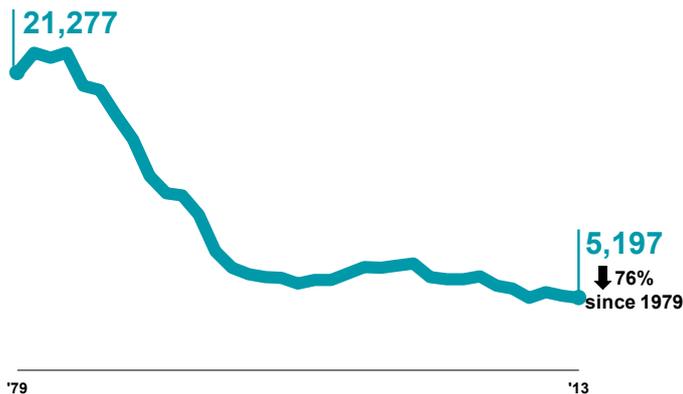


Overview

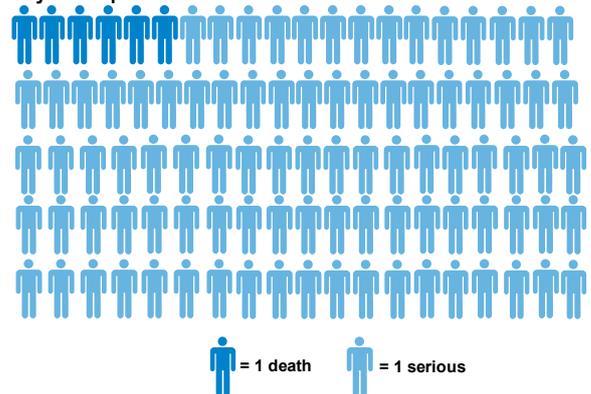
Motorcyclists are one of the vulnerable user groups, along with pedal cyclists, horse riders and pedestrians. These groups are not protected by a vehicle body in the same way car users, etc., are, and tend to be harder for other drivers to see on the road. They, therefore, are particularly vulnerable to injuries and accidents. Motorcyclists, in particular, have the highest accident and injury rates per mile travelled of all road user groups.

Killed or seriously injured, 1979 to 2013



Average per week, 2013

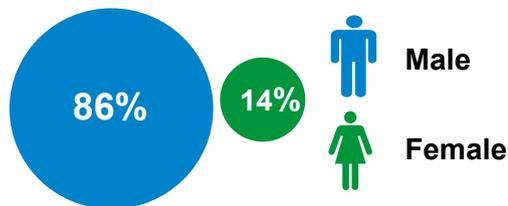
An average of 6 deaths and 94 serious injuries per week



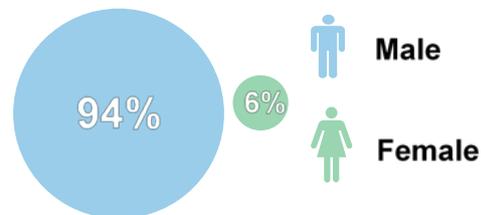
Gender differences

Male motorcyclist account for the majority of the total distance travelled and of the KSI casualties

Total motorcycle distance travelled by gender

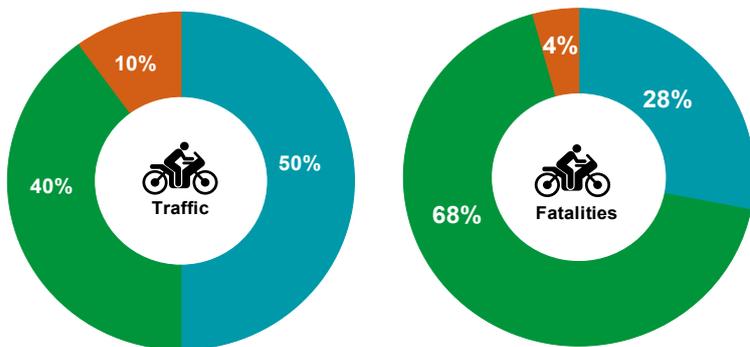


Motorcyclist KSIs by gender



Motorcycle traffic and fatalities

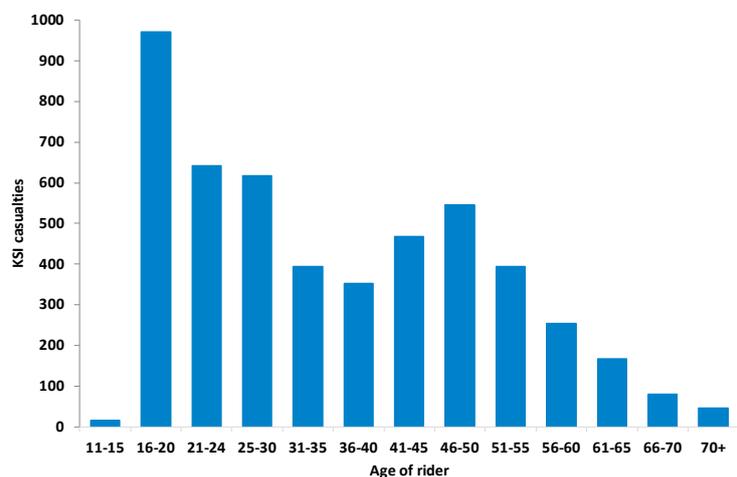
Despite rural roads accounting for 40% of motorcycle traffic, they account for 68% of motorcyclist fatalities.



Key: Motorways Urban roads Rural roads

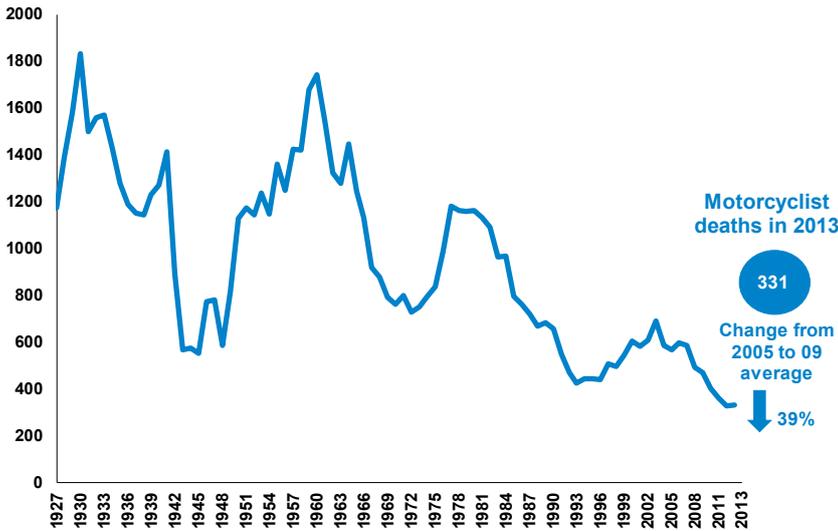
Motorcyclist KSIs by age

Riders aged below the age of 25 account for the majority (33%) of motorcyclist KSIs



Long term trends

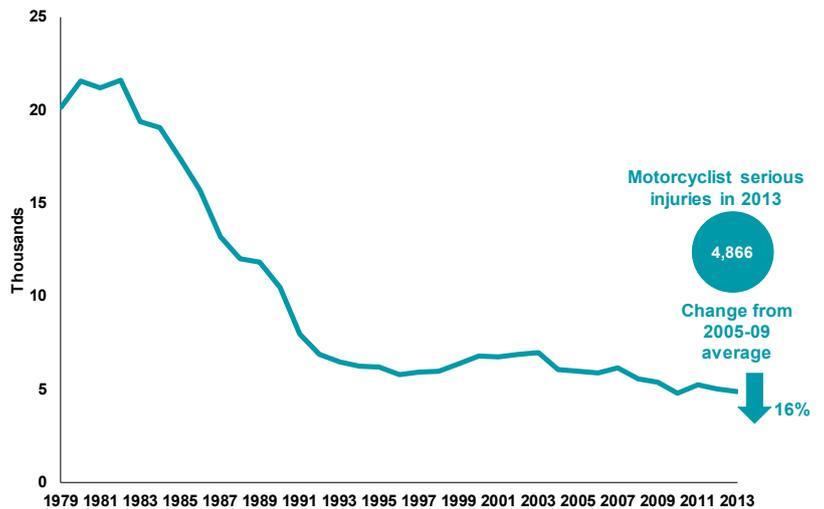
Reported motorcyclist fatalities, GB: 1927 to 2013



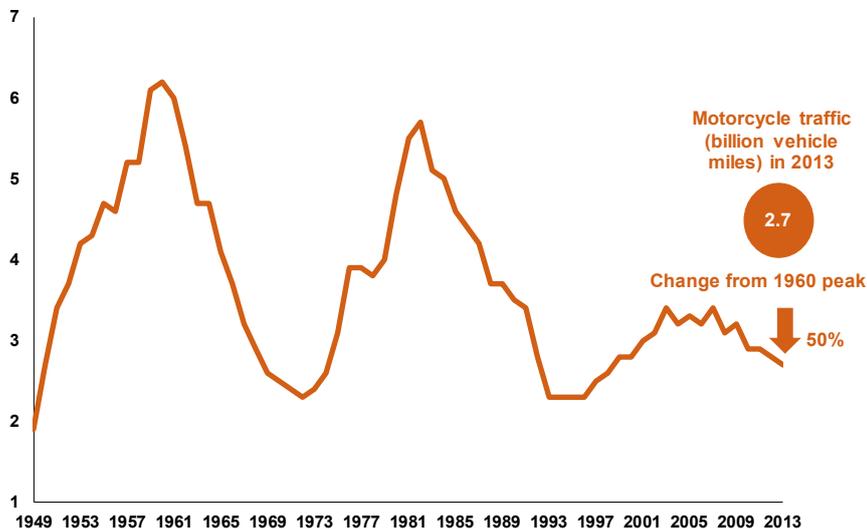
- Since recording began in the 1920s **motorcycle fatalities** have fallen over the long term, albeit with a number of peak and troughs throughout the years.
- The highest annual number of motorcyclist fatalities was 1,832 in 1930. The lowest year was 2012, which had 328 deaths. The figure has been relatively stable since around 2010.

Reported motorcyclist serious injuries, GB: 1979 to 2013

- **Seriously injured motorcycle casualties** have fallen since the 1980s. There were over 20,000 serious injuries in the early 1980s. This figure fell sharply between 1983 and 1991. Since then the number of serious injuries has fluctuated around the 5 to 7,000 level for most
- 2010 marked the lowest annual figure at 4,780 in 2010, 78 per cent lower than the 1982 high.



Reported motorcycle traffic, GB: 1949-2013



- The highest annual figures recorded for **motorcycle traffic** was 6.2 billion vehicle miles in 1960 and 5.7 billion vehicle miles in 1982. The lowest figure was 1.9 billion vehicle miles in 1949, the first year road traffic estimates were recorded.
- In 2013, motorcycle traffic accounted for only 1 per cent of road traffic in Great Britain.

Casualty rates per mile travelled

Relative risk of different forms of transport, GB: 2013

Casualty rate¹ 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 survey data used to calculate pedestrian rates.

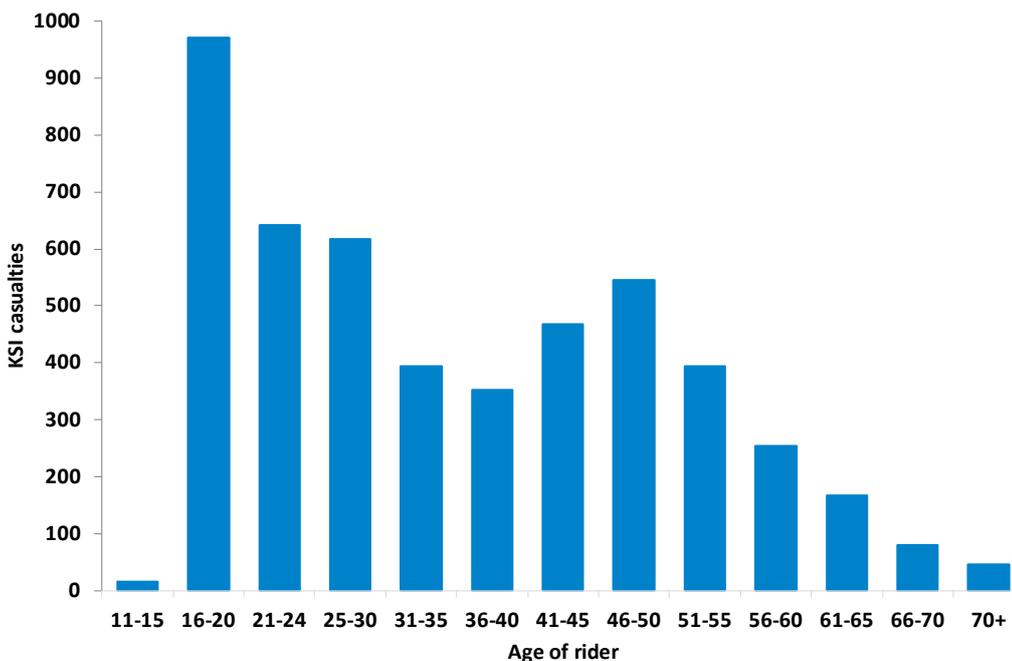
NTS data based on England only resident sample.

- Motorcyclists account for less than 1 per cent of traffic each year, but 19 per cent of fatalities in 2013.
- They are therefore considerably over-represented in accidents, more so than any other road user group.
- The **risk of death** for a motorcyclist is at least 57 times than that for a car occupant.

- Motorcyclists are very exposed with relatively little protection, beyond clothing. It is hard to introduce secondary safety features on motorbikes – i.e. features that will mitigate injuries when accidents occur.

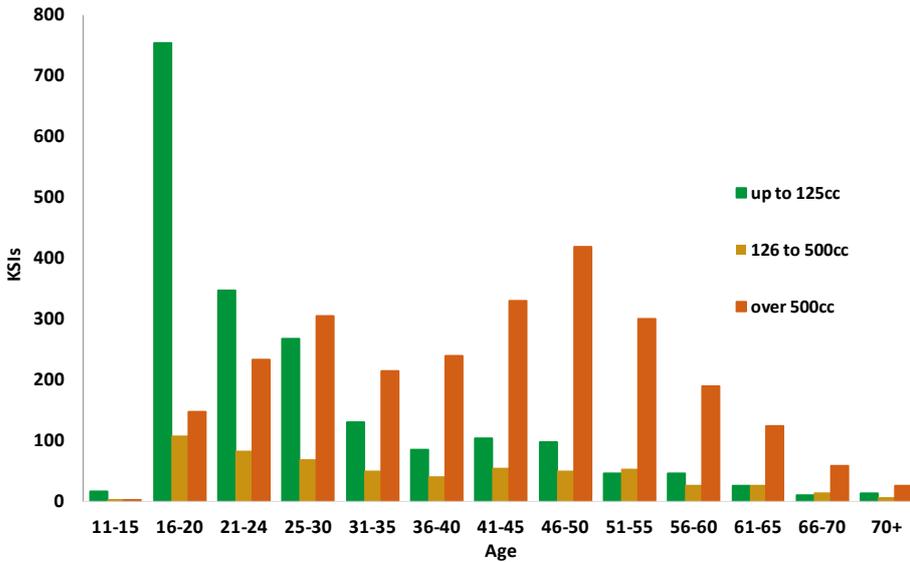
Age of rider

Reported motorcyclist KSI casualties by age of rider, GB: 2013



- Riders aged under 25 account for the majority of motorcyclist KSIs (33 per cent in 2013), with the **16 to 20** age group having more KSI casualties than any other age group.
- There is a similarity between riders aged 21 to 24 and 25 to 30, as both groups have similar KSI figures. They account for a quarter of the motorcyclist killed or seriously injured casualties
- A second peak also occurs for riders between the ages of **41 and 50**. In 2013 they accounted for a further 20 per cent of motorcyclist KSIs.

Reported motorcyclist KSI casualties by age of rider and size of bike, GB: 2013



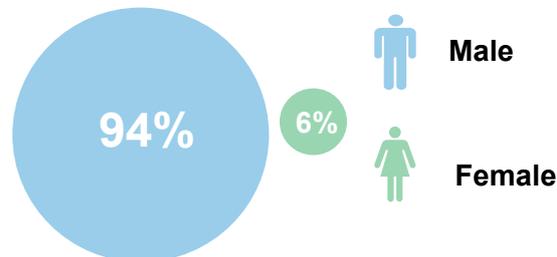
- Riders aged under 25 are more likely to be riding less powerful bikes. They account for 57 per cent of motorcyclist KSIs with an engine size up to 125cc.

- Older motorcyclist casualties (aged 25 and above) are more likely to be riding more powerful bikes. Riders aged between 41 and 55 account for 41 per cent of motorcyclist KSIs with an engine size of 500cc and over.

A comparison of male and female riders

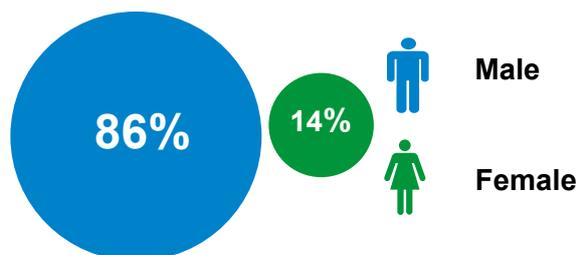
- Across all severities, **males** make up the majority of motorcyclist casualties (92 per cent compared to 8 per cent of females). In 2013 of the 4,984 motorcyclist killed or seriously injured casualties, 94 per cent were **male** and only 6 per cent were **female**.

Motorcyclist killed or seriously injured casualties by gender

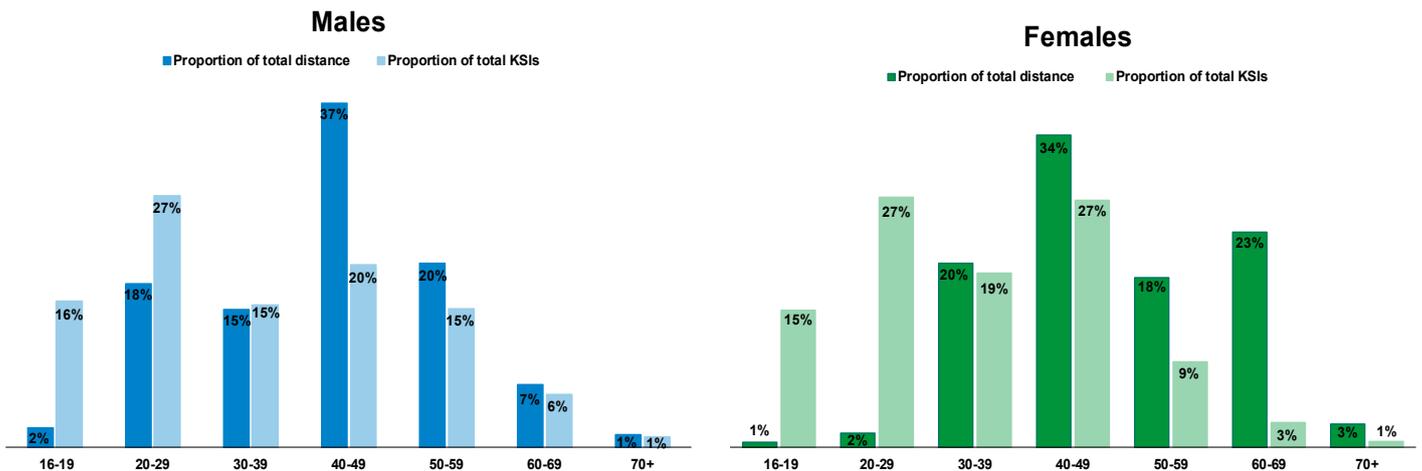


- The difference largely reflects the difference in the **total distance travelled** by male and female motorcyclists. In 2013 the average distance travelled by male motorcyclists was 6 times higher than female motorcyclists, 405 miles in comparison to 67 miles, (86 per cent compared to 14 per cent).

Total motorcycle distance travelled by gender



The proportion of total distance travelled and the proportion of killed or seriously injured casualties by gender and age group, GB: 2013



- **Young male motorcyclists** between the ages of **16 and 19** and those between the ages of **20 and 29** are the most over-represented male age groups as KSI casualties. In 2013 they comprised 43 per cent of male motorcyclist KSI casualties but only 20 per cent of distance travelled. Older male motorcyclists in their **40s** and **50s** tend to travel longer distances as they comprised 57 per cent of the distance travelled but only 35 per cent of KSIs.
- The same pattern holds true for female motorcyclists. **Young female motorcyclists** between the ages of **16 and 19** and those above the age of 20 are more likely to be killed or seriously injured as they comprised 42 per cent of KSIs in 2013 but only 1.4 per cent of distance travelled. Female motorcyclists in their **40s**, **50s** and **60s** travel further than any other age groups, they comprised 76 per cent of the distance travelled in 2013 but only 39 per cent of KSIs.

Which other vehicles are involved in motorcycle accidents?



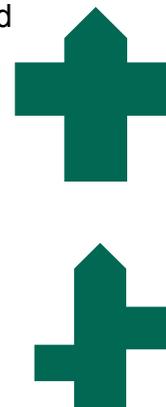
	Truck	Van	Bus	Car	Motorcyclist
% of GB traffic	5	14	1	79	1
% of deaths involved in	9	9	2	71	0.3
% of serious injuries involved in	2	7	1	84	1
% of slight injuries involved in	2	7	1	85	1
% of casualties involved in	2	7	2	84	1

- The **distribution of involvement in accidents** involving at least one motorcyclist does not directly reflect the **distribution of traffic**.
- **HGVs** are disproportionately likely to be involved in a motorcyclist death: between 2009 and 2013 they accounted for 5 per cent of GB traffic however they were involved in 9 per cent of motorcyclist deaths.

- HGVs and motorcyclists are less likely to collide than we expect, as HGVs are involved in only 2 per cent of motorcyclist casualties. However given the size of HGVs, a collision between a motorcycle and HGV is more likely to result in a motorcyclist death.
- Collisions between **cars** and motorcyclists are the most common type of accident. They also result in the greatest number of both fatalities and injuries. Between 2009 and 2013 cars accounted for 79 per cent of road traffic, but were involved in 71 per cent of motorcyclist fatalities and 84 per cent of casualties.
- The most common contributory factor allocated to vehicles involved in accidents with motorcyclists is **failed to look properly**. Between 2009 and 2013, 46 per cent of **cars** and 47 per cent of **light vans** involved in an accident with a motorcyclist failed to look properly.
- Cars and LGVs are also the most commonly recorded motor vehicles allocated the '**poor turn or manoeuvre**' contributory factor in accidents they are involved in with motorcyclists. Between 2009 and 2013, 18 per cent of cars and 20 per cent of LGVs involved in accidents with motorcyclists were allocated the poor turn or manoeuvre contributory factor.
- HGVs are commonly allocated the **vehicle blind spot** contributory factor in accidents they are involved in with motorcyclists. Due to the size of the HGV, it is far harder for an HGV to see a motorcyclist when manoeuvring in comparison to other motor vehicles. Between 2009 and 2013, 7 per cent of HGVs involved in accidents with motorcyclists were allocated a vehicle blind spot contributory factor.

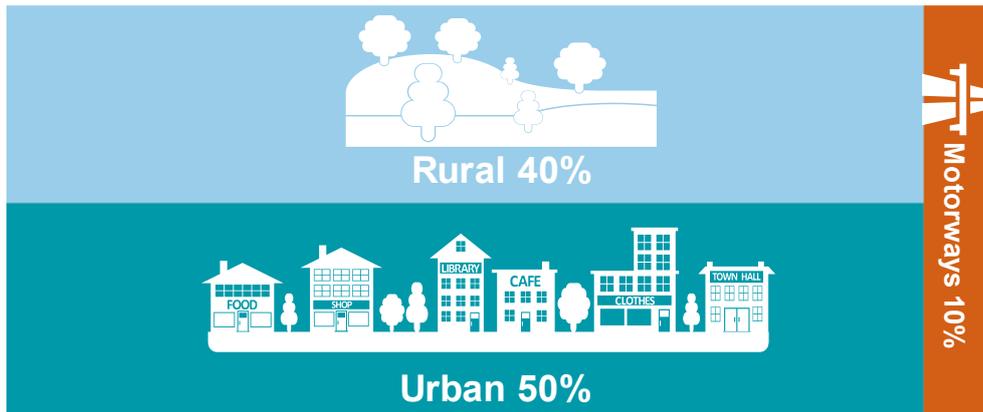
Vehicle movement on the road

- Motorcyclists killed in a two vehicle accident were more likely to be at a **junction** and recorded as '**going ahead**' than any other vehicles involved in accidents.
- Junctions are particularly dangerous for vulnerable road users such as motorcyclists because it can be difficult for other road users to see them and the greater number of **vehicle interactions** and changes in **vehicle movements** at junctions increase the likelihood of an accident.
- The majority of motorcyclists killed or seriously injured occur at **crossroads** or **t-staggered junctions** (41 per cent in 2013). Between 2009 and 2013, 36 per cent of the motorcyclist KSI casualties that occurred at a t-staggered junction or a cross road were as a result of both the motorcyclist and the other motor vehicle going ahead. A further 26 per cent occurred as a result of the other vehicle **turning right** whilst the motorcyclist was '**going ahead**'.
- In the last five years 30 per cent of motorcyclist KSIs occurred **away from junctions** when both the motorcyclist and the other vehicle were going ahead, a further 14 per cent occurred when the other vehicle was **overtaking** the motorcyclist.
- Unlike **pedal cyclists**, motorcyclists can quickly move-off at **roundabouts**. However they are still vulnerable at these locations. Between 2009 and 2013, 27 per cent of the motorcyclist KSIs that occurred at a roundabout were as a result of both the motorcyclist and the other vehicle going ahead and 7 per cent occurred when both vehicles were turning right at a roundabout.



Where do motorcycle casualties occur?

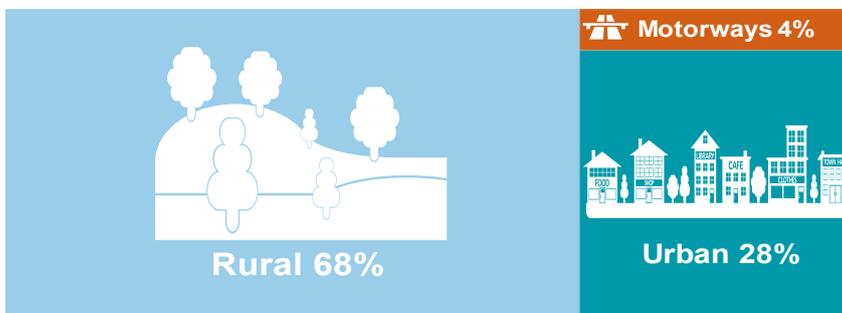
Motorcycle traffic by road type, GB: 2013



- The majority of motorcycle traffic occurs on urban roads (50 per cent) with 40 per cent on rural roads and 10 per cent on motorways.
- Despite rural roads only carrying 40 per cent of motorcycle traffic, the majority of motorcyclist fatalities occur on these roads. This is because of the difference in the average speed on different road types. Rural roads and motorways have a much higher average speed than urban roads. Rural roads are also often much more sinuous and narrow in nature with blind bends, dips and other distractions.

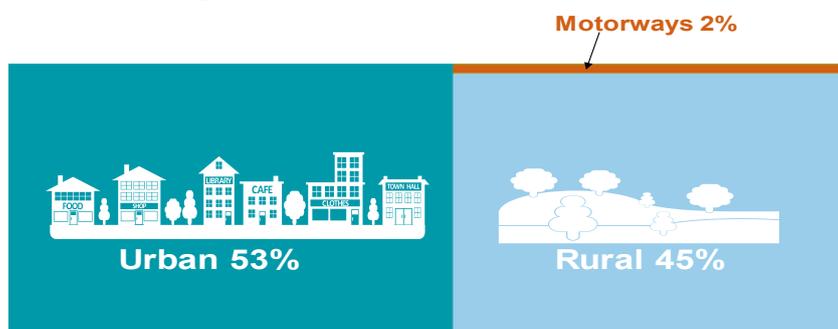
Motorcycle casualties by road type and severity, GB: 2013

Killed (331)



- The majority of **motorcyclist fatalities** occur on rural roads (68 per cent in 2013). Accidents that occur on rural roads are more likely to be fatal in nature compared with those that occur on urban roads and motorways.

Serious injuries (4,866)



- The pattern differs for **non-fatal casualties**. Accidents at lower speeds on urban roads are more likely to result in serious injuries. Over half (53 per cent) of motorcyclist serious injuries occurred on urban roads in 2013.

Slight injuries (13,555)



- The same applies for **slight injuries**. 72 per cent of motorcyclist slight injuries occurred on urban roads in 2013, 27 per cent occurred on rural roads and only 1 per cent on motorways.

All casualties (18,752)



- Unsurprisingly, the majority of **motorcyclist casualties of all severities**, occur on urban roads (66 per cent in 2013) given that 50 per cent of motorcycle traffic occur here.

Why do motorcycle accidents happen?

- 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.

Contributory factors in accidents¹ involving at least one motorcyclist and other vehicles (with no pedestrian casualties), GB: 2013

Contributory factor	Motorcycle		Other motor vehicles ²		All vehicles	
	Number	Percent	Number	Percent	Number	Percent
No CF recorded	29,542	36	23,670	33	53,212	34
Slippery road (due to weather)	6,568	8	735	10	7,303	5
Travelling too fast for conditions	4,798	5	545	0	5,343	3
Exceeding speed limit	4,057	5	389	1.0	4,446	3
Poor turn or manoeuvre	7,996	10	13,180	19	21,176	14
Failed to look properly	13,179	16	33,046	47	46,225	30
Failed to judge other person's path or speed	10,908	14	13,370	19	24,278	16
Sudden braking	5,766	7	1,805	3	7,571	5
Loss of control	13,897	16	585	1	14,482	9
Careless, reckless or in a hurry	7,409	10	7,961	11	15,370	11
Learner or inexperienced rider	7,389	9	841	12	8,230	5
Total number of vehicles³	16,122	100	70,965	100	154,924	100

1. Includes only accidents where a police officer attended the scene and in which a contributory factor was allocated

2. Includes other motor vehicles such as cars, lorries, HGVs and cases where the vehicle type was not reported

3. Columns may not add up to 100 per cent as accidents can have more than 1 contributory factor.

-
- The proportion of vehicles involved in personal injury accidents without a reported contributory factor varies by vehicle type. In 2013, motorcyclists were more likely to have **no contributory factor** allocated to them in comparison to other vehicles – 36 percent compared with 33 per cent of all other vehicles. Contributory factors are largely subjective, assigned quickly at the occurrence of the accident and often without extensive investigations. These differences may therefore be in part due to preconceptions of certain vehicle user groups.
 - The most common contributory factor assigned to motorcyclists was **failing to look properly**. This is commonly referred to as the '**looked but failed to see**' problem in road safety literature. This is particularly common where motorcyclists are hard to see and for motorists to fail to notice them when looking around the road.
 - In 2013, 47 per cent of other motor vehicles involved in accidents failed to look properly as well as 16 per cent of motorcyclists. Failing to look properly is also part of the motivation behind the '**Named Rider**' **Think! Campaign**' launched in 2010 with an objective to get car drivers to notice motorcyclists on the road. Evaluation of the campaign showed that the majority of drivers (89 per cent) agreed that motorcyclists are more vulnerable in every day driving situations than any other road users.
 - The second most common contributory factor assigned to both motorcyclists and other vehicles was '**failed to judge other person's path or speed.**' In 2013, 15 per cent of motorcyclists in accidents failed to judge other person's path or speed, in comparison to 19 per cent of other vehicles.

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 on the average distance travelled is 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 on (tables and charts) contributory factors for reported road accidents can be found at: [Contributory factors for reported road accidents \(RAS50\) - Statistical data sets - GOV.UK](#)

Further information on campaigns launched by THINK! can be found at: [THINK! communication activity - GOV.UK](#)