Measure Name   Public messaging to prevent trespassing

Definition   Messages to prevent trespassing on rail property and increase rail safety knowledge.

Tags

Incident Type   Trespass only
Location   Both station and right-of-way
Intervention Strategy   Education: outreach and messaging
Measure Group   Public communication

Description

Public messaging to prevent trespassing on rail property aims to increase knowledge of rail safety, the risks of trespassing, and existing regulations. This messaging encourages safe behaviors by highlighting the dangers of trespassing and promoting desired safe practices in the rail environment. Broader public messaging campaigns to prevent trespass may also involve rail safety groups, such as Operation Lifesaver, Inc.

Public messaging can be designed to target specific populations and problem behaviors in the track area, for example, shortcutting, loitering, photography, videography, fitness activities, risk-seeking, vandalism, and other recreational or criminal activity. Alternatively, public messaging may focus more on positive behaviors that help keep communities safe, such as crossing the tracks at a designated pedestrian crossing.

A variety of media types can be used to convey this information, including:

- Physical warning signs
- TV, radio, or podcasts
- Newspapers, brochures
- Websites and social media platforms
- Geofencing

Geofencing has been used to notify drivers approaching railroad crossings, as well as for notifying rail workers when they have entered an unsafe area. Similarly, this technology could be used to alert pedestrians that they are approaching railroad tracks, however, no implementations were identified as of May 2024.

It is important to consider how trespass safety messaging could impact at-risk individuals, even if the messaging does not explicitly mention suicide. Portraying a train strike as a quick and certain death may inadvertently highlight the rail system as a viable means for suicide. When creating messages for trespass prevention, consider whether messages inflate or highlight lethality [1].

Additional search terms: *media, messages, signage, signs*

Advantages

- This measure can be tailored to fit a range of budgets, because the costs associated with this type of collaboration depend on the mitigations implemented (e.g., warning signs or mass media campaign).

- Messaging can reach a large segment of the public because it can be implemented along the right-of-way, at stations, and outside of the rail environment.

- Messaging has the potential to impact both trespass and suicide.

Drawbacks

- Signage may require periodic maintenance.

- Campaign materials may need to be designed by a third party, which could increase costs.

- Campaign effectiveness may decline over time. Periodically revising the messaging and/or design may help to mitigate this decline [2][3].

Notable Practices

- Avoid highlighting the lethality of the rail system; emphasizing rail lethality can have unintended consequences for individuals at risk for suicide [4]. Consider focusing on other aspects of rail casualties such as debilitating injury, impacts on train crews, delays, etc. [1].

- Use positive messaging that highlights safe behaviors while avoiding fear-based massaging that focuses on unsafe behaviors [2].

- Use multiple types of media to communicate the messages [2].

- Identify whether the campaign will target a specific population (e.g., through data analysis), and tailor the campaign to the intended audience [2].

- The types of media used, and messaging should consider the ethnicities, languages, and ability status represented in the local population.

- Consider placing messaging in high-traffic locations or where trespassing is known to occur.

- This measure is often implemented along with other countermeasures [2][6][7], such as education, fencing and other barriers, collaboration with law enforcement and communities, and safety and security patrols.

- Collaborate with various stakeholders, such as local law enforcement, government entities, and community representatives/members [5].

References

[1] Operation Lifesaver, Inc. *Safe and Effective Messaging on Rail Incidents: Useful Tips for Effective Reporting on Rail Suicide.*

> Description: Recommendations for reporting specifically on rail incidents developed by the FRA, Volpe Center and OLI.

[2] Robertson, R. D., & Pashley, C. R. (2015). *Road Safety Campaigns: What the research tells us*.

> Document Excerpt: This document focuses on road safety campaigns, but the information it provides can be applied to public messaging to prevent trespassing.] This report contains an overview of leading theories that provide the foundation for road safety campaigns. It is combined with a comprehensive summary of the research evidence related to the effectiveness of road safety campaigns generally, and examples of individual campaign evaluations regarding drinking and driving, distracted driving, seatbelt use, speeding and vulnerable road users. It also highlights what is known about learning styles based on educational theories and shares recommendations to help communities develop effective road safety campaigns.

[3] RESTRAIL. (2014). *Evaluation of measures, recommendations and guidelines for further implementation Pilot test #1: Warning signs and posters – CIDAUT*.

> Description: Describes a study evaluating the effectiveness anti-trespass warning signs and posters in Spain.

[4] RESTRAIL. (2019, July 17). *17.3 Targeted campaign towards vulnerable categories*. Restrail Toolbox.

> Description: This webpage provides information on implementing trespass prevention campaigns targeted for specific populations and trespassing behaviors (e.g., photography, fitness, etc.) in Europe, including recommendations, considerations for implementation, and relevant research results.

[5] Delhomme, P., De Dobbeleer, W., Forward, S., Simoes, A., Adamos, G., Areal... Walter, E. (2009). *Manual for designing, implementing, and evaluating road safety campaigns* (P.Delhomme, W. r De Dobbeleer, S. Forward, A. Simões , Ed.). Brussels: Belgian Road Safety Institute.

> Document Excerpt: [This document focuses on road safety campaigns, but the information it provides can be applied to public messaging to prevent trespassing.] The aim of this manual is to provide a detailed and practical tool that can be used to design, implement and evaluate road safety communication campaigns. It contains both a theoretical background and a practical guideline how to carry out campaigns on a national and international level. It is aimed at both researchers and practitioners involved in designing and implementing road safety communication campaigns all over Europe.

[6] Lobb, B., & Harré, N., & Terry, N. (2003). An evaluation of four types of railway pedestrian crossing safety intervention. *Accident Analysis & Prevention*, 35(4), 487-494.

> Abstract: This study evaluated a programme of interventions designed to reduce the incidence of illegal and unsafe crossing of a rail corridor at a city station by boys on their way to and from the adjacent high school in Auckland, New Zealand. The boys were observed crossing before, during, and after implementation of each intervention; in addition, surveys were carried out before and after the programme to discover the boys' attitudes. Rail safety education in school, punishment for every unsafe crossing (continuous punishment), and punishment occasionally for unsafe crossing (intermittent punishment) were associated with significant decreases in unsafe crossing compared with that observed

prior to any intervention. General communications about rail safety were not associated with significant decreases in unsafe crossing. When interventions were examined consecutively, unsafe crossing was significantly reduced between the communications and education phases, and even more so between education and continuous punishment, but there was no statistically significant difference in frequency of unsafe crossing between continuous and intermittent punishment. It was concluded that punishment may be more effective in reducing unsafe behaviour in this type of situation than targeted education, and is much more effective than communications to heighten awareness.

[7] Silla, A. & Luoma, J. (2011). Effect of three countermeasures against the illegal crossing of railway tracks. *Accident Analysis & Prevention, 43*(3), 1089-1094.

Abstract: This study was designed to investigate the effects of three countermeasures – landscaping, building a fence and prohibitive signs – on the frequency of trespassing, which in this case means crossing the track at places where it is forbidden. At each location the official route was no more than 300 m away. The main results showed that the effect of each countermeasure on the frequency of trespassing was statistically significant. Specifically, the fencing reduced trespassing by 94.6%, followed by landscaping (91.3%) and prohibitive signs (30.7%). The majority of illegal crossings were committed alone and the persons trespassing were mostly adults and men. In addition, the results demonstrated some tendencies of how the effects of the selected countermeasures can vary with the characteristics of the trespassers. The main implication of this study is that the building of physical barriers such as landscaping or fencing is recommended for reducing trespassing. However, if the required resources are not available or the site is not suitable for such measures, the use of prohibitive signs is recommended. Further, there is a need to tailor the countermeasures to the characteristics of the trespassers in order to ensure that the most appropriate countermeasures are applied.

Additional Resources

Federal Highway Administration. (2008). *Step-by-Step Guide - National Pedestrian Safety Campaign*.

Description: This document focuses on pedestrian road safety, but the information it provides can be applied to railroad trespass. The document "is designed to help communities conduct their own multi-media public education and information campaign. A list of campaign materials is provided on page 9 and a matrix identifying the types of campaign materials is provided on page 100."

Forsdike, N., Turner, C., Bellerby, F., Nelson, S., & McGuire, P. (2007). Improving the Content and Placement of Anti-Trespass Signs (J. R. Wilson, B. Norris, T. Clarke, & A. Mills, Ed.). *People and Rail Systems: Human Factors at the Heart of the Railway* (pp. 37-47). Burlington, VT: Ashgate Publishing Company.

Description: This chapter describes a study that sought to identify ways to improve the design and placement of anti-trespass signage, and in particular, increase effectiveness for children.

Havârneanu, G. M. (2017). Behavioural and organisational interventions to prevent trespass and graffiti vandalism on railway property. *Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit*, *231*(10), 1078-1087.

Abstract: This review covers a central aspect in railway safety which is the prevention of suicides and trespassing accidents. The paper attempts to answer the following research question: 'What measures are

available to reduce railway suicide and trespass, and what is the evidence for their effectiveness?' The review is based on 139 relevant publications, ranging from 1978 to 2014. The analysis aimed to identify the past and current trend in the prevention practice by looking both quantitatively and qualitatively at the recommended measures. According to the results, there has been a constant focus on suicide prevention, and only relatively recent interest in trespass countermeasures. The content analysis revealed 19 main preventative categories which include more than 100 specific measures. We identified 16 common categories against railway suicide and trespass, and 3 categories of specific measures to prevent suicide. There are only 22 studies which provide empirical support for the effectiveness of measures. Actual combinations of measures are barely evaluated, but several challenges emerge from the literature. The discussion focuses on the need for a unified approach to suicide and trespass prevention, and on the importance to consider the effect mechanism of the measures in order to design better interventions.

Hoekstra, T., & Wegman, F. (2011). Improving the effectiveness of road safety campaigns: Current and new practices. *IATSS Research*, 34(2), 80-86.

Abstract: The evaluation of campaigns aimed at improving road safety is still the exception rather than the rule. Because of this, ineffective campaigns and campaign techniques are allowed to continue to be utilised without question, while new methods of behaviour modification are often ignored. Therefore, the necessity and advantages of formally evaluating road safety campaign efforts are discussed. This article also describes the pros and cons of some of the more common campaign strategies and introduces a number of new methods that show a great deal of promise for the purpose of road safety campaigns. In order to infuse the field of road safety campaigning with such new insights into road user behaviour and behavioural modification, one should look beyond the confines of road safety campaign standards and learn from the knowledge gained in other disciplines such as economics and social psychology. These new insights are discussed in terms of their implications for the future of road safety campaigns.

Related Measures

- Collaboration with local government and communities
- Identify funding opportunities
- Incident cost estimation
- Passenger engagement to identify customers at risk
- Physical barriers at bridges
- Public messaging to prevent suicide
- Public messaging to prevent trespassing
- Rail safety education in communities
- Rail safety education in schools
- Safety patrols to deter suicide and trespassing

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