

Trespasser Strikes and Intentional Deaths

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MODERATOR:
Joyce Rose, TSSP, WSP USA

- Hilary Konczal, Metra
- Sarah Kline, Operation Lifesaver, Inc.
- Patrick Sherry, Ph.D., Univ. of Denver

2018
Annual
Meeting



AMERICAN
PUBLIC
TRANSPORTATION
ASSOCIATION

LEADING CAUSE OF DEATH ON RAIL SYSTEMS: TRESPASSING AND SUICIDE

Federal Railroad Administration Safety Statistics:

- Over the four-year period from 2012-2015, 43% of railroad fatalities were trespassers and 29% were suicide
- In 2017, there were a total of 1,087 fatalities on FRA-regulated rail systems (includes freight, Amtrak and commuter rail)
- Trespassing and suicide fatalities : 793 (73% of total fatalities)

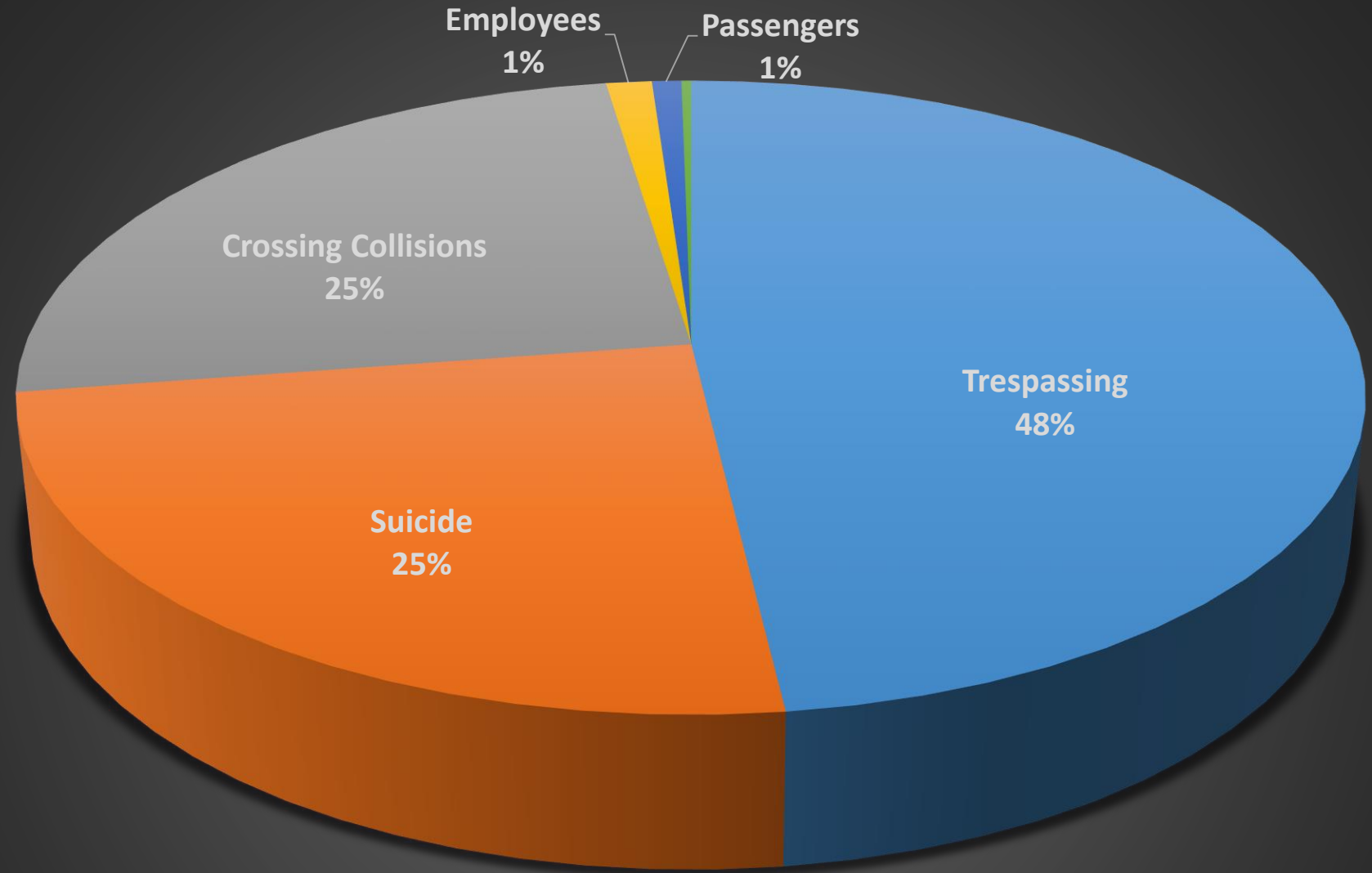
Federal Transit Administration Safety Statistics:

- In 2017, there were a total of 145 FTA-reported fatalities on rail transit systems (Metro, Light Rail, Streetcar)
- Of these transit fatalities, 66 were suicides; 25 were people waiting or leaving; 19 were bicyclists or pedestrians

Fatalities on U.S. General Railway System

Safety oversight by Federal Railroad Administration

2017 Fatalities: 1,087



2017 General Railway System Fatalities – Freight Railroads, Amtrak and Commuter Railroads

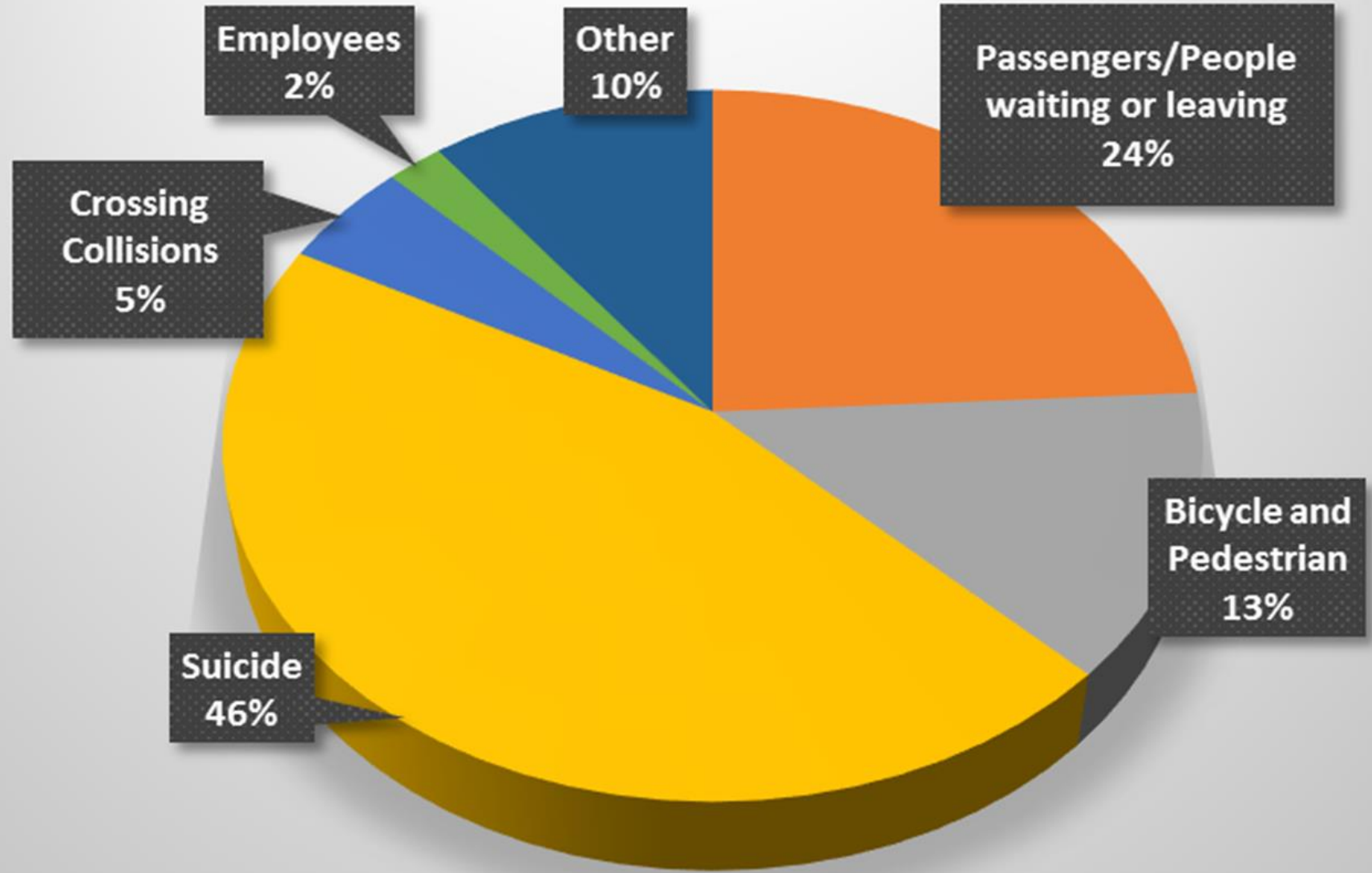
Fatalities on U.S. Rail Transit Systems

Rail Transit systems include Metro, Light Rail, and Streetcars

Safety oversight by SSOAs and Federal Transit Administration

2017 Fatalities: 145

2017 Rail Transit System Fatalities





Seeing the “Big Picture”

- There is no easy way to compile FRA and FTA safety data together, or to compare relative risk factors
- FRA and FTA use different measures for safety data

FRA	FTA
Crossing Collisions	Other Vehicle Occupant
Trespassing	Ped in Crossing
	Ped Not in Crossing
	Ped Crossing Tracks
	Ped Walking Along Tracks
Suicide	Suicide
Employee on Duty	Operator
	Employee
	Other Worker
	Bicyclist
Non-Crossing Collisions	
	Passenger
	People Waiting or Leaving

Role of Transportation Research Board

- In January 2017, TRB AHB60 Standing Committee on Highway/Rail Grade Crossings formed a Subcommittee to focus on Rail ROW trespass and suicide research
- First task of the Subcommittee has been a Literature Review of recent research
- Total of 102 research studies reviewed, of which 46 were cited in the resulting report
- The Literature Review helped the Subcommittee:
 - Make general findings regarding rail trespass and suicide epidemiology, countermeasures, and data adequacy
 - Identify research gaps and needs



Summary of TRB Literature Review Findings

Study Process	Epidemiologic Findings	Causation and Risk Factor Findings	Countermeasure Findings	Data Findings
Recent studies (2010 onward)	Rail suicide is much more prevalent choice in EU than U.S. (12% vs. <1%)	Rail suicides tend to occur in suburban areas (55%)	Organizational and procedural measures (speed restrictions, track surveillance)	FRA and FTA data is not harmonized
102 studies reviewed, 49 studies cited	Rail trespassing is much more prevalent in U.S. than EU (>43% in U.S. vs. 17% in EU)	Rail suicides have a high percentage of co-morbidity with alcohol (94% > .08 BAC)	Physical and technological measures (fencing, platform screens, automatic detection and warning systems, blue lights, suicide pits)	Sample sets tend to be limited and study periods short
28 studies applicable to U.S. systems	Lethality: 50% of trespassers are fatal; 90% of rail suicides are fatal	About 50% of rail trespasser fatalities had alcohol or drugs in their system	Public awareness and education measures (Operation Lifesaver, safety campaigns, presentations, social media, media guidelines for reporting)	More studies needed to increase empirical data
	Demographics: Mean age of rail trespassers is 38; rail suicides tend to be younger	55% of rail trespassing fatalities were using headphones or mobile phones	Law enforcement approaches (blitzes, officer on a train, removing high-risk populations from track areas, CCTV & remote monitoring)	
	Demographics: Rail suicides by men outnumber women by more than 3 to 1. For trespass, men outnumber women by more than 4 to 1	A potential factor in higher rail suicide risk in EU vs. U.S. could be firearm availability		