Evaluation and Management of Co-occurring PTSD and Substance Abuse in First Responders

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What we are going to cover…

- Types of trauma and stress reactions
- Evaluation of PTSD in first responders
- Association between PTSD and SUD
- Management of PTSD and SUD
- Conclusions
- Future considerations

- Jay was a 34-year-old San Diego County California paramedic in June 2015 when he was called along with his partner, Doug, to a trolley stop. His dispatcher had stated that it was a generic "intoxicated male, possible mixed medications, trolley security on scene. Believing this to be a routine call, Jay and his partner were relaxed en route". Unlike the other 20 calls they had taken that day this one took a dark turn when upon arrival at the scene a bystander, angry for no apparent reason, pulled out a gun and shot Jay and his partner at point-blank range. Jay's partner was critically injured when he stepped in front of the gun trying to protect Jay. At this point the police arrived and fatally wounded the shooter.
- Jay was in stable condition on arrival to the emergency room. He was quickly taken to surgery for corrective action on his wounds. Immediately postoperatively Jay asked about Doug and was told that he had not survived his injuries. Jay quickly recalled Doug stepping in front of the gun in order to protect him and immediately he was filled with an overwhelming guilt and remorse. Jay took no solace in the fact that the shooter was dead. This feeling was then replaced with a sense of numbness, derealization, and depersonalization.
- Jay was seen by a social worker who explained to him that re-experiencing this horrific trauma could last a lifetime. She told Jay that may have nightmares and flashbacks of the incident. She strongly recommended that Jay see a therapist after discharge. Doug stated that he "felt fine" but was heavily medicated at the time, so sleeping was not an issue.

- After discharge, Jay spent a week on the couch just watching television. Jay was still on large doses of Percocet which he augmented with alcohol. Well after his wounds had healed Jay continued to tell his surgeon that he was having significant pain from his injuries. At each visit with his physician he was given a new prescription for Percocet with no questions asked. Jay began to drink heavily and overmedicate with pain pills.
- His first night home Jay dreamt that he was back at the trolley stop. In his dream he could feel the bullet entering his body. Jay knocked the man to the ground just after he was shot. Everything felt real. He dreamt that he had pushed the assailant’s face to the pavement and could even feel the stubble of his assailant’s beard. He got on top of the shooter and bit his eyebrows off. He then gouged his eyeballs out with his thumbs. The assailant began screaming, with Jay screaming louder. Jay woke up screaming and soaked in sweat. He could feel his heart pounding in his ears. Frequently he would take another Percocet and wash it down with a couple of shots of whiskey in order to calm himself.
- The nightmares continued, and the flashbacks began. Jay was wracked with guilt and shame over the death of Doug, his partner of 7 years. He avoided talking to Doug’s widow who frequently checked on him.

- Jay felt anxious, depressed, and grief-stricken all at the same time. He was constantly nauseated and could not eat. He felt extremely tired but avoided sleep because of the fear that the nightmares would continue. He avoided any sort of reminder of the incident but continued to re-experience it anyway. Jay came forgetful, and his attention and concentration was considerably diminished.
- Jay developed a vicious cycle of opioid and alcohol abuse. Nothing seemed to help. He thought about quitting his job as a paramedic, something he loved dearly. Two months went by and he felt no better. His nightmares continued as did his flashbacks. He was now dependent on alcohol and opiates. He was no longer able to subdue the patient in his dreams. Rather, he had horrific re-experiencing of watching Doug get shot.
- Jay eventually sought counseling and began to see a psychiatrist and therapist at the urging of his peer support person at the fire department. He also sought treatment for his drug and alcohol abuse.
- Jay's psychiatrist and therapist diagnosed him with post-traumatic stress disorder. He began sessions of cognitive behavioral and exposure therapy. He had sessions of EMDR weekly with a trauma-focused therapy. His engine house gave him a PTSD-trained service dog, Bailey, a three-year-old golden retriever, would wake him when he began to have a nightmare.

- After 8 months of treatment, Jay was able to return to work. Through a combination of medications and psychotherapy his nightmares resolved as did his flashbacks. To this day Jay continues to avoid the trolley stop where the assault took place. Jay thinks of Doug daily. He now visits Doug's widow on a weekly basis and takes Doug's children on outings. In the back of his mind he still feels some guilt and remorse and believes his attention towards Doug's family is somehow a penitence.
- Jay realizes he will never completely recover from the incident but does his best "in honor of Doug's memory."
- Jay has now been sober for 4 years with the help of continued individual psychotherapy and a dedicated 12-step recovery program.
- Today Jay continues is a peer mentor for first responders who have developed work-related PTSD.

The root of the problem…

- The relationship between a first responder and their “patient” or subject of attention is often very close.
- This proximity can expose them to the distress and trauma experienced by patients.
- First responder exposure can often include subjects who have been affected by trauma, violence, abuse, death, and fear, combined with a myriad of other physical and mental health issues.

What are "second victims"?

SECOND VICTIMS are healthcare providers or first responders who are involved in unanticipated adverse events and who have been traumatized by what they had witnessed in the line of duty.

Stress and Trauma Terminology

- There is a great debate on the **correct terminology** for this type of trauma, with a range of descriptions that are **often confused** with each other and are often used interchangeably:
  - ***Vicarious trauma***
  - ***Acute stress reaction***
  - ***Post-traumatic stress disorder***
  - ***Compassion fatigue***
  - ***Secondary traumatic stress disorder***
- Although there is **some discrepancy** in the definitions, most researchers agree **that having a clear and distinct understanding of each term will help identify, respond and prevent the emotional impact of stress and trauma at work.**

Vicarious Trauma and Compassion Fatigue

- **Vicarious trauma**, or **compassion fatigue**, is often described as an **occupational hazard for first responders during engagement with trauma victims.**
- Over time, **first responders begin to mirror the biopsychosocial effects shown by the victims of trauma.**
- **Vicarious trauma** can impact the physical and mental health of a first responder, permeating **ALL** aspects of work and home life.

❖ ***Over time, even character and personal belief systems can be altered, resulting in drastic changes in spirituality and major psychological needs.***

Secondary Trauma and Indirect Trauma

- **Secondary** or **indirect trauma** describes how a healthcare provider or first responder **begins to experience similar symptoms** as the patient, whereby the traumatizing event of the patient becomes a traumatizing event for the responder.
- The **symptoms of secondary trauma and vicarious trauma are essentially the same**.
- The only notable difference is that **secondary trauma can occur unexpectedly and suddenly after just ONE case**, **whereas vicarious trauma occurs over time.**

Traumatic Countertransference

- **Traumatic countertransference** is when a healthcare provider or responder **relates to a patient or citizen in such a way that they unconsciously connect the patient with an existing relationship in their own life.**
- This can occur in many situations (not just in a medical setting) where there is a connection between people based on empathy.
- **This can be harmful in more ways than one because as a responder, the relationship should be professional and not because the patient reminds you of your mother, for example.**

Common Stress Reactions: Behavioral

- Change in activity levels
- Decreased efficiency and effectiveness
- Difficulty communicating
- Increased sense of humor/gallows humor
- Irritability, outbursts of anger, frequent arguments
- Inability to rest, relax, or let down
- Change in eating habits
- Change in sleep patterns
- Change in job performance
- Periods of crying
- Increased use of tobacco, alcohol, drugs, sugar or caffeine
- Hypervigilance about safety or the surrounding environment
- Avoidance of activities or places that trigger memories
- Accident-prone behavior increases

Common Stress Reactions: Psychological or Emotional

- Feeling heroic, euphoric or invincible
- Denial
- Anxiety or fear
- Worry about safety of self or others
- Irritability or anger
- Restlessness
- Sadness, moodiness, grief or depression
- Vivid or distressing dreams
- Guilt or "survivor guilt"
- Feeling overwhelmed, helpless or hopeless
- Feeling isolated, lost, lonely or abandoned
- Apathy
- Overidentification with survivors
- Feeling misunderstood or unappreciated

Common Stress Reactions: Physical

- Increased heart rate and respirations
- Increased blood pressure
- Upset stomach, nausea, diarrhea
- Increased or decreased appetite which may be accompanied by weight loss or gain
- Sweating or chills
- Tremors or muscle twitching
- Muffled hearing
- Tunnel vision
- Feeling uncoordinated
- Headaches
- Sore or aching muscles
- Light-sensitive vision
- Lower back pain
- Feeling a "lump in the throat"
- Easily startled
- Fatigue that does not improve with sleep
- Menstrual cycle changes
- Change in sexual desire or response
- Decreased resistance to colds, flu, infections
- Flare up of allergies, asthma, or arthritis
- Hair loss

Common Stress Reactions: Cognitive

- Memory problems/forgetfulness
- Disorientation
- Confusion
- Slowness in thinking, analyzing or comprehending
- Difficulty calculating, setting priorities or making decisions
- Difficulty concentrating
- Limited attention span
- Loss of objectivity
- Inability to stop thinking about the disaster or an incident

Common Stress Reactions: Social

- Withdrawing or isolating from people
- Difficulty listening
- Difficulty sharing ideas
- Difficulty engaging in mutual problem solving
- Blaming
- Criticizing
- Intolerance of group process
- Difficulty in giving or accepting support or help
- Impatient with or disrespectful to others

- First responders are at greater risk for acute stress disorder and PTSD.
- As many as 400,000 first responders in the US and many more in other countries are suffering from symptoms of PTSD with associated functional impairments.
- Exposed to death, serious injury, violence at a significantly higher rates than other professions, both directly and indirectly.

- Rates of PTSD in first responders in some studies approach 1 out of every 3 personnel.
- Occupations and professions that repeatedly put those employed squarely in harm’s way:
    - ✓Combat soldiers and other active duty military personnel
    - ✓Civilian first responders such as paramedics, law enforcement, fire personnel, 911 dispatchers
    - ✓Nurses, doctors, therapists

Categories of evidence for PTSD symptoms reported by ER nurses: EXPOSURE AS A WITNESS…

- Patient instability is a stress factor.
- Although patient death is not always associated with PTSD symptoms, specific circumstances (such as suicide or prolonged resuscitation) can contribute to PTSD when a death occurs.
- PTSD symptoms are also more likely to be expressed when the symptom involves a child, relative, colleague, or colleagues relative.

❖ *“Well, something happened last year, a child who died in a car accident… The other nurse and I looked after her, because we were the most experienced. We massaged her, resuscitated her over and over. The poor girl, every bone in her body was broken. When the mother arrived, the other nurse and I had to go meet her, because we were the most experienced in the unit. I can still see that little girl. I dreamt about her for a month. The other nurse and I cried and cried, we couldn’t get over it. We kept saying “It doesn’t make sense, it can’t be.”*

A.D., RN, 31-year-old nurse with 10 years of ER nursing experience

Categories of evidence for PTSD symptoms as reported by ER nurses:

EXPOSURE AS A VICTIM…

- **This category includes:**

✓Conflictual situations with a colleague or physician.

✓Verbal or physical violence by a patient, visitor, patient’s relative, colleague, or physician.

❖*“The night I had a gun in my face, I’ll tell you, I hope I never have another night like that!”*

A.A., RN, 48-year-old nurse with 28 years of experience, including 22 years in the ER.

Quote from an ER nurse who was assaulted by a patient…

"It's sad, really, because I never used to be easily frightened, but you know, after that I started locking my car doors, and I became more cautious and anxious when there was someone who looked like they might mean trouble… It's annoying, I can't control it. If I had a choice, I'd go back to the way I used to be. I don't want to go on being so easily frightened."

- Interviewer:
  "You mean always on the alert?"
- ER nurse:
  "Well, I don't know, how can I put it… Let's say not on the look-out all the time."

B.D., RN, 29-year-old nurse with 8 years of experience, including 6 in the ER.

What the studies in paramedics show…

- Higher rates of job absenteeism than in the public sector.
- Levels of psychological stress up to 10 times higher than in the general population.
- Greatly increased risk for being the victim of workplace violence.
- Increased risk for:
  - ✓ Career abandonment
  - ✓ Reduced work competency
  - ✓ Work overload
  - ✓ Work team instability
  - ✓ Career burnout
  - ✓ Increased interpersonal problems at home
  - ✓ Substance abuse

Barriers to Diagnosing PTSD in First Responders

- Reluctance to discuss PTSD symptoms
- Reluctance to acknowledge the presence of traumatic events in their lives
- Stigma associated with diagnosis and treatment of psychiatric and/or substance use disorders
- Many first responders report that they are expected to minimize the impact of traumatic exposures in their professional and personal lives
- Often engage in avoidance and may employ substance abuse as a coping mechanism

Screening First Responders for Potential Maladaptive Stress Responses

- There are **multiple checklists** and **questionnaires** available to help clinicians screen patients, including traumatized healthcare workers, for the signs and symptoms of stress reactions.
- **Acute Stress Disorder (ASD):** characterized by the development of severe anxiety, depression, dissociation, and other symptoms that **occur within 1 month** after exposure to an extreme traumatic stressor.
- **Posttraumatic stress disorder (PTSD):** development or continuation of ASD-type symptoms **after 1 month** following exposure to an extreme traumatic stressor.

Helpful Screening Questions

Questions that may be helpful when taking the history of an at-risk patient may include:

"In the past month have you directly experienced a traumatic event yourself?"

"Have you witnessed one in others, such as a close family member or friend?"

"If so, have you experienced any of the following:

1. Nightmares about event or thought about the event you did not want to?
2. Tried hard not to think about event or went out of your way to avoid situations that reminded you of the event?
3. Been constantly on guard, watchful or easily startled?
4. Felt numb or detached from people, activities or your surroundings?
5. Felt guilty or unable to stop blaming yourself or others for the event or any problems the event may have caused?"

If your patient answers "yes" to any three of five questions he or she may be developing PTSD and would benefit from being referred on to a mental health provider.

A very commonly used screening tool, the PCL-5, Questions1 through 10:

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4

PCL-5: Questions 11 through 20

11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

How to use the PCL-5 Questionnaire…

- **Greatly helps with Diagnosis and Treatment Planning:**

✓When given at an intake or assessment session, the **PCL-5 may be used to help determine the appropriate next steps or treatment options.**

✓**Severity can be determined by adding the scores of each item together to determine a total score.**

✓**The range is 0-80.**

❖***A total score of 33 or higher suggests the patient needs further assessment to confirm the diagnosis of PTSD.***

PTSD Symptoms

- **An event is classified as 'traumatic' when it triggers specific PTSD symptoms**
- **These symptoms are observed:**

✓ Either during or immediately after the event (**peri-traumatic stage**)

✓ Several days later (**post-traumatic stage**)

- At the **peri-traumatic stage**, those who are affected report symptoms of:

✓ Distress (anxiety, guilt)

✓ Dissociation (people, places and things just don't seem real anymore)

- At the **post-traumatic stage** those who are affected describe symptoms of:

✓ Revival

✓ Stimulus avoidance

✓ Dulling of general responsiveness

✓ Hyperarousal

Posttraumatic Stress Disorder Is a Risk Factor for Multiple Addictions in Police Officers Hospitalized for Alcohol

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Co-occurring PTSD and Substance Use Disorders in First Responders

- PTSD prevalence in the general population is 8%.
- PTSD is highly comorbid with AUD and SUD.
- Individuals with SUD have lifetime PTSD prevalence of 30-60%.
- 80% of individuals with SUD have been exposed to at least one or more traumatic events.
- This compares to 50% of individuals in the general population.
- First responders have a greatly increased risk of PTSD.
- Incidence of PTSD with SUD/AUD in first responders is 40%.
- Age, sex, marital status does not seem to be a factor.

Examples of other treated first responders with co-occurring SUD and PTSD

- Veteran fireman who found 3 young children dead of smoke inhalation in a house fire.
- Police officer who fatally wounded a teenage felon during an armed robbery.
- U.S. Air Force dental technician assigned to an armed forces human remains identification team.
- ER trauma nurse who treated an innocent young victim of a drive by shooting.
- 911 dispatcher working a multiple fatality home invasion.
- Therapist for a young woman held hostage for 2 years by a sex trafficking ring.

Psychological First Aid (PFA)

- World Health Organization and International Red Cross
- Evidence-informed approach to providing individuals following a serious crisis event.
- PFA aims to reduce initial stress of a traumatic event and promote adaptive functioning and coping.
- Current techniques of PFA were developed in the wake of tragedies such as war, natural disaster, and most recently, school shootings.
- PFA assumes that individuals may experience a broad range of reactions following a traumatic event but that not all individuals will develop mental health problems.

Core Actions of PFA

- **1. Contact and engagement:** initiate contact with the targeted individuals in a non-intrusive, compassionate and helpful manner.
- **2. Safety and comfort:** enhance immediate and ongoing safety if any element of dangerousness still remains at the scene of a violent act or death.
- **3. Stabilization:** calm and orient the emotionally overwhelmed or disoriented persons who have been traumatized by an event.
- **4. Information gathering:** identify immediate needs and concerns, gather additional information, and tailor PFA interventions (DO NOT ask for a detailed description of the traumatic event itself as this can prove to be counterproductive and may actually worsen the psychological status of a traumatized person).

Critical Incident Stress Management

- Peer lead approach to crisis intervention
- Developed specifically for dealing with major stress-producing events
- Basic tenant “first responders already know how to cope with stress”
- Coping skills may be overwhelmed
- Composed of teams comprised of mental health professionals and first responder peers
- Emphasis is on education
- It is not psychotherapy and thus more widely accepted by affected personnel

- First responders tend to decompress and vent their frustrations and job stressors with peers in an informal setting rather than seek formal counseling.
- Police and fire bars are not just in the movies.
- May actually be counterproductive at times with increased risk of developing PTSD (so-called “psychological debriefing”).

Management of PTSD and SUD

- Treat co-occurring disorders simultaneously **ONCE PATIENT SAFETY IS ESTABLISHED**

Treatment Considerations: a Phase-Oriented Approach

- Phase 1: Diagnostic assessment
- Phase 2: Symptom stabilization and skills training
- Phase 3: Trauma-focused processing
- Phase 4: Consolidation and aftercare

Phase 1: Diagnostic assessment

Early markers for at-risk personnel

- Absenteeism
- Early retirement
- Extreme irritability
- Intense anger
- Constant hypervigilance
- Sleep disruption with nightmares
- Difficult sleep during shiftwork such as in firemen and paramedics
- Conflict in the workplace

Phase 2: Symptom stabilization and skills training

- Some individuals with PTSD and other co-occurring symptoms may require an initial period of stabilization or skills training prior to undertaking trauma-focused processing
- Immediate stabilization
- Ensure safety
- Provide a conducive environment
- Inpatient or outpatient
- Is substance abuse and issue?
- Thorough physical examination and evaluation for medical comorbidities is paramount
- Introduce new coping skills only after the above-mentioned issues are addressed

Phase 3: Trauma-focused processing

- **Cognitive therapies**
- **Exposure-based therapies (ET):**

✓ Imaginal exposure

✓ In vivo exposure

✓ Virtual reality exposure

- **Cognitive behavioral therapy (CBT)**
- **Couples CBT**
- **Coping skills training:**

✓ Role-playing

✓ Assertiveness training

✓ Stress management

✓ Relaxation text

✓ Biofeedback (e.g., using EMG, heart rate and respiration rate)

✓ Teaching sleep hygiene

✓ Recommending exercise

- EMDR
- Interpersonal therapy
- Mindfulness-based stress reduction
- Other psychotherapies:
  - ✓ Acceptance and commitment therapy (ACT)
  - ✓ Psychodynamic psychotherapy
  - ✓ Eclectic psychotherapy
  - ✓ Combined psychotherapy for PTSD and TBI
- Medication-augmented psychotherapy

Pharmacological Treatment of PTSD

- SSRIs: paroxetine (Paxil), sertraline (Zoloft)
- SNRIs: duloxetine (Cymbalta), venlafaxine (Effexor)
- 2nd generation antipsychotics: risperidone (Risperdal), quetiapine (Seroquel), olanzapine (Zyprexa)
- Alpha-adrenergic receptor blockers: prazosin (Minipress)
- Other antidepressants: TCAs, MAOIs, atypical (mirtazapine)
- Beta-blockers: propranolol (Inderal)
- Mood stabilizers: topiramate (Topamax), divalproex (Depakote)
- Ongoing trials: ketamine, cannabis, MDMA

Prevention and Protection: Organizational Strategies

- From an **organizational level**, there should be **policies and procedures** that **recognize and prevent risk factors** for vicarious and secondary trauma.
- Notably, this should **include the provision of educational material about mental health disorders and the support systems that are available to all staff.**
- Organizations can also **make sure that managers encourage professional development as well as make sure staff maintain a proper work/life balance.**
- **Positive encouragement** and the **continuing appreciation** of the work being done can be beneficial in promoting a supportive and safe workplace for all.

Future Considerations

- Need for future research
  - ✓ Neurobiological
  - ✓ Psychopharmacological
  - ✓ Psychotherapeutical
- Need for specialized treatment programs
- Greater use of family-focused therapies
- Greater use of pet-based therapies
- **Routine first responder screening for PTSD**