Measure Name: Support rail staff after traumatic events

Definition: Develop strategies to manage the impacts of potentially traumatic events on staff, including support before, during, and after a train-person or train-vehicle collision.

Tags:

Type of Incident:
- ☐ Non-Motorized Users Only
- ☐ Motor Vehicles Only
- ☒ Both

Intervention Strategy:
- ☐ Data: application and planning
- ☒ Education: outreach and messaging
- ☐ Enforcement: policy development and rulemaking
- ☐ Engineering: technological and physical deterrents

Type of Problem:
- ☒ Non-Motorized Users Violating Warning Devices
- ☒ Motor Vehicles Violating Warning Devices
- ☒ Vehicle ROW Incursion
- ☒ Vehicle Congestion
- ☒ Blocked Crossing
- ☒ Vehicle Hang-up

Measure Category:
- ☐ Risk Assessment
- ☐ Policy and Enforcement
- ☒ Collaboration, Training, and Education
- ☐ Public Communication
- ☐ Physical Barriers
- ☐ Detection and Lighting
- ☐ Infrastructure Modification
- ☒ Post-Incident Management
- ☐ Warning Devices

Description

This measure focuses on strategies to provide employees with support before, during, and after an incident where a person is struck at a grade crossing, or along the right-of-way.

The detrimental impacts of these incidents on the mental health and wellbeing of train crews have been extensively researched. Train crews may experience Post-Traumatic Stress Disorder (PTSD), anxiety, depression [1], and a variety of other disturbances. Symptoms from these incidents can last for several months or more after an incident and can lead to an increase in sick time used compared to employees who never experienced an incident [1]. Past research emphasizes the importance of providing support for train crews soon after an incident and long-term to help reduce the various symptoms experienced after an incident [2].

Certain types of rail carriers are required to develop critical incident stress plans to support train crews after an incident occurs, as outlined in Title 49 of the Code of Federal Regulations (CFR) Part 272, "Critical Incident Stress Plans" [3]. Example requirements include relief from duty at the time of the incident and subsequently, transportation from the incident, counseling and other appropriate support services (refer to the CFR for a complete list of requirements). Additional recommendations for critical incident stress plans are provided in "Proposed Key Elements of a Critical Incident Intervention Program for Reducing the Effects of Potentially Traumatic Exposure on Train Crews to Grade Crossing and Trespasser Incidents" [4].

In addition to supporting train crews after an incident occurs, a proactive approach can also be taken to help prepare train crews for managing effects of future incidents. For example, psychological first aid is an approach used by first responders, the Department of Veteran's Affairs, and others to provide support to individuals following traumatic events. This type of training covers actions that can help an individual immediately after experiencing the event and help staff to quickly assist coworkers. Resilience training, on the other hand, focuses on learning skills to help better manage traumatic events experienced on the job [5], and found useful for law enforcement and other first response occupations. Helping employees to increase resilience can also be beneficial for helping employees to effectively manage daily stress, adapt to change, and maintain job performance [6]. Critical incident stress plans may be complemented by these additional types of training and can be paired with other efforts to support employee mental health. Efforts to support mental health for rail employees can include education about mental health issues, how mental health affects both work and personal lives and what are signs that you or someone you know is in distress as well as how to find support.

Encouraging employees to check in with one another can also benefit staff and help to create a safe and supportive work environment. There is some evidence that training such as Trauma Risk Management can assist in changing employee's attitudes toward talking to coworkers about a traumatic event, and about seeking help, although additional research is needed [6]. Another example of efforts to including employee to employee support is Union Pacific Railroad program, "Courage to Care." This program is designed to support a strong safety culture and a compassionate and supportive work environment. In addition, a "stand down" is also held to give employees the opportunity to openly share their experiences with other employees [7]. Metra also initiated a campaign, "Breaking the Silence", in collaboration with Amtrak and others to encourage a more open discussion of railway suicide within the

rail industry and in the public [7]. These employee-to-employee support programs are not only in the US but the international rail community as well. In Australia and New Zealand, a program was developed called, "R U OK? Day." This program encourages employees to reach out to support one another. Information given to employees includes how to recognize signs of a coworkers in distress and how to start a conversation to support them [7]. Such a campaign can help normalize the discussion of these incidents and create and create a more open and accepting culture to allow employees to feel comfortable opening about their experiences and supporting their peers.

Additional search terms: *conductor, driver, engineer, PTSD, train crew*

Advantages

- Employees will benefit from learning resiliency skills that are useful in their personal lives as well as in the work environment.
- Training that underscores the common emotions and reactions to traumatic events can aid employees in their coping process [6] and encourage employees to talk more openly about their experiences and seek help when they need it.
- Supporting employee mental health is low-cost. Rail carriers can use existing resources within Employee Assistance Programs (EAPs).
- Supporting employee mental health may lead to positive impacts on employee mental and physical health, along with their overall job performance. [8]

Drawbacks

- Employees may have varying levels of comfort and interest in receiving and giving this type of support and/or training.
- Employees may be hesitant or discouraged from attending optional meetings due to stigmas associated with mental health issues. [9]

Notable Practices

- Employee care programs should be designed to fit the unique needs of each individual rail carrier and their staff. [4]
- Provide protocols for employees involved in an incident. [4]
- Identify who will be responsible for communicating with the employees involved. [4]
- Specify EAP responsibilities for employee outreach after an incident occurs. [4]
- Provide training for rail employees including train crews, managers, EAP staff, etc. [4]
- All employees will not have the same reaction to traumatic events depending on the factors involved in the incident and how many incidents the employee has experienced; therefore, a variety of options should be available.
- Training for rail employees should covey that feeling distress after an incident occurs is normal, as well as how to recognize PTSD symptoms. [8]

- It is important to highlight the positives of receiving support after a traumatic event since some employees may be hesitant to seek or accept support due to the stigmas often associated with mental health issues. Training, team-building activities, and peer support can help to address these stigmas. [6] [9]

References

[1] Clarner, A., Graessel, E., Scholz, J., Niedermeier, A., Uter, W., & Drexler, H. (2015). Work-related posttraumatic stress disorder (PTSD) and other emotional diseases as consequence of traumatic events in public transportation: a systematic review. *International Archives of Occupational and Environmental Health*, *88*(5), 549-564.

> Abstract: Background. Drivers in public transportation are at risk of experiencing potential traumatic events such as accidents involving persons, collisions, or suicides. In this context, the question arises to what extent psychological traumatization and posttraumatic diseases occur. Purpose. The aim of this systematic review was to describe the frequency and nature of work-related posttraumatic disorders, to analyze risk and prognostic factors after potentially traumatic events (accidents resulting in damage to property and/or in injury or death), and address sick leave after such events in the realm of public transportation, based on the available literature. Methods. Systematic review based on four databases (PubMed, PSYNDEX/MEDLINE, ScienceDirect, PILOTS) between 1980 and June 2013. Results. We identified seven studies (four longitudinal, three cross-sectional) that examine employees after person under train (PUT) events. PTSD prevalences varied broadly between 0.7 and 17 %. The same applies to dysthymia/neurotic depression (1–26 %). However, similarly low prevalences of major depression (1.3–2.8 %) and panic disorder (0.5–1.3 %) have been observed. Risk factors of PTSD comprised individual, work-related, event-related, and prognostic aspects. Following the traumatic event, a total of 69–81 % of the drivers were absent, and if sick leave occurs, this was on average 3–19 days. Conclusions. It became evident that drivers in public transportation run a high risk of sick leave. It was also striking that despite the immense impact of PUT and high number of suicides, only an infinitesimal number of studies exists. Due to various differences (period of follow-up, instrument of measurement and study period), it turned out that the comparability of the results of the studies is limited. For various reasons, further research is urgently needed, as from an occupational health point of view the issue of posttraumatic diseases and implications for fitness for service should be addressed.

[2] Limosin, F., Loze, J., Cothereau, C., de Beaurepaire, C., Payan, C., Conso, F., Hautecouverture, S. & Rouillon, F. (2006). A prospective study of the psychological effects of "person under train" incidents on drivers. *Journal of Psychiatric Research 40*(8), 755–761

> Abstract: Previous studies have shown that person under train (PUT) accidents cause psychological distress to drivers during the first year following the incident. Our aims were to assess the psychological consequences of PUT accidents on drivers prospectively, and to identify risk factors for psychological effects. In this prospective, one-year, follow-up study, a consecutive series of PUT drivers (n = 202) were compared with a group of matched control drivers (n = 186). Psychological state was assessed 15 days, 3 months and 1 year after the event, using the GHQ-28 questionnaire and a standardised diagnostic interview (the v4.4 MINI). Fifteen days after the event, PUT drivers had significantly higher GHQ-28 scores (p < 0.0001) and more acute stress disorder (p = 0.008) than control drivers. No significant differences were found 3 months and 1 year after the accident. Significant explicative variables were the presence of acute and chronic psychosocial stressors (OR = 3.30 and 3.68) and the availability of immediate help (OR = 0.46). We thus confirm previous findings that train drivers who have experienced a PUT accident

experience acute psychological disturbances. Our results also highlight the utility of the systematic prevention programme provided.

[3] Critical Incident Stress Plans, Title 49 CFR Part 272 (2014).

[4] Gist, R. (2014). Proposed Key Elements of a Critical Incident Intervention Program for Reducing the Effects of Potentially Traumatic Exposure on Train Crews to Grade Crossing and Trespasser Incidents. Technical Report No. DOT/FRA/ORD-14/06. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: This independent report presents work conducted regarding project FR-RDD-0024-11-01 to advise and support the formulation of regulations and supporting materials concerning "critical incident" response plans for rail carriers covered by the Rail Safety Improvement Act of 2008, Sec. 410. This report addresses the following topics: (a) Review of literature on established and emerging research findings with respect to occupational exposure to potentially traumatic events (PTEs)(b) Review of literature on current best practices with respect to prevention, mitigation, early intervention, and evidence-based treatment of established sequelae from such exposures; (c) Review of current practices by key rail carriers as reported through the Association of American Railroads (AAR) to determine level of consensus reflected in existing programs respecting critical requirements of the authorizing act (e.g., definition of "critical incident," release from duty of impacted employees, intervention design, and evaluation of outcomes);(d) Preparation of a general guidance template outlining key features that might be expected in model programs, reflecting current best practices and existing consensus; and (e) Comparison of reported features within existing carrier programs with critical elements of current best practices.

[5] Arnetz, B. B., Nevedal, D. C., Lumley, M. A., Backman, L., & Lublin, A. (2009). Trauma resilience training for police: Psychophysiological and performance effects. *Journal of Police and Criminal Psychology*, *24*(1), 1-9.

Abstract: The objective of this study is to test the effects of police trauma resilience training on stress and performance during a critical incident police work simulation. Rookie police officers (N = 18) participated in a randomized trial of a 10-week imagery and skills training program versus training as usual. Twelve months later, psychophysiological stress and police work performance were assessed during a live critical incident simulation. Training resulted in significantly less negative mood, less heart rate reactivity, a larger increase in antithrombin, and better police performance compared to controls. Trends for cortisol and self-reported stress also suggested benefits of training. This novel training program is a promising paradigm for improving police well-being, stress resiliency, and optimizing job performance.

[6] Sage, C. A. M., Brooks, S. K., Jones, N., & Greenberg, N. (2016). Attitudes towards mental health and help-seeking in railway workers. *Occupational Medicine*, *66*(2), 118-121.

Abstract: Background: TRiM (Trauma Risk Management) has been shown to improve mental health and attitudes towards mental health in high-risk occupational groups; however, there has been no research into how TRiM might work for railway workers. Aims: To assess whether attending a TRiM training course alters mental health and attitudes to mental health-related help-seeking in railway workers. Methods: Workers completed a survey assessing mental health and attitudes towards mental health and help-seeking, before and after a 2-day TRiM course; follow-up questionnaires were administered 4 months post-course. Results: Fifty railway employees completed the questionnaires. Post-course scores for cohesion and mental health peer literacy (i.e. feeling able to recognize and discuss mental health symptoms with colleagues) and some aspects of stigma significantly improved, while there were non-significant improvements in common mental disorder and post-traumatic stress symptoms. The response rate for completing follow-up surveys was small (*n* = 8) but results from these subjects suggested mental health peer literacy scores remained significantly improved. Conclusions: This study provides a useful insight into attitudes of railway workers regarding stigma and their confidence in discussing trauma-

related mental health. Significant improvements in cohesion and mental health peer literacy along with the general improvement in scores post-TRiM course provide some evidence of the potential benefits of TRiM training in railway workers. Follow-up results have limited reliability due to the small number of responders but suggest possible long-term benefits of attending a TRiM course. Further research is required to confirm this finding.

[7] Gabree, S. H., Hiltunen, D., & Ranalli, E. (2019). Railroad Implemented Countermeasures to Prevent Suicide: Review of Public Information. Technical Report No. DOT/FRA/ORD-19/04. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: The public discussion of railroad safety initiatives can help to improve safety, either directly with the public through an increased awareness, or by encouraging other carriers to consider similar safety efforts. Rail carriers are often quick to promote trespass and crossing safety efforts, however, efforts to mitigate rail suicide are often not discussed. Suicide is unique from other rail safety topics in that it requires more precise language when discussing publicly. Responsible discussion of suicide prevention can increase the availability of information on how to get help, while limiting the dramatization of these events, thereby reducing the likelihood of copycat events. In this report, the authors conducted web-based searches to identify rail-specific efforts to mitigate suicide that have been publicly discussed, either by the carrier themselves or through the media. Generally, there is limited discussion of suicide-specific prevention efforts being undertaken by rail carriers, and the level of detail provided about these efforts varies. In total, 14 carriers and a range of strategies were identified including fencing, signage, detection and monitoring, training of employees and authorities, public and industry events, websites, and media guidelines. Partnerships with suicide prevention groups, both local and national, were most often discussed.

[8] Leon, M. R., & Halbesleben, J. R. (2013). Building resilience to improve employee well-being. A.M. Rossi, J.A. Meurs, P.L. Perrewé (Eds). *Improving Employee Health and Well Being*, (pp. 65-82).

Description: Book chapter that addresses employee resilience, well-being and performance

[9] Williams, C., Miller, J., Watson, G., & Hunt, N. (1994). A strategy for trauma debriefing after railway suicides. Social Science & Medicine, 38(3), 483-487.

Abstract: Following an increase in the incidence of railway suicide from an average of four events a year up to 1989 to 12 in 1990 an initiative was developed between the District Department of Clinical and Community Psychology, Exeter Health Authority and British Rail, Western Region. Trainerew leaders and management had become increasingly aware of the severity of the short- and long-term effects on drivers of experiencing a suicide. Although a management strategy had been developed over time to deal with what had been a rare phenomenon it was clear that such a dramatic increase in suicides warranted a more professional approach to debriefing and trauma counselling. This paper describes the strategies adopted by psychologists in developing an understanding of the stresses of experiencing suicides and other major incidents. The outcome of small group sessions with affected drivers is outlined. An account of the strategy developed through workshops with traincrew leaders is detailed and a three-stage debriefing (shock, search, adjustment) and follow-up protocol is discussed. This process is proposed for adoption as normal procedure following suicides or similar traumas for drivers and line managers.

Additional Resources

The following websites provide various resources that may be useful for supporting rail staff:

- [International Critical Incident Stress Foundation, Inc.](#)

- [SAMHSA Psychological First Aid Resources](#)

- [Rail R U OK? Day webpage](#)

Anderson, G. S., Di Nota, P. M., Groll, D., & Carleton, R. N. (2020). Peer Support and Crisis-Focused Psychological Interventions Designed to Mitigate Post-Traumatic Stress Injuries among Public Safety and Frontline Healthcare Personnel: A Systematic Review. *International Journal of Environmental Research and Public Health, 17*(20), 7645.

Abstract: Public safety personnel (PSP) and frontline healthcare professionals (FHP) are frequently exposed to potentially psychologically traumatic events (PPTEs), and report increased rates of post-traumatic stress injuries (PTSIs). Despite widespread implementation and repeated calls for research, effectiveness evidence for organizational post-exposure PTSI mitigation services remains lacking. The current systematic review synthesized and appraised recent (2008-December 2019) empirical research from 22 electronic databases following a population-intervention-comparison-outcome framework. Eligible studies investigated the effectiveness of organizational peer support and crisis-focused psychological interventions designed to mitigate PTSIs among PSP, FHP, and other PPTE-exposed workers. The review included 14 eligible studies (n = 18,849 participants) that were synthesized with qualitative narrative analyses. The absence of pre-post-evaluations and the use of inconsistent outcome measures precluded quantitative meta-analysis. Thematic services included diverse programming for critical incident stress debriefing, critical incident stress management, peer support, psychological first aid, and trauma risk management. Designs included randomized control trials, retrospective cohort studies, and cross-sectional studies. Outcome measures included PPTE impacts, absenteeism, substance use, suicide rates, psychiatric symptoms, risk assessments, stigma, and global assessments of functioning. Quality assessment indicated limited strength of evidence and failures to control for pre-existing PTSIs, which would significantly bias program effectiveness evaluations for reducing PTSIs post-PPTE.

Bardon, C., & Mishara, B. L. (2015). Development of a comprehensive programme to prevent and reduce the negative impact of railway fatalities, injuries and close calls on railway employees. *Journal of Occupational Rehabilitation, 25*(3), 557-568.

Abstract: Aim This article presents a strategy to prevent trauma, support and care for railway personnel who experience critical incidents (CI) on the job, usually fatalities by accident or suicide. Method We reviewed all publications on CI management, support and care practices in the railway industry, as well as practices in place in Canada (unpublished protocols). Semi structured interviews were conducted with 40 train engineers and conductors involved in CIs and the content was coded and analysed quantitatively. Results Employees' satisfaction with the help received after the incident varies according to the behavior of the local manager, company officers and police, the level of compliance with existing company protocols to help them, the presence of unmet expectations for support and care, their perceived competency of clinicians they consulted and the level of trust toward their employers. Conclusion On the basis of the interview results, the review of existing railway practices and discussions with railway stakeholders, a model protocol was developed for a comprehensive workplace prevention, support and care protocol to reduce the negative impact of railway critical incidents on employees. This protocol

includes preventive actions before traumatic events occur, immediate responses at the site of incident, interventions within the first few days after the incident and longer term support and interventions provided by the company and by outsourced experts.

Creamer, M. C., Varker, T., Bisson, J., Darte, K., Greenberg, N., Lau, W., ... & Watson, P. (2012). Guidelines for peer support in high-risk organizations: An international consensus study using the delphi method. *Journal of Traumatic Stress, 25*(2), 134-141.

> Abstract: Despite widespread adoption of peer-support programs in organizations around the world whose employees are at high risk of exposure to potentially traumatic incidents, little consensus exists regarding even the most basic concepts and procedures for these programs. In this article, consensus refers to a group decision-making process that seeks not only agreement from most participants, but also resolution of minority objections. The aim of the current study was to develop evidence-informed peer-support guidelines for use in high-risk organizations, designed to enhance consistency around goals and procedures and provide the foundation for a systematic approach to evaluation. From 17 countries, 92 clinicians, researchers, and peer-support practitioners took part in a 3-round web-based Delphi process rating the importance of statements generated from the existing literature. Consensus was achieved for 62 of 77 (81%) statements. Based upon these, 8 key recommendations were developed covering the following areas: (a) goals of peer support, (b) selection of peer supporters, (c) training and accreditation, (d) role of mental health professionals, (e) role of peer supporters, (f) access to peer supporters, (g) looking after peer supporters, and (h) program evaluation. This international consensus may be used as a starting point for the design and implementation of future peer-support programs in high-risk organizations.

Fan, J., & Smith, A. (2017). Positive well-being and work-life balance among UK railway staff. Open *Journal of Social Sciences, 5*, 1-6.

> Abstract: Failure to manage the well-being and work-life balance of railway workers may result in an increased risk to train safety and employees' health. This article reports the findings of a study that measured positive well-being and work-life balance, and identified the factors affecting these among UK railway staff. On the whole, staff who perceived high levels of control and support had a better work-life balance and an increased sense of well-being. A positive personality was associated with positive well-being both at work and outside of work.

Related Measures

- Plan for expedited incident response

Images

- No image available