

SB 56/2014

02 July 2014

## Motorcycle user casualties, 2013

This Statistical Bulletin looks at motorcycle user road traffic casualties in Wales.

The aim of this bulletin is to show trends in the number and severity of these casualties; and to show the circumstances associated with the accidents that resulted in these casualties. The Bulletin provides information relevant to road safety policy. It also provides a starting point for any further, in-depth investigation of the accidents resulting in motorcycle users casualties.

The context for a separate Bulletin about motorcycle user casualties is that they are a significant component of all road casualties in Wales. In 2013 they represented 21 per cent of Killed and Seriously Injured (KSI) road traffic casualties and 6 per cent of slight casualties in Wales.

The context for road safety interventions by the Welsh Government and its partner organisations is the 'Road Safety Framework for Wales' published in July 2013. This sets out three road safety targets for Wales. These targets are that by 2020, and compared with the 2004 to 2008 average, there will be:

- A 40 per cent reduction in the total number of people killed and seriously injured (KSI);
- A 40 per cent reduction in the number of young people (aged 16 to 24) KSI; and
- A 25 per cent reduction in the number of motorcyclist KSIs.

### Key points

- In 2013, there were 17 motorcyclist fatalities on Welsh roads. This is the lowest figure since records began in 1979.
- In 2013, there were 229 seriously injured motorcyclist casualties, giving the total number killed or seriously injured (KSI) at 246 casualties during the year.
- There were 439 slightly injured motorcyclist casualties; this figure was higher than the number of slight casualties in each year since 2009.

Despite the rise in KSI casualties in 2013, it is important to note that casualty figures can fluctuate from year to year and it is sometimes not advisable to look at one year in isolation. Looking over a longer period, the level of KSI motorcyclist casualties have remained approximately the same since the mid-1990s.

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## A note about the figures for 2012:

- From April 2012 onwards, South Wales police made changes to their procedures for recording road traffic accidents and casualties where their officers attended road traffic collisions. These changes have led to a lower number of slight and serious casualties being recorded for South Wales than we believe would have been the case with the procedures used in previous years. This means that these 2012 figures are not directly comparable with those for earlier years. This issue does not affect road traffic fatalities, including pedestrian fatalities, in South Wales. The 2012 figures can be directly compared with those for earlier years.

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## Notes for the following tables and charts

The coverage of this Bulletin is that:

- **Motorcycle:** 'Motorcycle' is defined as including mopeds, motor scooters, motorcycles and motorcycle combinations.
- **Motorcyclists:** The term 'motorcyclist casualties' or 'motor cycle users' refers to both the riders and passengers.
- Some sections compare motorcyclist casualties with car user casualties; in the latter case, that is both car drivers and passengers.
- **Casualties:** A person killed or injured in an accident. One accident may give rise to several casualties. Casualties are subdivided into killed, seriously injured and slightly injured categories.
- The figures show the involvement of motorcyclists in accidents; they do not show any information about the degree of responsibility of motorcycle drivers for these accidents.
- It also does not show any information about whether or not the drivers concerned held a valid driving licence.
- Some tables show the '2004 to 2008 average' because the Welsh Government has casualty reduction targets to be achieved by 2020 based on reductions from the average for this base period.

The figures in this Bulletin are derived from the personal injury road accident data recorded by the police on STATS19 forms.

## Summary of findings:

### Motorcycling is risky...

- In 2013, the chance of a motorcycle rider being killed or seriously injured, per kilometre travelled, is around 78 times greater than for a car driver.
- Motorcyclists represent 0.2 per cent of traffic in Wales whilst motorcycle riders comprised 31 per cent of fatal and serious casualties of all motor vehicle drivers ('How risky is motorcycling?').

### ..and casualty levels have risen in 2013.

- In the early 1980s, motorcyclist casualty levels in Wales were around four times higher than the most recent casualty levels.
- Since the mid-1990s KSI casualty levels have remained approximately the same (chart 2 and table 4).

### Casualties are mostly men and are getting older...

- Since 2004 approximately 90 per cent of motorcyclist casualties are male (chart 3 and table 5).
- Since 1998, casualties aged 30 and over have exceeded those aged under 30 (chart 4, table 6).

### ...and older casualties are riding more powerful machines

- Casualties aged under 30 tended to ride machines with an engine capacity of up to 125cc, and these machines accounted for 64 per cent of all casualties within this group;
- Casualties aged 30 and over tend to ride machines of over 500cc engine capacity, and these machines account for 68 per cent of the casualties within this group (chart 6 and table 7).

### Compared with car occupant casualties, motorcyclist casualties were:

- More likely to occur in the spring/summer, and less likely to occur in winter (chart 7 and table 8);
- More likely to occur on a Sunday (chart 8 and table 9);
- Slightly more likely to occur in daylight (chart 9 and table 10);
- Slightly more likely to occur in fine weather (chart 10 and table 11); and
- More likely to occur at a junction (chart 11 and table 12);

### Looking across Wales...

- The highest numbers of motorcyclist casualties were in Carmarthenshire and Powys (18 per cent of the total) followed by Swansea and Cardiff (chart 12).
- Just under a half of motorcyclist casualties in Wales as a whole rode machines with an engine capacity of over 500cc. This group accounted for 82 per cent of casualties in Powys, 82 per cent in Monmouthshire and 81 per cent in Gwynedd (table 13).

### ...the highest relative risk of motorcyclist casualties was in rural local authorities.

Relative risk in individual local authority area can be seen by looking at the distribution of the percentage of total casualties across Wales. By looking at this distribution for car occupant casualties as compared with motorcyclist casualties it shows (chart 13):

- A higher proportion of motorcyclist casualties compared with car occupant casualties in the local authorities of Monmouthshire, Denbighshire, Ceredigion, Torfaen, Vale of Glamorgan, Conwy, Flintshire, Swansea, Carmarthenshire and Powys.
- A higher proportion of car occupant casualties compared with motorcyclist casualties in the local authorities of Isle of Anglesey, Merthyr Tydfil, Blaenau Gwent, Caerphilly, Gwynedd, Pembrokeshire, Newport, Bridgend, Wrexham, Rhondda Cynon Taf, Neath Port Talbot and Cardiff.

Table 1 shows the relationship between motorcyclist casualties and other road user casualties.

**Table 1: Motorcyclist casualties in context: Casualties by type of road user and severity, 2004-2008 average and 2009-2013**

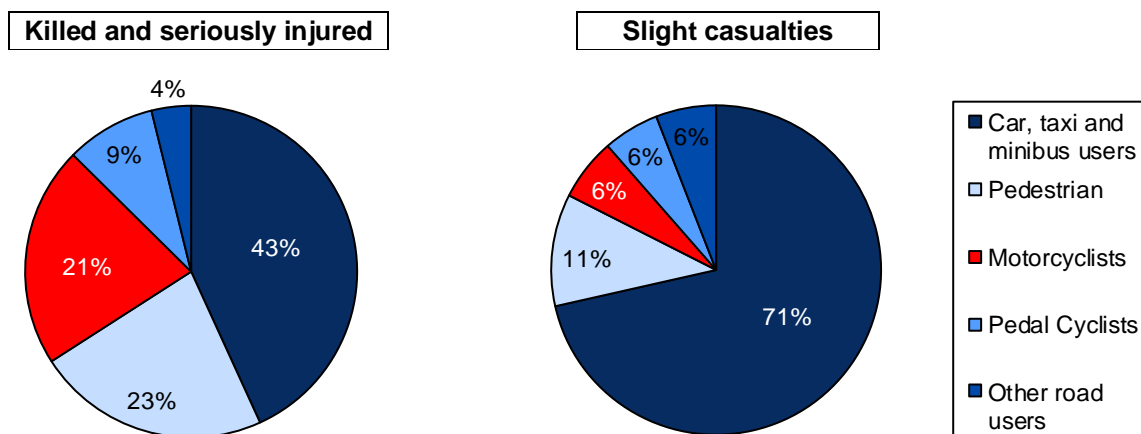
	<i>Number and per cent</i>					
	Pedestrian	Pedal cyclists	Motorcyclists (a)	Car, taxi and minibus users	Other road users (b)	Total
<b>Total casualties</b>						
2004-2008 average	1,368	463	<b>756</b>	9,200	726	12,513
2009	1,114	403	<b>651</b>	7,607	579	10,354
2010	1,108	447	<b>645</b>	7,131	624	9,955
2011	1,154	521	<b>612</b>	6,553	566	9,406
2012	1,007	474	<b>627</b>	5,986	471	8,565
2013	1,052	496	<b>685</b>	5,633	469	8,335
Percentage change 2013 on 2004-08 average	-23	7	<b>-9</b>	-39	-35	-33
<b>KSI casualties</b>						
2004-2008 average	271	70	<b>257</b>	749	59	1,406
2009	257	84	<b>241</b>	595	44	1,221
2010	213	68	<b>247</b>	499	60	1,087
2011	261	118	<b>242</b>	573	53	1,247
2012	203	84	<b>213</b>	494	40	1,034
2013	260	100	<b>246</b>	494	44	1,144
Percentage change 2013 on 2004-08 average	-4	43	<b>-4</b>	-34	-25	-19

Source: Welsh Road Accident Database

(a) Includes mopeds, motor scooters, motorcycles and combinations.

(b) Includes buses, coaches, goods vehicles, invalid vehicles, motor caravans, other and unknown vehicles.

**Chart 1: Casualties by type of road user, 2013**



## How risky is motorcycling?

Motorcyclists are at a much greater risk of becoming a casualty than other motor vehicle drivers and occupants. The relative risk in 2013 can be shown in a variety of ways.

There were around 54 thousand motorcycles licensed<sup>1</sup> in Wales in 2012. This number has grown over the last 10 years and is 43 per cent higher than in 2001, when it came to 38 thousand motorcycles. This can be compared with, for example, a 19 per cent growth in the number of cars licensed in Wales over the same period. In 2012, around 4 thousand motorcycles were registered for the first time for a license in Wales, compared with 72 thousand cars.

Motorcycles are a small proportion of vehicles and traffic:

- 3.2 per cent of all vehicles licensed (by body type) in Wales in 2012; this represented
- 3.8 per cent of the number of cars licensed in Wales in 2012; and
- 0.2 per cent of all motor vehicle traffic<sup>2</sup> in Wales in 2012.

### Relative risks to motor vehicle drivers

Despite only comprising 0.2 per cent of traffic in Wales in 2012:

- Motorcycle riders comprised 39 per cent of fatal and serious casualties of all motor vehicle drivers (31 per cent of all riders/drivers including motor vehicle drivers) in 2013.
- Motorcycle riders comprised 10.4 per cent of slight casualties of all motor vehicle drivers (7.3 per cent of all riders/drivers including motor vehicle drivers).

The relatively higher proportion of fatal or serious motorcyclist casualties are because of the greater vulnerability of motorcyclists compared with other motor vehicle users.

Table 2 shows this exposure to risk expressed as the rate of casualties per kilometre travelled.

- There were 1,170 fatal or serious motorcycle rider casualties per billion vehicle kilometres travelled by motorcycles in Wales; compared with 15 fatal or serious car driver casualties per billion vehicle kilometres travelled by cars in Wales.
- The corresponding figures for slight casualties were 2,105 motorcycle rider casualties per billion vehicle kilometres; compared with a rate of 157 car driver casualties.

**Table 2: Number and rate of vehicle driver casualties, 2013**

	<i>Number and Rate per billion vehicle kilometres</i>							
	<b>Number of driver casualties, 2013</b>				<b>Driver casualties per billion vehicle kilometres (a)</b>			
	Motor-cycles	Cars, taxis and minibuses	Other powered vehicles (b)	Pedal cyclists	Motor-cycles	Cars, taxis and minibuses	Other powered vehicles	Pedal cyclists
Fatal	16	39	5	5	80	2	1	25
Serious	218	290	29	95	1,090	14	6	475
Fatal and serious	234	329	34	100	1,170	15	7	500
Slight	421	3,370	234	392	2,105	157	46	1,960
Total	655	3,699	268	492	3,275	173	53	2,460

(a) Calculated using 2013 casualty data and 2012 traffic volume data.

(b) Excluding horse riders and non motor vehicles.

<sup>1</sup> See Welsh data shown in 'Licensing and Vehicle Ownership, 2012' at <http://wales.gov.uk/statistics-and-research/licensing-vehicle-ownership/?lang=en>

<sup>2</sup> See 'Road Traffic, 2013' at <http://wales.gov.uk/statistics-and-research/road-traffic/?lang=en>

### Relative risks to motor vehicle occupants

The relative risk for motorcyclists is lower if the comparison is made of all vehicle occupants by vehicle type. This is because car drivers will often be accompanied by other passengers, whilst motor cycle riders carry a passenger relatively less frequently. Repeating the analysis above, but for all vehicle occupants, that is driver plus passengers, shows:

- Motorcyclists comprised 31 per cent of fatal and serious casualties of all motor vehicle occupants (28 per cent of all vehicle users including motor vehicle occupants and pedal cycle users).
- Motorcyclists comprised 7.3 per cent of slight casualties of all motor vehicle occupants, (6.8 per cent of all vehicle users including motor vehicle occupants and pedal cycle users).

Table 3 shows this risk expressed in terms of the number of casualties to vehicle occupants per kilometre travelled. This shows that:

- There were 1,230 fatal or serious motorcyclist (driver plus passenger) casualties per billion vehicle kilometres travelled by motorcycles in Wales; compared with 23 fatal or serious car occupant casualties per billion vehicle kilometres travelled by cars in Wales.
- The corresponding figures for slight casualties were 2,195 motorcycle rider casualties per billion vehicle kilometres; compared with a rate of 240 car occupant casualties.

**Table 3: Number and rate of vehicle occupant casualties, 2013**

	<i>Number and Rate per billion vehicle kilometres</i>							
	<b>Number of vehicle occupant casualties, 2013</b>				<b>Vehicle occupant casualties per billion vehicle kilometres (a)</b>			
	Motor-cycles	Cars, taxis and minibuses	Other powered vehicles (b)	Pedal cyclists	Motor-cycles	Cars, taxis and minibuses	Other powered vehicles	Pedal cyclists
Fatal	17	56	6	5	85	3	1	25
Serious	229	438	37	95	1,145	20	7	475
Fatal and serious	246	494	43	100	1,230	23	9	500
Slight	439	5,139	416	396	2,195	240	83	1,980
Total	685	5,633	459	496	3,425	263	92	2,480

(a) Calculated using 2013 casualty data and 2012 traffic volume data

(b) Excluding horse riders and non motor vehicles

### A final summary of risk

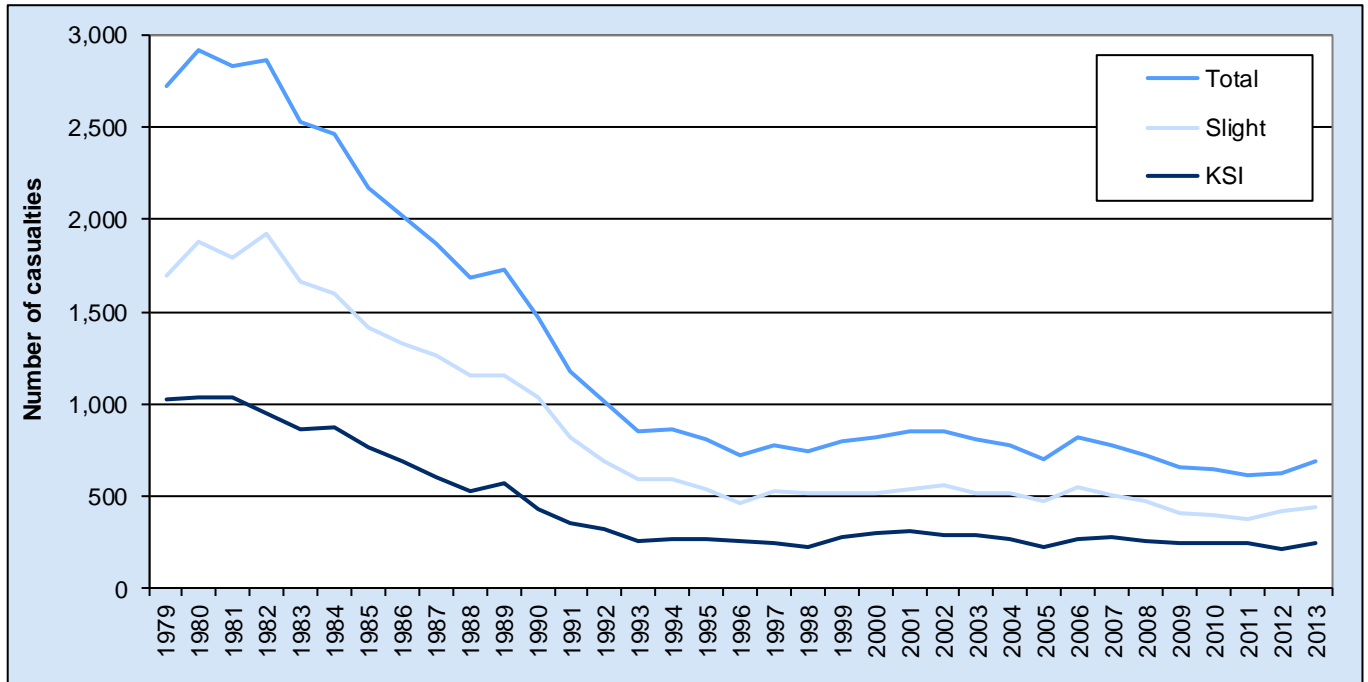
As a final summary of the extra risks involved in being a motorcycle rider compared with a car driver in terms of the relative risk per kilometre travelled (based on the unrounded numbers that lie behind the figures shown in table 2).

- The chance of a motorcycle rider being killed, per kilometre travelled, is around 40 times greater than for a car driver (including taxi and minibus ) drivers.
- The chance of a motorcycle rider being seriously injured, per kilometre travelled, is around 78 times greater than for a car (including taxi and minibus) driver.
- The chance of a motorcycle rider being killed or seriously injured, per kilometre travelled, is around 78 times greater than for a car (including taxi and minibus) driver.
- The chance of a motorcycle rider being slightly injured, per kilometre travelled, is around 13 times greater than for a car (including taxi and minibus) driver.

## Summary of motorcyclist casualties

Chart 2 below summarises the data on motorcyclist casualties since 1979. The detailed figures can be found in table 4 on the following page.

**Chart 2: Motorcyclist casualties by severity, 1979-2013**



In the early 1980s, motorcyclist casualty levels in Wales were five times higher than the most recent casualty levels. The overall number dropped by 77 per cent from 2,922 in 1980 to 685 in 2013.

The number killed or seriously injured fell from over 1,025 in 1979 to 246 in 2013.

Since the mid-1990s, the KSI casualty figures have remained approximately the same.

A substantial minority of total motorcyclist casualties are killed or seriously injured. In 2013, 36 per cent of total motorcyclist casualties were killed or seriously injured (KSI); this can be compared with 9 per cent across all vehicle occupant casualties. This proportion is high in relation to other groups of vulnerable road user casualties; the corresponding figures for 2013 are that 25 per cent of total pedestrian casualties were KSI casualties and 20 per cent of pedal cyclist casualties were KSI casualties. The proportion of total motorcyclist casualties that are KSI has oscillated around a third of total casualties throughout the period 1980 to 2013, despite the sharp fall in the total level of motorcyclist road traffic casualties during the 1980s and early 1990s.



**Table 4: Summary of motorcyclist casualties, 1979-2013**

*Number and percentage*

	Killed	Seriously Injured	Killed or seriously Injured (KSI)	Slightly Injured	All casualties	Percentage KSI
1979	56	969	1,025	1,700	2,725	38
1980	57	983	1,040	1,882	2,922	36
1981	45	991	1,036	1,796	2,832	37
1982	43	906	949	1,921	2,870	33
1983	43	823	866	1,658	2,524	34
1984	45	825	870	1,594	2,464	35
1985	37	728	765	1,412	2,177	35
1986	22	666	688	1,331	2,019	34
1987	36	565	601	1,266	1,867	32
1988	41	487	528	1,155	1,683	31
1989	28	544	572	1,156	1,728	33
1990	23	409	432	1,039	1,471	29
1991	19	330	349	823	1,172	30
1992	30	291	321	691	1,012	32
1993	18	239	257	593	850	30
1994	30	235	265	595	860	31
1995	26	245	271	541	812	33
1996	19	239	258	458	716	36
1997	35	213	248	530	778	32
1998	32	193	225	520	745	30
1999	30	244	274	520	794	35
2000	28	271	299	516	815	37
2001	36	274	310	539	849	37
2002	27	260	287	560	847	34
2003	42	249	291	512	803	36
2004	39	228	267	511	778	34
2005	22	201	223	471	694	32
2006	38	227	265	548	813	33
2007	42	233	275	499	774	36
2008	24	231	255	468	723	35
2009	28	213	241	410	651	37
2010	25	222	247	398	645	38
2011	24	218	242	370	612	40
2012	26	187	213	414	627	34
2013	17	229	246	439	685	36

## What age and sex are the motorcyclist casualties?

Chart 3 plots the killed and seriously injured (KSI), and slightly injured figures for both sexes. It clearly shows that the overwhelming majority (approximately 90 per cent each year) of motorcyclist casualties are male. Even the number of males killed or seriously injured exceeds the total for female casualties of all severities.

**Chart 3: Motorcyclist casualties, by severity and sex**

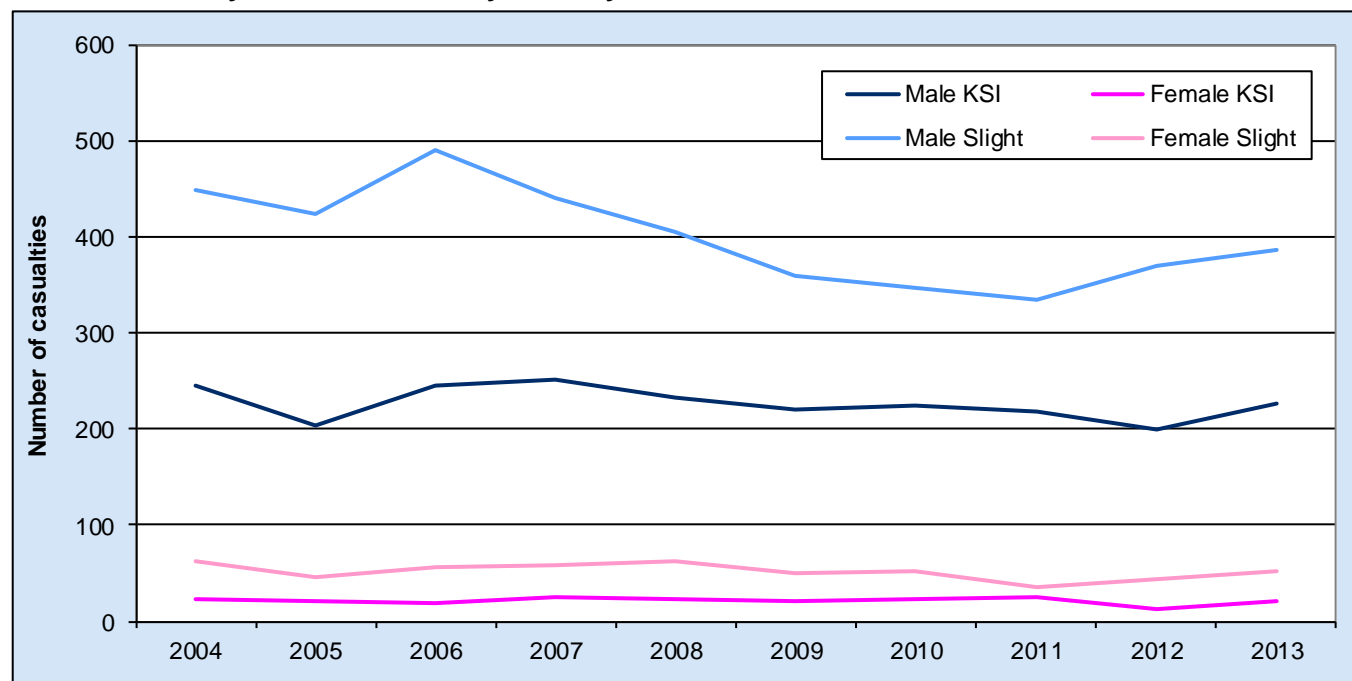


Table 5 below gives the breakdown by sex, from the 2004-08 baselines and from 2009 to 2013.

**Table 5: Motorcyclist casualties, by severity and sex**

	2004-08 average	2009	2010	2011	2012	2013
<i>Number</i>						
KSI:						
Male	236	220	224	218	200	226
Female	21	21	23	24	13	20
Total KSI (a)	257	241	247	242	213	246
Slight:						
Male	442	360	347	334	371	387
Female	57	50	51	36	43	52
Total Slight (a)	499	410	398	370	414	439
All severities:						
Male	678	580	571	552	571	613
Female	78	71	74	60	56	72
All casualties (a)	756	651	645	612	627	685

(a) Includes casualties of unknown sex

Chart 4 shows that the total number of motorcyclist casualties aged under 30 fell dramatically from 2,388 in 1979 to 278 in 2013. In contrast, casualties aged 30 and over averaged 344 per year from 1979 to 1996, they then rose, with the average for each year between 1997 and 2013 standing at 395. This means that since the late 1990s, the broad age range of motorcyclist casualties has altered, with the numbers aged 30 and over exceeding those aged under 30 and remaining in the majority to the present time.

**Chart 4: Motorcyclist casualties by broad age group, 1979-2013**

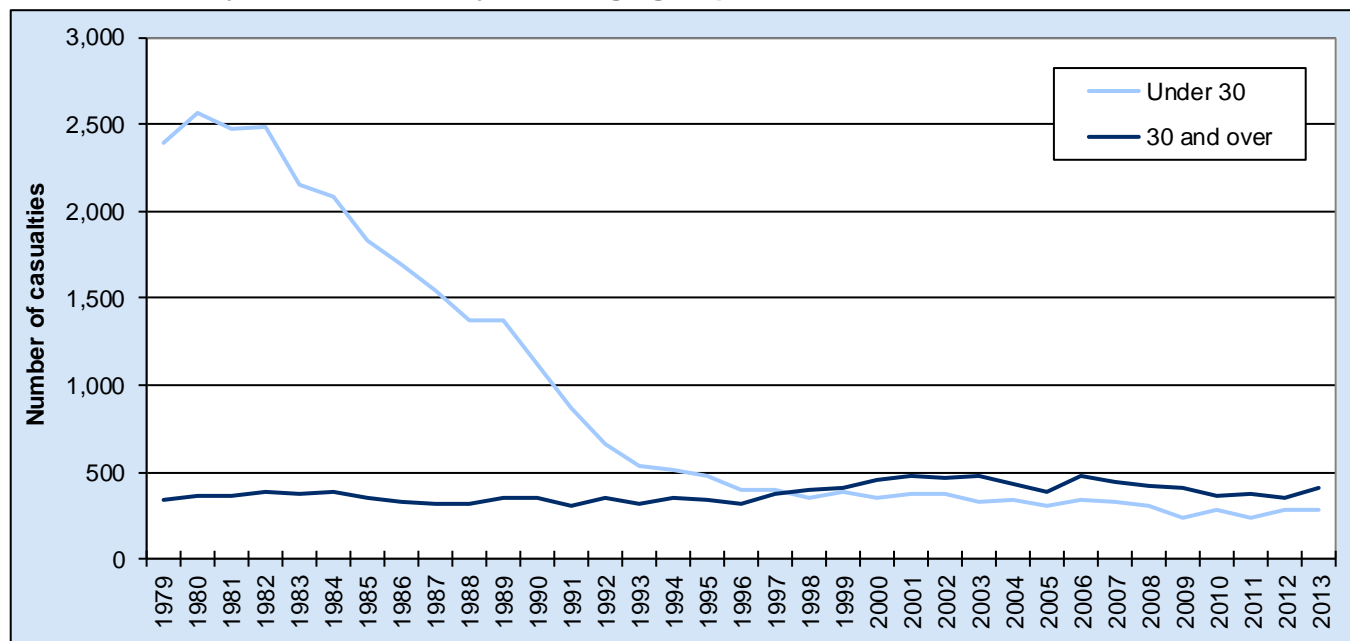


Chart 5 looks in more detail at recent trends in total motorcyclist casualties aged 30 and over by showing casualties for narrower age groups. The number of casualties in the 30-39 age group decreased from a 2004-08 average of 169 to 82 in 2012, slightly rising to 88 in 2013.

The older age groups have, however, tended to increase throughout the same period. The 40-49 age group going from an average of 157 in 2004-08 to 158 in 2013; the 50-59 age group, from an average of 75 in 2004-08 to 110 in 2013; and the 60 and over age group, from an average of 33 in 2004-08 to a peak of 54 in 2011 before falling slightly to 47 in 2013.

**Chart 5: Motorcyclist casualties aged 30 and over by age group**

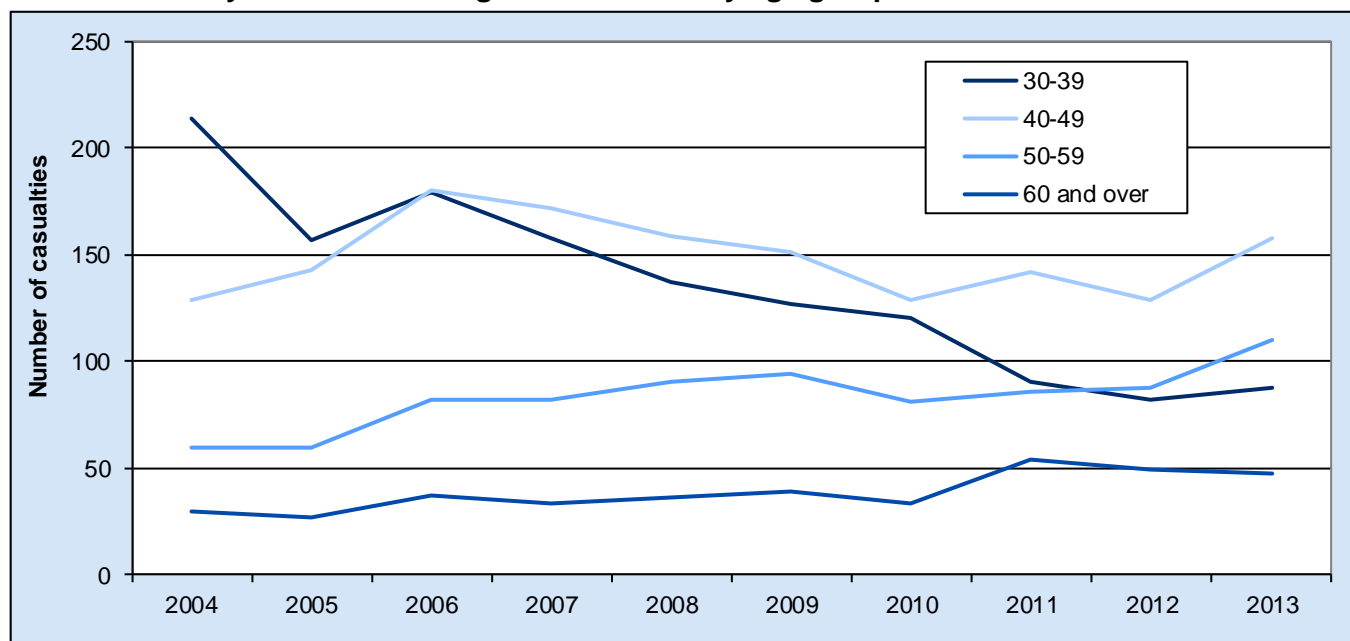


Table 6 shows of all motorcycle casualties the 2004-08 average was 43 per cent of those aged under 30 and 57 per cent for those aged 30 and over, whereas by 2013 they had changed to 41 per cent and 59 per cent respectively.

**Table 6: Motorcyclist casualties, by severity and age group**

	<i>Number</i>					
	2004-08 average	2009	2010	2011	2012	2013
<b>KSI:</b>						
0-15	4	4	1	2	1	1
16-19	30	23	35	34	26	22
20-24	31	23	32	23	27	42
25-29	25	20	22	22	13	17
30-39	60	51	52	35	31	39
40-49	64	65	53	64	48	69
50-59	31	39	34	40	43	40
60 and over	12	16	18	22	24	16
Total KSI (a)	257	241	247	242	213	246
<b>Slight:</b>						
0-15	9	6	2	0	2	1
16-19	116	98	99	89	95	86
20-24	61	30	54	47	74	67
25-29	47	36	37	22	41	42
30-39	109	76	68	55	51	49
40-49	93	86	76	78	81	89
50-59	44	55	47	46	45	70
60 and over	20	23	15	32	25	31
Total Slight (a)	499	410	398	370	414	435
<b>All severities:</b>						
0-15	13	10	3	2	3	2
16-19	146	121	134	123	121	108
20-24	92	53	86	70	101	109
25-29	72	56	59	44	54	59
30-39	169	127	120	90	82	88
40-49	157	151	129	142	129	158
50-59	75	94	81	86	88	110
60 and over	33	39	33	54	49	47
All casualties (a)	756	651	645	612	627	685

(a) Totals include casualties of unknown ages

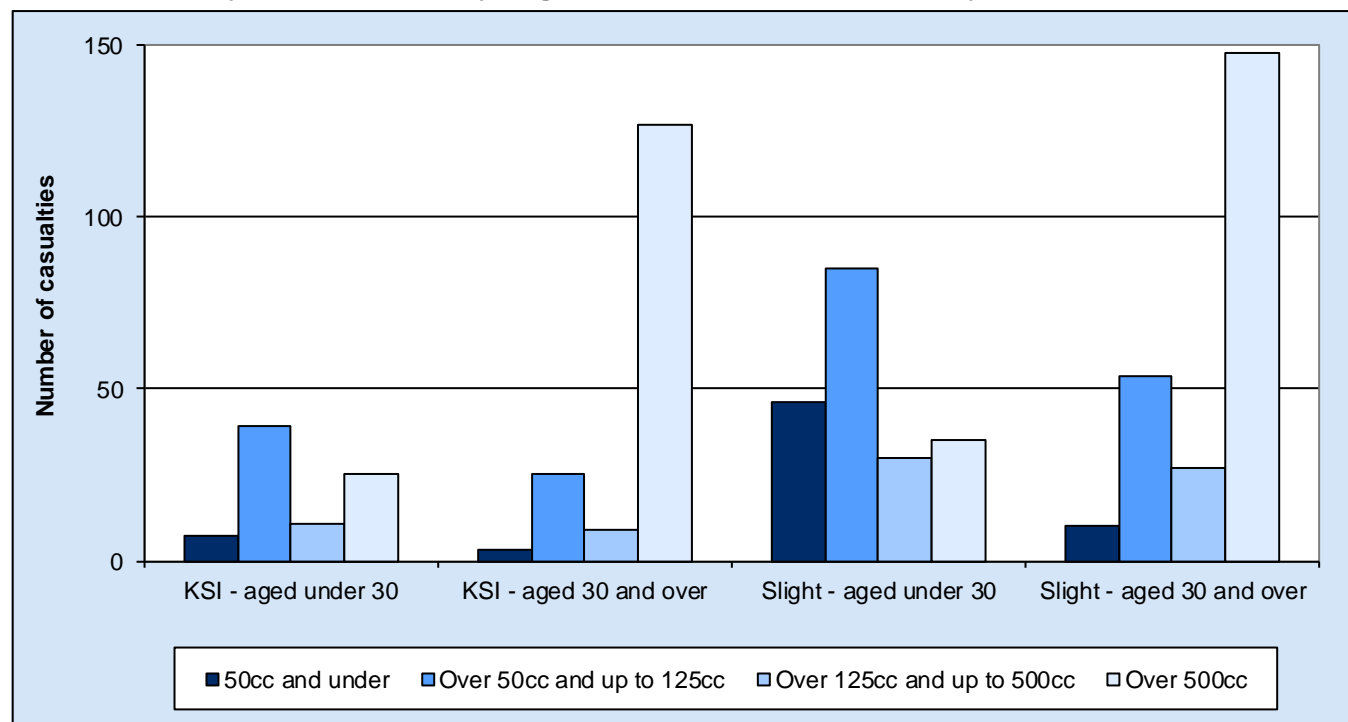
## What type of motorcycle was the casualty riding when the accident occurred?

Chart 6 and the supporting data in table 7 below, show the engine size of the motorcycle the different age groups were riding at the time of their accidents in 2013.

Motorcycle rider casualties aged under 30 tended to have been riding the less powerful machines, with engine size up to 500cc. These machines accounted for 78 per cent of all casualties in that age group.

Conversely, riders aged 30 and over were more likely to become casualties whilst riding the most powerful machines. These machines accounted for 68 per cent of all casualties in the older age group.

**Chart 6: Motorcyclist casualties by engine size of vehicle and severity, 2013**



**Table 7: Motorcyclist casualties, by broad age band and by engine size of vehicle, 2013**

	<i>Number</i>				
	50cc and Under average	Over 50cc and up to 125cc	Over 125cc and up to 500cc	Over 500cc	Total
<b>KSI:</b>					
Aged Under 30	7	39	11	25	82
Aged 30 or over	3	25	9	127	164
<b>Total (a)</b>	<b>10</b>	<b>64</b>	<b>20</b>	<b>152</b>	<b>246</b>
<b>Slight:</b>					
Aged Under 30	46	85	30	35	196
Aged 30 or over	10	54	27	148	239
<b>Total (a)</b>	<b>56</b>	<b>139</b>	<b>58</b>	<b>186</b>	<b>439</b>
<b>All severities:</b>					
Aged Under 30	53	124	41	60	278
Aged 30 or over	13	79	36	275	403
<b>Total (a)</b>	<b>66</b>	<b>203</b>	<b>78</b>	<b>338</b>	<b>685</b>

(a) Totals include casualties of unknown ages

## When are casualties most likely to occur?

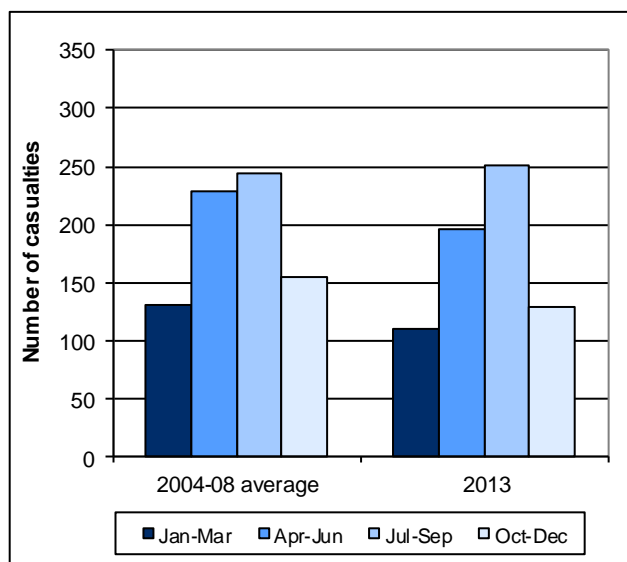
Chart 7 plots the motorcyclist casualties by the time of year when they occurred, concentrating on the 2004-08 average and the latest available figures, 2013. The figures for the whole of the period are given in table 8.

The greatest number of motorcyclist casualties occurred in the third quarter, July-September (an average of 32 per cent over the years shown in table 8). The second quarter, April-June also experienced a high number of casualties (an average of 31 per cent over the years shown in table 8).

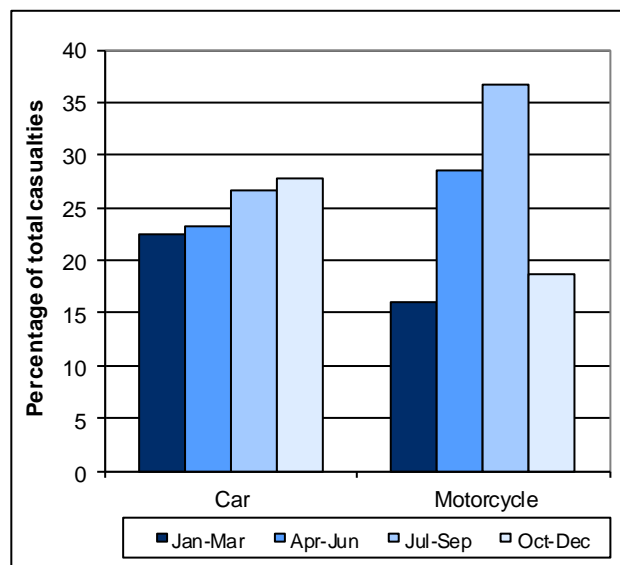
The smallest number occurred at the start of the year, January-March (an average of 17 per cent) with the fourth quarter, October-December, experiencing an average of 20 per cent.

Chart 7a gives a comparison with car user casualties for 2013. This shows that car user casualty figures varied little throughout the year, contrasting markedly with the seasonal variation in the motorcyclist casualties.

**Chart 7: Motorcycle casualties, by time of year**



**Chart 7a: Comparison of car user and motorcyclist casualties, by time of year, 2013**



**Table 8: Motorcyclist casualties, by quarter**

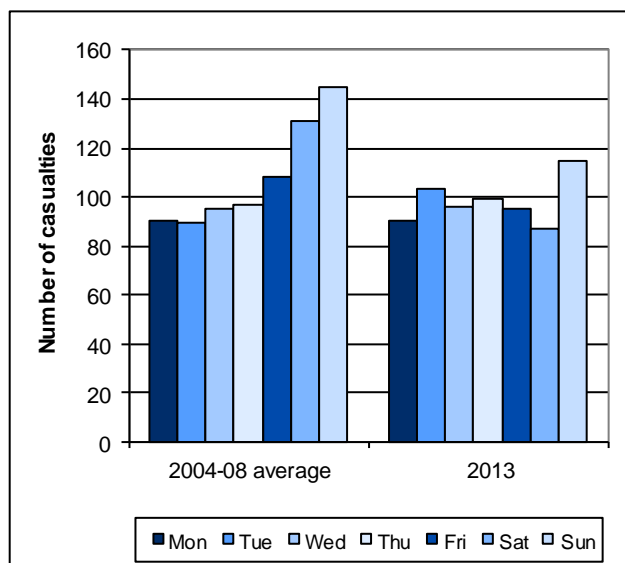
	<i>Number</i>					
	2004-08 average	2009	2010	2011	2012	2013
January- March	130	102	94	106	128	110
April-June	229	205	246	194	176	196
July- September	244	218	190	178	204	251
October-December	154	126	115	134	119	128
<b>Total</b>	<b>756</b>	<b>651</b>	<b>645</b>	<b>612</b>	<b>627</b>	<b>685</b>

Chart 8 shows the motorcyclist casualties by the day of the week they occurred. The supporting figures are in table 9 below.

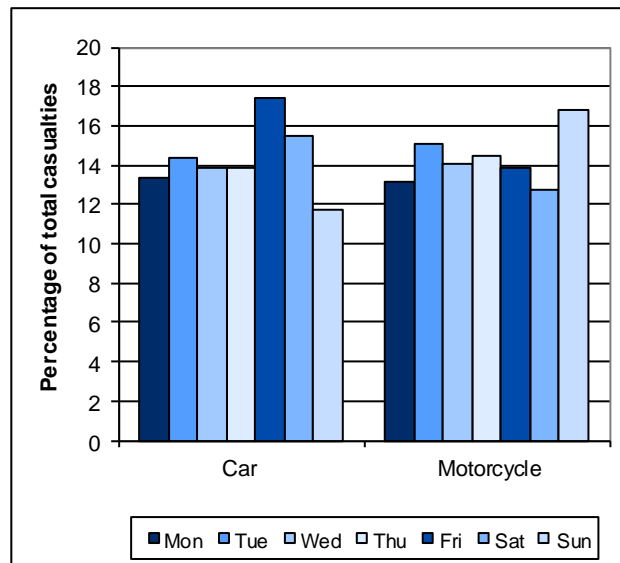
Motorcycle casualties were higher in 2013 on a Sunday (17 per cent) with Saturday having the lowest casualties figures for the first time in the time series.

Chart 8a gives a comparison with car user casualties for 2013. Friday experienced around 17 per cent of the total for car user casualties. In contrast with the motorcycle casualties, car casualties were lowest on Sundays.

**Chart 8: Motorcyclist casualties, by day of the week**



**Chart 8a: Comparison of car user and motorcyclist casualties, by day of the week, 2013**



**Table 9: Motorcyclist casualties, by day of the week**

	<i>Number</i>					
	2004-08 average	2009	2010	2011	2012	2013
Monday	91	81	88	79	67	90
Tuesday	90	79	72	55	78	103
Wednesday	95	78	83	85	73	96
Thursday	97	86	87	88	69	99
Friday	108	75	86	77	91	95
Saturday	131	116	104	103	127	87
Sunday	145	136	125	125	122	115
Total	756	651	645	612	627	685

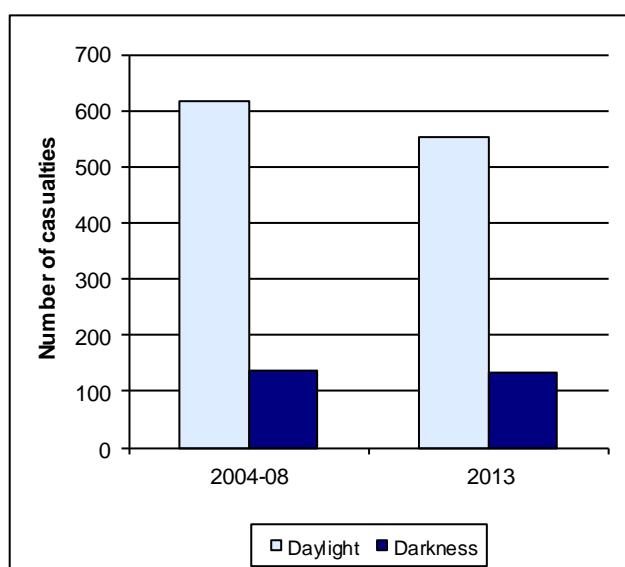
## Under what light and weather conditions are casualties most likely to occur in a road accident?

Chart 9 and the supporting data in table 10, below, shows the light conditions at the time casualties occurred.

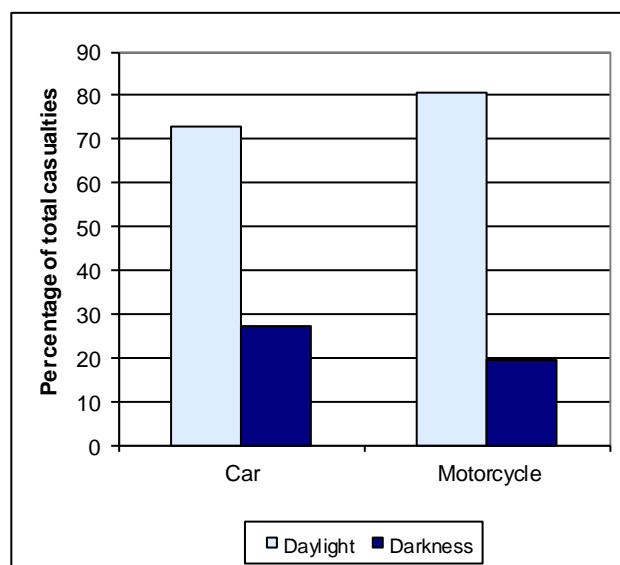
It is clear that most motorcycle casualties (83 per cent over the period from 2009 to 2013) occurred in daylight, with very little annual variation in this throughout this period.

Chart 9a shows car user casualties for comparison with motorcyclist casualties during 2013. The majority of car user casualties also resulted from accidents that occurred in daylight; this proportion was lower than that for motorcyclist casualties, with 73 per cent of car user casualties compared to 80 per cent for motorcyclist casualties in 2013.

**Chart 9: Motorcyclist casualties, by light condition**



**Chart 9a: Comparison of car user and motorcyclist casualties, by light condition, 2012**



**Table 10: Motorcyclist casualties, by light condition**

	Number					
	2004-08 average	2009	2010	2011	2012	2013
Daylight	618	546	542	511	523	551
Darkness	138	105	103	101	104	134
Total	756	651	645	612	627	685

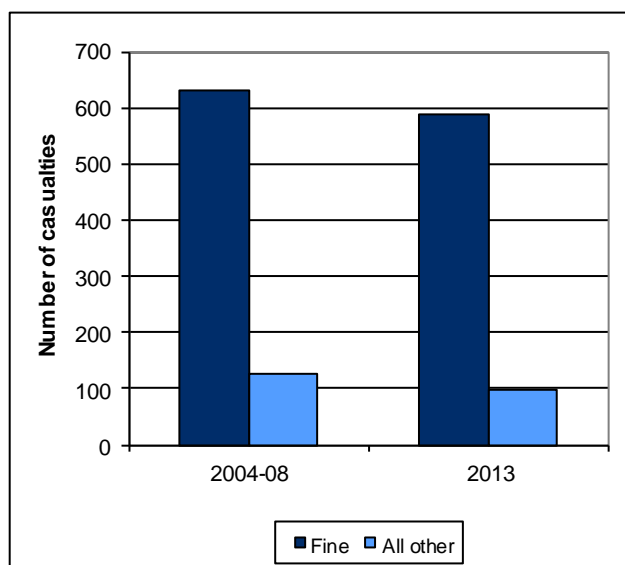


Chart 10 and the supporting data in table 11, below, shows weather conditions at the time casualties occurred.

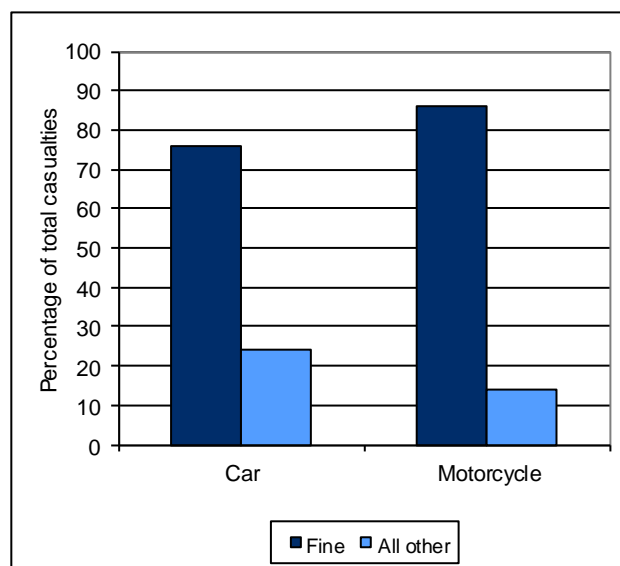
Most motorcyclist casualties occur in fine weather: Over the whole period from 2009 to 2013, 86 per cent of motorcyclist casualties resulted from accidents when weather conditions were recorded as 'Fine'. The 'all other' weather conditions in chart 10 include accidents when conditions were recorded as 'not known'.

Comparing the car user casualties with motorcyclist casualties in 2013, Chart 10a shows that the majority of car user casualties also occurred in fine weather. The percentage for car user casualties was; however, lower at 76 per cent compared with 86 per cent for motorcyclists.

**Chart 10: Motorcyclist casualties, by weather condition**



**Chart 10a: Comparison of car user and motorcyclist casualties, by weather condition, 2012**



**Table 11: Motorcyclist casualties, by weather condition**

	<i>Number</i>					
	2004-08	2009	2010	2011	2012	2013
	average					
Fine	629	538	570	534	529	588
Rain	77	82	47	61	75	84
Snow	1	1	4	0	0	6
Fog/mist	3	0	2	0	2	0
Other	18	11	10	6	13	6
Unknown	28	19	12	11	8	1
Total	756	651	645	612	627	685

## Where on the road are casualties most likely to occur?

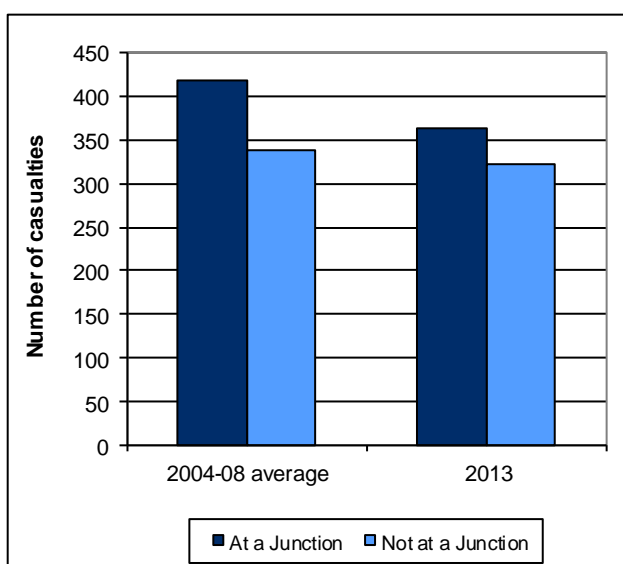
Chart 11 shows whether or not motorcyclist casualties resulted from an accident that occurred at a junction, for the 2004-08 baseline and 2013.

Most casualties come from junction accidents: Over the period from 2009 to 2013, 57 per cent of motorcyclist casualties resulted from accidents taking place at junctions. The most common type of junction where casualties happen is at T-Junctions with 48 per cent of total motorcyclist casualties occurring at junctions over this time period, followed by roundabouts with 19 per cent of casualties.

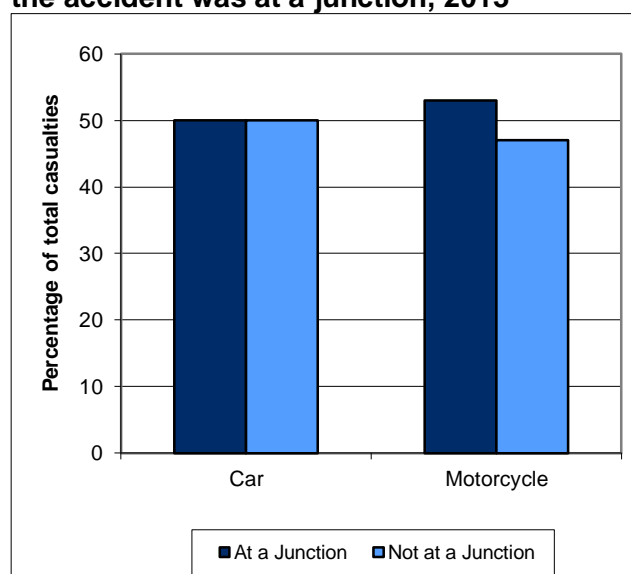
The separate junction categories and the full range of years are shown in table 12.

Chart 11a compares the 2013 car user casualties with the motorcyclist casualties. The figures show that, compared with car user casualties, a greater proportion of motorcyclist casualties resulted from accidents taking place at a junction. In 2013, 57 per cent of motorcycle casualties resulted from accidents taking place at junctions compared to 53 per cent of car user casualties.

**Chart 11: Motorcyclist casualties, by whether or not the accident was at a junction**



**Chart 11a: Comparison of car user and motorcyclist casualties, by whether or not the accident was at a junction, 2013**



**Table 12: Motorcyclist casualties, by junction type**

	<i>Number</i>					
	2004-08 average	2009	2010	2011	2012	2013
Not at junction	338	261	271	255	271	322
Roundabout	73	76	75	56	66	77
Mini roundabout	3	5	4	2	3	2
T junction	202	194	162	184	177	175
Slip road	9	12	6	3	11	8
Crossroad	38	28	30	25	27	33
Multiple junction	9	14	14	5	8	9
Private drive	35	24	37	34	25	32
Other junction	49	37	46	48	39	27
<b>Total</b>	<b>756</b>	<b>651</b>	<b>645</b>	<b>612</b>	<b>627</b>	<b>685</b>

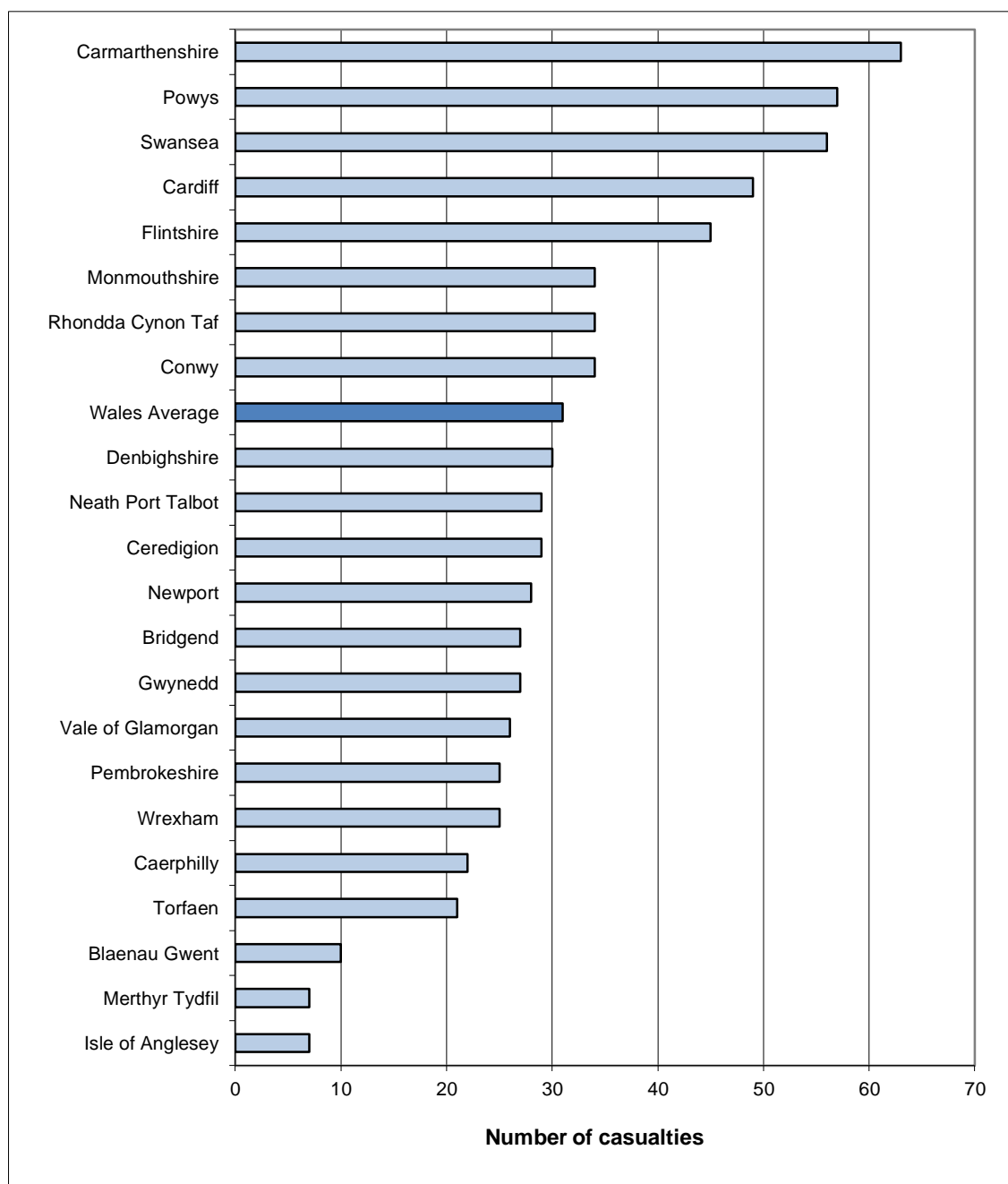
### Where in Wales did the motorcyclist casualties occur?

Chart 12 and table 13 below show that Carmarthenshire had the highest number of motorcyclist casualties in 2013 – 63 casualties accounting for around 9 per cent of the Wales total.

Of the six local authorities experiencing the highest number of motorcycle casualties, three, Swansea, Cardiff and Flintshire are considered to be urban areas and between them they accounted for around 22 per cent of motorcyclist casualties. The other three, Powys, Carmarthenshire and Monmouthshire, are rural areas and they accounted for 23 per cent of the total.

There were 338 casualties that were riding motorcycles in the ‘Over 500cc’ category, 49 per cent of the Wales total in 2013. In some local authority areas a higher proportion of motorcyclist casualties were riding motorcycles with larger engine sizes at the time of their accident. The proportion of casualties riding machines in the ‘Over 500cc’ category was highest in Powys 82.5 per cent; Monmouthshire 82.4 per cent and Gwynedd 81.5 per cent of all casualties.

**Chart 12: Motorcyclist casualties by local authority, 2013**



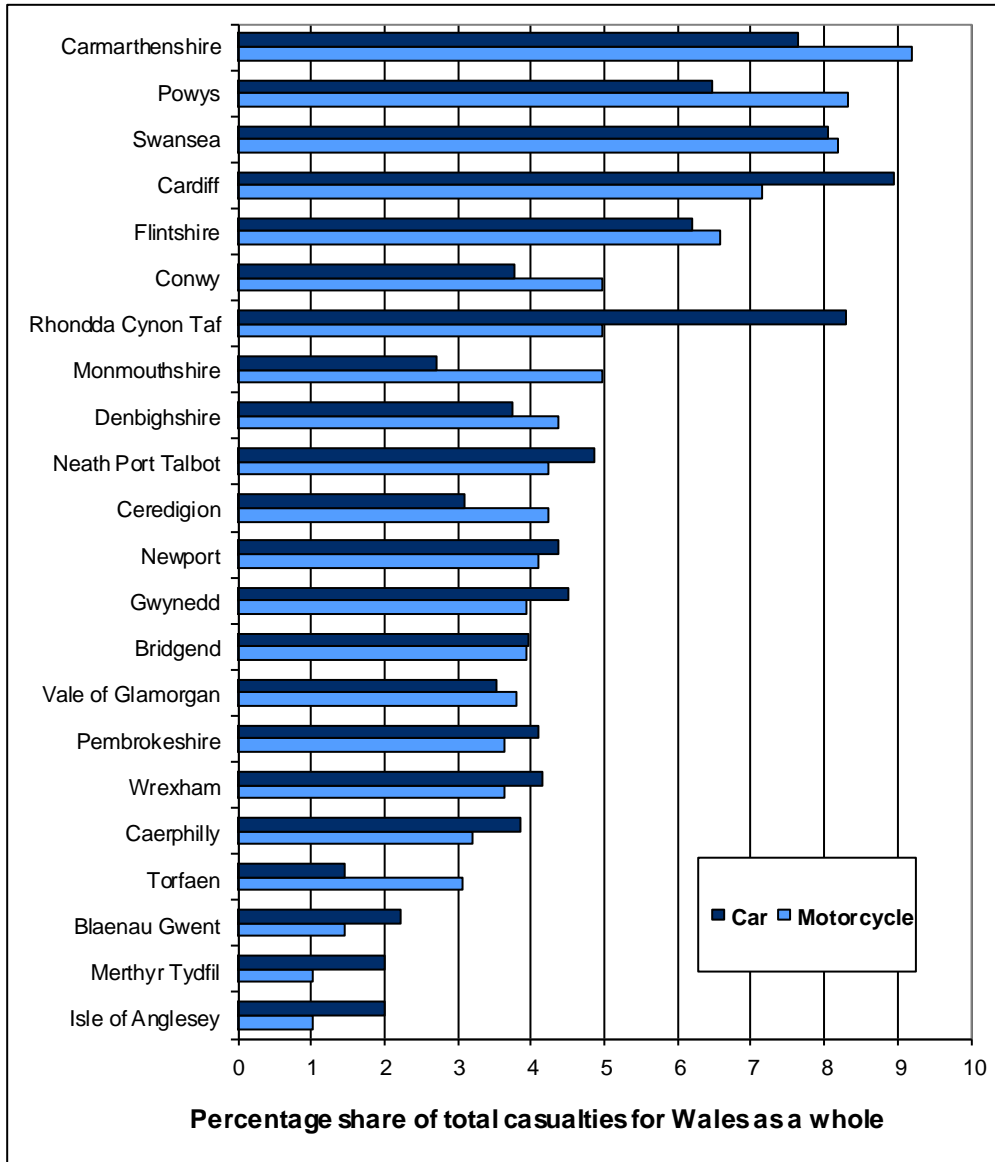
**Table 13: Number of motorcyclist casualties, by engine size of motorcycle and by local authority, 2013**

	<i>Number and percentage</i>					Percentage of Wales total
	50cc and under	Over 50cc and up to 125cc	Over 125cc and up to 500cc	Over 500cc	Total	
Isle of Anglesey	1	0	1	5	7	1
Gwynedd	0	3	2	22	27	4
Conwy	2	13	6	13	34	5
Denbighshire	1	10	1	18	30	4
Flintshire	2	13	9	21	45	7
Wrexham	2	10	3	10	25	4
Powys	1	5	4	47	57	8
Ceredigion	3	7	6	13	29	4
Pembrokeshire	9	5	1	10	25	4
Carmarthenshire	5	23	3	32	63	9
Swansea	12	18	4	22	56	8
Neath Port Talbot	2	14	1	12	29	4
Bridgend	3	8	7	9	27	4
Vale of Glamorgan	4	11	2	9	26	4
Cardiff	4	20	7	18	49	7
Rhondda Cynon Taf	4	10	5	15	34	5
Merthyr Tydfil	1	1	1	4	7	1
Caerphilly	4	8	4	6	22	3
Blaenau Gwent	0	7	0	3	10	1
Torfaen	2	6	4	9	21	3
Monmouthshire	0	4	2	28	34	5
Newport	4	7	5	12	28	4
<b>Wales</b>	<b>66</b>	<b>203</b>	<b>78</b>	<b>338</b>	<b>685</b>	<b>100</b>

Chart 13 shows the relative incidence of motorcyclist casualties and car user casualties in each local authority area across Wales during 2013. It shows the proportion of the total casualties for Wales that took place in each individual local authority area (the total for motorcyclist casualties for all the local authorities summed comes to 100 per cent; this is also true of the car user casualties).

The local authority with the highest proportion of motorcycle casualties in Wales was Carmarthenshire (9 per cent) this is put into context when you consider that Carmarthenshire only accounted for 8 per cent of Welsh car user casualties.

**Chart 13: Comparison of car and motorcyclist casualties, by local authority, 2013**



## Key quality information:

Source: Police reported road casualties in Wales

Status: National Statistics

Description: The statistics refer to casualties resulting from personal injury accidents on public roads reported to the police and forwarded to the Welsh Government. The police compile statistical data about road traffic accidents and casualties (called Stats19 data) for the Welsh Government and the Department for Transport (DfT). This follows police attendance at accidents that involve any personal injury, together with members of the public reporting personal injury accidents directly to the police. The figures are based on information available to the Government 14 weeks after the end of the latest quarter.

A casualty is defined as, a person killed or injured in an accident. One accident may give rise to several casualties. Casualties are subdivided into killed, seriously injured and slightly injured categories. Casualties reported as killed include only those cases where death occurs in less than 30 days as a result of the accident. They do not include those who died as a result of natural causes (e.g. heart attack) rather than as a result of the accident, nor do they include confirmed suicides.

Uses of data: There are a variety of organisations that use the Welsh road traffic accident and casualty data. The Welsh Government uses road traffic collision and casualty data to help set road safety policy. It is also used for performance indicators, both for the Welsh Government's Transport Strategy and for some Health Performance indicators. They are also component indicators in the Welsh Government's Child Poverty and Sustainable Development indicators.

Other users include Highway Authorities, covering the Welsh Government, which is responsible for the motorway and trunk road network, and local authorities, which are responsible for other roads in Wales. Other bodies involved in road safety include the Safety Camera Partnership, Trunk Road Agents, and Police & Community Safety Partnerships.

Quality: The figures shown may change in future if there are late amendments. Similarly, the figures for earlier years may differ from those previously published. The figures cover only road accidents reported to the police and involving personal injury.

Links to further information: This is one of a series of Statistical Bulletins that are intended to provide users with more information about road accident and casualties in Wales during 2013. Most of these Bulletins focus on particular groups of road users that are either at higher risk of involvement in an accident or are more vulnerable in terms of becoming a casualty, if involved in an accident.

All these Bulletins will be available from the following link:

<http://wales.gov.uk/statistics-and-research/?topic=Transport&lang=en>

Results for Great Britain were published by the Department for Transport on 26 June 2014 in 'Reported road casualties in Great Britain main results: 2013'; available from the link:

<https://www.gov.uk/government/collections/road-accidents-and-safety-statistics>