Department for Transport

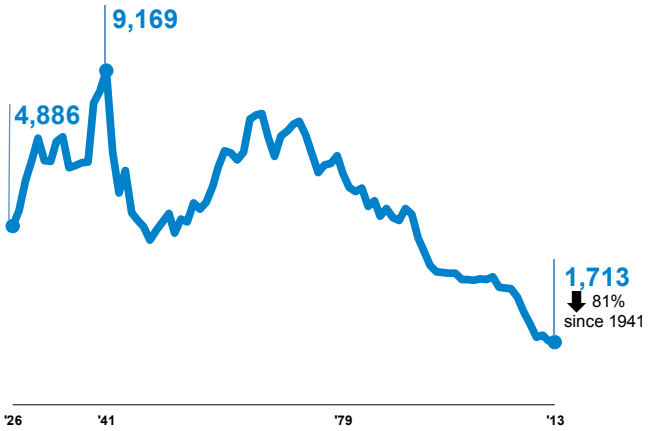
Facts on Road Fatalities

June 2015

Overview

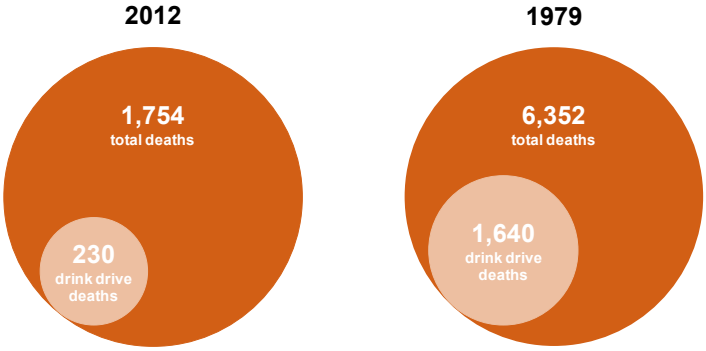
Since records began in 1926, reported road fatalities have fallen by almost 80 per cent, with steady falls since the peacetime in 1966. Motor traffic levels have more than doubled since recording began in 1949, which means the relative risk of road deaths has fallen significantly.

Reported road fatalities, GB: 1926 to 2013



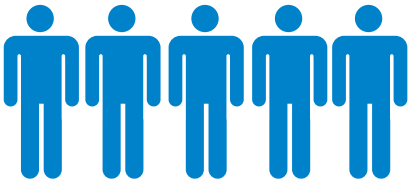
Drink drive fatalities

In 2012, **drink drive fatalities** were seven times lower than the 1979 total…



Average per day, GB: 2013

An average of 5 deaths occurred per day



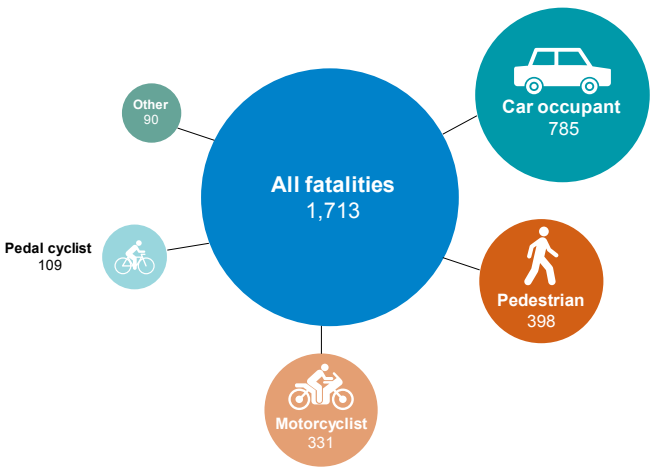
Top contributory factors allocated

35%
of road fatalities were allocated a loss of control contributory factor

26%
of road fatalities were allocated a failed to look properly contributory factor

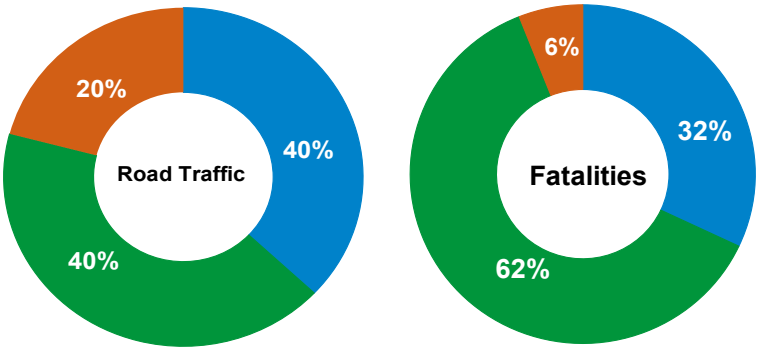
Fatalities by road user type, GB: 2013

Car occupants make up the largest proportion (46 per cent) of road fatalities across all road user types.



Fatalities by road type, GB: 2013

Rural roads carry 40% of road traffic, but account for 62% of road fatalities.



Key:
Motorways
Urban roads
Rural roads

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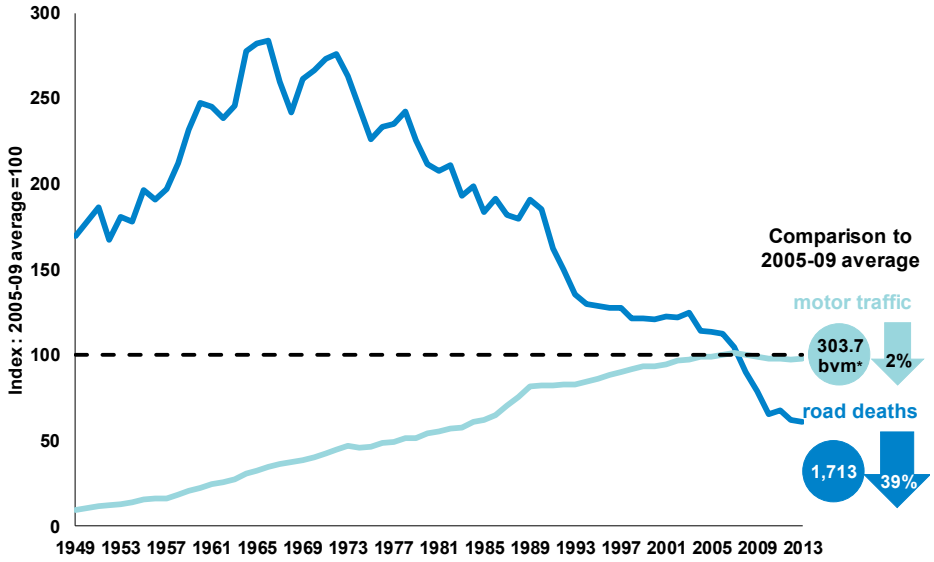
Trends over time

Reported road fatalities and motor traffic, GB: 1949 to 2013[1]



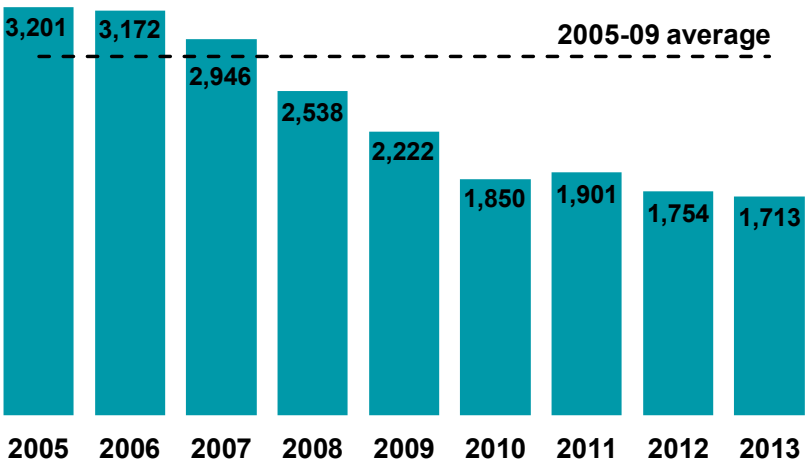
1 Traffic estimates from 1995 onwards were produced on a new more accurate basis and are not directly comparable with previous years.

**bvm = billion vehicle miles*

- **There has been long term reductions in fatalities** of all **road user types** from a post-war peace time high of almost 8,000 deaths in 1966 to 1,713 deaths in 2013, the lowest recorded.
- Alongside the falls in road deaths, **motor traffic** has increased by a tenfold since recording began in 1949. This means that the relative risk of road death, has fallen by even more.

- The **fatality rate** has halved in the past decade, from 10.6 **fatalities per billion vehicle miles** in 2004 to 5.6 fatalities per billion vehicle miles in 2013.
- Despite the on year decrease in the **fatality rate** in most years of the decade to 2013, there was a reversal of the trend in 2011. In this year the fatality rate **increased,** probably as a **result of bad weather in 2010** which supressed the number of fatalities that year. However the decreasing trend resumed to 2013.

Fatalities in reported accidents, GB: 2005 - 2013



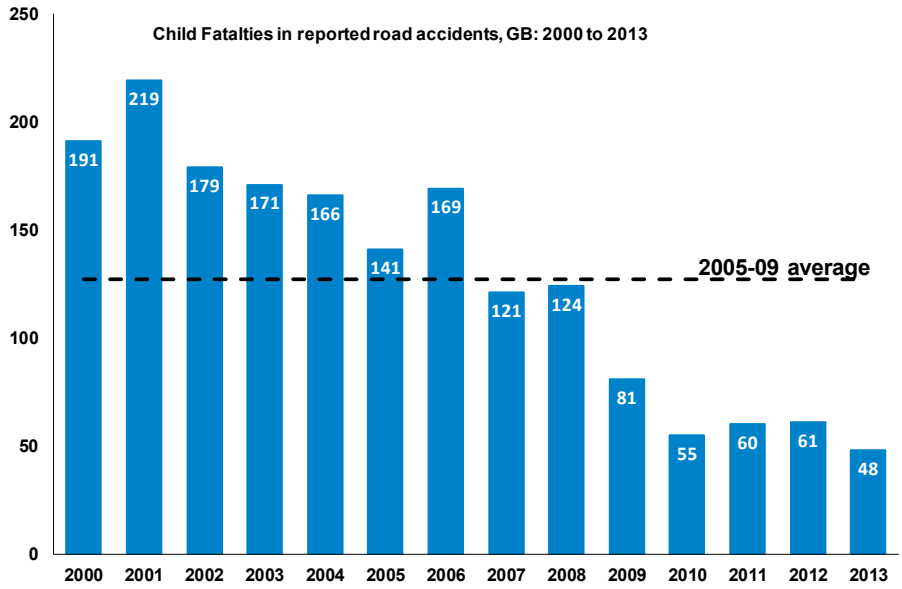
- **Road deaths** fell year on year from 2005 to 2010 with the exception of 2011.The largest decrease occurred between 2008 and 2010, with an average year on year fall of 10 per cent during this period.
- Since 2010 there have been much smaller decreases in fatalities with some annual increases as well.

Background to trends in reported fatalities

There are a number of factors which may have contributed to the falling number of fatalities over the years:

- **Sustained periods of snow and ice** in the first and fourth quarters of 2010 contributed to the highest ever fall in fatalities in a single year. Comparable periods of bad weather were not seen in 2011 and this was a factor in the increase in fatalities between 2010 and 2011. **Traffic levels** stabilised in 2011 after falling for the previous three years following the 2007-2009 **recession**.
- There is evidence to suggest that **economic recessions** have contributed to a decrease in reported road deaths. The two periods of large falls in reported road deaths since 1979 (1990-94 and 2006-10) coincided with the 1990-92 and 2008-10 recessions.
- **Technological** and **engineering** improvements to vehicles and highways may have played a role in avoiding accidents and mitigating the consequence when the do occur.
- **Improved education** and **training** is likely to have produced better and safer drivers.
- **Improvements in trauma care** (and in England, particularly with the introduction of major trauma care centres) and **emergency services responses** are likely to have improved outcomes after an accident has occurred.

Child (0-15) fatalities



- The number of **children** killed in reported road accidents has fallen significantly since 1979.
- The 2013 level of 48 child fatalities is over 90 per cent lower than the 1979 figure.
- From 2000 to 2013 child fatalities fell almost every year, with exceptions of 2001, 2006 and 2008.
- The majority of child fatalities are **pedestrians** making up 54 per cent of child fatalities followed by **car occupants** that make up a further 24 per cent. See child casualties factsheet for more details.

Fatalities in reported road accidents by road user type

- **Car occupants** make up the largest share of road deaths across all road user type. In 2013 car occupants accounted for 46 per cent of reported road fatalities. **Car traffic** accounts for the majority (80 per cent) of road traffic on British roads.
- Vulnerable road users - **pedestrians, pedal cyclists** and **motorcyclists** collectively making up a further 49 per cent of road fatalities. Other road users include **bus and goods vehicle occupants** which account for the final 5 per cent of reported road fatalities.

Reported killed casualties for the four largest casualty groups, per billion miles travelled, GB: 2005 to 2013

- There has been a reduction in the **fatality rate** of all four main casualty groups over the past decade, with broadly continuous drops between 2005 and 2010.

- The **largest decrease has been for car occupants.** The fatality rate in 2013 was over 40 per cent lower than the 2005-09 average. Reasons for this include improvements in vehicle safety, road safety engineering and education.
- The fatality rate for **pedal cyclists** and **motorcyclists** decreased more slowly, ending around a quarter lower than the 2005-09 average by 2013.

Relative risk of different forms of transport, Great Britain: 2013

	Casualty rate[1] per billion vehicle miles	
	Killed	Killed or seriously injured
Car occupants	2	21
Pedestrian[2]	34	463
Pedal cyclist	34	1,036
Motorcycle users	114	1,789

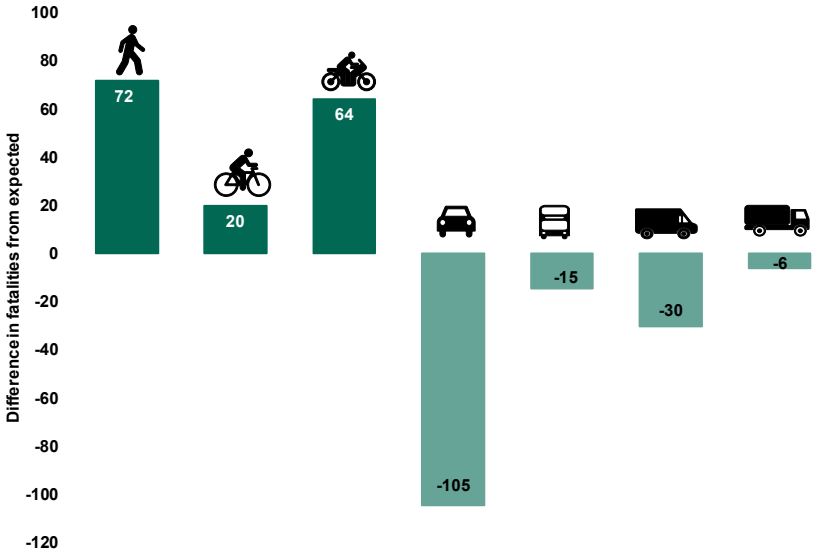
1 Rates calculated using traffic figures

2 National Travel Survery data used to calculate pedestrian rates. NTS data based on England only resident sample

- Per **billion vehicle miles** travelled, the **greatest risk of death** is for **motorcyclists.** This group accounts for less than 1 per cent of traffic but 19 per cent of fatalities.
- The risk of death for a motorcyclist is at least 57 times than that for a **car occupant**.

- Pedal cyclists and pedestrians have comparable fatality rates.

The number of fatalities per passenger mile varies between road user groups



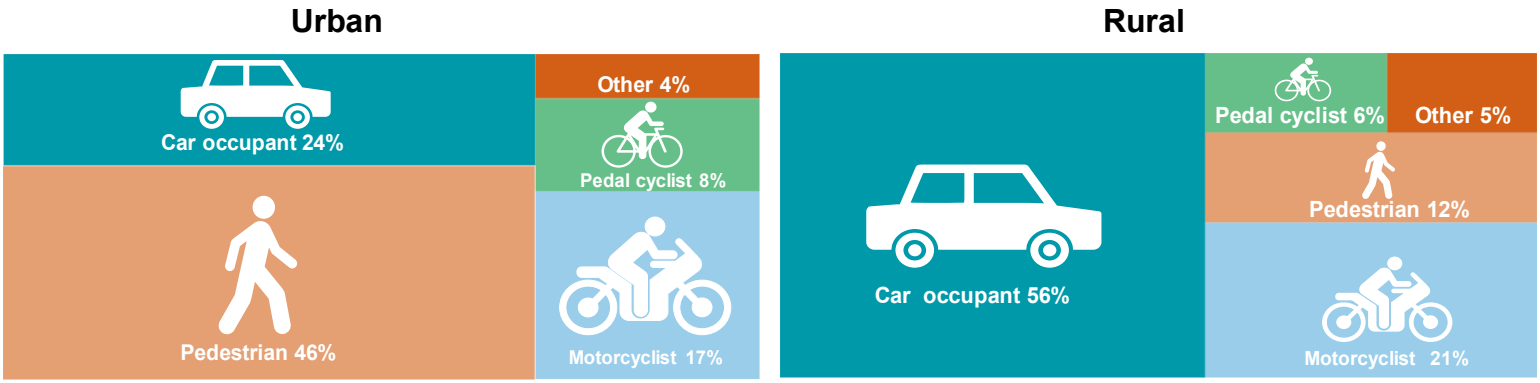
- As described above, there is a difference in the fatality rate per passenger mile for each road user group.
- This chart shows the difference between the actual number of fatalities in 2013 and the expected number of deaths per passenger mile across all road user groups.

- There have been **more fatalities** in the vulnerable users groups (**pedestrians, pedal cyclists** and **motorcyclists**) than would be expected, given the distance the groups travel.
- If all user groups had the same fatality rate per passenger mile travelled, there would have been **72 fewer pedestrian, 64 fewer motorcyclist** and **20 fewer pedal cyclists** deaths in 2013.
- In contrast, there are significantly **fewer fatalities** in the **car occupant** group, at 105 fewer deaths than would be expected if the fatality rate were the same.

Road type

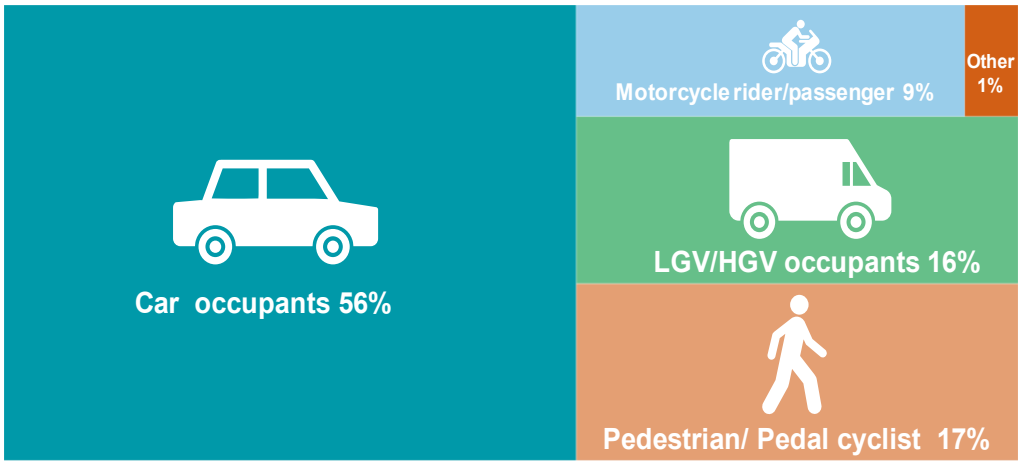
- In 2013, **rural roads** carried the majority of **car traffic** (42 per cent) followed by **urban roads** (32 per cent) and **motorways** (20 per cent). Fatalities on rural roads increased by 3 per cent to 1,070 in 2013, however this figure is still around 8 per cent lower than 2011 total.
- In contrast, fatalities on urban roads decreased by 13 per cent from 627 deaths in 2012 to 543 deaths in 2013, reversing the 2011 increase.
- Accidents that occur on rural roads are more likely to be of a fatal nature in comparison with those on urban roads. This is because of the difference in the **average speed on different roads**.
- Rural roads have a much **higher average speed** than urban roads. Rural roads are often much more sinuous and narrow in nature with blind bends, dips and other distractions. Accidents at **lower speeds** on urban roads are less likely to result in serious injuries or fatalities.
- This is borne out by the fact that the **fatality rate** for road deaths is **higher on rural roads than on urban roads** (7.3 fatalities per billion vehicle miles compared to 2.6 on urban roads), despite the greater number of vehicle interactions on urban roads.

Fatalities on urban and rural roads by road user type, GB: 2013



- **Pedestrians** are more likely to be killed in reported road accidents on urban roads. They accounted for 46 per cent of fatalities in 2013, with **car occupants** and **motorcyclists** accounting for 28 per cent and 17 per cent, respectively. The difference in traffic volumes and pedestrian volumes between urban and rural roads mean that more accidents involving pedestrians occur on urban roads and more accidents involving cars occur on rural roads.
- The pattern differs on rural roads however on these roads, **car occupants** account for the majority (66 per cent) of fatalities, with **motorcyclists** accounting for a fifth and **pedal cyclists** and **pedestrians** around 10 per cent each.

Reported fatalities on motorways by road user type, GB: 2009-2013



- Reported fatalities on **motorways** have fluctuated between 100 and 200 since the 1990s. The lowest annual figure for fatalities on the motorway was in 2012 (88 deaths). Year on year changes are likely to be as a result of chance than any meaningful trend.

- Fatalities on **motorways** account for less than 10 per cent of reported road deaths. Between 2009 and 2013 motorways carried around 20 per cent of GB traffic, but accounted for just 6 per cent of road deaths. Mile per mile, the **risk of death** on motorways was around 5 times lower than the equivalent figure for rural roads and 3 times lower than for urban roads.
- **Motorways are statistically the safest roads in GB.** They are built and maintained to higher design standards than other roads on the network, including having wider lanes, grade separated junctions and each carriageway is separated by barriers of both steel and concrete in order to improve safety and avoid the risk of head on collisions. Motorways include greater use of technology to manage the flow of traffic and variable speeds which contribute to the strong safety record.

- In the last five years **car occupants** made up the majority of fatalities (56 per cent) and the majority of motor traffic (80 per cent) on motorways. **Pedestrians**[1] accounted for 17 per cent of road deaths on motorways while **goods vehicles** and **motorcyclists** accounted for 25 per cent collectively.

Fatalities by time of day

The table below shows reported road fatalities by time of day after taking into account reported traffic levels by time of day to calculate actual and expected values:

Reported road fatalities by time of day and day of week, 100 = expected number of fatalities given distance driven during that hour GB: 2009 to 2013

Hour of day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
00:00-01:00	498	201	234	351	306	610	478
01:00-02:00	461	299	189	354	410	803	854
02:00-03:00	509	330	186	317	289	856	1,137
03:00-04:00	433	229	247	219	352	721	1,270
04:00-05:00	82	128	139	100	162	372	957
05:00-06:00	96	87	137	121	134	341	500
06:00-07:00	86	67	84	74	91	152	264
07:00-08:00	58	66	48	53	65	136	230
08:00-09:00	59	54	39	36	56	106	118
09:00-10:00	61	55	41	55	61	93	124
10:00-11:00	53	79	73	63	55	85	117
11:00-12:00	71	65	81	64	62	102	98
12:00-13:00	65	69	82	64	48	81	101
13:00-14:00	66	72	67	95	69	95	111
14:00-15:00	77	87	82	73	96	101	101
15:00-16:00	70	78	69	66	69	150	116
16:00-17:00	77	84	73	65	71	125	139
17:00-18:00	77	78	66	66	87	115	101
18:00-19:00	80	68	61	73	74	113	102
19:00-20:00	95	129	119	97	117	142	81
20:00-21:00	132	157	133	103	161	155	123
21:00-22:00	147	213	168	188	209	226	180
22:00-23:00	207	210	192	166	253	324	246
23:00-00:00	359	235	315	312	436	327	254

Key

Scores below a 100 are highlighted in **blue** which indicates fewer fatalities than expected.

Scores above a 100 are highlighted in red which indicates more fatalities than would be expected.

- The heat maps give an indication of the risk of fatalities during each hour of the day. We assume that the risk of a fatality per mile travelled remains the same throughout the day. A value of 100 indicates that there are as many fatalities as would be expected during that hour given the distance travelled during that hour. Scores **below 100** indicate that there are **fewer fatalities** than would be expected, and scores **above 100** indicate that there are **more fatalities** than would be expected. For instance, an hour with a score of 50 has roughly 50 per cent (or half) of the expected number of fatalities. An hour with a score of 200 has roughly 200 per cent (or twice the number) of the expected number of fatalities.

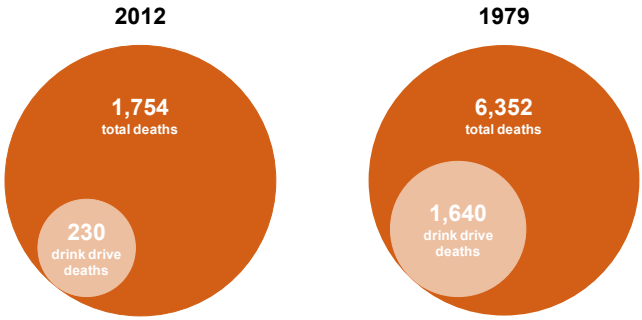
[1] Although pedestrians and pedal cyclists are not allowed on motorways as a matter of course, people can make mistakes and enter the motorway by error or deliberate act, or can become pedestrians if they have to exit a broken down vehicle.

- The chart therefore gives an indication **of what times of the day and week have greater risk of fatalities**. This is not necessarily the same time of the day as when the most accidents occur. It is likely that the greatest number of accidents will happen during the busiest times of the day, when there is a lot of traffic on the road.
- In general, the **highest rate of road fatalities per mile travelled is overnight**, between around **9 to 12 pm and 4 am** (or even later in the morning over the weekend). In particular the **highest risk hours** are between **midnight of Friday night / Saturday morning through to 6 am Saturday**, and the equivalent for **Saturday night / Sunday morning**, with up to 10 times the expected number of fatalities occurring.
- If the rate of fatal accidents remained constant throughout the day, we would expect very few accidents to occur during this period due to relatively low volumes of traffic. The very high rate is likely to be as a result of a combination of factors including, but not limited to, tiredness, poor visibility, clear roads which would allow speeding, and possibly driving under the influence of alcohol or drugs.
- Based on 2012 drink drive statistics, **83 per cent of pedestrians aged 16 and over** killed in reported accidents between the hours of **10 pm and 4 am were over the legal limit for drivers** compared with **59 per cent of car drivers themselves**. A similar proportion (50 per cent) of pedal cyclists killed overnight were over the legal alcohol limit for driving.

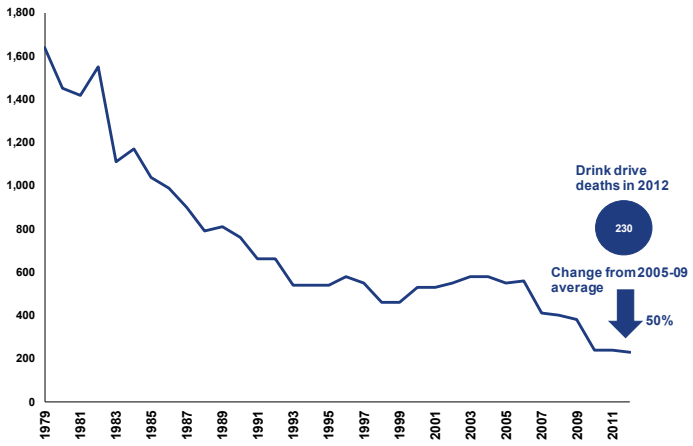
Drink drive fatalities

Detailed reporting of **drink drive accidents** began in 1979. There were 1,640 fatalities in reported drink-drive accidents in that year, over seven times larger than the drink drive fatality figure reported for 2012.

Comparing total road deaths and drink drive deaths, GB: 1979 and 2012



Killed casualties in reported drink drive accidents, GB: 1979 to 2012



- The number of people estimated to be killed in reported drink drive accidents fell to 230 in 2012, a 4 per cent decrease from 240 **drink drive deaths** in 2011. This figure is not significantly different from the past two years.
- Although the number of fatalities in reported road accidents has fallen since 1979, drink drive fatalities have seen a larger fall.

- In 1979 drink drive fatalities accounted for a quarter of road deaths, however in 2012 they accounted for 13 per cent of reported road deaths.

Most commonly recorded contributory factors in reported road accidents by severity of casualty, GB: 2013

Contributory factors provide an insight into how and why accidents occur. The factors are largely subjective as they reflect the opinion of the reporting officer, therefore they should be interpreted with caution. A maximum of six factors can be recorded for each accident.

	Killed		Seriously injured		Slightly injured		All casualties	
Contributory factor reported in accident[1]	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Careless, reckless or in a hurry	320	*20*	3,195	*17*	22,090	*17*	25,605	*17*
Aggressive driving	147	*9*	800	*4*	4,085	*3*	5,032	*3*
Poor turn or manoeuvre	234	*15*	2,819	*15*	18,978	*15*	22,031	*15*
Driver/Rider failed to look properly	408	*26*	6,548	*35*	54,881	*43*	61,837	*42*
Failed to judge other person's path or speed	217	*14*	3,086	*16*	31,093	*24*	34,396	*23*
Swerved	109	*7*	888	*5*	5,361	*4*	6,358	*4*
Loss of control	551	*35*	3,779	*20*	17,081	*13*	21,411	*14*
Driver/Rider impaired by alcohol	138	*9*	1,282	*7*	5,202	*4*	6,622	*4*
Exceeding speed limit	249	*16*	1,365	*7*	5,901	*5*	7,515	*5*
Travelling too fast for conditions	209	*13*	1,607	*9*	9,360	*7*	11,176	*8*
Pedestrian failed to look properly	171	*11*	2,538	*13*	8,283	*6*	10,992	*7*
Total number of casualties[1]	**1,587**	***100***	**18,874**	***100***	**127,848**	***100***	**148,309**	***100***

1 Includes only casualties in accidents where a police officer attended the scene and in which a contributory factor was reported.
2 Columns may not add up to 100 per cent as accidents may have more than one contributory factor

- In 2013, 35 per cent of fatalities resulting from personal injury accidents were allocated the "**loss of control**" contributory factor. In contrast, this was not the case for non-fatal casualties, 20 per cent of serious injuries and 13 per cent of slight injuries were allocated a 'loss of control' contributory factor.
- The second most common contributory factor allocated to fatalities resulting from personal injury accidents was **driver/rider failed to look properly**, allocated to 26 per cent of reported fatalities and 11 per cent of pedestrian fatalities in 2013. This is commonly known as the looked but failed to see in road safety literature. Failed to look properly was most common factor for serious and slight injury casualties, 35 and 43 per cent respectively.
- **Careless, reckless or in a hurry** was the third common contributory factor allocated to reported fatalities. Reported for 20 per cent of fatalities, 17 per cent of serious injuries and 17 per cent of slight injuries.

References and further information

Further information about the Reported Road Casualties Great Britain 2013 can be found at: Reported road casualties Great Britain: annual report 2013 - Publications - GOV.UK

Notes and definitions used in Stats19 can be found at: Road accidents and safety statistics guidance - Publications - GOV.UK

Further information the average distance travelled published by the National Travel Survey can be found at: National Travel Survey: 2013 - Publications - GOV.UK

More information on traffic estimates used in this factsheet are published by the Road Traffic statistics team at: Road traffic statistics - GOV.UK

Detailed statistics (tables and charts) on contributory factors for reported road accidents can be found at: Contributory factors for reported road accidents (RAS50) - Statistical data sets - GOV.UK