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Nearly one-third of all rail-relate	ed fatalities in th	e U.S. result from	n an intentional act of	suicide. Ra	ail carrier-based strategies to	
prevent these incidents are not w	vell understood,	and empirical evaluation to educe	idence of the effective	ness of know	own strategies is currently very	
near-term risk of suicide and how to intervene. As with other mitigation strategies, empirical evidence of the impact of suicide						
intervention training remains limited; however, there are a wide variety of best practices and lessons learned from existing						
programs that may help future training programs. This report documents these best practices and lessons learned, first through a						
review of several established suicide intervention training programs, and second through a summary of the basics of how such a						
program may be developed by other carriers. Kail carriers looking to implement a suicide intervention training program will be						
when launching their own training	ng programs.	field, and will I	ind guidance on impor		ons they will need to make	
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1 foot (ft)	= 30 centimeters (cm)	1 centimeter (cm) = 0.4 inch (in)		
1 yard (yd)	= 0.9 meter (m)	1 meter (m) = 3.3 feet (ft)		
1 mile (mi)	= 1.6 kilometers (km)	1 meter (m) = 1.1 yards (yd)		
		1 kilometer (km) = 0.6 mile (mi)		
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1 square inch (sq in, in ²)	= 6.5 square centimeters (cm ²)	1 square centimeter (cm ²) = 0.16 square inch (sq in, in ²)		
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1 acre = 0.4 hectare (he)	= 4,000 square meters (m ²)			
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Executive Summary

Fatalities due to suicide attempts account for about one-third of all fatalities on the U.S. rail system between 2011 and 2018.¹ The impact of these incidents can be felt throughout the industry and within communities around the country. Although many U.S. rail carriers are actively implementing strategies to try to prevent these incidents from occurring or to mitigate their impacts, only a limited number of studies have examined the effectiveness of various countermeasures. This lack of evidence may contribute to uncertainty among rail carriers when considering or implementing countermeasures to mitigate the number of suicides that occur along their tracks.

One valuable mitigation strategy is educating rail staff to identify individuals at risk for suicide and intervene. This type of training has been successfully implemented and documented by several rail carriers. While the goals of these suicide intervention training programs are largely the same, the details of the implementations are unique to each carrier. This document provides a review of several suicide intervention training programs, including the most established programs from around the world, including the U.K., Germany, the Netherlands, and the U.S.

This document provides a detailed review of what is known about each of these programs in an effort to understand how they were developed and why certain decisions about program specifics were made. The programs all include a partnership with an existing group that specializes in suicide prevention or suicide prevention training, though the partners were not all the same. In some programs, training was provided directly to staff by the rail carrier's partner, while in other programs the partner trained key staff members who then provided the training to other staff members. Many other details about the training varied from program to program, including who was trained, the length of the training classes, the need for refresher materials, and various other components. Additionally, reviews of available documentation and direct communication with program leaders helped to reveal certain issues that arose during program and later summarized for carriers to reference when developing their own program.

This report does not provide a strict guide for rail carriers to follow; rather, it describes the development process, including various decisions that must be made to tailor such a program to the needs of an individual rail carrier. To ensure a successful training effort, rail carriers should know the basics for what needs to be considered early in the program development stage.

This report provides a high-level overview of some of the key aspects and decisions that a carrier will face when implementing a suicide intervention training program for rail employees, as well as many of the factors that will be critical to a successful program. Topics include planning, content development, implementation, continued improvement, and helpful tips. Refer to <u>Section</u> <u>5</u>, Program Basics, for additional detail.

¹ Includes FRA data current as of October 26, 2018, and excludes employees and passengers.

1. Introduction

This document describes various rail suicide intervention training efforts that have been implemented in the U.S. and internationally to provide important insights to other carriers pursuing or considering the development of their own training programs.

1.1 Background

Fatalities due to suicide attempts account for about one third of all fatalities that occurred on the U.S. rail system between 2011 and 2018.² The impact of these incidents reaches far beyond the loss of life and the overwhelming grief of friends and family. Rail crews can also experience lasting trauma, anxiety, guilt, and stress after being involved in a suicide incident (Mehnert, Nanninga, Fauth, & Schäfer, 2012). Passengers, witnesses, and first responders are also often affected, as well as rail carriers and the general public who experience lengthy and costly delays, cancelations, and road closures that often result from these incidents.

Although many U.S. rail carriers are actively implementing strategies to try to prevent these incidents or to mitigate their impacts, hundreds of individuals continue to lose their lives each year. The rail industry lacks empirical evidence on how to best prevent rail suicide incidents, and there have been few formal evaluations examining the effectiveness of various countermeasures. This paucity of evidence may contribute to uncertainty among rail carriers when considering or implementing countermeasures, as the effectiveness and safety impact of many strategies remains unclear.

Note that it can be challenging to conduct evaluations of rail suicide countermeasures for several reasons. Small numbers, due to the relatively low number of occurrences, can make it difficult to conclude whether a change in suicide rate is due to an implemented countermeasure or random fluctuation. Any annual changes in suicide rates on a rail system may be reflective of national or regional changes. For example, a suicide rate that remains stable may be considered a somewhat positive outcome if the national or regional rates of non-rail suicide are increasing significantly. Likewise, increases in rail suicide rates can reflect national or regional increases rather than a problem within the rail system.

Many factors can impact suicide rates that are independent of the rail environment, including: the availability of alternative means for suicide or access to adequate mental health care, laws and policies that affect the social stigmas attached to vulnerable populations, as well as economic and meteorological changes. Other ongoing suicide prevention efforts, both rail-specific and more general, can also make it difficult to isolate and evaluate the effectiveness of a specific countermeasure. Lastly, while lessons learned and best practices from specific carrier implementations may be helpful, it can often be hard to generalize findings to other carriers with unique geographic and cultural environments.

² Includes FRA data current as of October 26, 2018, and excludes employees and passengers.

The aforementioned challenges are not meant to minimize the value of evaluating rail suicide countermeasures. Implementing and evaluating countermeasures is a critical step along the path toward identifying the most effective strategies for reducing rail suicide, even though that process presents challenges. This does, however, highlight the importance of documenting information and collecting data about the process of implementing a countermeasure, and not focusing solely on suicide rates as the primary outcome. While the goal of any suicide prevention countermeasure will be to reduce suicide casualties, the potential for success can be found through examining other variables that are collected throughout the implementation process. Additionally, while not all findings are generalizable to every other carrier, understanding why certain decisions were made may help other carriers to identify and tailor strategies to their particular needs. Documenting the successes and challenges of carrier-specific countermeasure implementations can help to clarify this for other carriers. This document highlights some of these findings for one countermeasure: railroad-based suicide intervention training.

1.2 Objectives

The goal of this document is to provide a better understanding of suicide intervention training for railroad employees by presenting what is currently known about this strategy, as well as an overview of training programs implemented by other railroads. Evaluation results and lessons learned are also included to provide important insights to other carriers who are pursuing or considering the development of their own training programs.

1.3 Overall Approach

Researchers collected information about suicide intervention training by conducting web searches and by contacting railroads that have implemented training programs both within the U.S. and internationally. Web searches were conducted between December 2018 and February 2019, and included both general suicide intervention literature as well as rail-specific literature. The information gathered is condensed into a high-level overview of the factors to consider and steps to be taken for rail carriers that are currently implementing or considering a rail suicide intervention training program.

1.4 Scope

The information documented in this report is intended to provide an overview of suicide intervention training for railroad employees. This report is not intended to be an exhaustive review of the research available on suicide intervention training and does not include an exhaustive list of employee training programs implemented by rail carriers. Information was collected from a sample of rail suicide intervention training programs and is discussed to provide background information and lessons learned that can assist other railroads in the design, implementation and evaluation of their own training programs. Every rail carrier for which information is provided primarily operates as a passenger railroad and, as such, the findings are likely to be most useful for passenger and commuter railroads.

1.5 Organization of the Report

The remainder of this report is organized into five main sections. <u>Section 2</u>, Suicide Intervention Training Approach and Theory, presents and overview of the approach and theory of suicide intervention training to give the reader a foundation for the topics discussed later in the document. <u>Section 3</u>, Case Studies of Suicide Intervention Training for Rail Employees, presents a sample of rail carriers that have implemented suicide intervention training programs for employees both within the U.S. and internationally. Background information is included when available, as well as an overview of the implementation and evaluation process, and lessons learned. <u>Section 4</u>, Suicide Intervention for the Community, discusses efforts that focus on greater community involvement in rail suicide prevention. Program Basics, in <u>Section 5</u>, outlines various factors for rail carriers to consider when implementing their own rail suicide intervention training programs. Conclusions are discussed in <u>Section 6</u>.

2. Suicide Intervention Training Approach and Theory

In 2017, the U.S. experienced 47,173 suicide deaths—approximately 129 per day.³ As a critical part of many communities around the world, the rail industry may be in a position to become more involved in mental health and help prevent some of these incidents. One avenue for rail suicide prevention that has shown success is the training of rail staff to identify distressed individuals who may be contemplating suicide and intervene. This is sometimes referred to as gatekeeper training. Gatekeepers, in this context, are those in contact with individuals at risk, and can recognize the signs of someone who may be suicidal-for example, doctors, social workers, police, and teachers (Isaac et al., 2009). This type of training has been successfully implemented within several areas outside of the rail domain, including but not limited to the military, schools, and clinical environments (Isaac et al., 2009). In these settings, gatekeepers regularly interact with and monitor a specific population, providing an opportunity to recognize changes in individuals within that population and intervene to get them help when they need it most. The benefits of suicide intervention training, however, are not limited to these types of settings. Training can also be applied in public settings where suicide may be attempted, such as bridges or train stations. In public settings, trained individuals may be able to recognize behaviors that can precede an attempt. Training community members who are in the unique position to informally observe individuals at risk and provide help can also be beneficial (Cross, Matthieu, Lezine, & Knox, 2010). This type of training will herein be referred to as suicide intervention training.

Suicide intervention training differs from other types of mitigations in that it focuses on addressing suicidal ideation before an individual acts, but does not solely rely on that individual taking the initiative to reach out for help, as is the case with suicide prevention helpline signage. Instead, another individual—in this case, a trained employee—takes the action to reach out and offer assistance to someone in crisis so they can be removed from the rail environment and put in touch with the help they need. Suicide interventions in the rail environment will be most effective in areas where there is an increased opportunity for of rail staff to identify an individual at risk, for example, at stations and platforms, or at particular hot-spots.

Suicide intervention training programs can vary in the content of the training as well as how the training is conducted; however, the ultimate objective remains the same—to provide the "knowledge, attitudes and skills to identify individuals at risk for suicide and refer them to service" (Cross et al., 2010). One example of commercially available training is the Applied Suicide Intervention Skills Training program (ASIST), developed in 1983 by LivingWorks.⁴ The ASIST training has been used across many professions and organizations, including by those who answer calls for the U.S. National Suicide Prevention Lifeline. Another example is Question, Persuade, and Refer (QPR), which is a shorter 1-2 hour training developed by Paul Quinnet in 1995.⁵ Metra, a Chicago area commuter railroad, adopted this training as the basis for

³ www.afsp.org/about-suicide/suicide-statistics/

⁴ Additional information is available at the <u>LivingWorks</u> website.

⁵ Additional information is available at the <u>QPR Institute</u> website.

their employee training program, which will be discussed in more detail in Section 3.4.2. A third example is the Yellow Ribbon suicide prevention training, which is community based and focused more on youth suicide prevention.⁶ ASIST and QPR have been accredited by the Substance Abuse and Mental Health Services Administration (SAMHSA) National Registry of Evidence-Based Programs and Practices (NREPP), and Yellow Ribbon is listed on the Suicide Prevention Resource Center (SPRC) Best Practice List. These are not the only options available in the U.S. for identifying suicidal risk and intervening, but rather provide a few examples of what such programs may look like and can be used as models for rail-specific training programs. Many suicide prevention groups and crisis intervention services provide these training skills and may present another way to identify a group with these skills within a local community.

Suicide intervention training is based on the assumption that people in distress can exhibit recognizable behaviors or warning signs, and that those individuals can be redirected toward getting the help they need, thereby reducing the number of suicides (and attempts). Although there is no clearly defined set of behaviors that all individuals in distress exhibit or that can predict suicidal ideation, some research has begun to examine and propose certain behaviors or warning signs that can be recognized as a sign of potential distress in the rail environment (e.g., Lukaschek, Baumert, & Ladwig, 2011; Mackenzie et al, 2018; Ryan, 2018). Additional research is needed in this area to better understand these behaviors and to tailor suicide intervention training for the rail environment.

This type of training is also rooted in community involvement, and in the idea that anyone—not only mental health professionals—can help another person in need. Others capable of helping those in need connect with professional services. Rail employees can be trained and empowered to identify warning signs of an individual who may be in distress and contemplating suicide, how to approach the individual, ensure their safety, and direct them to services that can provide the help they need. This strategy was first broadly implemented in the U.K. with much success. Other rail and transit carriers in the U.S. and Europe have also implemented this strategy, each of which will be discussed in the sections to follow.

⁶ Additional information is available at the <u>Yellow Ribbon Suicide Prevention Program</u> website.

3. Case Studies of Suicide Intervention Training for Rail Employees

Suicide intervention training has been implemented by rail carriers around the world. The specifics of the programs and the path that led each carrier to their selected implementation are often different depending upon each carrier's specific needs and constraints. The following subsections contain information about suicide intervention training programs that have been implemented both internationally as well as in the U.S., although, there may be additional rail carriers that have current suicide intervention training in place that are not included in this section. This document is not intended to provide an exhaustive list of rail carriers who have implemented a suicide intervention training program for employees, but rather presents a sample of training programs that have been implemented to date.

3.1 United Kingdom

The U.K.'s Network Rail has one of the most robust railroad-based suicide prevention programs in the world. Network Rail has implemented a wide variety of suicide prevention efforts, many in partnership with Samaritans, a U.K.-based suicide prevention charity. One strategy that Network Rail has found to be very successful is the Managing Suicidal Contacts (MSC) training course, conducted for rail staff by the Samaritans. The information provided and documents reviewed about this effort was obtained through personal communication with a Network Rail representative (I. Stevens, personal communication, February 2019) unless otherwise noted.⁷

MSC training was developed in 2010 in partnership with the Rail Industry Suicide Stakeholder Group (RISSG) and provides a 1-day, 8-hour course specifically tailored to the needs of staff working in the rail industry. The training, which is conducted by Samaritans staff, includes the following topics:

- Listening skills and interpretation, including potential barriers to listening effectively and a practical model for listening skills
- Bereavement and loss
- Appropriate responses and empathy
- Suicide awareness and making referrals
- Ending conversations
- Getting support (e.g., self-care)

The training also highlights the benefits of a short conversation with someone who may be experiencing suicidal feelings and offers strategies to minimize immediate risk for suicide, as well as the risk of the individual returning to the rail environment at a later point to end their life.

⁷ Additional information can be found on the <u>Samaritans</u>, and <u>Network Rail</u> websites.

The MSC training course can have benefits beyond the potential life-saving opportunities that result. The skills learned in this training may help employees who have to respond to the scene of an incident themselves or in supporting a colleague who witnessed a suicide or was called to the scene. Additionally, these skills may benefit employees in their personal lives, thus helping them to become more resilient both personally and on the job.⁸

The MSC training has a stated goal that everyone who takes the course will be able to do the following:

- Acknowledge difficult feelings and circumstances.
- Show that they've listened and heard.
- Provide emotional first aid.
- Make sensitive and effective referrals.

Following the training, approximately 11 percent of staff made an intervention within their first 6 months back on the job. Even those who did not make an intervention benefited from the training, with 60 percent reporting that they used the skills they learned in some other aspect of their work.

Throughout the process of implementing this training, Samaritans noted a few lessons learned which may help to guide future efforts. Early on, through rail employee surveys, Samaritans identified three incorrect beliefs, or myths, about rail suicide that can create major barriers that are likely to hinder training efforts. In response to this information, Samaritans developed the training to directly address the following *incorrect* beliefs about suicide:

- "There's nothing you can do to prevent suicide."
- "I'll become responsible for interventions if I attend the training."
- "Suicidal people want to take others with them."

Each of these myths created a barrier that could negatively affect staff attitudes toward the training, or limit their willingness to use this knowledge after they attended the course. By directly addressing these misperceptions and providing evidence to counter them, the training was believed to be more successful.

The MSC training is a full-day, 8-hour training course that is directly taught by a Samaritans employee to a classroom of at least 8, and up to 20, rail employees. It was determined that a 1-day training course is ideal for effectively teaching staff how to manage these challenging situations, although it may be difficult to provide that time away from regular duties to every

⁸ Samaritans provides a separate course for rail staff called *Trauma Support Training* that is directly focused on anyone who has a role in supporting staff who have experienced a potentially traumatic event.

employee. Still, Network Rail and Samaritans have stressed the value of a full-day, in-person training course. The amount of content Samaritans delivers requires 8 hours and the role-playing skills practice component is seen as critical to building employee confidence in actively using these skills. Since the inception of the course, pressure has mounted from carriers to reduce the time required to conduct the course, and as a result, Samaritans and Network Rail have considered two alternatives: an online video-based training tool and a shorter 2-hour course. While not intended to replace the live instruction, Network Rail and Samaritans also launched The Learning Tool, an online resource with 10 short video modules to train employees on the basics of MSC training. This tool is available to employees who have not received the training, as well as employees who have received the in-person training and wish to refresh their skills. A shorter 2-hour course.

The MSC course was very well received by the over 20,000 rail industry personnel, including London Underground and British Transport Police (BTP) officers who have taken the course as of December 2018. Staff evaluations of the course have been very positive since the course was initially implemented, and 98 percent of those who took the course would recommend it to a colleague. This level of employee support is critical to ensuring that such a program can be successfully implemented. After attending the training, 81 percent of rail employees felt that they were more likely to suggest or seek emotional support for a colleague and 61 percent felt that they would seek such support for themselves. Samaritans also reported that a number of rail staff have gone on to become Samaritans volunteers and attend other awareness events, having been motivated by the course. Additionally, Samaritans reports that this training may be helpful in changing the culture surrounding mental health and seeking help.

While rates of rail suicide in the UK are not drastically lower, rates have been steadily declining since 2014. As mentioned earlier in this report, using suicide rate alone to judge the impact of an intervention can be misleading; however, with 5 years of data this decline is promising. This reduction in rail suicide rate is likely a result of a larger dedicated effort to address rail suicide in the U.K., and therefore cannot be entirely attributed to employee training.

In addition to suicide rates, Network Rail also tracks the number of interventions made. Each year since inception, Network Rail has reported an increase in both the number of staff trained and the number of interventions. Each of these interventions represents an individual who was potentially suicidal, could become suicidal, who was in need of other assistance, or simply needed a listening ear. Regardless of the level of suicidal risk, each individual was helped in some way.

Each year, since the inception of the MSC training, *lifesaving interventions* (a term used by Network Rail and Samaritans) have increased. Interventions are on pace to surpass 2,000 for the 2018/2019 fiscal year—the first time such a mark has been reached. For comparison, in the first year the training was offered, 2013/2014, just over 500 interventions were recorded. As more individuals were trained and as staff became more confident in using the training, the number of interventions nearly quadrupled over the next 5 years.

Throughout the implementation of the training to date, Network Rail and Samaritans identified several other factors that they believe are valuable to consider as these training programs are developed:

- Identify potential barriers to acceptance (e.g., see above) and endeavor to address those concerns head-on.
- Ensure that the individuals within the railroad tasked with developing the program are experienced and have knowledge of rostering and staff.
- Highlight the fact that the skills learned are broadly applicable, including to help manage any stressful situation in or away from work.
- Address needs relating to post-incident care for employees.
- For Network Rail, it was essential that the meeting included a qualified professional with the ability to support individuals in the class who may become distressed.
- In-person training is critical, as the course focuses on human contact, and face-to-face training allows for skills practice.
- Provide attendees with a handout summarizing the training that they can easily reference after the course.
- Keep records of who has been trained.
- Conduct post-course evaluations to capture a range of case studies, and to help to build evidence of the effectiveness of the training.

The program that was developed by Network Rail and Samaritans may not be the perfect fit for every rail carrier, but represents a detailed example or template for other rail carriers to consider when pursuing a rail suicide intervention training effort.

3.2 Germany

The success of Network Rail's efforts received international recognition as one of the few railfocused suicide prevention efforts to empirically show impact, and led to the development of similar programs in other countries. In 2013, the Helmholtz München German Research Centre (HMGU) for Environmental Health in Germany developed a suicide intervention training program as part of the European RESTRAIL project. The information provided about this effort can be found in "Selection of Measures and their Implementation in Pilot Tests Planning and Execution" (Kallberg et al, 2014), unless otherwise noted.⁹

⁹ Information can also be found in Evaluation of Measures, Recommendations and Guidelines for Further Implementation Pilot Test #8 (Colliard, 2014a), available on the <u>RESTRAIL</u> website.

This training was developed for railway employees as well as other individuals in the railway environment—for example, police and other security staff. Researchers brought together individuals working in different areas of the railway system to share their perspectives on and experiences with rail suicide.

The training took place in November 2013 with 12 participants and took 4 hours or less to complete. This included time for interactive learning between trainees and between trainees and the trainer. The content of the training included the following topics:

- Facts and statistics about suicide and railway suicide
- Behaviors preceding railway suicide (through media reports about railway suicides and empirical research)
- The concept of active listening, a technique that requires listeners to accurately understand what is being said, and respond to the speaker in a way that shows understanding (Nelson-Jones, 2015).
- The effect of railway suicides on witnesses, police officers, and train drivers (using research data and trainees' experiences)

In addition, interactive group exercises were also included to reinforce active listening knowledge and skill. During these exercises, trainees worked on several different crisis scenarios. Trainees were asked to discuss given solutions as either appropriate or not appropriate, using their active listening skills.

The impact of the training was evaluated and documented by HMGU as part of the RESTRAIL project. Questionnaires were given to the trainees before the course, after the course, and again 3 months following the course. The questions focused on the trainees' knowledge about railway suicide and conducting an intervention as well as communication with and support for suicidal individuals.

The questionnaire results showed that knowledge about railway suicide increased, and communication and support for suicidal individuals improved. A change was not found between the time the course ended and the 3 months following. These findings suggested to researchers that refresher courses are not necessary; however, additional data collection is needed at a time interval greater than 3 months to corroborate this finding.

3.3 The Netherlands

In 2013, ProRail and Dutch Railways also collaborated to develop a suicide intervention training program for railroad employees and other staff who work in the railway environment. The information provided about this effort can be found in "Selection of Measures and their

Implementation in Pilot Tests Planning and Execution" (Kallberg et al., 2014), unless otherwise noted.¹⁰

As with Germany's effort, funding to evaluate this training effort was provided through the RESTRAIL project. The course was modeled after Network Rail's training program, and was tailored to meet the needs of the Dutch rail system. Two pilot training sessions were held in addition to the training itself, which took place on 10 different days between October and December 2013.

The course took 6 hours to complete, and consisted of 9 to 12 trainees per group (approximately 100 trainees in total). There were two main trainers and one back-up trainer available over these 10 days.

The training materials consisted of a workbook and a PowerPoint presentation given by the trainers. The topics covered are listed below:

- Recognize suicidal behaviors.
- Approach an individual and begin talking to them.
- Move away to a safe location.
- Listen to the individual.
- Refer the individual to mental health services.
- How to end the conversation.

As part of the RESTRAIL project, this program was formally evaluated by RESTRAIL researchers. The evaluation consisted of two parts: interviews and questionnaires. The interviews took place in January and February 2014, and lasted no more than 1.5 hours. Eleven employees were interviewed who interacted with a suicidal individual in the rail environment, but had not taken the training. The interviews included detailed questions about a specific interaction with a suicidal individual and details about how the encounter transpired. Questions also included what they would do differently or wished they knew as well as any recommendations for other employees when performing interventions. The goal of the interviews was to understand whether the training adequately covered the information employees need. The interviews revealed the

¹⁰ Information can also be found in:

Colliard, J. (2014b). "Reduction of Suicides and Trespasses on RAILway property Collaborative Project Evaluation of Measures, Recommendations and Guidelines for Further Implementation Pilot Test #9," Gatekeeper Programme – Prorail, available on the <u>RESTRAIL</u> website; and

Terpstra, S., Beekman, A., Abbing, J., Jaken, S., Steendam, M., & Gilissen, R. (2018). Suicide prevention gatekeeper training in the Netherlands improves gatekeepers' knowledge of suicide prevention and their confidence to discuss suicidality, an observational study. *BMC Public Health*, *18*(1), 637.

several things that employees wished they had known prior to making an intervention, examples of which follow:

- A general need to be better prepared, such as through formal training.
- How to start a conversation; examples of first questions; what to say and what not to say.
- Hear from colleagues who had intervened in the past.
- How to address the emotions of the individual and allow that person to share their thoughts and feelings.
- How to influence (or interrupt) the individual's thoughts away from suicide.

Additionally, interviewees provided the following tips for colleagues making interventions in the future:

- Take care of your own safety.
- Try to behave as a counselor.
- Stay calm.
- Continue to communicate with colleagues, family, and friends after an incident.
- Ask other people to share their experience with making an intervention.

In the second part of the evaluation, questionnaires were used to understand whether employees felt capable and competent in making interventions after training. The questionnaires were given to employees before they received training and 3 months following the training. Surveys were also given to other employees who did not receive the training. Information about the second part of the evaluation and lessons learned were found in "Evaluation of Measures, Recommendations and Guidelines for Further Implementation Pilot Test #9" (Colliard, 2014b), unless otherwise noted.

The results of the questionnaires revealed that the training covered the information that employees felt they needed when making an intervention, and that employees felt increased competence to perform an intervention with a potentially suicidal individual. This improvement was significant across genders, age, and years worked—with one exception: Employees with over 20 years of experience reported a generally higher self-reported competence and showed no improvement in competence after training. Employees' knowledge about rail suicide and about making an intervention also increased significantly across all genders, ages, and years worked.

Researchers also identified additional research needs based on the findings of the evaluation. Conducting additional interviews with trained employees after engaging in an intervention with a suicidal person would allow researchers to assess the practical impact of the training within reallife situations. It was also recommended that the questionnaire be repeated at a later point in time beyond 3 months after completing the training.

The researchers identified several additional lessons learned based on the implementation of the training. Having a homogenous group of trainees was useful in that trainees were able to better understand each other's experiences across different occupations within the railroad and across different organizations in the rail environment. It is also important to foster a safe environment where trainees feel comfortable in sharing their experiences, and to provide support before, during, and after the course for both trainees and trainers (Kallberg et al., 2014b). In particular, researchers learned that appropriate aftercare is important, as trainees may not feel the full impact of the situation until much later, making it more difficult for them to reach out for assistance.

Researchers from the Netherlands identified two additional factors in the success of the course. First, the local culture and attitudes about suicide may play a key role. Locations where the community is open to communication about suicide are likely to be more willing partners than communities where discussion about suicide is still more reserved. Second, this type of training is best-suited for areas where the chance of noticing a possibly suicidal person is high—for example, at stations and platforms, other heavily trafficked areas, or areas with a high number of incidents.

Lastly, representatives from ProRail indicated that it is important that this training not be viewed as an additional responsibility for those who are trained. Rather, staff are being equipped to manage situations that they may find themselves in through their normal work. With the additional resources the training provides, employees may feel more comfortable and confident in addressing the situation directly, instead of feeling ill-equipped to help.

3.4 United States

Several rail carriers (including transit) have also launched suicide intervention programs. For example, in 2010, the Washington Metropolitan Area Transit Authority (WMATA) was one of the first rail carriers in the U.S. to launch an employee suicide intervention training program. The decision was made after experiencing an increase in suicide incidents that began in July 2009. In this case, WMATA chose to use a *train the trainer* approach (WMATA, 2010). Initial training of train drivers was completed in June 2011, and by October 2011, training was also incorporated into train driver Recertification Training and Station Manager Training programs (WMATA, 2012a). The goal of the program was to train 896 employees by January 2013 (WMATA, 2012b). The San Francisco Bay Area Rapid Transit (BART) also initiated an employee training program; however, the details of the program are currently unavailable.

3.4.1 Chicago, Illinois

In 2015, Metra commuter rail in the Chicago metropolitan area implemented a suicide intervention training effort modeled after the Network Rail strategy (outlined in Section 3.1) and QPR Gatekeeper training (refer to Section 2, Suicide Intervention Training Approach and Theory). Metra identified this strategy in response to an increase in the number of suicide

incidents in 2015. Metra worked with Sertoma Centre, Inc., a community mental health center in Illinois, to tailor the QPR training for rail employees. Metra began by training frontline employees, including conductors, engineers, ticket agents, customer service representatives, and managers. The following year, Metra brought in a QPR-certified trainer onto their staff so that training could be completed in house (H. Konczal, personal communication, July 2018).

According to METRA, employees have expressed positive feedback about the training. In one poignant example from 2018, an employee approached an individual standing on the railing of a bridge over the tracks, and was able to successfully intervene and help the individual to get the assistance they needed. Metra has since expanded the QPR training to all maintenance employees (Wanek-Libman, 2018). In 2017, Metra employees logged 51 interventions, and by July of 2018 had already logged 40 interventions (H. Konczal, personal communication, July, 2018).

3.4.2 Los Angeles, California and Denver, Colorado

In 2016, three commuter rail systems participated in a study that helped to develop and evaluate a suicide intervention training program (Sherry, 2016). The three carriers, Los Angeles-area Metrolink and Metro Rail, and Denver Regional Transport District (RTD) worked with researchers to develop the training and evaluation materials. The training was provided by a professional mental health counselor twice at two locations and lasted approximately 4 hours. The course focused on the following objectives:

- Increase Awareness
- Reduce Stigma
- Engage Community
- Improve Identification/Surveillance
- Enhance Employees' Self-efficacy
- Prevent Premature Deaths/Suicides

During the training, expectations, roles, and responsibilities were clearly communicated to participants. It was intended that participants understood that it was not the goal, nor was it recommended, that employees be expected to provide mental health assistance or be required to act as suicide prevention frontline personnel. Rather, the training was intended to teach individuals to approach and ask questions of people who may be intending to harm themselves. Clearly communicating this role to employees was critical, so that they understood what was expected of them, without a sense of burden or overwhelming feeling of responsibility.

The evaluation of these training programs focused on three aspects:

• Knowledge of suicide warning signs

- Attitudes toward suicide
- Self-efficacy in approaching a suicidal individual

A voluntary survey was administered to employees who were in the training program and to those who were not, both before and after the training was completed for both groups. For comparison, an additional group of Master's students were also given the survey.

The results showed no significant difference in knowledge of suicide warning signs or attitudes toward suicide. However, those who received the training were significantly more confident (self-efficacy) in approaching a suicidal individual after training was completed compared to those who did not receive the training. While limited to one training effort, the effects are important to consider. Specifically, this training, as conducted, was effective at teaching employees how to identify warning signs for suicide and gave them confidence to intervene. Additional benefits of the course were also identified. Employees who took the training course felt relieved to have an opportunity to talk openly about their experiences with rail suicide incidents, as there was no formal avenue or setting for employees to share experiences or receive feedback from management (Sherry, 2016). Note that this evaluation did not track whether employees actually used their newly acquired skills on the job following the training.

4. Suicide Intervention by the Community

The programs described above focus on educating rail employees about how to conduct interventions with individuals who may be at elevated risk for suicide. There are other efforts in the U.S. and internationally that focus on greater community involvement in mental health and rail suicide prevention by encouraging community members to intervene and engage with others who may be in distress or at risk for suicide.

The study conducted by Sherry (2016), described in Section 3.4.2, also examined community awareness and understanding of suicide. While the study's broader, national applicability is limited (the study was conducted in the greater Los Angeles and Denver metropolitan areas only), it did highlight some interesting findings regarding community attitudes toward suicide. Most of the community members surveyed (71 percent) felt a sense of community responsibility in preventing suicide and largely felt that suicide was a preventable problem. Yet, fewer community members (43 percent) were confident in their ability help someone who may be suicidal. Combined, this data indicates that at least a portion of the public may be eager to help, were they provided with the right tools to do so. It is important to note that participants were attendees of a community railroad education effort, and the results should not be considered representative of the greater metropolitan area population. Community knowledge and attitudes may be important to consider with community-based suicide prevention strategies. This type of strategy may be best-suited to areas where the community is open and willing to communicating about mental health and suicide.

4.1 Reno, Nevada

In one example of community-based suicide intervention training implemented in Nevada in 2016, two county sheriffs developed Rail Auxiliary Teams to help address the public health and safety issues of trespassing and suicide on railroad property. The individuals being trained are not officially employed by the railroad or law enforcement, but rather are community volunteers who are passionate about railroad safety. The initial 8-hour training teaches volunteers to identify both trespassers as well as individuals who may be experiencing a suicidal crisis. Volunteers are trained to address the situation and to contact the appropriate authorities without entering the right-of-way and putting themselves in danger. This training teaches volunteers about suicide awareness and prevention so that they are better-equipped to identify someone who may be at risk, and are able to quickly alert the proper authorities who will respond to the scene. Volunteers also engage in training scenarios in the field as well as various follow-on training and activities, including monthly refresher courses and semi-monthly training bulletins. Volunteers also have access to online education materials and updates (R. Gent, personal communication, February, 2019).

4.2 United Kingdom

Members of the public who are traveling by train may also be in a position to identify individuals in need of help. While it isn't possible for the rail industry to sufficiently educate their ridership to the same extent as their own staff, there is the potential to encourage ridership to be more engaged. Network Rail and Samaritans launched their Small Talk Saves Lives campaign¹¹ in 2018, aimed to encourage the public to engage in small talk as a way to reduce suicide.

While such a campaign doesn't seek to educate the public about how to recognize specific warning signs or how to approach someone who may be in need, it could expand the reach of any employee training effort. This campaign encourages riders to look out for one another and to engage in small talk if they see someone who looks like they may need help. Although identifying potentially suicidal behavior can be difficult, the likelihood of intervention may be increased if those within the rail environment—including bystanders and commuters—are aware of how to recognize and assist someone at risk (Mackenzie et al., 2018). If even a small proportion the public are encouraged to engage with those who appear vulnerable, they may be able to help station staff to identify and respond to individuals in need of help. The Small Talk Saves Lives campaign is intended to encourage interaction; the idea being that even a seemingly innocuous exchange can provide urgently needed help to someone in need.

¹¹ Additional information about this effort is available on the <u>Samaritans</u> website.

5. Program Basics

This section provides a high-level overview of considerations for implementing a suicide intervention training program for rail employees, based on the information gathered for this report. Suicide intervention training is not one-size-fits-all, and not every training effort will be the same. Efforts may differ depending on specific strategies that the carrier selects and based on each carrier's unique needs and constraints. To be most effective, carriers should tailor these types of training programs to their specific situation. The program basics in this section may help guide carriers through some of the questions that are common in the development of such an effort.

Below, in Figure 1, is a diagram highlighting some of the key aspects and decisions that a carrier will face when implementing this type of program. Rail carriers will also find many of the factors that previous training efforts have identified as critical to a successful program. While not every training effort will be implemented in the same manner, it is valuable for carriers to consciously consider their options so that the program implemented is best for that carrier's needs. The following section will discuss these aspects in greater detail.

	Suicide Intervention Training Program Basics			
Early Preparation	Identify and document realistic expectations about what the rail carrier intends to achieve through training.			
Implementation Planning	Work with partner to ensure that the course will achieve carrier goals and address staff expectations. Decide who will be trained and the order in which staff will be trained. Will training be rolled out as a part of recurrent training or as a dedicated standalone training?			
Content Development	 Finalize plan for how the course will be delivered to staff. If training will be tailored for different staff roles, how will each course differ? What content will be presented? In what format will the content be delivered? How many staff will be trained in each session? How long is each training session? 			
Implementation	Implement training program and regularly collect feedback from staff after training to assess if changes are needed to meet training objectives.			
Continuing Improvement	 Identify a strategy to track the impact of the training. Consider assessments of staff attitudes or self-reported knowledge and ability before and after training. Assessments at later points in time will help to determine training effectiveness and if refresher training is needed. Develop a plan to track interventions, including relevant details. This helps indicate the success of the program over time, and can help to identify potential improvements to the training. 			
Additional Tips				
 Provide tra summary h reference. Maintain re been traine Identify bar acceptance mispercept them direct course. 	 Clarify that this course equips Clarify that this course equips Highlight that learned skills have broad applicability in and out of work for managing difficult situations. Ensure that railroad staff implementing program have knowledge of rostering and staff. Clarify that this course equips Highlight that learned skills have broad applicability in and out of work for managing difficult situations. Ensure that support is provided to help manage stress during training. Provide support for post- incident care. 			

Figure 1. Overview of Suicide Intervention Training Program Basics

5.1 Early Preparation

Identify and document rail carrier expectations.

Any rail carrier considering a suicide intervention training program will benefit from ensuring that they have realistic expectations for what this program can achieve. No rail-based suicide prevention strategy can immediately eliminate the entire risk of suicide to the network. When effective, suicide intervention training is likely to have a very specific impact: the identification of people exhibiting clear behavioral signals in an area where a trained staff member can identify them. The scope of where a rail carrier expects to have an opportunity to identify a person at risk will help determine the number and type of staff who the carrier may wish to educate. A more limited training program will likely result in a more limited scope of who can intervene, and where and when to do so. The decisions about how and who to train will likely be different for each carrier, and careful considerations about the expectations for what this program will achieve can help clarify those decisions.

Clarify and document the expectations from staff who will receive the training, and develop a plan for how roles and responsibilities will be clarified to the trainees.

Formally communicating the expectations for the training course and clearly defining employee roles and responsibilities will be critical for successful implementation. There are several misconceptions about suicide and helping a suicidal individual that can negatively influence employee attitudes about intervention training—which can ultimately hinder the effectiveness of the training effort. Identifying what these pre-training misperceptions and staff expectations about responsibilities are critical. Addressing these types of issues head-on can improve employee attitudes toward training, and ensure that the rail carrier, its staff, and trainers have a common understanding of what to expect. The following list provides a few tips and examples of clear expectations, roles, and responsibilities that were communicated to trainees in existing rail suicide intervention training programs:

- Emphasize supporting employees to be better-equipped to handle these difficult situations, rather than asking employees to take on additional responsibility.
- Employees are not expected to provide mental health assistance, but rather recognize individuals who may be in distress and help them get in contact with the professional assistance they need.
- Employees will not be penalized, judged, or otherwise held responsible if a suicide does occur.
- An individual considering suicide will not bring you with them, if you approach.
- Suicide is preventable.

Identify a partner to provide expertise about suicide and performing interventions.

Choosing a partner is often the first step in developing a suicide intervention training program, as rail carriers may not have the skills in-house to educate staff about this topic. Rail carriers have several options when selecting a partner—for example, an established suicide intervention training program like QPR, or a local or national suicide prevention organization. This also requires that railroads decide on the type of training model that will be used. Training that is outsourced to experts can ensure that the training is consistent, and that appropriate support is available for employees participating in training, as the topic of mental health and suicide can be difficult to talk about, particularly for those employees that have already experienced a rail suicide. Over time, however, this method can be more costly than a train-the-trainer approach, where training is initially provided by experts to a limited number of personnel who then go on to train other staff members. An expert can also be hired as a permanent staff member to conduct and oversee training.

- Choose a partner to best suit railroad needs.
- Consider the benefits and limitations for the different training approaches and methods available.

5.2 Implementation Planning

Work with partner to ensure that goals and expectations will be met.

Once a suitable partner has been established, rail carriers should work with their partner to ensure that the goals of the rail carrier will be met by the partner's training plans. Additionally, the partner should be aware of any potential misperceptions or false expectations that staff may have about the purpose of the training or how it will change their daily responsibilities. Working with the partner to directly address these beliefs and attempt to correct misperceptions will help to ensure staff buy-in to the program and assist trainees to confidently implement their skills when presented with an opportunity to do so.

Develop a plan for who will be trained and how the training will be rolled out.

Many suicide intervention training programs begin with training frontline staff or with those who work in the station environment. These positions are those where the chance of encountering an individual in distress is highest. If training programs prove successful, some carriers have gone on to expand the program and train additional employees in a variety of roles.

The number of trainees in each class can vary, and determining a suitable range may be helpful. If the number of individuals enrolled becomes too small, the course may become less interactive and less valuable for the trainees. However, if the number is too high, trainees may not have the ample opportunity to interact with each other or the trainer to practice their skills and ask questions.

- Determine who will be trained (e.g., frontline personnel, personnel who work in stations, or all staff).
- If training is to be rolled out over time, determine a strategy for how to prioritize who received training.
- Determine a suitable class size, typically 8-20 trainees.

5.3 Content Development

Determine course objectives, content, delivery, and length.

Developing clear course objectives is another important component to a successful suicide intervention training program. Course objectives will provide the framework for developing the course materials, delivery formats, and course length. In some cases, course objectives may already be clearly defined by the rail carrier's selected training program or partner. Examples of objectives are provided below:

- Increase awareness and knowledge about suicide, generally.
- Improve employees' knowledge of suicidal behaviors and warning signs.
- Improve employees' confidence to identify suicidal behaviors and warning signs.
- Increase employees' confidence in their ability to help someone exhibiting these signs, including:
 - a. How to approach this person.
 - b. What language to use/avoid.
 - c. Who else to call and what resources to provide.

When training is outsourced, course content and materials may be developed by the selected partner with minimal rail carrier input required to tailor the training to the rail environment. Developing course content and materials can also be a more collaborative process, and rail carriers may provide greater input to help tailor the training to their specific needs. Course content is variable across training programs, but may include the following topics:

- Employee roles and responsibilities
- Facts and myths about suicide and mental health
- How to identify someone who is suicidal or in distress.
- Listening skills

- How to approach someone who is suicidal or in distress.
- How to move a person in distress to a safe location.
- How to make appropriate referrals.
- Self- care after an intervention

There are several ways to deliver course material to trainees, and may include a combination of formats—for example, presentations, workbooks and open discussion. Some rail carriers have reported that one of the most important components of suicide intervention training is providing the opportunity for trainees to interact directly with other trainees and instructors. Presenting trainees with a variety of scenarios can give trainees the opportunity to use new skills in a safe environment where they can ask questions and receive feedback from an instructor. Including an interactive, hands-on component to training can also help trainees to build confidence in making an intervention. Providing trainees with the opportunity to share their own experiences with suicide can also be beneficial in understanding these events and their impact from a variety of different perspectives, particularly when training includes employees from different occupations within the rail environment. Lastly, it may be beneficial to produce materials that summarize the lessons learned during the training for trainees to take home after the completion of the course.

The length of the training course will be dependent on several factors. One factor is the amount of material covered, and whether the training includes interactive role-playing to practice interventions, which may require extra time. Another factor is the impact on rail operations and the organization as a whole, especially if positions are understaffed, which could lead to increased dropout rates or decreased attendance. The length of the courses reviewed for this effort varied from a 2-hour course that was included as a part of ongoing training to an 8-hour full-day course dedicated to that topic alone.

5.4 Implementation

Implement the training program, as determined through steps above, and collect staff feedback.

With the details of the training program settled, the training implementation can begin. Throughout implementation, it will be important to collect feedback from staff who have completed the training to understand staff satisfaction. Collecting feedback from staff will help in a variety of ways that may inform if changes will be required to maximize the benefit of the training, including:

- Ensure that training is addressing misperceptions about expectations or roles/responsibility changes.
- Do staff feel confident in their ability to use the information that they have learned? While on the job? While at home or away from work?
- Do staff believe that this course was valuable?

By understanding how staff are responding to the course, the carrier and their partner can identify areas of potential improvement. Given the variety of ways that training can be implemented, identifying issues and concerns early will help to ensure that necessary modifications are promptly made to the course.

5.5 Continuing Improvement

Develop a plan for how to assess the success of the effort in order to improve effectiveness.

Determining the impact of suicide prevention and mitigation efforts can be challenging, but is crucial in order to measure and improve the effectiveness of mitigation strategies. The impact of suicide intervention training can be measured in several ways, and is not limited to the measurement of suicide rates. Surveys can be used to examine employee knowledge and attitudes about suicide and interventions before and after training to understand whether the course objectives are being met. As described above, this is critical for ensuring that the program is being received by staff as it was intended to be, but these types of surveys can also help to determine success over time. Potential methods to assess the impact of this type of intervention include:

- Surveys assessing trainee experiences and attitudes can be distributed at a longer time interval to understand the impact of the training over time.
- Trainee interviews can be used to provide a more in-depth understanding of employees' experiences with the training as well as with making interventions after training, which can help to improve training for future trainees.
- Tracking the number of interventions made can provide insight into the effectiveness of the training in terms of whether employees are putting their knowledge into action. Each intervention made can be seen as helping a person who is presently suicidal, or who could become suicidal in the future, and return to the rail environment to end their life.

Over the long term suicide rates may be used to provide insight into rail suicide prevention programs as a whole, but cannot determine the effectiveness of suicide intervention training alone. There are many other factors that can impact rail suicide rates that make it difficult to isolate a cause-and-effect relationship, including national suicide rates and other suicide prevention efforts both within outside of the rail environment.

Determining the success of the program should begin with the very first round of training in order to understand what is working well and what needs improvement. Changes and revisions can then be made to address the identified issues. As the training is continually rolled out, data collection and subsequent revisions should continue as needed. Periodic review of these data over the long term will also be helpful for understanding long-term impacts, continuing to improve training efforts, and determining whether refresher training is necessary.

- Consider what measures will be used to track success. Rail carriers reviewed for this effort typically conducted surveys and interviews with trainees and track the number of interventions made over time, at a minimum.
- Consider time intervals for data collection—for example, before and after training and after employees make their first interventions in the field.
- Continue to review data over the long term to continue to improve training efforts. These longer term reviews may achieve two things:
 - Understand if the training has the same impact on new trainees years after the training was initiated. A dip in satisfaction may indicate that the training course may need to be revised.
 - Understand if staff are as effective at using the training material years after they initially received it. If staff use the skill less often, or less effectively, as time passes, it may indicate a need for refresher training.

Tips for Success

The following tips summarize additional lessons learned from the rail suicide intervention training programs discussed in Section 3.

Tips for Rail Carriers:

- Provide trainees with a handout summarizing the training that they can easily reference after the course to help them during an encounter or to refresh their knowledge periodically.
- Keep records of who has been trained.
- Identify potential barriers to acceptance (e.g., suicide myths, worry of responsibility) and endeavor to address those concerns head-on.
- Ensure that the individuals within the railroad that are tasked with developing the program are experienced and have knowledge of rostering and staff. This will help ensure that staffing needs are maintained through the training program.
- Highlight the fact that the skills learned are broadly applicable to help manage any stressful situation, including those in the workplace or personal life.
- Address support needs relating to post-incident care for employees. Many individuals attending the course have personal experience with suicide, either through work or outside it, and by having trainers there in person ensures that this can be managed effectively.

6. Conclusion

Railroad carriers may be uncertain of how they can best reduce the number of suicide incidents that occur on their rail systems. Staff of rail carriers are rarely trained in mental health; thus, they may feel ill-equipped to address the problem of rail suicide. Restricting access to the right-of-way can be helpful, but it fails to address the root cause of the problem. One strategy that has often been used throughout the world to prevent suicide is to educate people about how to recognize someone in distress, how to intervene, and to refer individuals to get the help they need. This strategy does not require the railroad staff to become mental health experts, but rather to be observant and willing to engage with a person who they suspect needs help.

This report provides an overview of several successful efforts to educate railroad staff to identify individuals at risk for suicide and intervene to put them in touch with help. While each rail carrier's effort found success, they have each taken a unique path toward training their staff. One of the benefits of a suicide intervention training program is that rail carriers can tailor the program to best suit their individual priorities. Understanding what rail carriers have done may help to guide other carriers through the process of developing their own suicide intervention training programs.

The Program Basics section of this report includes a very high-level review of the types of decisions that a rail carrier will face when developing and implementing this type of effort. Some of these decisions are about how to approach the problem generally, such as which staff to train and who will conduct the training. Other decisions deal with the logistics of how the training will be conducted, such as if the training will be a standalone education opportunity for staff or rolled into a larger training session. Each of these decisions aims to construct a training program that best suits the carrier's needs.

The goal of this document is to provide insight from prior efforts about lessons learned and best practices. These lessons may help carriers identify how to implement their own programs in the most effective way possible. Additionally, this report aims to convey how the success of these programs has been documented around the world, especially for passenger railroads. As other railroad carriers implement similar programs, we hope that they will add to this body of knowledge and share their lessons learned to benefit the industry and to help save lives.

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Abbreviations and Acronyms

Abbreviation or Acronym	Name
ASIST	Applied Suicide Intervention Skills Training
BART	Bay Area Rapid Transit
BTP	British Transport Police
HMGU	The Helmholtz München German Research Centre
MSC	Managing Suicidal Contacts
NREPP	National Registry of Evidence-based Programs and Practices
QPR	Question Persuade and Respond
RESTRAIL	REduction of Suicides and Trespasses on RAILway Property
RISSG	Rail Industry Suicide Stakeholder Group
RTD	Regional Transport District
SAMHSA	Substance Abuse and Mental Health Services Administration
SPRC	Suicide Prevention Resource Center
U.K.	United Kingdom
WMATA	Washington Metropolitan Area Transit Authority