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Safer Than You Think!

Revising the Transit Safety Narrative

22 June 2025

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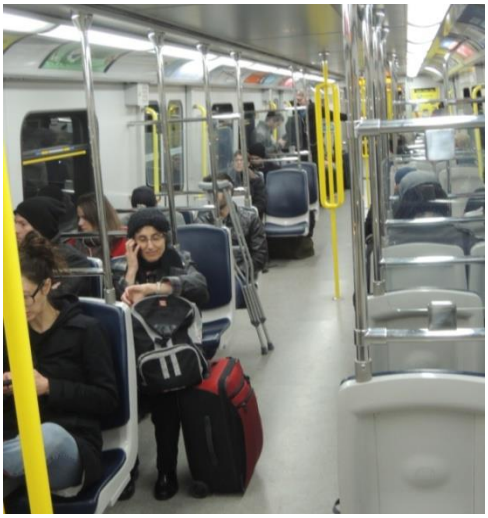

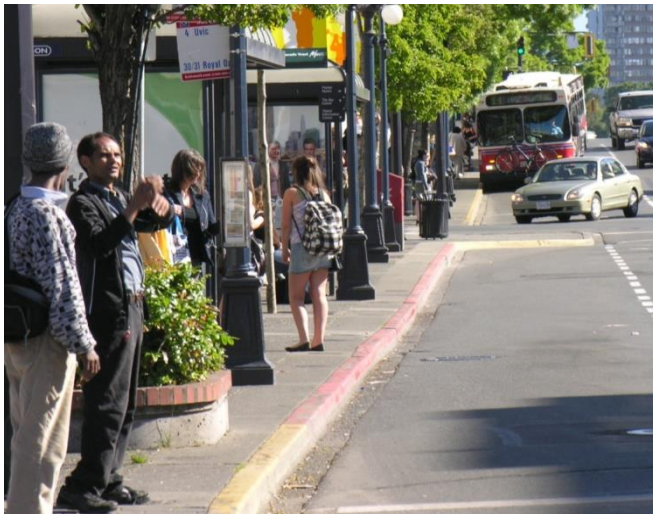

Abstract

Public transportation is overall very safe (low crash risk) and secure (low crime risk). Transit travel has about a tenth the traffic casualty (death or injury) rate as automobile travel, and transit-oriented neighborhoods have about a fifth the per capita crash casualty rate as automobile-oriented areas. Transit also tends to have lower overall crime rates than driving, and transit service improvements can further increase security by improving surveillance and economic opportunities for at-risk populations. However, many people consider transit dangerous and so are reluctant to use it or support service expansions in their communities. Various factors contribute to this fear including the nature of public transit travel, heavy media coverage of transit crashes and crimes, and safety messages that emphasize danger rather than safety. This report identifies practical ways to address fears and better communicate the overall safety and security of transit travel and address.

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"We have nothing to fear except fear itself." - Franklin D. Roosevelt (1933)

Introduction

High quality public transit provides many benefits to users and communities. It is far more affordable than owning and operating a private automobile, provides basic mobility for non-drivers, and allows travellers to work, rest and avoid the stresses of driving. Since most transit trips include walking and bicycling links, transit users get healthy exercise, and passengers tend to have more friendly social interactions than in other modes. It reduces road and parking infrastructure costs, congestion, pollution and crash risk, increasing transportation efficiency and community livability.

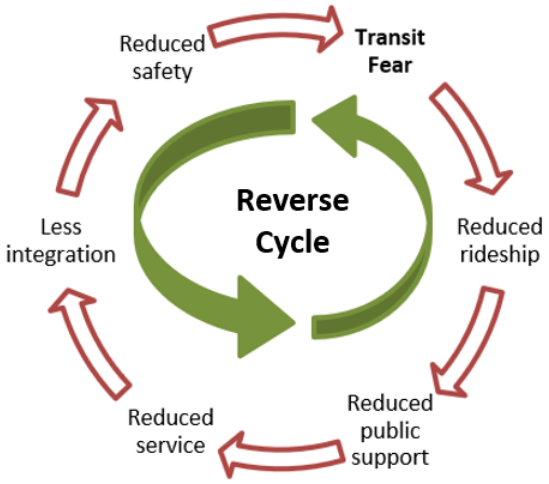
However, many people use transit less and give it less support than optimal due to the common misconception that it is dangerous. In fact, transit has much lower crash and crime rates than driving, and communities tend to become safer and more secure as non-criminal transit ridership increases. There is an important story to tell that can help solve transportation problems.

Fear of transit is understandable. Passengers travel in enclosed and sometimes crowded spaces with strangers; although most fellow passengers are responsible and considerate, we tend to remember unpleasant interactions. Transit users have little control over their environment, while motorists enjoy privacy, comfort and control over sound, temperature and ventilation. Transit travel is often stigmatized. In addition, because they are unusual, transit crashes and crimes tend to receive exaggerated media coverage while vehicle crashes, assaults and thefts are so common that they receive little attention.

This is important because when it comes to such risks, perception is reality. Fear of transit contributes to a self-reinforcing cycle of decline, as illustrated to the right. To create more efficient and equitable transportation systems practitioners and advocates must reverse this cycle by communicating the true safety of transit and addressing the factors that contribute to fear and discomfort. Transit safety and security are therefore fundamental to efficient transportation, and so should be integrated into all aspects of planning, operations and public communication.

This report explores these issues. It evaluates various public transit risks including crashes, crimes and terrorism; compares these risks with other transport modes; examines evidence of excessive and irrational fear of transit; examines how transit risks are currently evaluated; and recommends better ways to communicate transit safety impacts and strategies. This should be of interest to people involved in transport planning, transit promotion, and transportation safety and security analysis.

Figure 1 **Reversing the Cycle of Decline**



Public transit is vulnerable to a cycle of declining ridership, public support, service quality, system integration and safety (red arrows). This is reversable if people gain confidence in transit's safety and value (green arrows).

Evaluating Transportation Risks

Transportation risks analysis can be challenging because there are several perspectives and impacts to consider. How risks are measured affects analysis results. For example, transit crash risks can measure based on collisions, casualties (somebody is injured or killed) or fatalities, and may include passengers, vehicle occupants (passengers plus employees), all crash victims (including other road users hit by a transit vehicle), plus suicides and non-collision injuries such as accidents and assaults in transit vehicles and stations, and employee workplace injuries. The scope of analysis can consider injuries in transit vehicles, transit properties (vehicles, stops and stations), or entire journeys from origin to destinations, including walking or bicycling links. Risks are considered *internal* if imposed on mode users and *external* if imposed on other people. Similarly, crime statistics may include violent crimes, all crimes against passengers and employees, or all transit-related crimes including trespassing, vandalism and fare evasion. Table 1 summarizes various risk categories.

Table 1 **Types of Transportation Risks**

Perspectives	Accidents	Crime	Other Risks
Internal (impacts on a mode's users).	Crash damages to users. Falls (e.g., in train stations). Worker injuries.	Crime risk to users. Crime risk when accessing vehicles.	Pollution exposure to users. Sedentary living (inadequate exercise) by mode users.
External (impacts on non-users).	Crash risk to other people.	Crime risk that users of a mode impose on other people (such as travel by criminals).	Pollution imposed on others. Self-harm (suicides)

Transportation activity can involve various types of risks.

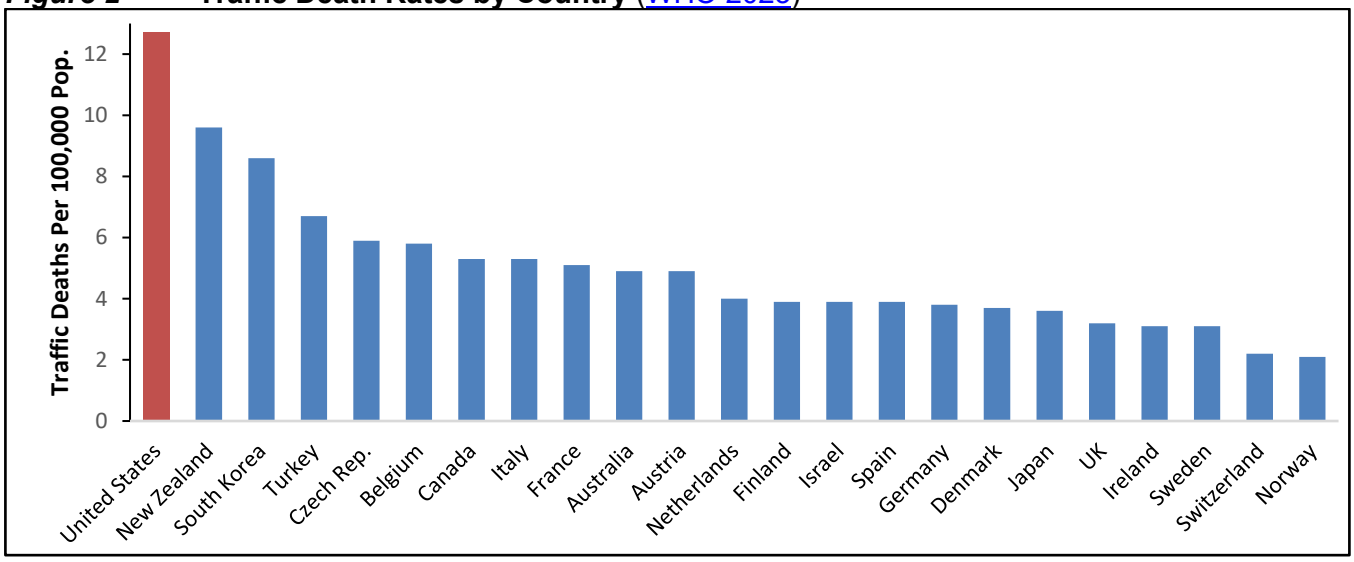
Transportation risks can be measured by distance (such as crashes, casualties, deaths or crimes per million trips or billion passenger-miles or -kilometers) or per capita. Which perspective is used can also affect results. For example, active modes (walking, bicycling and variants such as wheelchair) have high casualty rates per mile or kilometer travelled, but because users tend to travel fewer annual miles and impose minimal risk on others, per capita crash rates tend to decline as active mode shares increase in a community. Driving a larger vehicle reduces internal but increases external crash risks. Similarly, excluding poor households from a neighborhood may reduce local crime risks but by concentrating poverty and reducing disadvantaged people's economic opportunity, it may increase total regional crime risk.

Risk analysis is also complicated by confounding factors. For example, transit service and ridership, vehicle crash rates, poverty and some types of crime tend to increase with city size and urban density, but such correlations do not necessarily indicate causation; they do not really mean that crashes and crime would increase with more transit travel. For example, bank robberies occur at banks and bar fights occur in bars, both of which tend to concentrate in downtowns and other commercial centers where public transit travel is more common. In addition, some city neighborhoods have concentrated poverty. As a result, public transit is often *associated* with robberies, fights, poverty and associated social problems but that does not mean that public transit *causes* those problems or the total number of robberies, fights and poverty increases with more transit service or use.

Comparing Traffic Risks

The figure below shows that the U.S. has the highest traffic fatality rate among peer countries. Geographic factors do not explain these differences: Australia and Canada have lower population densities, and Sweden, Norway and Finland have more extreme weather, yet all have much lower traffic death rates than the U.S.

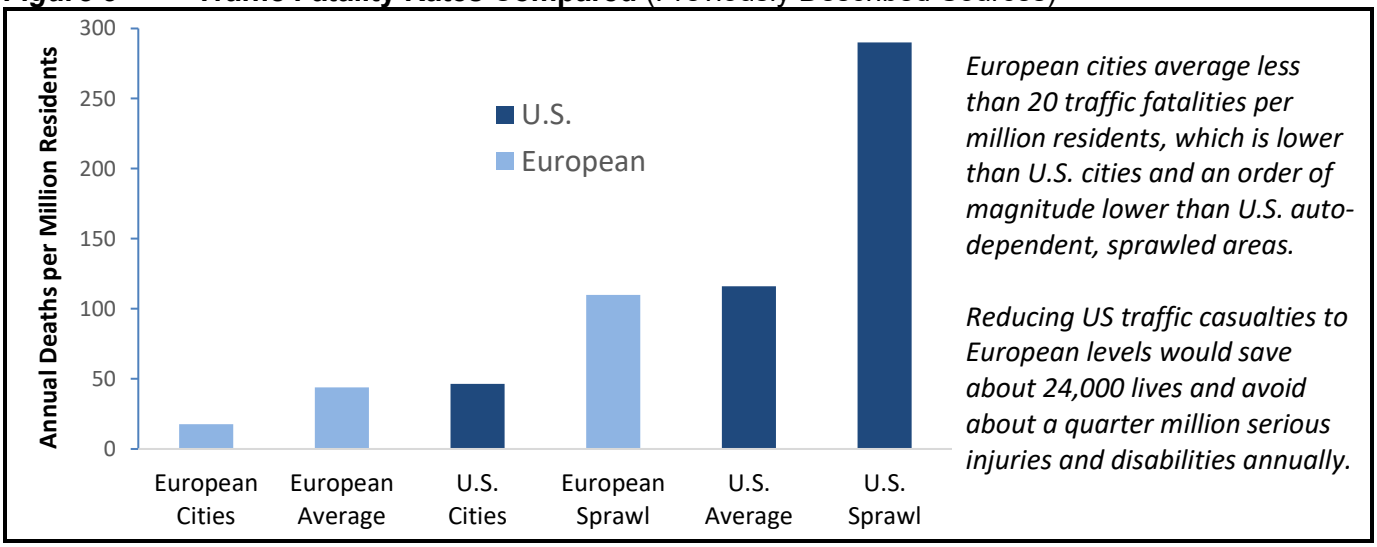
Figure 2 **Traffic Death Rates by Country** (WHO 2023)



The U.S. has, by far, the highest traffic fatality rate among peer countries.

Similar variations occur within regions. Compact, multimodal neighborhoods have about a fifth the traffic fatality rates as sprawled, auto-dependent areas, Europe has 60% lower rates than in the U.S. and an order of magnitude lower rates than in U.S. sprawled areas, as illustrated below. Reducing U.S. traffic casualty rates to those of Europe would save more than 20,000 lives and avoid a quarter million injuries annually.

Figure 3 **Traffic Fatality Rates Compared** (Previously Described Sources)



European cities average less than 20 traffic fatalities per million residents, which is lower than U.S. cities and an order of magnitude lower than U.S. auto-dependent, sprawled areas.

Reducing US traffic casualties to European levels would save about 24,000 lives and avoid about a quarter million serious injuries and disabilities annually.

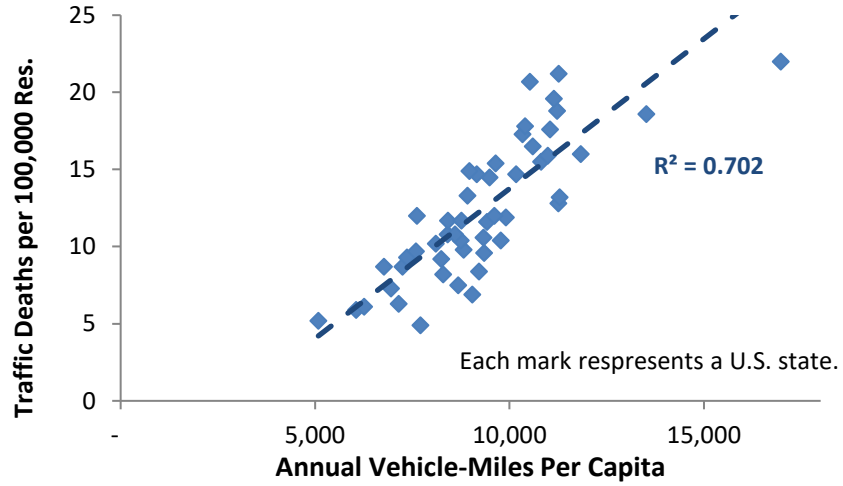
Crash Casualty Risk Factors

This section examines various factors that can affect crash casualty rates.

Effects of Total Vehicle Travel

Although many demographic, geographic and economic factors affect traffic risks, all else being equal, that is, for a given group or area, per capita fatality rates tend to increase with vehicle travel and therefore risk exposure (Litman 2025). The figure below shows this relationship for U.S. states.

Figure 4 **Traffic Fatalities Versus Mileage for U.S. States, 2022** (IIHS 2024)

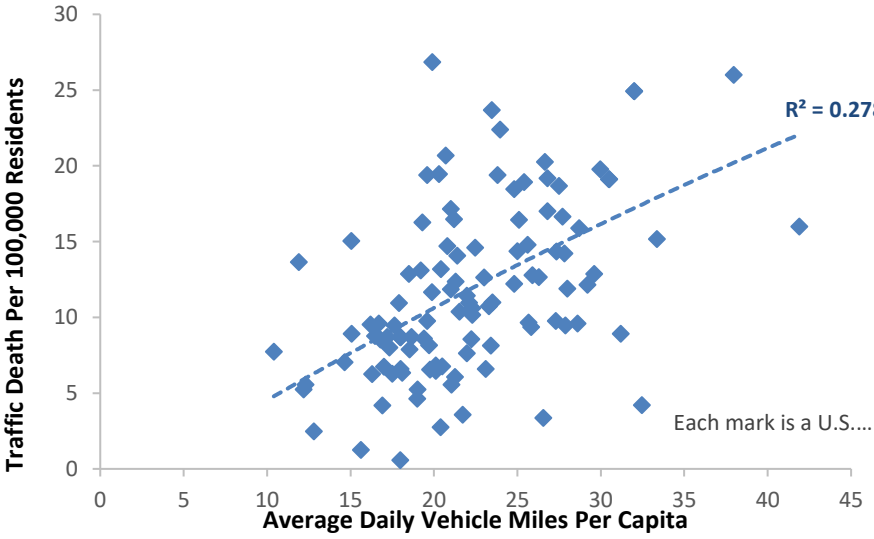


All else being equal, traffic fatality rates increase with per capita vehicle-miles. As a result, planning decisions that stimulate vehicle travel tend to increase crashes, and vehicle travel reduction policies tend to increase safety.

The 0.702 R^2 indicates a statistically strong relationship.

The figure below shows this relationship for U.S. urban regions. Other studies find similar patterns *within* regions: traffic casualty rates are much lower in compact, multi-modal neighborhoods than in sprawled, auto-dependent areas (Ewing and Dumbaugh 2009; Ewing, Hamidi and Grace 2016; Welle, et al. 2018). These data indicate that all else being equal (for similar groups and areas) traffic fatalities increase with vehicle travel.

Figure 5 **Traffic Deaths Versus Mileage for U.S. Urban Regions** (FHWA and NHTSA 2023)



Per capita traffic fatality rates tend to increase with per capita vehicle-miles in U.S. Metropolitan regions.

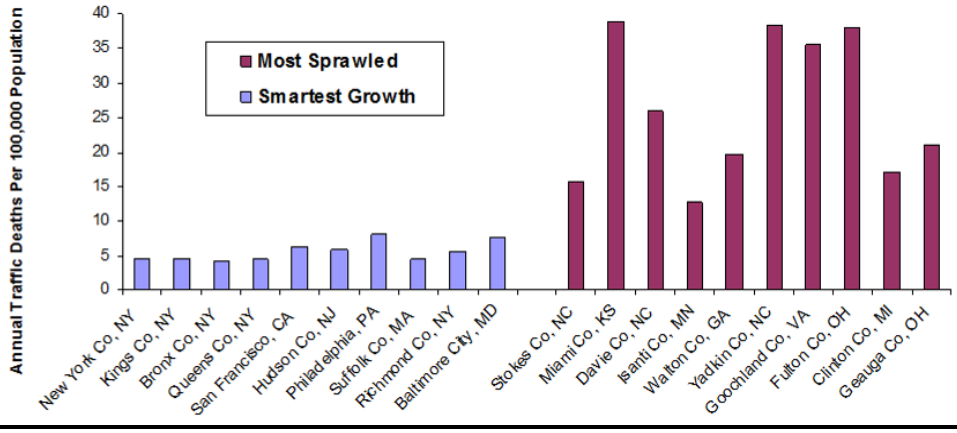
Community Design Factors

Vehicle travel and risk vary by community type. Households in compact, multimodal neighborhoods (called *transit-oriented development*, *Smart Growth*, or *15-minute communities*) tend to drive 20-60% fewer annual miles, at slower speeds with more caution, and have better travel alternatives, resulting in much lower traffic casualty rates than in urban fringe areas (Ahangari, Atkinson-Palombo and Garrick 2017).

A major epidemiological study evaluated factors that affect traffic casualty rates in 1,632 global cities (Thompson, et al. 2020). The researchers found that crash rates were much lower in cities that have better transit, denser road networks and smaller city blocks, factors that tend to reduce vehicle travel and traffic speeds. A detailed study of 144 mid-size U.S. urban regions by Frederick, Riggs and Gilderbloom (2017) found strong statistical evidence that living in auto-dependent cities can have harmful health effects, including higher traffic casualty rates, than in cities with higher non-auto mode shares.

Using sophisticated statistical analysis, Ewing, Hamidi and Grace (2015) and Yeo, Park and Jang (2014) found that more compact communities had significantly higher transit ridership, slightly higher *total* crash rates, but much lower *fatal* crash rates than sprawled communities: each 10% increase in their compact community index is associated with an 11.5% increase in transit commute mode share, a 0.4% increase in total crashes and a 13.8% reduction in traffic fatalities (Ewing and Hamidi 2014). The following figure shows the lower fatality rates in the 10 U.S. counties with the highest Smart Growth rating compared with the ten rated most sprawled. The safest counties are characterized by having high quality public transit and transit-oriented neighborhoods.

Figure 6 **Annual Traffic Death Rate** (Ewing, Schieber and Zegeer 2003)



Of 280 U.S. counties analyzed, the ten with the lowest sprawl rating have about a quarter the per capita annual traffic fatality rates of the most sprawled counties.

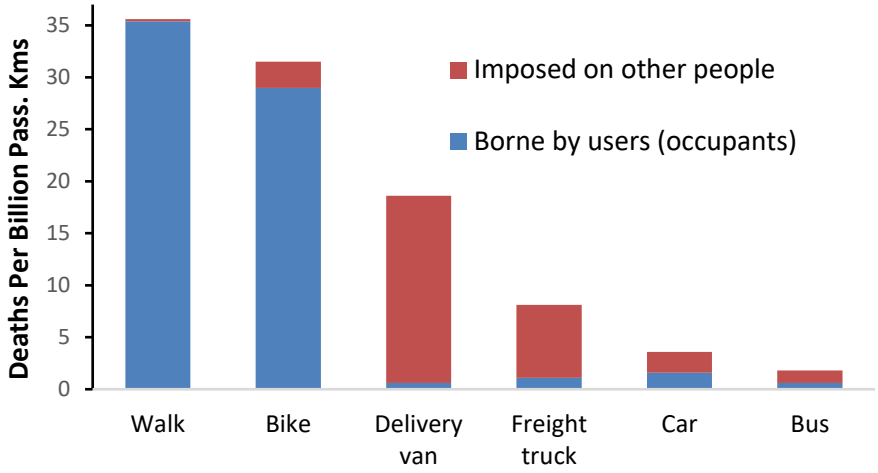
Overall, this research indicates that communities become safer if they have the following features:

- Compact and mixed neighborhoods, with well-connected street networks and short blocks, that reduce total vehicle travel and increase active travel for local errands.
- Good active travel conditions with complete sidewalk, crosswalk and bikeway networks, and low traffic speeds.
- High quality public transit integrated into communities, including good pedestrian access to transit stops and stations, and most commercial and employment located in transit-oriented areas.
- Low parking supply and efficiently priced parking.
- Low per capita vehicle ownership and mileage, and high non-auto mode shares.

Risk by Mode

Crash risks vary significantly between mode (NSC 2024). The figure below shows U.K. crash risk borne and imposed by various modes, from the report, *What Kills Most on the Roads?* (PACTS 2020).

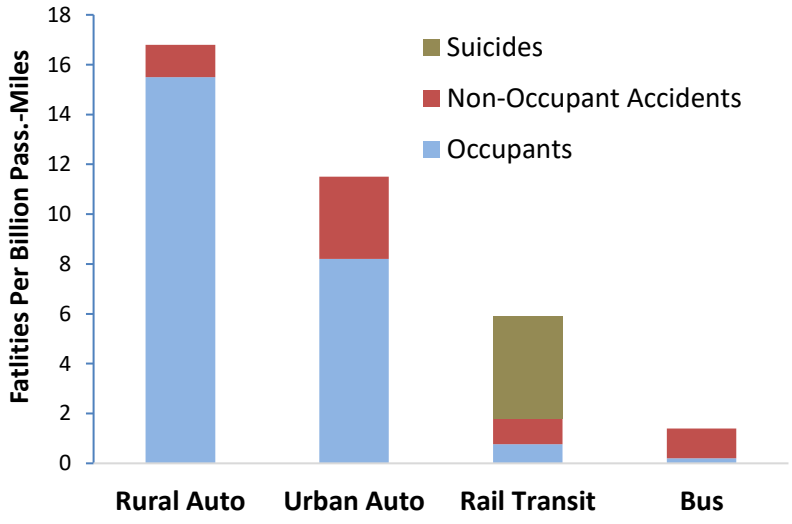
Figure 7 **U.K. Traffic Death by Mode, 2019** (PACTS 2020)



Modes vary in the risks occupants bear and impose on others. Public transit is the safest mode overall. Although walking and bicycling bear high risks per mile or kilometer, they impose minimal risk on others and travel few annual miles, so their total risk tends to be low. (This graph excludes motorcycles which have extremely high fatality rates.)

The following graph compares internal and external fatality risk by mode in the U.S. Driving is more dangerous in rural than urban areas due to higher travel speeds and slower emergency response, and transit is much safer than driving considering both internal and external risks.

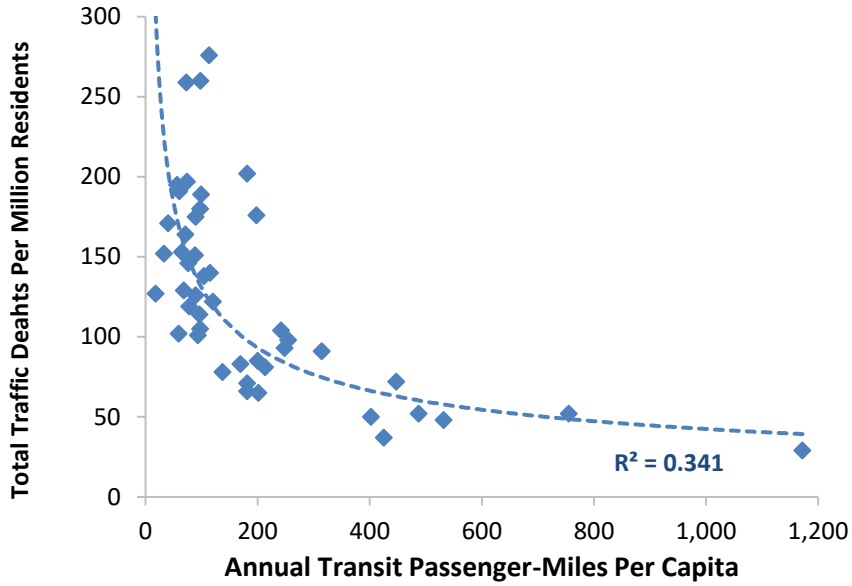
Figure 8 **U.S. Traffic Death Rates Compared** (APTA, BTS, FTA and IIHS Data)



Per-mile traffic fatality rates are higher in rural than urban areas, and much higher for automobile than transit. Rail and bus passengers have very low risk, and transit imposes much less accident risk on other road users. As a result, total (all mode) crash rates tend to decline as transit travel increases in a community.

The following graph shows that total (all mode) traffic fatalities tend to decline as transit travel increases in a community. Cities that average more than 200 transit passenger-miles (about 50 annual transit trips) per capita have about half the fatality rates as those with fewer than 100 annual passenger-miles (about 25 transit trips).

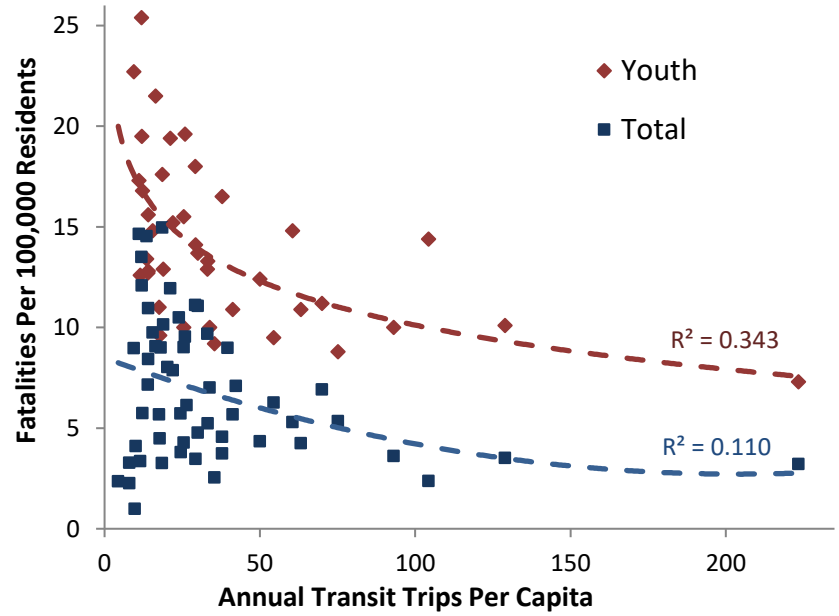
Figure 9 **Traffic Fatalities Versus Transit Travel** (APTA 2024, Ap. B; NHTSA 2023, T-124)



Traffic fatalities decline with more transit travel. U.S. cities that average more than about 50 annual transit trips or 200 passenger-miles per capita have less than half the total (all mode) traffic fatality rates as regions with less than 30 trips or 100 passenger-miles. The 0.341 R^2 value indicates a fairly strong statistical relationship.

The statistical relationship between transit ridership and traffic safety is particularly strong for youths, as illustrated below. This suggests that many young people want to reduce their driving and associated risk but can only do so if they have adequate alternatives.

Figure 10 **Youth and Total Traffic Fatality Rates Compared to Transit Travel** (CDC 2012)



Youths (15-25 years old) have about twice the traffic fatality rates as the total population average, and both youth and total fatality rates tend to decline with increased transit ridership.

This statistical relationship is particularly strong for youths. This suggests that many young people are willing to reduce their driving and associated risk, but can only do so if they have adequate alternatives

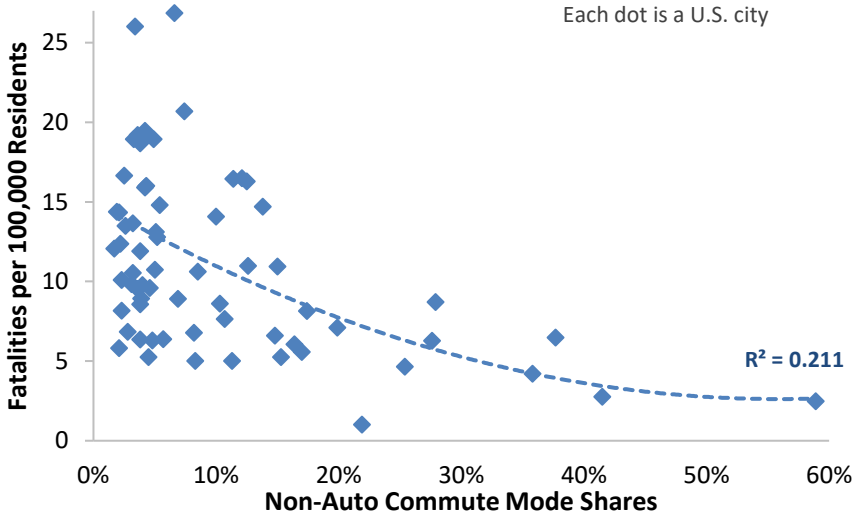
Analyzing 29 years of traffic data for 100 U.S. cities, Stimpson, et al. (2014) found that a 10% increase in the portion of passenger-miles made by transit is associated with 1.5% reduction in total (all mode) traffic deaths. Since transit only carries about 2% of total person-miles, this means that each one-point increase in transit mode share is associated with a 2.75% decrease in fatalities per 100,000 residents. They conclude,

> "We found that increased use of mass transit was associated with fewer fatalities from motor vehicle crashes after accounting for climate and the economic costs of driving. Therefore, reduced traffic deaths may be counted among the benefits of mass transit use in addition to already reported benefits such as economic development, reduced traffic congestion, and lower emissions." (Stimpson, et al. 2014, p. 6)

Ferenchak and Woods (2025) analyzed the Albuquerque bus rapid transit (BRT) system's traffic safety impacts. They found that BRT significantly reduced total crashes: excessive speed crashes decreased 19% and excessive speed severe injury crashes decreased 100%, severe pedestrian injuries increased 15% apparently due to more walking but those involving left-turning vehicles decreased 80%, and total left-turning crashes decreased 35%.

This analysis indicates that improving and increasing transit travel tends to increase traffic safety. Cities that improve transit services, such as New York, Seattle and Vancouver, reduce crash rates (APTA 2016). This occurs, in part, because high quality public transit is a catalyst for multimodal transportation and compact development, so relatively small increases in transit mode shares can leverage larger reductions in vehicle travel and crashes. One study found that each additional transit passenger-mile typically reduces about seven vehicle-miles (Sabouri, Ewing and Kalantari 2024). The following graph shows that total (all mode) traffic fatalities tend to decline as non-auto (walking, bicycling and public transit) commute mode shares increase.

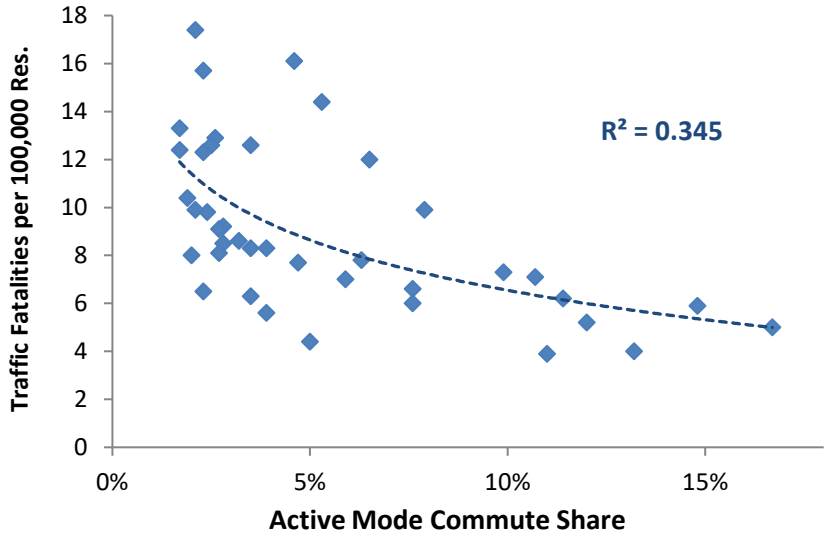
Figure 11 **Traffic Deaths Versus Non-Auto Travel Mode Shares** (ABW 2024)



As non-auto (walking, bicycling and public transit) commuting increases in a community, traffic fatality rates decline. Cities with more than 15% non-auto commute mode shares average just 6 deaths per 100,000 residents, less than half the 13 deaths per 100,000 residents in cities with less than 5% non-auto shares.

Most transit trips include active mode (walking, bicycling and variants) links such as walking and bicycling to stops and stations, and walking at destinations. Although these modes have high casualty rates per mile, numerous studies find that total crash casualties tend to decline as active travel increases in an area, an effect called *safety in numbers* (NACTO 2016; Truong and Currie 2019). U.S. urban regions with active mode shares over 10% average about half the per capita traffic fatality rates as those with active mode shares under 5%, as illustrated in the following graph. Comprehensive analysis by Marshall and Ferenchak (2024) found that total traffic fatality rates in U.S. cities decline with increased bicycling mode shares.

Figure 12 **Traffic Deaths Versus Active Commute Mode Share** (Census and CDC Data)



Total per capita traffic death rates tend to decline as active (walking and cycling) commute mode shares increase in U.S. urban regions.

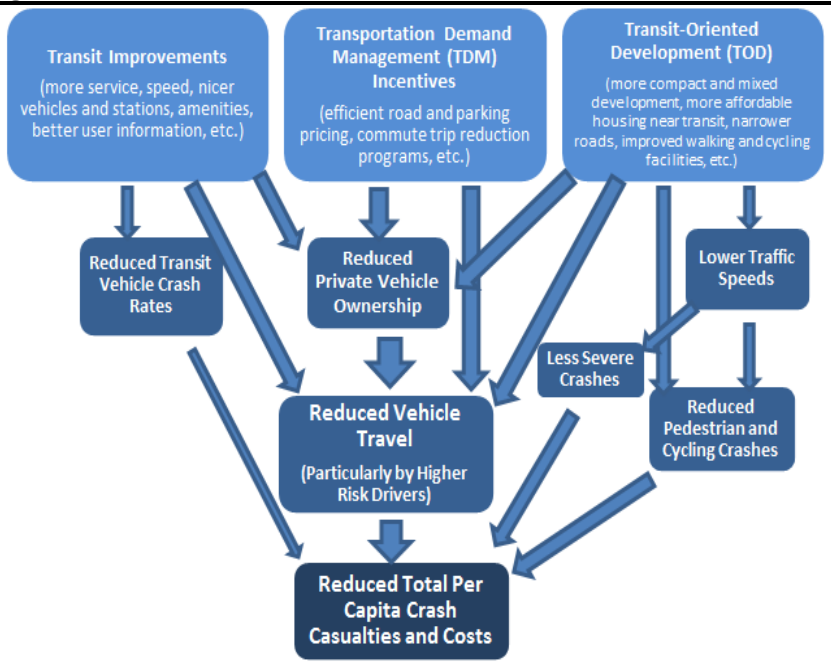
This and other research indicate that more active travel tends to increase overall traffic safety.

Several factors help explain the large safety gains associated with more non-auto travel:

- *Reduced total travel.* When people shift from driving to non-auto modes they tend to travel less which reduces risk exposure (Sabouri, Ewing and Kalantari 2024). For example, pedestrians and bicyclists shop in their neighborhoods rather than driving to regional shopping centers, and downtown transit commuters often run errands near their worksite rather than making special trips.
- *Reduced chauffeuring trips*. Inadequate transit services cause non-drivers to rely on chauffeuring by family members and friends who drive, or taxis, which increases total vehicle travel due to empty backhauls, so transporting a passenger 10 miles generates 20 vehicle-miles.
- *Safer travel conditions.* Both active and public transit tend to increase with safer facilities such as improved sidewalks, crosswalks, bicycling facilities and traffic speed reductions.
- *Complementary factors.* Many factors that encourage walking and bicycling, such as connected streets, higher parking and fuel prices, and compact development, also tend to increase traffic safety.
- *Reduced high-risk driving.* Improving non-auto modes allows young, old, impaired and distracted travellers to reduce driving, increasing the effectiveness of safety strategies such as graduated licenses, senior driver testing, and anti-impaired driving campaigns (Greenwood and Wattal 2015; Jackson and Owens 2011).
- *Reduced risk to other road users.* Pedestrians and bicyclists impose less risk on other road users.
- *More effective traffic safety strategies* such as graduated licenses, senior driver testing, and anti-impaired driving campaigns, and stricter traffic law enforcement by giving youths, seniors, drinkers and travellers with revoked driving privileges convenient and safe alternatives to driving (Lichtman-Sadot 2019).
- *Increased driver caution.* As active travel increases in an area, drivers tend to be more aware and cautious.
- *Stronger traffic enforcement*. In automobile dependent communities, courts are less likely to restrict licensure and confiscate vehicles of high-risk drivers (Wilson 2022 and 2023).
- *New users may be more cautious than current users.* Walkers and bicyclists who observe traffic rules and use protective gear (such as helmets and lights) can have lower than average casualty rates.

The figure below shows various ways that transit improvements can increase safety.

Figure 13 **Transit Improvements, Incentives and TOD Safety Impacts** (Litman 2014)



Public transit service improvements, transportation demand management (TDM) incentives, and transit-oriented development tend to increase safety in several ways. They reduce traffic speeds, reduce per capita vehicle travel, and are often particularly effective at reducing higher risk (youth, senior and impaired) driving.

Many of these effects are synergistic: they become more effective if implemented together. For example, public transit improvements attract more passengers and reduce more driving if implemented with TDM incentives such as efficient road and parking pricing, and with development policies that create transit-oriented neighborhoods. Similarly, traffic safety strategies such as graduated driver's licenses, senior driver testing, and campaigns against impaired and distracted driving become more effective and socially acceptable if implemented in conjunction with transit service improvements and transit-oriented development so youths, seniors and drinkers have viable ways to get around without driving.

These interactive relationships help explain why relatively small increases in non-auto mode shares can provide large crash reductions: high quality transit provides a catalyst for transportation and land use changes that together create safer communities. It also explains why conventional traffic safety strategies are less effective in auto-dependent areas. For example, anti-impaired driving campaigns are likely to fail in automobile-dependent, sprawled areas where it is difficult and expensive to travel home form social events by non-auto modes.

Transit improvements can also increase safety in rural areas. As previously described, rural areas have high traffic fatality rates, due in part to a lack of travel options, increasing higher-risk driving. For example, rural seniors must sometimes drive in conditions they prefer to avoid, at night, in bad weather and on busy highways, and people drive when impaired by illness, alcohol or drugs, or tired. Inadequate travel options also increases chauffeuring. For example, lacking interregional transit services, parents often drive hundreds of miles to pick up and return students during college breaks, and motorists require chauffeuring to pick up a vehicle that was purchased or repaired in another city. The empty backhauls double vehicle-miles, so transporting a passenger 100 miles generates 200 vehicle-miles. In the past, rail and bus services connected most cities and towns, but they have collapsed on most routes. Transit improvements should be recognized as traffic safety strategies.

Transit Crime Risk

Crime risk comparisons are challenging because different modes involve different crime types as indicated in the following table. For example, transit passengers face personal assaults and theft, while motorists face road rage, vehicle assaults, vehicle theft and vandalism, and both face comparable risks when walking to and from transit stops or parked vehicles. Most statistics only consider some of these risks, making comparisons difficult.

Table 2 **Transit and Automobile Crime Categories**

Transit	Automobile
• Passenger and employee assaults on transit properties. • Assaults on passengers when accessing stations and stops. • Crimes by transit passengers. • Thefts against passengers, employees and agencies. • Transit agency property vandalism. • Fare evasion.	• Road rage and vehicular assault (intentional harm by drivers). • Assaults when vehicles stop (in parking lots). • Assaults in parking lots. • Thefts of and from vehicles. • Vehicle, road and parking facility vandalism

Transit and automobile travel involve different types of crime risks.

The table below summarizes the number of crimes reported on transit properties (in vehicles, at stations, bus stops and park-and-ride lots) between 2015 and 2023 (USDOT 2024). For comparison, in 2023, 118 motorists were killed and 365 were seriously wounded by guns in road rage incidents, which is many times higher than gun deaths and injuries committed by strangers to transit passengers (Burd-Sharps, Tetens and Fingar 2024).

Table 3 **Transit Crime Reports** (BTS 2024)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average
Homicide	8	22	19	10	18	31	24	50	34	**26**
Rape	7	9	10	12	16	13	5	17	8	**11**
Robbery	108	120	129	155	211	90	111	101	101	**125**
Assault	907	907	1015	1,222	1,560	1,036	1,257	1,770	2,181	**1,405**
Theft	5	4	5	2	8	0	6	9	18	**7**
Vandalism	3	7	8	2	3	3	5	12	5	**6**

Only a small number of serious crimes (murder, rape, robbery and assault) occur on transit properties.

The table below summarizes total comparable crimes.

Table 4 **Total Crimes** (FBI, 2025)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average
Homicide	15,880	17,410	17,290	16,370	16,670	21,570	23,060	22,240	19,800	**18,921**
Rape	119,604	126,395	135,798	143,791	141,996	129,262	112,028	136,354	128,032	**130,362**
Robbery	321,517	328,677	312,653	280,424	262,808	235,931	138,333	221,662	218,702	**257,856**
Assault	1,070,561	1,117,834	1,107,793	1,077,661	1,054,014	1,120,231	799,848	1,105,850	1,085,536	**1,059,925**
Property crime	7,823,780	7,795,949	7,525,626	7,103,920	6,717,891	6,231,850	4,551,120	6,359,580	6,270,553	**6,708,919**
Vehicle theft	698,387	756,353	758,233	742,446	702,638	786,341	619,894	924,537	1,050,287	**782,124**

Most serious crimes (murder, rape, robbery and assault) do not occur on transit properties.

Only a tiny portion of total crimes occur on transit properties, as shown in the following table. About one in a thousand murders and one in ten thousand reported rapes take place in transit stations or vehicles, and many of these would occur regardless of location. For example, only 7 annual thefts and 6 vandalism incidents occur on transit properties compared with 6.7 million total property crimes and 782,124 vehicle

thefts. In addition to being more frequent, automobile crimes tend to be more costly. A typical transit theft involves a telephone, wallet or briefcase worth a few hundred dollars, while typical vehicle theft or vandalism costs thousands of dollars to replace or repair. Of course, many crimes are unreported but there is no obvious reason to expect lower reporting rates for transit crimes than for automobile crimes.

Table 5 **Transit Percent of Total Crimes**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average
Homicide	0.050%	0.126%	0.110%	0.061%	0.108%	0.144%	0.104%	0.225%	0.172%	**0.12%**
Rape	0.006%	0.007%	0.007%	0.008%	0.011%	0.010%	0.004%	0.012%	0.006%	**0.01%**
Robbery	0.034%	0.037%	0.041%	0.055%	0.080%	0.038%	0.080%	0.046%	0.046%	**0.05%**
Assault	0.085%	0.081%	0.092%	0.113%	0.148%	0.092%	0.157%	0.160%	0.201%	**0.13%**
Property crime	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	**0.00%**
Vehicle theft	0.000%	0.001%	0.001%	0.000%	0.000%	0.000%	0.001%	0.001%	0.000%	**0.00%**

Only a tiny portion of serious crimes (murder, rape, robbery and assault) occur on transit properties.

Despite low crime rates many people fear transit and are reluctant to use it or support its expansion in their community (Ferrell, Mathur and Mendoza 2008; Kennedy 2008). Several factors may contribute to this. Crime, particularly violent crime, tends to invoke intense fear. Transit travel requires passengers to give up control and to be confined with strangers in sometimes crowded and uncomfortable vehicles and stations; and although most passengers are responsible, considerate and clean, a few may be anti-social, rude and dirty (Ringerud 2014). These cause feelings of powerlessness, discomfort and insecurity. Exaggerated media coverage also increases transit fear. Because transit accidents and assaults are infrequent, they tend to receive excessive attention: a transit crash or assault often receives national and international media coverage while fatal vehicle crashes are so common they are only reported locally (Martin 2011).

Residents sometimes oppose new transit services in their neighborhood due to fears that improving low-income people's access will increase crime rates (Zaleski 2023) but before-and-after studies indicate that new transit services do not generally increase crime rates (Blum 2012; Tay, et al. 2013). Transit improvements may attract more people and businesses which may increase total crimes in a local area but per capita, per trip and total regional crime tend to decline (Billings, Leland and Swindell 2011).

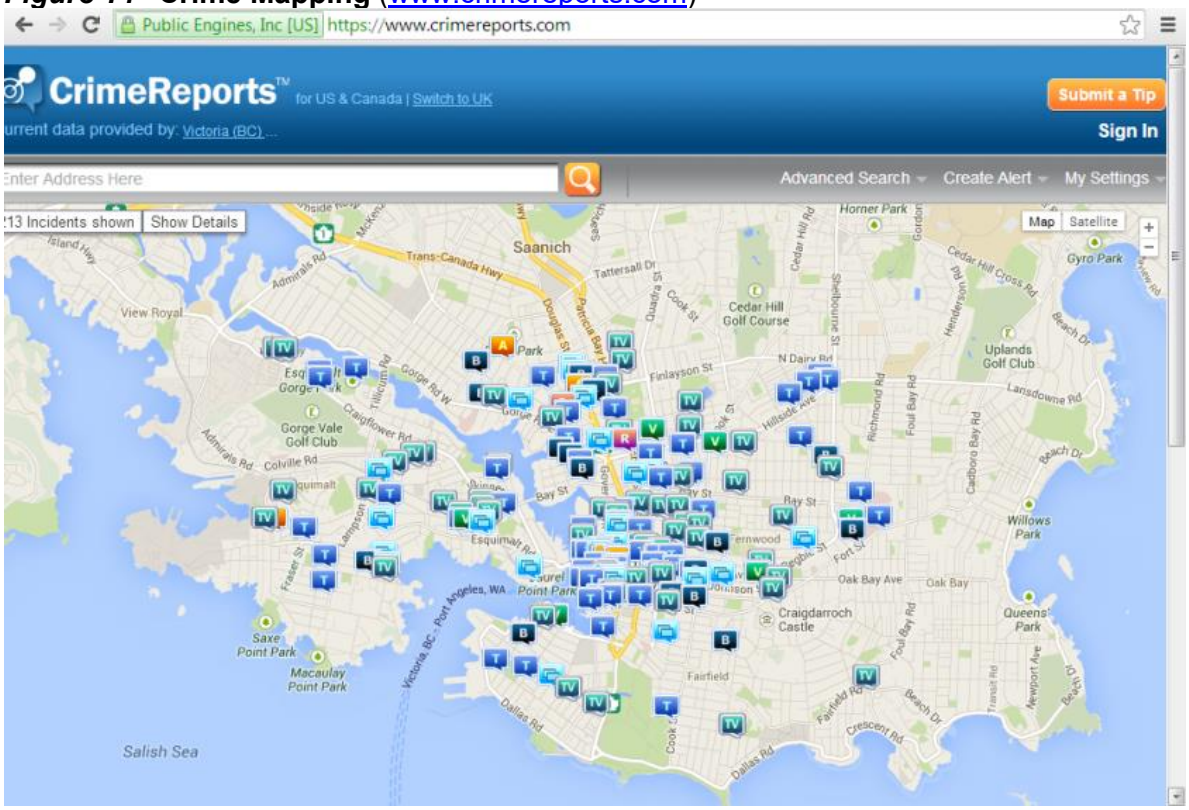
Although transit terrorism is a concern, the risk is small (Litman 2005; Wilson and Thomson 2005). Even including large events such as the 2004 Madrid rail bombing which killed nearly two hundred people and the 2005 London subway attack which killed about fifty people, traffic crashes cause hundreds of times more deaths. Because traffic risk is much greater than terrorism risk, total deaths can increase if fear causes shifts from public transport to driving. For example, during the three months after the September 11 attacks, shifts from air to automobile travel caused hundreds of additional traffic fatalities (Gigerenzer 2004; Sivak and Flannagan 2004). Had these trends continued, the additional traffic deaths would have exceeded the terrorist attack deaths. Similarly, there is evidence that the 2005 London subway attack caused mode shifts that increased total traffic deaths (Ayton, Murray and Hampton 2009).

This indicates that public transit travel has low overall crime risk due to passive surveillance by employees and fellow passengers, and pro-transit policies can further reduce crime. Transit passengers face the greatest crime risk when walking or waiting in isolated areas (Kennedy 2008), although even these risks are comparable to those faced by motorists walking to parked vehicles.

Urban Crime Risks

Transit travel and some types of crime tend to increase with urban density. Simplistic analysis can lead to false conclusions concerning urban crime risks. For example, crime maps such as the one illustrated below show crime concentrated in city centers implying that urban environments increase crime, but this is not really what the data indicate. Dense, mixed urban areas have more of everything, good and bad: more people, businesses, wealth, poverty, social services, productivity, tragedy, generosity and crime, and some types of crime are associated with urban land uses such as banks and bars. The number of crimes reported in city centers does not really indicate that denser development increases total criminal behavior or an average person's risk of being a crime victim.

Figure 14 **Crime Mapping** (www.crimereports.com)

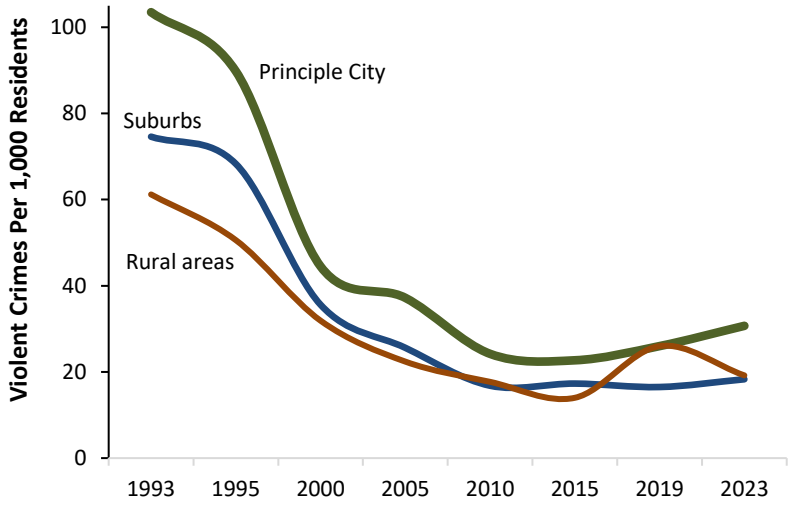


Maps such as this show crimes concentrated in city centers. This does not really mean that individual's risk of being a crime victim increase by living in a city or travelling by public transit.

Fear can cause households to move from cities to suburbs, and for residents to oppose affordable housing and public transit based on inaccurate assumptions that density and lower-income households increase crime. Such solutions fail to address the root causes of social problems; on the contrary, they can increase total crime by concentrating poverty, increasing isolation, reducing passive surveillance (non-criminal residents, workers and pedestrians), and increasing police response times.

Many people have outdated, exaggerated ideas about urban crime. During the last two decades, U.S. crime rates declined significantly, as illustrated below. This occurred for virtually all crime types in virtually all size communities, but the declines were particularly large in major cities, greatly reducing the large differences between urban, suburban and rural areas.

Figure 15 **U.S. Crime Trends by Location** (NCVS Dashboard 2025)

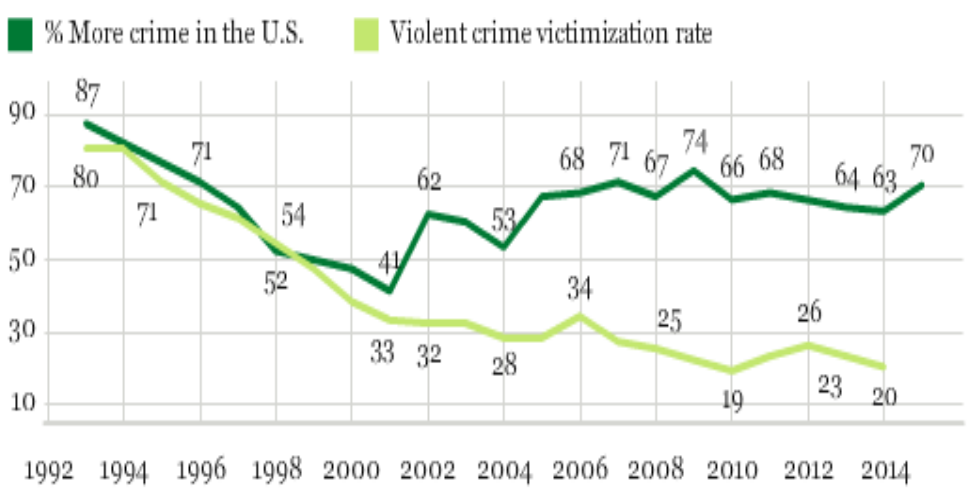


Violent crime rates declined significantly during the last three decades, particularly in large cities, which has nearly eliminated what was previously a large disparity in crime rates between cities, suburbs and rural areas. Similar declines occurred with property crimes.

Most people are unaware of these trends, resulting in excessive fear of urban crime risk.

However, people tend to exaggerate crime risk (TOA 2014). Public opinion accurately tracked crime rates as they declined in the 1990s, but although crime continued to decline, fear of crime increased after the 2001 terrorist attacks, as illustrated below. Most Americans have exaggerated fear of crime.

Figure 16 **Actual Verses Perceived Crime Risk** (Gallup 2015)



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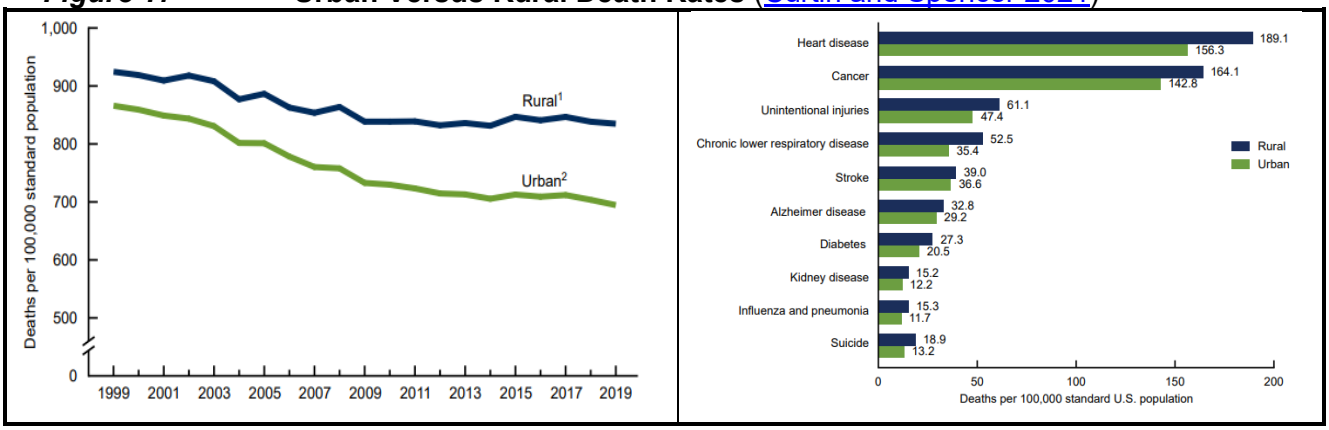
Although violent crime rates declined from 80 per 1,000 residents in 1992 down to 20 in 2014, crime perception increased between 2000 and 2014.

Although cities have slightly higher homicide rates than suburbs and rural areas, urban residents have significantly lower total death rates and much longer life expectancies due to lower rates of disease, suicide and unintentional accidents, particularly automobile crashes, as illustrated below.

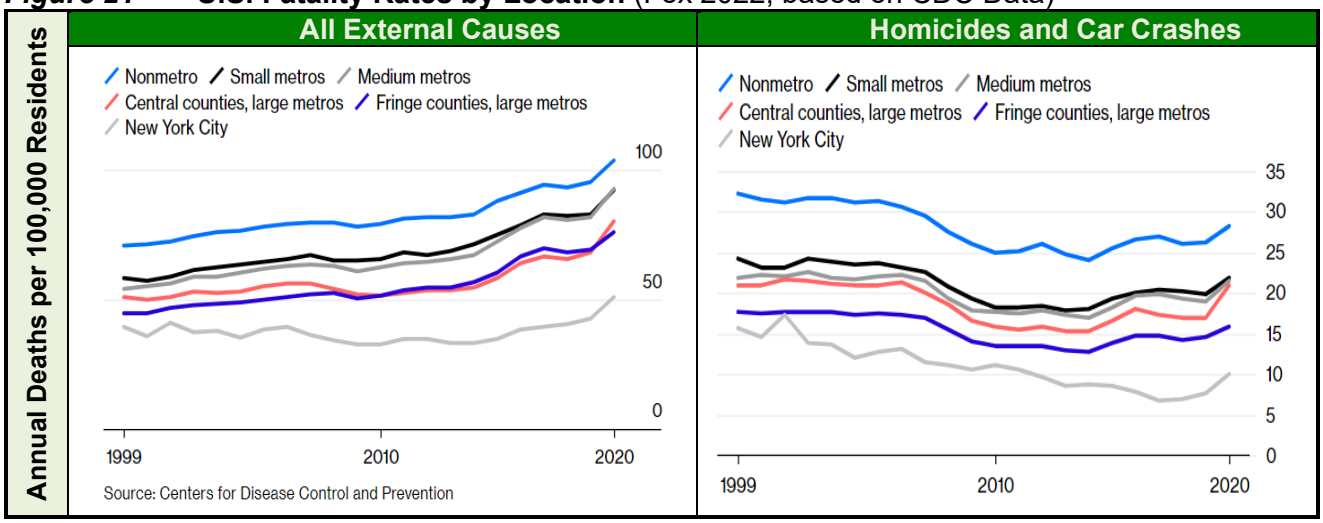
Figure 17 **Urban Versus Rural Death Rates** (Curtin and Spencer 2021)



Rural residents have much higher death rates and shorter lifespans than urban areas (left graph) due to higher rates of diseases, suicides and unintentional injuries (right graph).

Overall, large metro regions tend to be safer than small and medium metros, which tend to be safer than non-metro (rural) areas, and New York City is by far the safest overall, as illustrated below.

Figure 21 **U.S. Fatality Rates by Location** (Fox 2022, based on CDC Data)



Fatality rates tend to decline with density and city size, and are particularly low in large cities such as New York.

Of course, cities, and therefore transit-oriented neighborhoods, often *feel* dangerous due in part to *social drift*, the tendency of poverty, mental illness, addiction and homelessness to concentrate in urban centers because they offer better non-auto access to social services, opportunities and shared community (Glaeser, Kahn and Rappaport 2008). Urban neighborhoods where these problems are concentrated may have higher crime rates.

High quality studies indicate that, all else being equal, crime rates tend to decline with urban density and walkability due to more *passive surveillance* (also called *eyes on the street*) as more residents and by-passers can see and report possible threats (Gilderbloom, Riggs and Meares 2015; Tang 2015). For example, after adjusting for socioeconomic factors such as age, employment status and income, Browning, et al. (2010) found that per

capita violent crime rates decline with density in Columbus, Ohio neighborhoods, particularly in the most disadvantaged areas. Christens and Speer (2005) also found that per capita violent crime rates decline with density in the Nashville, Tennessee region. Foster, et al. (2019) found a large and statistically significant negative relationship between a New Urbanist design and self-reported crime rates: accounting for neighborhood demographic factors, each 10% increase in their New Urban index, the odds of being a crime victim declined 40%, with particularly large reductions (51%) associated with improved neighborhood walkability. Using international data, Ahlfeldt and Pietrostefani (2017) found that crime rates increase with density in US cities, but decline with density in other OECD countries, perhaps reflecting the location of concentrated poverty.

Using high-resolution data to evaluate how land use factors affect street crime (robbery and assault) in Chicago, Twinam (2018) found that crime rates decline with population density, and although they increase near commercial land uses, particularly liquor stores and late-hour bars, dense mixed-use areas are safer than typical residential areas. Chang and Jacobson (2017) found that, all else being equal, Los Angeles neighborhood crime rates decline with walkability which increases "eyes upon the street" passive surveillance. Similarly, Humphrey, et al. (2019) found that crime rates decline near businesses such as cafes and convenience stores that are open more weekly hours.

Anderson, et al. (2013), analyzed how development changes affect crime rates in high-crime areas in Los Angeles. They found that mixed commercial- and residential-zoned areas are associated with lower crime than commercial-only areas, and neighborhoods where zoning changes increased residential development in previously commercial-only blocks experienced significant crime declines, suggesting that mixing residential and commercial development tends to reduce crime rates. Overall, these studies indicate that increasing the number of residents, businesses and pedestrians in an area tends to reduce crime risk.

Health Impacts

Public transit can affect public health in several ways:

- Most transit trips include active travel (walking and bicycling) links, and transit oriented communities are very walkable, so public transit travel tends to increase physical fitness and health. Travellers who rely on transit are more likely to achieve physical activity targets than motorists (Lachapelle, et al. 2011).
- As previously described, urban residents tend to be healthier overall, have lower mortality rates and longer life expectancy than in suburbs and rural areas apparently due to more physical activity, healthier lifestyles, lower accident rates and better healthcare access (Ewing and Hamidi 2014).
- Public transit increases affordability, economic opportunity and healthcare access, particularly for people with disabilities and low incomes, reducing economic and health disparities between advantaged and disadvantaged groups (Litman 2024).
- Public transit can be a disease vector but not necessarily more than driving. For example, during the Covid pandemic, neighborhood infection rates tended to decline with transit mode share and increased with automobile mode share, apparently because motorists visited more destinations and took fewer precautions (Joselow 2020).

This evidence indicates that high quality public transit can provide significant overall health benefits.

Transit Security Messages

Transit agencies sometimes unintentionally reinforce transit fears by communicating messages that emphasize dangers without counterbalancing messages about transit's overall safety. A review of twenty typical transit agency websites, summarized below, found that most emphasize uncommon risks such as terrorism and theft, and some offer safety advice, but few mention the overall safety of transit travel.

Table 6 **Summary of Transit Agency Websites' Safety and Security Messages**

Agency, City, Website	Safety and Security Messages
Champaign-Urbana Mass Transit District, Champaign-Urbana, IL (www.cumtd.com)	"Safety and Security" page describes what the agency is doing to maximize rider security and safety.
Chattanooga Area Regional Transportation Authority, Chattanooga, TN (www.carta-bus.org)	No mention of safety or security.
Chicago Transit Auth., (www.transitchicago.com)	Includes a "Safety and Security" page, and a "Security Tips" brochure.
Greater New Haven Transit District, New Haven, CT (www.gnhtd.org)	Emphasizes that operators receive special safety training. No other discussion of safety or security.
Intercity Transit, Olympia, WA (www.intercitytransit.com)	Lists various benefits of transit, but not traffic safety. Has no specific safety or security messages.
Long Beach Transit, CA (www.lbtransit.com)	"Safety and Security" page describes the Agency's security programs.
Maryland Transit Administration, Baltimore (www.mta.maryland.gov)	"MTA Police Force" page describes policing programs. "Safety, Quality Assurance, Risk Management" page describes some safety programs.
Massachusetts Bay Transportation Authority, Boston, MA (www.mbta.com)	"Safety" page describes ways to increase user safety (mostly personal security). "Transit Police" page describes security programs and recent crimes.
Metro Transit, Minneapolis, MN (www.metrotransit.org)	Includes "Safety and Security" page which describes safety and policing programs and offers safety tips.
METRO, Oklahoma City, OK (www.gometro.org)	"Transit Benefits" page mentions "enhances safety" as a community benefit. "Safety and Security" page provides safety and security tips.
Metropolitan Atlanta Rapid Transit Authority, Atlanta, GA (www.itsmarta.com)	"Safety on MARTA" page offers safety and security tips, and a "MARTA Police" page which describes the agency's policing services.
Metropolitan Transit Authority of Harris County, Houston, TX (www.ridemetro.org)	"Safety and Security" page describes ways to increase personal safety and security. States that "In today's world, protecting one's personal safety has never been more important."
Metropolitan Transportation Authority, New York, NY (http://new.mta.info)	"Customer Safety" page offers safety tips. "MTA Police" page describes police services. "Performance Indicators" page reports accident rates.
Miami-Dade Transit, Miami, FL (www.miamidade.gov)	"Passenger Safety" page provides safety tips. A "Transit Watch" page encourages passengers to report suspicious and illegal activity.
Pierce Transit, WA (www.piercetransit.org)	"Safety and Security" page emphasizes responsible rider behavior.
Southeastern Pennsylvania Transportation Authority, Philadelphia (www.septa.org)	"Safety and Security" page emphasizes anti-terrorism programs, describes policing activities, and offers various safety and security tips.
Suburban Mobility Authority for Regional Transportation, Detroit, MI (www.smartbus.org)	"Safety and Security" page provides basic safety advice. Emphasizes operators' safety training and the system's low accident rates.
Toronto Transit Commission, Toronto, ON (www.itsmarta.com)	"Safety and Security" page offers information and guidance on public transit safety and security.
TransLink, Vancouver, BC (www.translink.ca)	"Sustainability" page highlights environmental benefits but not safety. "Safety and Security" page describes the agency's safety and security programs.
Utah Transit Authority, Salt Lake City, UT (www.rideuta.com)	States, "You are 25 times less likely to die in a traffic accident when you ride public transit versus travel in a personal vehicle." "Safety and Security" page offers safety tips.

Transit agency websites seldom provide positive information about the relative safety of public transit travel.

Since transit crime risks tend to decline with more non-criminal ridership and improved community integration, transit agencies and local governments can increase safety and security by implementing the following strategies (Loukaitou-Sideris 2009).

Table 7 **How Transit and Transit-Oriented Development Can Reduce Crime**

Crime Risk Factor	Transit and Transit-Oriented Development Impacts
Reduced poverty concentration and increased economic opportunity	More mixed development can reduce poverty concentration and increase economic opportunities for at-risk residents, particularly non-drivers.
Passive surveillance and community cohesion	More businesses, residents and by-passers provide surveillance and help build local social networks (neighbors who know and care about each other).
Policing efficiency and response.	Compact development allows more specialized policing and faster response.
Transit security	Increased ridership makes transit policing more efficient (lower costs per passenger) and builds public support, leading to expanded programs.
Motor vehicle ownership	Reduced vehicle ownership reduces vehicle crimes (vehicle assaults, thefts and vandalism), which are more common and costly than transit crimes.

Improving public transit services and transit-oriented development (TOD) can increase security in several ways. These tend to reduce total per capita crime rates rather than simply shifting where crimes occur.

A New Safety Narrative

Transportation professionals and organizations can do more to convey the overall safety, security and health benefits of public transit to current transit passengers, potential passengers, local residents and businesses, and public officials. This new safety narrative can be incorporated into all types of communication, including planning, community engagement, performance evaluations, newsletters, websites, media contacts, marketing and employee training.

The new narrative provides accurate and comprehensive information on transit safety, security and health impacts. It should not understate risks or blame victims by implying that they should have been more cautious; safety and security should be recognized as a serious concern that can be addressed through cooperation between transit agencies, passengers and communities. The new narrative corrects common misperceptions about transit risks. It answers common questions such as:

- Is public transit dangerous?
- What are the greatest risks associated with transit?
- Does expanding transit service (such as a new line or station in a neighborhood) increase local crime?
- How can individuals and communities minimize transit risks?
- What are accurate information sources on transit risks and safety strategies?
- How can people and businesses report transit safety and security concerns?

Transit agencies should carefully assess safety and security messages to ensure they are overall positive and convey a sense of partnership. Although rational arguments alone may not change everybody's feelings about public transit, appropriate safety and security information should be part of marketing programs that help reposition transit as an efficient, safe, attractive, enjoyable and prestigious form of travel that can enhance people's lifestyle and community.

Below are examples of ways to apply the new transit safety narrative.

Policy and Planning Evaluation

Common transportation policy, planning and investment decisions can incorporate better analysis of safety and security impacts. For example, evaluations of transit service improvements, encouragement incentives or transit-oriented developments should describe and if possible quantify safety and security benefits.

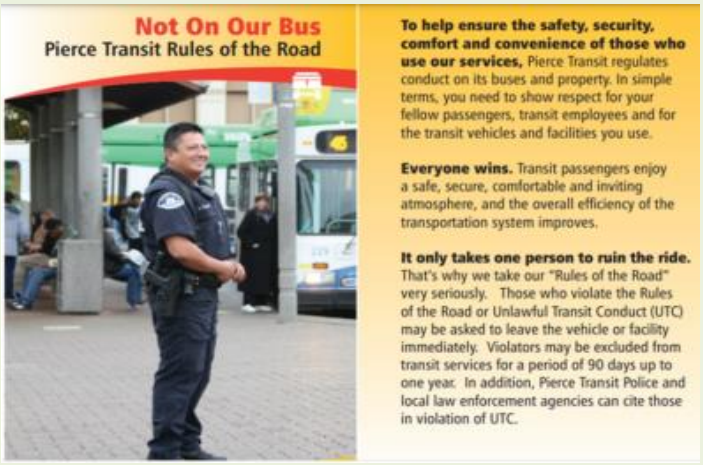
Programs that increase transit safety and security can help achieve strategic objectives such as reduced traffic and parking congestion, consumer savings and affordability, and emission reductions. For example, when evaluating possible solutions to traffic congestion and parking problems highlight the additional safety and health benefits provided by public transit. Evaluations of new transit routes, bus lanes or transit-oriented development should include estimates of their vehicle travel and resulting crash reductions. Many colleges and universities have Upass programs (bulk transit pass purchases for all students) and some employers offer transit benefits to reduce traffic and parking problems; their economic analysis should also consider their safety and security benefits.

Improved Perceived Safety and Security

This study indicates that when it comes to public transit safety and security, perception is reality. If people fear transit, ridership and public support decline, making it less safe and beneficial. For a transportation system to be efficient and equitable, transit travel must feel safe and secure so non-drivers can travel independently and urban travellers can reduce driving.

This requires addressing perceived risks at every step of a transit trip, when obtaining information, walking and bicycling to and from transit, waiting at stops and stations, and riding in vehicles. Since transit travel feels safer with more passengers, ridership incentives are a security strategy. Similarly, transit travel feels safer if it is better integrated into neighborhoods, for example, if transit stops and stations are located in activity centers with active storefronts, homes and pedestrian traffic. Money that would otherwise be spent to expand urban roadways and subsidize parking can be better spent improving transit security, encouraging transit travel and creating transit-oriented developments.

Transit agencies should maintain high levels of maintenance and cleanliness, and address encroachment on transit properties. They should define, encourage and enforce social norms that make public transit feel more comfortable and secure, for example, discouraging passengers putting feet on seats, panhandling, loud music, smoking cigarettes or illegal drug use (Brozen 2023; Ferrell, Mathur and Appleyard 2015; MM 2025). Some agencies simply post a list of laws and penalties; a more effective approach is to explain why and how transit passengers can be considerate to others, as illustrated to the right.



*This poster describes why transit passengers should be considerate and responsible. It personalizes the message with an image of a friendly operator. (**APTA Code of***

Public Communications

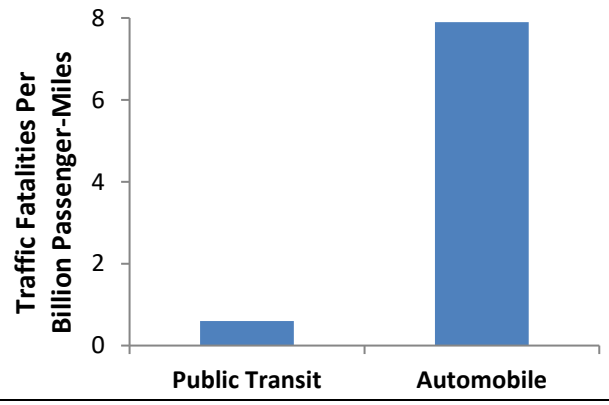
Virtually all transit-related communications can incorporate safety and security information. These messages should use appropriate perspectives and wording for various audiences.

- Transit passengers and potential passengers, neighborhood residents and businesses want realistic assessments of the risks they face and ways to reduce them. They want assurances that transit agencies are their partner and advocate for improving community safety, security and health. They want to know how to contact transit agencies and local officials if they have a concern or encounter a problem.
- The general public wants accurate information on the overall transit safety and security and evidence that transportation agencies are responsive to users and residents' concerns about these issues. Define codes of conduct, and provide practical guidance for how passengers should respond when they see harassment, vandalism, panhandling, drug use or smoking or other obnoxious behavior.
- Give public officials reliable evidence that public transit improvements and transit-oriented development can provide safety, security and health benefits, or at least not exacerbate such problems.
- Be prepared to respond to crash or crime incidents. Officials should acknowledge the tragedy and provide victim and community support, but put incidents into perspective by highlighting transit's overall safety and security. Give front-line workers this information to share.

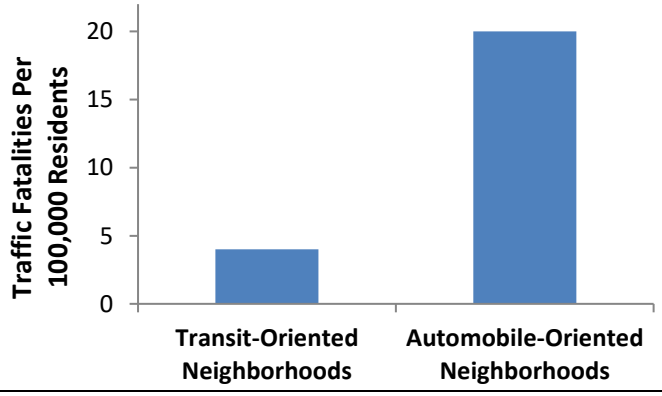
The following text box summarizes key messages which can be communicated frequently and illustrated with figure. This general information can be augmented with specific data from a particular agency or area. For example, transportation agencies can compare automobile and transit crash and crime rates and report trends in these impacts.

The new narrative presents easy to understand information on the relative safety of transit travel and transit-oriented development, such as the following graphs. If possible, this information should be tailored to specific communities and audiences, using local or regional data.

Figure 18 **Examples of Transit Safety Messages**



Public transit is the safest transport modes, with per-mile traffic injury and death rates less than a tenth of automobile travel.



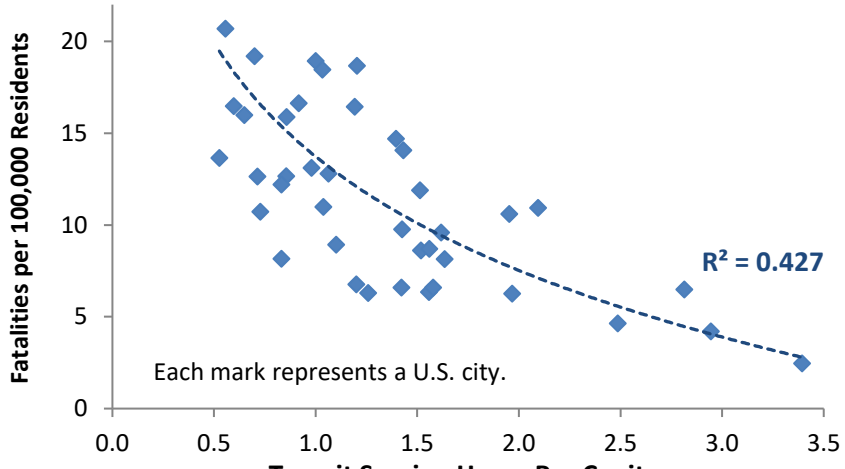
Total traffic injuries and deaths tend to decline in a community as transit travel increases. Residents of transit-oriented neighborhoods have about a fifth the per capita traffic fatality rate as in automobile-dependent areas.

Success Stories

This section describes evidence that public transit improvements can increase community safety.

The figure below shows a statistically strong negative relationship between transit service and traffic fatality rates for 41 U.S. cities, indicating that cities become safer as transit service improves.

Figure 19 **Traffic Fatalities Versus Transit Service** (APTA 2020 and NHTSA 2022)



Total per capita traffic fatality rates tend to decline as transit service (rail and bus operating hours per capita) increases. The 0.427 R^2 value indicates a strong relationship.

This and other research indicate that cities tend to become safer as transit service improves.

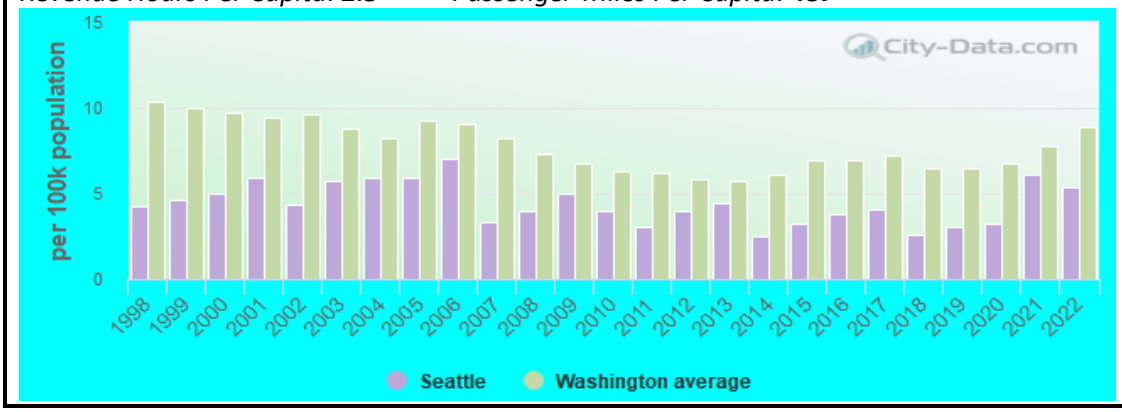
Below are descriptions of cities with high transit service, high ridership and low traffic fatality rates.

Seattle, Washington

Seattle is an attractive, economically successful city and geographically constrained city. To reduce traffic problems, in 1991 Washington State established a commute trip reduction law that requires urban governments and large employers to encourage non-auto travel. The region and city have made strategic investments in active and public transport which have proven successful (Peterson 2017). Between 2010 and 2020 Seattle gained more than 150,000 residents and 160,000 jobs but vehicle trips declined more than 5%, vehicle emissions decreased 4%, and downtown auto commute mode share declined from 35% to 26%. The city has very high 2.5 transit service hours and 487 passenger-miles per capita, and a very low traffic fatality rate.

Seattle Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***2.5*** *Passenger-Miles Per Capita:* ***487***



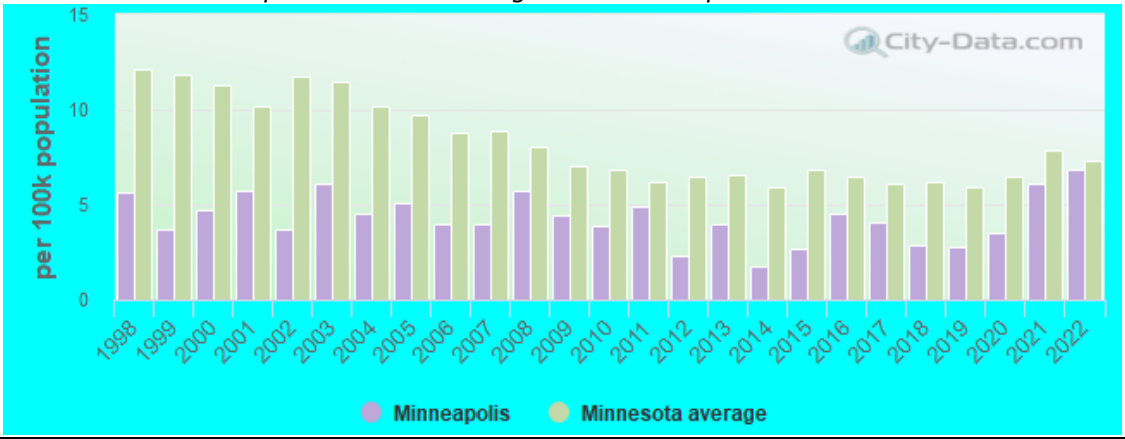
Seattle has very high transit service and ridership, and a low traffic fatality rate, although the death rate increased in 2021 and 2022 when the pandemic reduced transit ridership.

Minneapolis, Minnesota

Minneapolis and St. Paul are together a large city with a diversified economy. The city has a well-established public transit network. It has high 1.7 transit service hours and 181 passenger-miles per capita, and a low traffic fatality rate, although this increased in 2021 and 2022 when the Covid pandemic reduced transit ridership.

Minneapolis Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***1.7*** *Passenger-Miles Per Capita:* ***181***



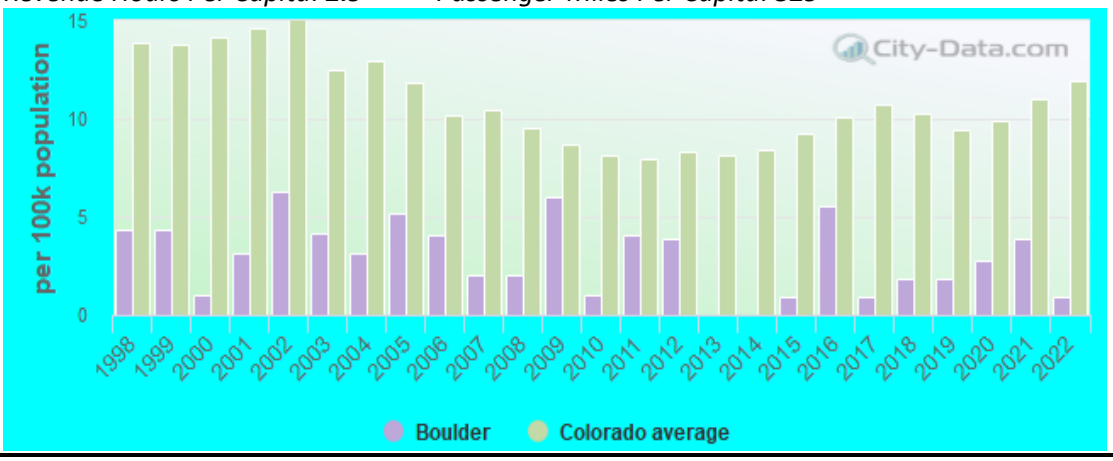
Minneapolis has high transit service and ridership, and a low traffic fatality rate, although this increased during 2021 and 2022 when transit ridership declined.

Boulder, Colorado

Boulder is a medium-size city with a major university. The city has made various investments to support active and public transport, resulting in non-auto modes serving about a third of all trips (Henao, et al. 2015). It has very high 2.9 transit service hours and 329 passenger-miles per capita, and a very low traffic fatality rate, achieving zero deaths some years.

Boulder Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***2.9*** *Passenger-Miles Per Capita:* ***329***



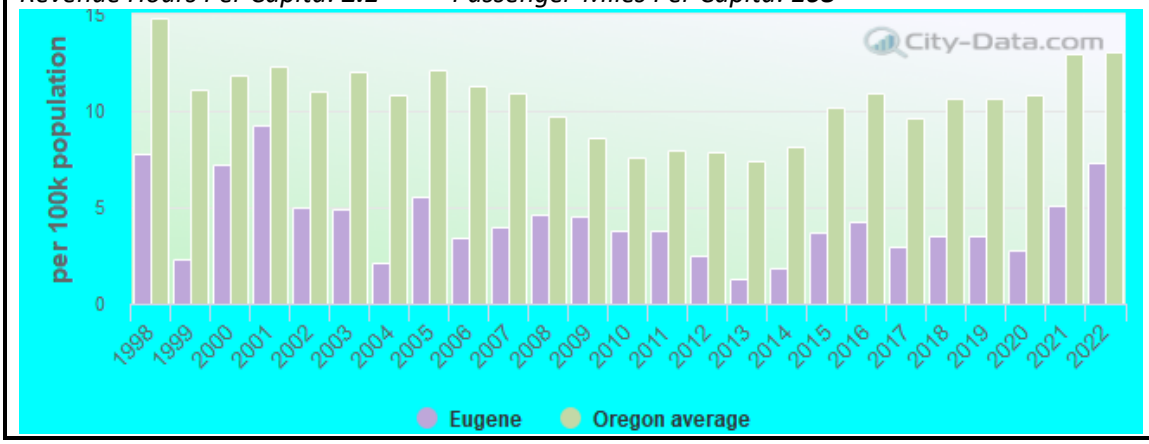
Boulder has very high transit service and ridership, and very low traffic fatality rate, achieving zero deaths some years.

Eugene, Oregon

Eugene is a medium-size city with a diverse economy including a major university. The city has made various investments to support active and public transport. It has high 2.1 transit service hours and 168 passenger-miles per capita, and a low traffic fatality rate, although this increased in 2021 and 2022 when transit ridership declined.

Eugene Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***2.1*** *Passenger-Miles Per Capita:* ***168***



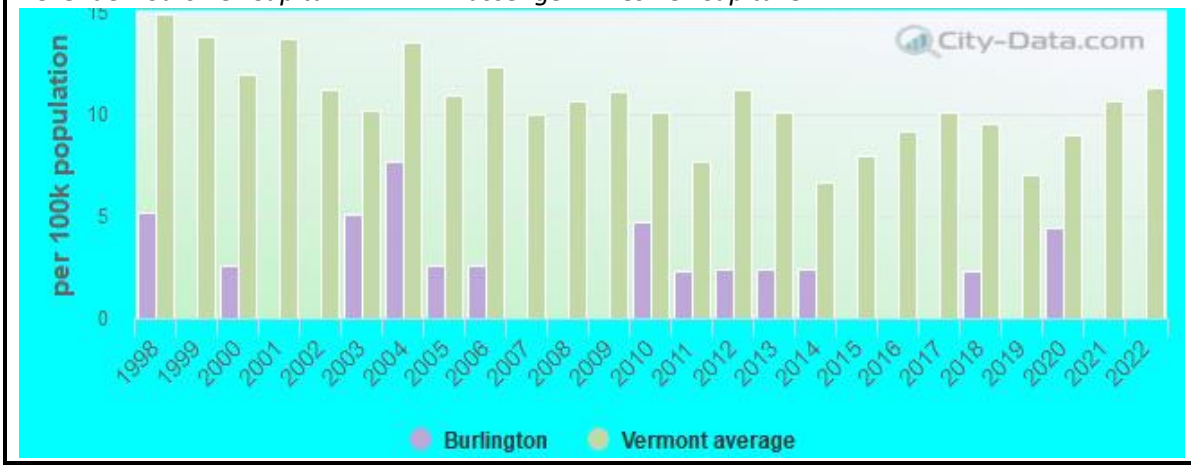
Eugene has high transit service and ridership, and low traffic fatality rate, achieving zero deaths some years.

Burlington, Vermont

Burlington is a small city. The city has made various investments to support active and public transport. It has moderate 1.2 transit service hours and 92 passenger-miles per capita, and a very low traffic fatality rate, often achieving zero deaths.

Burlington Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***1.2*** *Passenger-Miles Per Capita:* ***92***



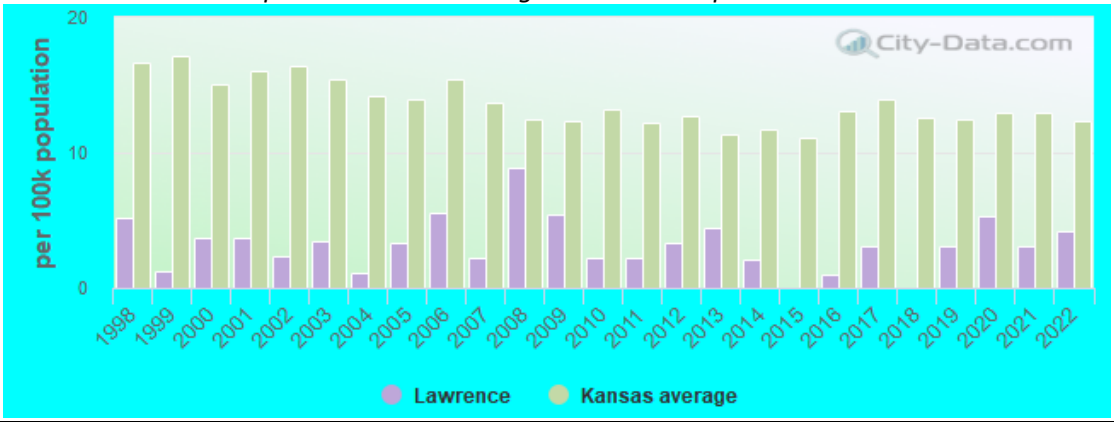
Burlington has moderate transit service and ridership, and very low traffic fatality rate, often achieving zero deaths.

Lawrance, Kansas

Lawrance is a small city with a medium-size university. It has high 1.8 transit service hours and 60 passenger-miles per capita, and a very low traffic fatality rate.

Lawrance Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***1.8*** *Passenger-Miles Per Capita:* ***60***



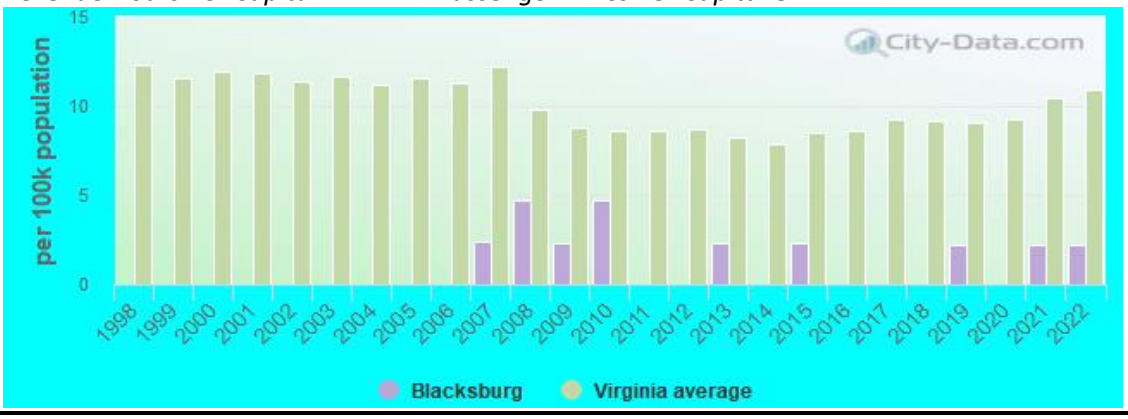
Lawrance has moderate transit service and ridership, and very low traffic fatality rate, sometimes achieving zero deaths.

Blacksburg, West Virginia

Blacksburg is a small city with a medium-size university. It has moderate 1.7 transit service hours and 82 passenger-miles per capita, and a very low traffic fatality rate, often achieving zero deaths.

Blacksburg Traffic Fatality Rates (City Data 2025)

Revenue Hours Per Capita: ***1.7*** *Passenger-Miles Per Capita: 82*



Blacksburg has moderate transit service and ridership, and very low traffic fatality rate, often achieving zero deaths.

This analysis indicates that North American cities *can* achieve very low traffic fatality rates, in part by improving public transit service and creating transit-oriented communities. There is a statistically strong relationship between transit service and safety; more frequent transit service appears to be a catalyst for various factors that increase safety including lower vehicle ownership, less driving, less high risk driving and more compact development. Although many of these cities have universities, that alone does not explain their success: other college towns with less transit service have much higher traffic fatality rates. Universities seem to create political support for transportation and land use policies that improve safety, security and health for everyone regardless of age, education or income.

Conclusions

Public transit travel is overall very safe (low crash rate) and secure (low crime rate). It has about a tenth the crash casualty rate as automobile travel, and transit-oriented neighborhoods have about a fifth the per capita traffic casualty rate as in auto-dependent areas. Transit crimes are much less frequent and costly than vehicle crimes, and crime risks decline as more non-criminals use transit. There is much that individuals and communities can do to increase transit safety and security.

Despite these facts, many people consider transit dangerous. This is understandable because many aspects of transit travel invoke fear: it requires passengers to share sometimes crowded and uncomfortable spaces with strangers, operates in sometimes chaotic urban areas, and its risks are highlight by news media and transit agency messages. The table below evaluates these factors and how to create a better narrative.

Table 8 **Actual Versus Perceived Transit Risks**

Type of Risk	Actual Risk	Perceived Risk	New Narrative
Transit passenger crash risk	Very low. Much lower than automobile travel.	Although infrequent, transit crashes receive heavy media coverage which increases fear.	Emphasize the overall safety of transit travel and ways to further increase this safety.
Crash risk while accessing transit	Active modes have higher risk per mile, but safety, security and health increase with their use.	Pedestrian and cyclist crash injuries tend to receive heavy media attention.	Acknowledge this risk, describe practical ways to reduce it, and emphasize health benefits.
Crash risk to other road users	Moderate. Risks to other road users decline as transit mode share increases.	Transit vehicle crashes receive heavy media coverage which exacerbates fear.	Communicate transit's relative safety to other road users and ways to improve it.
Overall community crash rates	Decline with increased transit mode share and very low in transit-oriented developments.	This impact is seldom considered in media coverage or planning analysis.	Communicate the safety of TOD, and quantify it for planning analysis.
Transit passenger crime risk	Transit travel generally has lower crime risk than driving, but risks may be higher in some locations.	Transit crimes often receive heavy media coverage leading to exaggerated fear of this risk.	Communicate the security of transit travel, and practical ways to reduce risks.
Crime risk while accessing transit	Variable. Usually low due to passive surveillance, but may be significant in isolated areas.	Perceived as very dangerous.	Communicate the relative security of transit, and practical ways to reduce risks.
Impacts on overall community crime	Transit crime is less frequent and costly than automobile crime and declines with more transit use.	Many people have excessive fear of large cities based on outdated information.	Communicate the security of transit-oriented development, and ways to increase it.
Terrorism risk	Low.	Transit agencies tend to emphasize this risk.	Communicate the low level of this risk.

There are many risks to consider in transit safety and security planning and communications.

This has important implications. The U.S. has extremely high traffic death rates. Peer countries have less than half the traffic fatality rates largely due to more compact and multimodal communities. High quality public transit and transit-oriented development be a catalyst for more safety and security, in addition to other community benefits.

Fear of accidents and crime, both real and exaggerated, deters people from using efficient travel options and accessible urban locations, which contributes to a cycle of automobile dependency, sprawl, concentrated poverty and urban crime. This is particularly unfair and harmful to people who cannot or should not drive and so is forced to use uncomfortable, unsafe and stigmatized modes. As a result, reducing these risks and their perception is one of the most cost-effective ways of increasing urban transport efficiency and equity.

Transportation planning often overlooks or undervalues this potential. Transit improvements are promoted to provide basic mobility and reduce traffic problems; their ability to increase safety and security are seldom quantified in economic analyses. This is particularly true for rural and long-distance transit improvements. Rural areas have particularly high crash casualty rates, in part because higher-risk drivers lack viable options. Frequent, integrated and affordable interregional transit service should be recognized as a highway safety strategy.

There is much that transportation agencies and practitioners can do to address these issues:

- Provide information that highlights the overall safety benefits of transit to individuals and communities, and practical ways to increase safety. Communicate these messages in various ways, reflecting the diverse perspectives and concerns of different audiences.
- Collect and distribute accurate, timely and positive information on transit safety including crash and crime data, and safety and security plans. Provide context when reporting risks, for example, by comparing the overall safety of transit compared with driving.
- Define, encourage and enforce social norms that make public transit feel more comfortable and secure.
- Create multi-dimensional safety and security programs that integrate local planning, infrastructure design, neighborhood policing and user information. Apply crime prevention through environmental design (CPTED), and build partnerships with local communities and police to implement these strategies.
- Integrate the new safety narrative into transportation demand management and smart growth development programs. Reducing exaggerated fear of transit can help achieve strategic planning objectives.
- Account for transportation safety and public security benefits when evaluating transit improvement and encouragement programs, and transit-oriented developments.
- Integrate safety information into overall marketing activities that identify and overcome common barriers to transit travel, and repositions public transit as a prestigious and enjoyable mode.

There is a positive story to tell. Contrary to common perceptions, public transit is overall extremely safe, and other traffic safety strategies become more successful if travellers have convenient alternatives to driving. Traffic safety programs should support transit improvements, and transportation planning should recognize the large safety and security benefits that high-quality transit can provide.

References

AAA (2009), *Aggressive Driving: Research Update*, American Automobile Association Foundation for Traffic Safety (www.aaafoundation.org); at https://bit.ly/2ZbwuKk.

Hamed Ahangari, Carol Atkinson-Palombo and Norman Garrick (2017), "Automobile Dependency as a Barrier to Vision Zero," *Acc. Analysis and Pre.*, Vo. 107, pp. 77-85 (doi.org/10.1016/j.aap.2017.07.012).

Gabriel Ahlfeldt and Elisabetta Pietrostefani (2017), *Demystifying Compact Urban Growth*, Coalition for Urban Transitions, New Climate Economy (newclimateeconomy.report); at https://bit.ly/2XbGliS.

James M. Anderson, et al. (2013), "Reducing Crime by Shaping the Built Environment with Zoning," University of Pennsylvania Law Review, Vo. 161, pp. 699-756; at https://bit.ly/2P4m67n.

APTA (2016), *Public Transit's Safety Benefits*, American Public Transportation Association (www.apta.com); at https://tinyurl.com/2mw9rna8.

Peter Ayton, Samantha Murray and James Hampton (2009), *Terrorism, Dread Risk, and Bicycle Accidents*, in "Casualty Toll Of The Dread Risk Effect," *Medical News Today* (https://bit.ly/2TMTXAt).

Stephen B. Billings, Suzanne Leland, and David Swindell (2011), "The Effects of the Announcement and Opening of Light Rail Transit Stations on Neighborhood Crime," *Journal Of Urban Affairs*, Volume 33, Issue 5, Pages 549–566, December 2011; summary at https://bit.ly/2NMcHQY.

Alex Blum (2012), "New MAX Line Might Not be the 'Crime Express'", *Portland Tribune* (www.portlandtribune.com), 1 August 2012; at https://bit.ly/2OPkB8t.

Christopher R. Browning, et al. (2010), "Commercial Density, Residential Concentration, and Crime," *Journal of Research in Crime and Delinquency*, Vol. 47, No. 3, pp. 329-357; at http://jrc.sagepub.com/content/47/3/329.short.

Joshua Broyles (2014), *Drinking and Driving and Public Transportation: A Test of the Routine Activity Framework*, Master's Thesis, Arizona State Uni. (www.asu.edu); at https://tinyurl.com/34cd9w4y.

Madeline Brozen (2023), "How Can L.A. Metro Make Train Service Safer? Look to What's Working on Buses," *Los Angeles Times* (www.latimes.com); at https://tinyurl.com/w4n8wn2b.

BTS (annual reports), *Security Events of Crime by Transit Mode*, Bureau of Transportation Statistics (bts.gov); at www.bts.gov/content/reports-violent-crime-property-crime-and-arrests-transit-mode.

Sarah Burd-Sharps, Paige Tetens and Kathryn R. Fingar (2024), Road Rage Shootings Remain Alarmingly High, *Every Town* (https://everytownresearch.org); at https://tinyurl.com/43nv6xf6.

CDC (2012), "Motor Vehicle Crash Deaths in Metropolitan Areas — United States, 2009," *Morbidity and Mortality Weekly Report*, Vol. 61/28, pp. 523-528, Center for Disease Control (www.cdc.gov/mmwr); at www.cdc.gov/mmwr/preview/mmwrhtml/mm6128a2.htm.

CDC Foundation (2020), *Public Health Action Guide: Public Transportation*, (www.cdcfoundation.org); at www.cdcfoundation.org/sites/default/files/files/HI5_TransportationGuide.pdf.

Tom Chang and Mireille Jacobson (2017), "Going to Pot? The Impact of Dispensary Closures on Crime," *Journal of Urban Economics*, Vo. 100, pp. 120-136 (doi.org/10.1016/j.jue.2017.04.001); at bit.ly/2R5kmsV.

Brian Christens and Paul W. Speer (2005), "Predicting Violent Crime Using Urban and Suburban Densities," *Behavior and Social Issues*, Vol. 14, pp. 113-127; at https://bit.ly/2mrYTe9.

Sally C. Curtin and Merianne Rose Spencer (2021), *Trends in Death Rates in Urban and Rural Areas*, National Center for Health Statistics, Brief No. 417; at www.cdc.gov/nchs/data/databriefs/db417.pdf.

CUTA (2010), *Transit Fact Book*, Canadian Urban Transit Association (www.cutaactu.ca).

Eric Dumbaugh and Robert Rae (2009), "Safe Urban Form," *Journal of the APA*, Vo. 75/3 (10.1080/01944360902950349); at http://actrees.org/files/Research/dumbaugh_urbanform.pdf.

Reid Ewing, Richard A. Schieber and Charles V. Zegeer (2003), "Urban Sprawl as a Risk Factor in Motor Vehicle Occupant and Pedestrian Fatalities," *Am. Jnl. of Pub. Hlth.* (www.ajph.org); at bit.ly/2yumNiu.

Reid Ewing and Eric Dumbaugh (2009), "The Built Environment and Traffic Safety: A Review," *Journal of Planning Literature*, Vol. 23/4 pp. 347-367 (doi.org/10.1177/0885412209335553).

Reid Ewing and Shima Hamidi (2014), *Measuring Urban Sprawl and Validating Sprawl Measures*, Smart Growth America (www.smartgrowthamerica.org).

Nicholas N. Ferenchak and Wesley E. Marshall (2024), Traffic Safety for All Road Users," *Journal of Cycling and Micromobility Research*, Vo. 2 (https://doi.org/10.1016/j.jcmr.2024.100010).

Nicholas N. Ferenchak and Brady A. Woods (2025), "Changes in Crash Types and Contributing Factors After Bus Rapid Transit (BRT) Infrastructure Installation in Albuquerque, New Mexico," *Multimodal Transportation*, Vo. 4/1 (https://doi.org/10.1016/j.multra.2025.100192).

Christopher Ferrell, Shishir Mathur and Emilia Mendoza (2008), *Neighborhood Crime and Travel Behavior*, Mineta Institute (www.transweb.sjsu.edu); at http://works.bepress.com/shishirmathur/12.

Christopher Ferrell, Shishir Mathur and Bruce Appleyard (2015), *Neighborhood Crime and Transit Station Access Mode Choice*, Mineta Institute (www.transweb.sjsu.edu); at https://bit.ly/2lsbOj9.

FHWA (2014), *Nonmotorized Transportation Pilot Program: Continued Progress in Developing Walking and Bicycling Networks*, Volpe Center, USDOT (www.fhwa.dot.gov); at https://bit.ly/1KakRWU.

Sarah Foster, et al. (2016), "Are Liveable Neighbourhoods Safer Neighbourhoods? Testing the Rhetoric on New Urbanism and Safety," *Social Sci. & Med.*, Vo. 164 (doi.org/10.1016/j.socscimed.2015.04.013).

Justin Fox (2022), "New York City is a Lot Safer Than Small-Town America," *Bloomberg* (www.bloomberg.com); at https://bloom.bg/3MuTZGN.

Chad Frederick, William Riggs and John Hans Gilderbloom (2017), "Commute Mode Diversity and Public Health," *International Journal of Sustainable Transport* (https://bit.ly/2UBrUWu).

G. Gigerenzer (2004), "Dread Risk, September 11, and Fatal Traffic Accidents," *Psychological Science*, Vol. 15, pp. 286 –287; at https://bit.ly/2kqPNRl.

John I. Gilderbloom, William W. Riggs and Wesley L. Meares (2015), "Does Walkability Matter? An Examination of Walkability's Impact on Housing Values, Foreclosures and Crime," *Cities*, Vol. 42, pp. 13–24 (doi:10.1016/j.cities.2014.08.001); at http://bit.ly/1swuVXD.

Edward L. Glaeser, Matthew E. Kahn and Jordan Rappaport (2008), "Why Do the Poor Live in Cities? The Role of Public Transportation," *Journal of Urban Economics* (doi.org/10.1016/j.jue.2006.12.004).

Reid Ewing, Shima Hamidi and James Grace (2016), "Urban Sprawl as a Risk Factor in Motor Vehicle Crashes," *Urban Studies*, Vol. 53/2 (doi.org/10.1177/0042098014562331); at https://bit.ly/2L9zGQT.

Alejandro Henao, et al. (2015), "Sustainable Transportation Infrastructure Investments and Mode Share Changes," *Transport Policy*, Vo. 37, pp. 64-71, (doi.org/10.1016/j.tranpol.2014.09.012).

Alena Katharina Høye and Ingeborg Storesund Hesjevoll (2020), "Traffic Volume, Crashes and How Crash and Road Characteristics Affect Their Relationship," *Accident Analysis & Prevention*, Vo. 145 (doi.org/10.1016/j.aap.2020.105668).

C. Kirabo Jackson and Emily Greene Owens (2010), "One for the Road: Public Transportation, Alcohol Consumption, and Intoxicated Driving," *Journal of Public Economics*; at https://bit.ly/2Qaf0cZ.

Maxine Joselow (2020), "There Is Little Evidence that Mass Transit Poses a Risk of Coronavirus Outbreaks," *Scientific American* (www.scientificamerican.com); at https://bit.ly/3jMesZD.

Matthew E. Kahn, Edward Glaeser and Jordan Rappaport (2008), "Why Do the Poor Live in Cities? The Role of Public Transportation," *Journal of Urban Economics*, Vol. 63, No. 1. Pp. 1-24; at http://dash.harvard.edu/handle/1/2958224.

Md. Ahsanul Karim, Mohamed M. Wahba and Tarek Sayed (2012), *Evaluating the Safety Estimates of Transit Operations and City Transportation Plans*, TRB (www.trb.org); at amonline.trb.org/1slsr0/1slsr0/1.

D.M. Kennedy (2008), *Personal Security in Public Transport Travel in New Zealand*, Report 344, Land Transport New Zealand (www.nzta.govt.nz); at www.nzta.govt.nz/resources/research/reports/344.

Ugo Lachapelle, et al. (2011), "Commuting by Public Transit and Physical Activity," *Journal of Physical Activity and Health* (journals.humankinetics.com/jpah), Vol. 8, pp. S72-S82; at https://bit.ly/2ZGYjfH.

Shirlee Lichtman-Sadot (2019), "Can Public Transportation Reduce Accidents?, *Regional Science and Urban Econ.*, Vo. 74, pp. 99-117 (doi.org/10.1016/j.regsciurbeco.2018.11.009); at bit.ly/31TzTiF.

Todd Litman (2005), "Terrorism, Transit and Public Safety: Evaluating the Risks," *Journal of Public Transit*, Vo. 8/4 (www.nctr.usf.edu/jpt/journal.htm), pp. 33-46.; at www.vtpi.org/transitrisk.pdf.

Todd Litman (2014), "A New Transit Safety Narrative," *Journal of Public Transportation* (www.nctr.usf.edu/category/jpt), Vo. 17, No. 4, pp. 114-135.

Todd Litman (2016), *The Hidden Traffic Safety Solution: Public Transportation*, American Public Transportation Association (www.apta.com); at https://bit.ly/34ho5x7.

Todd Litman (2024), *Evaluating Public Transit Benefits and Costs*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/tranben.pdf.

Todd Litman (2025), *A New Traffic Safety Paradigm*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/ntsp.pdf.

Anastasia Loukaitou-Sideris (2009), *How to Ease Women´s Fear of Transportation Environments*, Mineta Institute (transweb.sjsu.edu); at http://transweb.sjsu.edu/project/2611.html.

Anastasia Loukaitou-Sideris, Robin Liggett, and Hiroyuki Iseki (2010), *The Geography of Transit Crime*, University of California Transportation Center (www.uctc.net); at www.uctc.net/papers/550.pdf.

John Martin (2011), *Incidence and Fear of Transit Crime*, University of the Fraser Valley (www.ufv.ca); at http://cjr.ufv.ca/the-incidence-and-fear-of-transit-crime-a-review-of-the-literature.

Wesley E. Marshall (2024), *Killed by a Traffic Engineer,* Island Press (https://islandpress.org); at https://islandpress.org/books/killed-traffic-engineer.

MM (2025), "Denver RTD's 3-Year 'Reclaiming Union Station' Delivers Tangible Results," *Metro Magazine* (www.metro-magazine.com); at https://tinyurl.com/4v46hb88.

NACTO (2016), *Global Street Design Guide*, National Assoc. of City Transportation Officials (www.nacto.org); Global Designing Cities Initiative (www.globaldesigningcities.org).

NHTSA (annual reports), *Fatality Analysis Reporting System*, National Highway Traffic Safety Administration (www-fars.nhtsa.dot.gov/Main); at www.cdan.dot.gov/tsftables/tsfar.htm.

NSC (2024), *Deaths by Transportation Mode*, National Safety Council (https://injuryfacts.nsc.org); at https://injuryfacts.nsc.org/home-and-community/safety-topics/deaths-by-transportation-mode.

PACTS (2020), *What Kills Most on the Roads?* Parliamentary Advisory Council for Transport Safety (www.pacts.org.uk); at www.pacts.org.uk/pacts-report-what-kills-most-on-the-roads.

Sarah Jo Peterson (2017), *Seattle's Transportation Transformation*, Urban Land Institute (http://urbanland.uli.org); at https://tinyurl.com/3d25btku.

Sadegh Sabouri, Reid Ewing and Hannaneh Abdollahzadeh Kalantari (2024), "Estimating Transit's Land-Use Multiplier," *Transportation* (https://link.springer.com/article/10.1007/s11116-024-10542-0).

Ian Savage (2013). "Comparing the Fatality Risks in the United States Transportation Across Modes and Over Time," *Research in Transportation Economics*, Vol. 43/1, pp. 9-22; at https://bit.ly/3vJlki3.

Michael Sivak and Michael J. Flannagan (2004), "Consequences for Road Traffic Fatalities of the Reduction in Flying," *Trans. Research F*, Vol. 7/4-5, pp 301-305 (doi.org/10.1016/j.trf.2004.09.007).

Jim P. Stimpson, et al. (2014), "Share of Mass Transit Miles Traveled and Reduced Motor Vehicle Fatalities in Major Cities of the United States," *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, (doi:10.1007/s11524-014-9880-9); at https://bit.ly/2YVj6Lm.

Richard Tay, et al. (2013), "Analysis of the Influence of Urban Rail Stations on Neighbourhood Crime," *International Journal of Urban Sciences*, Vol. 17/2 (dx.doi.org/10.1080/12265934.2013.776289).

Jason Thompson, et al. (2020), "A Global Analysis of Urban Design Types and Road Transport Injury," *The Lancet*; at www.thelancet.com/journals/lanplh/article/PIIS2542-5196(19)30263-3.

TOA (2014), *What Factors Affect Americans' Perception of Whether Crime is Increasing or Decreasing?*, The Opportunity Agenda (https://opportunityagenda.org); at https://tinyurl.com/mr9hk9rz.

Long T. Truong and Graham Currie (2019), "Macroscopic Road Safety Impacts of Public Transport," *Accident Analysis and Prevention*, Vol. 132 (https://doi.org/10.1016/j.aap.2019.105270).

Tate Twinam (2018), "Danger Zone: Land Use and the Geography of Neighborhood Crime," *Journal of Urban Economics*, Vo. 100, pp. 104–119 (doi.org/10.1016/j.jue.2017.05.006); at https://bit.ly/2Q8jVio.

UITP (2020), *Promoting Safe and Sustainable Cities with Public Transportation*, International Association of Public Transport (www.uitp.org); at https://bit.ly/3IIDvtg.

USDOT (2024), *Major Safety Events: Public Transit*, US Department of Transportation (https://transportation.gov); at https://tinyurl.com/mnt3m44u.

Ben Welle, et al. (2018), *Sustainable & Safe: A Vision and Guidance for Zero Road Deaths*, World Resources Institute (www.wri.org) and Global Road Safety Facility (www.worldbank.org/grsf); at www.wri.org/publication/safe-system.

N. Wilson and G. Thomson (2005), "Deaths from International Terrorism Compared With Road Crash Deaths," *Injury Prevention* (ip.bmjjournals.com) Vo. 11 (injuryprevention.bmj.com/content/11/6/332).

Jiho Yeo, Sungjin Park and Kitae Jang (2015), "Effects of Urban Sprawl and Vehicle Miles Traveled on Traffic Fatalities," *Accident Analysis and Prevention*, Vo. 16/4 (doi.org/10.1080/15389588.2014.948616).

Andrew Zaleski (2023), *All Aboard the 'Crime Train' Narrative*, Bloomberg (www.bloomberg.com); at https://tinyurl.com/4x6ffz9v.

www.vtpi.org/safer.pdf