



Department for Transport

# Reported road casualties in Great Britain: final estimates involving illegal alcohol levels: 2018

## 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 limit for driving, in Great Britain in 2018.

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

## 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 (or injury), 95 of those years will result in a number of fatalities (or injuries) between 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).

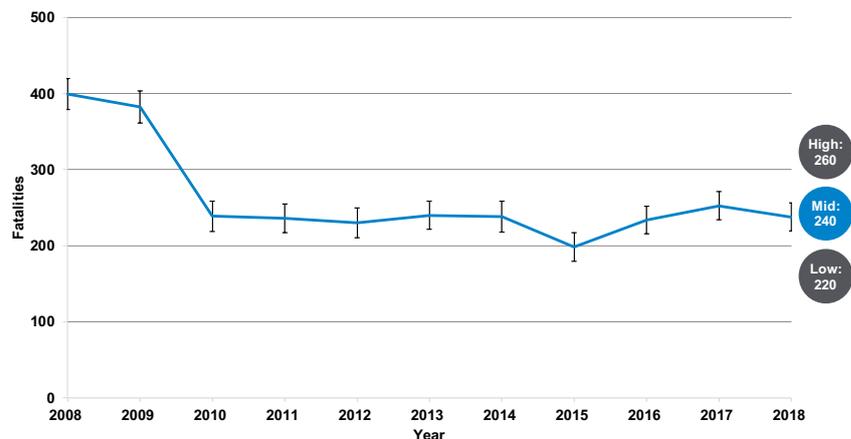
## In this publication

- Drink-drive casualties.....[p2](#)
- Drink-drive accidents..... [p4](#)
- Country and English regions..... [p6](#)
- Gender and age.....[p7](#)
- Other data sources ..... [p11](#)
- Strengths and weaknesses..... [p12](#)
- Background information..... [p12](#)

**Final estimates for 2018 show that between 220 and 260 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 240 deaths.**

- The final estimate of **fatalities** for 2018 is similar to levels seen since 2010, however, the fall from 250 in 2017 is **not statistically significant** (see definition).

**Chart 1: Fatalities in reported drink-drive accidents: GB 2008-2018; error bars show 95% confidence intervals**



[RAS51001]

- An estimated 8,680 people were **killed or injured** when at least one driver was over the drink-drive limit. This represents an **increase** of 1% from 8,600 in 2017, but is still 4% lower than the level in 2016.
- The **total number of accidents where at least one driver was over the alcohol limit** rose by 3% to 5,890 in 2018 compared to 2017, but is 3% lower than the level in 2016.

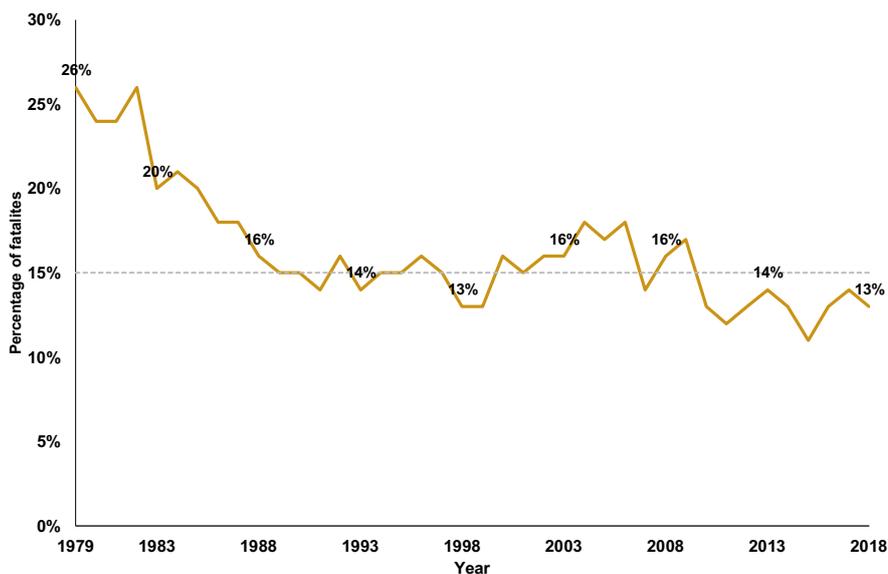
# Casualties in drink-drive accidents in 2018

## Drink-drive fatalities

The final central estimate of the number of fatalities in accidents with at least one driver over the alcohol limit for 2018 is **240**. This represents about 13% of all deaths (1,784) in reported road accidents in 2018. **The central estimate for 2018 is lower than the final figure for 2017, but the decrease is not statistically significant.** The 95% confidence interval indicates that we can be 95% certain that the **true figure, as opposed to the estimate, falls somewhere between 220 and 260 fatalities.**

The final estimate for 2018 is based on coroners' and procurators' fiscal reports for 65% of the drivers or riders who were killed in road traffic accidents in 2018, in addition to breath tests taken at the scene (see definitions opposite).

**Chart 2: Fatalities in reported drink-drive accidents as a proportion of all fatalities: GB, 1979-2018**



[RAS51001]

The prevalence of drink-driving in road deaths has fallen over time. In 1979, 26% of road deaths occurred in accidents where at least one driver/ rider was over the drink-drive limit. This had fallen to 16% by 1988 and then varied around 15%. It has been below 15% each year since 2010.

## 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](#).

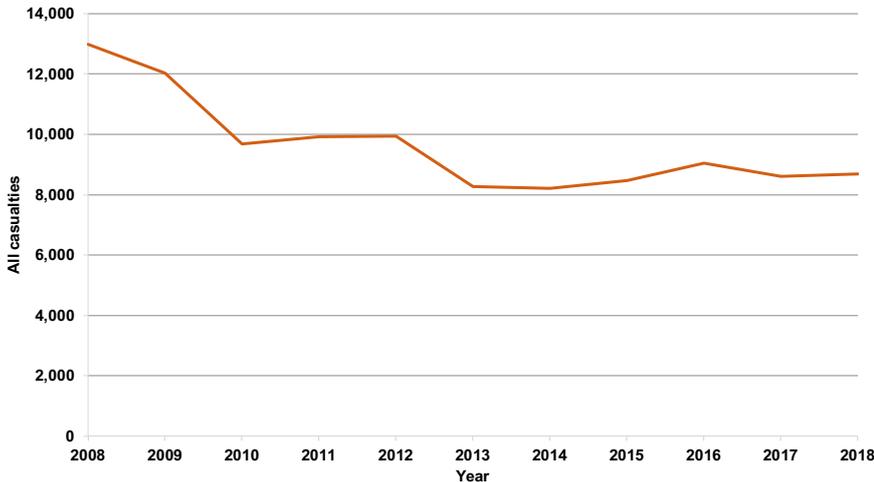
## Methodology details

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

## All drink-drive casualties

The central estimate of the number of **drink-drive casualties of all severities** in 2018 is 8,680, an increase of 1% on 2017. This is still 4% lower than the level in 2016.

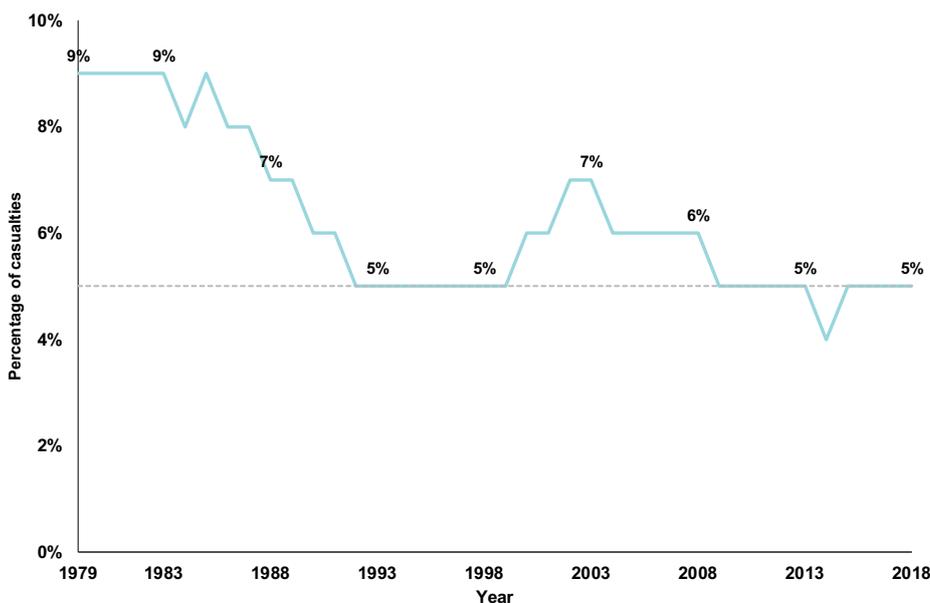
**Chart 3: Total casualties in reported drink-drive accidents: GB 2008-2018**



[RAS51001]

It is estimated that around 5% of all casualties (160,597) in reported road accidents in 2018 were involved in accidents in which at least one driver or rider was over the drink-drive limit.

**Chart 4: Casualties in reported drink-drive accidents as a proportion of all casualties: GB, 1979-2018**



[RAS51001]

In 1979, 9% of road casualties occurred in accidents in which at least one driver/rider was over the drink-drive limit. This had fallen to 6% by 1990 and has been around 5% since then.

## Uncertainty

These statistics, especially the number of fatalities, are subject to considerable uncertainty (see Sampling uncertainty on page 11). This means that it is impossible to be sure of the precise number of fatalities, so ranges and confidence intervals are used for fatalities throughout the 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.

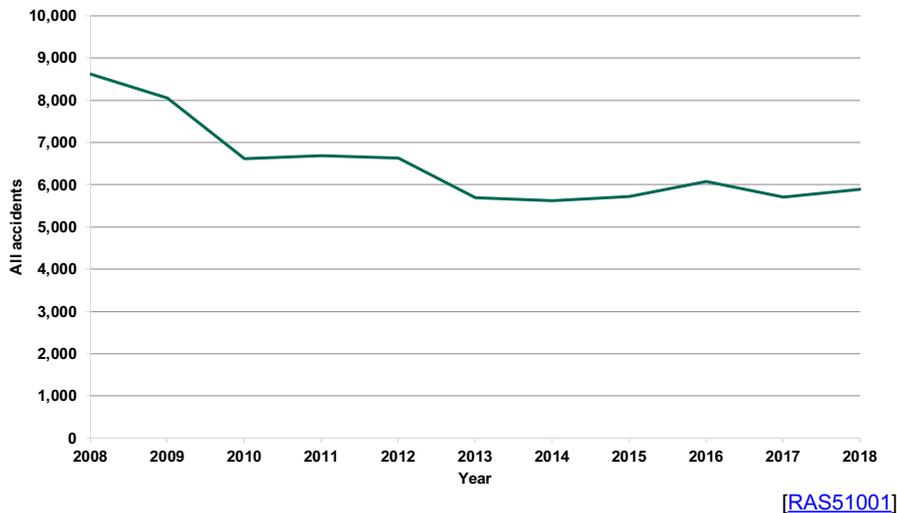
Technically, it indicates that if many samples of the same population were drawn, 95% of the results would fall between the confidence interval values.

For instance, for 2018 we have an upper limit of 260 fatalities and lower limit of 220. This means that we are 95% confident that the true number for 2018 will fall between these values, but most likely towards the centre of this range.

## Number of drink-drive accidents in 2018

The **total number of drink-drive accidents** of all severities increased by 3% to 5,890 in 2018. This is still 3% lower than the level in 2016. This means that around 5% of all reported road traffic accidents in 2018 (122,635) involved at least one driver/rider over the legal alcohol limit.

**Chart 5: Number of reported drink-drive accidents: GB 2008-2018**



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 122,635 in 2018, a 52% reduction. However, **drink-drive accidents have fallen further; down 70% since 1979**. It is therefore likely that some drink-drive initiatives have been effective in reducing the number of drink-drive accidents.

### Changes in systems for severity reporting

Since 2016, figures have been affected by a large number of police forces changing their reporting systems which has had a large impact on the classification of non-fatal injuries recorded. Further details are in the Road Casualties Great Britain [annual report 2018](#). Figures for serious and slight injuries accompanying this release are unadjusted for the change.

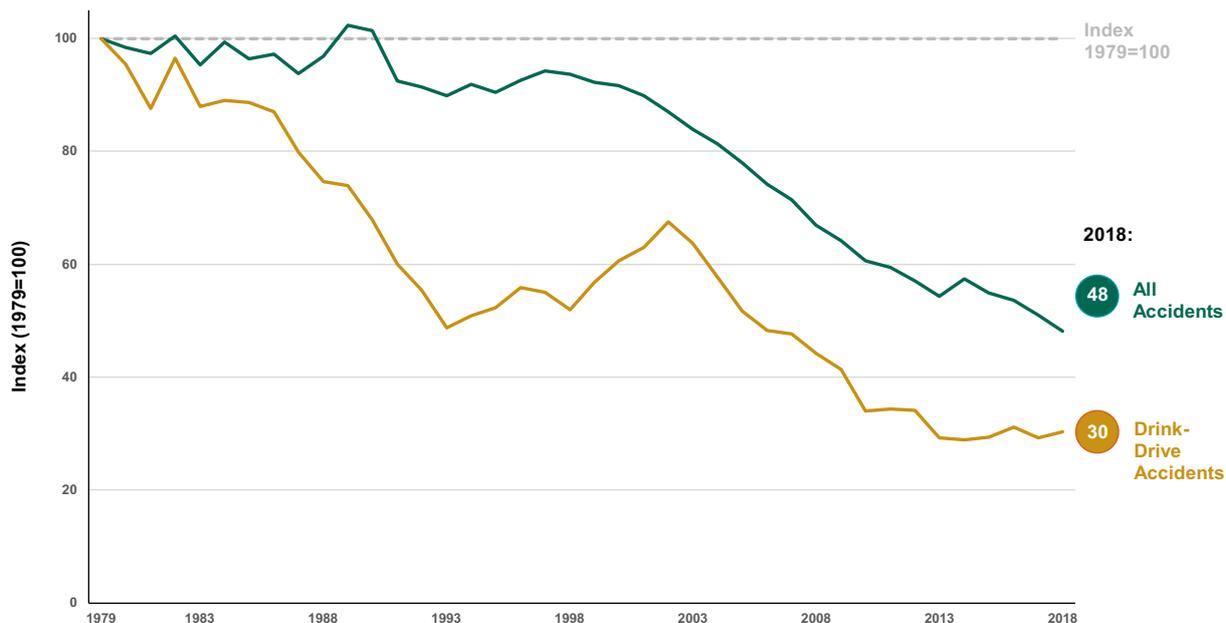
### How do provisional estimates differ from the final estimates?

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 2018](#) published in February 2020, was based on around 47% of drivers who died in road accidents. The final estimate in this publication is based on 65% of drivers. This represents the second highest return rate (second only to 2017) since 2009. This is a better than expected result given the issues surrounding the COVID-19 pandemic.

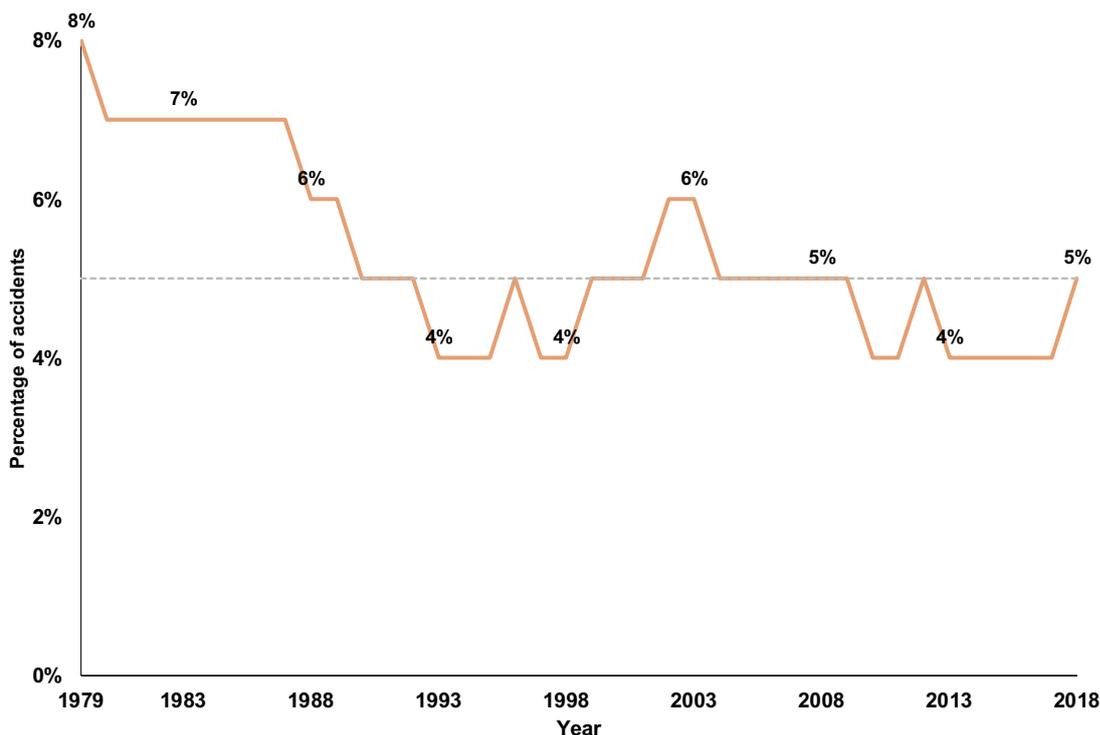
There were an estimated 210 **fatal drink-drive accidents** in 2018. Fatal drink-drive accidents have been around this level since 2010. In 1979, around 7% of reported road traffic drink-drive accidents resulted in a fatality. This compares to 4% of drink-drive accidents in 2018.

**Chart 6: Reported accidents and drink-drive accidents:  
GB 1979 to 2018 (index 1979 = 100)**



[RAS51001]

**Chart 7: Reported drink-drive accidents as a proportion of overall reported accidents: GB, 1979-2018**



[RAS51001]

In 1979, 8% of reported road accidents were drink-drive. This had fallen to 6% by 1988 and has been generally around 5% since then.

The headline drink-drive table, [RAS51001](#), shows accidents and casualties by severity since 1979. This is the final update on the provisional estimates published in February 2020.

**Chart 8: Drink-drive fatalities, casualties and accidents: GB, 2018**

	Drink-drive fatalities	All drink-drive casualties	All drink-drive accidents
Number in 2018	240	8,680	5,890
Change since 2017	↓ 6% ns	↑ 1% *	↑ 3% *
Change compared to 2010	↓ 0.4% ns	↓ 10% *	↓ 11% *
As a proportion of all fatalities/casualties/accidents	13% of all fatalities	5% of all casualties	5% of all accidents

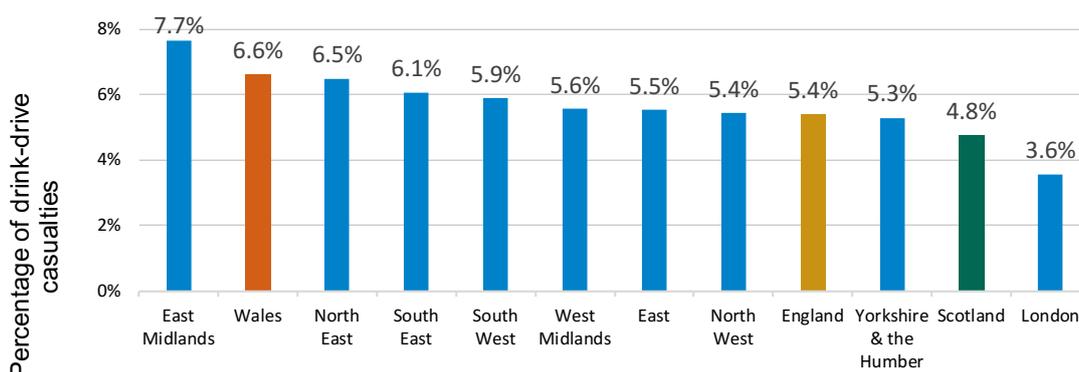
ns = not significant  
\* = significant at 95% level

[RAS51001]

## Drink-drive casualties by country and English region

Overall, 5% of casualties in reported road accidents in 2018 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 percentage of all casualties which occurred in drink-drive accidents is the highest in Wales at 6.6% followed by England at 5.4% and Scotland at 4.8%. Within the English regions, the casualty rates varied from 7.7% in the East Midlands to Greater London at 3.6%.

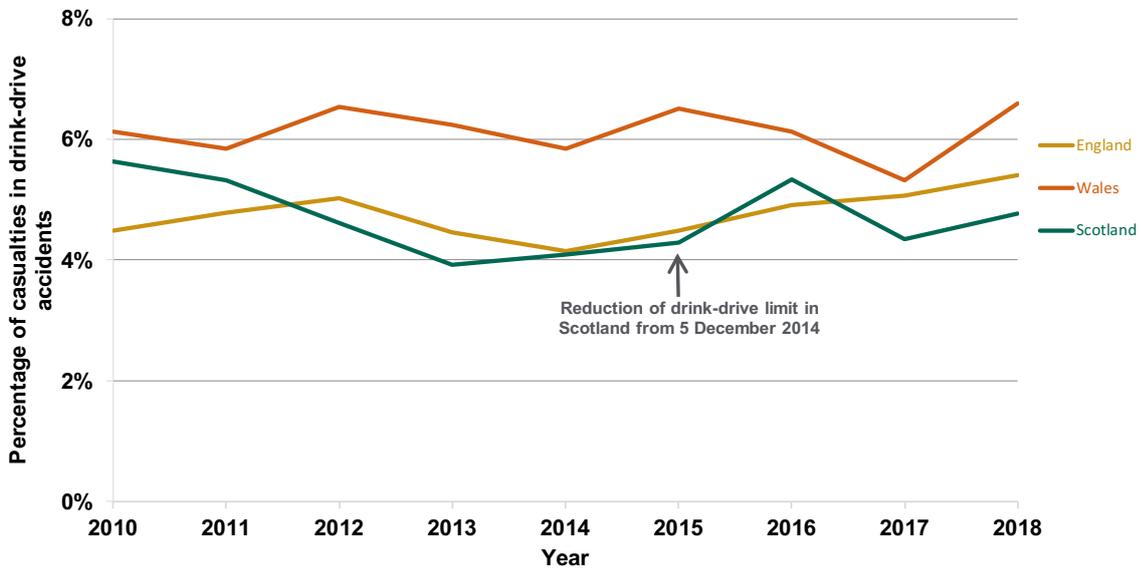
**Chart 9: Percentage of casualties occurring in drink-drive accidents by country and English region, 2018**



[RAS51019]

Since 2010, the proportion of casualties that occur in drink-drive accidents has been lower in London than any other region. Wales had a higher rate than England or Scotland in the same time period. Please note that the variability in figures for Scotland might be due to low underlying numbers in the estimation.

**Chart 10: Percentage of casualties occurring in drink-drive accidents by country, 2010 to 2018**

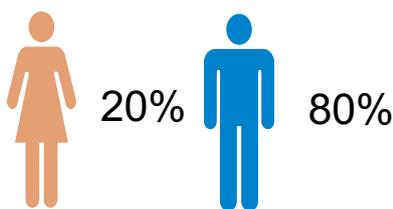


[RAS51019]

## Casualties in drink-drive accidents by gender and age

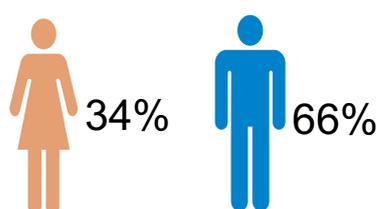
In 2018, 80% of drink-drive accidents involved male drivers/riders over the legal alcohol limit. Some accidents will involve both male and female drivers over the limit, and gender is unknown for some drivers over the limit. However, males make up 66% of casualties and females 34% in drink-drive accidents.

**Chart 11: Drink-drive accidents by gender of driver/rider over the limit involved, 2018**



[RAS51022]

**Chart 12: Gender of casualties in reported drink-drive accidents, 2018**



[RAS51005]

### 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.

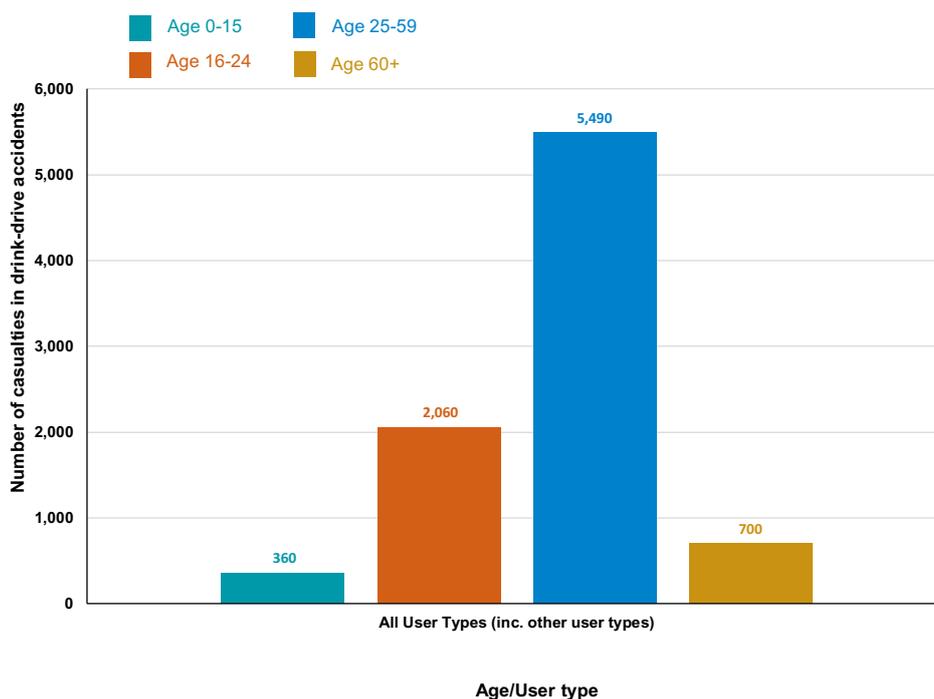
Almost two thirds of casualties in drink-drive accidents (63%) are aged 25-59 (compared to 58% of casualties in all accidents). People aged 16-24 represent 24% of drink-drive casualties (compared to 20% of all casualties). The respective figures for older people (aged 60 or more) is 8% and 14%. For children (aged 0-15) the figures are 4% and 6%.

## Tables published with this release

In this release, the tables on drink-driving are organised 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. Estimated number of reported accidents involving a car drink-driver by age.
- [Drink-drive casualties](#) by user type gender and age. KSI casualties involving young drivers over the drink-drive limit.
- [Drink-drive fatalities](#): drivers/riders killed over the drink-drive limit, by blood alcohol category and age, blood alcohol levels of all fatalities.

**Chart 13: Number of casualties in drink-drive accidents by age, 2018**



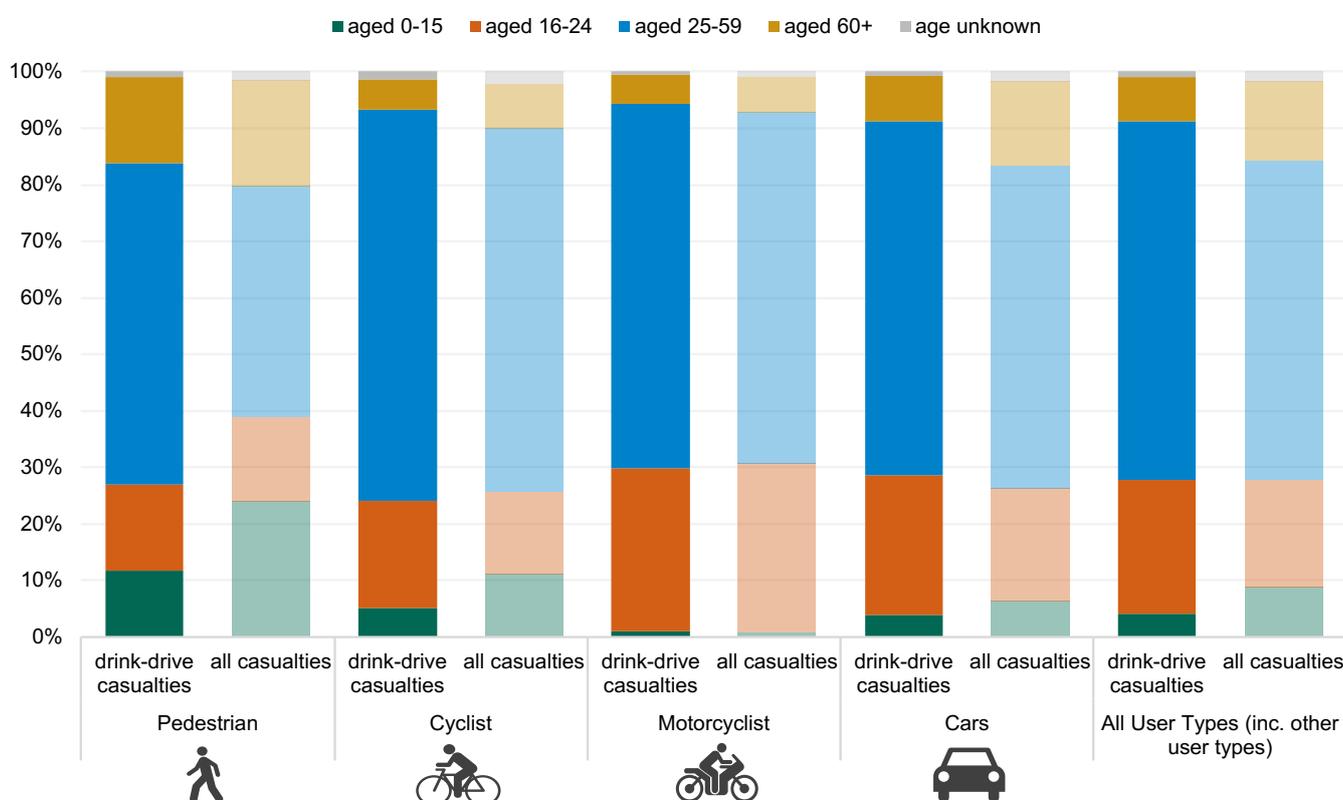
[RAS51005]

Children (aged 0-15) and older people (aged 60+) represent a lower proportion of casualties in drink-drive accidents compared to all reported road accidents. Children comprise of 4% of drink-drive casualties, compared to 9% of casualties in all accidents. Older people make up 8% of drink-drive casualties, compared to 14% of all casualties. Young adults (aged 16-24) and adults (aged 25-59) are over-represented in drink-drive casualties, accounting for 24% and 63% of them respectively, compared to 19% and 56% in all accidents. One reason may be that children and older people are less likely to be on the road late at night or in the early hours in the morning when drink-drive accidents are more likely to occur.

Child pedestrians, pedal cyclists and car occupants are particularly under-represented in drink-drive casualties compared to all casualties. The under-representation is largest for pedestrians. Children represent 12% of pedestrian drink-drive casualties, compared to 24% of all pedestrian casualties.

Older people are under-represented in drink-drive casualties for all user types. The under-representation is largest for car occupants. Older people represent 8% of car occupant drink-drive casualties, compared to 15% of all car occupant casualties.

**Chart 14: Percentage of casualties by age and user type, in drink-drive accidents compared to all accidents: GB 2018**



[RAS51005]

## Evaluation of changes to the drink-drive limit

An independent evaluation of the impact of the limit reduction in Scotland led by the University of Glasgow was [published in the Lancet](#) on 12 December 2018. This evaluation took advantage of the natural experiment created by the lowering of the legal blood alcohol limit in Scotland only and compared data on weekly road traffic accident rates and alcohol consumption (off and on sales data) between Scotland (the intervention group) and England and Wales (the control group). The study found that lowering the drink-drive limit was not associated with any reduction in total accident rates or serious and fatal accident rates, but that the change was associated with a small reduction in per-capita alcohol consumption from on trade alcohol sales.

## Reviewing the frequency and improving the timeliness of drink-drive estimates

We want to further improve the quality and timeliness of road safety data. Currently, provisional drink-drive estimates are released 14 months after the end of the year reported on (with a return rate around 30% from coroners), and final estimates are released 20 months after the end of the year (with a return rate around 60% from coroners).

The range of uncertainty associated with the lower return rate at the provisional stage means that it is very unlikely the provisional publication can detect significant changes in the underlying trends. Therefore the road safety team in the longer term aims to reduce the delay from the end of the year to the date of publication making the releases more timely.

The road safety team is working to allow the data collection from coroners to start earlier and more regularly based on STATS19 data. The aim is to improve the overall response rate and allow the publication of final drink-drive estimates to be released in less than 20 months after the end of the year. This approach is currently being tested and initial findings are encouraging. The return rate for 2017 and 2018 at 84% of all fatalities was 3 percentage points higher than for 2016. Further progress will be reported on in due course.

We welcome your feedback on this approach, specifically how you are using these statistics and whether this meets your needs. Please contact us at [roadacc.stats@dft.gov.uk](mailto:roadacc.stats@dft.gov.uk).

## Background on legislation

The Road Safety Act 1967 introduced the first drink-driving limit in the UK, set at a maximum blood alcohol concentration of 80mg of alcohol per 100ml of blood (or the equivalent 107mg of alcohol per 100ml of urine). It became an offence to drive, attempt to drive or be in charge of a motor vehicle on a road or other public place with a BAC that exceeded the maximum prescribed legal limit. The 1967 Act also made it an offence to fail to provide a specimen for a laboratory test without reasonable excuse.

[The Transport Act 1981](#) introduced evidential breath testing and established a maximum breath alcohol concentration of 35 micrograms of alcohol in 100ml of breath. This was implemented in 1983. Today, people are given a preliminary breath test at the roadside and then taken back to the police station for an evidential breath test.

Drink-driving legislation has been strengthened over the years, including tougher penalties for offenders which can include potentially unlimited fines, disqualification from driving, or facing imprisonment for the most serious offences. On 5 December 2014, Scotland reduced the legal BAC limit for all drivers from 80mg/100ml of blood to 50mg/100ml. The drink drive limit introduced by the 1967 Act remains in place for England and Wales today.

## Other data sources

Breath test data for 2019 will be published in September 2020 alongside the Reported Road Casualties Great Britain: 2019 Annual Report.

Statistics on the results of **roadside breath alcohol screening tests**, administered by police forces in England and Wales in 2018, 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 around 60% to 70% of relevant cases (averaging 63% between 2011 and 2017) for final estimates. Final estimates for 2018 are based on 65% of relevant cases.

To account for the killed drivers 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.

#### Next release

Provisional 2019 estimates for casualties in reported drink-drive accidents will be published in February 2021.

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 54% of fatalities in 2018 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 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](#).