

Potential Countermeasures to Mitigate Suicides on the Railroad Rights-of-Way

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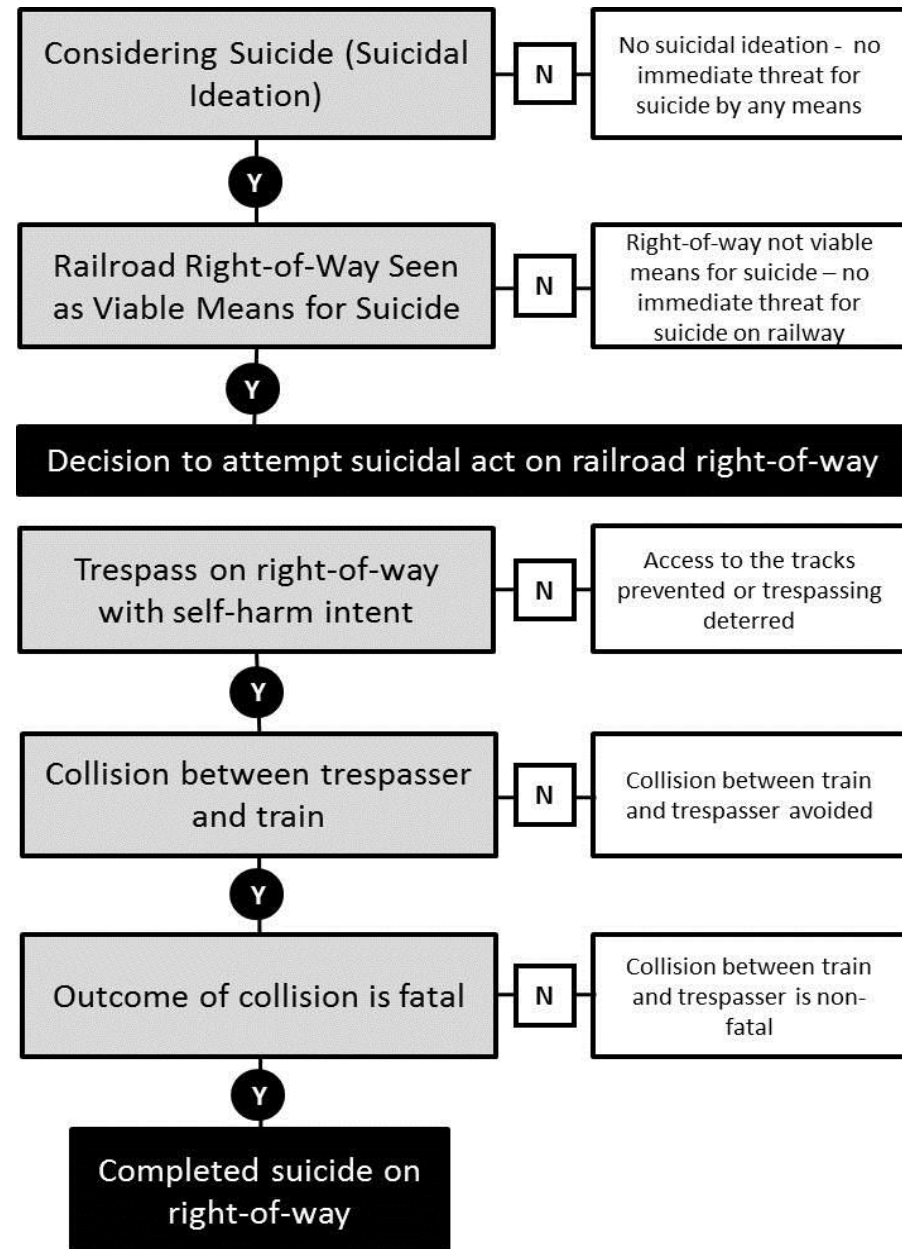


Team

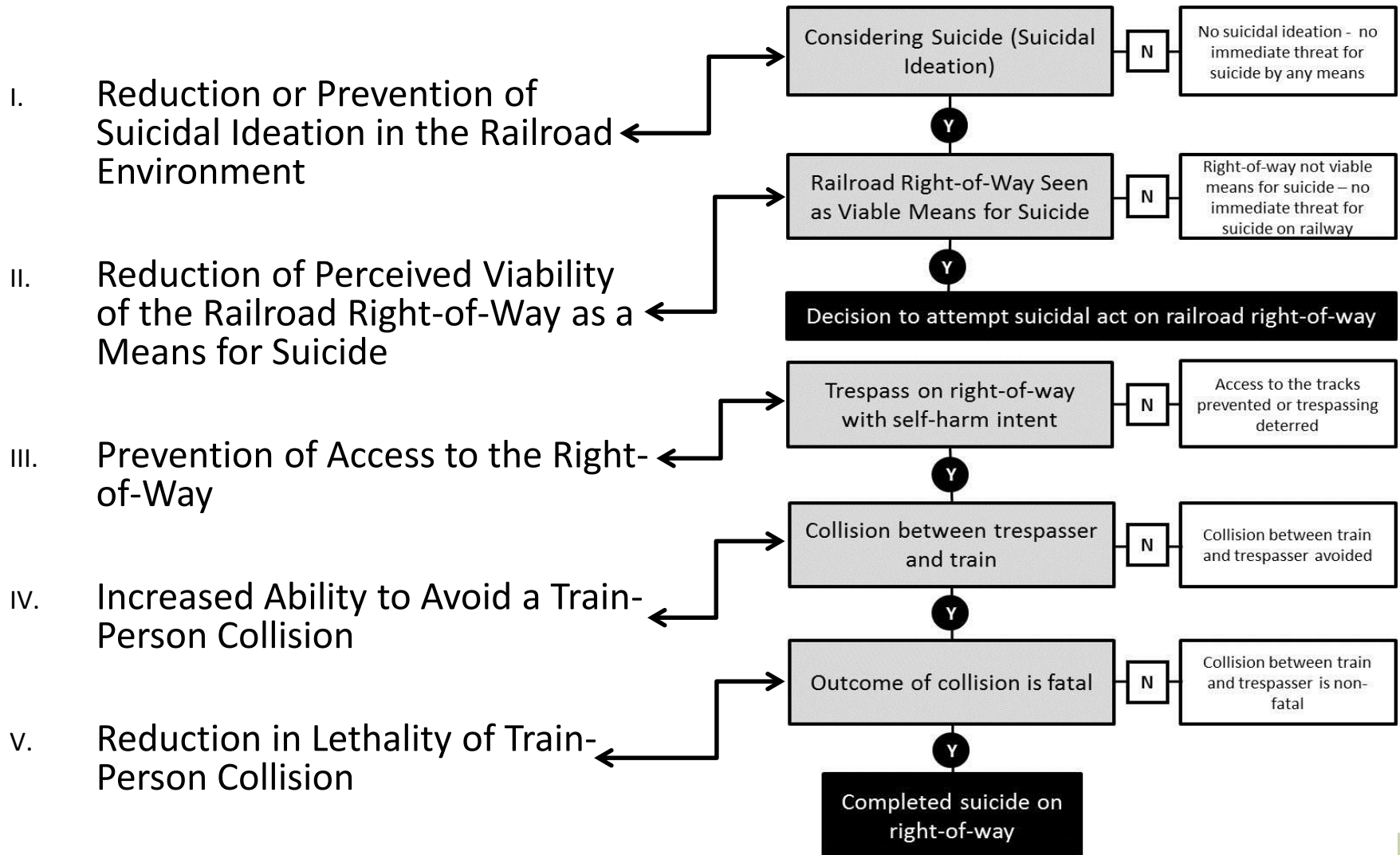
- ❑ **Michael Coplen** (*sponsor*) – Federal Railroad Administration
Office of Research and Development
- ❑ **Stephanie Chase, Ph.D.** – Volpe Center
- ❑ **Bianka Mejia** – Volpe Center
- ❑ **Ann Doucette, Ph.D.** – George Washington University
- ❑ **Michael Martino** – Association of American Railroads

Overview

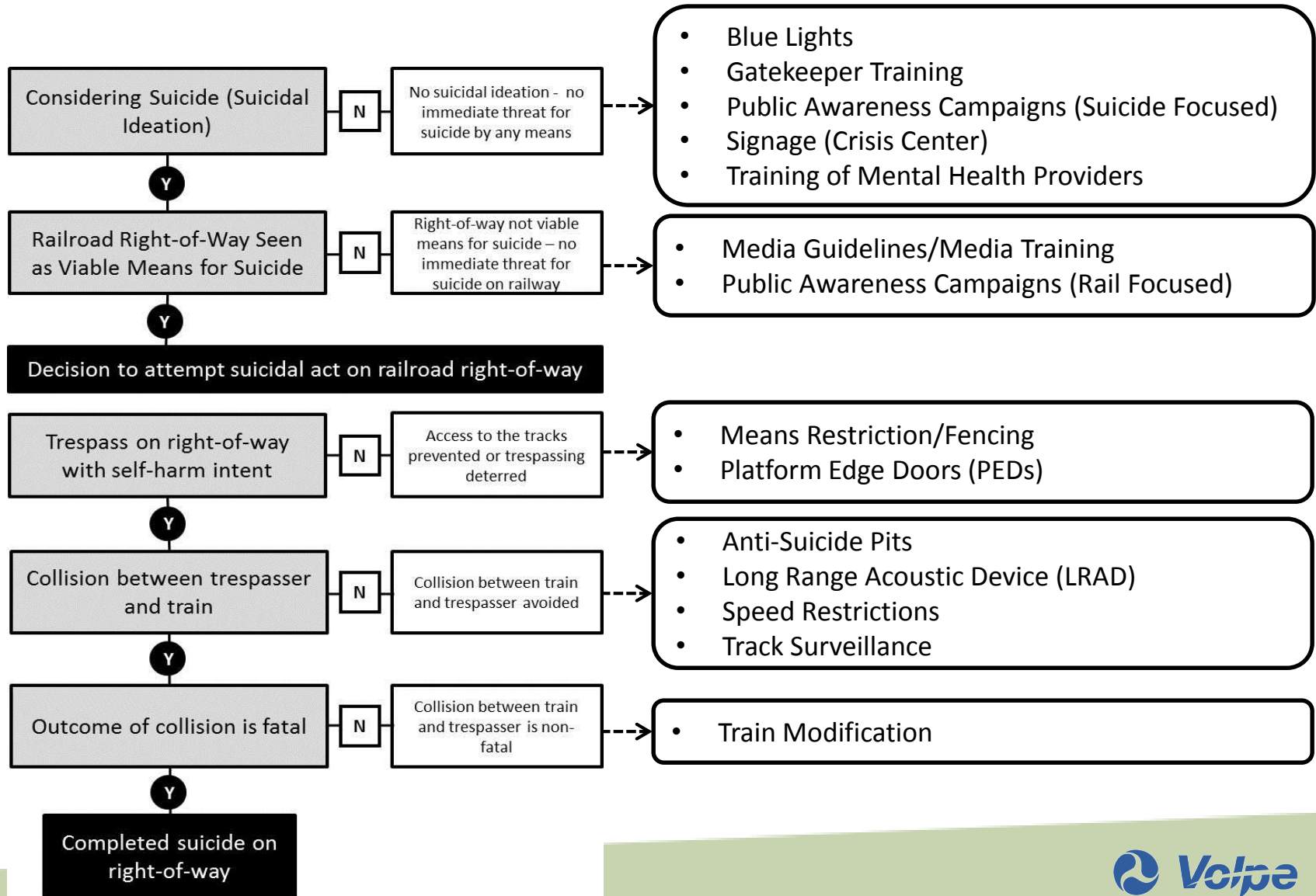
- ❑ Potential order of events preceding a suicide on right-of-way
- ❑ Can intervene at many points
- ❑ Discussion of countermeasures that have been proposed
 - Not all are recommended
 - May depend on specific carrier needs or environmental factors
 - Forthcoming paper discusses feasibility in greater detail



Potential Points of Intervention

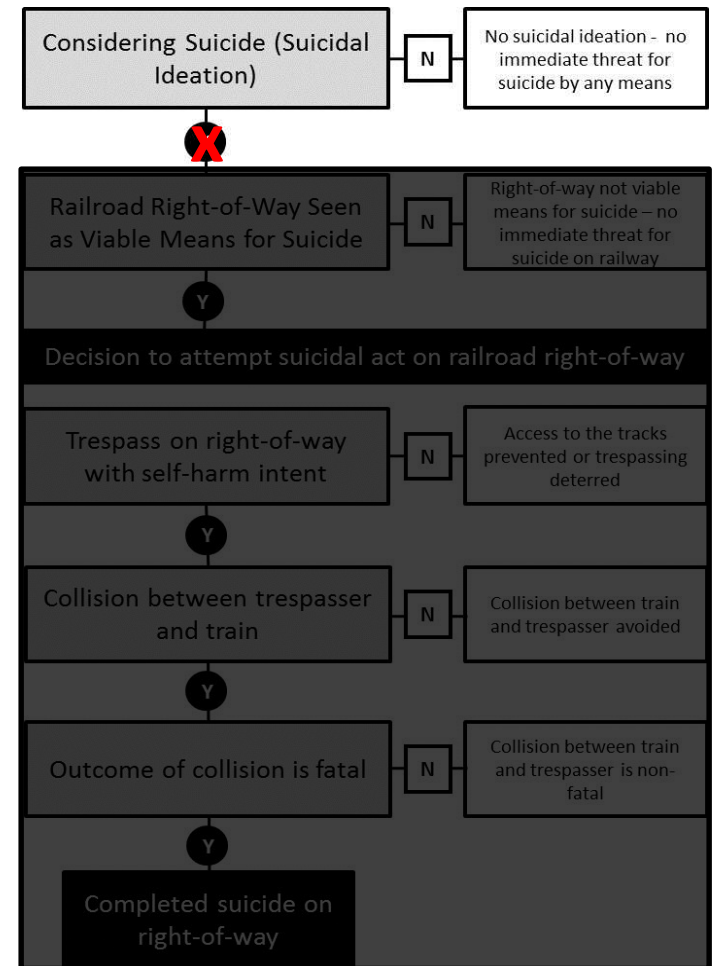


Points of Intervention - Countermeasures



I. Reduction or Prevention of Suicidal Ideation in the Railroad Environment

- ❑ Blue Lights
- ❑ Gatekeeper Training
- ❑ Public Awareness Campaigns (Suicide Focused)
- ❑ Signage (Crisis Center)
- ❑ Training of Mental Health Providers



I. Reduction or Prevention of Suicidal Ideation in the Railroad Environment

❑ Blue Lights

❑ Gatekeeper Implemented in Japan and now piloted in UK

❑ Public Awareness (Suicide) Mechanism by which this would reduce suicide is not well understood.

❑ Signage Little evidence of effectiveness – more testing needed.

❑ Training Providers



I. Reduction or Prevention of Suicidal Ideation in the Railroad Environment

- ❑ Blue Lights

- ❑ Gatekeeper Training

- ❑ Public Awareness (Suicide Prevention) Implemented in UK and various other locations including Australia.

- ❑ Signage Most easily implemented in stations.

- ❑ Training of Mental Health Providers



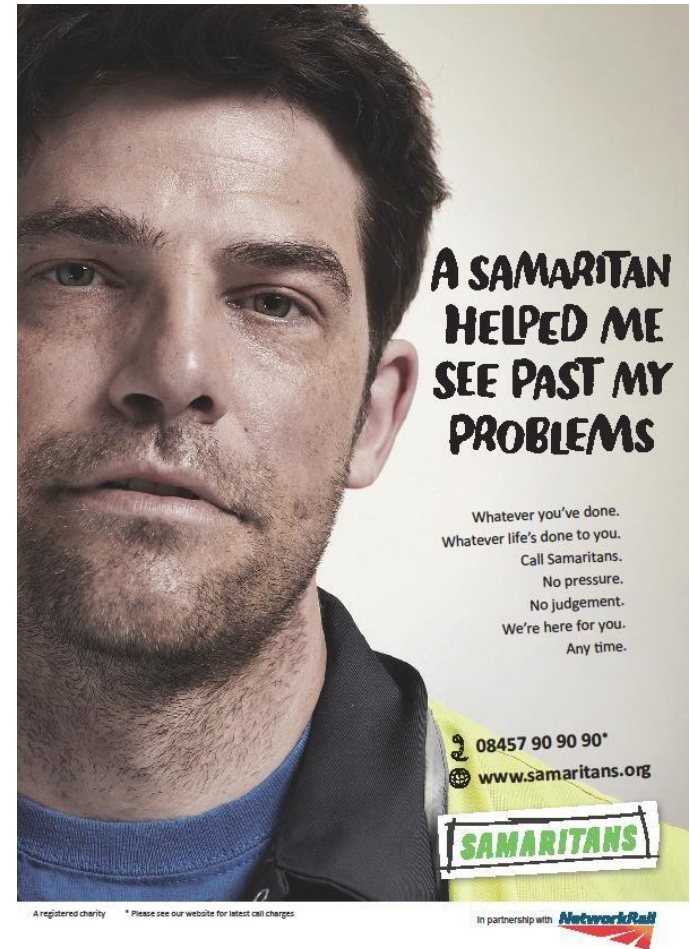
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Implemented in locations around the world, but little known of impact when implement in rail stations or along right-of-way.

Most easily implemented in stations.



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I. Reduction or Prevention of Suicidal Ideation in the Railroad Environment

❑ Blue Lights

❑ Gatekeepers

Unclear how exactly the railroad can assist.

❑ Public Awareness
(Suicide Prevention)

Not yet demonstrated that incidents in the US occur close to MHP facilities.

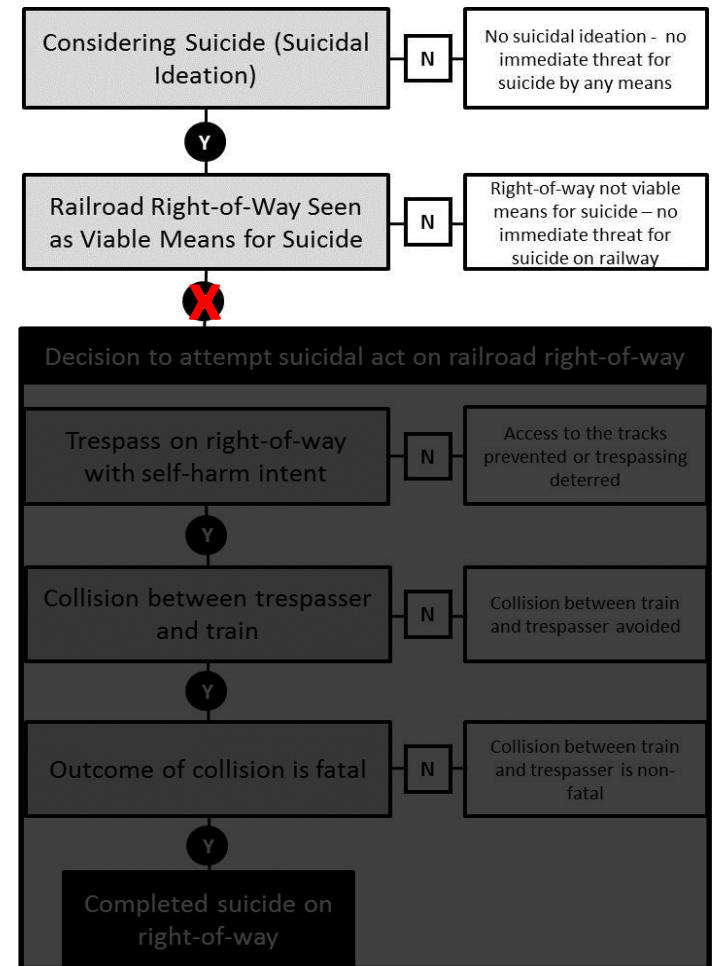
❑ Signage (Crisis Center)

❑ Training of Mental Health Providers



II. Reduction of Perceived Viability of the Right-of-Way as a Means for Suicide

- ❑ Media Guidelines/Media Training
- ❑ Public Awareness Campaigns (Railroad Focused)



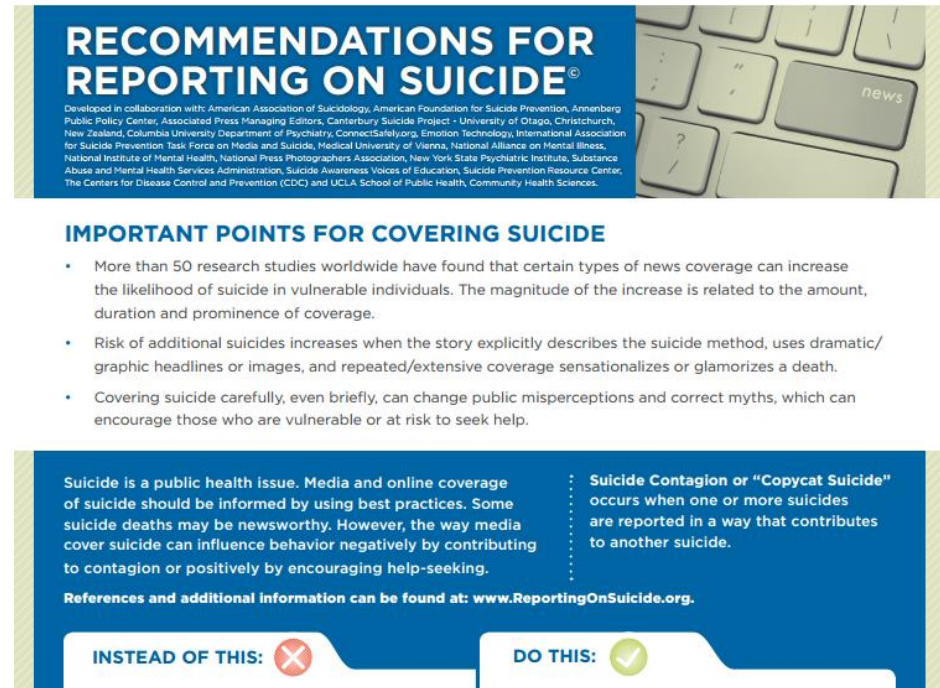
II. Reduction of Perceived Viability of the Right-of-Way as a Means for Suicide

❑ Media Guidelines/Media Training

❑ Public Awareness Campaigns (Railroad Safety)

Guidelines exist in many countries, including the US, but are often not followed.

How best to design guidelines for railroad fatalities is still being explored.



RECOMMENDATIONS FOR REPORTING ON SUICIDE®

Developed in collaboration with: American Association of Suicidology, American Foundation for Suicide Prevention, Annenberg Public Policy Center, Associated Press Managing Editors, Canterbury Suicide Project - University of Otago, Christchurch, New Zealand, Columbia University Department of Psychiatry, ConnectSafety.org, Emotion Technology, International Association for Suicide Prevention Task Force on Media and Suicide, Medical University of Vienna, National Alliance on Mental Illness, National Institute of Mental Health, National Press Photographers Association, New York State Psychiatric Institute, Substance Abuse and Mental Health Services Administration, Suicide Awareness Voices of Education, Suicide Prevention Resource Center, The Centers for Disease Control and Prevention (CDC) and UCLA School of Public Health, Community Health Sciences.

IMPORTANT POINTS FOR COVERING SUICIDE

- More than 50 research studies worldwide have found that certain types of news coverage can increase the likelihood of suicide in vulnerable individuals. The magnitude of the increase is related to the amount, duration and prominence of coverage.
- Risk of additional suicides increases when the story explicitly describes the suicide method, uses dramatic/graphic headlines or images, and repeated/extensive coverage sensationalizes or glamorizes a death.
- Covering suicide carefully, even briefly, can change public misperceptions and correct myths, which can encourage those who are vulnerable or at risk to seek help.

Suicide is a public health issue. Media and online coverage of suicide should be informed by using best practices. Some suicide deaths may be newsworthy. However, the way media cover suicide can influence behavior negatively by contributing to contagion or positively by encouraging help-seeking.

Suicide Contagion or "Copycat Suicide" occurs when one or more suicides are reported in a way that contributes to another suicide.

References and additional information can be found at: www.ReportingOnSuicide.org.

INSTEAD OF THIS: ❌

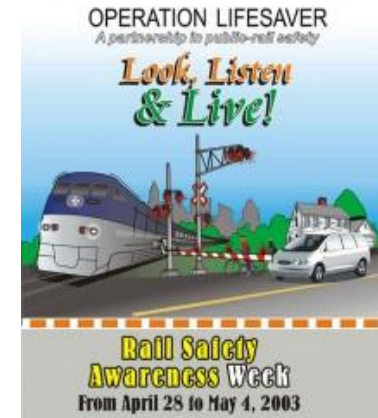
DO THIS: ✅

II. Reduction of Perceived Viability of the Right-of-Way as a Means for Suicide

- ❑ Media Guidelines/Media Training
- ❑ Public Awareness Campaigns (Railroad Focused)

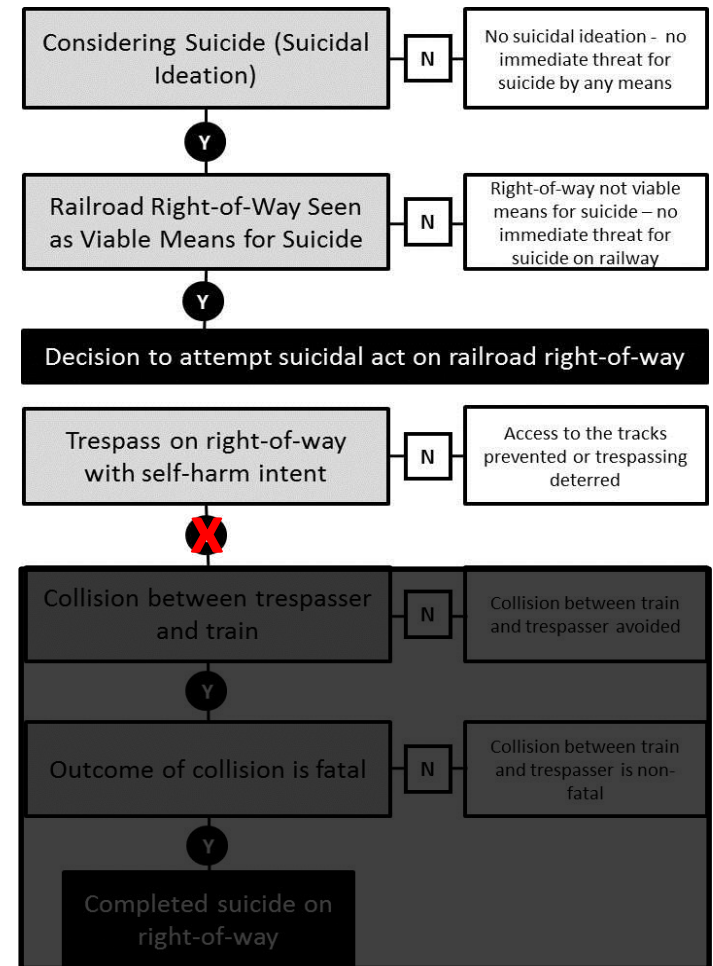
Such campaigns are used widely around the world and in the US. True impact is not well understood.

Potential for unintended increase in suicide if not phrased carefully (e.g., inadvertent advertising of a means of suicide)



III. Prevention of Access to the Right-of-Way

- ❑ Means Restriction/Fencing
- ❑ Platform Edge Doors (PEDs)



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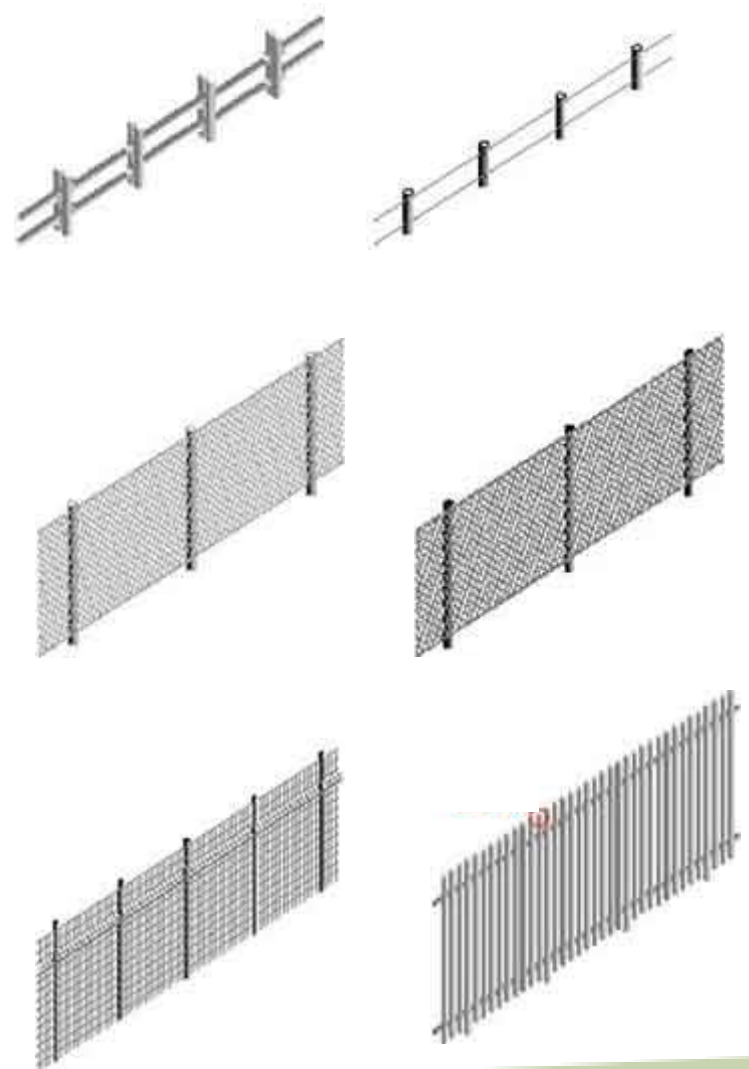
- ❑ Means Restriction/Fencing

- ❑ Platform Edge Doors (PEDs)

Used throughout the railroad community around the world.

Exact impact is not well documented.

Both maintenance and installation costs should be considered.



III. Prevention of Access to the Right-of-Way

- ❑ Means Restriction/Fencing
- ❑ Platform Edge Doors (PEDs)

Used in some stations around the world, e.g., Hong Kong.

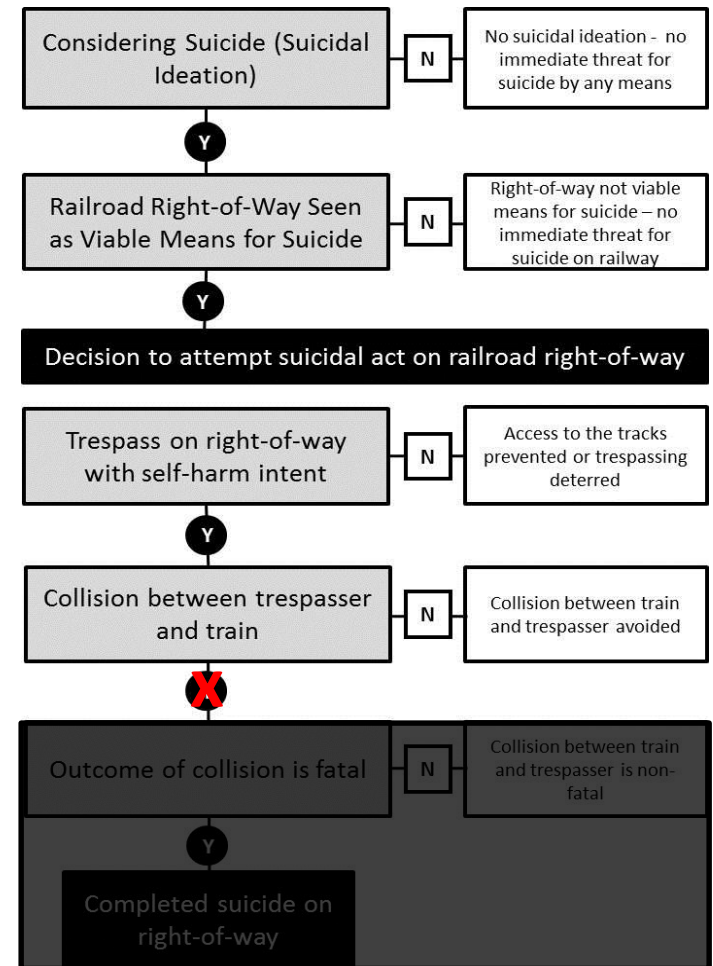
Very expensive and heavy.

Implausible outside of station environments.



IV. Increased Ability of Avoid a Train-Person Collision

- ❑ Anti-Suicide Pits
- ❑ Long Range Acoustic Device (LRAD)
- ❑ Speed Restrictions
- ❑ Track Surveillance



IV. Increased Ability of Avoid a Train-Person Collision

❑ Anti-Suicide Pits

❑ Long Island
(LRAD)

Only implemented in a few stations, such as some in the UK.

❑ Speed

Expensive to retro-fit stations.

❑ Track

Implausible outside of station environments.

Little evidence of effectiveness.



IV. Increased Ability of Avoid a Train-Person Collision

- ❑ Anti-Suicide Pits

- ❑ Long Range Acoustic Device (LRAD)

Not yet tested in the rail environment.

- ❑ Speed Restrictions

No evidence of effectiveness.

- ❑ Track Surveillance

Potential human rights concerns if too loud.

May be disorienting and cause unintended effects.



IV. Increased Ability of Avoid a Train-Person Collision

❑ Anti-Suicide

Often used by railroads in times/areas of concern.

❑ Long Range (LRAD)

Time delays.

Braking distance is dependent on many factors, not just speed.

❑ Speed Restrictions

❑ Track Survey

Slow trains may still be deadly.

Identifying areas of concern may be challenging.



IV. Increased Ability of Avoid a Train-Person Collision

❑ Anti-Suicide Currently being tested.

❑ Long Range (LRAD)

Monitoring may be technological, human, or a combination thereof.

❑ Speed Rest

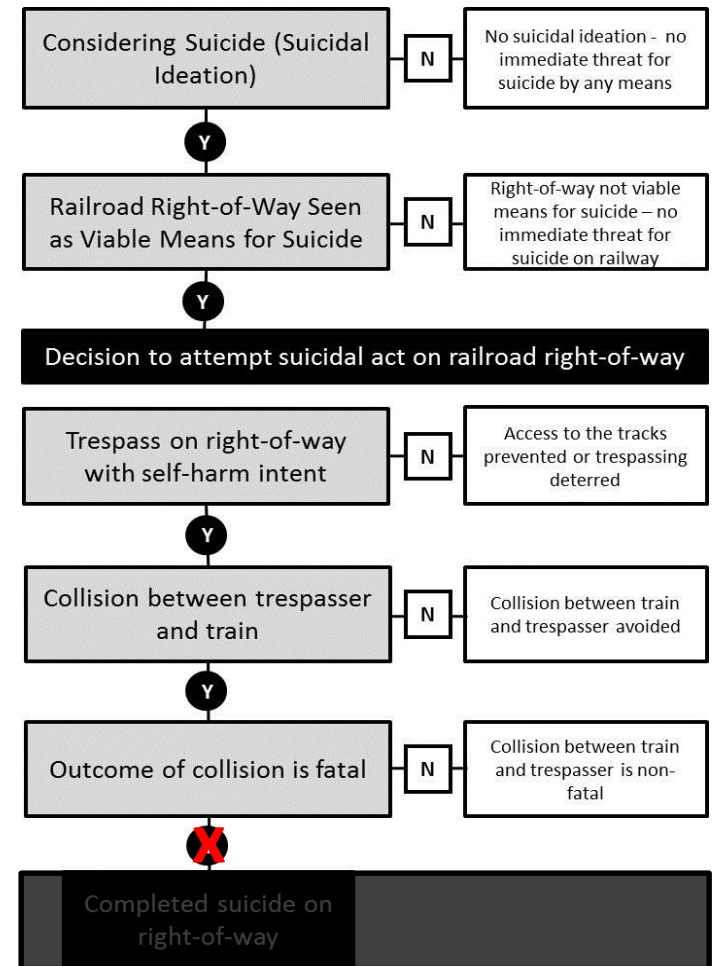
Cannot work without clear plan of action or enforcement.

❑ Track Surveillance



V. Reduction in Lethality of a Train-Person Collision

□ Train Modification



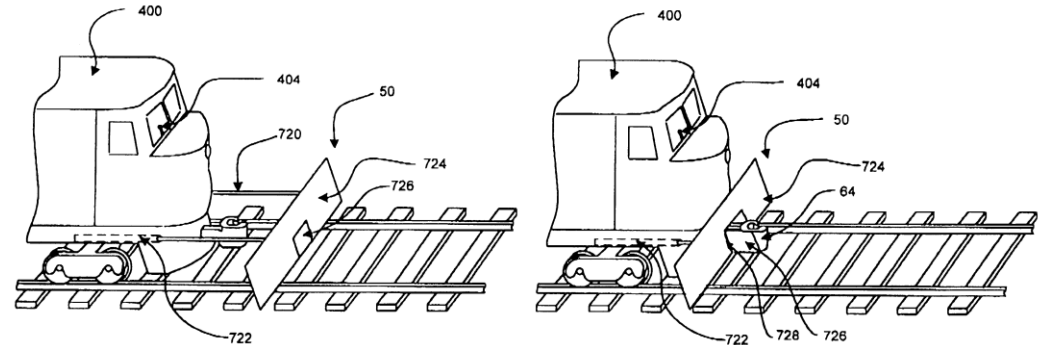
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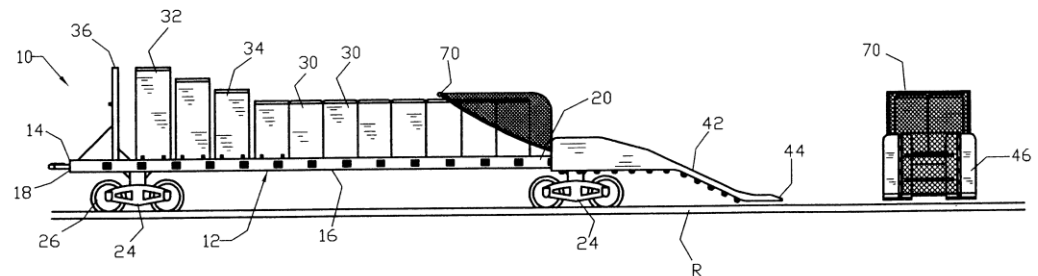
Never tested in the rail environment.

No evidence of effectiveness.

Physics of a train-person collision indicate fatalities may not be reduced.



US Patent Number: US6845874 B2



US Patent Number: US6293205 B1

Conclusions

- ❑ Many countermeasures have been proposed – few evaluated
- ❑ Evaluations are challenging given small sample sizes
- ❑ Implementing multiple kinds of countermeasures may be most effective
- ❑ Coordination with communities and other resources is vital