firm, Consort Strategy Ltd. She leads the North American portfolio and in doing so continues to pursue her passion for helping public safety organizations in developing and fostering innovation in leadership, strategy and business development.

Andrew Chamberlain, Managing Director, Consort Strategy Ltd

Andrew is a former association CEO and now MD of Consort Strategy, a consultancy firm specialising in leadership development, good governance, organization improvement and business growth. For 15 years he held C-suite leadership positions in professional associations and membership bodies across the UK.

He travels internationally to provide specialist support on non-profit governance, strategy, leadership and management. He is the founder of the Cambridge Governance Symposium; author of the NETpositive Governance™ model; co-host of the bi-monthly podcast *Association Transformation* and the weekly podcast *Good Enough for Jazz* (both available on Apple podcasts).

He is a long-term sufferer and survivor of depression that has resulted from several mental health injuries experienced throughout his professional and personal life. He is a vociferous advocate of mental health awareness and wellbeing, irrespective of professional contexts or social norms.

ABOUT BAPCO

The British Association of Public Safety Communications Officials (BAPCO) is acknowledged as the leading UK-based association for all professionals using or developing public safety technology. It is a growing community whose extensive knowledge and expertise in public safety technology is based on members' collective development, use and delivery of real-life public safety solutions. BAPCO is an independent, member-focused not-for-profit association with charitable status working to improve emergency services and public safety communications and information technology for everybody's benefit.

DISCLAIMER

The opinions and information provided in the white paper are offered in good faith. Whilst we make every attempt to ensure the information contained in this white paper is correct, we are unable to guarantee the accuracy or completeness of any information contained herein.

BAPCO members, their employees and agents will not be responsible for any misinterpretation, misunderstanding or loss, however arising, from the use of, or reliance on this information.

INTRODUCTION

Public safety communications professionals, the people who answer 3-digit and other emergency calls from the public, render lifesaving assistance, and deploy emergency resources to a scene, are routinely exposed to trauma through their day-to-day duties. Acutely and cumulatively, this trauma impacts the mental health and well-being of these professionals. Often, their work causes them to suffer mental health injuries, also known as operational stress injuries, which can lead to a multitude of disorders, such as anxiety, depression, vicarious traumatization and compassion fatigue, burnout, substance abuse, post-traumatic stress disorder (PTSD), suicidal ideation, and fatally, suicide.[1]

Above all, without formal support for processing the trauma to which they are routinely exposed, these professionals exponentially suffer the impacts of mental health injuries. It is imperative that we assist and equip public safety communications professionals (PSCs) with the tools and support for managing trauma and maintaining their mental health, so that they can continue to serve their calling of helping their communities.

The nature of the work creates an environment predisposed to trauma exposure, i.e. increased stressors due to constant change; a lack of predictability or control of one's workload; constant performance evaluation; and an unyielding workload that leaves little or no room to process one's thoughts and emotions between calls. These circumstances are exacerbated by broader lack of awareness or understanding of mental health injuries amongst colleagues, stigma associated with mental health and trauma, the lack of formal training or program of support. This frequently results in multiple mental health injures at any one time, impacting PSCs and persisting or remerging throughout their careers.[2]

This toxic combination of circumstances can be overwhelming and hinders a PSC from acknowledging their need for help, or from reaching out to access it when they do. This only prolongs and compounds the effects of mental health injuries, creating painful difficulties for PSCs in their professional and personal lives. It can include feelings of guilt, anxiety, helplessness and hopelessness, continual exhaustion, or burnout, often to the point of requiring medical leave or a decision to leave the industry. For centres and control rooms, their people are suffering, with increased levels of illness, absenteeism and long-term medical leave, higher rates of turnover, a deteriorating workplace culture, and an increase in behavioural and disciplinary issues. Overall, mental health injuries cause significant impact on professionals, create major operational and financial impacts for centres and control rooms, and have far-reaching system-wide impacts on industry and communities.

"This toxic combination of circumstances can be overwhelming and hinders a PSC from acknowledging their need for help, or from reaching out to access it when they do."

THE MENTAL HEALTH CRISIS IN PUBLIC SAFETY COMMUNICATIONS

There is a mental health crisis affecting the public safety communications profession across the globe. The impacts of operational stress and mental health injuries and illnesses amongst police, firefighters, and paramedics (field responders or first responders) are well documented and recognized as a critical pressure point in maintaining the resilience and effectiveness of our emergency services. However, only recently has the profession been included in this awareness and research.

PSCs are essentially the first, first responder: They are the first point of contact for the public in the chain of emergency services provision. Research demonstrates that the frontline call-handlers and dispatchers in emergency services are equally and routinely exposed to trauma, albeit from differing perspectives than field responders (police, firefighters, paramedics, coastguard, etc) who respond to emergency scenes. Although they may not physically attend the scene of an incident, PSCs *are* first responders who have initial contact with the public in an emergency, providing lifesaving instruction whilst organizing the chaos of an emergency event, and simultaneously dispatching responders to the scene. Irrespective of which emergency service they support, call-handlers and dispatchers work in an environment characterized by the same difficulties as field responders, including the demands of rapid risk assessment, time-limited decision-making, and coping with unexpected developments, all executed without the benefit of face-to-face communication. PSCs are also hindered by the additional disadvantage of often not having closure on the situations that they handle: the call ends and the PSC swiftly moves on to answer the next call, and the next, usually without the opportunity to process their emotions and perceptions about the experience.

These frontline communications specialists also experience additional on-the-job stressors, such as high workload, shift work, performance monitoring, and limited opportunity for physical movement. All of these difficulties combine to realize significant negative physical and psychological outcomes for call-handlers and dispatchers, including cumulative stress effects, PTSD, vicarious traumatization, compassion fatigue, burnout, increased emotional exhaustion, reduced job satisfaction, poorer work performance and in some cases disciplinary action.

Within this critical professional community, we face a mental health crisis of an unprecedented scale. A willingness to engage in cursory discussion about mental wellbeing is no longer sufficient and we call on all relevant parties, from national governments and civic leaders to local departments and services, to prioritize and engage proactively in supporting PSCs' mental and emotional wellbeing.

“Although they may not physically attend the scene of an incident, PSCs are first responders who have initial contact with the public in an emergency, providing lifesaving instruction whilst organizing the chaos of an emergency event, and simultaneously dispatching responders to the scene.”

The 'hidden' emergency service

There is a common perception amongst the public safety communications community that they are viewed within emergency services as separate from their frontline colleagues. For the most part, call-handlers and dispatchers *are* physically isolated from both field response teams and wider organizational support services, such as human resources. This serves to exacerbate PSCs view of themselves as the 'hidden' emergency service. Indeed, despite playing an integral (and stressful) part in emergency management, the role of call-handlers and dispatchers *is* often overlooked. For example, in the wake of major incidents, field responders are rightly commended for their role and results whilst PSCs and their role as the first, first responders often receive relatively scant acknowledgement. Being respected and appreciated by others is one of the most fundamental human needs. Consequently, people go to great pains to gain acceptance and approval. Recent research in the discipline of occupational health psychology shows that many stressful experiences are linked to being offended, such as being ignored or ridiculed through social exclusion, social conflict, or illegitimate tasks. Such experiences of being treated "unfairly" constitute an offence to self, and this can have quite far reaching consequences in terms of mental health and wellbeing. Conversely, being appreciated is one of the most important factors that increases motivation, satisfaction and a sense of self-worth, all of which are fundamental to promoting good mental health and wellbeing.

THE CAUSES OF OPERATIONAL STRESS INJURIES

Mental health injuries are an emotional or psychological trauma that a first responder suffers in the course of their duties. Recently, to extend the understanding of mental health injuries as being more than PTSD, and to reduce the stigma surrounding “mental health”, academics and clinicians have adopted the term “operational stress injuries”, recognising that harm occurs *because* of the trauma to which first responders are exposed and encompass many diagnosed disorders. The most common operational stress injuries include PTSD, depression, anxiety, acute stress disorder, trauma and stressor related disorders, substance abuse, and suicide.

The causes of mental and emotional injury and disorder amongst call-handlers and dispatchers are varied and reflect the unique circumstances of working in highly demanding and unpredictable environments.

Inability to predict calls

PSCs are the first point of contact for most emergencies. They collect and decipher as much information as possible and disseminate it in a timely and organized fashion to the next point of contact, i.e. the frontline field responders, all whilst providing reassurance and often life-saving instructions to callers. Unlike frontline field responders, call-handlers and dispatchers rarely have information regarding the details of the emergency prior to the incoming call. For instance, they may receive a calm call regarding an abandoned car immediately followed by a distraught call about an unresponsive new-born baby. The inability to predict call content and the volatile nature of the calls are additional sources of distress within emergency communications. Unpredictability is a core construct across fear and anxiety disorders and studies support an increased risk of post-traumatic stress disorder resulting from unpredictable aversive events.[3] Further, it is recognised that feeling in control helps to diminish the effects of stressful events: the uncontrollable nature of the calls therefore intensify stress levels in PSCs. Individuals with PTSD seem to be oversensitive to unpredictability[4], suggesting that PSCs that live with post-traumatic stress symptoms (PTSS) likely experience added daily job-related distress because of the lack of control, unforeseeable events, feelings of helplessness and powerlessness, uncertainty, and unknown outcomes.

“The inability to predict call content and the volatile nature of the calls are additional sources of distress within emergency communications. Unpredictability is a core construct across fear and anxiety disorders and studies support an increased risk of post-traumatic stress disorder resulting from unpredictable aversive events.”

* Data relates to US control centers. A UK-based study describes long periods with only three seconds between calls and up to 60 calls queuing at any one time.

Lack of visual information

Exposure to traumatic audio content has a significant impact on call-handlers and dispatchers. There is frequently an assumption that the lack of direct exposure to an emergency scene somehow protects the call-handler or dispatcher from the horrors of the situation. Traumatic aural exposure can however have severe emotional and cognitive impacts. Recent studies demonstrate that in comparison to watching scenes on video, listening to a narrative directly impacts a person's physiological reactions[5]: people show higher engagement with audio than video and specifically they display higher average heart rates; higher body temperatures; and changes in body temperature which indicate fluctuations in blood flow, a process regulated by the autonomic nervous system. Finally, listening rather than observing, results in higher ectodermal activity, which is a measure of emotional arousal.[6]

Overall, these findings demonstrate greater emotional and cognitive activation while listening to audio versus visual scrutiny. Such findings apply directly to call-handlers and dispatchers: listening to phone calls likely leads to an increase in cognitive and emotional engagement which when experienced as cognitive and emotional distress during traumatic exposure directly links to PTSD and depression.[7] During a typical 12-hour shift in a medium sized centre (or control room), call-handlers individually spend an estimated 10.5 hours answering between 40 and 120 phone calls separated by a six-second resting period*. Many of these calls will be stressful or distressing and this intense and prolonged stimulation stemming from duty-related traumatic audio leads to a negative impact on a person's nervous system, increasing the risk of developing stress-related disorders, such as PTSD and weaker immune systems, resulting in greater physiological concerns.[8]

Unknown call outcomes and lack of closure

In comparison to on-the-scene first responders, who often learn the outcome or resolution of the emergency, because call-handlers and dispatchers are physically removed from the scene, they often do not receive this information. This lack of knowledge regarding call outcomes contributes to a decline in mental health for several reasons:

1. Due to the nature of some calls, the caller might not be able to provide "the whole picture" or clear descriptions of the situation. This can leave the call-handler or dispatcher unable to provide the best assistance, which leads to feelings of inadequacy and/or incompetence.[9]

2. Further, "relay syndrome", when information goes from the person in distress to another and then eventually to the call-handler, can lead to feelings of powerlessness, confusion, and stress.

3. To complicate matters further, even if PSCs are able to gain a good understanding of the emergency, they may not learn the outcomes of the calls or receive "closure" and validation that their assistance made a difference.

The restricted ability to provide hands-on assistance and reduced likelihood of learning the outcomes of their assistance can negatively impact a call-handler's sense of efficacy or competence and their need for closure. Over time, an individual's baseline levels of stress are likely to increase which can lead to psychological exhaustion, anxiety, or depression. [10]

Call-handlers and dispatchers receive a large number of calls during each shift and unsurprisingly, the number of traumatic calls has been found to significantly correlate with perceived lack of control and feelings of helplessness.

Trauma load

Research consistently supports a dose-response relationship between trauma exposure and mental health injuries, i.e. the greater the amount of exposure over time, the greater the risk for symptoms of clinical conditions. Call-handlers and dispatchers receive a large number of calls during each shift and unsurprisingly, the number of traumatic calls has been found to significantly correlate with perceived lack of control and feelings of helplessness.[11] In addition, distress felt during the time of stressful calls (peritraumatic distress) can result in compassion fatigue and symptoms of PTSD amongst call-handlers and dispatchers.Further, the type of emergencies and the extent to which the calls are distressing (for example suicides, child-related trauma or uncooperative callers) can lead to higher PTSS levels amongst call-handlers and dispatchers.[12] The traumatic work load has also been shown to lead to burnout, which is the result of severe stress and high ideals experienced by people working in "support" professions. Burnout has been shown to adversely impact performance and decrease effectiveness, particularly in high-risk environments.[13] Further, job stress has been shown to predict poor job satisfaction, which in turn increases the risk of staff turnover.

Moral Injury

Any event, action, or inaction violating our moral or ethical beliefs is understood as a moral injury. In the emergency services this includes incidents such as witnessing (in person or over the phone) and/or failing to prevent harm or death; unintentional errors leading to injury or death; abuse or death of children; and leaders or peers who betray our moral and ethical beliefs. Exposure to events that inflict moral injury are inevitable in the profession, which is why it is important to be aware of the symptoms and impacts. Moral injury can create feelings of betrayal and hopelessness, shame, grief, sorrow and guilt. It can also influence personality changes, increase cynicism, and create an "us versus them" mentality between responders and those they help. This mentality becomes increasingly problematic over time in a responders' behaviour and can present as direct or indirect hostility toward those they are helping and/or a negative disposition about the profession and their peers overall, thereby impacting performance negatively and increasing risk to responders, the organization, and the public they serve.

Personal resonance

It is not always major incidents that trigger an emotional response. Often it can be less significant situations that for some reason resonate personally, for example because the caller reminds the call-handler of someone they loved, or they can relate to a situation from personal experience. These incidents can play on a person's mind for days, weeks or months afterwards. Call-handlers have described dealing with a situation that appeared on the surface to be relatively minor but resulted in them needing to seek further support or having a period off work. There is generally limited access to post-event debriefing for anything other than the most critical incidents. Subsequently call-handlers feel less able to seek support in dealing with the impact of a 'minor' incident because of how this might be perceived[14], i.e. it is not standard protocol and therefore they worry that colleagues will think there must be something "wrong" with them for needing this additional support.

"Still waiting"

The issue of managing callers waiting for police, fire, or ambulance response is regularly highlighted by call-handlers, i.e. either callers calling again when field responders have not yet arrived or needing to return a call to someone who has been waiting for a specified time. Whilst these calls are generally not regarded as high priority blue light emergencies, they can still be potentially life-threatening for the individual waiting, as well as being stressful for all parties involved. Generally, call-handlers are unable to reassure callers with an ETA because responders can be diverted right up until they have actually arrived on the scene of a call if a higher priority incident is identified elsewhere. Whilst the challenge is generally recognised by call-handlers as being an inevitable consequence of finite resources, it does nonetheless add to the stress of the job, especially as those waiting for a responder often direct their frustration and anger towards the call-handler. [15]

Targets

Call-handlers and dispatchers are all too aware of the pressures of targets. It is common practise for control rooms to display a live feed indicating current call volumes and wait times for incoming calls. Being able to see calls stacking up unnecessarily increases call-handler stress because the unpredictable nature of calls (see above) makes it impossible to work towards any meaningful call-time target. Anecdotal evidence also suggests that some call-handlers and dispatchers worry about what might be happening with each person in the queue, whilst knowing that it is only possible for them to handle one call at time.

It is reported that in one 12-hour shift, a call-handler will answer emergency calls for approximately 10½ hours.

Inability to take breaks

The unrelenting pressure of dealing with high call volumes for long periods have combined to create a culture of unyielding expectations on call-handlers and dispatchers, manifesting as the inability to take adequate breaks, or indeed any breaks during gruelling shifts. It is reported that in one 12-hour shift, a call-handler will answer emergency calls for approximately 10½ hours.[16] Inadequate break times, a lack of a quiet space in which to take a break, recuperate, or regain composure, and poor air quality, inadequate lighting, and ergonomics are all cited as amplifying work-related distress and exacerbating poor physical and mental health. Others have cited the guilt that dispatchers feel when they need to take a break or when they want to take a day off (Dicks, 2014); and also feeling extremely cautious before taking an unscheduled break out of fear that they might seem weak or unable to handle the job.[17] PSCs with rotational shift patterns and less break time are more likely to meet criteria for acute stress disorder (ASD) and PTSD compared to those who work a stable shift schedule.

Physical inactivity

Directly linked to the inability to take breaks, is the sedentary nature of the job: after hours spent sitting in front of computer monitors, call-handlers and dispatchers often end their shifts feeling physically exhausted. The most common complaints are headaches, itchy eyes, sleeping difficulties, insomnia (all attributed to using monitors for prolonged periods), or itchy skin, and muscle tension including shoulder, back and wrist pain (attributed to prolonged sitting and use of keyboards). Physical pain is directly linked to anxiety, depression and low job satisfaction. Unsurprisingly, time spent in control rooms has been linked with negative health complaints and even those with less than two years in the role reported high gastrointestinal difficulties and body pains.[18] Elevated rates of obesity (53.4%) have been detected in a large sample of call-handlers and dispatchers[19], and less than 1/5 fell in their normal weight range. In addition, inadequate sleep is linked to worsening health amongst critical communications professionals and high rates of absenteeism have been largely explained by acute illness and chronic diseases. These findings are unsurprising, as it is understood that prolonged stress impacts the immune system, leading to higher release of glucocorticoids, i.e. stress hormones.[20] This directly suppresses the immune system's activity and possibly leads to higher incidences of disease. Feeling out of control, overwhelmed and living a sedentary life are associated with weaker immune systems and it is therefore unsurprising that physical and physiological concerns are commonly reported by call-handlers and dispatchers working in these highly stressful settings.[21]

> Elevated rates of obesity have been detected in a large sample of call-handlers and dispatchers, and less than ⅕ fell in their normal weight range.

Inappropriate or abusive callers

Call-handlers and dispatchers routinely reference the stress caused by people using the emergency number inappropriately, such as calling for an ambulance to be taken for a routine appointment, or the fire service to replace batteries in a smoke alarm, or accidental misdials from mobile phones in pockets and bags. Call-handlers' frustration is tangible, especially when it proves difficult to get callers off the line. Call-handlers also report a large number of calls to non-emergency numbers from people in life threatening situations, usually because they "don't want to bother anyone". In this situation, call-handlers describe feeling unprepared - both emotionally and often physically - due to being of a different mindset for the non-emergency role and possibly using a separate part of the computer system to manage the call. This then results in processing difficulties, which take time to resolve and increase the time taken for call-handlers to establish facts in relation to the emergency. In addition, call-handlers describe how difficult it can be to manage callers who are verbally abusive towards them. In some instances, this can be recognised as a reaction to the caller's emergency situation but nonetheless, these calls are still unpleasant for the call-handler because emotions naturally run high in these situations. It is rarely a personal attack, but abusive language makes a difficult situation harder to handle. Ultimately, although call-handlers do not react to it while online with the caller, and instead carry on with calming the person in order to assist them, the emotional impacts are still felt and cumulate over the long term.

Disruption

The public safety communications profession is one of the most rapidly changing because of the frequent release of new technologies, which is a double-edged sword: technology allows call-handlers and dispatchers to swiftly gather more accurate data, such as caller location and medical information, whilst providing life-saving assistance *and* deploying emergency response teams. As technology-driven efficiencies are realised, so too are expectations of individuals' performance, which can result in additional stress and anxiety. These pressures are exacerbated by emergency services' correct obligation to consistently review and upgrade their processes, policies and technologies to ensure they can best serve their communities. Thus, PSCs often feel that they operate within a continuous cycle of disruption, which can lead to general anxiety disorder (GAD).

CALL TO ACTION

The industry and wider society can no longer turn a blind eye to the impacts on PSCs of their day-to-day operational duties. Research demonstrates that this issue is not about individuals' ability to "handle" the job but rather it is continuous exposure to trauma in the work environment which fuels the silent pandemic of mental health injuries within the industry. In their Canadian study, Carleton et al (2018) assert that over 50% of PSCs screened positive for a mental health injury or disorder due to the demands of their work. Our profession is experiencing a mental health injury crisis of global proportions, and it is time for the industry, civic leaders, and our governments, to address the causes and impacts of, and solutions to this mental health crisis.

> 50% of PSCs screened positive for a mental health injury or disorder due to the demands of their work.

OTHER TITLES IN THIS SERIES

Subsequent titles in this series address the symptoms and impacts of and solutions to the pandemic of mental health injuries in public safety communications, providing the industry with insights on understanding and tackling a global contagion that risks significantly undermining the success, value and impact of public safety communications and this vital profession:

No 02:2020: The warning signs (published September 2020)

No 03:2020: The hidden costs (published October 2020)

No 04:2020: Realising good cognitive health (published November 2020)

GLOSSARY OF TERMS

Burnout is a state of emotional, mental, and physical exhaustion due to prolonged stress. In the workplace it is often caused by a perceived or actual lack of control, causing feelings of overwhelm and lower job satisfaction.

Call-handlers, Dispatchers and Public Safety Communicators (PSCs): These terms are used interchangeably but can mean different roles in control rooms depending on the operational model and size of the centre.

> **Call-handlers** answer and triage emergency and non-emergency calls from the public requiring assistance from police, fire, or emergency medical services. They obtain important details such as location and nature of the incident and provide the caller with instructions to manage the emergency in progress. In some control rooms, they may also coordinate the dispatch of field responders to the incident.
>
> **Dispatchers** receive call information including location and nature of incident and dispatch field responders to the scene. They also provide responding personnel with call information throughout the duration of the call, track logistics such as type of resources assigned, and benchmark response times throughout the call. Additionally, they may coordinate ancillary support for incidents as necessary (such as other emergency services, tow vehicles, victim support, etc.). In some control rooms, the term dispatcher is used to describe someone who also performs the role of call-handler.
>
> **Public Safety Communications Professional (PSC)** is an inclusive term used to describe public safety communications professionals who perform in call handler or dispatcher roles, answer emergency and non-emergency calls for assistance, provide important instructions to callers in emergency situations, and dispatch public safety resources to the scene.

Compassion fatigue is understood as the profound emotional and physical erosion that takes place when helpers are unable to refuel and regenerate.

Generalized Anxiety Disorder (GAD) is characterized by persistent and excessive worry about a number of different things. People with GAD may anticipate disaster and may be overly concerned about money, health, family, work, or other issues. Those with GAD struggle to control their worry, recognise their level of concern is greater than situation dictates and may often expect the worst-case scenario in numerous situations, without apparent cause or evidence to support it.

Mental health injuries or **Operational stress injuries** occur as a result of the operational stressors present in the day-to-day duties of a PSC, which include exposure to trauma through the calls they answer and dispatch. There are both acute and cumulative stress and trauma impacts to PSCs during their careers that contribute to the development of mental health/operational stress injuries and disorders. Mental health/operational stress injuries can become disorders such as anxiety, depression, post-traumatic stress disorder, vicarious traumatization, compassion fatigue, burnout, substance abuse, suicidal ideation, attempts, and suicide.

Post-Traumatic Stress Disorder (PTSD), as described by the Canadian Mental Health Association, is a mental illness caused by exposure to trauma involving death or the threat of death, serious injury, or sexual violence. The trauma can be experienced first-hand, or a person can be witness to or exposed to the trauma of another and be affected. PSCs are routinely exposed to the type of trauma that causes PTSD.

Stigma is a mark of disgrace associated with a circumstance, quality or person (Oxford Dictionary, 2020). In public safety, there are still elements of stoic culture in many organizations, and with it comes stigma associated to discussing operational stress injuries and its impact on personnel. Understandably, stigma is a deterrent to accessing help or even being willing to admit one is suffering.

Substance abuse is a pattern of using any mood-altering substances such as drugs (illegal, legal, or prescription) and alcohol in a harmful way.

Suicidal ideation is thinking about, considering, or planning to take your life by suicide.

Vicarious traumatization (VT) or **Secondary Traumatic Stress (STS)** is caused by exposure to difficult or disturbing images and second-hand stories, and often impacts those who work in helper professions. VT is characterized as a significant shift in perspective where foundational beliefs about the world being a good place are altered because of repeated exposure to trauma and the suffering of others. Symptoms of VT and STS often present like those of PTSD.

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Many colleagues have provided insights that have helped to shape this series of white papers and in particular we want to acknowledge the following, who have been instrumental in guiding our development of this narrative:

Dr Stephen Czarnuch, Assistant Professor, Memorial University of Newfoundland

Stephen's PhD focused on human tracking, ambient intelligence and automated task assistance systems, designing systems to support the loss of cognition associated with dementia in a real-world, home environment. In 2015 he joined Memorial University as an assistant professor, jointly appointed to the Department of Electrical Engineering and the Discipline of Emergency Medicine in the Faculty of Medicine. He is a Scholar in Residence at the Canadian Institute for Public Safety Research and Treatment and as such is part of the team pioneering Canadian research into the causes and responses to public safety personnel trauma.

Dr Michelle Lilly, Associate Professor, Northern Illinois University

Michelle is a licensed clinical psychologist in Illinois and is trained in evidence-based treatments for PTSD, depression, anxiety, and other conditions, and has experience in delivering training and intervention at both individual and group levels. She has studied the physical and mental health of public safety professionals over the past decade and is among the first to publish data on the mental and physical health of 9-1-1 professionals. In 2019 she has received State funding to support the development and distribution of her Saving Blue Lives training on PTSD, suicide, peer support, and resilience.

Monica Million, Executive Director, Colorado 9-1-1 Resource Center

Monica has worked in the 9-1-1 industry for 18 years. She began her career as a 9-1-1 Telecommunicator, worked her way to the Center Training Officer, Supervisor and ultimately the Operations Manager of the Grand Junction Regional Communication Center. She holds the Emergency Number Professional Certification and has a BA from California State University, Long Beach. She is the Immediate Past President of the US National Emergency Number Association (NENA); a founding member of the Collaborative Coalition of International Public Safety (CCIPS); and the driving force behind NENA's Continuum Initiative, a comprehensive approach to promoting wellness in the 9-1-1 industry.

Ian Thompson, Chief Executive, British APCO

Ian was appointed Chief Executive Officer in December 2016 after retiring from a successful 30-year career in the police. Previously a volunteer member of the BAPCO Executive Committee for a number of years, Ian has a strong background in public safety critical communications and IT from his time in the police service. He has changed the focus of the association from blue light critical communications to a more inclusive membership from across all areas of public safety technology. He is a founding member of the Collaborative Coalition of International Public Safety (CCIPS) and a leading figure in defining international conversations about mental health injuries and wellbeing in public safety communications.

REFERENCES

[1]Carleton, R. N., Afifi, T. O., Turner, S., Taillieu, T., Duranceau, S., LeBouthillier, D. M., Sareen, J., Ricciardelli, R., MacPhee, R. S., Groll, D., Hozempa, K., Brunet, A., Weekes, J. R., Griffiths, C. T., Abrams, K. J., Jones, N. A., Beshai, S., Cramm, H. A., Dobson, K. S., … Asmundson, G. J. G. (2018). Mental disorder symptoms among public safety personnel in Canada. The Canadian Journal of Psychiatry / La Revue Canadienne de Psychiatrie, **63**(1), 54–64.

[2]Carleton et al., (2018). pp. 54-64.

[3]Lilly, M.M., Dadouch, Z., & Robinson, D.A., (2019). The First, First Responder: the neglected needs and unique challenges of work as a 9-1-1 telecommunicator. In C.A. Bowers, D.C. Beidel and M.R. Marks, eds. Mental Health Intervention and Treatment of First Responders and Emergency Workers. Hershey: IGI Global. p. 69.

[4]Grillon, C., Pine, D.S., Lissek, S., Rabin, S., Bonne, O., & Vythilingam, M. (2009). Increased anxiety during anticipation of unpredictable aversive stimuli in posttraumatic stress disorder but not in generalized anxiety disorder. Biological Psychiatry, **66**(1), pp. 47–53.

[5]Richardson, D.C., Griffin, N.K., Zaki, L., Stephenson, A., Yan, J., Curry, T., & Devlin, J.T. (2018). Measuring narrative engagement: The heart tells the story. bioRxiv, pp. 35–48.

[6]Critchley, H.D. (2002). Electrodermal responses: What happens in the brain. The Neuroscientist, **8**(2), 132–142.

[7]Pierce, H., & Lilly, M. M. (2012). Duty-related trauma exposure in 911 telecommunicators: Considering the risk for posttraumatic stress. Journal of Traumatic Stress, **25**(2), 211–215.

[8]Lilly et al., (2019). pp. 63-85.

[9]Forslund, K., Kihlgren, A., & Kihlgren, M. (2004). Operators' experiences of emergency calls. Journal of Telemedicine and Telecare, **10**(5), pp. 290–297

[10]Lilly et al., (2019). p. 69.

[11]Adams, K., Shakespeare-Finch, J., & Armstrong, D. (2015). An interpretative phenomenological analysis of stress and well-being in emergency medical dispatchers. Journal of Loss and Trauma, 20(5), pp. 430–448.

[12]Pierce & Lilly (2012).

[13]Bakker, A.B., Demerouti, E., & Euwema, M.C. (2005). Job resources buffer the impact of job demands on burnout. Journal of Occupational Health Psychology, **10**(2), pp. 170–180.

[14]Mind, (2019a). Blue Light Programme – Phase Three. New Audience Scoping: 999 Call Handlers. Final Report. London: Mind. [viewed 20 December 2019]. Available at www.mind.org.uk/media/24690335/blue-light-programme_999-call-handler-scoping-report.pdf

[15]Mind (2019a).

[16]Dicks, R.L.H. (2014). Prevalence of PTSD Symptoms in Canadian 911 Operators (unpublished master's thesis). University of the Fraser Valley, Canada.

[17]Gurevich, M., Halpern, J., Brazeau, P., Defina, P.S., & Schwartz, B. (2009). Frontline stress behind the scenes: Emergency medical dispatchers. Ryerson University, Do Psychology.

[18]Rameshbabu, A., Reddy, D.M., & Fleming, R. (2013). Correlates of negative physical health in call center shift workers. Applied Ergonomics, **44**(3), pp. 350–354.

[19]Lilly, M.M., London, M.J., & Mercer, M.C., (2016). Predictors of obesity and physical health complaints among 911 telecommunicators. Safety and Health at Work, **7**(1), pp. 55–62.

[20]Carlson Neil, R. (2013). Physiology of behavior. Boston: Pearson.

[21]Lilly et al., (2019). pp. 63-85.

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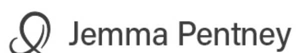

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