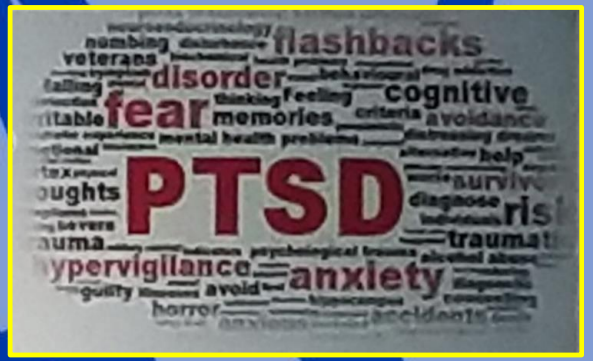
Unavoidable Stress: The Unrecognized Epidemic



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A key responsibility of emergency managers is to provide as safe a workplace as possible and help their providers maintain good mental health and overall wellbeing.

It's not only the right thing to do, it is cost effective and reduces long term expenses that result from lost work days and medical costs.

A substantial number of studies of the causes and exacerbating factors of debilitating mental stress have been done over the years, but not specifically regarding the paramedicine industry.

They've been targeted more toward physicians, police officers, firefighters and combat veterans.

The “new” EMS dilemma

(We must refrain from terming it a “disorder”)


PTS

The brain is the most advanced and complex image retention (camera) mechanism every created

A.J. Heightman, Editor-Emeritus, *JEMS*

There is no patent or trademark on it, it does not lose images due to battery failure & does not have a SD or sim card that you can remove or easily alter.

A.J. Heightman, Editor-Emeritus, *JEMS*

Chemical imbalances and physical trauma such as concussions & traumatic brain injuries have almost the same effect as a damaged hard drive or faltering CPU

The ability to
remember (or forget/delete)
is seriously impacted and it takes
an educated “technician” or
psychologist to find and fix bad
sectors or redirect or recover lost
(or repressed) images
& data (memory).


Post Traumatic Stress (PTS)
in WWII

Vietnam

31% of the 3.1 million Vietnam veterans (930,000 troops) suffered from Post Traumatic Stress

Source: 1988 Veteran's Administration study
(Conducted 13 years after the end of the Vietnam War)

Typical symptoms of PTS are:

- Cynicism
- Frustration
- Fear
- Negative self-image
- Problems with intimacy
- Distrust & paranoia
- Loneliness

Source: *The Graffiti of War Project*

- Suicidal feelings
- Addiction
- Alcoholism
- Thinking that feelings are meaningless
- Feeling powerless or hopeless
- Resignation (“don’t care”)

Source: *The Graffiti of War Project*

We must focus more on the impact of stress on EMS, Fire, Law Enforcement & Dispatch personnel

The Firefighter Behavioral Health Alliance has documented,

nearly 600 EMS & firefighter suicides since 2012

That’s
200 a year!

As of October 1, 2015
there were
84 EMS provider suicides
in the United States

That's too many!

Courtney Smith, 54, drove to a desolate country road on a cold winter morning. It was three hours from the city where she worked as a medic for 28 years.

Courtney pulled to the side of the road and sent a text to her three children. She told them she was proud of them and that she loved them.

She then walked out into the field beside the road, pulled out a pistol and succumbed to the memories that had been nagging her for years of shift work, responding to countless horrific calls.

The flashbacks of a mother's wail when she is told her child has died, the vision of bodies mangled in a vicious car wreck, and the memories of all the suicides—the smells and the sounds—would plague her no more.

Courtney always “seemed” to be able to manage the stress that accompanies the critical calls —the type of calls that haunt most people.

It was all a facade.

Courtney was able to hide the pain and subdue the effects of the nightmares and flashbacks she had almost every day.

She knew if she showed any weakness, she would be pulled off the truck and possibly lose her job.

The thought that she would lose the respect of her partner, her boss and her co-workers was more intimidating than addressing her issues.

The idea that she may need counseling was even scarier.

Courtney's co-workers, friends and family were surprised by her suicide.

They said everything in her life seemed fine. She was happy, vibrant and excited about her future.

They said she loved her job, loved her children and loved her husband.

She was the person they could all count on when *they* needed help.

Others saw something—a shift in her outlook, her mannerisms, her attitude—but didn't know what to do or what to say.

Their concerns for appearing too nosy or breaching some unknown boundary into Courtney's personal life seemingly outweighed what was really important.

They were *unable to see* the depth of her pain and her need for help.

They felt guilty for not speaking up and talking to her about their concerns and now there was nothing they could do except support her family and each other.

Reviving Responders

Reviving Responders **was born out of a research assignment from Fitch & Associates' *Ambulance Service Manager Program* researched the prevalence & severity of EMS provider stress in the workplace.**

These researchers addressed what the researchers termed "critical stress" (CS) and also looked at providers who've either contemplated or attempted suicide.

In addition,
they attempted to measure
how effective current support mechanisms are from the provider's point of view,
and
what can be improved through these support institutions.

Lastly, they took a snapshot of the various cultures of EMS throughout the country as they pertain to provider support for mental health and looked for any connections between an EMS provider's stress level and the associated culture in which they are immersed.

Many recipients then shared the survey via social media, allowing the survey to spread to providers and organizations across the country.

Critical Stress (CS) was defined as:

"The stress we undergo either as a result of a single critical incident that had a significant impact upon you, or the accumulation of stress over a period of time. This stress has a strong emotional impact on providers, regardless of their years of service."

Questions asked of the respondents:

1. **If they've ever experienced CS;**
2. **If they've ever contemplated suicide;**
3. **If they've ever attempted suicide;**
4. **If support was available;**
5. **If support was used.**

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The survey also asked about the different types of support, such as employee assistance programs (EAP) and critical incident stress management (CISM) teams, with the intent of finding how effective EMS providers found the help, and what they felt would have made the support more effective.

Finally, the survey asked questions about whether the provider felt supported by their peers and management team with respect to their mental wellness, and asked whether or not an employee was encouraged by their peers and management team to use the formal support services available.

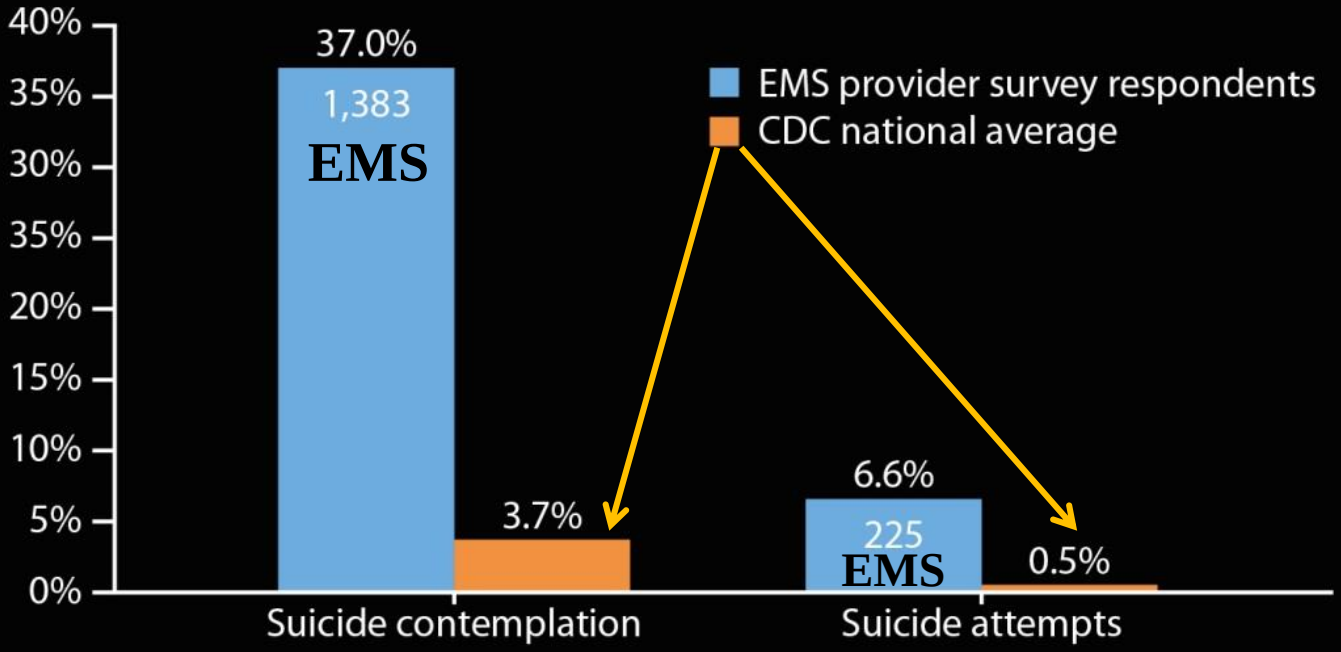
It was unknown how many responses would be received. The researchers hoped for 500 responses; but they received an amazing 100 responses in one hour, and within one week there were over 1,000.

The survey quickly had respondents from all 50 States and wound up with a total of

4,022 responses

The results showed that 3,447 (86%) of the 4,022 respondents experienced CS, but the shocking discovery was that 1,383 (37%) respondents had contemplated suicide *and* 225 (6.6%) had actually tried to take their own life.

Figure 1: Comparison of suicide contemplation and attempt rates: survey respondents vs. national average (n = 4,022)

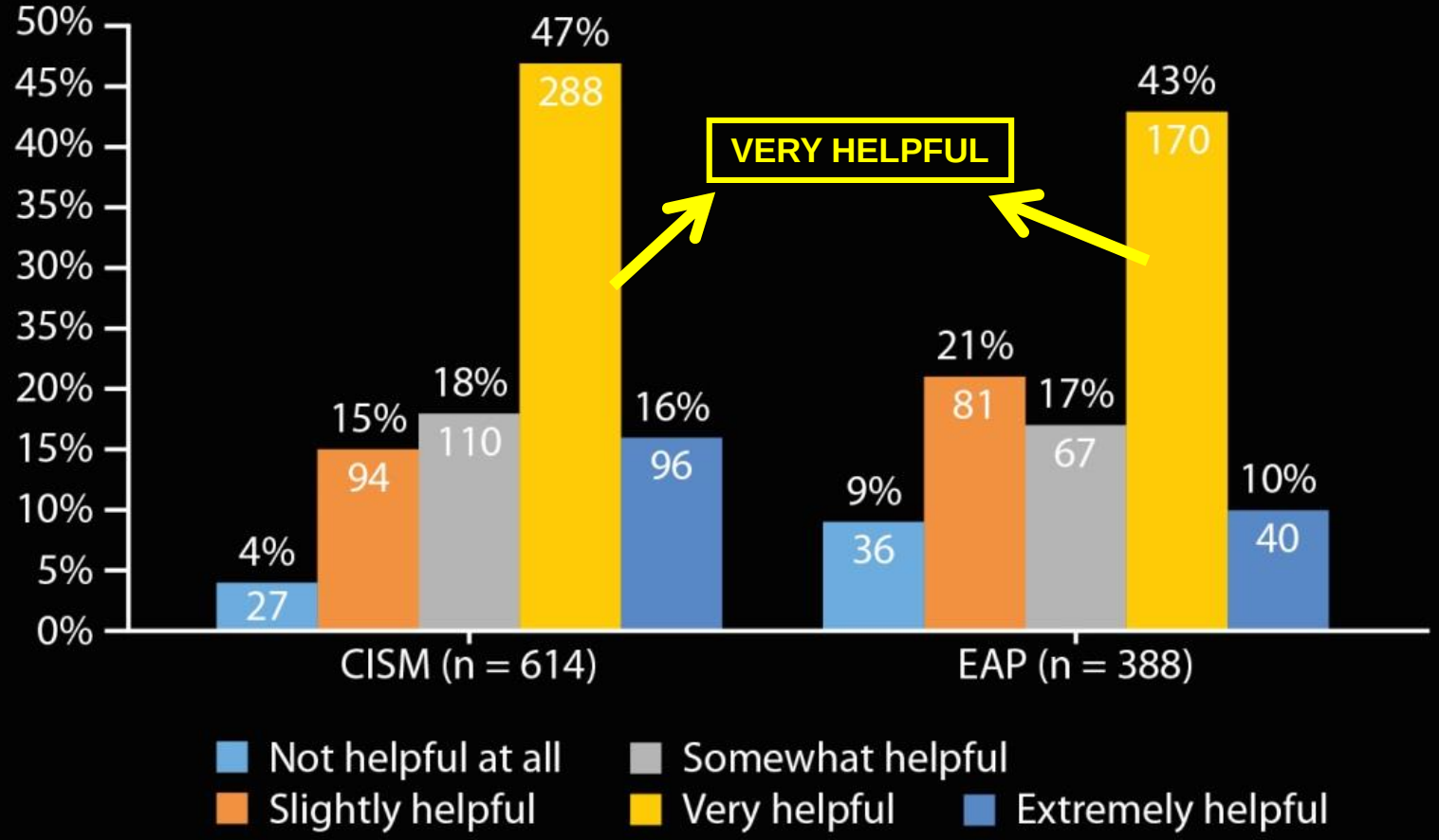


Of the 86% of respondents who experienced critical stress:

18% (614) attended CISM-type programs; and 63% (388) found the sessions very helpful or extremely helpful.

Of the 11% (394) who attended EAP sessions, 53% (210) found them very or extremely helpful.

Figure 2: Effectiveness of formal support institutions



Some who used CISM teams stated they received the CISM support "too late" or that they didn't feel comfortable sitting in a room of people to talk about how they felt, and were horrified to have to "relive the call."

There were two (2) critiques prevalent in the responses:

1. **The support was either not accessible; or**
2. **The providers felt they were discouraged from using the support**

Some comments from survey respondents that illustrate these critiques included:

“Fear of being fired. We’re not allowed CISM at our service.”

“I asked for help and ended up losing my 22-year career.”

“Asked for help and was laughed at.”

“Was told to get back to work. Was told I ‘signed up for it’ so deal with it.”

“It wasn’t offered - even though we all thought it should be.

“A co-worker who heard about my stress (PTS) made comments about me not being ‘mentally fit enough to be on a truck’ because the kid’s death bothered me.”

1,592 (40%) of the respondents reported they had access to support but didn't seek help.

25% of the respondents who didn't seek help for their CS were concerned about how they'd be viewed at work if they had sought support.

Over 40% of those who had either contemplated or attempted suicide and didn't get help listed *scrutiny* from others as the reason why they didn't seek support.

Critical Stress & EMS Culture
Another shocking revelation

The data showed that
EMS culture is a huge barrier
to providers getting relief for
their sleepless nights or
relived nightmares

As an industry,

how we support our EMTs and paramedics when they're feeling overwhelmed varies from one department to the next

Four prominent cultures dominated the data:

1. **A field provider doesn't experience mental wellness support from their peers or management team. This field provider is also not encouraged to engage in formal support institutions like EAP or CISM;**

Four prominent cultures dominated the data:

2. **A field provider experiences support from his peers regarding his or her mental wellness, but doesn't feel supported by the management team. This field provider isn't encouraged to engage in formal support institutions like EAP or CISM;**

3. **A field provider experiences support from their peers and management team, but there's no encouragement for a field provider to utilize CISM or EAP; and**

4. **A field provider is supported by *both* peers and the management team. This field provider is *also* encouraged to utilize the formal support institutions like EAP and CISM.**

The survey results show that presence of CS was roughly the same in all of these cultures

But the rates of suicide contemplation and suicide attempts *significantly decreased* when a field provider had the support of their peers and *was encouraged* to utilize the formal support institutions in place

A supportive *and* encouraging environment cut suicide contemplation rates in half and attempt rates by 66%.

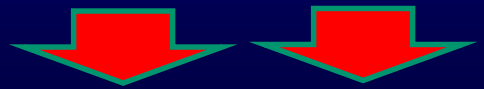


Figure 3: EMS cultures and the presence of critical stress

FAIRLY EVEN

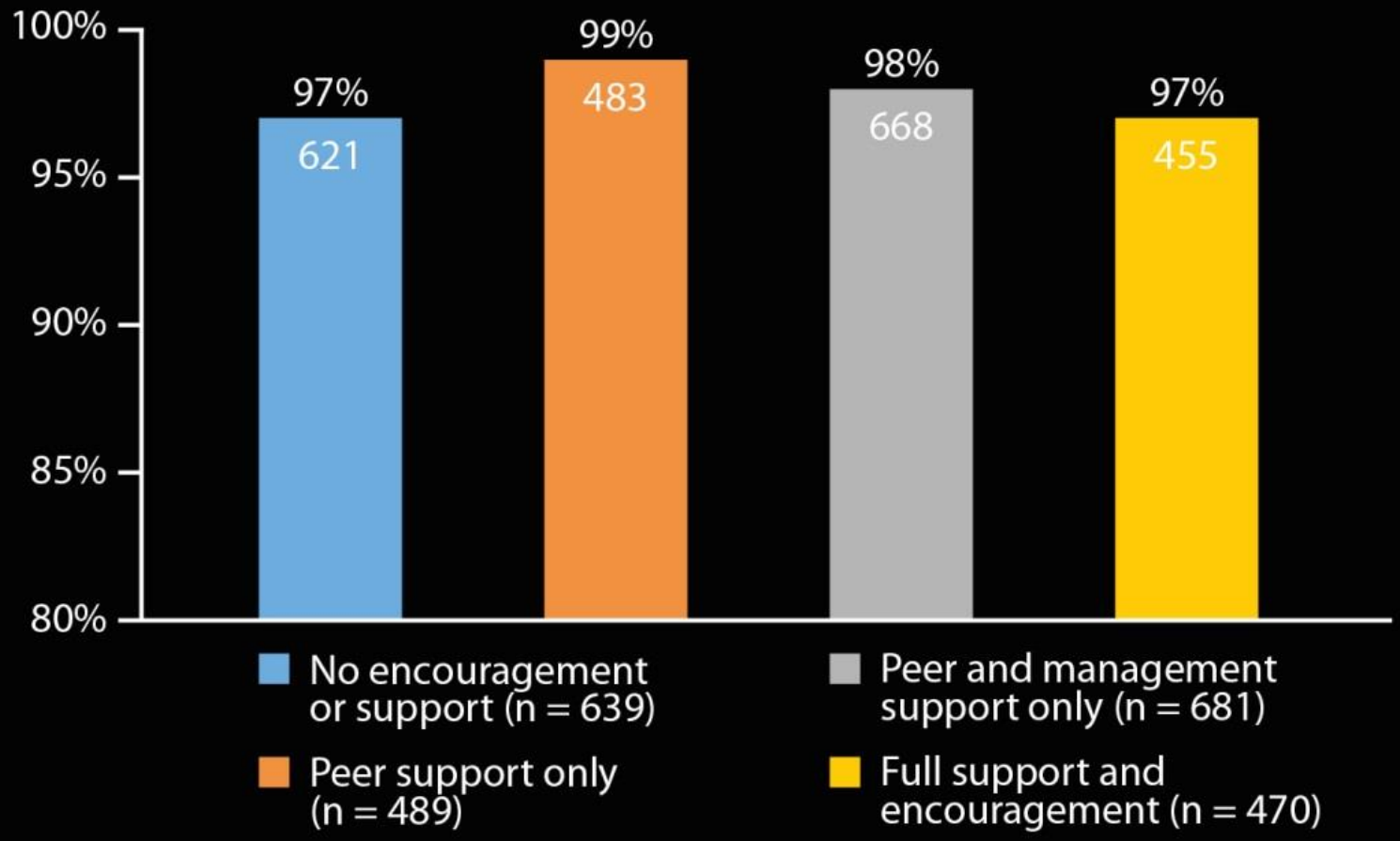
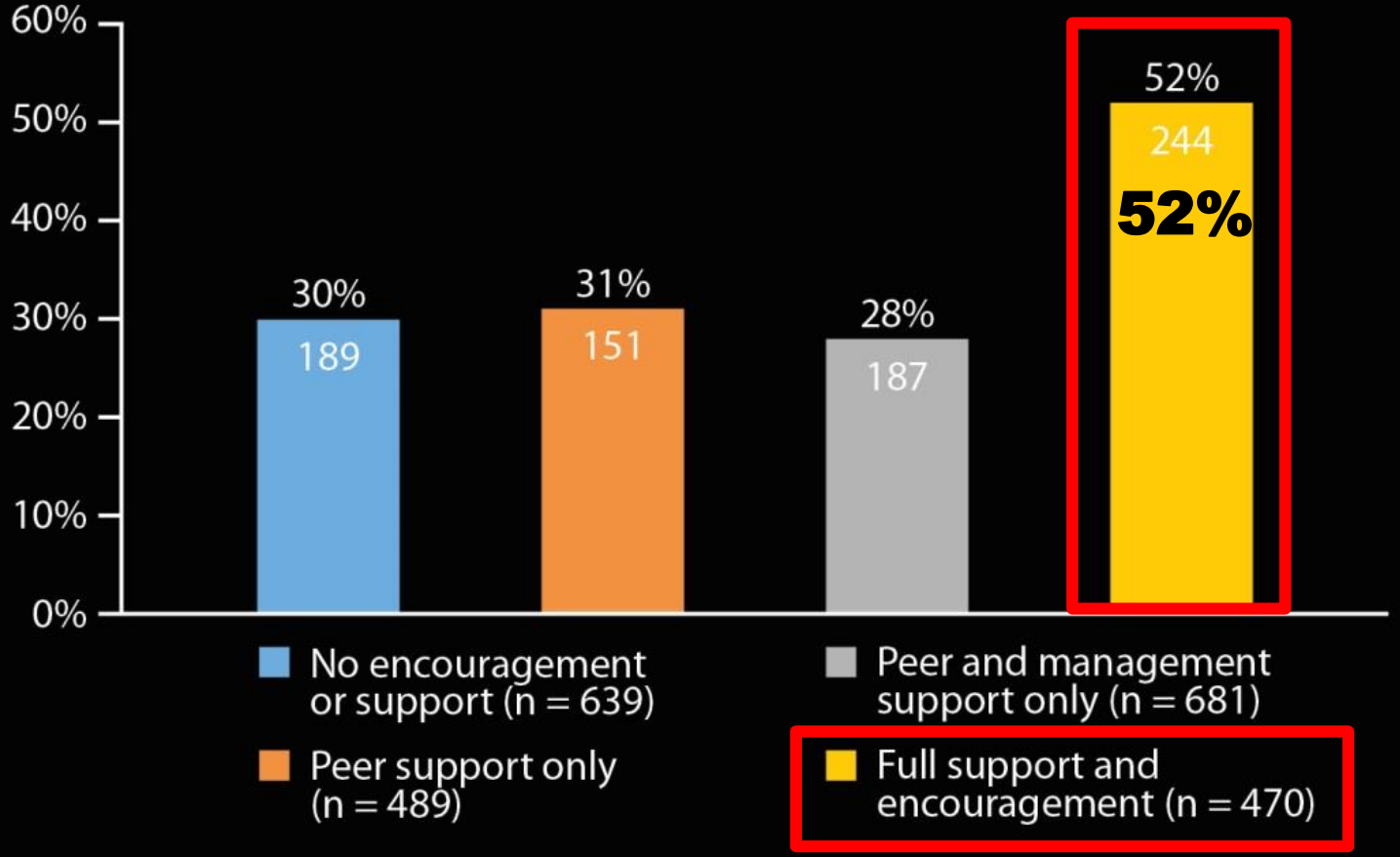


Figure 5: EMS providers who sought help for stress in various EMS cultures



Providers seeking help for CS from either a CISM or EAP program

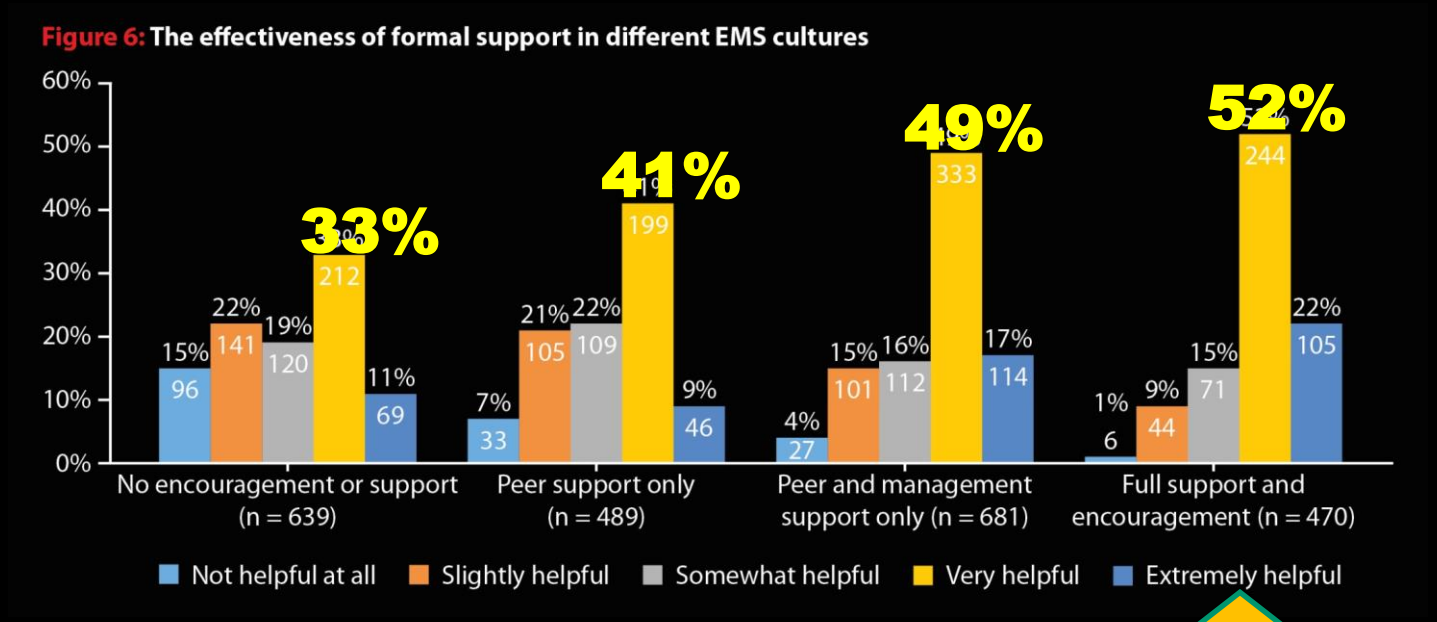
The data suggests that *being in a supportive environments isn't enough!*

The major factor increasing the likelihood that a respondent would seek help was if he or she was *encouraged to seek help by either their peers or management.*

The perceived effectiveness of the formal support institutions is greater when a field provider is supported by peers and management with respect to mental wellness,

and **they are encouraged to utilize formal support.**

The Effectiveness of Formal Support in the Different EMS Cultures



The support effectiveness was greater when the field provider attended on a *voluntary basis* versus instances where a field provider was *mandated to attend*.

Conclusions

Suicide contemplation and attempt rates among EMS practitioners are significantly higher than the general population.

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Suicide contemplation and attempt rates among EMS practitioners are significantly higher than the general population.

10 times higher!

There may be a variety of factors that contribute to CS beyond the things we see throughout our careers:

- **Sleep deprivation (Also – having to work extra shifts of jobs to make ends meet);**
- **Feeling underappreciated;**
- **Marital / relationship / partner stress and strife;**
- **Poor nutrition and lack of exercise (overweight or obesity)**

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Action Plan

- **A conscious decision is needed to make a positive change in the culture surrounding mental health.**

- **No special training is necessary to support your coworkers. Ask them how they're doing, and be honest when others ask you how you're doing.**

- **Support each other, support yourself and take care of yourself.**

- **Talk and listen to each other!**

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- **Talk and listen to each other!**

Help and encourage each other to get the help needed!

If you feel like one of your peers needs more advanced help, there are several resources you can use.

Websites like:
www.revivingresponders.com &
www.codegreencampaign.org

- **Be part of the solution, and not tolerate the behavior of those who are part of the problem.**

- **Confront the behavior of those who promote a negative culture at your workplace.**

- **Support those who promote a positive culture.**

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- **Support those who promote a positive culture**

Make sure your agency has an

Employee Assistance Program

(EAP) they can turn to

(*and count on*)

to get support

[confidentially]

when they need it!

Together, we need to make changes in the culture to help improve the well being of our personnel

SLEEP DEPRIVATION

The elephant in the room!

After multiple, predictable and avoidable U.S. naval accidents that killed sailors and crippled vessels that were loaded with accident avoidance technology, the Navy began to realize that sleep deprived and overworked sailors working inappropriate schedules, was the root of the problem.[7-8]

7. Circadian Rhythm Being Implemented on Navy Surface Ships. www.public.navy.mil/surfor/Pages/Circadian-Rhythm-Being-Implemented-on-Navy-Surface-Ships.aspx

8. www.public.navy.mil/surfor/Pages/fleetsupportimprovement.aspx

Researchers Michael H. Bonnet and Donna L. Arand, report:

1. “There is strong evidence that sufficient shortening or disturbance of the sleep process compromises mood, performance and alertness, and can result in injury or death.

2. In this light, the most common sense ‘do no wrong’ medical advice would be to avoid sleep deprivation.”[7]

7. Circadian Rhythm Being Implemented on Navy Surface Ships. www.public.navy.mil/surfor/Pages/Circadian-Rhythm-Being-Implemented-on-Navy-Surface-Ships.aspx

“Better sleep is linked to improved memory, creativity, productivity, concentration, happiness, optimism and frustration tolerance.”

Professor Nita Lewis Shattuck, Ph.D., U.S. Naval Postgraduate School

Epic research by *JEMS* Editorial Board member Dan Patterson, a PhD/paramedic, and his colleagues, (February *JEMS* cover story), as well as multiple other studies and reports, have now charted a roadmap that emergency service officials should, and probably will have to, pay attention to.[1-6]

1. Patterson, Daniael J: Dead Tired - Evidence-based recommendations for combatting fatigue in EMS. JEMS. February 2018.
2. medium.com/@esaylors/firefighters-are-not-machines-they-need-sleep-9fc33b8cfb3e
3. www.fireengineering.com/articles/print/volume-170/issue-4/features/how-sleep-affects-long-term-health.html
4. www.nsca.com/education/articles/managing-firefighter-fatigue/
5. www.usfa.fema.gov/current_events/081717.html
6. aams.org/toolbox/IAFC%20-%20Effects%20of%20Sleep%20Deprivation%20Report.pdf

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Stress & Sleep Deprivation – A.J. Heightman - JEMS

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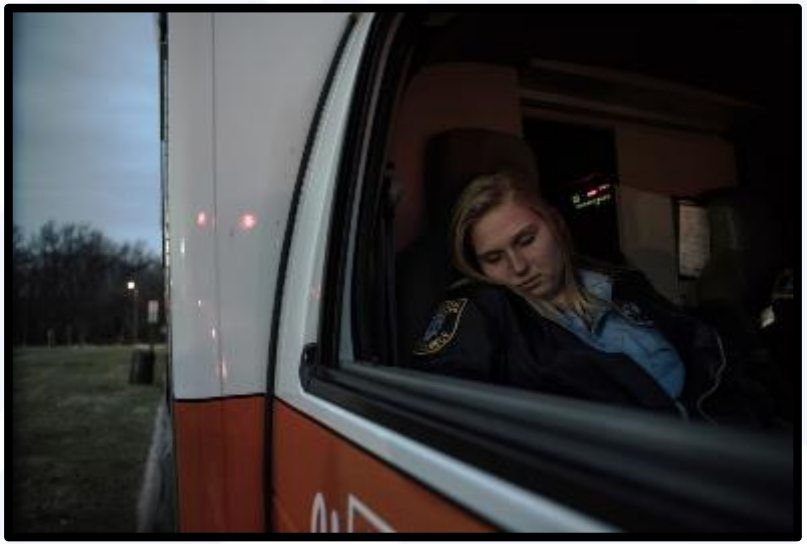
- **May 24, 2017: An ambulance crashes and the 64-year-old patient dies on scene. The ambulance operator fell asleep at the wheel just moments before the crash.**

The ISSUE!

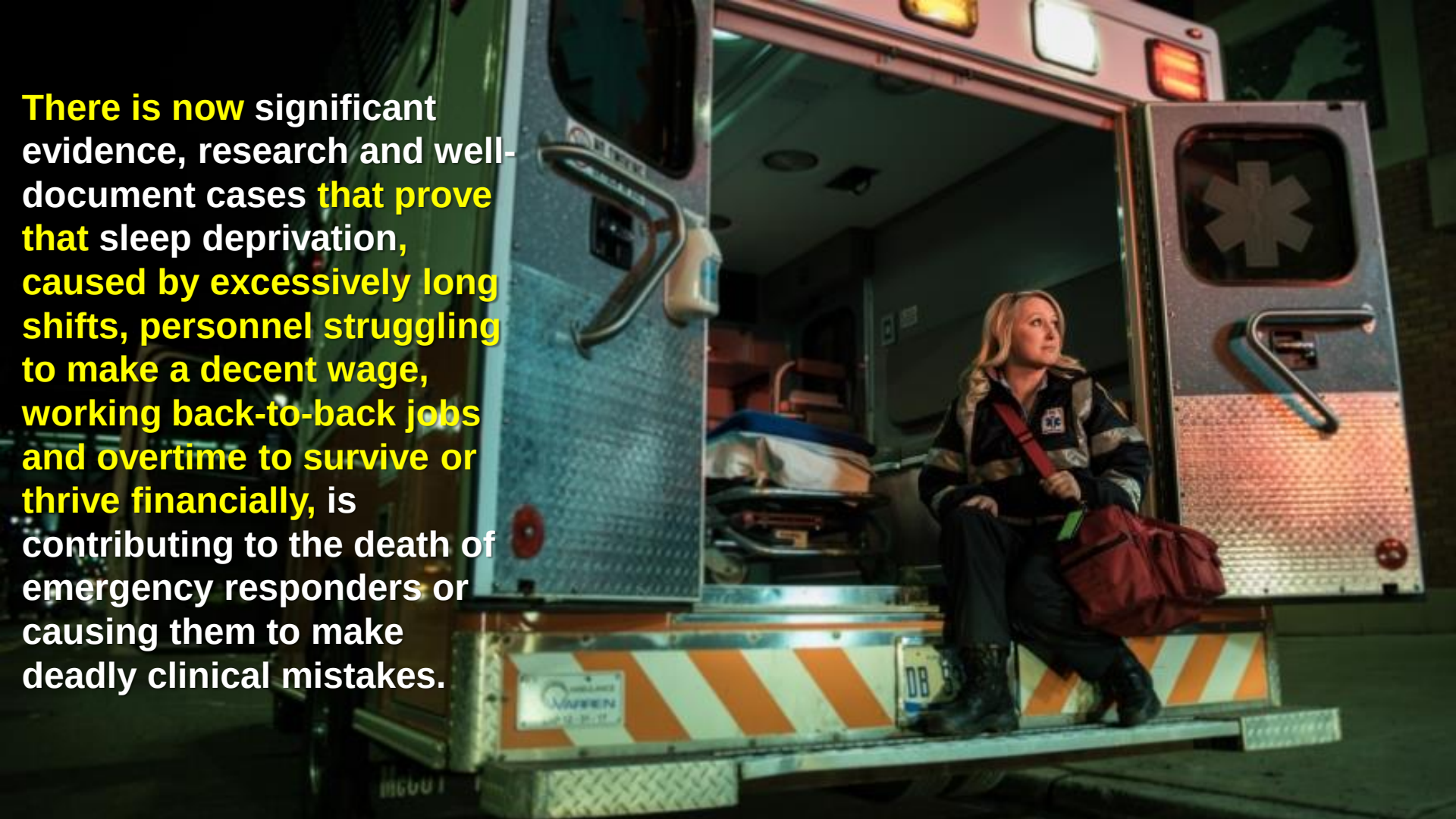
Our crews are struggling with stress, finances, excessively demanding shifts and being punished for sleeping on duty and afraid to report medical errors



Stress & Sleep Deprivation – A.J. Heightman - JEMS

These are issues that have been ignored – *until now!*

The medical community, military officials, and EMS administrators have known that these issues were problematic and deadly, but have ignored them or brushed them under the rug to save money, gain maximum effort from tired, overworked and over-stressed personnel, and meet the often unachievable or underfunded demands of citizen or service contracts


There is now significant evidence, research and well-document cases that prove that sleep deprivation, caused by excessively long shifts, personnel struggling to make a decent wage, working back-to-back jobs and overtime to survive or thrive financially, is contributing to the death of emergency responders or causing them to make deadly clinical mistakes.

Research and countless deadly incidents, like the ones described earlier, have awoken the sleeping giant of ignorance and placed responsibility, and liability, on managers and government officials, to make changes.

Sleep Deprivation

The National Sleep Foundation (NSF) recommends that adults obtain between seven and nine hours of sleep per 24-hour period.

Most U.S. adults report seven hours of sleep per night, yet one-third (33%) of EMS responders report inadequate sleep in the previous 24 hours.

Sleep Deprivation

Most EMS clinicians don't meet NSF recommendations for sleep and many report inadequate sleep and many of us have partners or know of colleagues who regularly report getting little or no sleep between shifts.

1. **50% of EMS personnel sleep only six hours every 24 hours - with more than half reporting poor sleep quality, and**
2. **70% report some problems with sleep.**

Stress & Sleep Deprivation – A.J. Heightman - JEMS

Fatigue Mitigation Strategies

In the summer of 2017, a panel of experts reviewed the evidence germane to multiple fatigue mitigation strategies and formulated five recommendations tailored to EMS operations.

Fatigue Mitigation Strategies

- A research team of more than two-dozen investigators and staff in a detailed review of **more than 38,000 pieces of literature.**
- They evaluated the quality of the evidence linked to multiple fatigue mitigation strategies and **led a panel of experts through a rigorous protocol for evidence-based guidelines development.**

Fatigue Mitigation Strategies

The expert panel reached consensus on recommendations that addressed five areas:

1) **Shift duration;**
2) **Access to caffeine;**
3) **Use of napping during shift work;**
4) **Education and training; and**
5) **Use of reliable/valid instruments to diagnose fatigue in the field.**

Recommendation #1:

1. **EMS organizations should use fatigue/sleepiness survey instruments to measure and monitor fatigue in EMS personnel;**
2. **Specifically, use survey instruments discovered in a recent systematic review that show evidence of reliability and/or validity.[1]**

Patterson PD, Higgins JS, Van Dongen HPA, Buysse DJ, Thackery RW, Kupas DF, Becker DS, Dean BE, LIndbeck GH, Guyette FX, Penner JH, Violanti JM, Lang ES, Martin-Gill C. Evidence-based guidelines for fatigue risk management in Emergency Medical Services. Prehosp Emerg Care. 2017;00(00):0000-0000 Accepted 0009/0001/2017 IN PRESS.

Recommendation #2:

- **The panel recommended that EMS personnel work shifts that are shorter than 24 hours in duration.[46]**
- **The review of evidence showed that shifts 24 hours in duration or longer are unfavorable in terms of fatigue and related outcomes.[48]**

46. Patterson PD, Higgins JS, Van Dongen HPA, Buysse DJ, Thackery RW, Kupas DF, Becker DS, Dean BE, LIndbeck GH, Guyette FX, Penner JH, Violanti JM, Lang ES, Martin-Gill C. Evidence-based guidelines for fatigue risk management in Emergency Medical Services. Prehosp Emerg Care. 2017;00(00):0000-0000 Accepted 0009/0001/2017 IN PRESS.

48. Patterson PD, Runyon MS, Higgins JS, Weaver MD, Teasley EM, Kroemer AJ, Matthews ME, Curtis BR, Flickinger KL, Xun X, Bizhanova Z, Weiss PM, Condle JP, Renn ML, Sequeira DJ, Coppler PJ, Lang ES, Martin-Gill C. Shorter versus longer shift duration to mitigate fatigue and fatigue related risks in Emergency Medical Services: A systematic review. Prehosp Emerg Care. 2017;00(00):0000-0000-Accepted 0009/0001/2017 IN PRESS.

Recommendation #3:

The panel recommended that EMS personnel have access to caffeine as a fatigue countermeasure.

The review of evidence revealed that few studies have evaluated the impact of caffeine on safety and other outcomes among EMS personnel or similar shift workers.[51]

Recommendation #3:

The available evidence showed <u>a positive impact of caffeine on performance and other outcomes.</u>

80 mg of caffeine

Recommendation #3:

The review didn't identify an optimal dose of caffeine, yet 250 mg per day has been cited as a low-to-moderate, generally safe dose

Coffees	Serving Size	Caffeine (mg)
Starbucks Coffee, Blonde Roast	venti, 20 oz.	475
Dunkin' Donuts Coffee w. Turbo Shot	large, 20 oz.	398
Starbucks Coffee, Pike Place Roast	grande, 16 oz.	310
Panera Coffee, Light Roast	regular, 16 oz.	300

- **Administrators may need to consider providing access to caffeinated beverages by stocking coolers on ambulances; especially for crews deployed in remote locations or at night with limited or no access to stores or other resources.**
- **The panel recommends that the goal for any organization that adopts this recommendation should be that 100% of all shifts include access to caffeine.**

Stress & Sleep Deprivation – A.J. Heightman - JEMS

Recommendation #4:

Recommended that EMS personnel have the opportunity to nap while on duty to mitigate fatigue

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Recommended that EMS personnel have the opportunity to nap while on duty to mitigate fatigue

- **The review of evidence showed that napping during shifts (i.e., *actually sleeping, not just resting*) had a positive impact on outcomes.[53]**
- **The panel emphasized that this recommendation should be applied to extended shifts and on overnight shifts.**

46. Patterson PD, Higgins JS, Van Dongen HPA, Buysse DJ, Thackery RW, Kupas DF, Becker DS, Dean BE, LIndbeck GH, Guyette FX, Penner JH, Violanti JM, Lang ES, Martin-Gill C. Evidence-based guidelines for fatigue risk management in Emergency Medical Services. Prehosp Emerg Care. 2017;00(00):0000-0000 Accepted 0009/0001/2017 IN PRESS.

53. Martin-Gill C, Barger LK, Moore CG, Higgins JS, Teasley EM, Weiss PM, Condle JP, Flickinger KL, Coppler PJ, Sequeira DJ, Divecha AA, Matthews ME, Lang ES, Patterson PD. Effects of napping during work on sleepiness and performance in Emergency Medical Services personnel and similar shift workers: A systematic review and meta-analysis. Prehosp Emerg Care. 2017;00(00):0000-0000-Accepted 0008/0031/2017 IN PRESS.

Recommendation #5:

The panel recommends that all EMS personnel receive education and training in sleep health and the dangers of fatigue to mitigate fatigue and fatigue-related risks.[46]

- **It should occur as part of new employee orientation (i.e., onboarding), and be repeated every two years for all employees.**
- **Findings from a review of diverse education and training programs that include a sleep health or fatigue component show positive results in the weeks following education and training.[54]**

46. Patterson PD, Higgins JS, Van Dongen HPA, Buysse DJ, Thackery RW, Kupas DF, Becker DS, Dean BE, LIndbeck GH, Guyette FX, Penner JH, Violanti JM, Lang ES, Martin-Gill C. Evidence-based guidelines for fatigue risk management in Emergency Medical Services. Prehosp Emerg Care. 2017;00(00):0000-0000 Accepted 0009/0001/2017 IN PRESS.
54. Barger LK, Runyon MS, Renn ML, Moore CG, Weiss PM, Condle JP, Flickinger KL, Divecha AA, Coppler PJ, Sequeira DJ, Lang ES, Higgins JS, Patterson PD. Effect of fatigue training on safety, fatigue, and sleep in Emergency Medical Services personnel and other shift workers: A systematic review and meta-analysis. Prehosp Emerg Care. 2017;00(00):0000-0000-Accepted 0007/0025/2017 IN PRESS.

In addition

– Here's what we know thus far about the *causes* of mental illness *and what affects its various elements*

Chronic Pain

Research has revealed that chronic pain is strongly associated with increased incidents of suicide and suicidal ideation.[1-2]

Other research has drawn the conclusion that multiple sources of chronic pain compound the potential for suicide and violent impulses.

They also reveal that the degree to which chronic pain interferes with an individual's ability to engage in social, recreational, emotional and physical activities, is a stronger indicator of suicidal and violent ideation, than the intensity of the pain.[3]

1. Legarreta, M., Bueler, E., DiMuzio, J., et al: Suicide Behavior and Chronic Pain: An Exploration of Pain-Related Catastrophic Thinking, Disability, and Descriptions of the Pain Experience. The Journal of Nervous and Mental Disease, pp. 206(3), 217-222. 2018, March).
2. Racine, M: Progress in Neuropsychopharmacol & Biological Psychiatry. Chronic pain and suicide risk: A comprehensive review. (2017, August 26).
3. Blakey, S., Wagner, H., Naylor, J., et al: Chronic Pain, TBI, and PTSD in Military Veterans: A Link to Suicidal Ideation and Violent Impulses? The Journal of Pain. (2018, March 8).

Additionally, some research indicates that a person's perception of the severity of the pain from which they suffer, and their tolerance of it, is influenced adversely *when they are also suffering from* a Mood Spectrum Disorder (MSD) - anxiety, depression, bipolar, and others.[4i]

4. Ciaramella, A: Mood Spectrum Disorders and Perception of Pain. The Psychiatric Quarterly, pp. 687-700. (2017, August 26).

i Mood spectrum disorders are mental illnesses that exist through a range of linked conditions, sometimes including singular symptoms and/or characteristics. The various components of a mood spectrum disorder have either a similar appearance or are believed to be caused by the same underlying mechanism. MSDs include anxiety, depression, bipolar, and others.

So, physical injuries suffered by our practitioners, as well as their emotional state of mind, substantially influences their predisposition to thoughts of suicide and violence.

Whether their injuries or mental stress is work related or not, it has an impact on their wellbeing and susceptibility to suicide ideation and violent behavior.

And, their susceptibility to taking deleterious actions worsens when they have additional mental illnesses.

ACTION / CONSIDERATIONS

1. Expand our risk management processes to now include a focus on these areas to help us identify employees at risk; and
2. Provide us the opportunity to ***intervene in advance of a provider developing symptomatology of suicide or self-destructive behavior***.

Psychological Pain

Feelings of mental distress from a non-physical source(s), emotional suffering and/or mental torment, are all definitions of psychological pain.

This term is becoming increasingly accepted within the medical community.[5]

5. Biro, D: Is There Such a Thing as Psychological Pain? and Why It Matters. Culture, Medicine and Psychiatry, pp. 658-667. (2010, September 13)

- **Research demonstrates that elevated levels or intensity of psychological pain are strongly associated with increased suicidal ideation and self-injurious acts.[6-8]**

- **Other research indicates that the higher the tolerance an individual has for psychological pain and their self-perceived ability to cope with that pain, the less likely they are to attempt suicide.[9]**

6. Ducasse, D, Holden, R, Boyer, L, et al: Psychological Pain in Suicidality: A Meta-Analysis. Jouirnal of Clinical Psychiatry. (2017, August 29).
7. Rizvi, S, Iskric, A, Calati R, et al: Psychological and physical pain as predictors of suicide risk: evidence from clinical and neuroimaging findings. Current Opinion in Psychiatry, pp. 159-167. (2017, March).
8. Conejero, I, Olié, E, Calati, R, Ducasse, D,et al: Psychological Pain, Depression, and Suicide: Recent Evidences and Future Directions. Current Psychiatry Reports. (2018, April 5).
9. Meerwijk, E, & Weiss, S: Tolerance for psychological pain and capability for suicide: Contributions to suicidal ideation and behavior. Psychiatry Research, pp. 203-208. (2018, April).

- **Therefore, it's not just physical pain that can aggravate a practitioner's mental distress and increase their likelihood of suicide, violent behavior and self-harm, *it's also psychological pain*.**

- **It doesn't matter whether their physical or psychological pain is work related.**

- **Thus, the concept of teaching practitioners mental resiliency and coping skills that would mitigate or interrupt the path toward suicide and self-harm, at which they would otherwise be at risk, seems quite playable.**

PTSD

- **Research has also shown a link between Post Traumatic Stress Disorder and chronic pain severity.**
- **Persons who suffer from PTSD are likely to perceive their pain as more intense or severe. When successfully treated for PTSD, their sense of pain reduces as well.[10]**
- **Other studies have concluded that a prevalence of PTSD exists with individuals suffering from clinically diagnosed chronic pain.[11]**

10. Siqveland, J, Hussain, A, Lindstrøm, J, et al: Frontiers in Psychiatry. Prevalence of Posttraumatic Stress Disorder in Persons with Chronic Pain: A Meta-analysis. (2017, September 14).
11. Siqveland, J, Ruud, T, & Hauff, E: Post-Traumatic stress disorder moderates the relationship between trauma exposure and chronic pain. European Journal of Psychotraumatology. (2017, September 19).

- **Thus, we know that a practitioner suffering from PTSD and/or an MSD is likely to perceive *any physical pain* they're experiencing with *more intensity*.**

- **We also know the more severe and chronic the physical pain suffered by a person, the more likely they are to think about suicide and exhibit violent behavior.**

- **Therefore, chronic pain in the presence of PTSD and/or an MSD substantially exacerbates the risk to our practitioners for debilitating mental illness that leads to suicide and self-injury.**

Conclusion / Action Recommendation

Establishing mechanisms to identify staff who suffer from PTSD and/or MSDs, along with chronic physical and/or psychological pain, would allow paramedicine leaders to provide timely interventions designed to mitigate their predisposition for suicide and suicidal ideation, as well as self-injurious or violent behavior.

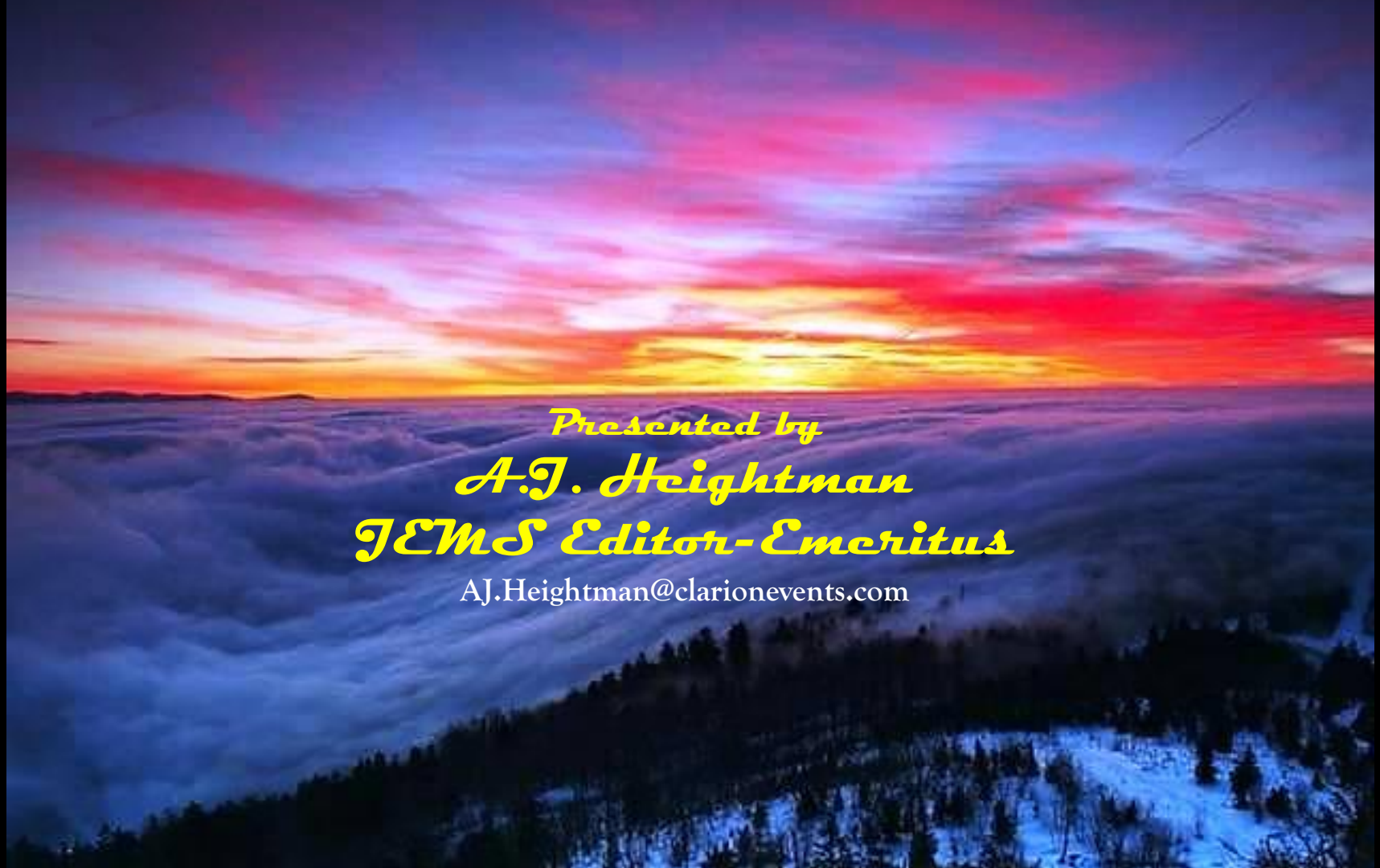
ACTIONS RECOMMENDED

EMS agencies must:

1. Study, rethink and reduce **shift lengths**;
2. Stop back-to-back deployments and work by mercenary providers;
3. Allow staff to **take breaks and naps while on duty** and;
4. Educate their staff about the hazards to them, and their patient and co-workers, from **deadly fatigue, exhaustion, stress and sleep deprivation.**

If you are suicidal and need emergency help, call 911 immediately or 800-273-8255 if in the United States.

If you are in another country, find a 24/7 hotline at www.iasp.info/resources/Crises_Centres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