International Transport Forum

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ROAD SAFETY ANNUAL REPORT 2019

UNITED KINGDOM

OECD

UNITED KINGDOM

In 2017, 1 856 persons lost their lives in road crashes in the United Kingdom. Overall, the number of road deaths has considerably declined in the past two decades; however, since 2010 the rate of decline has slowed. In July 2019, the government published the Road Safety Statement 2019 "A Lifetime of Road Safety," which sets out a two-year action plan containing 74 action measures. The Statement emphasises the mentality shift towards a Safe System approach.

Trends

Country Profile

Population in 2017: 66 million

GDP per capita in 2017: 39 945 USD

Cost of road crashes: 1.7% of GDP (2017)

Road network: 423 019 kilometres (urban roads 37%; rural roads 63%; motorways 1%)

Registered motor vehicles in 2017: 38.9 million (cars 83%; goods vehicles 12%; motorcycles 3.1%)

Speed limits: 30 mph on urban roads; 60-70 mph on rural roads; 70 mph on motorways

Limits on Blood Alcohol Content: 0.8 g/l (England, N. Ireland, Wales); 0.5 g/l (Scotland)

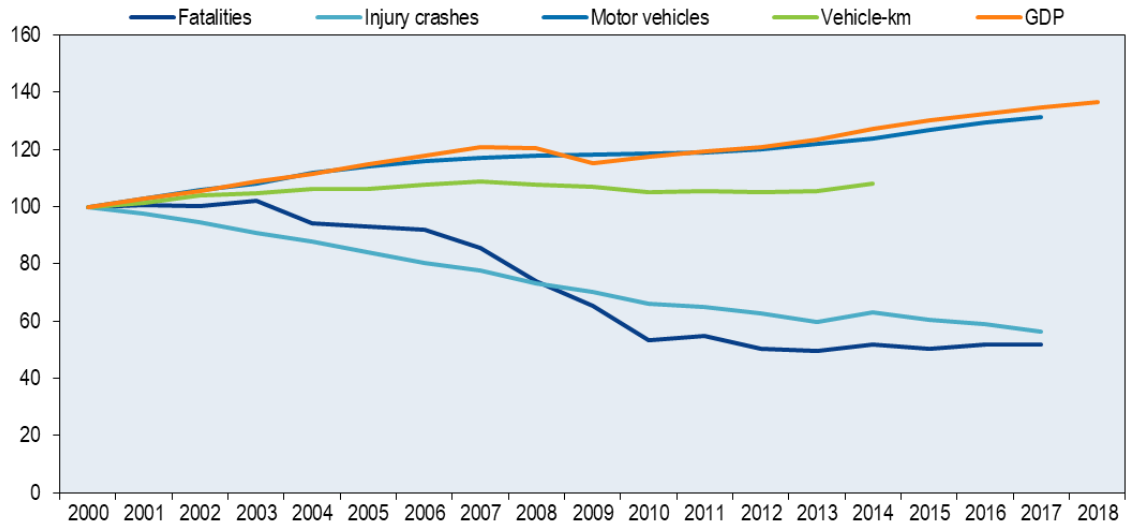
The United Kingdom registered an overall **decrease in the number of road deaths in 2017**. According to the latest available data, 1 856 persons lost their lives in traffic crashes in the United Kingdom in 2017. This represents a 0.2% decline on 2016. In 2016, 1 860 road deaths were reported, a 3.1% increase on 2015.

The **longer-term trend for road deaths** in the United Kingdom has been encouraging. Between 2000 and 2017, the number of annual road fatalities fell by 48%. The greatest reductions were achieved in the 2000-2010 period when annual fatalities totals dropped 47%. Since, the reduction in the number of road deaths has slowed; 2017 counted only 5.3% fewer fatalities than 2011.

The number of **traffic deaths per 100 000 inhabitants** in the United Kingdom has fallen by 54% between 2000 and 2017. In 2017, **2.8 traffic deaths per 100 000** inhabitants were recorded, compared to 6.1 in 2000. By way of comparison, the average in the European Union is 4.9 deaths per 100 000 inhabitants in 2018.

The United Kingdom recorded 0.5 **road fatalities per 10 000 registered vehicles** in 2017. This represents a decrease of 61% compared to the year 2000, when the rate of deaths to registered vehicles stood at 1.2.

Figure 1. Road safety, vehicle stock, traffic and GDP trends
Index 2000 = 100



The graph for **fatalities by road user groups** shows that passenger car occupants continue to be the group most affected by road crashes. In 2017, passenger car occupants accounted for the largest share of road deaths with 44% of the total. They were followed by pedestrians (26%), motorcyclists (19%) and cyclists (6%).

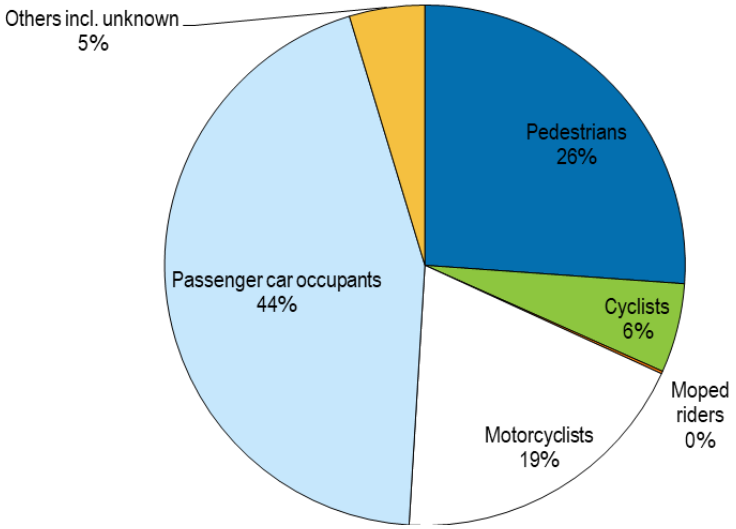
The largest increase in 2017 was registered among motorcyclists with 12.3% more deaths compared to 2016, according to 2017 data. They were followed by pedestrians with 4.8% more road fatalities than in 2016. Passenger car occupants, cyclists and moped riders saw annual road fatality figures drop by 4.2%, 1.9% and 62.5%, respectively.

The long-term trend shows that traffic in the United Kingdom has become safer for all road user groups since 2000. The strongest fatality reduction was observed among passenger car occupants, who registered 60% fewer deaths over this period. Motorcyclists (-42%) and pedestrians (-45%) also saw strong road safety improvements during this time.

The user group that has benefitted least are cyclists, who saw the number of crash deaths fall by 20% since 2000.

More recently, since 2010 (see figure 6), the number of road deaths decreased for all road users but pedestrians. While on average the number of fatalities declined by 2.6%, it increased by 16.9% for pedestrians.

Figure 2. Road fatalities by road user group in percentage of total, 2017



Road deaths by age group in 2017 showed some changes compared to 2016. Notably, young people saw a strong reduction in fatalities whilst the elderly population saw a significant uptick in road deaths. Road users aged between 0-14 and 15-17 saw road deaths fall by 30% and 21.4%, respectively, compared to 2016. The elderly between 65 and 74 years old, however, experienced the opposite effect with 27.1% more road fatalities than in 2016.

Looking at the longer-term trend, since 2000, the number of road deaths decreased for all groups. The strongest reduction fatalities over this period occurred among UK youth with each age category up to 20 years of age recording fatality reductions of nearly 70% or more during this time period. 21-64 year olds saw fatalities halved in this time. The elderly benefitted the least from road safety improvements seeing road fatalities drop by about 30% since 2000.

More recently, since 2010 (see figure 6), the number of fatalities decreased markedly again for the young people aged 15-17 and 18-20, while the situation deteriorated for the elderly (+46% fatalities for the 65-74 and +17% for the people above 75).

Despite recent improvements, young people continue to be at high risk in traffic with a mortality rate much above the average. 18-20 year olds and 21-24 year olds experience traffic fatalities at rates of 4.7 and 4.5 per 100 000 persons, respectively.

However, elderly people above 75 now have a mortality rate above young people experiencing road fatalities at a rate of 5.4 per 100 000 persons.

Figure 3. Road fatality rates by age group, 2000-2017
Deaths per 100 000 population in a given age group

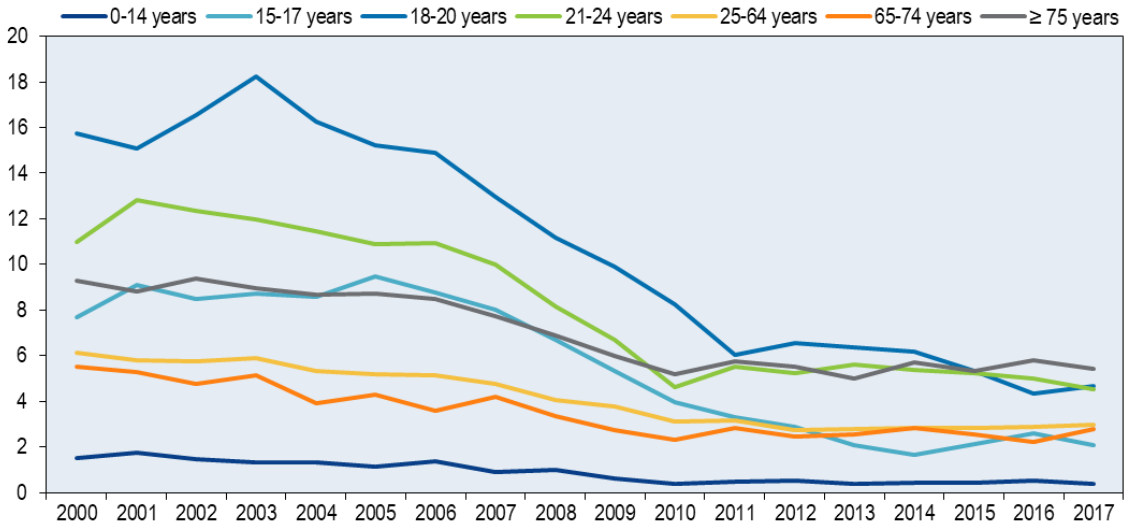
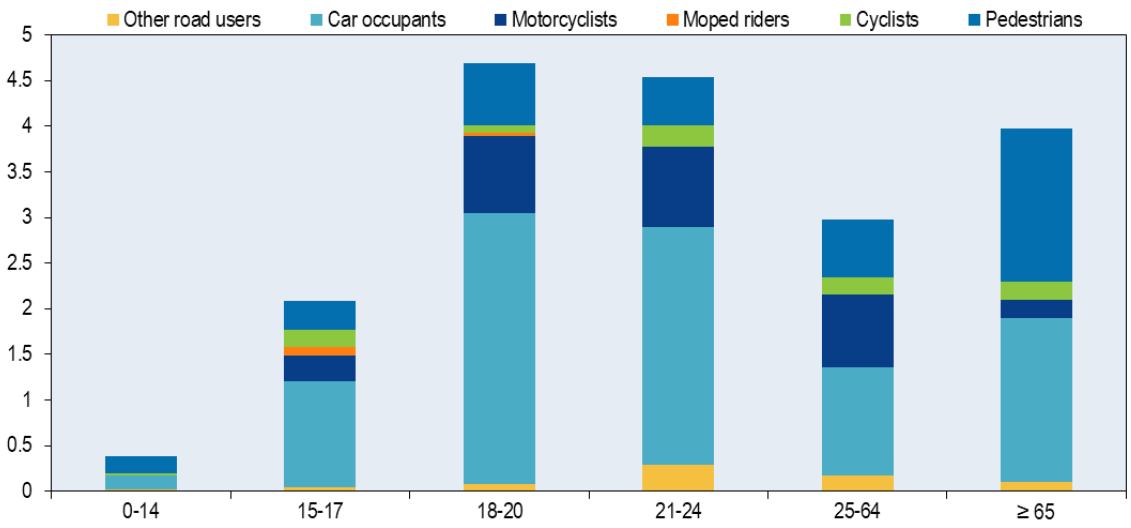


Figure 4. Road fatality rate by age and road user group, 2017
Fatalities per 100 000 population



Analysis of **fatalities by road type** shows that the rural network is the deadliest in the United Kingdom. In 2017, 59% of deaths occurred on rural roads, 36% on urban roads and 5% on motorways. This repartition has remained largely stable in recent years.

In 2017, in comparison to 2016, the number of road deaths decreased by 2% on rural roads, whilst urban roads and motorways saw road deaths increase slightly by 1% and 3%, respectively.

Since 2000, fatalities decreased significantly and evenly across all areas with each seeing 48% fewer fatalities in 2017.

Figure 5. Road fatalities by road type

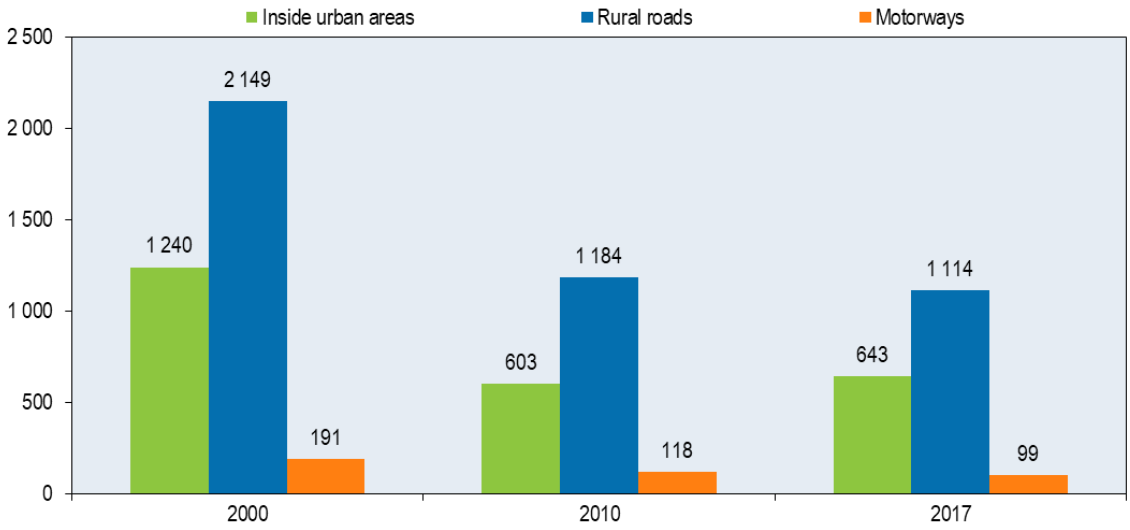
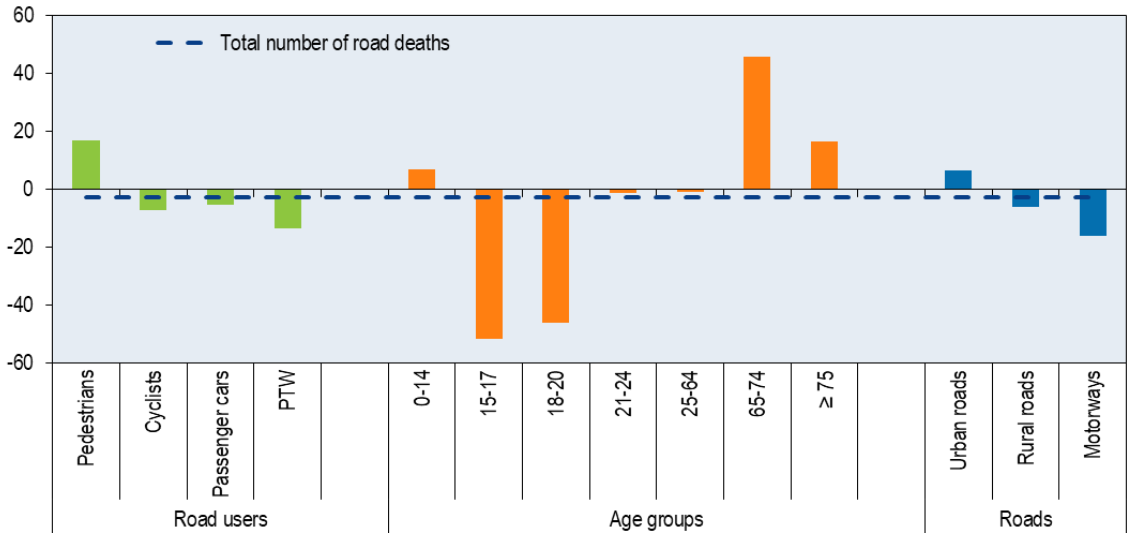


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-2017



Fatality data are essential to understand road safety issues but hardly sufficient. Information on **serious injuries from crashes** is also critically important. Yet injury data are much more difficult to obtain, validate and - where available - compare. In the United Kingdom, 25 609 serious injuries were recorded in 2017 – an increase of 2.7% on 2016.

Economic costs of road crashes

In 2017 the estimated total value of prevention of unreported accidents is around GBP 19 billion a year, higher than the value of reported injury accidents. This raises the

total estimate for all reported and unreported accidents to around GBP 35 billion a year corresponding to 1.7% of GDP.

Table 1. Costs of road crashes, 2017

	Unit cost [GBP]	Total [GBP]
Fatalities	2.13 million	3.6 billion
Severe injuries	0.24 million	5.5 billion
Slight injuries	0.25 million	2.7 billion
Property damage costs	0.02 million	4.5 billion
Non-fatal crashes not reported to police		19 billion
Total		**35.3 billion**
Total as % of GDP		**1.7%**

Behaviour

The behaviour of road users is an important determinant of a country's road safety performance. **Inappropriate speed**, in particular, is one of the main causes of road crashes. In Great Britain, 14% of all road fatalities in 2017 cited excessive speed as a contributory factor. Exceeding the speed limit was reported as a contributory factor in 5% of all crashes in Great Britain in 2017.

The table below summarises the main speed limits in the United Kingdom.

Table 2. Passenger car speed limits by road type, 2019

	General speed limit
Urban roads	30 mph
Rural roads	Single carriageway: 60 mph Dual carriageway: 70 mph
Motorways	70 mph

A report on the evaluation of the 3-year project on 20 mph limits was published in 2018. The purpose was to address a gap in the evidence available on the effectiveness of 20mph speed limit (signed only) schemes. See more detail in the section on "Measures".

Driving under the influence of alcohol is another cause of road crashes in the United Kingdom as in most IRTAD countries. Between 230 and 270 people were killed in accidents in Great Britain where at least one driver was over the drink drive BAC limit in 2017, with a central estimate of 250 deaths. Although the central estimate for 2017 is higher than the final figure for 2016, the difference is not statistically significant and continues a period of stability recorded since 2010.

In a survey on drink driving in England and Wales undertaken in 2017-18, around 7% of drivers said that they had driven at least once or twice within the previous 12 months

when they thought they were over the legal alcohol limit (DfT, 2018). This proportion has remained broadly unchanged since 2010-11.

In England, Wales and Northern Ireland, the maximum authorised blood alcohol content (BAC) is 0.8 g/l. In Scotland, the maximum limit was reduced to 0.5 g/l in December 2014.

For statistical purposes, a drink drive accident is defined as an incident on a public road in which someone is killed or injured and where at least one of the motor vehicle drivers or riders involved met one of the following criteria: refused to give a breath test specimen when requested by police (other than when incapable of doing so for medical reasons; failed a roadside breath test by registering over 35 micrograms of alcohol per 100 millilitres of breath in England and Wales (or 22 micrograms of alcohol per 100 millilitres of breath in Scotland); died and was subsequently found to have more than the authorised BAC.

Drugs and driving is a worrying concern in the United Kingdom, but there are no data on the role of drug use by road users for reported road crashes. In 2017-18 in England and Wales, 0.2% of drivers said they had driven under the influence of illegal drugs at least once in the previous year. This is not significantly different from earlier years. Both drink and drug driving are more prevalent amongst males and younger drivers. More detailed results on self-reported drink and drug driving are published at *https://www.gov.uk/government/statistical-data-sets/ras51-reported-drinking-and-driving*.

The United Kingdom introduced new legislation on 2 March 2015 on driving with a specified controlled drug in the body above a specified limit. The previous legislation required the police to demonstrate that driving was impaired by drugs in order to prosecute. An evaluation of this new drug driving legislation was conducted in 2017 and the conclusions are available at: *https://www.gov.uk/government/publications/drug-driving-law-evaluation*.

An increasing problem for traffic safety in the United Kingdom is **distraction**, for instance through the use of mobile phones while driving or crossing a street. An observational survey held in 2017 in Great Britain showed the proportion of drivers using hand-held mobile phones while driving was 1.1% overall: 1% for car drivers, 2.1% for van drivers, and 0.6% for truck drivers (*https://www.gov.uk/government/statistics/seatbelt-and-mobile-phone-use-surveys-2017*).

In the United Kingdom, it is not permitted to drive while using a hand held device, although hands free devices are tolerated. In March 2017, new penalties were introduced. Motorists using a phone while driving now receive 6 points on their licence and a GBP 200 fine – up from the previous 3 points and GBP 100 penalty. Motorists caught using their mobile phones twice or accruing 12 points on their licence will face magistrates' court, being disqualified with fines of up to GPB 1 000. New drivers, within 2

years of passing their test, risk having their licence revoked and lorry or bus drivers can be suspended if caught.

The share of **sleepiness and fatigue** as a causal factor in crashes is especially challenging to detect. In Great Britain, "fatigue" was assigned as a contributory factor in 2% of all reported accidents and 4% of fatal injury crashes in 2017.

Seat-belt wearing has been compulsory in the United Kingdom since 1983 in front seats and from 1991 for rear seats. Seat belt wearing regulations for children in rear seats came into force in 1989. Children are required to be restrained by a suitable combination of car seats and belts, depending on age.

Table 3. Seatbelt wearing rates
Percentages

	2017
Front seats	
Driver	99
Passenger	97
Rear seats	
General	93
Children (use of child restraint)	97

For motorcyclists, **helmet wearing** is the most effective passive safety habit. In the United Kingdom, helmets have been compulsory on motorcycles since 1973 and on mopeds (up to 50 cc, maximum speed 45 km/h) since 1977.

A helmet is not compulsory on bicycles.

Road safety management and strategies

There are **several factors of influence on the United Kingdom's road safety performance** as captured by the above indicators. Road fatalities reached a peak in 1941 of just over 9 000 in Great Britain. Since then, fatalities have decreased by more than 80%. Various factors may have contributed to the recent large reductions in fatalities in addition to the longer-term trends in improved vehicle safety, road engineering, trauma care and education.

The recession and economic downturn led to falling traffic levels and the continued reduction in average speeds will have played a significant part. In similar fashion, large fatalities reductions were seen during the recession in the early 1990s. In more recent years, though, traffic levels have risen again, surpassing pre-recession levels. This may be one key reason why casualty levels have, at best, plateaued and may begin to increase again.

A statistical weather model for Great Britain has been used to assess the impact of weather on the number of road casualties reported in 2015. The model indicates that for

most months of the year the weather had little net effect, so the weather adjusted figures for 2015 differ little from the actual reported figures. In 2016, it is estimated that the warmer and dryer weather may have led to 20 more deaths.

Responsibility for the organisation of road safety in the United Kingdom lies with the Department for Transport (DfT). The DfT sets the overall road safety strategy for Great Britain. This includes decisions about road safety targets and legislating on key safety issues. Transport Scotland has certain powers in regards to road safety in Scotland, for example, it can vary the drink driving limit; and the Welsh Assembly has set a Welsh road safety target. Local highway authorities are responsible for safety on their roads and can use engineering measures as well as local education campaigns to improve safety. Road safety in Northern Ireland is the responsibility of the Department of the Environment in Northern Ireland.

In July 2019, the Department for Transport published the Road Safety Statement 2019 titled *A Lifetime of Road Safety*. The document sets out the Department's action plan for the coming two years and focuses on its priority road user groups: young road users, rural road users, motorcyclists and older vulnerable road users. The document outlines additional actions for safer vehicles, safer speed and safer infrastructure in line with the principles of the Safe System approach. In total, the Statement sets out 74 different actions that the Department will work towards.

The Statement emphasises the mentality shift towards a Safe System approach, which commits the Department to the idea that road deaths and casualties are not merely the result of poor driving but of a transport system as a whole, from signage to road user education, from enforcement to infrastructure design and construction. The effect of this approach should be to raise standards and improve coordination, so that avoidable road deaths and injuries are reduced to an absolute minimum. Accordingly, national and local agencies, road safety charities, stakeholder groups, emergency services and other actors are integral to achieve safer roads.

Measures

Several measures to improve road safety management have recently been put into place.

Road Safety Statement 2019

- The Department recently published a number of road safety measures in accordance with its publicly stated road safety priorities in the Road Safety Statement.

- This statement is a two-year action plan to address four priority road user groups; young people, rural road users, motorcyclists and older vulnerable users. The publication outlines 74 actions the Department aims to implement in this period, including further research into road safety management.

Road safety management

- A GBP 350 000 innovation competition to provide police forces with the next generation of mobile breathalyser equipment, enabling swifter and timelier read-outs on drink-driving tests is currently underway.

- In January 2018 the Secretary of State announced that the Department would be taking over responsibility for CRASH, a collision reporting and sharing/investigation IT system currently managed by the Home Office. DfT helped to redevelop and enhance the system, and it has now been rolled out to all police forces using the previous CRASH system.

- A report on the evaluation of the 3-year project on 20 mph limits was published last year. The purpose was to address a gap in the evidence available on the effectiveness of 20mph speed limit (signed only) schemes. Twelve case study schemes were studied, from a variety of area types, road types and scale. The research concludes that:

  - 20 mph limits are supported by the majority of residents and drivers;

  - There has been a small reduction in average (median) speed - less than 1 mph;

  - Vehicles travelling at higher speeds before the introduction of the 20 mph limit have reduced their speed more than those already travelling at lower speeds;

  - There is not enough evidence to conclude that there has been a significant change in collisions and casualties following the introduction of 20 mph limits in residential areas.

Road users

- The first statutory Cycling and Walking Investment Strategy was published in April 2017. In March 2018, the government published a public call for evidence on the topic. The government response to the call for evidence was published in November 2018 and includes a range of safety measures that will bring cycling and walking closer together as part of the government's overall ambition to increase active travel. The response also sets out a vision and a two year plan of action with 21 packages of measures addressing the key themes and issues raised in the call for evidence.

- The Department for Transport announced a GBP 480 000 partnership between police forces and the RAC Foundation to trial an innovative approach to road collision investigation, carrying out more in-depth, qualitative analysis of the underlying causes of road safety incidents.

Infrastructure

- The Safer Roads Fund makes available GBP 100 million to enable local authorities to improve the 50 most dangerous stretches of 'A' roads in England. This improvement

project is currently underway and the Department is working closely with local authorities and the Road Safety Foundation.

Definition, methodology, data collection

- Road fatality: human casualties whose injuries resulted in death within 30 days of a road accident. Confirmed suicides are excluded.

- Serious injury: an injury for which a person is detained in hospital as an "in-patient", or any of the following injuries whether or not they are detained in hospital: fractures, concussion, internal injuries, crushings, burns (excluding friction burns), severe cuts, severe general shock requiring medical treatment and injuries causing death 30 or more days after the accident. Casualties are recorded as seriously or slightly injured by police on the basis of information available within a short time of the accident. This generally will not reflect the results of a medical examination but may be influenced according to whether the casualty is hospitalised or not.

- Slight injury: an injury of a minor character such as a sprain (including neck whiplash injury), bruise or cut which are not judged to be severe, or slight shock requiring roadside attention. This definition includes injuries not requiring medical treatment.

There are three main sources of safety information in the United Kingdom:

- the national road accident reporting system, STATS19, which is based upon police reports;

- information from coroners (in England and Wales) and procurators fiscal (in Scotland) on the levels of alcohol in the blood of people killed in road traffic accidents;

- hospital episode statistics (HES).

Most of the data in this report, which is also included in the IRTAD database, come from STATS19. While all fatal crashes are reported by the police, data from hospitals, surveys and compensation claims indicate that a considerable proportion of non-fatal casualties are not known to the police. The best current estimate derived primarily from the National Travel Survey data and produced in 2017, is that the total number of road casualties in Great Britain each year, including those not reported to the police, is within the range of 590 000 to 760 000 with a central estimate of 670 000.

Linking HES data from hospitals and police data for England gives a better understanding of injury severity and outcomes. Around 47% of the police-reported seriously injured casualties for England alone are matched to the hospital records. As part of this linkage, the DfT has been working with the Maximum Abbreviated Injury Scale (MAIS) to rate the severity of injury crashes.

In 2015/2016, some police forces changed their reporting system for severe injuries and it is likely that the recording of serious injuries is more accurate for police forces using

the new reporting systems. This has had a large impact on the number of serious injuries reported in 2016 and 2017, which can therefore not be directly compared with previous years.

Resources

Recent research

Evaluation of new drug driving legislation: *https://www.gov.uk/government/publications/drug-driving-law-evaluation*

A review of interventions to increase the safety of young and novice drivers was recently published: *https://www.gov.uk/government/publications/review-of-interventions-to-increase-the-safety-of-young-and-novice-drivers*

Evaluation of fixed penalty notices for careless driving completed and published: *https://www.gov.uk/government/publications/evaluating-fixed-penalty-notices-for-careless-driving-offences*

A report on the problem of seat belt non-wearing in the UK was recently published: *http://www.pacts.org.uk/wp-content/uploads/sites/2/PACTS-Seat-Belts-Report-Final3.pdf*

Websites

UK Department for Transport – Road Safety policy: *https://www.gov.uk/transport/road-safety-driving-rules-and-penalties*

UK Department for Transport – Road Safety Statistics: *https://www.gov.uk/government/collections/road-accidents-and-safety-statistics*

UK Road safety observatory: key facts and summaries of research on road safety topics: *http://www.roadsafetyobservatory.com/*

References

DfT (2018), *Road Safety Statement: Progress Report. Moving Britain ahead*, Department for Transport, London *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/719259/road-safety-statement-progress-report.pdf*

Road safety and traffic data

						2017 % change over			
	1990	2000	2010	2016	2017	*2016*	*2010*	*2000*	*1990*
Reported safety data									
Fatalities	5 402	3 580	1 905	1 860	1 856	-0.2%	-2.6%	-48.2%	-65.6%
Injury crashes	265 600	242 117	160 080	142 846	136 063	-4.7%	-15.0%	-43.8%	-48.8%
Deaths per 100,000 population	9.4	6.1	3.0	2.8	2.8	0.6%	-7.4%	-53.8%	-70.2%
Deaths per 10,000 registered vehicles	2.1	1.2	0.5	0.5	0.5	-1.5%	-11.9%	-60.5%	-77.7%
Deaths per billion vehicle kilometres	..	7.4	3.8	..	..	..	..	..	..
Fatalities by road user									
Pedestrians	1 754	889	415	463	485	4.8%	16.9%	-45.4%	-72.3%
Cyclists	267	131	111	105	103	-1.9%	-7.2%	-21.4%	-61.4%
Moped riders	37	15	10	8	3	-62.5%	-70.0%	-80.0%	-91.9%
Motorcyclists	634	597	403	316	355	12.3%	-11.9%	-40.5%	-44.0%
Passenger car occupants	2 462	1 784	867	859	823	-4.2%	-5.1%	-53.9%	-66.6%
Other road users	248	164	99	109	87	-20.2%	-12.1%	-47.0%	-64.9%
Fatalities by age group									
0-14 years	394	171	42	64	45	-29.7%	7.1%	-73.7%	-88.6%
15-17 years	335	169	57	58	45	-22.4%	-21.1%	-73.4%	-86.6%
18-20 years	558	342	197	105	111	5.7%	-43.7%	-67.5%	-80.1%
21-24 years	616	304	178	174	154	-11.5%	-13.5%	-49.3%	-75.0%
25-64 years	2 223	1 908	1 046	1 002	1 024	2.2%	-2.1%	-46.3%	-53.9%
65-74 years	..	272	128	146	184	26.0%	43.8%	-32.4%	..
≥ 75 years	..	407	257	311	293	-5.8%	14.0%	-28.0%	..
Fatalities by road type									
Urban roads	2 462	1 240	603	627	643	2.6%	6.6%	-48.1%	-73.9%
Rural roads	2 706	2 149	1 184	1 137	1 114	-2.0%	-5.9%	-48.2%	-58.8%
Motorways	234	191	118	96	99	3.1%	-16.1%	-48.2%	-57.7%
Traffic data									
Registered vehicles (thousands)	25 191	29 629	35 170	38 388	38 893	1.3%	10.6%	31.3%	54.4%
Vehicle kilometres (millions)	..	482 951	507 814	..	..	..	..	..	..
Registered vehicles per 1,000 population	440.1	503.0	560.4	576.7	588.9	2.1%	5.1%	17.1%	33.8%