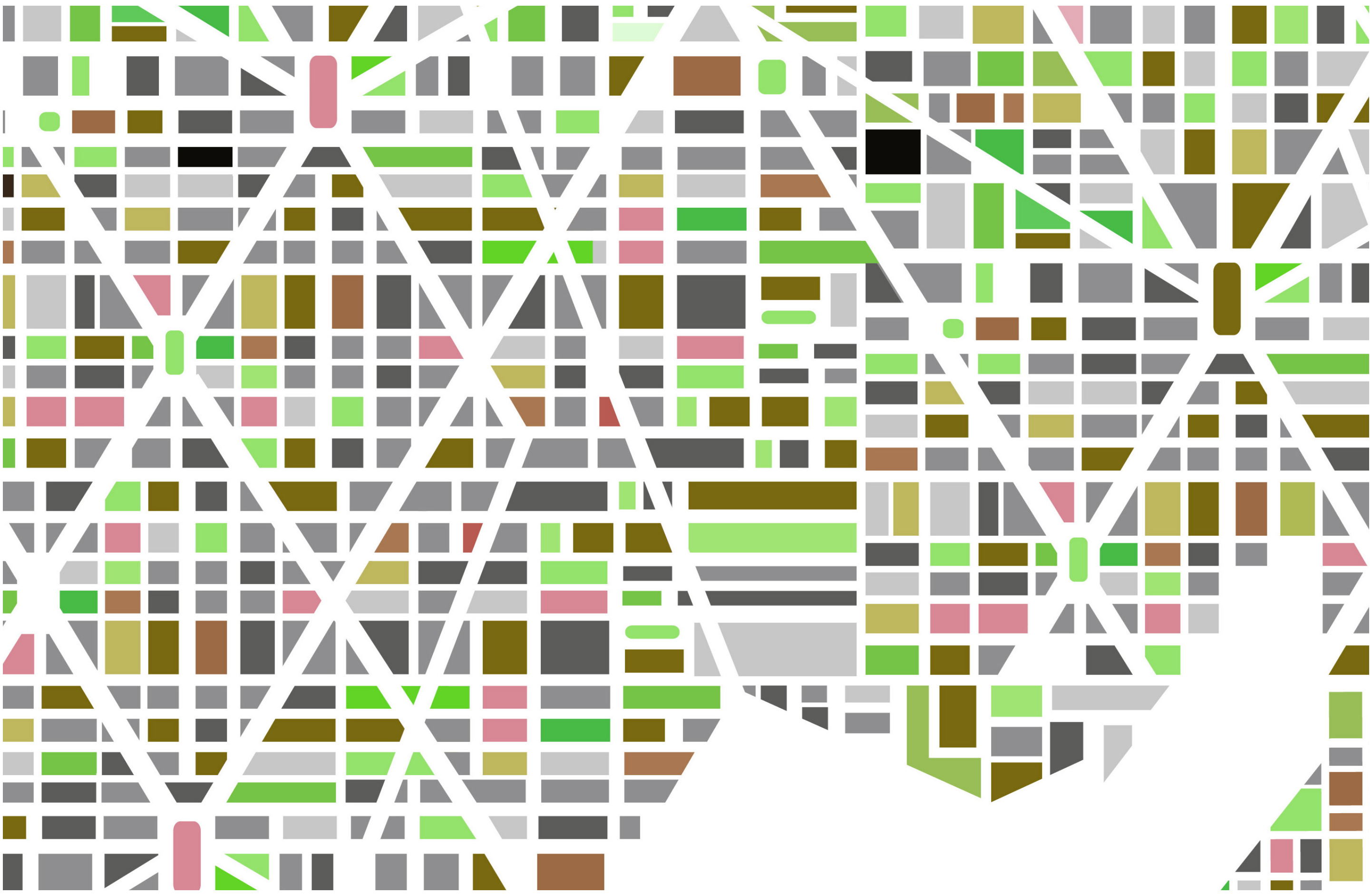
International Transport Forum



Monitoring Progress in Urban Road Safety

2022 Update

Safer City Streets

Monitoring Progress in Urban Road Safety

2022 Update

Safer City Streets

The International Transport Forum

The International Transport Forum is an intergovernmental organisation with 64 member countries. It acts as a think tank for transport policy and organises the Annual Summit of transport ministers. ITF is the only global body that covers all transport modes. The ITF is politically autonomous and administratively integrated with the OECD.

The ITF works for transport policies that improve people's lives. Our mission is to foster a deeper understanding of the role of transport in economic growth, environmental sustainability and social inclusion and to raise the public profile of transport policy.

The ITF organises global dialogue for better transport. We act as a platform for discussion and pre-negotiation of policy issues across all transport modes. We analyse trends, share knowledge and promote exchange among transport decision makers and civil society. The ITF's Annual Summit is the world's largest gathering of transport ministers and the leading global platform for dialogue on transport policy.

The Members of the Forum are: Albania, Armenia, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Cambodia, Chile, China (People's Republic of), Colombia, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Republic of Moldova, Mongolia, Montenegro, Morocco, the Netherlands, New Zealand, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tunisia, Türkiye, Ukraine, the United Arab Emirates, the United Kingdom, the United States and Uzbekistan.

International Transport Forum
2 rue André Pascal
F-75775 Paris Cedex 16
contact@itf-oecd.org
www.itf-oecd.org

Case-Specific Policy Analysis Reports

Cite this work as: ITF (2022), "Monitoring Progress in Urban Road Safety: 2022 Update", *International Transport Forum Policy Papers*, No. 108, OECD Publishing, Paris.

Acknowledgements

This report was written by Dominic Streuber and Rachele Poggi of the International Transport Forum (ITF). Rachele Poggi carried out the statistical calculations and data visualisation work.

The report is part of the ITF Safer City Streets initiative and was funded by the FIA Road Safety Grant Programme, supported by the FIA Foundation.

The authors are grateful to the members of the Safer City Streets network, in particular, the local government road safety teams that collected and shared their road safety data with the ITF.

The document was reviewed by Stephen Perkins and copy-edited by Lauren Chester at the ITF.

Safer City Streets benefits from the guidance of the International Traffic Safety Data and Analysis Group (IRTAD), which established the methodological framework for the initiative. It has benefitted from funding from the European Commission that supported the development of some of the risk indicators used to benchmark performance.

The Safer City Streets network involves not only local governments but also national and international organisations, academia, road user groups, multilateral development banks and philanthropies committed to improving the use of robust evidence in the elaboration of road safety policies. The list of partners includes the World Bank, Bloomberg Initiative for Healthy Cities, iRAP, Vital Strategies, POLIS, Inter-American Development Bank, WRI, GDCI and FIA Foundation. All contribute to improving the quality of data and analysis of urban road safety.

Foreword

Every minute, someone in the world dies in urban traffic. Local governments are at the forefront of efforts to prevent these needless road deaths. Their actions – speed limit reductions and radical changes in street design, for example – are delivering measurable results. One city, Warsaw, achieved the UN target for halving road deaths between 2010 and 2020. Barcelona and Edmonton came close to meeting the target.

With the launch of the Second UN Decade of Action for Road Safety and its target to halve road deaths and injuries by 2030, all cities need to adopt measures that have proved to be effective. This report investigates the progress made in the First Decade of Action from 2010 to 2020. Some cities have achieved more promising results than others. Therefore, there are opportunities to accelerate progress using evidence of success in peer cities to support the adoption of more effective policies.

Under the UN Sustainable Development Goals (SDGs), road-injury prevention is explicitly mentioned in the Goal for Health and the Goal for Cities (SDG 11.2: Make cities and human settlements inclusive, safe, resilient and sustainable). Safer streets are crucial for making cities more liveable. If streets are dangerous, efforts to promote walking and cycling are undermined. Reducing the risks of urban traffic not only saves lives but also opens doors to sustainable forms of transport, which can reduce pollution, cut emissions, fight congestion and improve citizens' physical and mental health.

The International Transport Forum (ITF) at the OECD launched the ITF Safer City Streets initiative at the UN Habitat III conference in 2016. It brings together road safety experts working in cities and explores the solutions developed at a local level. Cities in the network improve their urban road safety performance by sharing data, experience and knowledge and learning from each other. Safer City Streets replicates, at the city level, the International Traffic Safety Data and Analysis Group (IRTAD). IRTAD is a global road safety network of countries hosted by the ITF that has been running for more than 25 years.

The ITF Safer City Streets initiative consists of a global city-level database on mobility and road safety statistics. A global network of experts supports the data collection and shares experience in the fields of road safety and urban mobility at Safer City Streets meetings, online webinars and workshops.

The ITF published the world's first road safety benchmark at the city level in 2018 and developed indicators to monitor progress. The ITF updated this road safety benchmark in 2020 to monitor the developments.

This is the third in a series of urban road safety benchmarking reports, providing updates on road safety data in cities in the Safer City Streets network. Drawing on Safer City Streets meetings, conferences and webinars, it highlights best practices and identifies room for progress towards better urban road safety policies. A complete list of the cities mentioned in this report is available in the Annex.

Table of contents

Figures

Tables

Boxes

Executive summary

What we did

This report tracks developments in urban road safety to help reduce the number of serious traffic crashes on city streets. It traces the number of road fatalities and serious injuries in 32 cities around the world for the period 2010-20 using different indicators that measure the risk of dying in traffic for various road user groups. The indicators use three-year averages to capture trends from small annual data sets, i.e. the year 2020 is represented by the average for 2018-20. The cities participating in the benchmarking are located in Europe (18), the Americas (11), Oceania (2) and Africa (1). They work together in the International Transport Forum's Safer City Streets network.

What we found

Most cities have continued to reduce the number of road deaths since 2010, despite considerable differences between them.

The year 2020 stands out in the past decade's road safety data because of the Covid-19 pandemic. As many cities experienced restrictions on movements, traffic volumes fell, and mobility patterns changed. The number of road deaths decreased by 4% on average across the 32 cities in 2020. The average annual reduction for the period 2010-19 had been 3.5%. Overall, the reductions in the number of road deaths in 2020 are not as high as one could expect from the restrictions on movement.

Out of 32 cities, 31 missed the initial road safety target stipulated in the UN Sustainable Development Goals (SDG) of cutting road deaths by 50% over the decade 2010-20. Warsaw was the only city to achieve the road safety target. Barcelona and Edmonton reduced the number of road deaths by more than 45%. Despite considerable efforts and the exceptional decline due to the pandemic, most cities only achieved reductions between 20% and 40% over those ten years. Notably, both Helsinki and Oslo recorded zero fatalities among pedestrians or cyclists in 2019, thus demonstrating that "Vision Zero", the objective of eliminating all traffic deaths, has a basis in reality.

Sharing experiences and learning from other cities can accelerate progress towards meeting the revised SDG target of 50% fewer road deaths by 2030. Systematic and targeted use of urban road safety and mobility data will help cities to set the right policy priorities and take decisions that will save lives.

What we recommend

Ensure consistent collection of reliable urban road safety data

Up-do date, reliable data is essential to monitor a city's road safety performance and develop effective policies that will save lives. Data on road crash fatalities, serious injuries and exposure to crash risk are critical. Cities do well to allocate sufficient resources to collecting and managing road safety data. Cities should also enable road safety experts in the city administration to exchange knowledge and best practices with their peers on a national and international level.

Create urban traffic observatories that collect both general mobility data and road safety data

City governments should collect mobility data in order to understand what factors drive trends in crash data. The behavioural changes triggered by the Covid-19 pandemic underline the case for collecting urban mobility data systematically. Data on driver behaviour and enforcement of traffic rules are required as well as data on traffic volumes. A dedicated, fully funded and staffed road safety observatory is most likely to deliver robust empirical evidence for effective decision-making.

Set ambitious reduction targets for the number of traffic crash casualties in cities

Cities should adopt clear targets to rapidly reduce the number of fatalities and serious injuries on their streets. Drawing attention to other cities' road safety performance, and benchmarking one against others, can secure public support and political buy-in for ambitious casualty reduction targets.

Focus on protecting vulnerable road users on urban streets

Cities should do more to protect pedestrians, cyclists and motorcycle riders on their streets. They are most at risk in urban traffic and constitute the vast majority of crash fatalities. Cities should manage streets so that they provide safe conditions for walking and cycling. Adopting a Safe System approach when setting speed limits is particularly recommended. This includes 30 km/h speed limits where motor vehicles mix with vulnerable road users. Automated enforcement and safe street design principles will maximise compliance with speed limits. Re-allocating road space in dense urban areas can make city centres safer by shifting mobility from car and motorcycle trips to walking, cycling and low-speed micromobility.

Measure crash risks for vulnerable road users with appropriate indicators

Analysts should control for travel volume when assessing the traffic risk for any road user group. This is particularly important for cycling and other forms of micromobility, given their rapid expansion in many cities. Analysts should monitor the number and length of trips made by each mode with household travel surveys or GPS tracking. Where funding for monitoring is a problem, local governments should explore partnerships with national authorities and public health bodies. Survey methods that are simplified and standardised can also reduce costs.

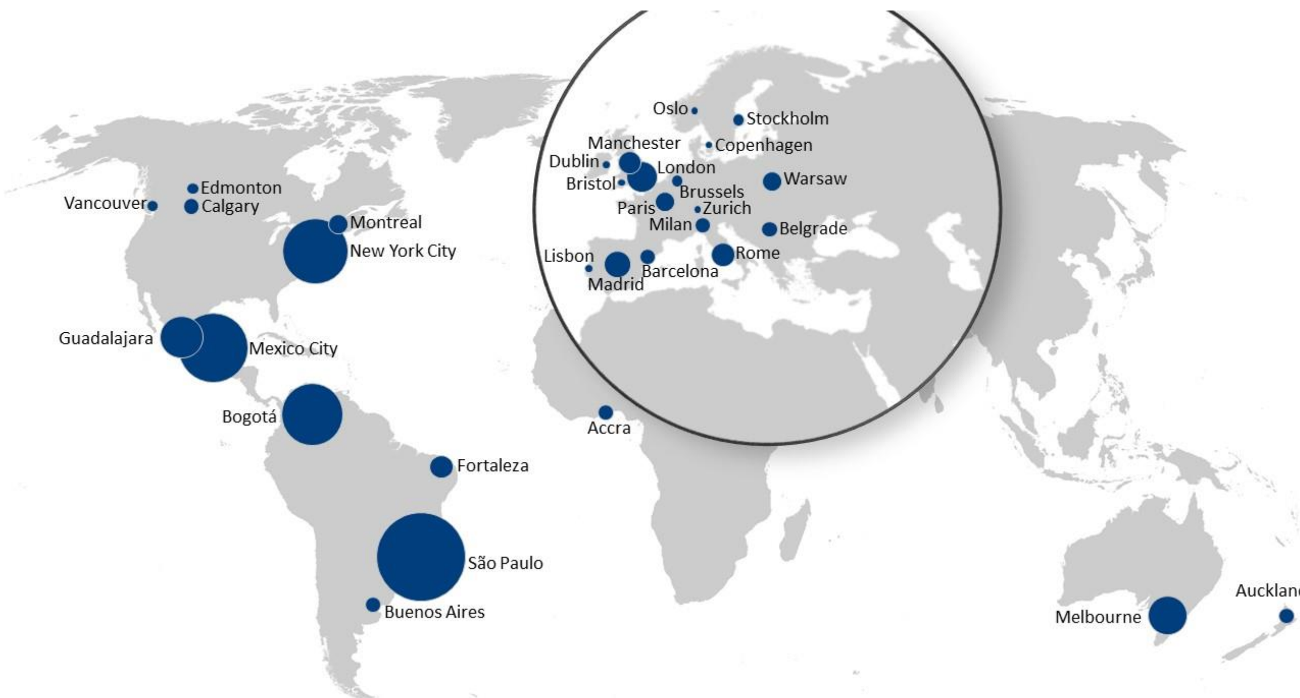
Adopt an integrated urban mobility plan based on Safe System principles

Cities should consider developing a Sustainable Urban Mobility Plan that covers all forms of mobility. Such a plan should prioritise public transport and non-motorised mobility. Regarding road safety, this plan should be based on Safe System principles. From it, a detailed action plan with quantitative targets for the reduction of crash casualties and other safety performance indicators should be developed, implemented and systematically monitored.

Cities participating in this report

The International Transport Forum (ITF) collected road safety data from 32 cities in 22 countries (Figure 1).[1] A full list of the participating cities in this report is provided in Table A1 in the Annex. Three cities involved in comparing performance in previous years were unable to contribute, while one city (São Paulo) is new to the network.

Figure 1. Cities contributing to the ITF Safer City Streets database in 2022



Note: Circle area is proportional to the resident population. The circle area for London represents Inner London. Data for Greater London is also available and used in this report.

The cities show significant differences in land area, population size and density. These differences must be considered in the analysis of road safety data:

- land area varies from 84 km^2 (Lisbon) to 8 800 km^2 (Melbourne)
- population varies from 435 000 (Zürich) to 12 million (São Paulo)
- population density varies from 347 (Auckland) to nearly 21 000 (Paris City) inhabitants per km^2.

To compare road safety performance across cities, road fatalities are controlled for resident population, daytime population, vehicle fleet, and road network length. Where data are available, data are also controlled for trip numbers and traffic volume. For comparisons based on functional urban areas (city plus commuting zone), see ITF (2019).

Some cities have successfully reduced fatal crashes to a low level. The effect is that small annual changes in fatalities have a very large impact on short-term trends, which can result in misleading fluctuations in rates of fatal crashes. A number of steps can be taken to mitigate this effect, and the statistical adjustments usually made in cities are followed in this report. Therefore, three-year averages are used when two periods are compared. So, for example, data points for 2020 are actually average figures for the period 2018-20. Five-year averages are used to calculate risk exposure rates. And the median is used to provide average figures for rates of reduction in casualties to mitigate for small sample effects.

For the average rates of improvement in casualty numbers reported in figures 3 and 4, using raw data or three-year averages makes little difference because of the large overall sample size. Three-year averages are used in Figure 3 and Table A3 in the Annex, while raw data for fatalities is presented in Annex Table A2.

Progress in reducing road deaths and serious injuries

Twenty-six cities have data for the entire 2010-20 period. The number of fatalities recorded in these cities decreased by a third between 2010 and 2020. Most cities achieved reductions in serious injuries over the same period. However, significant differences in performance exist. Although many cities recorded reduced road deaths and serious injuries, only one, Warsaw, achieved the UN target of reducing at least 50% of road traffic deaths and injuries by 2020 as set out in the First Decade of Action for Road Safety.

This chapter examines the trends of the decade 2010-20, analyses traffic safety by mode of transport and compares city-level data with the national average. It should be noted that data are presented as three-year or five-year averages (i.e. 2020 data refer to the average 2018-20 or 2016-20).

Road deaths fell 4% annually

The median rate in the annual reduction of road deaths between 2010 and 2020 was 4% (using raw data, the figure is 3.3%). An overall reduction of 33.3% can be observed for the decade 2010-20 (Figure 3). Most cities reduced road deaths between 2.3% and 5% every year. The reduction of road deaths has accelerated when compared with data from previous years, partly because of the exceptional circumstances experienced in 2020. The median rate in the annual reduction of road deaths for the period 2010-19 was 3.5%. Due to the Covid-19 pandemic and restrictions on movement, 2020 was an exceptional year. However, road deaths fell by 4%, which is not so different from the previous trend. This decline is less than what was expected from the restrictions on mobility (see Box 1 for a discussion), even when accounting for using a three-year average rather than raw annual data.

Box 1. Road safety and the Covid-19 pandemic

Restrictions on movement due to the Covid-19 pandemic affected traffic volumes and patterns worldwide. At the start of the pandemic in 2020, traffic volumes considerably decreased as countries introduced lockdowns. At the national level, overall traffic volumes decreased by 12.2% in 2020 compared to the average for 2017-19 in 11 countries of the International Traffic Safety Data and Analysis Group (IRTAD). The number of road deaths decreased by 8.6% in 2020 across the 34 IRTAD countries compared with the baseline, revealing substantial differences between countries.

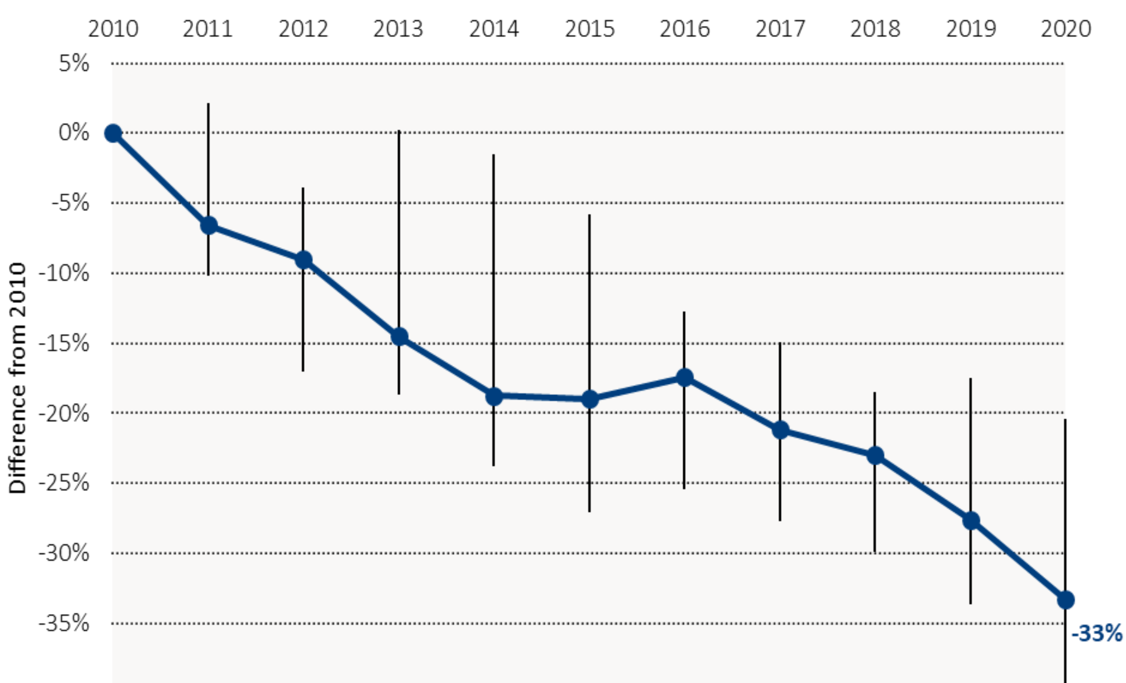
Cities enforced confinement measures resulting in decreased traffic volumes in many urban areas. Data analysis by TomTom showed that traffic volumes decreased between 70% and 85% in many major European cities (TomTom, 2020). Across the seven cities of the Safer City Streets network that collect data on traffic volume, traffic was 18% lower in 2020 than the average for 2016-18, while fatalities decreased by 16%. Injury crashes declined in many cities, but not as much as traffic. Reductions in motor vehicle travel did not necessarily result in fewer injuries and fatalities, as examples from Greater Manchester and Greater London illustrate. One explanation of this is the reported issue of drivers taking advantage of emptier streets, resulting in excessive speeding and increased crash risk.

Figure 2. Bogotá rapidly increased its cycle lane network in response to the Covid-19 pandemic

Source: Alejo Bernal/Shutterstock.

Source: ITF (2021) and Safer City Streets database.

Figure 3. Road traffic deaths, 2010-20



Note: for each year, the dot represents the median percentage change since 2010 across 26 cities. Vertical bars represent the inter-quartile range: observations between the 25th and the 75th percentiles. The number of deaths is captured by a three-year average – for instance, a 2010 value represents the 2008-2010 average.

Source: ITF Safer City Streets database.

Although positive and sustained, the decline in the number of road deaths was still well below the progress needed to achieve the 50% reduction target for the decade. Warsaw was the only city to reach the road safety target included in UN Sustainable Development Goal 3.6 to reduce road deaths by more than 50% between 2010 and 2020[2]. Barcelona and Edmonton also made significant improvements, reducing the number of road deaths by more than 45%, almost meeting the UN target for the First Decade of Action on Road Safety.

The significant improvements in Warsaw were the result of a combination of actions taken at the national and local levels. Measures at the national level include priority for pedestrians at all crossings; a focus on speed management with, for example, the introduction of a uniform speed limit of 50 km/h in built-up areas (until 2020, the limit was 60 km/h at night); increased fines for traffic violations and new regulations for e-scooters and personal transport devices. Measures at the city level include the redirection of heavy vehicle traffic to ring roads and expressways and the expansion of bike lanes and bike-friendly routes. A holistic approach that involves several public actors has helped reduce the number of fatal crashes.

Cities need to reduce the number of road deaths by around 7% per year to achieve the UN's new road safety target to halve the number of road deaths between 2021 and 2030. Warsaw reduced road deaths by 7.9% per year between 2010 and 2020 and will need to maintain that rate to meet the UN target for 2030[3].

Sixteen cities have data for 2021. Road fatalities decreased annually by 3.2% between 2010 and 2021. This is encouraging, as their trend in reducing fatalities was not reversed by the lifting of movement restrictions during the year as Covid-19 pandemic measures eased.

Box 2. Vision Zero and the Safe System

Vision Zero is a strategy that aims to eliminate all road fatalities and severe injuries while increasing safe, healthy and equitable mobility for all. First implemented on the national level in Sweden in 1997, Vision Zero has been adopted by cities around the world. So far, no city providing data to the ITF Safer City Streets database has achieved Vision Zero. A number of cities have nevertheless shown that Vision Zero is a tangible objective, with Helsinki and Oslo reducing the number of pedestrians and cyclists killed in traffic to zero in 2019.

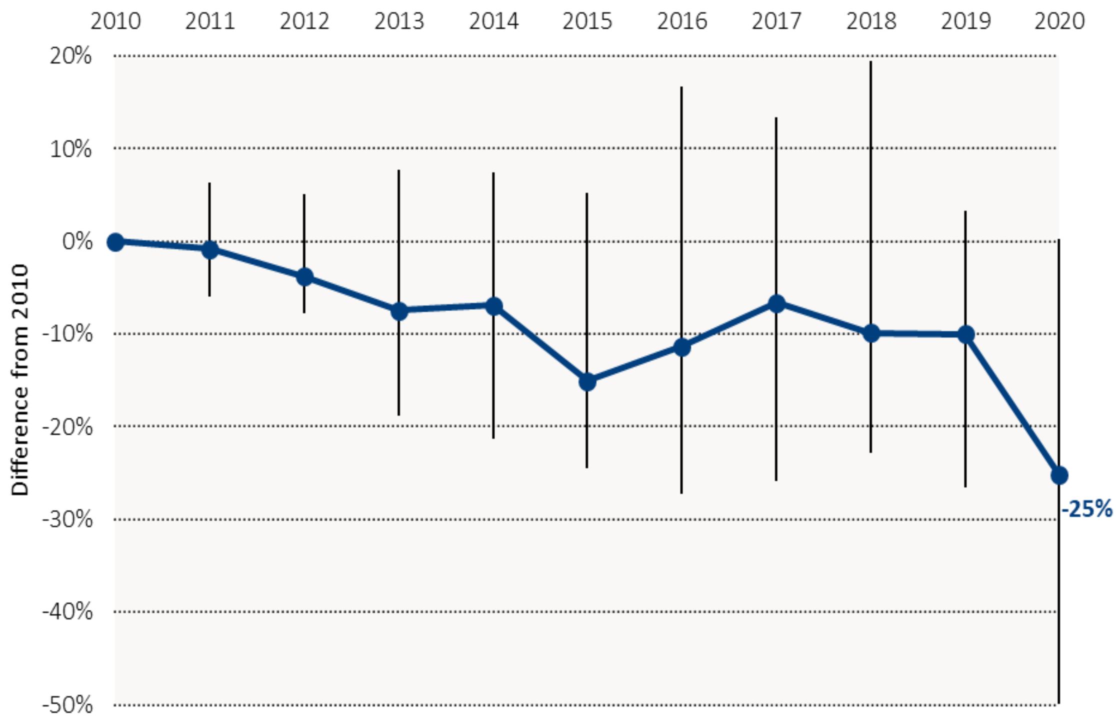
At the core of the Vision Zero strategy is the Safe System, a holistic and proactive safety approach that reduces risks in all areas of the road safety system. The Safe System recognises that humans make mistakes and that policies need to prevent fatal and serious injuries resulting from these mistakes. A system approach, together with shared responsibility between those who design, build, manage and use roads and vehicles, is needed to achieve the goal of zero fatalities and severe injuries.

Source: Vision Zero Network (2022) and ITF (2022).

Serious injuries fell 2.9% annually

Most cities reduced serious injuries between 2010 and 2020. The median annual reduction of serious injuries was 2.9%, resulting in a reduction of 25% over the decade. At the same time, the number of serious injuries increased in five out of 22 cities for which data is available. The data suggest there may have been an acceleration in reductions in serious injuries (Figure 4). However, 2020 was an exceptional year because of movement restrictions in response to the Covid-19 pandemic. Exacerbated under-reporting of injuries was also likely as people tried to avoid going to the hospital.

Figure 4. Serious injuries, 2010-20



Note: for each year, the dot represents the median percentage change since 2010 across 22 cities. Vertical bars represent the inter-quartile range: observations between the 25th and the 75th percentiles.

Source: ITF Safer City Streets database.

Box 3. Injury data and Maximum Abbreviated Injury Scale

The Maximum Abbreviated Injury Scale (MAIS) is a globally accepted injury severity scale. It ranges from 1 (minor injuries) to 6 (non-treatable injuries) and reflects the threat to life associated with the most severe injury across all body regions. Following a recommendation by the ITF (2011), a level of injury of MAIS3+ became the accepted cut-off for a serious injury, with anything below falling into the category of minor injury. The European Commission adopted this definition and published in 2016 for the first time a figure for the number of people seriously injured on Europe's roads: 135 000 serious injuries in 2014 (European Commission, 2016).

Several methods exist to collect robust, comparable injury data; many are documented in ITF (2011), FERSI (2016) and SafetyCube (2016). They are classified into three groups by the European Transport Safety Council (Adminaite et al., 2018):

1. continue to use police data but apply a correction coefficient based on samples
2. report the number of injured based on data from hospitals
3. create a link between police and hospital data.

Source: Santacreu (2018).

Cities have adopted different definitions of serious injuries. Therefore, difficulties with collecting and comparing injury data between cities have to be considered.

The ITF Safer City Streets database monitors two indicators for the number of serious injuries:

1. the number of people hospitalised for 24 hours or more, excluding those who die within 30 days
2. the number of people whose injuries are assessed at level 3 or more on the Maximum Abbreviated Injury Scale (MAIS), which is optimal for international comparisons but is used in fewer cities.

Traffic safety by transport mode

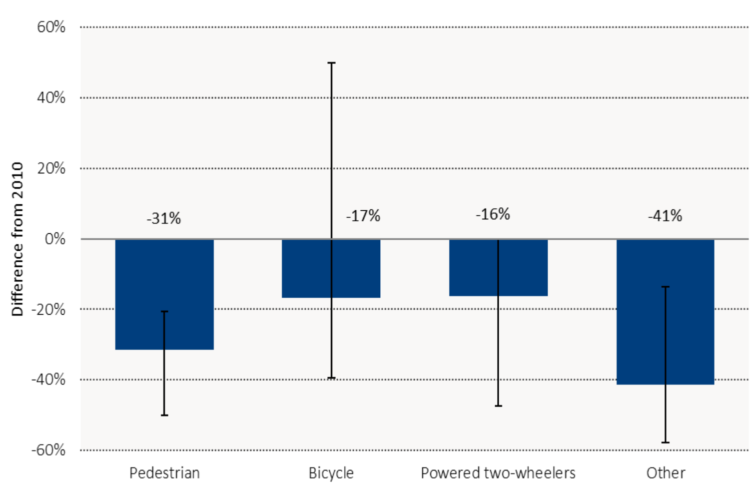
Road traffic deaths vary across transport modes and user groups. The reduction in the number of deaths and serious injuries is slower among vulnerable road users and slowest among powered two-wheelers.

Since 2010, the number of pedestrian fatalities has fallen in 22 out of 25 cities. Across all cities, pedestrian fatalities typically fell by 3.7% per year, adding up to 31.5% over ten years, using median values (Figure 5).

Since 2010, the number of cycling fatalities has fallen in only 13 out of 25 cities. Considering median values across 25 cities, the reduction in cycling fatalities stands at 1.8% per year, adding up to 16.7% over ten years. This relatively small improvement can be partly explained by the increase in people cycling during the last decade. In comparison, the number of car and truck occupant fatalities fell nearly three times faster, by 5.2% per year, or 41.3% over the decade (Figure 5).

Serious injury trends diverge even more across transport modes. The number of serious cycling injuries increased in 14 cities and fell in only five. Considering median values across 19 cities, the number of serious cycling injuries increased by 1.9% per year or 21% over the ten-year period. In comparison, the number of seriously injured fell across all other user groups. Among car and truck occupants, they fell by 3.9% per year or 32.6% over the decade (Figure 6).

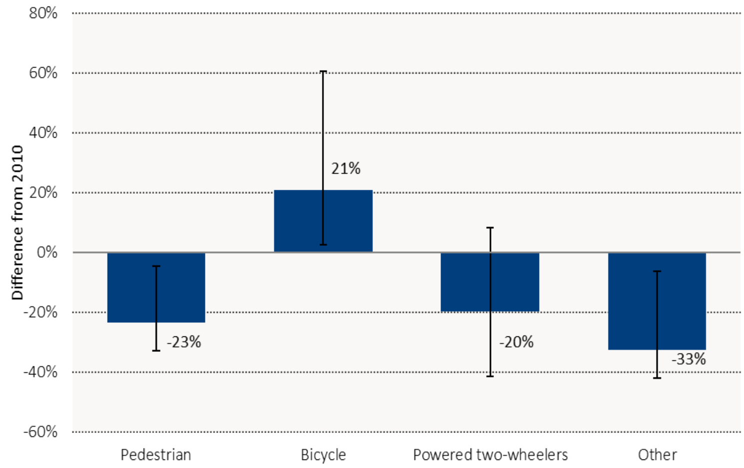
Figure 5. Road traffic deaths by mode, 2020



Note: for each mode, the chart represents the median percentage change across 25 cities. Vertical bars represent the interquartile range, which is the range of values observed in half of the cities. The number of deaths is captured by a three-year average – i.e., a 2010 value represents the 2008-10 average.

Source: ITF Safer City Streets database.

Figure 6. Serious injures by mode, 2020



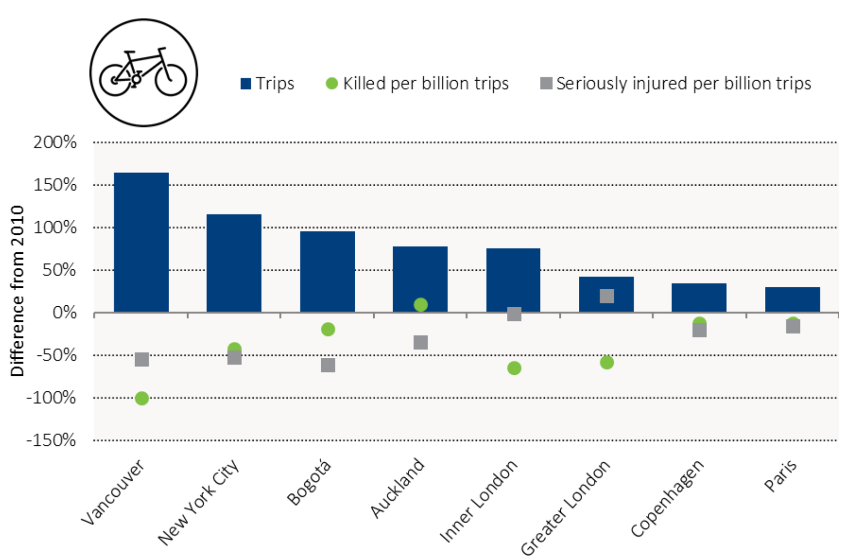
Note: for each mode, the chart represents the median percentage change across 19 cities. Vertical bars represent the interquartile range, which is the range of values observed in half of the cities. The number of seriously injured is captured by a three-year average – i.e., a 2010 value represents the 2008-10 average.

Source: ITF Safer City Streets database.

Cycling safety

As shown above, the reduction of road traffic deaths among cyclists is the slowest out of all transport modes and cycling injuries increased by 21% between 2010 and 2020.

Figure 7. Cycling trips and risk per trip, 2020



Note: the chart represents the percentage change from the 2008-10 average to the 2018-20 average. Killed and seriously injured are expressed per billion trips.

Source: ITF Safer City Streets database.

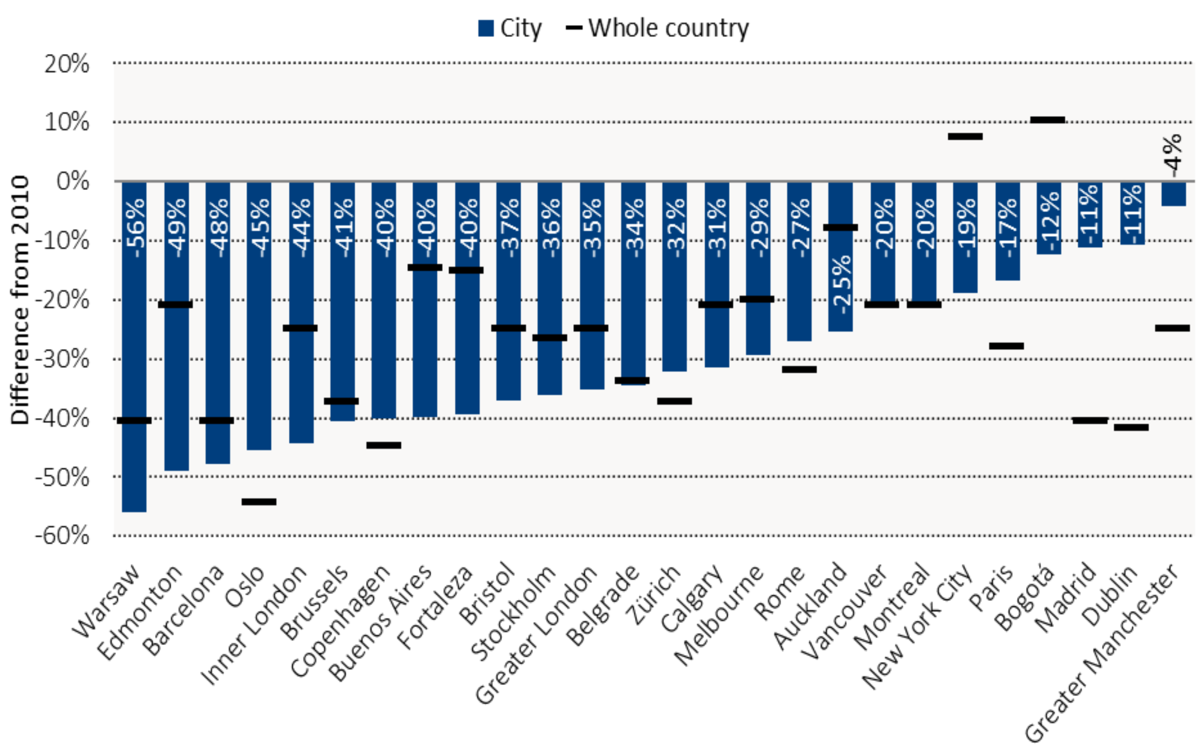
At the same time, Figure 7 shows that cycling has become more popular in many cities. The number of cycling trips increased by more than 50% in London, Auckland and Bogotá and more than doubled in New York City and Vancouver.

In all cities, the number of trips increased more than the number of cyclist deaths and injuries (Figure 7). This shows that cycling became safer over the ten-year period. Cycling additionally delivers public health benefits associated with increased physical activity and improved air quality.

Road traffic deaths in cities compared to the national average

Sixteen out of 26 cities have outperformed national progress in reducing fatalities. This is most remarkable in Edmonton, New York City, Buenos Aires and Fortaleza (Figure 8). These cities were successful in significantly reducing road fatalities thanks to the implementation of robust and data-driven road safety policies, many of which have been documented in previous reports from the Safer City Streets initiative (ITF, 2021; ITF, 2020a). The reduction of road traffic deaths in cities compared to an increasing national average is particularly striking in New York City and Bogotá.

Figure 8. Change in road traffic deaths by city and country, 2010-20



Note: the number of deaths is captured by a three-year average in both cities and countries. The chart, therefore, represents the percentage change from the 2008-10 average to the 2018-20 average.

Source: ITF IRTAD database, ITF Safer City Streets database.

Road fatalities in New York City decreased by 18.9% from 2010 to 2020 compared to an increase of 7.4% in the entire country in the same time period. New York City adopted a Vision Zero strategy in 2014 that combines improved street design, expanded enforcement and penalisation of violations like speeding as well as better education and public campaigns. Similarly, Bogotá recorded a decrease in road deaths by 12.3%, while numbers in the entire country increased by 10.3% between 2010 and 2020. An ambitious Vision Zero approach based on a Safe System and high-quality data was the basis for significant progress. The provision of public transport and speed management based on a data-driven Vision Zero approach contributed to the positive trend of reduced road fatalities in Bogotá. The public consultation and communications strategies employed by the city to develop support for reduced speeds on commuting corridors, coupled with automated enforcement systems, have been particularly successful.

Benchmarking urban road safety

The ITF published the first global benchmark of urban road safety in 2018 (Santacreau, 2018). The report revealed significant differences in road safety performance between the cities of the Safer City Streets network. A second monitoring report was published in 2020 and re-examined the differences between cities with data from 2016-18 (ITF, 2020b). The present report uses new data up to 2020 to continue monitoring the progress in cities' road safety performance.

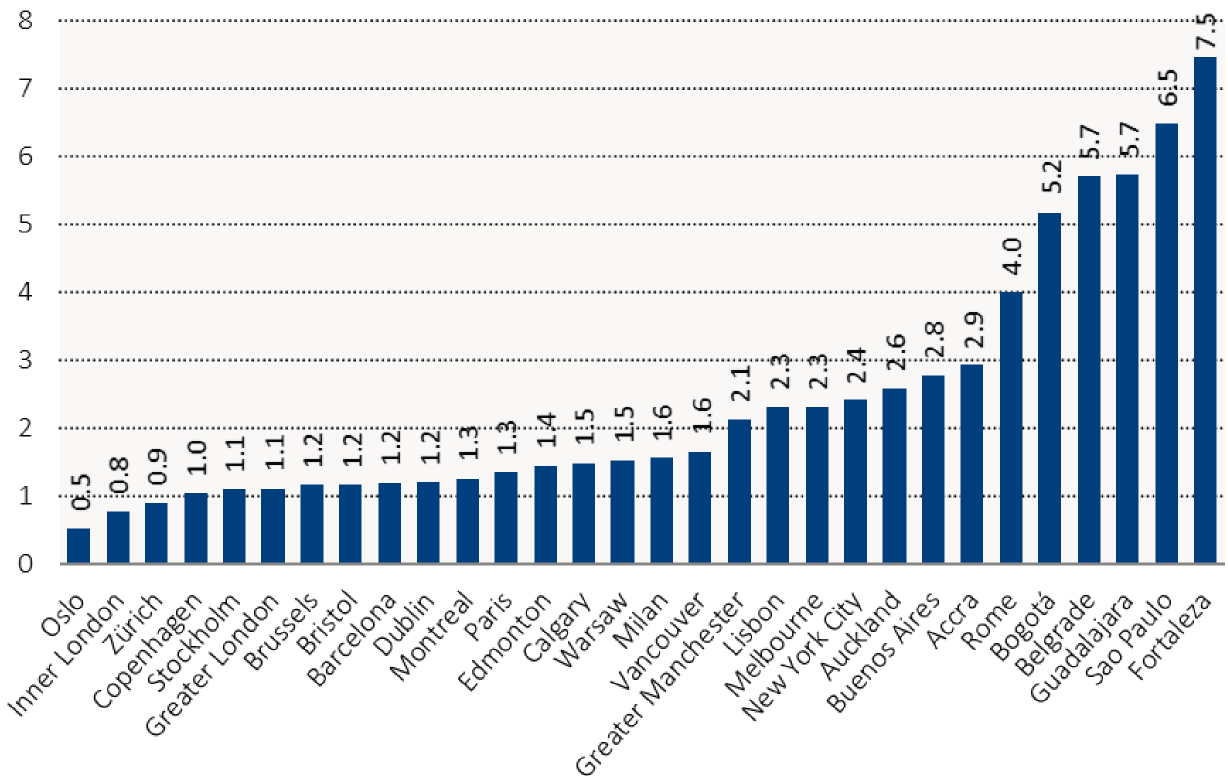
Like in previous reports, the trends have been smoothed using three-year or five-year averages. This mitigates the potential for reporting misleading developments from the large fluctuations that can result from year-on-year changes in relatively small absolute numbers. This also mitigates the impact of the Covid-19 pandemic on results. Nevertheless, for exposure data, it was difficult to estimate the effect of Covid-19 restrictions, in particular for daytime population and traffic volume.

Road deaths in cities

Mortality is a frequently used indicator to benchmark road safety performance. It is defined as the ratio of road traffic deaths over the number of inhabitants. However, as the number of inhabitants does not always account for the true level of transport activity, cities are encouraged to estimate their daytime population. As in previous Safer City Streets benchmarking reports, daytime population is therefore used for a more accurate estimation of risk exposure and for a more robust benchmarking result.

The number of fatalities recorded ranges from 0.5 to 7.5 per 100 000 daytime population (Figure 9). The results reflect a wide range of situations, with a median of 1.5 fatalities per 100 000 population per year and the highest value as five times this amount. These new figures with data up to 2020 confirm the large performance gaps between cities and suggest that progress can be made in most cities by learning from each other.

Figure 9. Road traffic deaths per 100 000 daytime population, average 2018-20



Note: daytime population is the sum of the resident population and the net influx of commuters.

Source: ITF Safer City Streets database.

Road deaths by mode

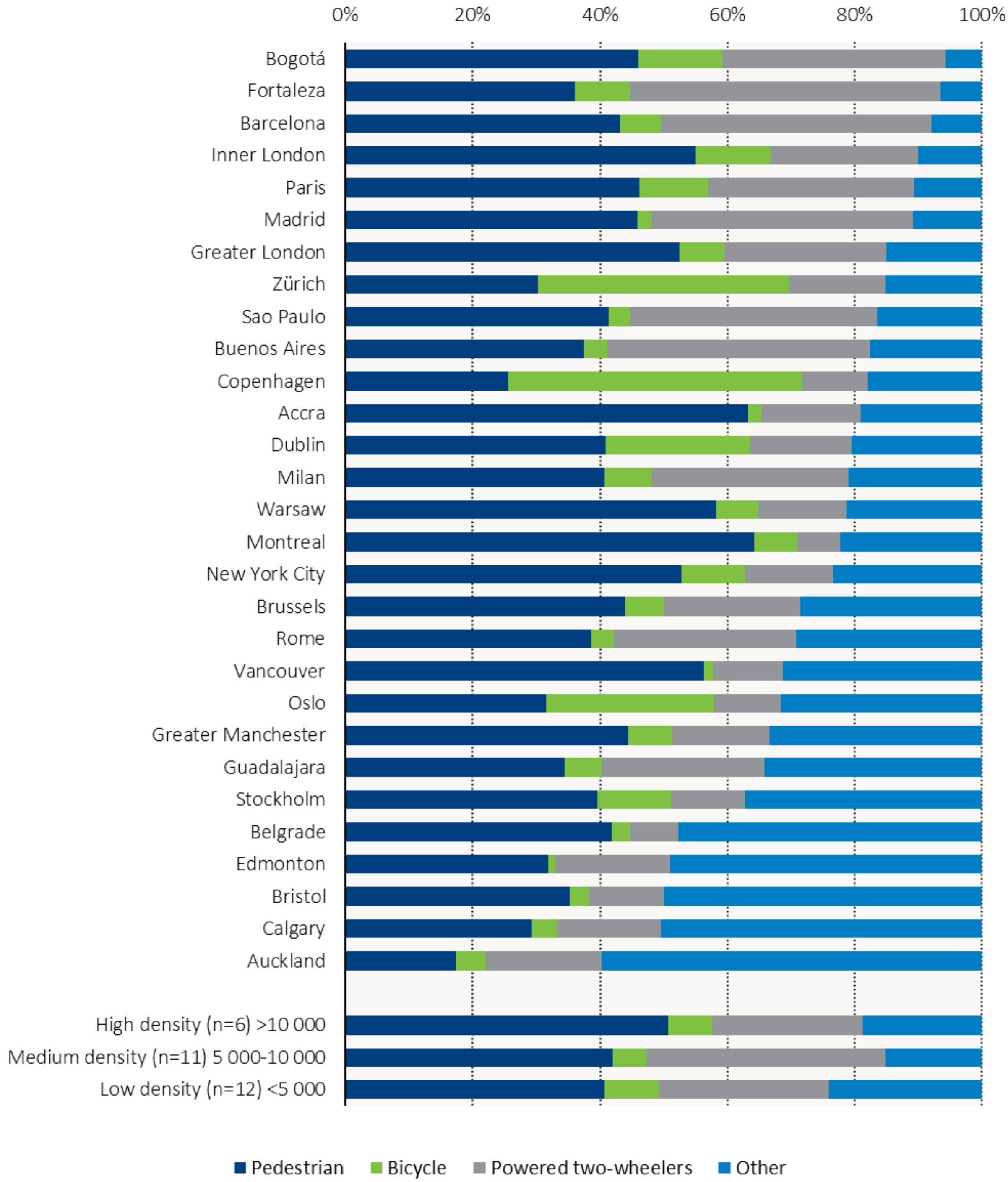
Pedestrians, cyclists and riders of powered two-wheelers represent over 50% of road traffic deaths in almost all cities (26 out of 29) that provide data on transport modes (Figure 10).

Vulnerable road users (VRUs) represent particularly high numbers of road fatalities in cities with high population density because a much larger share of the population walks and cycles in these cities. Figure 10 should not be interpreted as a risk analysis. The high share of cyclists among fatalities in some cities (e.g. Copenhagen, Oslo and Zurich) is due to a large proportion of cycling trips rather than an unsafe cycling environment.

In the six cities with over 10 000 inhabitants per square kilometre, 81% of road fatalities are VRUs. The data confirm that policymakers should prioritise the protection of vulnerable road users, as they constitute the great majority of fatalities on urban roads. Cities with particularly large shares of VRUs, such as Bogotá, Fortaleza and London, have reported success with an intervention that combines speed management and allocation of protected space for walking and cycling (ITF, 2021). Cities with a high proportion of pedestrian fatalities, such as Accra, Montreal and Vancouver, should intensify their efforts to investigate these high numbers and set policy priorities accordingly.

Figure 10. Modal share of road fatalities by city, average 2016-20

Percentage



Note: low population density (n=12) is less than 5 000 inhabitants per square kilometre, medium (n=11) is less than 10 000, and high (n=6) is 10 000 and above. Where cities are grouped, the chart represents the unweighted average across cities in the group.

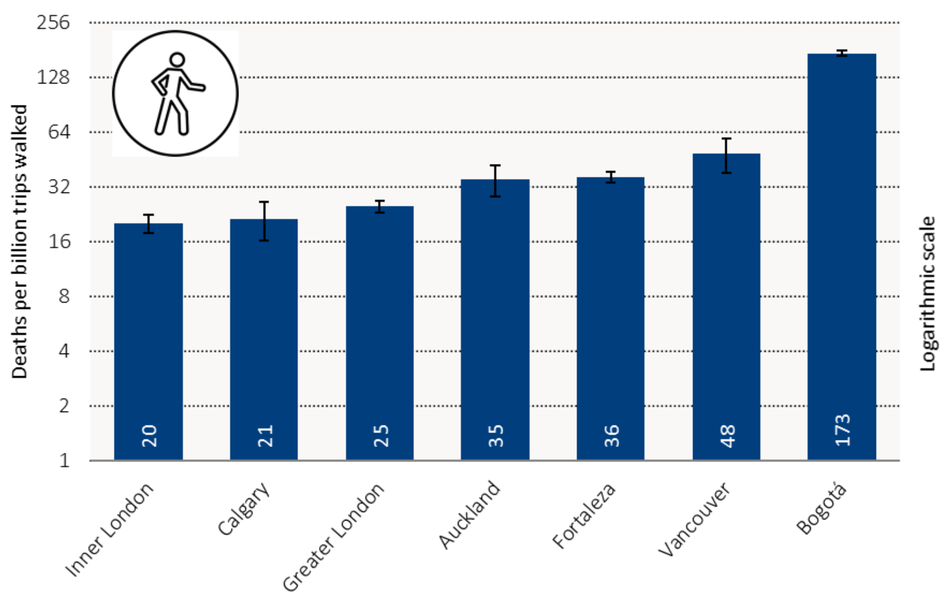
Source: ITF Safer City Streets database.

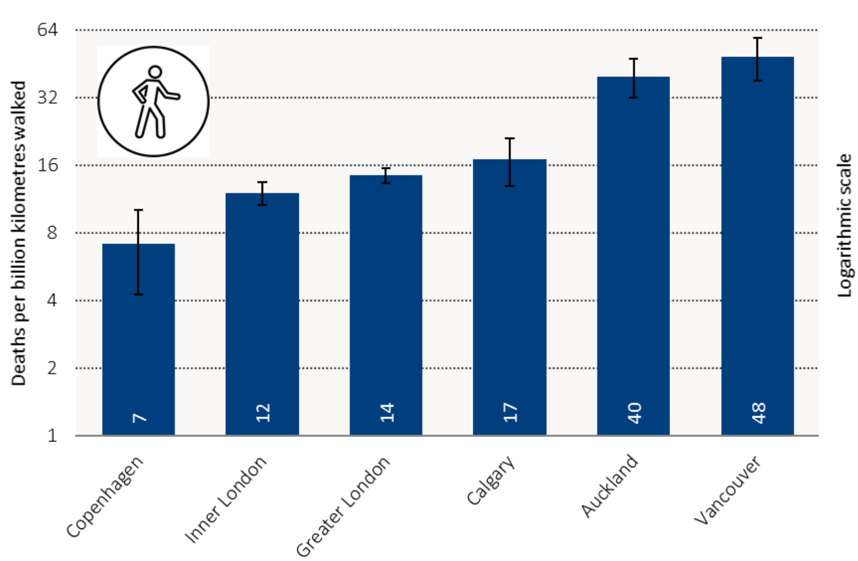
Pedestrian safety

Large variations in the safety of walking can be observed across cities. Figure 11 presents two indicators that capture the likelihood of dying in a crash while controlling for the number of trips or kilometres walked. London and Copenhagen are the safest cities to walk in out of the seven cities that provided data.

Figures 11, 13 and 15 include confidence intervals, which reflect the statistical uncertainty that comes from the observation of a relatively small number of events. The higher the number of deaths in a city, the more accurate the walking risk estimate.

Figure 11. Pedestrian fatality risk across cities, average 2016-20





Note: vertical bars represent 80% confidence intervals based on the observed number of deaths.

Source: ITF Safer City Streets database.

Box 4. Safer walking in Fortaleza

A growing number of cities are making improvements to pedestrian safety. The "Lively Sidewalk" program in Fortaleza aims to make walking more attractive and increase pedestrian mobility. Before implementation, many pedestrians were forced to walk on the road between motor vehicles. Low-cost and fast-implementation materials – paint, benches, bollards and planters – made it possible to reduce the number of pedestrians walking in the road by 92%. The program was also successful at reducing speeds above 30 km/h and 40 km/h by 65% and 84% respectively, decreasing the risk and severity of crashes.

Figure 12. Rapid sidewalk extension in Fortaleza

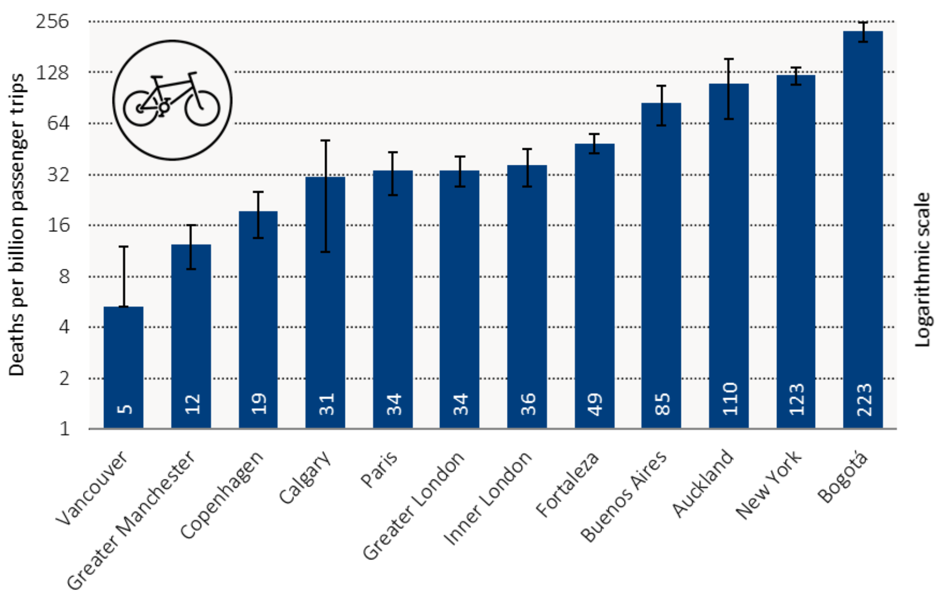
Source: Paulo Winz/GDCI.

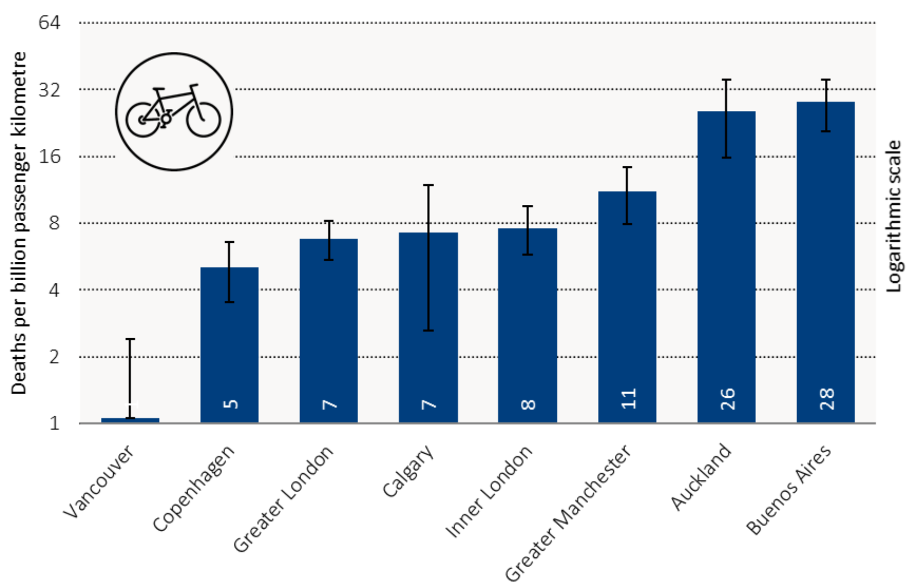
Source: ITF (2021).

Cycling safety

Figure 13 identifies Vancouver and Copenhagen as the safest cities for riding a bike. The large differences between cities can be interpreted as room for progress. Several cities with significantly higher risks for cycling can learn from the better-performing cities that have implemented successful safety measures. The cities with a high crash risk for cycling include Bogotá, New York, Auckland and Buenos Aires.

Figure 13. Cycling fatality risk across cities, average 2016-20





Note: vertical bars represent 80% confidence intervals based on the observed number of deaths.

Source: ITF Safer City Streets database.

Box 5. Safer cycling in London

Several cities use light protection of cycling lanes to increase cycling safety. This consists of the use of physical objects such as low profile separators, planters or flexible posts intermittently placed alongside a cycle lane marking to give additional protection from motorised traffic.

The first project in the United Kingdom using light protection to protect cyclists from traffic was implemented in the Camden district of northwest London. As part of a wider policy to improve conditions for cycling, the project aimed to test the concept of light protection as a quick and low-cost measure.

Figure 14. Flexible posts to separate cyclists from motorists

Source: Saruntorn Chotchitima/Shutterstock.

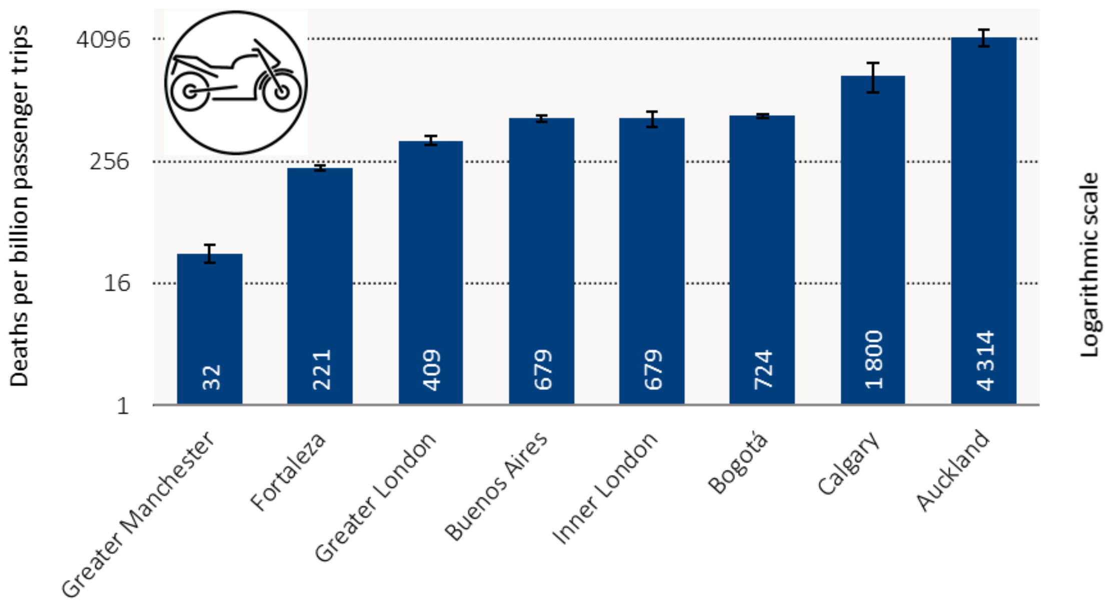
A before-and-after study revealed a 50% reduction in both the number of crashes involving cyclists and the severity of resulting injuries. This reduction was achieved while the total number of people cycling in both directions increased by 70%.

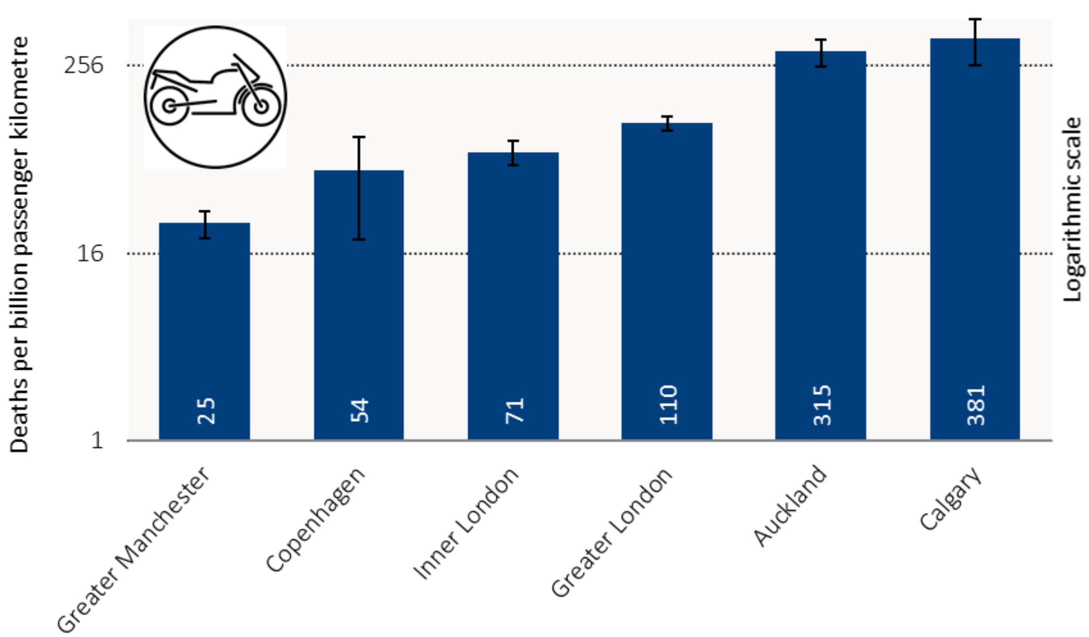
Source: ITF (2021).

Powered two-wheeler safety

The safety of riding motorcycles and scooters varies significantly across cities. Greater Manchester is a relatively safer city to drive a powered two-wheeler when compared to other cities that provided data. In comparison with risk levels observed for walking and cycling, the risk of riding a motorcycle or a moped is very high. This underlines the importance of providing good public transport, cycling and walking alternatives for equitable mobility.

Figure 15. Powered two-wheeler fatality risk across cities, average 2016-20





Note: vertical bars represent 80% confidence intervals based on the observed number of deaths.

Source: ITF Safer City Streets database.

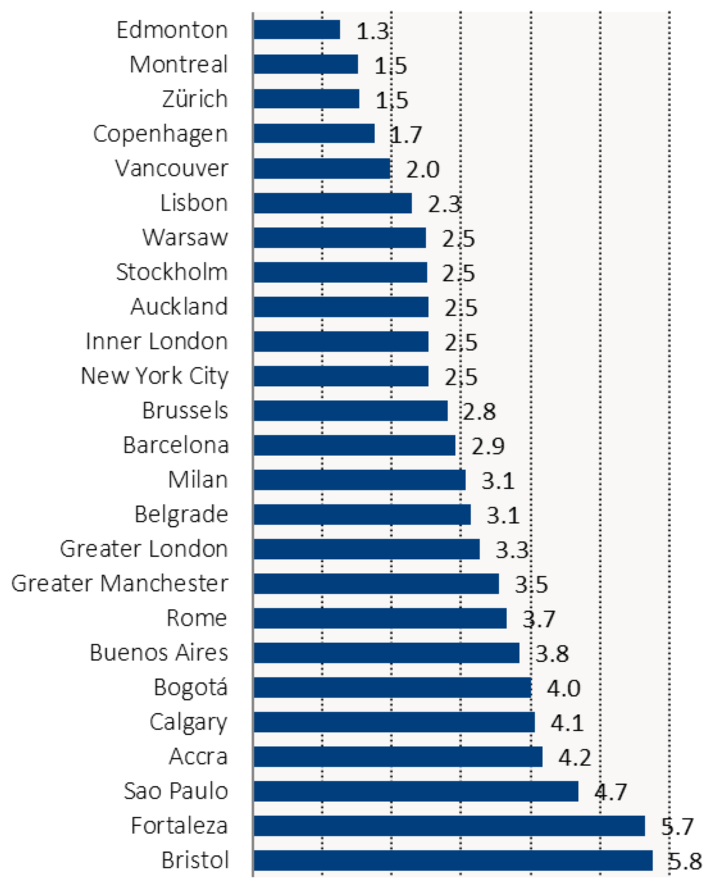
Road deaths by gender and age

Men are over-represented in road traffic deaths. In the vast majority of cities (21 out of 25), they are at least twice as likely to be killed in traffic in comparison to women (Figure 16).

Figure 16 shows for each city the ratio of male to female fatality rates. A ratio of 1 indicates an equal risk for men and women. This ratio varies significantly across cities, from values close to 1 in Edmonton, Montreal and Zurich to values of almost 6 as observed in Fortaleza.

Part of the gender gap may be explained by different travel patterns between men and women. In many cities, men travel more than women. Additionally, women often travel during off-peak times and travel shorter distances. Men also tend to have riskier behaviour and cycle and use motorcycles more often.

Figure 16. Ratio between male and female fatalities, average 2016-20



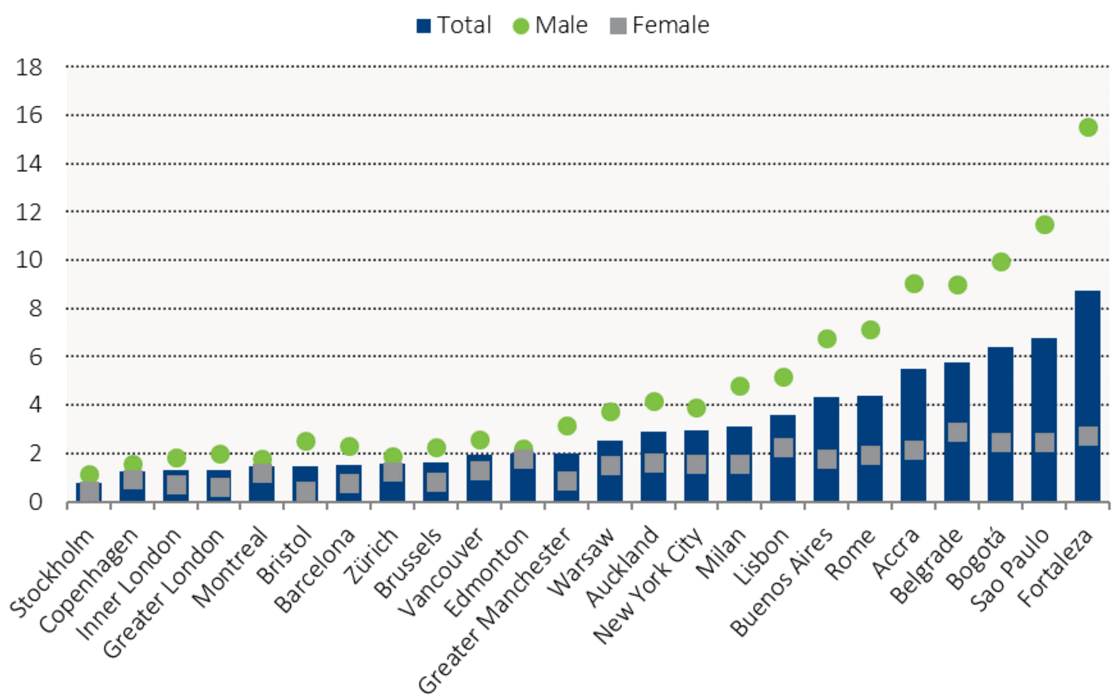
Note: the ratio controls for the male and female resident populations but does not control for differences in mobility patterns. The high figure in Bristol results from an overall small number of road fatalities.

Source: ITF Safer City Streets database.

A gender perspective on road safety could be a policy priority for some cities to reduce their overall mortality figures. Cities with the highest overall mortality are those where male and female mortality differ the most (Figure 17). These cities include Fortaleza, Bogotá, Belgrade, Accra, Rome and Buenos Aires.

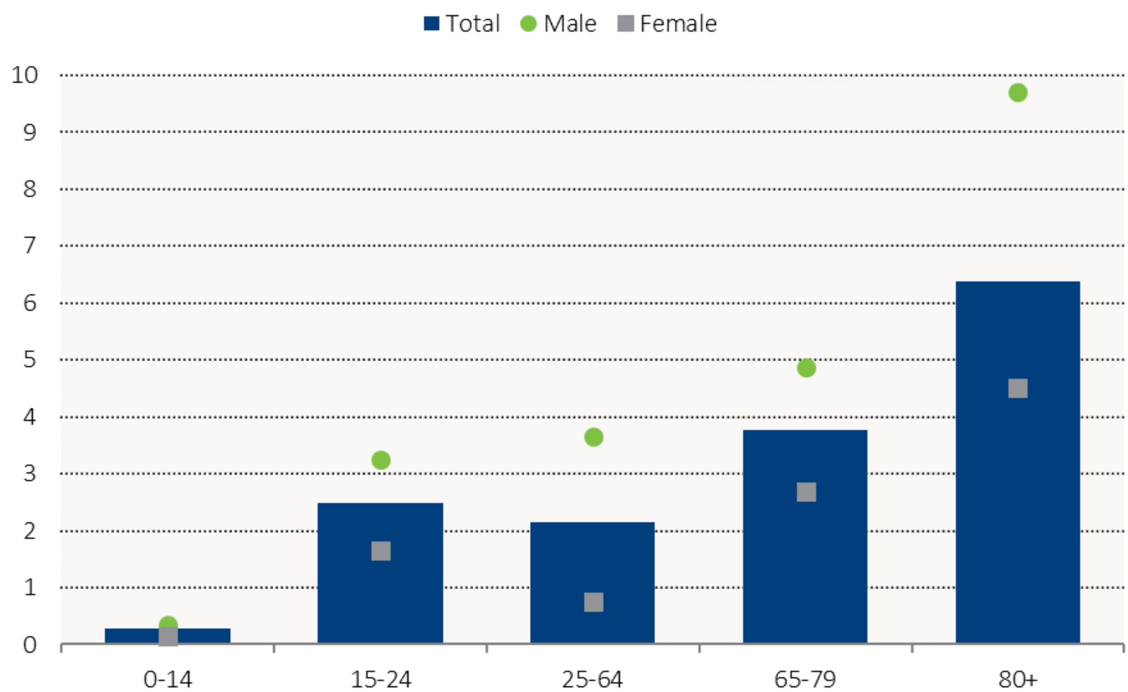
Monitoring the causality risk of different age groups can be key to developing policies that reduce road mortality. Age has a significant impact on mortality, and it is therefore recommended to control for this factor. Figure 18 demonstrates that the most significant gender differences are observed in populations aged 25-64 and 80+. This is mainly due to different travel patterns during working age (women use more public transport and are more risk-averse) and in old age (older women leave the house less often). The figure shows that mortality rates increase with age. The figures indicate that senior citizens are increasingly at risk in cities. A possible explanation for this trend is the growing share of seniors in the population.

Figure 17. Fatalities per 100 000 population by gender and city, average 2016-20



Source: ITF Safer City Streets database.

Figure 18. Fatalities per 100 000 population by gender and age, average 2016-20



Note: median values across 21 cities.

Source: ITF Safer City Streets database.

Box 6. Road safety and gender in Mexico City

Mexico City is not included in the accompanying figures because of a break in series in their data resulting from a change in methodology. However, the city has undertaken a detailed analysis of mobility patterns revealing that men and women travel for different purposes and at different times of the day. Women in Mexico City travel mainly in off-peak hours for care-related trips. Regarding the mode of transport, women drive and cycle less but walk considerably more than men. This analysis resulted in Mexico City focusing on pedestrian mobility to improve gender equity in the development of road safety policies.

Figure 19. Improved street lighting under Mexico City's Walk Free Walk Safe programme

Source: SEMOVI/CDMX.

The city's "Walk Free, Walk Safe" programme aims at improving street lighting and pedestrian crossings. The program has treated 117 crosswalks and 222 km of sidewalks, reducing fatalities by 32% at treated locations. Other initiatives addressed a redesign of streets adapted to women's safety needs by replacing pedestrian bridges with pedestrian crossings. Education programs were also introduced, such as establishing bike schools for women.

Source: Rivera Flores (2021).

Road user behaviour in cities

Despite the undisputed value of helmets for motorcycling safety, Table 1 reveals significant differences in helmet-wearing rates across cities. While most cities record a rate of helmet use above 90%, other cities record much lower rates. Frequent collection of this indicator could help authorities evaluate the success of their education and enforcement campaigns.

For cyclists, helmet-wearing rates vary between 22% (Buenos Aires) and 85% (Stockholm), according to surveys and roadside observations in eight cities (Table 1), even if wearing a helmet is not compulsory for adult cyclists. However, it should be noted that the city with the lowest cycling fatality rate, Copenhagen, does not record a high helmet-wearing rate. This demonstrates the importance of other elements of Safe System policies for safe cycling behaviour.

Table 1. Protective equipment wearing rate by city

Percentage

City	Helmet		Seat belts in passenger cars			
	Bicycle	Powered two-wheelers	Child restraint	Driver	Front seat passenger	Rear seat passengers
Accra	..	69	23	..	21	..
Auckland	89	..	92	..	97	86
Belgrade	..	85	59	88	86	33
Bogotá	..	100	18	89	77	10
Bristol	..	..	..	99	97	93
Brussels	47	99	92	95	94	..
Buenos Aires	22	33	44	74	63	19
Copenhagen	43	89	..	96	..	85
Dublin	40	99	..	96	97	82
Fortaleza	..	95	39	87	85	97
Lisbon	36	..	..	..	..	..
Melbourne	..	..	..	97	97	97
Montreal	44	..	..	98	98	..
Sao Paulo	..	..	..	98	..	..
Stockholm	85	..	..	98	98	..
Warsaw	..	99	99	98	99	85

Source: ITF Safer City Streets database.

The data reveals that the use of seat belts remains far from universal in cities: it ranges from 61% to 99% on front seats. In particular, the use of seat belts on rear seats remains much lower. In Bogotá and Buenos Aires, no more than 20% of rear-seat passengers wear a seat belt, whereas over 60% of drivers wear one.

Policymakers should monitor behaviours and attitudes and vehicle design to explain the low wearing rates of protective equipment in some cities. Other behavioural factors, particularly attitudes towards speeding, should also be monitored.

Survey methods and definitions vary across countries. The data in Table 1 thus require careful interpretation.

Alternative road safety indicators

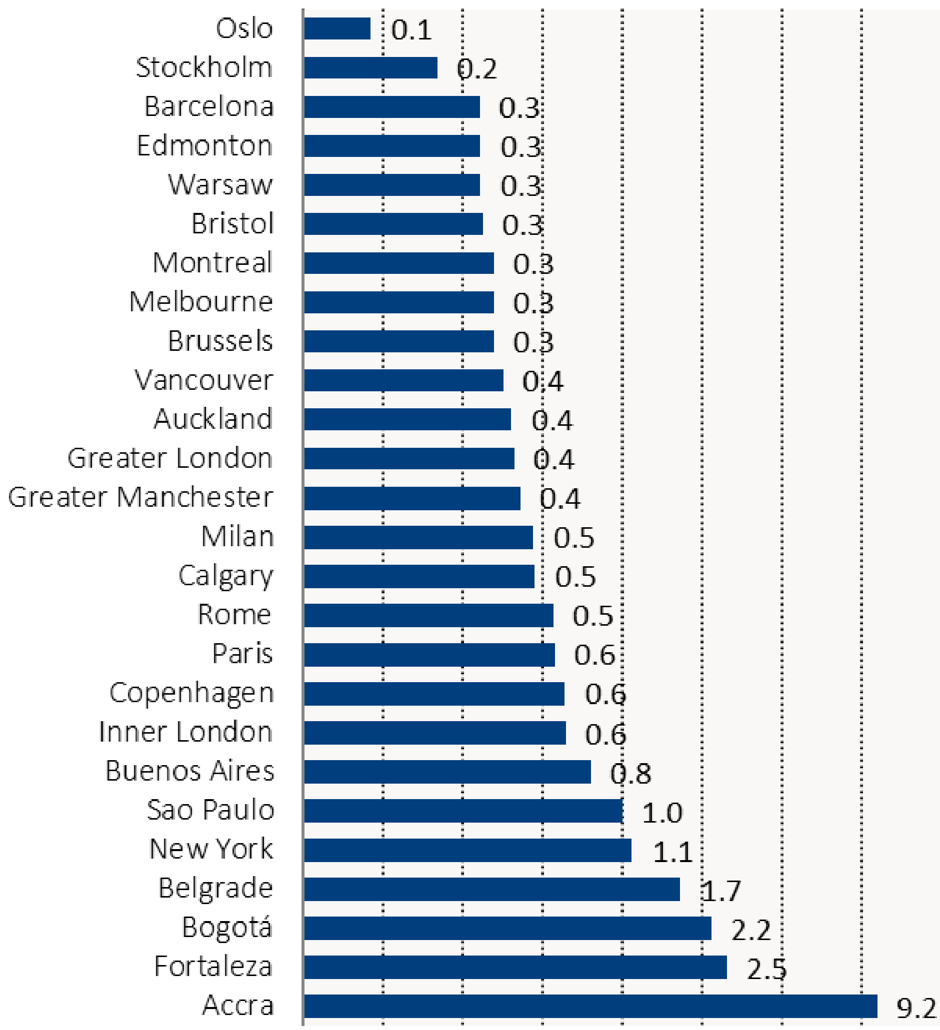
Several alternative road safety indicators are frequently used for the additional insights they provide. The three indicators presented here share a common focus on the number of road traffic fatalities – that is, the sum of road deaths across all modes – but differ in the choice of the denominator: the vehicle fleet, volume of traffic and length of the road network.

Controlling for the size of the vehicle fleet, the number of fatalities in Fortaleza is over twenty times higher than in Oslo and fatalities in Accra are over ninety times higher than in Oslo (Figure 20). This supports the case for high vehicle safety standards, such as Intelligent Speed Assistance, but also passive safety solutions to reduce the impact of a crash on pedestrians and other vulnerable road users. It also reflects the high numbers of pedestrians and cyclists exposed to crash risk as a result of inadequate infrastructure for safe road use in cities with the lowest levels of car ownership.

When controlling for the volume of motor vehicle traffic, the indicator reveals that Brussels has ten times more fatalities than Oslo (Figure 21). This indicator generally reveals higher fatality rates in areas that are the most densely populated, likely because of a high number of vulnerable road users (VRUs) and the high likelihood of conflict between VRUs and motor vehicles. Note, however, that the cities reporting data on the volume of motorised traffic are all in high-income countries.

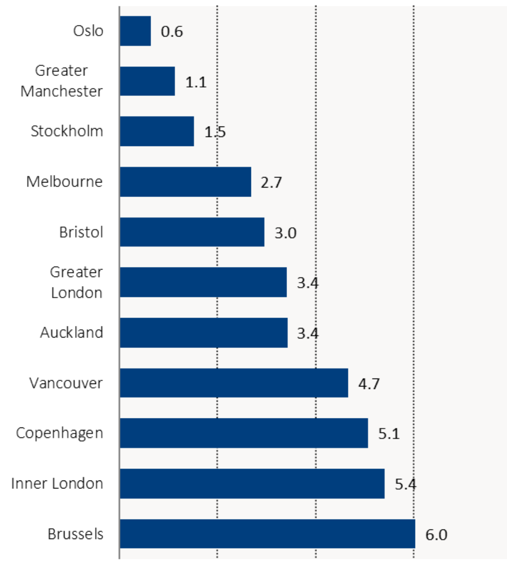
When controlling for the length of the road network, Figure 22 shows that Fortaleza has almost fifty times more fatalities than Oslo. This indicator reflects differences in the urban fabric, with some cities having larger blocks served by wider, busier streets. Such cities would particularly benefit from changes in street design. Safe street design can effectively reduce road fatalities, as discussed in ITF (2021).

Figure 20. Fatalities per 10 000 registered vehicles, average 2016-20



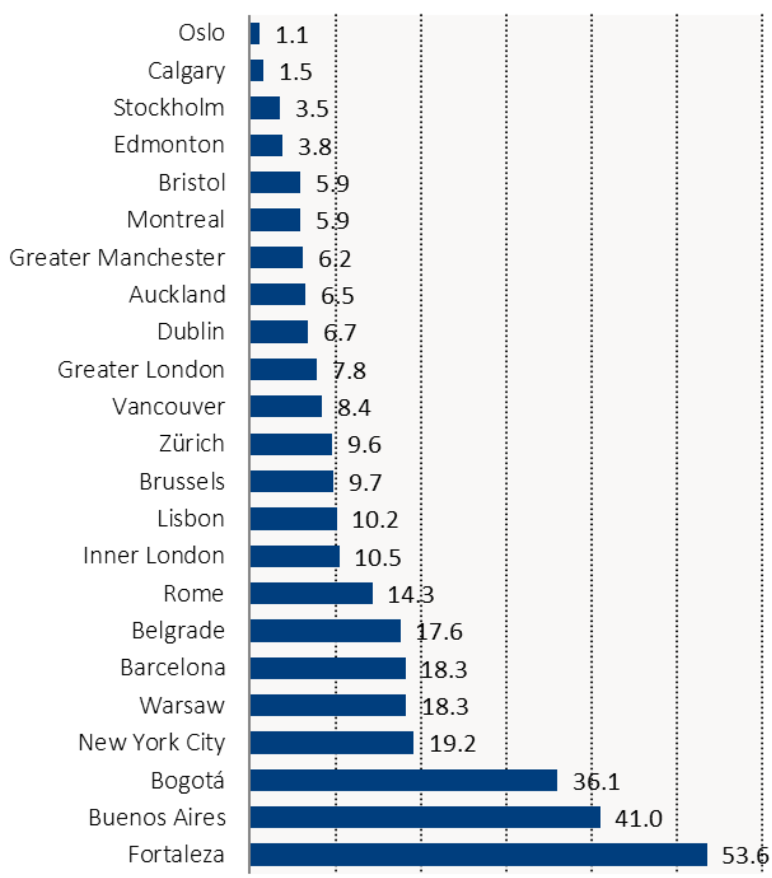
Source: ITF Safer City Streets database.

Figure 21. Fatalities per billion vehicle-kilometre, average 2016-20



Source: ITF Safer City Streets database.

Figure 22. Fatalities per 1 000 km of road network length, average 2016-20



Source: ITF Safer City Streets database.

Notes

1 This document reports on data collected directly from cities. The ITF does not commission independent data audits in the participating cities to fully assess the level of accuracy of each data contribution but runs a number of quality control procedures. This involves internal consistency checks, comparison with alternative sources, and comparison with known values in comparable regions. In addition, the ITF collects relevant information on the data sources and survey methods in order to apply correction factors where needed. Some data gaps have been addressed by simple interpolation between years for which data exists. This mainly concerns computation of five-year averages for which the denominator (e.g. population, traffic, trips, etc.) is missing where travel survey data is not collected every year. In spite of the heterogeneous quality of the data analysed in this document, publication of road safety and mobility figures at the city level is important, especially because circulation of the indicators among the Safer City Streets network maximises the level of scrutiny given to the data and helps correct inaccuracies.

2 The Sustainable Development Goal (SDG) 3 aims to ensure healthy lives and promote well-being for all at all ages. As part of this goal, UN target 3.6 initially aimed to halve the number of global deaths and injuries from road traffic accidents by 2020 compared to 2010. With the new resolution on road safety by the UN General Assembly in 2020, the target date has been adjusted and extended to 2030 with 2021 as baseline.

3 In September 2020, the UN General Assembly adopted resolution A/RES/74/299 "Improving global road safety", proclaiming the Decade of Action for Road Safety 2021-2030, with the target of preventing at least 50% of road traffic deaths and injuries by 2030 over the period 2021-30. Progress made during the First Decade of Action for Road Safety 2011-2020 has laid the foundation for the new Decade of Action.

References

Adminaite, D. et al. (2018), *Ranking EU Progress on Road Safety*, European Transport Safety Council, https://etsc.eu/wp-content/uploads/PIN_AR_2018_final.pdf (accessed 26 April 2022).

FERSI (2016), *Country Survey: State of the art of MAIS 3+ assessment in the FERSI Member States and EU/EEA countries*, https://afzenderonbekend.nl/fersi/wp-content/uploads/2019/02/160301-MAIS3.pdf (accessed 26 April 2022).

ITF (2022), *The Safe System Approach in Action*, OECD Publishing, Paris, https://www.itf-oecd.org/safe-system-approach-action-experience-based-guide-enhanced-road-safety.

ITF (2021), "Road Safety in Cities: Street Design and Traffic Management Solutions", *International Transport Forum Policy Papers*, No. 99, OECD Publishing, Paris, https://www.itf-oecd.org/road-safety-cities-street-design-management.

ITF (2020a), "Best Practice for Urban Road Safety: Case Studies", *International Transport Forum Policy Papers*, No. 76, OECD Publishing, Paris, https://www.itf-oecd.org/best-practice-urban-road-safety.

ITF (2020b), "Monitoring Progress in Urban Road Safety", *International Transport Forum Policy Papers*, No. 79, OECD Publishing, Paris, https://www.itf-oecd.org/monitoring-progress-urban-road-safety.

ITF (2019), "Road Safety in European Cities: Performance Indicators and Governance Solutions", *International Transport Forum Policy Papers*, No. 67, OECD Publishing, Paris, https://www.itf-oecd.org/road-safety-european-cities.

ITF (2011), *Reporting on Serious Road Traffic Casualties: Combining and using different data sources to improve understanding of non-fatal road traffic crashes*, OECD Publishing, Paris, https://www.itfoecd.org/reporting-serious-road-traffic-casualties.

Rivera Flores, M. F. (2021), "Road safety and gender", Presentation at "Road safety, inclusion, equity, gender and sustainability: exploring links", International Transport Forum Webinar, 24 November 2021, https://www.itf-oecd.org/road-safety-inclusion-equity-gender-and-sustainability-exploring-links.

SafetyCube (2016), Deliverable 7.1 Practical guidelines for the registration and monitoring of serious traffic injuries, https://www.safetycube-project.eu/wp-content/uploads/SafetyCube-D7.1-Practicalguidelines-for-the-registration-and-monitoring-of-serious-traffic-injuries.pdf (accessed 26 April 2022).

Santacreu, A. (2018), "Safer City Streets Global Benchmarking for Urban Road Safety", International Transport Forum Working Document, OECD Publishing, Paris, https://www.itf-oecd.org/safer-city-streets-global-benchmarking-urban-road-safety.

TomTom (2020), "What can traffic data tell us about the impact of the coronavirus?", https://www.tomtom.com/blog/traffic-and-travel-information/covid-19-traffic/ (accessed 14 June 2022).

Vision Zero Network (2022), "What is Vision Zero?", https://visionzeronetwork.org/about/what-is-vision-zero/ (accessed on 14 June 2022).

Annex A. Input data and statistics

Table A1 includes a full list of the participating cities in this report, including the land area, population size and density of each city. Table A2 presents the raw data for fatalities that were collected from cities for each year between 2010-21. Table A3 shows three-year averages for fatalities from each city from 2010 - 21 to mitigate potential misleading trends from small annual raw data sets.

Table A1. Land area, population and density in participating cities

Country	City	Land area (km^2)	Population	Population density (inhabitants/km^2)
Argentina	Buenos Aires	203	3 075 646	15 151
Australia	Melbourne	8 836	5 077 545	575
Belgium	Brussels	161	1 223 497	7 599
Brazil	Fortaleza	313	2 686 703	8 584
Brazil	Sao Paulo	1 521	11 869 660	7 803
Canada	Calgary	858	1 363 144	1 589
Canada	Edmonton	685	1 047 526	1 529
Canada	Montreal	365	2 072 645	5 678
Canada	Vancouver	115	716 827	6 233
Colombia	Bogotá	1 587	7 743 955	4 880
Denmark	Copenhagen	86	632 340	7 353
France	Paris	105	2 172 819	20 694
Ghana	Accra	173	2 173 407	12 563
Ireland	Dublin	115	576 639	5 014
Italy	Milan	182	1 406 242	7 727
Italy	Rome	1 285	2 808 293	2 186
Mexico	Guadalajara	2 217	5 079 762	2 291
Mexico	Mexico City	1 494	9 018 645	6 037
New Zealand	Auckland	4 942	1 716 900	347
Norway	Oslo	427	693 494	1 624
Poland	Warsaw	517	1 794 166	3 470
Portugal	Lisbon	84	509 614	6 067
Serbia	Belgrade	3 237	1 694 480	523

Spain	Barcelona	102	1 655 949	16 251
Spain	Madrid	604	3 223 334	5 337
Sweden	Stockholm	187	977 619	5 228
Switzerland	Zürich	88	434 736	4 940
United Kingdom	Bristol	111	465 900	4 197
United Kingdom	Greater London	1 572	9 002 500	5 727
United Kingdom	Greater Manchester	1 276	2 848 286	2 232
United Kingdom	Inner London	319	3 660 200	11 474
United States	New York City	792	8 336 817	10 526

Note: All figures refer to 2020. For Accra, data refer to the Accra Metropolitan Area, made of 12 separate local government districts. For Guadalajara, data include only 6 out of 9 municipalities legally recognised as Metropolitan Area. For Melbourne, data refer to 31 Local Government Areas, equal to Melbourne Statistical Division with the addition of Yarra Ranges Part B Statistical Local Area.

Source: ITF Safer City Streets database.

Table A2. Road fatalities by city, 2010-21

City	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Accra	..	173	205	144	144	243	111	86	130	103	136	..
Auckland	53	51	41	48	36	53	47	64	54	40	36	59
Barcelona	48	40	39	29	40	33	37	19	24	28	17	28
Belgrade	117	136	127	116	104	101	102	95	105	93	92	..
Bogotá	528	562	571	534	606	544	585	546	514	505	377	469
Bristol	4	11	7	12	8	8	5	12	7	3	7	..
Brussels	31	25	37	24	29	28	17	24	21	20	16	..
Buenos Aires	198	167	144	166	169	165	158	151	159	111	87	104
Calgary	23	26	34	40	28	23	26	12	17	18	26	16
Copenhagen	14	4	11	9	6	9	13	5	7	7	7	..
Dublin	8	6	6	10	16	7	9	10	10	8	7	8
Edmonton	27	22	27	23	23	32	22	27	19	14	12	16
Fortaleza	365	381	369	358	377	316	281	256	226	198	193	184
Greater London	126	159	134	132	127	136	116	131	112	125	96	..
Greater Manchester	54	76	49	35	54	49	54	50	50	63	67	..
Guadalajara	343	296	296	317	290	277	308	322	342	295	226	238
Inner London	51	58	53	55	59	52	56	54	42	44	33	..
Lisbon	16	18	12	10	9	12	9	15	30	14	22	..
Madrid	33	30	33	32	24	24	35	27	37	33	34	24
Melbourne	125	129	128	102	110	114	141	103	104	120	85	114
Mexico City	1 026	968	937	871	834	768	..	..	394	397	388	424

Milan	58	53	61	32	42	53	50	53	49	34	28	..
Montreal	43	44	39	33	32	30	31	27	27	32	31	29
New York City	273	250	278	299	259	234	232	224	206	220	243	273
Oslo	5	7	8	7	4	5	4	3	5	1	6	..
Paris	43	50	39	29	39	47	40	31	36	34	45	..
Rome	158	167	140	130	150	161	126	128	138	131	104	..
Sao Paulo	..	..	..	1 012	1 133	898	820	754	810	779	806	..
Stockholm	14	15	9	10	8	7	5	15	8	11	4	5
Vancouver	9	13	19	16	15	14	15	14	13	14	8	18
Warsaw	57	90	56	74	65	62	54	48	44	35	44	42
Zürich	11	12	6	10	4	6	7	5	10	6	5	5

Note: data are shown as single-year data, not averages. In Mexico City, the methodology changed between 2010-15 and 2018-21, so data are not comparable.

Source: ITF Safer City Streets database.

Table A3. Road fatalities by city, three-year average, 2010-21

City	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Accra	..	..	..	174	164	177	166	147	109	106	123	..
Auckland	58	58	48	47	42	46	45	55	55	53	43	45
Barcelona	44	45	42	36	36	34	37	30	27	24	23	24
Belgrade	147	136	127	126	116	107	102	99	101	98	97	..
Bogotá	531	539	554	556	570	561	578	558	548	522	465	450
Bristol	9	10	7	10	9	9	7	8	8	7	6	..
Brussels	32	29	31	29	30	27	25	23	21	22	19	..
Buenos Aires	..	..	170	159	160	167	164	158	156	140	119	101
Calgary	30	24	28	33	34	30	26	20	18	16	20	20
Copenhagen	12	8	10	8	9	8	9	9	8	6	7	..
Dublin	9	8	7	7	11	11	11	9	10	9	8	8
Edmonton	29	27	25	24	24	26	26	27	23	20	15	14
Fortaleza	340	353	372	369	368	350	325	284	254	227	206	192
Greater London	171	156	140	142	131	132	126	128	120	123	111	..
Greater Manchester	63	68	60	53	46	46	52	51	51	54	60	..
Guadalajara	..	..	312	303	301	295	292	302	324	320	288	253
Inner London	71	60	54	55	56	55	56	54	51	47	40	..
Lisbon	..	..	15	13	10	10	10	12	18	20	22	..
Madrid	39	35	32	32	30	27	28	29	33	32	35	30
Melbourne	146	133	127	120	113	109	122	119	116	109	103	106

Mexico City	1 047	1 016	977	925	881	824	..	..	..	..	393	403
Milan	..	..	57	49	45	42	48	52	51	45	37	..
Montreal	38	40	42	39	35	32	31	29	28	29	30	31
New York City	275	261	267	276	279	264	242	230	221	217	223	245
Oslo	7	7	7	7	6	5	4	4	4	3	4	..
Paris	46	46	44	39	36	38	42	39	36	34	38	..
Rome	170	169	155	146	140	147	146	138	131	132	124	..
Sao Paulo	..	..	..	..	..	1 014	950	824	795	781	798	..
Stockholm	12	13	13	11	9	8	7	9	9	11	8	7
Vancouver	15	13	14	16	17	15	15	14	14	14	12	13
Warsaw	93	81	68	73	65	67	60	55	49	42	41	40
Zürich	10	11	10	9	7	7	6	6	7	7	7	5

Note: data are shown as three-year averages - for instance, a 2010 value represents the 2008-2010 average. In Mexico City, the methodology changed between 2010-15 and 2018-21, so data are not comparable.

Source: ITF Safer City Streets database.

Monitoring Progress in Urban Road Safety

This report tracks the progress in reducing the number of road traffic fatalities and serious injuries in cities between 2010 and 2020. It presents traffic safety data collected in 32 cities participating in the ITF Safer City Streets network and compares trends in urban and national road safety. It provides indicators for the risk of traffic death for different road user groups that permits benchmarking of road safety outcomes.

International Transport Forum
2 rue André Pascal
F-75775 Paris Cedex 16
+33 (0)1 73 31 25 00
contact@itf-oecd.org
www.itf-oecd.org

Funded by

Published: 10/2022 | Photo credit: Alexel