

## **Safer Than You Think!** Revising the Transit Safety Narrative

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### **Abstract**

Public transportation is a safe form of travel. Total per capita traffic casualties tend to decline as public transit travel increases in a community. However, many people have the misimpression that transit is dangerous, and so are reluctant to use it or support transit service expansion in their communities. Various factors contribute to this transit dread (excessive and irrational fear), including conventional traffic safety messages, heavy media coverage of transit-related crashes and crimes, and the nature of public transit, which requires travel with strangers in confined spaces. In addition, the transit industry has responded to crime and terrorist risks with messages that emphasize fear and unusual dangers. There is much that public transit agencies can do to change the narrative to emphasize the overall safety of public transit travel, to improve passengers' sense of security, and to provide better guidance concerning how passengers and communities can enhance public transport safety and security.

**Introduction**

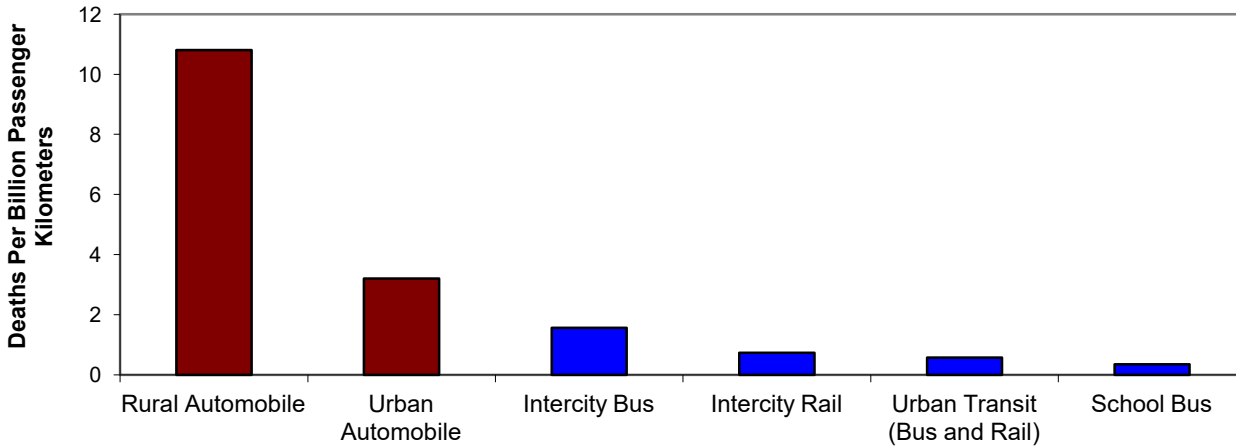
Public transportation is actually a very safe form of travel. However, many people have the misimpression that public transit travel is dangerous, and so are reluctant to use it or support transit service expansion in their communities. This reflects *dread*, which refers to irrational exaggerated fear. This can be a major obstacle to efforts to improve transit services and increase transit use, and therefore achieve strategic planning objectives such as traffic and parking congestion reduction, energy conservation and emission reductions, and improved mobility for non-drivers. This paper discusses causes of transit dread and possible ways to overcome it.

**Public Transit Risk Analysis**

*Crash Risk*

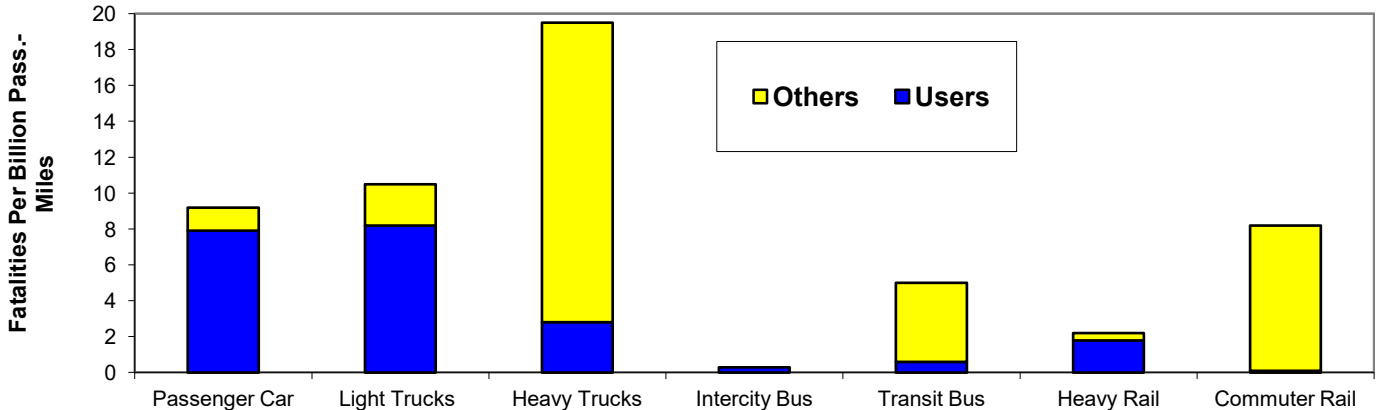
Public transport is a relatively safe mode of travel (1). Transit passengers have about one-tenth the fatality rate per kilometer traveled as car occupants, and even considering external risks, transit causes less than half the total deaths per passenger-kilometer as automobile travel, as illustrated in figures 1 and 2.

**Figure 1 Canadian Fatality Rate By Mode (2)**



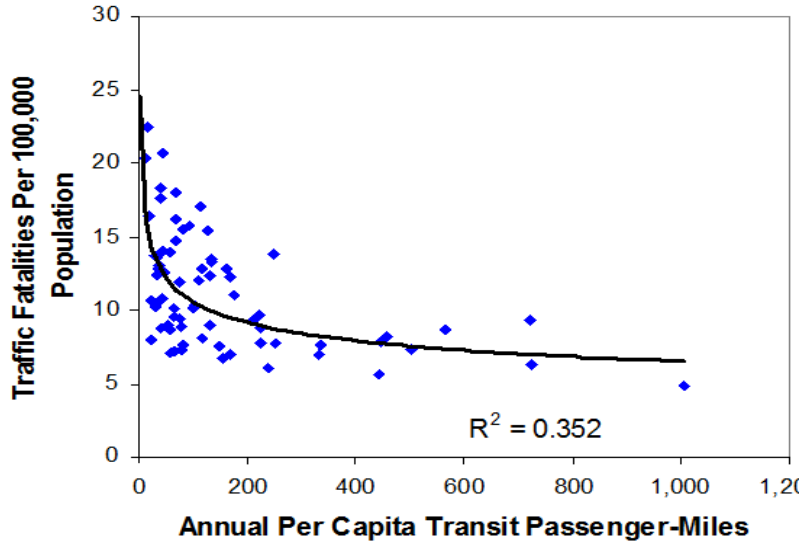
*Public transit tends to have much lower traffic fatality rates than automobile travel.*

**Figure 2 Transport Fatalities (1, based on FHWA and APTA Data)**



*Transit tends to have lower crash rates than automobile travel, even taking into account risks to other road users.*

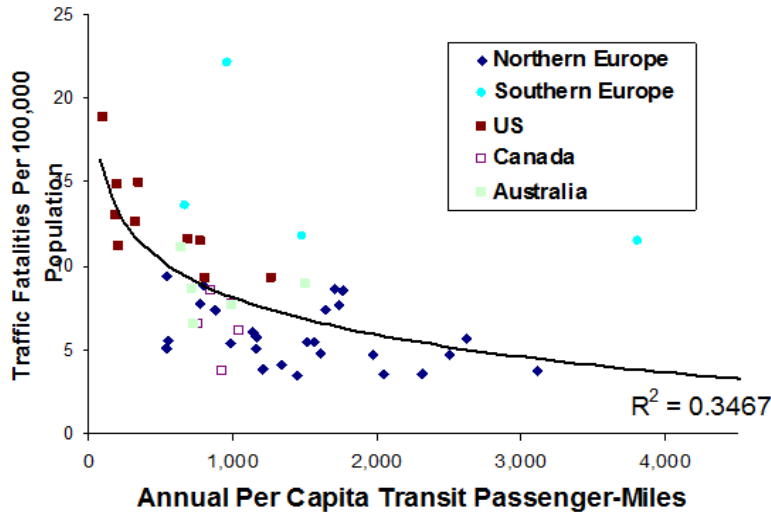
**Figure 3 U.S. Traffic Deaths (3)**



*Per capita traffic fatalities (including pedestrians, motorists and transit passengers) tend to decline with increased transit ridership.*

Crash rates per transit passenger-kilometer are relatively high in some areas due to low transit load factors and because a large portion of transit vehicle mileage occurs in congested conditions, but as transit ridership increases, casualty rates per passenger-mile and per capita (including pedestrians, cyclists, motorists and transit passengers) tend to decline (4), as indicated in figures 3 and 4.

**Figure 4 Traffic Fatalities Vs. Transit Travel (5)**



*International data indicate that per capita crash rates decline with increased transit ridership.*

These traffic fatality reductions result not just from automobile vehicle-kilometers shifted to transit passenger-kilometers, but also from transit leverage effects on travel and land use patterns (2). Residents of cities with high quality transit tend to own fewer automobiles, drive less, have lower traffic speeds, and have less high-risk driving (teenagers and elderly people may be less likely to have drivers licenses).

The conventional traffic safety program tends to overlook and undervalue public transit safety benefits. The conventional paradigm emphasizes that automobile travel is overall a safe activity since most accidents are associated with special risks such as impaired driving, very young or old drivers, or dark, wet or icy conditions (6). Conventional safety programs target these activities and conditions. From this perspective, it would be inefficient and unfair to increase safety by reducing total vehicle travel because that would “punish” all motorists for dangers caused by a minority. A new traffic safety paradigm recognizes that all vehicle travel incurs risk, and high- and low-risk driving are complements: transport and land use policies that increase per capita vehicle travel tend to increase high-risk driving (1, 7). For example, in an automobile-dependent community it is common for people to drive when attending social events where alcohol is consumed, for teenagers to obtain drivers’ licenses, and for seniors to continue driving despite declining ability, because alternative accessibility options are unavailable and stigmatized. The new safety paradigm recognizes the safety benefits of mode shifts and transit-oriented development.

### *Crime Risk*

Transportation crimes can include fare evasion, vandalism, theft, assault, carjacking and road rage. Several data sources give information on transport crime rates and crime prevention strategies (8, 9). Such analysis is complicated by various confounding geographic and demographic factors. For example, transit service and ridership tend to increase with urbanization and poverty. As a result, statistics may show correlations between transit supply or ridership and certain crimes, but that does not indicate causation. In many ways transit can help reduce crime by increasing passive and active security in an area, and even by reducing poverty and health problems by improving disadvantaged people’s access to education, employment and healthcare services.

Transit’s impacts on crime rates depend on how they are defined and measured. For example, if a new transit station attracts more transit passengers and businesses to an area, local crime rates often increase since there are more people there, although per capita (including transit passengers and employees) crime rates decline; over the short-term total regional crime will probably stay the same (that is, any additional crime in the station area would otherwise have occurred elsewhere), and over the long-run total regional crime may actually decline if better transit services improve disadvantaged people’s economic opportunities, for example, by allowing lower-income residents better access to schools and jobs (10).

### *Terrorist Risks*

In most countries terrorism, including transit terrorism, is a small risk compared with other more common safety and security dangers (11, 12). Even including events such as the 11 September 2001 terrorist attacks which killed nearly three thousand people, the 11th March 2004 Madrid rail bombing which killed nearly two hundred people, and the 7 July 2005 London subway attack which killed about fifty people, traffic crashes kill hundreds of times as many people on average as terrorism. In 29 OECD countries for which suitable data were available, the annual road injury deaths were approximately 390 times that from international terrorism (13).

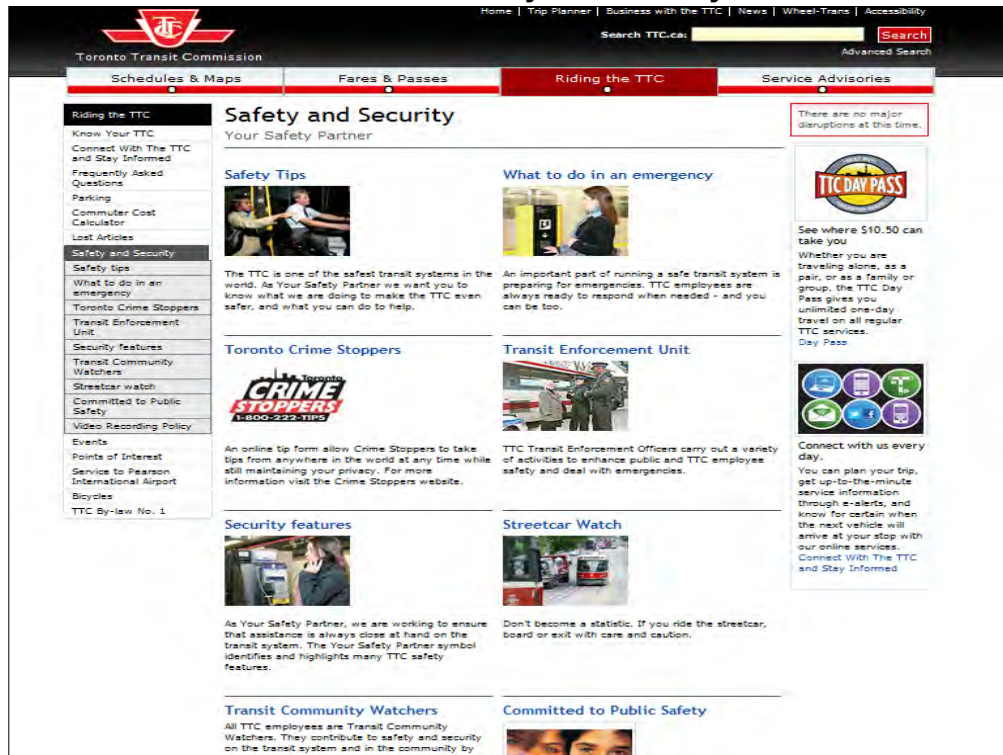
## Perceptions of Transit Risks

Transit stations and vehicles are generally as safe as other public spaces, and often safer overall due to passive (bystanders and shops) and active (cameras, transit security staff and police) surveillance. Yet many people are reluctant to use public transit because they consider it unsafe (14). The public transit travel experience can contribute to dread. Transit travel requires travelers to be in sometimes crowded enclosed spaces, including shelters, stations and vehicles. Although most passengers are responsible, considerate and clean, a (usually small) portion is anti-social, rude and dirty. It is common for transit passengers to hear obscene language or even insults. Authorities generally recommend that passengers ignore such problems, which contributes to feelings of discomfort, fear and powerless.

Public transit dread may partly reflect excessive media coverage. Because transit accidents and assaults are (fortunately) infrequent, they tend to receive significant media coverage (15). For example, the 1995 deaths of three passengers in a Toronto subway crash was widely reported throughout North America; the deaths of four teenagers a Vancouver Island car crash the same week received only local coverage. This suggests that transit passenger deaths receive far more media coverage as an automobile passenger death.

Traffic safety and security messages may also contribute to dread. Conventional traffic safety campaigns emphasize that automobile travel can be safe if drivers follow certain rules, while public transit passengers are reminded to be cautious to prevent exposure to personal assaults and terrorist attacks with messages such as the Department of Homeland Security's "If You See Something, Say Something" public awareness campaign. Transit agencies often have long lists of dangers, as illustrated in Figure 5. There is little public education that emphasizes the overall safety of public transit travel.

Figure 5 Toronto Transit Commission's Safety and Security Website



Official messages tend to emphasize public transit travel dangers rather than the mode's overall safety.

This dread contributes to a self-reinforcing cycle of reduced transit travel by responsible residents which reduces passive surveillance (i.e., people watching out for each other). Increasing transit ridership and more transit-oriented development, in which transit stops and stations become activity centers with nearby shops, housing and offices, can increase overall security.

### **A New Safety Narrative**

There is much that can be done to create a more positive public transit safety narrative. Decision-makers, including public officials and technical staff require better tools for evaluating public transit safety benefits, for understanding how specific planning decisions will affect safety and security, and for effectively communicating these to the general public. For example, with better information about transit safety impacts it will be possible to model how a particular transit service improvement or incentives to encourage transit use will affect overall transit security and traffic safety.

Whenever possible, transportation professionals should educate transit users and potential user about the overall safety of public transit travel. All staff should be educated about transit safety, and information about it should be incorporated into all possible public communications, including newsletters, media contacts and advertising. This involves three steps:

1. Research concerning transit safety and security impacts and practical ways to increase safety and security.
2. Information resources which explain safety and security benefits and strategies.
3. Communication practices that emphasize positive effects.

With this approach, information about transit safety benefits, and specific ways that communities and individuals can increase those benefits, can be incorporated into planning activities and public communications.

It is also appropriate to change how risks and solutions are evaluated. Conventional transit security programs tend to emphasize active interventions such as policing and baggage inspections, to prevent major crimes such as terrorism and assault. A more integrated and positive approach relies more on crime prevention through environmental design (CPTED), for example, by designing transit stations that have more integrated and nearby activities, and by providing guidance on how system users can prevent and respond to common anti-social behaviors such as rude language.


The following are specific recommendations for a new transit safety narrative:

- Provide accurate and timely information on public transit safety and security risks, including crash and crime data, safety policies and plans. Provide context and perspective when reporting such statistics. For example, compare crash risks between transit and automobile travel.
- Provide information that highlights the overall safety benefits of public transit to individuals and communities, and practical ways to further increase safety.
- Provide consistent and integrated information to users on public transit safety and security. This should include practical information on how to reduce risks while walking, cycling and using public transit.



- Promote common courtesies, such as avoiding obscene language and pushing in lines, and provide specific practical guidance to passengers on actions that individuals can do to increase their own and other system users' safety and security, including avoiding risks and reporting problems to authorities, and how to deal with common problems with other passengers (Figure 6).
- Create multi-dimensional safety and security programs that include infrastructure design, user information, risk procedures, and inaccurate perception of crime.
- Develop safety and security programs in partnership between government agencies (planning, transport, policing, public health, etc.), community groups and individuals.
- Support mobility management strategies and smart growth policies that reduce total vehicle travel and encourage shifts to alternative modes can provide safety benefits.

**Figure 6** BC Transit Rider Courtesy Guidance (16)



**Courtesy Counts!**

To help make the transit experience pleasant and comfortable, please be courteous and respectful of your driver and fellow passengers.

We encourage you to follow these simple suggestions while travelling with BC Transit:

- Although BC Transit serves everyone on a first-to-board basis, we extend a special thank you to our customers who give up their seats for people with disabilities or mobility challenges. Courtesy seating, located at the front of the bus, meets the needs of all transit customers, and is especially vital to:
  - Customers who use scooters, wheelchairs, pediatric strollers or other mobility aids
  - Customers with a disability or mobility issue
  - Customers with baby strollers
- Do not stand in the doorways. This is for your safety and so customers can quickly enter and exit the bus. Please stand behind the red or yellow lines.
- When the bus is full, please move to the back of the bus to accommodate as many passengers as possible.
- Seats are for customers, not bags, feet or wet umbrellas. Please allow others to make use of the seats. Place and hold your bag on your lap or on the floor where it will not obstruct the aisles or other customers.
- We appreciate your help in keeping the bus clean. Take your garbage with you when you leave.
- Be mindful of your belongings as you walk through the bus – you may be accidentally bumping into other customers as you pass.
- A bus ride is a great time to listen to music, but please be considerate – loud music coming from a headset can bother others.
- Please keep your in-person and cell phone conversations at a reasonable sound level.
- Try not to get involved and engage in confrontations.

*This is an example of transit user guidance concerning rider courtesies. It should also include specific information on how passengers can respond to common risks and problems.*

## Examples

Below are examples of ways that the new safety paradigm can be applied.

- *Funding Discussions.* When discussing new transit funding requirements planners can provide information on incremental safety and security benefits, including reductions in overall crashes that result from high quality public transit that reduces automobile travel. Standard value-of-life for avoided accident casualties can be incorporated into project economic evaluation (17).
- *Facility design.* Audit transit stops and stations to identify opportunities to implement crime prevention through environmental design. Where possible this should include services, such as newspaper kiosks at rail stations, and bus stops located in front of coffee shops.
- *Assault risk.* If a transit passenger is assaulted, the transit agency should acknowledge the problem but provide information showing that overall, public transit travel is relatively safe, safer than driving, that transit agencies are implementing programs to enhance security, and describe specific ways that passengers can increase their own and other passengers' safety.
- *User information and guidance.* Produce guidance information (websites, signs, brochures, etc.) which describe the safety benefits transit travel provides to passengers and their communities, and give specific advice for ways that individuals can increase safety and security.

## Conclusions

Public transit is overall a safe form of travel, and both safety and security tend to increase if more travelers shift from driving to transit. These benefits can be large: traffic fatality rates are an order of magnitude lower per passenger-kilometer for transit users than automobile passengers, and half to one-sixth as high per capita in transit-oriented communities than in automobile-dependent areas. Increased transit travel by responsible residents and more transit-oriented development tends to increase transit security by increasing passive surveillance. However, these benefits tend to be overlooked in conventional transport planning which generally focuses on transit's congestion reduction and energy savings benefits. Safety and security benefits are often ignored. Many people have exaggerated fears of public transit risks, which creates a self-reinforcing cycle of reduced ridership, safety and security. This dread is a major obstacle to efforts to encourage more efficient transport and land use development.

A number of factors contribute to transit dread. The conventional traffic safety paradigm tends to emphasize strategies for reducing risk per vehicle-kilometer rather than reducing total vehicle mileage. Transit crashes and crimes tend to receive heavy news media coverage. Transit travel often exposes passengers to minor discomforts and fears. Transit security messaging tends to emphasize danger and extreme risks such as terrorism.

Transit agencies can help create a new narrative which emphasizes the overall safety of transit travel and empowers passengers and communities to improve their safety and security. Effective safety programs integrate various approaches (engineering, design, education, enforcement and encouragement) to address risks. They help transport system users understand the real risks they face, and empower them to increase safety, as individuals and in partnership with public agencies and community groups. Transit security information should be comprehensive and integrated, providing consistent messages about risks and safety strategies through websites, signs, newsletters, brochures and other public communications. It should highlight the overall safety benefits to individuals and communities of increased public transit travel.



## Endnotes

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