



Department for Transport

Reported road casualties in Great Britain: Estimates for accidents involving illegal alcohol levels: 2016 (final)

About this release

This publication presents final estimates of casualties arising from reported accidents involving at least one motor vehicle driver or rider over the legal alcohol driving limit, in Great Britain in 2016.

Figures are derived from the STATS19 forms completed by the police plus toxicology data for road fatalities from coroners and procurators fiscal.

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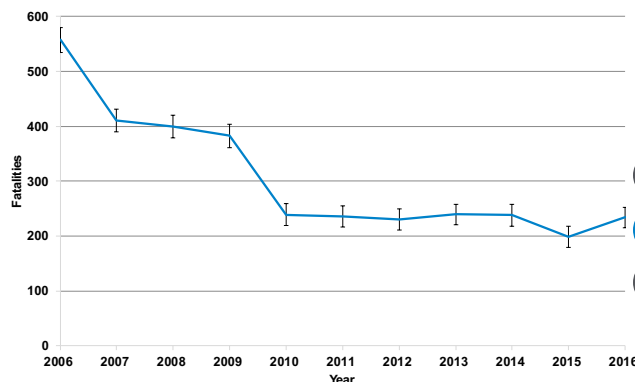
Next release

Provisional estimates for casualties in reported drink-drive accidents for 2017 will be published in February 2019 and final estimates in August 2019.

Final estimates for 2016 show that between 220 and 250 people were killed in accidents in Great Britain where at least one driver or rider was over the drink-drive limit, with a central estimate of 230 deaths.

The final estimate of drink-drive **fatalities** for 2016 is higher than in 2015, but the rise is **not statistically significant**. This estimate is continuing a period of stability recorded since 2010.

Chart 1: Fatalities in reported drink-drive accidents: GB 2006 to 2016; error bars show 95% confidence intervals



[\[RAS 51001\]](#)

An estimated 9,040 people were **killed or injured** in drink-drive accidents. This represents a **rise of 7%** from 8,470 in 2015, and is the highest number since 2012.

The **total number of accidents** where at least one driver or rider was over the alcohol limit rose by 6% to 6,070 in 2016.

Definitions

Drink-drive accident:

A reported incident on a public road in which someone is killed or injured, where at least one of the motor vehicle drivers or riders involved met one of these criteria:

- failed a roadside breath test by registering above 35 micrograms of alcohol per 100ml of breath (in England and Wales) or 22 micrograms (in Scotland).
- refused to give a breath test specimen when requested by the police (other than when incapable of doing so for medical reasons).
- died, within 12 hours of the accident, and was subsequently found to have more than 80 milligrams of alcohol per 100ml of blood (in England and Wales) or 50 milligrams (in Scotland).

Drink-drive casualties:

All road users killed or injured in drink-drive accidents.

A full list of the casualty definitions used in this release can be found [here](#).

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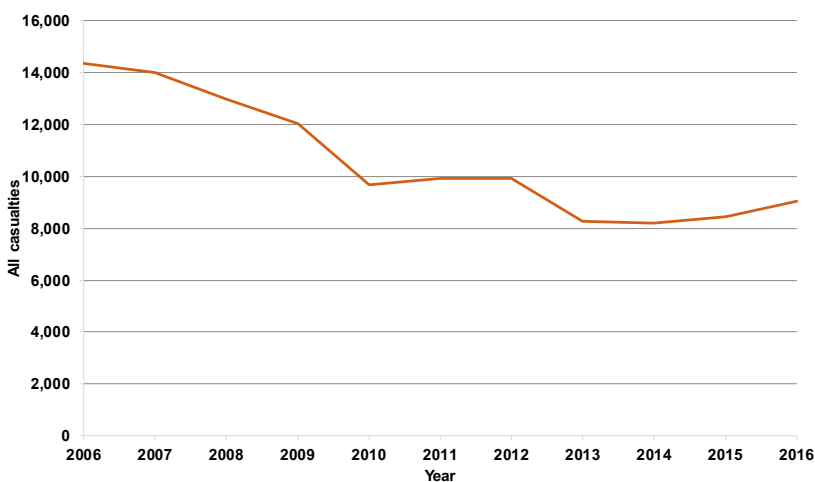
Drink-drive fatalities

The final central estimate of the number of deaths in accidents with at least one driver or rider over the alcohol limit for 2016 is **230**. This represents about 13% of all deaths in reported road accidents in 2016. **The central estimate for 2016 is higher than the final figure for 2015 but the increase is not statistically significant.** The 95% confidence range indicates that we can be 95% certain that the **true figure, as opposed to the estimate, falls somewhere between 220 and 250 fatalities.**

All drink-drive casualties

The central estimate of the number of **drink-drive casualties of all severities** in 2016 is 9,040, an increase of 7% on 2015. This is the highest level of drink-drive casualties in reported road accidents since 2012. This represents around 5% of all casualties in reported road accidents in 2016.

Chart 2: Total casualties in reported drink-drive accidents: GB 2006 to 2016



[RAS 51001]

Reported drink-drive accidents

There were an estimated 220 **fatal drink-drive accidents** in 2016. This is an increase from 170 in 2015 and is **statistically significant**, reverting to similar levels to those recorded between 2010 and 2014.

The **total number of drink-drive accidents** of all severities rose by 6% to 6,070 in 2016 and is the highest since 2012.

Uncertainty

The number of drink-drive fatalities are subject to considerable uncertainty (see Sampling uncertainty on page 9). This means that it is impossible to be sure of the precise number of fatalities, so ranges and confidence intervals for the number of fatalities are used throughout this publication.

95% confidence interval

The bars on chart 1 are ranges of values for an estimate which we are 95% confident that the 'true' value falls in.

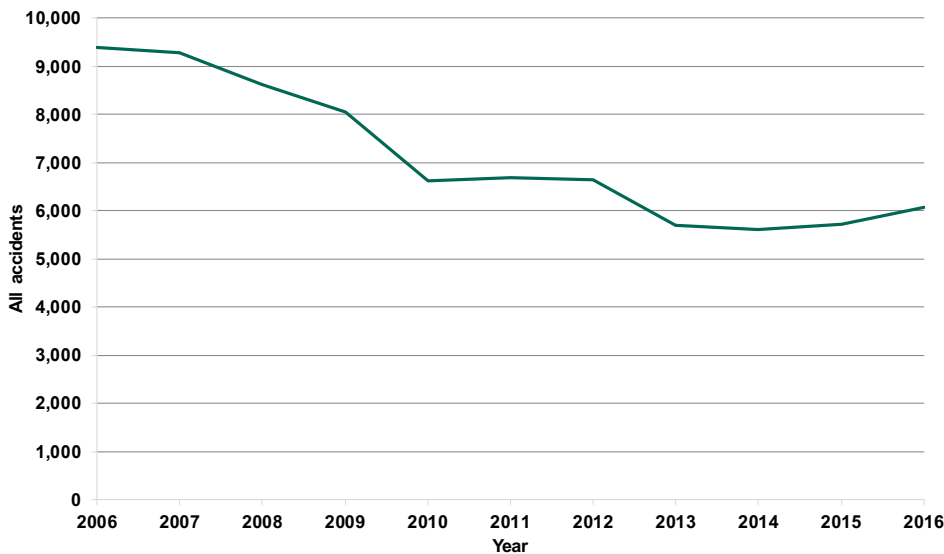
Technically, it indicates that if many samples of the same population were drawn, 95% of the results would fall between the confidence interval values.

For instance, for 2016 we have an upper limit of 250 fatalities and lower limit of 220. This means that we are 95% confident that the true number for 2016 will fall between these values, but most likely towards the centre of this range.

Statistically significant

The **95% confidence level** is the standard against which statistics are typically tested. It means that in 100 years with the same risk of fatalities, 95 of those years will result in a number of fatalities within a given range. If the actual change falls outside of this range then we can be 95% confident that the change is as a result of a genuine trend (statistically significant) rather than a product of chance (not statistically significant).

Chart 3: Total reported drink-drive accidents: GB 2006 to 2016



[RAS 51001]

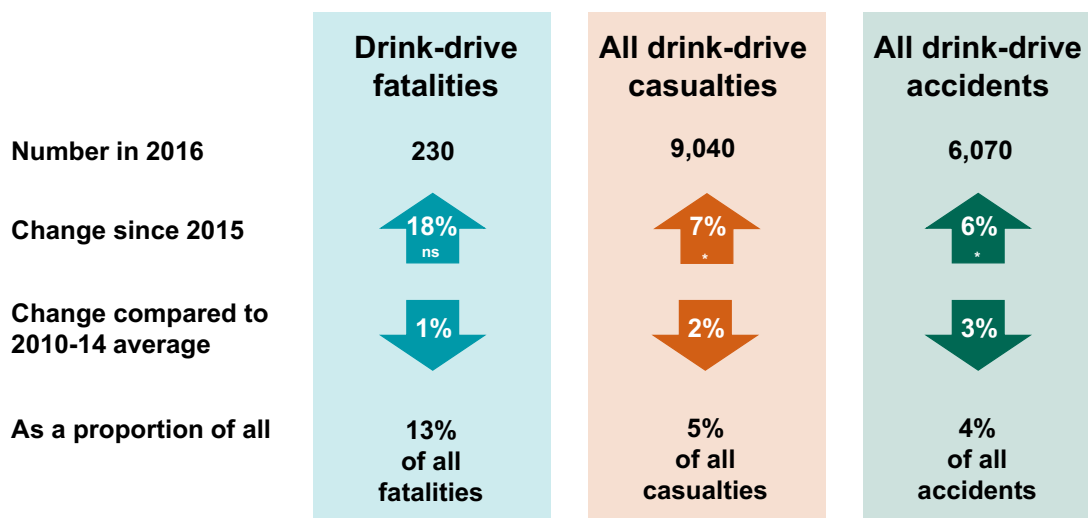
Around 4% of all reported road traffic accidents in 2016 involved at least one driver or rider over the legal alcohol limit.

How do provisional estimates differ from the final estimates?

The provisional estimates have a wider range than the final estimates. This is because the provisional estimates are based on fewer toxicology reports from coroners and procurators fiscal. The final estimates are based on more reports and have, therefore, increased the accuracy of the results.

The provisional figure for 2016, published in February 2018, was based on around 27% of drivers who died in road accidents. The final estimate is based on 63% of drivers. This represents the highest return rate since 2011.

Chart 4: Drink-drive fatalities, casualties and accidents: GB, 2016



ns = not significant
* = significant at 95% level

[RAS 51001]

The headline drink-drive table, [RAS51001](#), shows accidents and casualties by severity since 1979. This is the final update on the provisional estimate published in February 2018.

Changes in systems for severity reporting

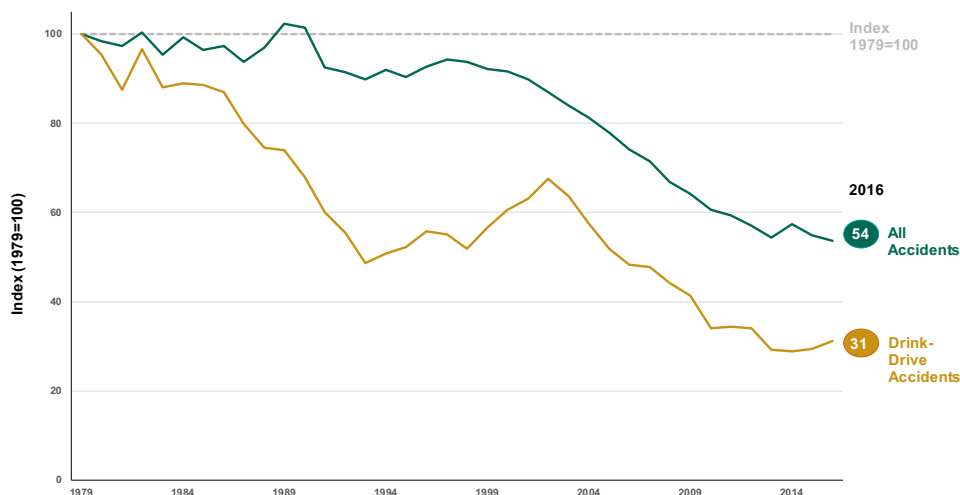
The 2016 figures have been affected by a large number of police forces changing their reporting systems during the year which has had a large impact on the classification of non-fatal injuries recorded in 2016. Further details are in the [2016 Annual report](#).

Long term trends

Detailed reporting on drink-drive accidents and casualties started in 1979. At that time, there were around 19,470 drink-drive accidents, accounting for nearly 8% of all personal injury accidents in Great Britain. By 1993 the number of drink-drive accidents recorded each year had halved to less than 10,000. It has been less than 10,000 for each year since 2006, and around 6,000 for each year since 2013.

It is important to note that over the same timescale, the number of overall road traffic accidents has also fallen, from 254,967 in 1979 to 136,621 in 2016, a 46% reduction. However, **drink-drive accidents have fallen further; down 69% since 1979**. During the same period, casualties in reported drink-drive accidents fell by 71%. It is therefore likely that some drink-drive initiatives have been effective in reducing the number of drink-drive accidents.

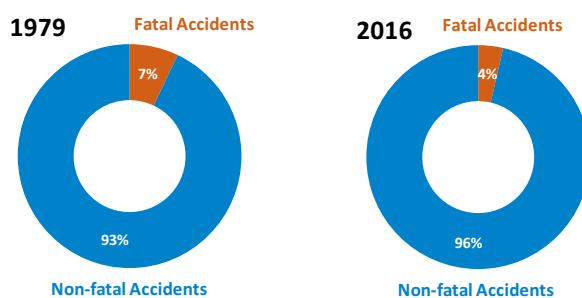
Chart 5: Reported accidents and drink-drive accidents: GB 1979 to 2016 (index 1979 = 100)



[RAS 51001]

In the same period there has also been a **reduction in fatal drink-drive accidents**. In 1979 the proportion of drink-drive accidents that resulted in at least one fatality was 7%; by 2016 this has fallen to 4%. The proportion of casualties that are fatal has also fallen from 5% to 3% in the same period.

Chart 6: Percentage of estimated drink-drive accidents by severity, GB, 1979 and 2016



[RAS 51001]

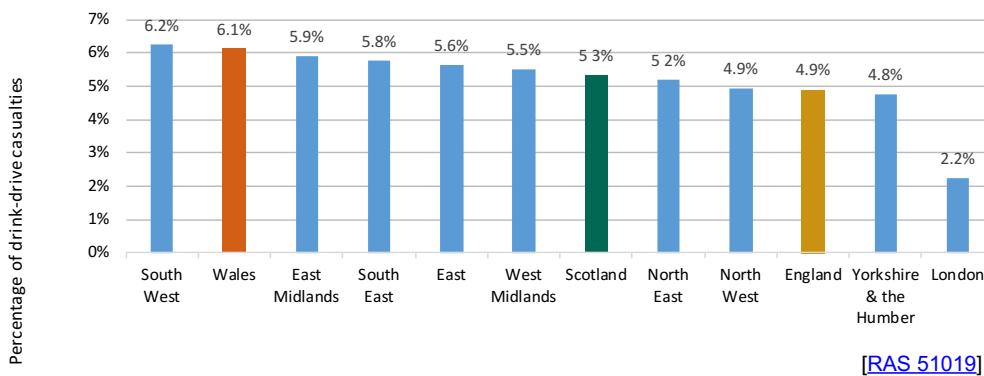
Drink-drive casualty rates by Country and English region

Overall, 5% of casualties in reported road accidents in 2016 occurred in accidents in which at least one driver or rider was over the drink-drive limit.

This varied across the countries of Great Britain. The rate of casualties in drink-drive accidents is the highest in Wales at 6.1% followed by Scotland at 5.3% and England at 4.9%.

Within the English regions, the casualty rates varied from 6.2% in the South West to Greater London at 2.2%. The rate for Greater London is less than half of any other region.

Chart 7: Percentage of casualties occurring in drink-drive accidents by Country and English region, 2016



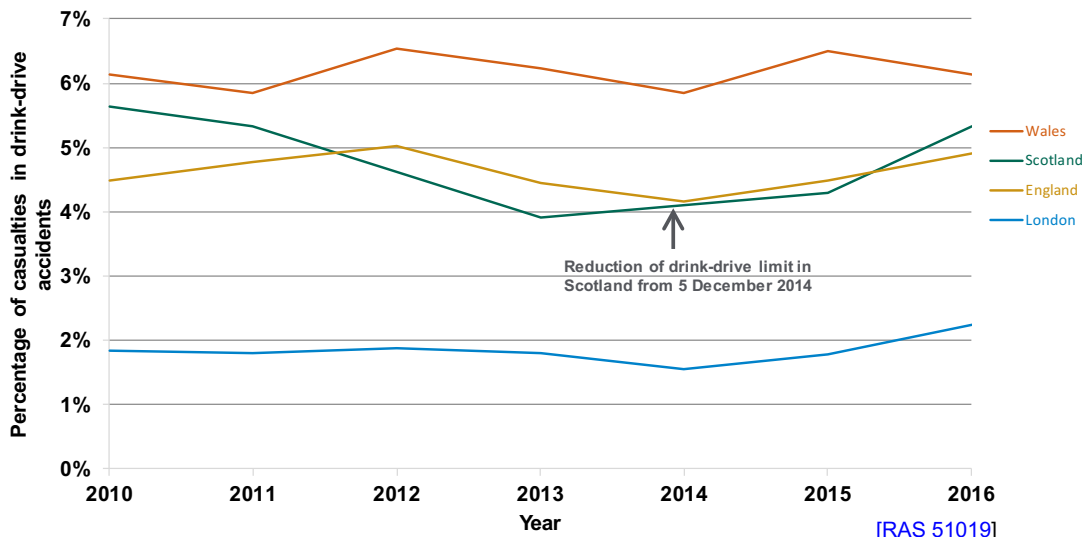
[RAS 51019]

Since 2010, the proportion of casualties that occur in drink-drive accidents has been lower in London than for any other region. Wales had a higher rate than England or Scotland in the same time period. The rate in Scotland has increased since the drink-drive limit was lowered in 2014. It is not clear whether this is due to a real change in prevalence or the definition capturing more accidents.

Drink-drive limit in Scotland

The drink-drive limit was reduced in Scotland on 5 December 2014, from 35 micrograms of alcohol per 100ml of breath to 22 micrograms, and from 80 milligrams of alcohol per 100ml of blood to 50 milligrams. Estimates have been produced using the new limits for the relevant periods of time. The levels remained unchanged in England and Wales.

Chart 8: Percentage of casualties occurring in drink-drive accidents by Country and in London, 2010 to 2016

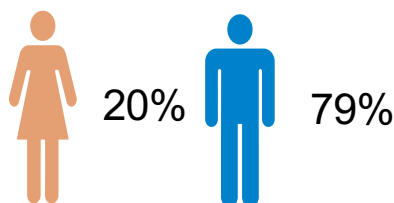


[RAS 51019]

Casualties in drink-drive accidents by gender and age

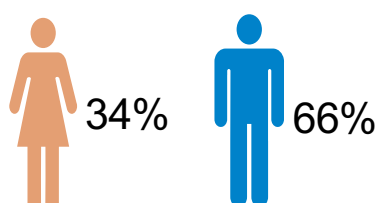
In 2016, 79% of drink-drive accidents involved male drivers/riders over the limit and females 20%. Some accidents will involve both male and female drivers over the limit, and gender is unknown for some drivers over the limit. This contrasts to males making up of 66% of casualties and females 34% in drink-drive accidents.

Chart 9: Drink-drive accidents by gender of driver/rider over the limit involved, 2016



[RAS 51022]

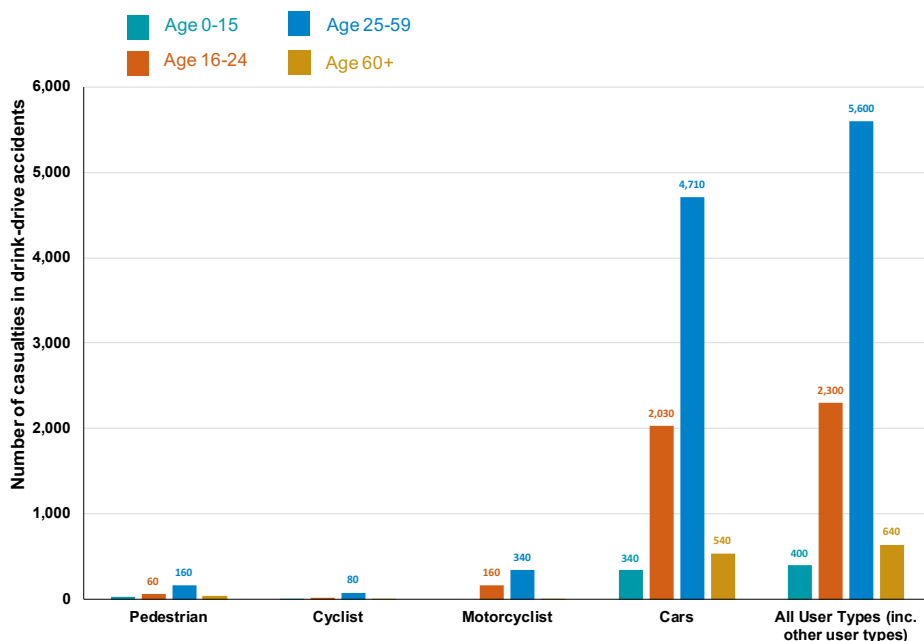
Chart 10: Gender of casualties in reported drink-drive accidents, 2016



[RAS 51005]

Car occupants account for 85% of casualties in drink-drive accidents. This does not vary greatly among the age groups. Motorcyclist riders account for 6% of drink-drive casualties, 3% were pedestrians, 1% pedal cyclists and 4% other user types.

Chart 11: Number of casualties in drink-drive accidents by age and user type, 2016



Age/User type

[RAS 51005]

Tables published with this release

In this release, the tables on drink-driving have been reorganised by topic.

- Drink-drive accidents and casualties by severity [overview](#), disaggregated by [gender](#), [country and English region](#) and [month of accident](#).
- Drink-drive accidents by [time of day](#), by [pedestrian and vehicle involvement](#),
- Drink-drive casualties by [user type gender and age](#).
- Percentages of drivers/riders killed [over the drink-drive limit](#), by [blood alcohol category and age](#).
- Blood alcohol levels of [all fatalities](#).
- KSI casualties involving [young drivers](#) over the drink-drive limit.
- Estimated number of reported accidents involving [a car drink-driver by age](#).

Methodology details

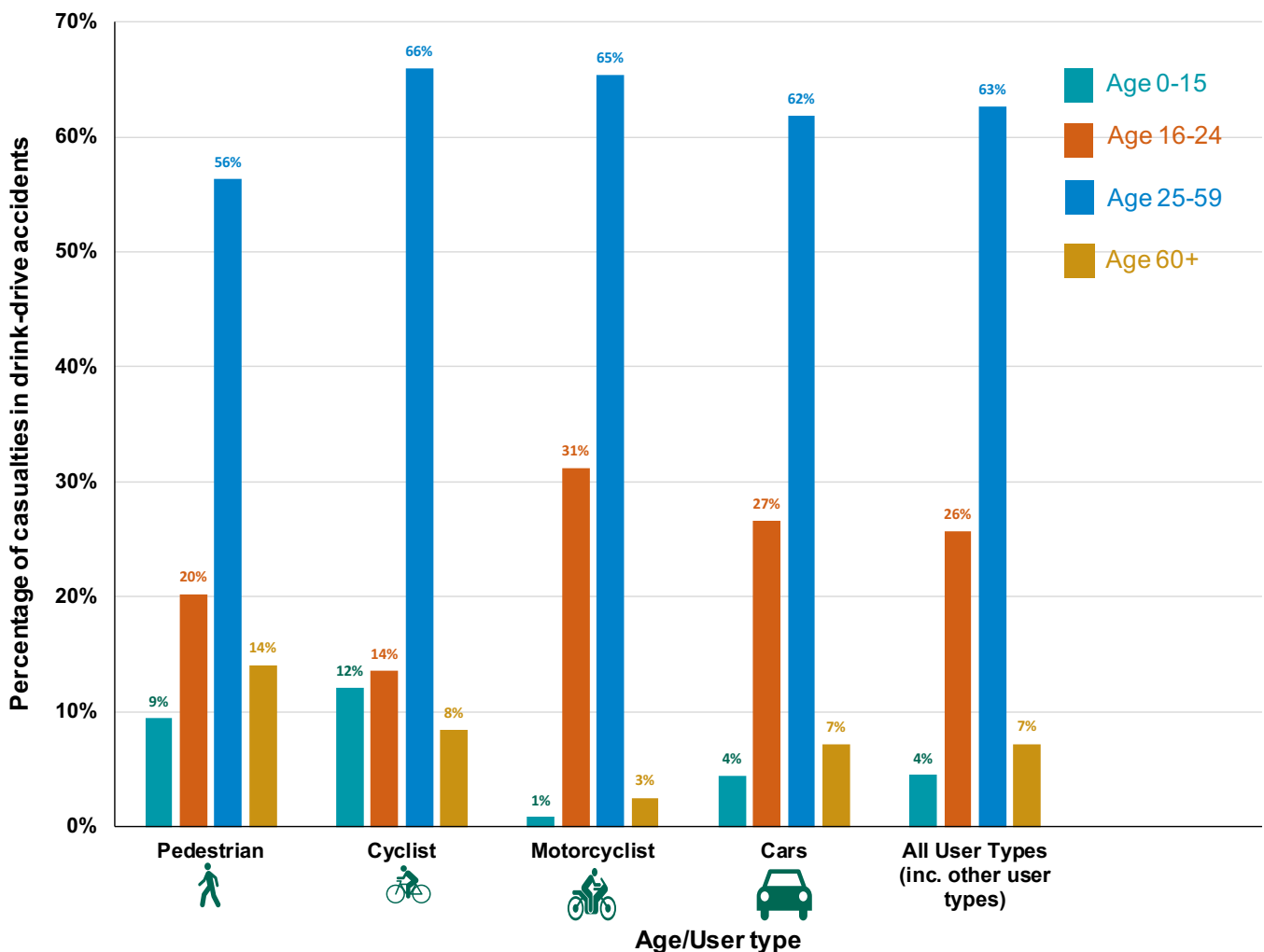
An updated [methodology note](#) is available describing how the estimates are compiled from the sources.

Children represent a higher proportion of pedestrian and cyclists drink-drive casualties than vehicle occupants drink-drive casualties. Around 9% of pedestrian and 12% of cyclists drink-drive casualties are aged 0-15 compared to 4% of all drink-drive casualties.

Older people represent a higher proportion of pedestrian drink-drive casualties than cyclists or vehicle occupants drink-drive casualties. About 14% of pedestrian casualties are over 60 compared to 7% of all drink-drive casualties.

Adults aged 16-24 represent a higher proportion of motorcyclists drink-drive casualties than any other vehicle type of drink-drive casualties. Over half of all drink-drive casualties are aged 25-59.

Chart 12: Percentage of casualties in drink-drive accidents by age and user type, 2016



[RAS 51005]

Other data sources

Breath test data for 2017 will be published in September 2018 alongside with the Reported Road Casualties Great Britain: 2017 Annual Report (RRCGB).

Statistics on the results of **roadside breath alcohol screening tests**, administered by police forces in England and Wales in 2016, using **digital breath testing devices** can be found [here](#). The devices are able to record exact breath alcohol readings and the result of individual tests, as well as reason for test, and age and gender profiles of those tested. The results are downloaded to data systems on a monthly basis and provided to the Department for Transport. These data are not provided by all police forces so are incomplete and therefore do not cover England and Wales as a whole.

Analysis on the **number of roadside tests** carried out by police in England and Wales is produced by the Home Office and can be found [here](#). The figures show geographic patterns and seasonal variation. Commentary is also provided to aid the interpretation of the trends.

The **Crime Survey for England and Wales** can be used to look at trends in **self-reported drink driving** by age, gender and frequency of alcohol consumption. Within the survey a driver is considered to be anyone who stated they had driven at least once in the past 12 months. Information is also provided for **self-reported drug driving** and is available [here](#).

The **motoring tool** produced by the Ministry of Justice can be used to explore trends in **driving convictions**. The tool presents information about activity within the criminal justice system, relating to specific motoring offences. Information is provided by age, gender, court type and area, with details about the outcome of court proceedings including the fine amount and sentence length. Data on driving convictions can be found [here](#).

Strengths and weaknesses of the data

Sampling uncertainty

Toxicology data are not available for all killed drivers / riders recorded in STATS19 and are typically available for over 60% of relevant cases (averaging 62 per cent between 2011 and 2016). To account for driver fatalities without a known Blood Alcohol Content (BAC), the casualties from the known cases are scaled up. The estimates are therefore based on a sample, rather than a complete count, which introduces an element of uncertainty.

Due to the nature of the data used to create these estimates, **there is considerably more uncertainty in the number of fatalities and fatal accidents than any other severity level**. The reason for this is that 53 per cent of the fatalities in 2016 were motor vehicle drivers themselves.

Under-reporting of road casualties

The estimates in this release are based only on those road accidents which are reported to the police. Comparisons of road accident reports with death registrations show that very few, if any, road accident fatalities are not reported to the police. However, it has long been known that a considerable proportion of non-fatal casualties are not known to the police. The data used as the basis for these statistics are therefore not a complete record of all personal injury road accidents, and this should be borne in mind when using and analysing the figures.

Background information

National Statistics are produced to high professional standards as set out in the Code of Practice for Official Statistics. They undergo quality assurance reviews to ensure that they meet customer needs. The statistics were last assessed during 2013 and the report, [number 258](#), is available.

Details of Ministers and officials who receive pre-release access to these statistics up to 24 hours before release can be found [here](#).