



FEDERAL TRANSIT ADMINISTRATION

# **Transit Advisory Committee for Safety (TRACS)**

## **Rail and Rail Transit Suicide Prevention**

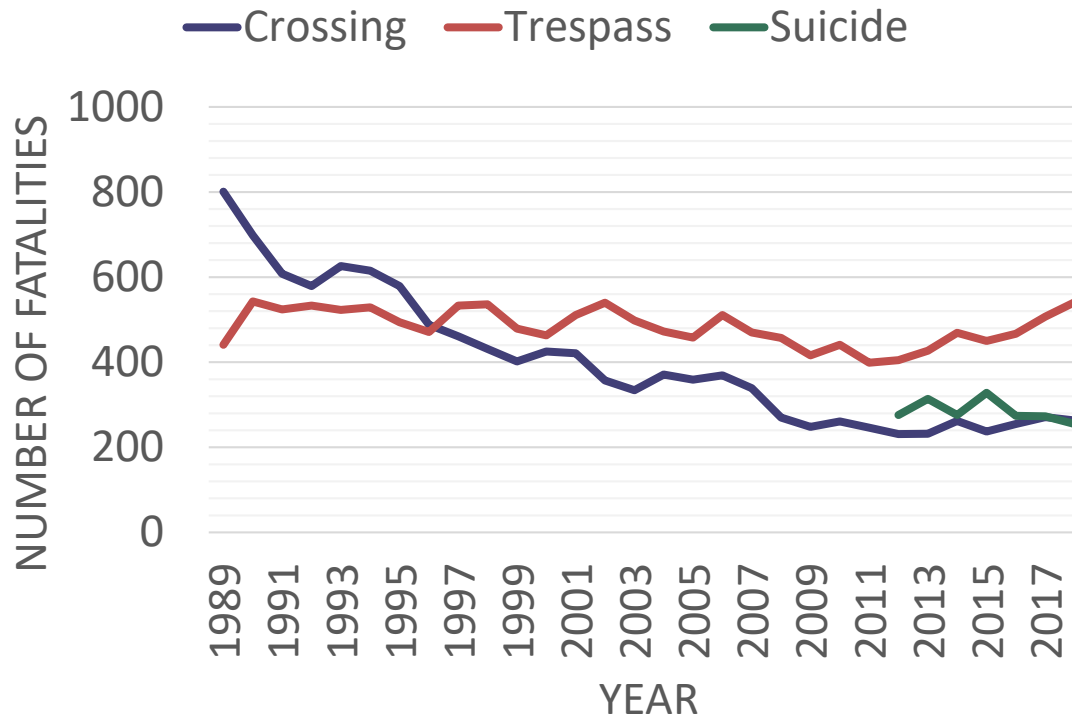
**September 9, 2019**

**Scott Gabree, PhD**



U.S. Department of Transportation  
Federal Transit Administration

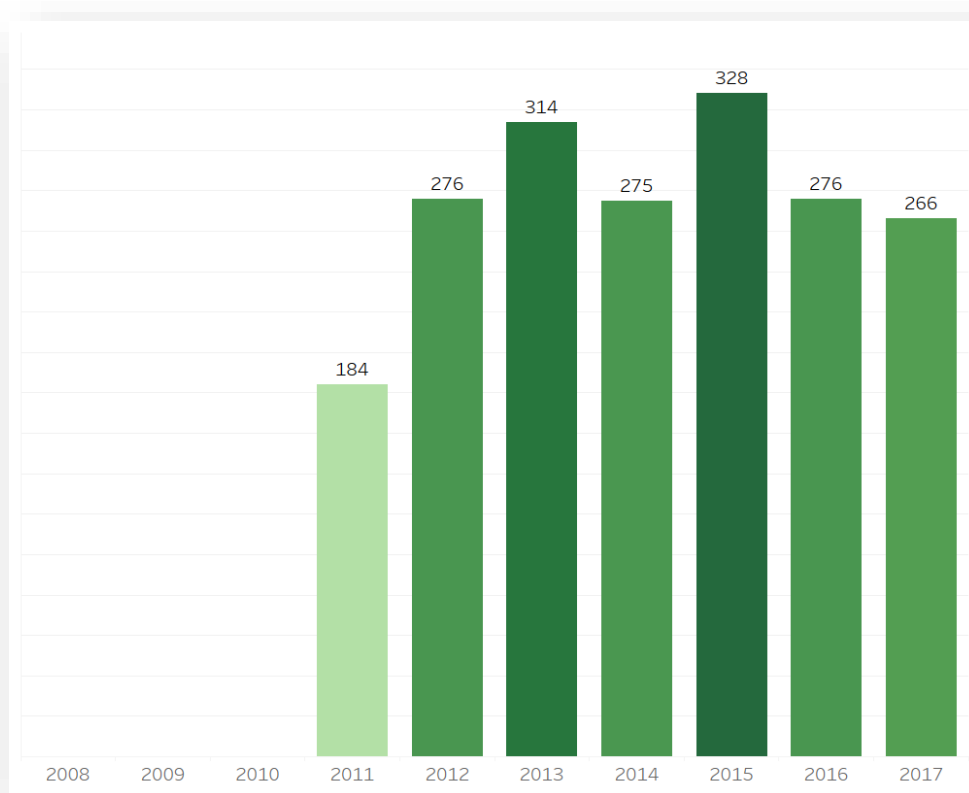
# RAIL SAFETY IN THE US



- Over the past 30 years crossing fatalities have dropped significantly
- Trespass and suicide have not experienced the same safety improvement

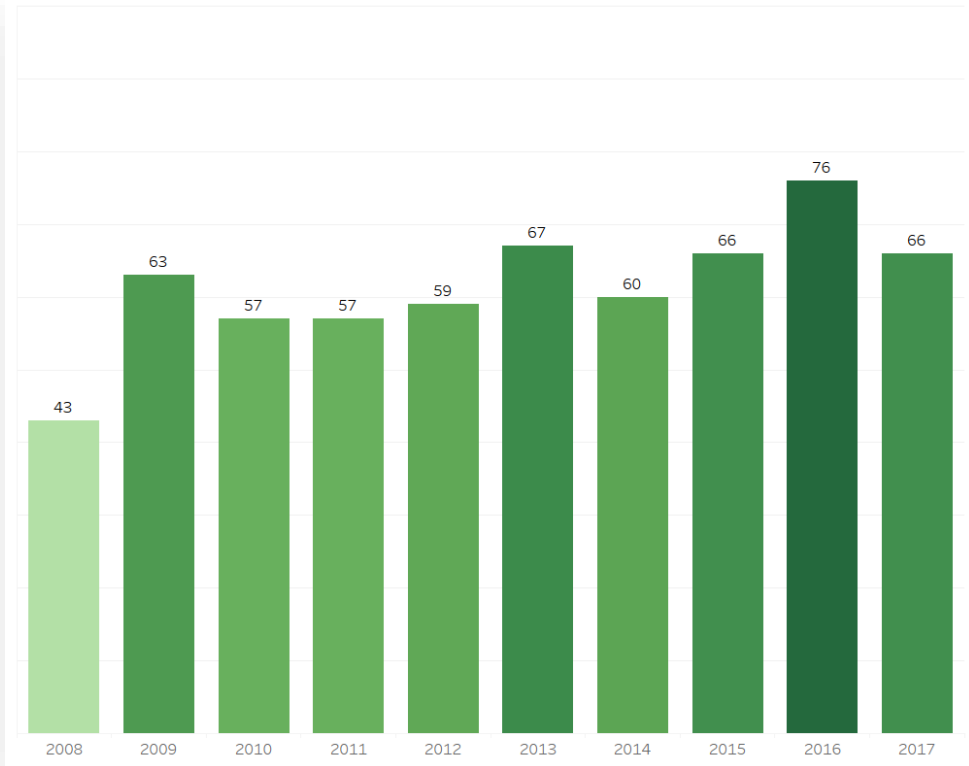
# SUICIDE IN THE US - RAIL

- Data only available since June 2011
- More variable, year-to-year
- Suicide is approximately 30% of all rail fatalities
- Mix of stations, crossings, and open track



# SUICIDE IN THE US - TRANSIT

- Four highest years have been since 2013
- Suicide is between 29% and 40% of **all** transit-related fatalities
- *But*, suicide is between 49% and 66% of **rail** transit-related fatalities
- Majority occur in stations



# SUICIDE IN THE US

In 2017,  
**47,173**  
Americans  
died by  
suicide

Rates are  
**increasing**  
annually



In 2017, an  
estimated  
**1.4M**  
suicide  
attempts

Annually,  
**300 - 400**  
rail and  
transit  
suicide  
deaths

Rail and  
transit suicide  
represent  
**less than 1%**  
of US suicides

Still, impacts  
on the rail  
industry are  
tremendous



# SUICIDE IN THE US (YOUTH)

- Youth suicide, ages 10-24, is growing most rapidly in the US (and second leading cause of death)
- Nationwide survey of high school students:
  - 16% seriously considered suicide in past year
  - 13% created a plan to take their life in past year
  - 8% attempted to take their life in the past year
- 157,000 10 to 24-year olds treated in Emergency Rooms in the US for self-inflicted injuries each year



# WHY RAIL?

- Death believed to be certain
- Death believed to be quick and painless
- Aware of prior incidents from media and announcements
- Accessible and intervention is unlikely



UNIVERSITY OF  
WESTMINSTER

## **Why do people take their lives on the Railways in Great Britain? A research study**

### **Final Report**

Lisa Marzano, Middlesex University  
Jo Borrill, Westminster University  
Jay-Marie Mackenzie, Westminster University  
Bob Fields, Middlesex University  
Ian Kruger, Middlesex University



# APPROACHES TO RAIL SAFETY

Engineering

Education

Enforcement

- The **3 E's** approach has traditionally focused on trespass and crossing safety
- How these strategies may be used to address rail suicide, specifically, is less well understood





# CURRENT SUICIDE PREVENTION PROGRAM (FRA)

- Volpe is currently funded by the FRA Office of Research, Development, & Technology (RD&T) to study rail suicide prevention
- Details of the program are available here:

[www.volpe.dot.gov/rail-suicide-prevention](http://www.volpe.dot.gov/rail-suicide-prevention)



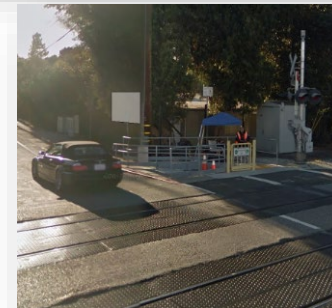
# CURRENT SUICIDE PREVENTION PROGRAM (FRA)

- The FRA program has six key program areas:
  - Suicide Countermeasure Pilot Testing
  - Media Reporting of Rail Incidents
  - Data Quality Improvement
    - Determination of Intent
    - Prevalence/Demographic Assessments
    - GIS Mapping
  - Global Railway Alliance for Suicide Prevention



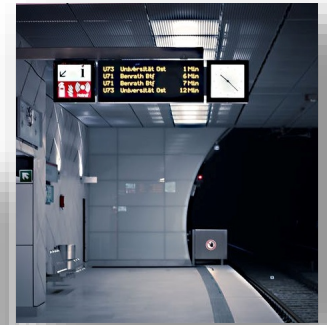
# COUNTERMEASURE PILOT TESTING

- Direct collaboration with US rail carriers to implement and evaluate rail suicide prevention countermeasures
- Currently, little empirical evidence is available about rail suicide prevention
  - Most rail suicide mitigations are done reactively, without time for a proper evaluation
- Countermeasures may involve the direct implementation of engineering or other mitigations, or involve coordination with external groups



# COUNTERMEASURE PILOT TESTING

- What are rail carriers doing, currently?
  - Awareness signage in stations
  - Identifying behaviors indicative of suicidal risk
    - Staff training
    - CCTV
    - Passenger responsibility
  - Community collaboration
  - Station improvements
  - Fencing
  - Lighting
  - Improve media reporting



## BEST PRACTICE SUICIDE REPORTING TIPS

There are many ways for journalists to produce sensitive coverage on the issue of suicide.

- [Download a summary of the key points of Samaritans Media Guidelines \(PDF\)](#)
- [Download a full version of Samaritans Media Guidelines \(PDF\)](#)

“Reporting on suicide and the inquests that follow can be difficult for a news organisation. As journalists we must report the story sensitively while still ensuring that the public are kept informed.”  
Jonathan Grun  
Editor, The Press Association

In the first instance, journalists may find the following reporting tips helpful:

### Do's and don'ts

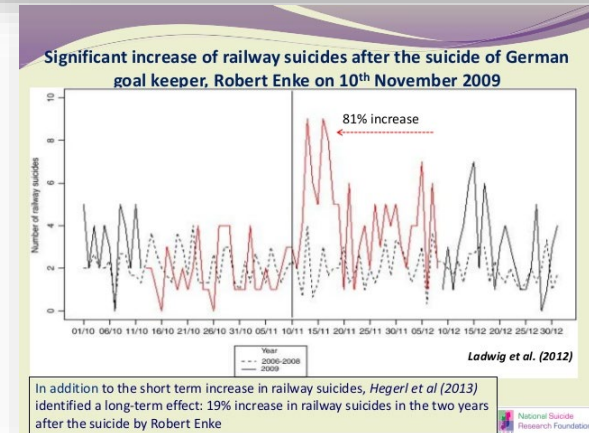
1. Think about the impact of the coverage on your audience

Your story might have an effect on vulnerable individuals or people connected to the person



# IMPACT OF MEDIA ON SUICIDE

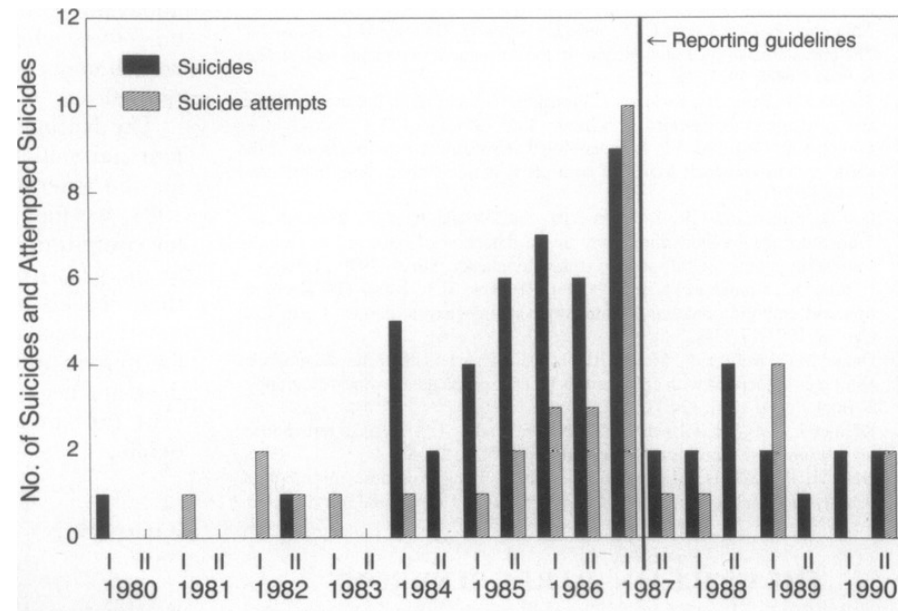
- Established body of literature about the impacts of the media on suicide
  - The *Werther Effect* is the term used to describe a rise in suicide rate following a highly publicized suicide
- Effects have been found specifically for rail suicides
  - Robert Enke – Germany
  - Viennese Subway System – Austria
  - Student Clusters – Palo Alto, CA





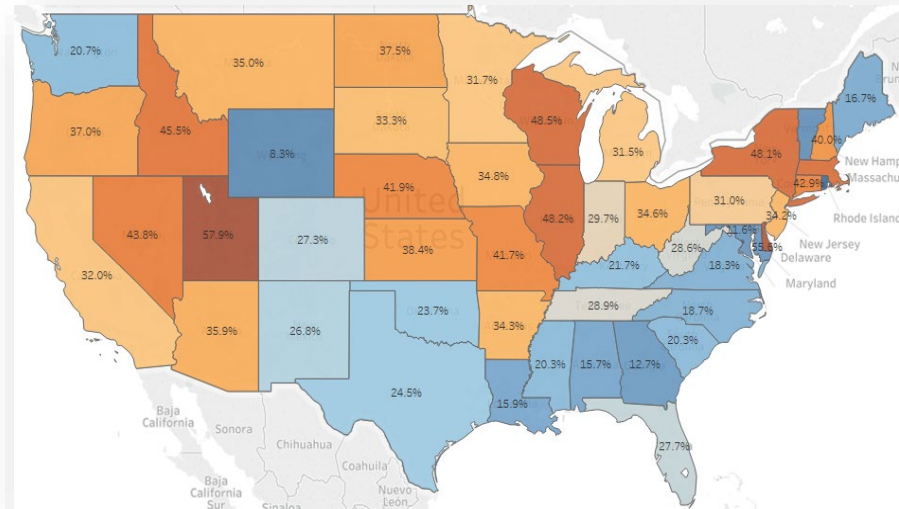
# IMPACT OF MEDIA ON SUICIDE

- Reporting guidelines can work
- Responsible reporting guidelines are widely available (a few, of many, below):
  - [ReportingOnSuicide.org](http://ReportingOnSuicide.org)
  - [World Health Organization](http://WorldHealthOrganization)
  - [Mindframe](http://Mindframe)
  - [SAVE](http://SAVE)



# DATA-DRIVEN EFFORTS

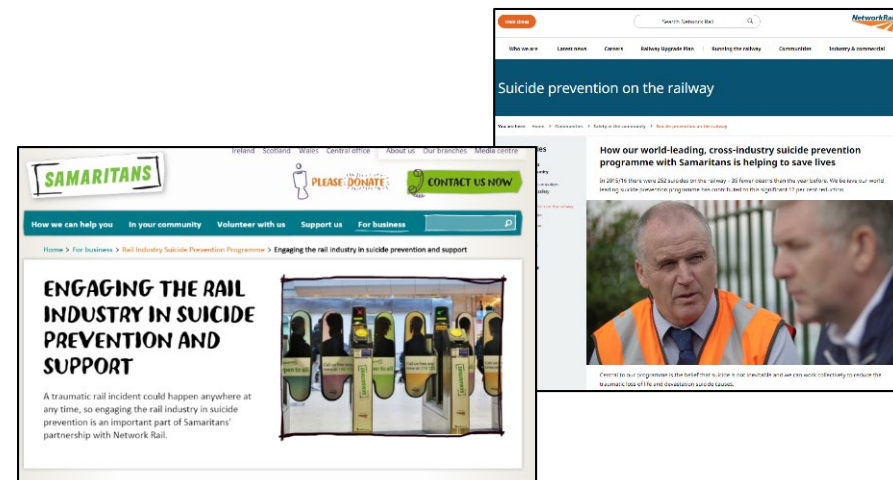
- Determination of Intent
  - How reliable are suicide vs. trespass determinations?
  - TIDE criteria
- Prevalence and Demographic Analyses
  - What can we learn from studying trends in the data?
  - Are there any common characteristics with respect to:
    - individual involved
    - location
    - timing
- GIS Mapping of Incidents
  - Can mapping be used to allocate resources more effectively?





# GRASP

- The **G**lobal **R**ailway **A**lliance for **S**uicide **P**revention
  - International work group of experts in rail suicide prevention
- Partners from ten countries
- Learning best practices from experts who have been attempting to address this issue for many years



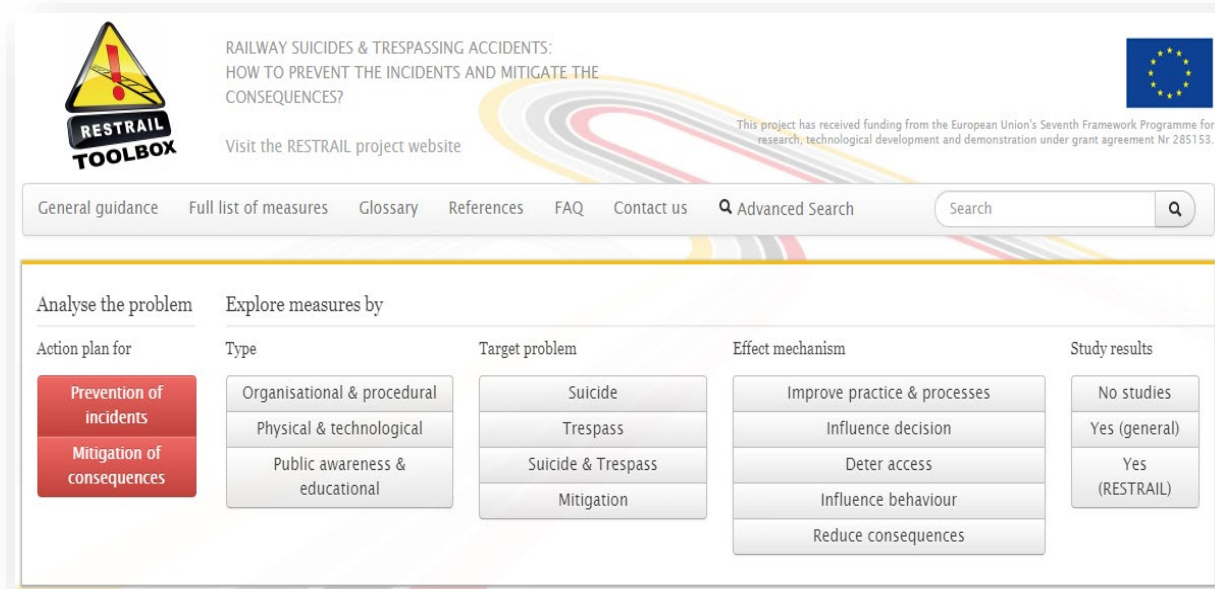
# GRASP

Country	Population	2017 Rail Suicide Incidents	2017 Train Person Incidents
Finland	5.5M	56	6
France	65.0M	297	87
Germany	83.1M	771	198
Ireland	4.8M	7	3
Netherlands	17.0M	215	7
Norway	5.3M	18	1
Sweden	10.0M	50	11
United Kingdom	67.1M	245	39
<b>United States</b>	<b>327.0M</b>	<b>313</b>	<b>1,018</b>

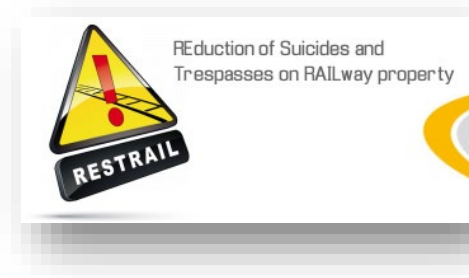
- US has fewer rail suicide incidents, per capita, than most European countries
- US has far MORE train person collisions than most European countries
- Much to be learned from European (and other) countries who have prioritized rail suicide prevention strategies

# INTERNATIONAL EFFORTS TO ADDRESS RAIL SUICIDE

- REduction of Suicides and Trespasses on RAILway property
- European Union effort to implement, evaluate, and document countermeasures to mitigate rail trespass and suicide



# RESTRAIL: TOOLBOX



- Two action plans:
  1. Prevention of incidents
  2. Mitigation of consequences
- Explore Measures by Type:
  1. Organization & Procedural
  2. Physical & Technological
  3. Public Awareness & Educational
- Explore Measures by Study Results:
  1. No studies
  2. Yes (general)
  3. Yes (RESTRAIL)
- Explore Measures by Target Problem:
  1. Suicide
  2. Trespass
  3. Suicide & Trespass
  4. Mitigation
- Explore Measures by Effect Mechanism:
  1. Improve practice & process
  2. Influence decision
  3. Deter access
  4. Influence behavior
  5. Reduce consequences

# TOOLBOX EXAMPLE: FENCING



- Toolbox > Physical & Technological: **Fencing**

- Between tracks
- Mid-Platform
- Platform ends
- Platform edge doors
- Anti-trespass grids
- Symbolic fencing
- Hotspot fencing
- Nets at bridges





# CAMERAS AND SURVEILLANCE



- Toolbox > Physical & Technological: **Surveillance**
  - Intelligent CCTV with sound warnings
  - Intelligent CCTV with live response
  - Detection systems with sound warnings
  - Forward facing CCTV



# TOOLBOX EXAMPLE: TRAINING/EDUCATION

- Toolbox: **Training/Education**
  - Educating the public
    - Awareness of services/encourage help-seeking
    - Education at schools (dedicated time & incorporation into existing disciplines)
    - Educate adults living/working near rail lines
  - Training to Identify Risk
    - Training to identify suicidal risk and intervene
    - Local law enforcement
    - Dedicated volunteer patrols



**NEWS**  
**Rail Auxiliary Team Looks To Keep Railroad Tracks Safer**  
The Rail Auxiliary Team, or the RAT pack as they are affectionately called, act as spotters for the railroads and for the Washoe County Sheriff's Office. They help keep people off the tracks and keep trains safe. The amazing thing is they are all volunteers.  
Source: March 2015, 12:15 PM PST  
Updated: Sunday, March 20th 2016, 5:07 PM PST





# ACTIVE US EFFORTS

- Suicide Intervention Training
  - Identify individuals at risk for suicide and intervene
- Surveillance
  - Smart cameras with live response
  - Volunteer patrols
- Increasing awareness of help services
  - Posters at stations
  - Booths at stations or events
- Fencing
  - ROW fencing (in hotspots)
  - Platform fencing (mid and end)



Column: Metra takes steps toward preventing death by train



# OTHER: CARE FOR THOSE WHO EXPERIENCE EVENT

- Adequate care for crews who experience potentially traumatic events
  - [FRA Rule](#) effective June 23, 2014
- What about bystanders who experience these incidents or first responders who are experience the result of the collision?



# WHERE DO WE GO FROM HERE?

- Study the impact of various strategies (empirical evidence)
- Improve quality of data collected
  - Collect data that can inform action
  - Improve consistency of data collected
- Identify how to establish effective partnerships with experts in suicide prevention

# THANK YOU TO OUR SPONSOR AND TEAM



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# THANK YOU!

## Thoughts? Questions? Ideas?

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