

Good Practice Factsheet 2018



Public transport



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Background

Road traffic accidents are responsible for 1.35 million deaths each year around the world.

Between 2013 and 2016, the number of road traffic deaths has increased in most low and middle-income countries, as can be seen in Figure 1 below:

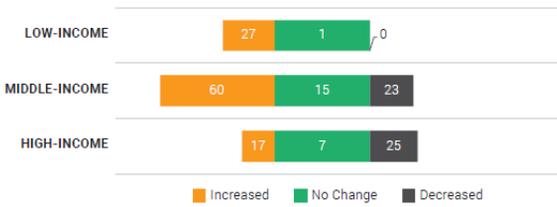


Figure 1

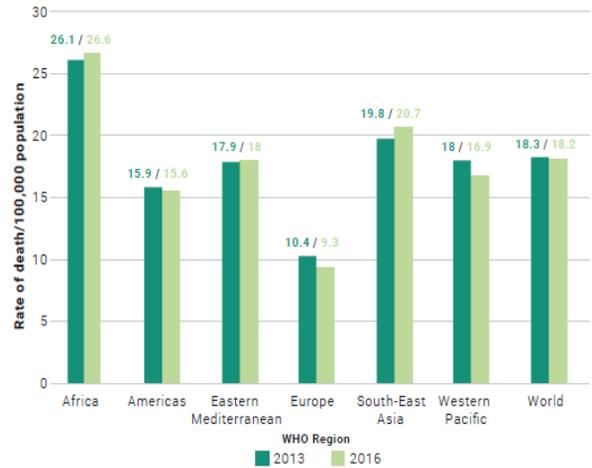


Figure 2

In African countries, the road accident death rate is much higher compared to high-income countries around the world, with an average of 26.6 deaths per 100,000 population (Figure 2).

Half of all road traffic deaths in the African region occur among vulnerable road users (pedestrians, cyclists and motorcyclists).

The proportion of deaths among pedestrians at 40%, when the average around the world is around 23% (WHO,2018).

Figure 3 shows the modal share of different transport types in different African cities. It can be seen that informal public transport (minibuses, motorcycle taxis) dominates the sector.

The number of road traffic accidents could be reduced by encouraging people to use public transportation. Overall, public transportation is a safer and more secure mode of transport compared to automobile travel.

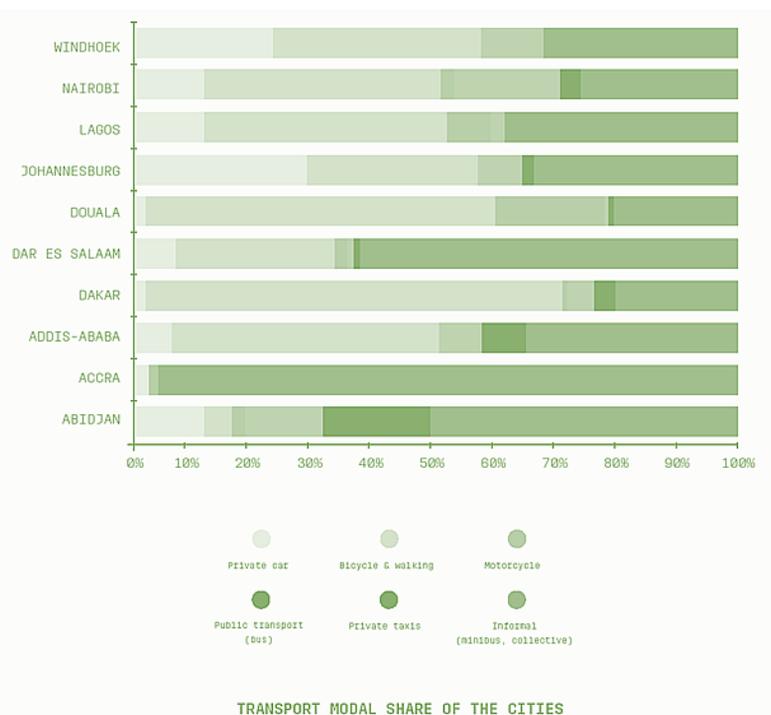


Figure 3

Safer mobility for road users

The shift from private motorised transport to public/rapid transport, such as rail, metro and buses is associated with a wide range of potential benefits including lower rates of traffic injury risk. Strong public transport systems have the advantage of reducing traffic intensity, which is related to road traffic injuries and other health impacts. In developed countries for instance, the injury risk for public transport users is much lower than the risk for car users.

Public transportation passengers have less than a tenth the per-mile crash rates of automobile travel, and transit-oriented community residents have a fifth the total (pedestrian cyclist, automobile and transit passenger) crash casualty rates per capita as in automobile communities.

Investing in mass public transport can also bring equity benefits by improving the mobility of women, elderly and the poor, who often lack access to private vehicles. This, in turn, provides opportunities for employment, education and health services.



Potential Interventions

- Address the lack of public transport infrastructure. Lack of alternative means of transport in urban settings in low- and middle-income countries limits commuter choice, forcing people to walk or use private vehicles. The increase in vehicles and PTWs increases pressure on urban infrastructure, with the competition for space on roads exacerbating the risk of injury or death among road users.
- Expand and improve current formal public transport systems. Well-maintained, sustainable public transport systems is an important aspect of making overall mobility safer, with the additional benefit of reducing congestion. Currently, a large number of urban and rural residents in low- and middle- income countries rely on informal transport systems, often because of lack of affordable and accessible organised public transport. Motorcycle taxis, auto-rickshaws and four-wheeled vehicles (jeepneys and jitneys) are in many cases the only available option, forcing commuters to use these ubiquitous, unsafe and in many cases more expensive, informal carriers. In India for example, only about 100 out of more than 5,000 cities and towns have formal public transport systems. In Thailand, Cambodia, Malaysia and other SE Asia countries the share of fatal crashes involving PTWs such as rickshaws and auto-rickshaws was between 60-70%. In Accra, Ghana minibuses accounted for the majority of traffic violations and 22% of accidents.
- Public transport routes should be designed to allow easy access without increasing pedestrian-vehicle conflicts. Bus and informal public transport (paratransit) stops should be formal and be provided with direct access to segregated pedestrian sidewalks.
- Provide bus lanes at congestion areas, to minimize public transport delays.
- Concrete (rather than bituminous) surfacing should be used at bus stop bays, to minimize maintenance problems and avoid buses from stopping on the main carriageway.
- Adjust demand management strategies. Provide incentives for travellers to shift from automobile to transit (pricing reforms, better service, reduced crowding, improved user information, more comfortable vehicles and stations).

Impact evidence

Results from a study in Sri Lanka show the accident risk ratio is double for commuters travelling with privately run buses or three-wheelers over public bus users. Encouraging people to use public transportation will reduce the number of accidents.

Implementing formal public transportation and moving from informal transit to a BRT (Bus Rapid Transit) system in Mexico City led to a reduction in the number of injuries by 38% and fatalities by 38% as well. Upgrading the bus system in Guadalajara, Mexico to a BRT system brought a reduction of 69% and 68% in injuries and fatalities respectively.

In Bogota, when a busway was upgraded to BRT the reduction in injuries was 39% while the number of fatalities fell by 48%.

The improvement in service for the bus system in Melbourne (queue jumpers, signal priority for buses) led to a reduction in the number of crashes by 11%. The number of injuries dropped by 25%.

A study analysing data from 100 US cities over 29 years found that each 10% increase in public transit's share of urban passenger travel is associated with 1.5% in motor vehicle fatalities.

Safer vehicles

It is necessary to ensure that vehicles carrying passengers are safe and road-worthy, with all the safety features mandated by safety standards. Most vehicles currently in use are imported second-hand and operate for many years, with all the implications this practice has on road safety.

Potential Interventions

- Improve vehicles and control systems to improve public transportation safety. For example, replace the old buses used by many providers with newer, safer vehicles that comply to safety standards.
- Public vehicles (buses, taxis and paratransit) should be tested periodically for their road-worthiness (once every 6 months). Quality checks should be run on the vehicles' safety features to ensure their proper operation. Ensure the tests are not susceptible to tampering or corruption. For example, it is common to find speed governors/limiters tampered with, or even removed completely and said vehicles exceeding the speed limits.
- Operators and drivers should be required to meet minimum criteria before being licensed to operate or drive public transport vehicles.
- Gradually integrate informal public transport in the transport system, through regulations and fiscal incentives.



Safer road users

Public transportation systems should be designed around the needs of their users. Safety campaigns can be used to inform passengers and other road users on safe road behaviour while at the same time, proper law enforcement ensures the adherence to traffic laws.

Potential Interventions

- Consider the safe access of pedestrians a key issue in the design of mass transport systems. Mass transport routes are usually located on major arterial roads, which are the most dangerous types of urban streets. Although travelling by public transport may be one of the safest modes, transit passengers are at a high risk of crashes when walking to and from a station/stop.
- Target high-risk drivers and encourage them to use public transport systems. Improved transit serving youths, seniors and drinkers as well as late-night service in urban areas.
- Education and safety campaigns encourages all road users (including users of public transportation) to behave responsibly and avoid behaviour that could potentially lead to a road accident.
- Regulations and their proper enforcement deter drivers from engaging in dangerous driving behaviour, thus reducing the number of accidents on the road.

Impact evidence

In Kenya, the Zusha! National Road Safety Campaign led to a 50% reduction in the total number of accidents and a 60% drop in accidents involving injuries or fatalities. The intervention included safety stickers for matatus (minibuses), a media campaign (radio, billboards, social media, news articles etc.) as well as stakeholder conferences and urged passengers to report unsafe behaviour by the drivers.

The high death rate in traffic was a serious issue in Kenya, with 3.004 fatalities and 10.036 serious injuries in 2003. The implementation and enforcement of stricter regulations in the informal transport sector (compulsory seatbelts, speed limit, fixed routes) led to a reduction in fatalities (2.251) and serious injuries (6.745) in 2004.



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