Florida Public Health Review

Volume 20 Article 6

6-23-2023

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Florida Public Health Review
Volume 20
Published June 23, 2023

Public safety telecommunication officers (PSTCOs), aka "dispatchers," are exposed to workplace traumatic stress. Dispatchers are at risk for mental health disorders, including post-traumatic stress disorder (PTSD) and depression. When compared to controls, emergency dispatchers on duty had significantly higher cortisol levels. Physical health is another area of concern for emergency dispatchers. Indirect effects on health included emotional dysregulation and psychological inflexibility. Coping and wellness strategies, such as peer support, reduce stress and improve physical health. This paper aims to describe the results of a study examining the patterns of exposure to job-related traumatic events and the relationship between workplace traumatic stress and mental health screening scores among a sample of PSTCOs and describe approaches to mitigating these concerns.

Background | Public safety telecommunication officers (PSTCOs), aka "dispatchers," are exposed to workplace traumatic stress [1-4] and can experience workplace situations characterized by uncertainty, communication difficulties, and a lack of resources.[5] Dispatchers are at risk for mental health disorders, including post-traumatic stress disorder (PTSD) and depression.[2,3,6] In fact, over 24% of emergency responders scored in the probable range for PTSD in one sample.[2] Depression is another mental health concern for emergency dispatchers. Depression prevalence rates are almost 24% in one sample of emergency dispatchers.[2] Traumatic stress experienced by emergency dispatchers has led to physical and mental health symptoms.[2,3,7] When compared to controls, emergency dispatchers on duty had significantly higher cortisol levels.[8] Moreover, emergency dispatchers had higher cortisol levels for incoming emergency calls.[9]

Physical health is another area of concern for emergency dispatchers. Indirect effects on health included emotional dysregulation and psychological inflexibility.[7] Over 82% of emergency dispatchers reported body mass index that fell into the overweight or obese categories.[7] Furthermore, years of experience, gender (men), and age were risk factors for being overweight or obese. Additionally, emergency dispatchers reported up to 17 physical health complaints monthly.[7]

Additional stressors and coping strategies for emergency dispatchers are in the literature. Staffing concerns were identified as a stressor, including being understaffed, difficulty training new emergency dispatchers, and conflicts with management.[10] Additional workplace stressors include inadequate workspace, computer systems, and software. During disasters and mass casualty incidents, they can additionally experience personal traumatic stress.[6] Emergency dispatchers also reported difficulty balancing professional and personal lives and a feeling of a lack of control.[10] In addition, dispatchers often report feeling the symptoms of compassion fatigue, burnout, and lower levels of happiness. In one study, dispatchers reported feeling compassion fatigue and burnout frequently during the past 30 days while reporting only moderate-to-low overall happiness levels.[11]

Figure 1 provides a narrative from a dispatcher describing exposure to traumatic stressors on the job.

Coping and wellness strategies reduce stress and improve physical health.[12] One of the most effective strategies is through peer support.[13] A growing body of literature supports the use of peer support to attenuate mental health concerns among first responders.[14,15] Peer support is an effective public health intervention due to its emphasis on prevention and early intervention, promoting a health-focused organizational culture, promoting quality mental health services and increasing accessibility to these services, and a reduction of adverse outcomes and stigma. These programs have been demonstrated to impact psychological health positively. Social support and self-efficacy are also positive predictors of well-

being.[16] Further coping strategies identified in the literature for emergency dispatchers include taking time off, exercising, and getting support from others.[10]

Currently, in Florida, PSTCOs are not statutorily recognized as first responders and are not eligible for PTSD worker's compensation benefits under Florida Statute (F.S.) 112.1815. Additionally, F.S. 112.1815 requires the employing agencies to "provide educational training related to mental health awareness, prevention, mitigation, and treatment." The omission of dispatchers from F.S. 112.1815 creates a disparity in developing and implementing prevention, early intervention, and treatment programs for these identified mental health concerns among PSTCOs. While an emphasis on PTSD in prevention, early intervention, and treatment programs is warranted, other mental health concerns in dispatchers, including depression, anxiety, suicidality, and harmful substance use, must be addressed in comprehensive programs.

This paper aims to describe the results of a study examining the patterns of exposure to job-related traumatic events and the relationship between workplace traumatic stress and mental health screening scores among a sample of PSTCOs and describe approaches to mitigating these concerns.

Methods |

Participants

The research team worked with administrators at a midsize Public Safety Telecommunications Center to distribute an anonymous Qualtrics link for the survey to their members. The team assembled an instrument that included the Life Events Checklist (LEC), Patient Health Questionnaire -9 (PHQ-9), Generalized Anxiety Disorder -7 (GAD-7), Post-traumatic Stress Disorder Checklist for the DSM-5 (PCL-5), the Suicide Behaviors Questionnaire-Revised (SBQR), and the Alcohol Use Disorders Identification Test (AUDIT). The university's IRB approved this cross-sectional survey before the administration in Northwest Florida between Fall 2020 and Spring 2022.

Measurement

The survey gathered demographic data, including age, ethnicity, gender, rank, employment type (i.e., career/volunteer/retiree) and status (i.e., full/part-time), marital status, time on the job, full/part-time, and education. The Life Events Checklist (LEC) assesses 16 events related to the development of post-traumatic stress symptoms and includes one additional item measuring other stressful events.[17] Respondents indicated their experience of each event as "happened to me," "witnessed it," "learned about it," "part of my job," "not sure," and "doesn't apply." The LEC is not formally scored but is used to gather information on potentially traumatic experiences.

The PCL-5 is a 20-item scale measuring 20 symptoms of PTSD that parallel criteria found in the DSM-5.[18] The 20 items are further divided into four dimensions corresponding to the DSM-5 symptom clusters, including intrusion, avoidance, cognition/mood, and arousal/reactivity. The items are rated on a 5-point Likert scale of 0-4 ("not at all" to "extremely"). A summed score can be calculated to determine the overall level of PTSD symptomatology with a range from 0 to 80. Suggested cutoff scores range from 31-33 based upon current psychometric work.[17]

The Patient Health Questionnaire is a nine-item (PHQ-9) self-rating instrument used to measure depression severity levels and developed to replace the lengthy clinician-administered PRIME-MD.[19,20] The nine items listed as a symptom checklist corresponds to the DSM-IV depression diagnostic criteria.[19] The ninth item on the PHQ-9 asks whether the respondent has experienced "thoughts that you would be better off dead or of hurting yourself in some way" which allows for a brief assessment of suicidal ideation.[19] Patients' severity score can range from 0 to 27 based on their response to symptoms starting from 0 (not at all) to 3 (nearly every day) over the last two weeks.[19] A final item also asks respondents to indicate how difficult the problems made it to work, take care of household tasks, or engage with others.[19] Findings suggest respondents with scores less than ten experience rare occurrences of major depression, whereas scores of 15 or higher indicate major depression. However, it is also worth noting that the authors report a "gray zone" between scores of 10-14, perhaps indicating subclinical depression.[19]

To measure the levels of anxiety symptomatology of the PSTCOs in this sample, the Generalized Anxiety Disorder 7-item (GAD-7) scale was used. The GAD-7 is a seven-item self-report scale that assesses the frequency of generalized anxiety symptoms. Scores can range from 0-21, with scores from 5-9 indicating mild symptomatology, 10-14 indicating moderate, and 15-21 indicating severe symptomatology. The suggested clinically significant cutoff score is 8. The GAD-7 has demonstrated good reliability with a Cronbach's alpha of .92 and relatively good sensitivity and specificity rates (89% and 82%, respectively).[21]

The Suicidal Behaviors Questionnaire-Revised (SBQR) consists of four items, each measuring a different dimension of suicidality (lifetime suicidal ideation, frequency of ideation over the past 12 months, the threat of suicidal behavior, and self-reported likelihood of suicidal behavior. Depending on the sample, Cronbach's alpha ranges between 0.76-0.88, indicating moderately high internal

consistency.[22] Osman et al. (1999) suggested a cutoff score of 7 for general adult populations.
The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening instrument for harmful alcohol consumption. Responses for each question range from 0-4, with a maximum score of 40. Items 1-3 measure alcohol consumption, 4-6 measure drinking behavior, 7-8 measure adverse reactions, and 9-10 measure the level of alcohol-related problems.[23] A score greater than 0 on questions 2 or 3 or a cutoff summary score of 8 is suggested as indicating harmful alcohol use.[24] The AUDIT has demonstrated high sensitivity (92%) and specificity (94%). Cronbach's alpha was calculated to be 0.93 across studies from six countries where the AUDIT was tested.[23]

Results | All analyses were conducted using SAS version 9.4 (SAS Institute Inc). A total of 54 Public Safety Telecommunications Officers responded to the survey (n=54). Table 1 shows the demographic characteristics of the PSTCO respondents. A majority of respondents identified as female (66.6%). Of the 54 respondents, 50.0% were non-Hispanic White, 33.3% were non-Hispanic Black, 7.4% were Hispanic/Latino or other, and 9.3% preferred not to say or did not respond to this item. For marital status, 42.6% reported being married, and 57.4% reported being single, never married, divorced, or provided no response. Most respondents were college educated, with 57.4% reporting receiving a college degree (associate's, master's degree, or bachelor's degree) and 42.6% having a high school diploma, GED, or some college but no degree. The mean age reported was 38 years (range 20-63 years).

Mental Health Status

PSTCOs completed several mental health screeners to assess levels of depression, anxiety, and PTSD symptomatology. Table 2 summarizes the key results from the mental health screeners. Using the PHQ-9 to screen for levels of depression, 18.4% of PSTCOs in this sample reported experiencing moderate to severe levels of depressive symptomatology. Using the GAD-7 to screen for anxiety levels, 12% of this sample reported moderate to severe anxiety levels. Using the PCL-5 to screen for levels of PTSD symptomatology, 14% of PSTCOs in this sample met the criteria for a provisional diagnosis of PTSD, using the more conservative cut-score of 33, and 16.0% using a cut-score of 30 (some studies have used a cut score of 30 to indicate a provisional diagnosis of PTSD).[18]

PSTCOs in this sample completed the AUDIT to screen for hazardous drinking behaviors. Based on the AUDIT's recommended cut score of eight or a response greater than 0 for questions 2 or 3, 40% reported hazardous drinking levels. Participants also completed the SBQR to screen for suicidal ideation and intent. Using the SBQR recommended cut score of seven, 9.3% of PSTCOs in this sample met the criteria of being at risk for suicide. Percentages of dispatchers providing positive responses to each item on the SBQR are also presented in Table 2 to clarify the positive responses for suicidal ideation versus suicidal intent.

The survey instrument included an open-ended section where respondents could provide qualitative comments. PTSCO respondents (n=2) provided responses in the open-ended section. Figure 2 shows the two comments received.

Job-Related Traumatic Events

Table 3 shows the prevalence of experiencing job-related traumatic events among the PSTCO respondents. Nearly three-quarters of the PTSCO respondents experienced at least one of the selected traumatic events. Approximately two-thirds of the respondents experienced physical assault, assault with a weapon, sexual assault, or severe human suffering as part of their job. About 70% of the respondents experienced physical assault or encountered sudden accidental death. About 80% of the respondents were assaulted with a weapon or encountered sudden violent death. The prevalence of exposure to any traumatic event (91.3% vs. 58.1%), sudden violent death (87% vs. 54.8%), and sudden accidental death (82.6% vs. 45.2%) was higher among those who were married or in a domestic partnership compared to those not married or in a partnership ($p<=0.05$).

Exposure to job-related severe human suffering varied significantly by age group and race/ethnicity.

Comparison of Mental Health Screener Scores

The dependent variables of interest (mental health screener variables and the hazardous alcohol consumption variable) were tested for normality. All variables (PHQ-9, GAD-7, PCL-5, SBQR, and AUDIT were not normally distributed based on visual inspection and using the Kolmogorov-Smirnov test. Given that the scores for these screeners are sums (counts) of individual items, Poisson regression was used to quantify the relationship between screener scores and job-related traumatic events, controlling for the remaining variables in each model. We used PROC GLM in SAS to conduct the Poisson regression. In the initial models, the authors noted overdispersion; therefore, the DSCALE option was used on the model statements to adjust the standard errors of the regression coefficients appropriately.[25]

Table 4 shows the Poisson regression analysis results indicating the change in the screener scores controlling for all variables in the model. Among the independent variables of interest (job-related stressors), assault with a weapon was significantly associated with an increase in the scale values for depression, hazardous alcohol use, and suicide risk (2.29, 2.87, and 1.60 units, respectively, with p<=0.05). Exposure to sexual assault was associated with decreased hazardous alcohol and suicide risk scale values (-3.73 and -1.89 units, respectively, with p<=0.05). Exposure to violent death was associated with a 0.61 unit increase in the suicide risk scale (p<=0.05). Exposure to job-related sudden death was associated with a 1.22 unit decrease in the hazardous alcohol scale and a 0.51 unit decrease in the suicide risk scale (both with p<=0.05).

Discussion | For this study, the small sample size hindered the detection of statistically significant differences. Post hoc power analyses resulted in statistical power ranging from 8% to 63%, depending on the outcome of interest (data not shown). There are, however, relevant findings that did not reach statistical significance. In particular, Table 3 reveals that those who were married or in a domestic partnership had a higher prevalence of experiencing job-related traumatic events. However, statistical significance was only achieved for three of the eight outcomes of interest. A similar pattern was evident when examining the prevalence of traumatic events by education level. Without exception, the prevalence of experiencing all of the job-related traumatic events was higher among those with a college degree compared to their counterparts; however, only marginal statistical significance was observed for one event: other unwanted sexual experience.

While significance testing was not conducted on the rates of mental health issues among the general population compared to PSTCOs in this study, for discussion, it is helpful to look at these rates in context. The National Institute of Mental Health (NIMH) reports a rate of 8.4% depression in the overall U.S. population.[26] In contrast, in this sample, 18.4% of PSTCOs reported experiencing moderate to severe levels of depression. The NIMH reports 10.8% moderate and severe anxiety levels in the overall population, while 12% of this sample reported moderate to severe anxiety levels.[27] Of this sample, 14% met the criteria for a provisional diagnosis of PTSD, while the NIMH reports 3.6% in the overall population.[28]

Furthermore, PSTCOs who reported certain job-related traumatic events (assault with a weapon and violent death) had significant increases in scores for depression, hazardous alcohol use, and suicide risk (assault with a weapon) or hazardous alcohol use and suicide risk (violent death).

Given that the sample size in this study was limited, thus resulting in lower statistical power, future research should include larger numbers of PSTCOs in surveys to assess generalizability. Future research should also examine call volume standards for PSTCOs, focusing on the "acceptable" volume of potentially traumatic calls taken by any individual dispatchers.

Implications for Public Health Practice

The Director of the Consolidated Dispatch Agency (CDA), a telecommunications center in Tallahassee, Florida, took a proactive and aggressive approach by creating an in-house Behavioral Health Wellness Program (BH Program) staffed with an on-site licensed clinical mental health counselor. The licensed mental health counselor oversees the BH Program, aids in the aftermath of critical incidents, and manages the peer support team. When concerns that require more extensive care are identified, referrals are provided to culturally competent clinicians.

With the assistance of partnering agencies, the BH Program tracks the outcome of critical calls and provides interested PSTCOs with follow-up. This initiative can be an essential aspect of stress management, restoring a sense of closure to the PSCTOs that the dangerous event is over for the individuals they serve. In addition to mental health services, the BH Program provides a comprehensive approach to wellness within a 9-1-1 environment, providing initiatives and resources to strengthen each component of wellness: physical, mental, financial, social, spiritual, environmental, and intellectual. For example, the CDA provides nutritious, fresh food options; on-site workshops on topics such as financial planning, relational issues, and sleep solutions; on-site chair massages; and stationary exercise equipment. The BH Program even hosted "Family Day" and an off-site "Healthy Pursuits Month," where local attractions provided behind-the-scenes tours, nature hikes, and learning opportunities to the CDA PSTCOs.

The success of any program is based on the "buy-in" of leadership. With wellness programs, psychological safety inside the workplace must be encouraged and modeled by leadership and embedded into the workplace's culture. For example, at the CDA, newly hired PSTCOs are orientated to the BH Program during their first few weeks of employment and must attend a stress management appointment during each phase of the training process. The goal is to onboard resiliency habits for a long, healthy career and retirement.

Figure 1. ***A Dispatcher's Perspective on Exposure to Workplace Traumatic Stress***

In a career spanning 4 decades, I've seen and heard a lot. I've seen co-workers come & go so fast; some I didn't even catch their names. The role of a 9-1-1 telecommunicator has evolved from a note taking company clerk to a first responding paraprofessional. Job stresses come from all directions. Daily stressors occur when the work/life/sleep balance is thrown for a skew. It comes from working days and weeks on end with diminished time off- with 12-hour shifts and sometimes more. It comes from missing special family events AGAIN. It comes from equipment shortcomings that come in the most inopportune moments. It comes with the shrieking voice of a disgruntled call about things well beyond your ability to control. It comes from expectations of "perfection" where objectives are unreasonable or unattainable. It comes from a "wash-rinse-repeat" mode of operation where stressors receive a blind eye yielding to the elephant in the room, the lack of staffing. Then of course there are hard stressors that leave you muttering to yourself at the end of a shift. They are the ones that stick to you, sometimes haunting your dreams, causing your heart to race even when you are sitting still in a locked car all by yourself.

It's a hell of a thing to watch a colleague crumble from post-traumatic stress. Very early in my career, I witnessed what inexplicable trauma does to the mind of even the most seasoned. A co-worker fielded a call from a paralyzed man intent on killing himself. The caller managed to place his toe against the trigger of a loaded shotgun, dialed 9-1-1 and stated the only reason he called 9-1-1 was to be found. The last sound my co-worker heard was the blast of that shotgun. There was no negotiation or de-escalation. Just BOOM! From that point on, my teammate was never the same. A strong, vibrant, yet mild mannered man became curt, distant and bitter. He was given leave to deal with his demons. Shortly after, he quit.

Over the years I bore witness to a myriad of traumatic events. Officer involved deaths, to unsupervised children trapped in a burning house, to being on the phone with murders, to directing CPR as loved ones pass. The scars are now interwoven. How they will manifest in later life remains a mystery. I maintain my faith in a higher power that the pummeling was as was necessary to fulfill a greater purpose. I don't believe I would have survived the decades without it.

Table 1. Demographic characteristics of PSTCO survey respondents (n=54)

Characteristics[a]	Descriptive Statistic
Age, mean (SD)	38.4 (11.3)
Age Range in Years	20 - 63
Sex (%)	
Female	66.7
Male	31.5
Prefer not to say or missing	1.9
Age Group (%)	
20-39 years	61.1
40-63 years	33.3
Prefer not to say or missing	5.6
Race/ethnicity (%)	
Non-Hispanic White	50.0
Non-Hispanic Black	33.3
Hispanic or Other	7.4
Prefer not to say or missing	9.3
Marital status (%)	
Married or Domestic Partnership	42.6
Divorced, Single, Never Married	57.4
Education Level (%)	
High School, GED, or Some College	42.6
College Degree	57.4

[a]Percentages may not sum to 100% due to rounding.

Table 2. Prevalence of outcomes from screening survey instruments (n=54)

Screening Scale Outcome	Percentage
Provisional Diagnosis of PTSD[a]	14.0
Provisional Diagnosis of PTSD[b]	16.0
Moderate-Severe Depression	18.4
Moderate-Severe Anxiety	12.0
Hazardous Alcohol Use	40.0
Increased Risk of Suicide	10.0

[a]Based on cutpoint of 33

[b]Based on cutpoint of 30

Figure 2. ***Open-ended Comments from Two PTSCO Respondents***

"Dispatchers are very much affected by the incidents/calls we take over the phone, and the people we help over the phone. Being a 911 dispatcher is a very stressful career because not only are we trying to keep our citizens safe and help them, we have to try to keep our fellow first responders that are on the road safe. If we make a mistake, it can cost someone their life. We are not just clerical staff."

"As a 9-1-1 Dispatcher, we are rarely, if ever thought of or considered as first responders, even though we are the very first people contacted when someone is having a crisis. Anyone with a significant amount of time served in this job can tell you stories about hearing suicides take place, physical assaults in progress, verbal abuse from citizens that you are required to help, and all sorts of heinous acts that stick with you for a very long time."

Table 3. ***Percentage of respondents experiencing job-related traumatic events by demographic characteristics.***

Demographic Characteristic (n)	Any Traumatic Event	Physical Assault	Assault with Weapon	Sexual Assault	Other Unwanted Sexual Experience	Severe Human Suffering	Sudden Violent Death	Sudden Accidental Death
Overall (54)	73.6	63.0	64.8	63.0	53.7	40.7	68.5	61.1
Sex (53)								
Female	75.0	63.9	69.4	66.7	55.6	36.1	69.4	61.1
Male	70.6	64.7	58.8	58.8	52.9	52.9	70.6	64.7
Age Group (51)								
20-39 years	69.7	54.6	57.6	54.6	48.5	30.3[a]	66.7	54.6
40-63 years	77.8	77.8	77.8	77.8	61.9	61.1	72.2	72.2
Race/ethnicity (54)								
Non-Hispanic White	85.2	77.8	74.1	74.1	66.7	55.6[a]	81.5	74.1
Non-Hispanic Black	55.6	44.4	11.7	50.0	44.4	22.2	50.0	44.4
Hispanic or Other Response	75.0	50.0	50.0	50.0	60.0	0.0	75.0	75.0
Prefer not to say or missing	60.0	60.0	60.0	60.0	20.0	60.0	60.0	40.0
Marital Status (54)								
Married or Domestic Partnership	91.3[a]	69.6	78.3	73.9	60.9	52.2	87.0[a]	82.6[a]
Not Married or Domestic Partnership	58.1	58.1	54.8	54.8	48.4	32.3	54.8	45.2
Education Level (54)								
High School, GED, or Some College	60.9	52.2	52.2	52.2	39.1[b]	34.8	60.9	47.8
College Degree	80.7	71.0	74.2	71.0	64.5	45.2	74.2	71.0

[a]Statistically significant difference at $p \leq 0.05$

[b]Marginally statistically significant difference $p > 0.05$ and $p \leq 0.08$

Table 4. Poisson regression analysis examining the relationship between screener scales and experiencing job-related stressors, controlling for the remaining variables in the full models, adjusted for overdispersion.

	Parameter Estimates (SE)				
Characteristic (Reference)	**Depression Scale n=46**	**PTSD Scale n=47**	**Anxiety Scale n=47**	**Hazardous Alcohol Scale n=47**	**Suicide Risk Scale n=47**
Demographic					
Female (Male)	0.59 (0.36)	0.06 (0.34)	0.41 (0.40)	-0.20 (0.28)	0.11 (0.11)
Age 20-39 years (40+ years)	-0.14 (0.36)	-0.32 (0.38)	-0.19 (0.41)	0.28 (0.31)	-0.24 (0.12)[a]
Non-Hispanic White (Prefer not to say or missing)	-1.21 (0.53)[a]	-0.91 (0.60)	0.14 (0.80)	-0.38 (0.50)	0.07 (0.24)
Non-Hispanic Black (Prefer not to say or missing)	-1.23 (0.55)	-0.41 (0.59)	0.48 (0.79)	-1.00 (0.55)[b]	0.35 (0.24)
Hispanic or Other (Prefer not to say or missing)	-1.02 (0.79)	-0.61 (0.86)	0.73 (1.03)	-1.20 (0.83)	0.23 (0.31)
Married or Domestic Partnership (Not married/partner)	0.53 (0.31)	0.19 (0.34)	0.38 (0.37)	-0.19 (0.31)	0.14 (0.11)
High School, GED, or Some College (College degree)	0.53 (0.35)	0.68 (0.34)[a]	0.36 (0.37)	0.12 (0.29)	0.28 (0.11)[a]
Job-Related Events					
Physical assault (No Event)	0.33 (0.97)	0.29 (0.99)	1.19 (1.07)	0.03 (0.76)	0.29 (0.30)
Assault with weapon (No Event)	2.29 (0.83)[a]	1.71 (0.94)[b]	0.96 (1.09)	2.87 (0.91)[a]	1.60 (0.36)[a]
Sexual assault (No Event)	-1.48 (1.26)	-1.79 (1.31)	-2.14 (1.39)	-3.73 (1.00)[a]	-1.89 (0.46)[a]
Other sexual experiences (No Event)	-0.64 (0.51)	-0.19 (0.61)	-0.37 (0.62)	0.63 (0.59)	0.20 (0.20)
Human suffering (No Event)	-0.30 (0.43)	-0.29 (0.47)	-0.26 (0.49)	0.09 (0.37)	-0.06 (0.14)

Violent death (No Event)	0.74 (0.57)	0.89 (0.62)	1.15 (0.65)[b]	1.27 (0.55)[a]	0.61 (0.25)[a]
Sudden death (No Event)	-0.72 (0.57)	-0.56 (0.59)	-0.41 (0.63)	-1.22 (0.59)[a]	-0.51 (0.23)[a]

[a]$p \leq 0.05$

[b]$p > 0.05$ and $p \leq 0.08$

Acknowledgements | The authors thank the Consolidated Dispatch Agency – 911 Emergency Communications Tallahassee, FL, and the 2nd Alarm Project for their significant contributions to this work.

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