European Commission

European Road Safety Observatory
www.erso.eu

Traffic Safety Basic Facts 2015

Main Figures

Transport

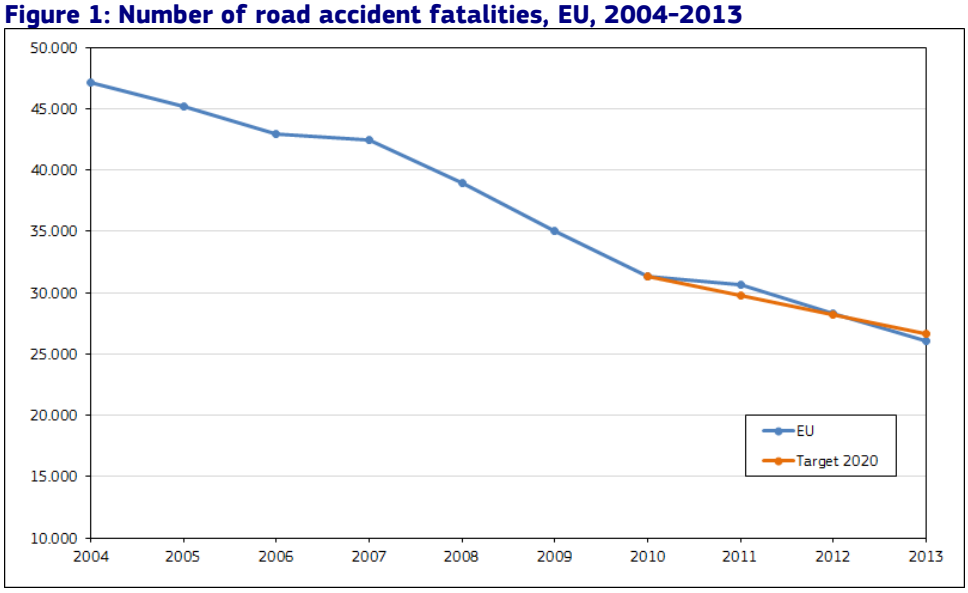
EU road safety targets

The European Commission set the ambitious target of halving the number of road fatalities by 2010 in its White Paper "European transport policy for 2010: time to decide" of 2001. A new target for 2020 to halve the number of road deaths compared to 2010 was set by the EU in its "Road Safety Programme 2011-2020".

Figure 1 shows that much progress has been made with reducing the number of fatalities. The average reduction between 2004 and 2007 was 3,4% per year. The number fell more rapidly in the 2007-2010 period, with an average reduction of 9,6%, which decreased the following years. It is estimated that the number of road accident fatalities in the EU fell by 45% between 2004 and 2013.

The EC's goal of reducing fatalities by 50% by 2010 was almost achieved; the actual reduction is estimated to be 44%.

Figure 1: Number of road accident fatalities, EU, 2004-2013



Source: CARE database, data available in May 2015

Road Accident fatalities in Europe

Table 1 shows that about 26.000 people were killed in road accidents in the EU countries in 2013, a reduction of over two fifths (45%) since 2004. In each of the EU countries there were fewer fatalities in 2013 than in 2004.

Table 1: Number of road fatalities by country, 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
BE	1.162	1.089	1.069	1.071	944	944	840	862	770	723
BG	943	957	1043	-	-	901	-	-	-	-
CZ	1.382	1.286	1.063	1.221	1.076	901	802	773	742	654
DK	369	331	306	406	406	303	255	220	167	191
DE	5.842	5.361	5.091	4.949	4.477	4.152	3.648	4.009	3.600	3.339
EE	170	170	204	196	132	98	-	-	-	-
IE	377	400	365	338	280	238	212	186	162	162
EL	1.670	1.658	1.657	1.612	1.553	1.456	1.258	1.141	988	879
ES	4.741	4.442	4.104	3.822	3.098	2.714	2.479	2.060	1.902	1.680
FR	5.530	5.318	4.709	4.620	4.275	4.273	3.992	3.963	3.653	3.268
HR	-	-	-	619	664	548	426	418	393	368
IT	6.122	5.818	5.669	5.131	4.725	4.237	4.114	3.860	3.753	3.385
CY	117	-	-	89	82	71	60	71	51	44
LV	516	442	407	419	316	254	218	179	177	179
LT	-	-	-	-	-	-	-	-	-	-
LU	50	47	43	46	35	48	32	33	34	45
HU	1.296	1.278	1.303	1.232	996	822	740	638	605	591
MT	13	17	11	12	9	15	13	-	-	-
NL	804	750	730	709	677	644	537	546	562	476
AT	878	768	730	691	679	633	552	523	531	455
PL	5.712	5.444	5.243	5.583	5.437	4.572	3.908	4.189	3.571	3.357
PT	1.294	1.247	969	974	885	840	937	891	718	637
RO	2.442	2.629	2.587	2.800	3.065	2.796	2.377	2.018	2.042	1.861
SI	274	258	262	293	214	171	138	141	130	125
SK	603	606	614	661	606	384	371	-	-	-
FI	375	379	336	380	344	279	272	292	255	258
SE	480	440	445	471	397	358	266	319	285	260
UK	3.368	3.336	3.298	3.059	2.645	2.337	1.905	1.960	1.802	1.770
EU	47.149	45.207	42.966	42.447	38.918	34.989	31.351	30.675	28.276	26.090
Yearly change		-4,1%	-4,9%	-1,3%	-8,0%	-10,4%	-10,4%	-2,2%	-7,8%	-7,7%
IS	23	19	31	15	12	17	8	12	9	15
LI	1	2	0	1	1	1	-	-	-	-
NO	257	224	242	233	255	212	208	168	145	187
CH	510	409	370	384	357	349	327	320	339	269

Source: CARE database, data available in May 2015
* Totals for EU include latest available data (Lithuanian data not included in totals)

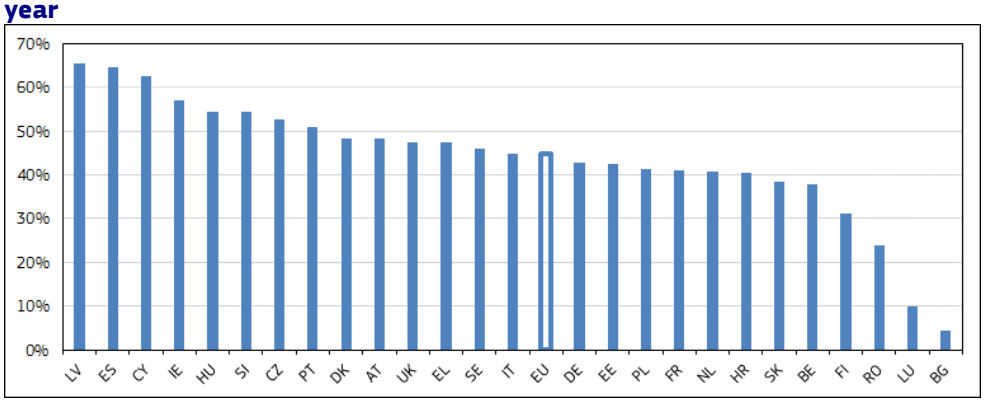
Road fatalities in the EU countries fell by 45% between 2004 and 2013.

In the following tables and figures, the CARE data for 2013 are analysed in greater detail. It should be noted that the latest available data are used, meaning 2009 data for BG and EE, 2010 data for MT and SK, and 2012 data for IE.

The number of fatalities fell by 65% in Latvia and Spain between 2004 and 2013.

Figure 2 shows the relative change in road fatality numbers in the EU over the decade. The highest reduction occurred in Latvia and Spain, where there were 65% fewer fatalities in 2013 than in 2004.

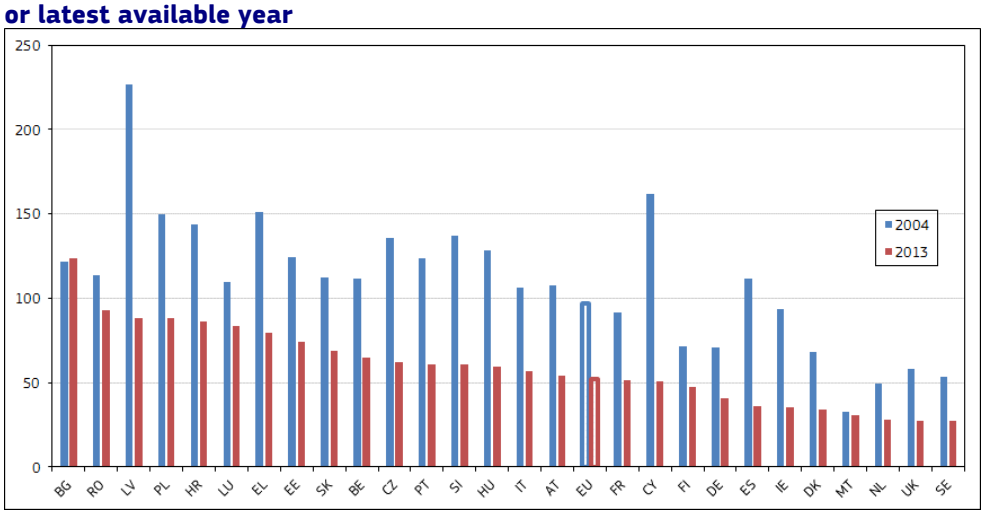
Figure 2: Reduction of road fatalities by country, 2004-2013 or latest available year



Source: CARE database, data available in May 2015

Figure 3 shows the rate of fatalities per million population in each of the EU countries in 2004 and 2013, as well as the EU average. The highest rate reduction over the decade occurred in Spain (68%), and the rate only increased in Bulgaria.

Figure 3: Road fatality rates per million population by country, 2004 and 2013 or latest available year



Sources: CARE database (EUROSTAT for population data), data available in May 2015

The geographical representation of fatality rates in Map 1 shows a tendency for rates to be lower in the north than in the south and lower in the west than in the east, which is probably the result of different historical backgrounds and policies for traffic safety.

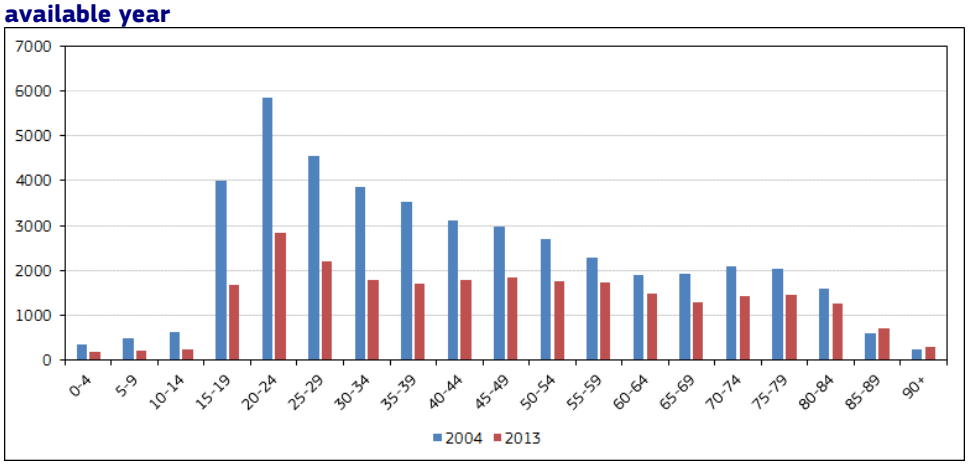
Fatality rates show both a north-south divide and an east-west divide across Europe.

Map 1: Road fatality rates per million population by country, 2013 or latest available year

Age and gender

Figure 4 compares the number of road fatalities per 5-year age group in 2004 and 2013. The distribution remained broadly the same, with the highest fatality numbers between the ages of 20 and 29 years.

Figure 4: Number of road fatalities by age group, EU, 2004 and 2013 or latest available year

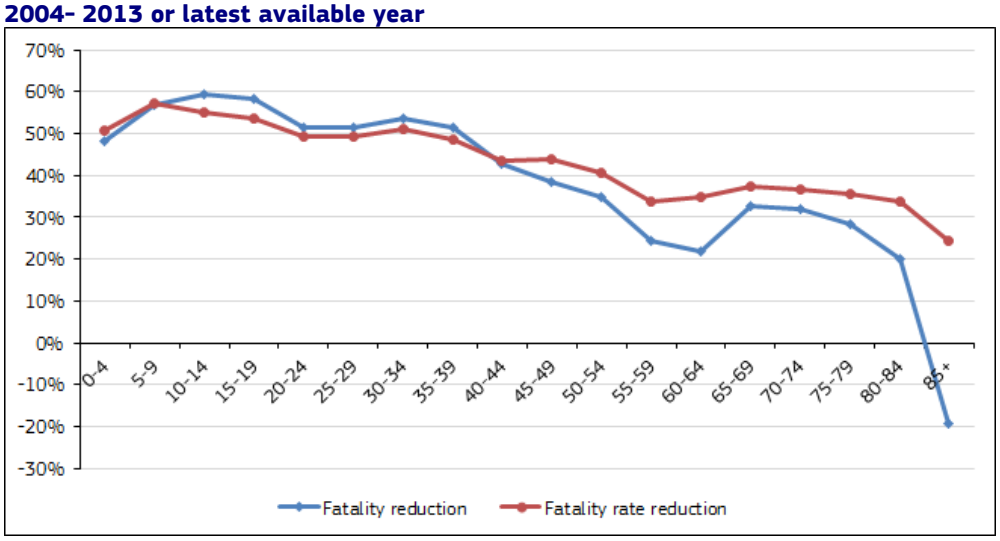


Source: CARE database, data available in May 2015

Demographic change has contributed to the changes seen in Figure 4. The population of the EU countries grew by 3,3% over the decade, but the growth occurred mainly among the older age groups and indeed the population declined in the age groups between 10 and 39 years. Figure 5 presents the reduction in fatality numbers and fatality rates by age group. Fatalities in the over 85 year old age group increased by 19% in 2013, compared with 2004.

The number of road fatalities in the EU decreased by more than half among children between 2004 and 2013, but by less than one tenth among those at least 80 years old.

Figure 5: Reduction of road fatalities and road fatality rates by age group, EU, 2004- 2013 or latest available year



Sources: CARE database (EUROSTAT for population data), data available in May 2015

Table 2 shows the distribution of road fatalities by age group in the EU countries in 2013. There are clear differences between countries, with fatalities in countries such as Ireland being on average younger than in others such as Portugal, Sweden and the Netherlands. The median age of fatalities across the EU was 45 years.

The distribution of road fatalities by age varies among EU countries.

Table 2: Total number and distribution of road fatalities by country and age group, 2013 or latest available year

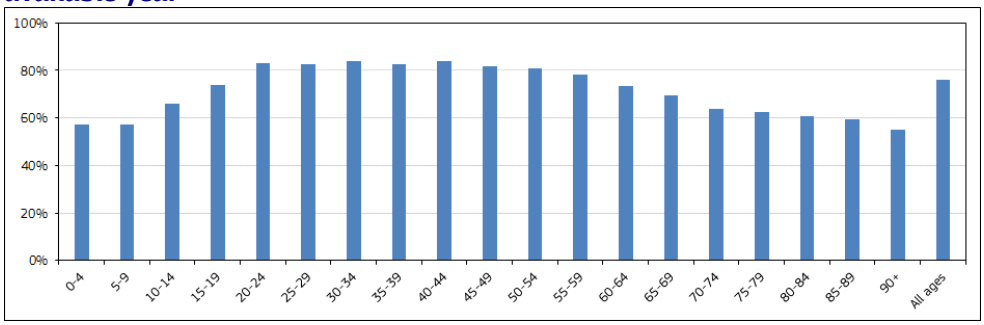
	0-14	15-24	25-59	60-99	Total	Median age
BE	2%	18%	55%	25%	723	41
BU	3%	21%	52%	23%	901	38
CZ	2%	16%	53%	29%	654	45
DK	7%	16%	44%	33%	191	47
DE	2%	17%	46%	35%	3.339	48
EE	4%	24%	52%	21%	98	36
IE	1%	26%	47%	25%	162	36
EL	2%	16%	50%	32%	879	46
ES	3%	10%	52%	35%	1.680	48
FR	3%	23%	49%	26%	3.268	40
HR	3%	18%	52%	27%	368	43
IT	2%	14%	48%	36%	3.385	48
CY	2%	41%	30%	27%	44	27
LV	4%	9%	58%	29%	179	46
LT	-	-	-	-	-	-
LU	4%	11%	60%	24%	45	44
HU	1%	11%	57%	31%	591	49
MT	8%	31%	54%	8%	13	29
NL	2%	20%	39%	40%	476	50
AT	2%	15%	45%	37%	455	49
PL	3%	19%	52%	27%	3.357	43
PT	2%	12%	48%	38%	637	51
RO	4%	14%	51%	30%	1.861	45
SI	2%	19%	50%	28%	125	46
SK	3%	21%	54%	22%	371	38
FI	2%	19%	43%	36%	258	48
SE	2%	18%	44%	36%	260	50
UK	2%	22%	49%	27%	1.770	42
EU	2%	17%	49%	31%	26.090	45
IS	13%	33%	40%	13%	15	30
NO	2%	19%	49%	30%	187	48
CH	4%	12%	40%	44%	269	55

Source: CARE database, data available in May 2015

Far more males than females are killed in road accidents: 76% of all fatalities were male and 24% were female. Figure 6 shows that this proportion varies by age and exceeds four fifths between the ages of 20 and 49 years.

76% of all road accident fatalities in 2013 were male.

Figure 6: Percentage of male road fatalities by age group, EU, 2013 or latest available year

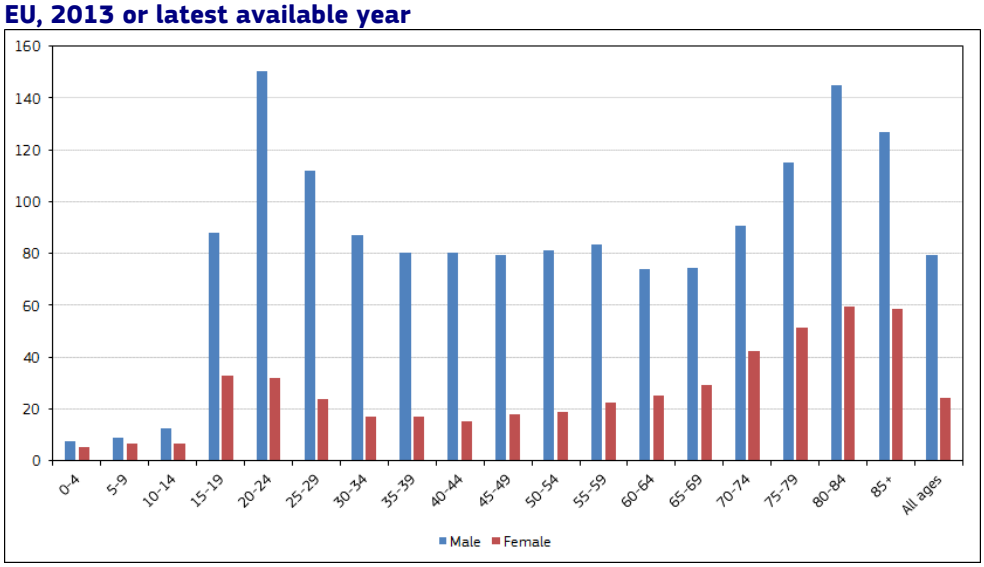


Source: CARE database, data available in May 2015

Figure 4 shows that the number of fatalities varied with age, and Figure 7 shows that the number of fatalities per million population also varies considerably with age. Rates are high among the young road users (15-24 years old), then fall with age. They begin to rise again, and rates for eldest road users (at least 80 years old) are similar to those for the young. The male fatality rate is over three times the female rate, 80 deaths per million population compared with 24.

The fatality rate for males in the EU is over three times the rate for females.

Figure 7: Road fatality rates per million population by age group and gender, EU, 2013 or latest available year

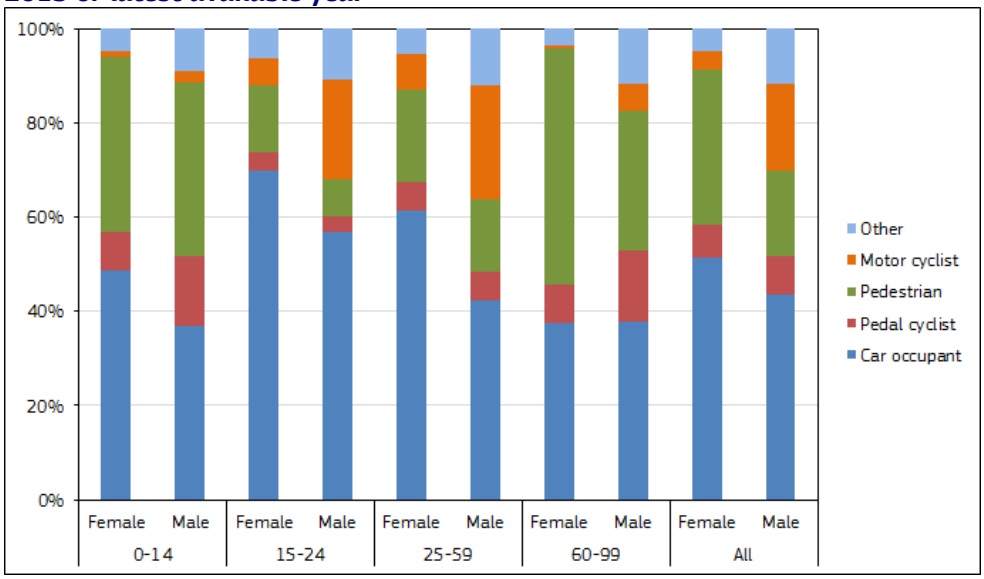


Sources: CARE database (EUROSTAT for population data), data available in May 2015

Figure 8 compares the male and female fatality distributions by road user type for four age groups (Figure 11 compares the all-ages distributions in more detail).

The distribution of road user type among fatalities in the EU varies considerably with age and gender.

Figure 8: Distribution of road fatalities by age, gender and road user type, EU, 2013 or latest available year



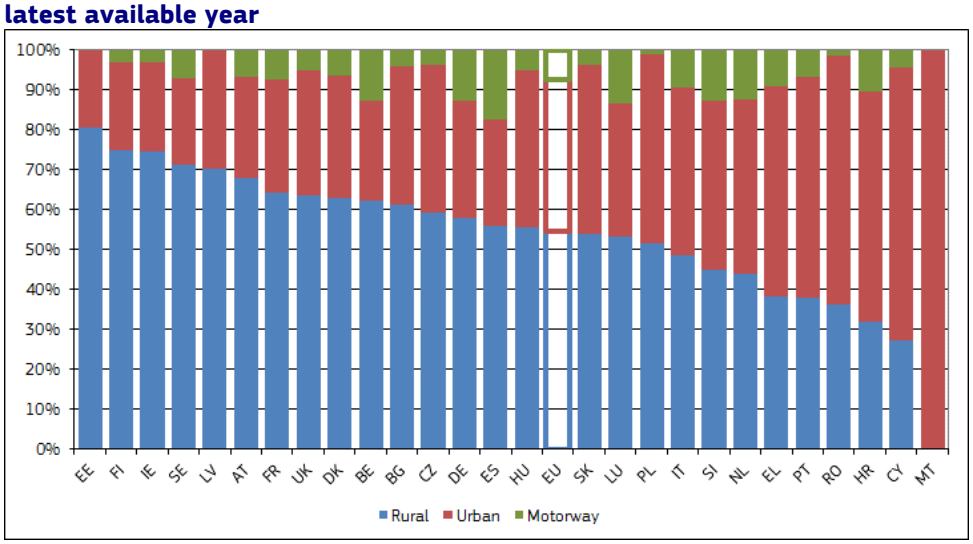
Source: CARE database, data available in May 2015

Type of road

Figure 9 shows the proportion of fatalities by type of road, with countries sorted by the proportion on rural roads. Overall, only 7% of road fatalities in 2013 occurred in accidents on motorways, and 54% died in accidents on non-motorway rural roads.

In the EU, more than half of all fatalities occurred on rural non-motorway roads.

Figure 9: Distribution of road fatalities by country and type of road, 2013 or latest available year

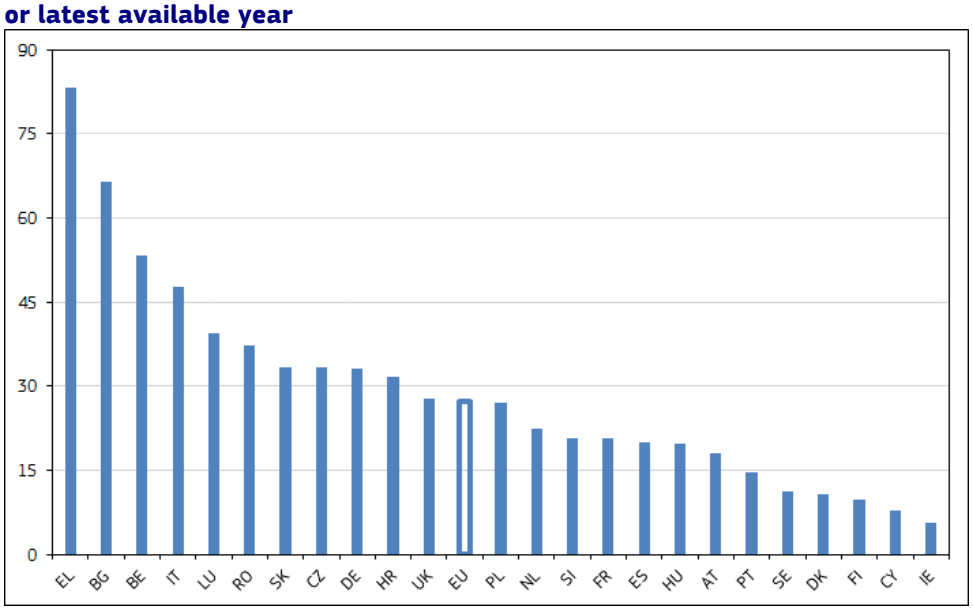


Source: CARE database, data available in May 2015

To allow for the differences between their motorway networks, Figure 10 compares the rate of fatalities per thousand km of motorways. The fatality rate in 2013 ranged from 5,6 in Ireland to 83,3 in Greece, and the EU average was 27,3.

The rate of fatalities per thousand km of motorways varies more than tenfold across the EU.

Figure 10: Motorway fatality rates per 1.000 km of motorway by country, 2013 or latest available year



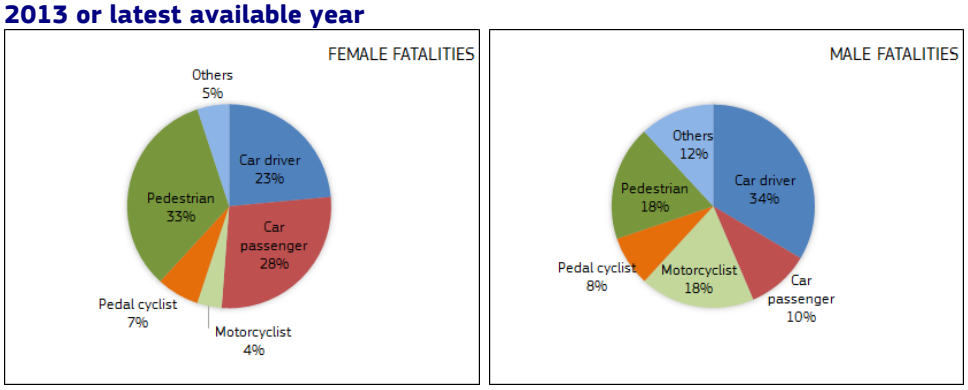
Sources: CARE database (EUROSTAT for road length data), data available in May 2015

Mode of transport and road user type

Figure 11 shows the male and female distributions of fatalities in the EU by road user type, and these differ considerably. Nearly two third of female fatalities were car passengers (28%) or pedestrians (33%), while only 10% of male fatalities were car passengers and 18% pedestrians. On the contrary, 18% of male fatalities and only 4% of female fatalities were motorcyclists. Figure 12 shows the national distributions (both sexes), sorted by the proportion of car drivers.

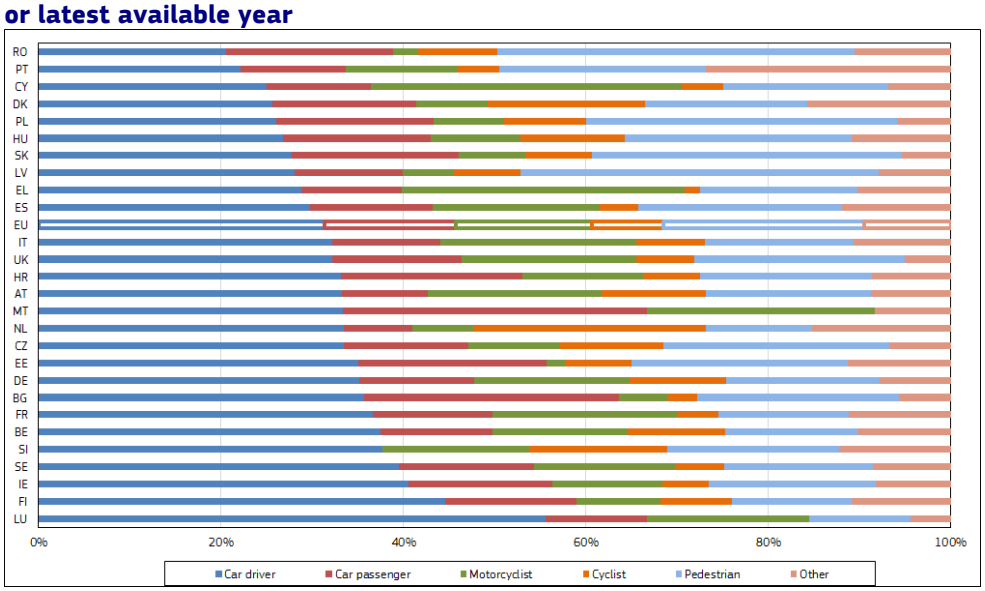
By comparison with male fatalities, females were more likely to be travelling as car passengers and pedestrians and less likely to be travelling as car drivers and motorcyclists.

Figure 11: Distribution of male and female fatalities by road user type, EU, 2013 or latest available year



Source: CARE database, data available in May 2015

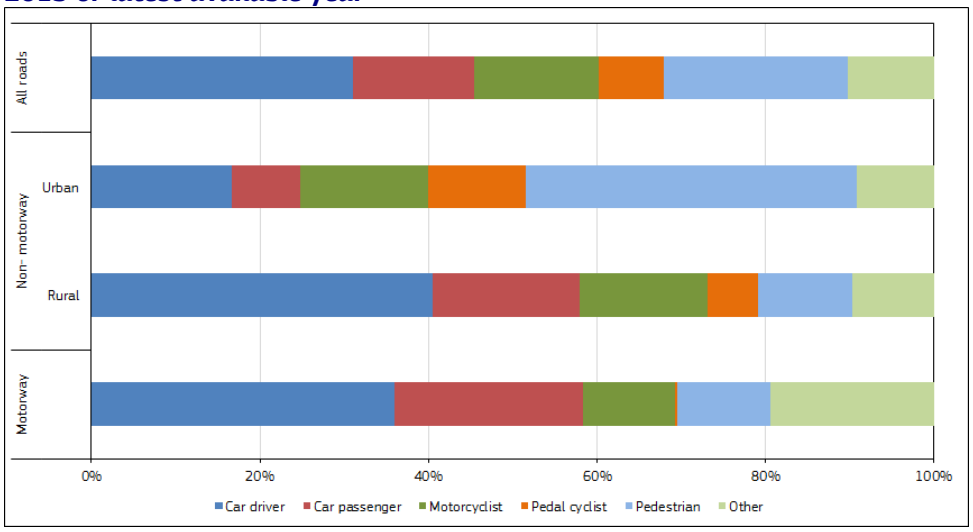
Figure 12: Distribution of road fatalities by country and road user type, 2013 or latest available year



Source: CARE database, data available in May 2015

Figure 13 shows the proportion of fatalities by road user type on three types of road. This varies with type of road and is influenced by the modes of transport typically used on each type of road.

Figure 13: Distribution of road fatalities by road user type and road type, EU, 2013 or latest available year



Source: CARE database, data available in May 2015

Almost half of all road fatalities (45%) are car occupants. On motorways this proportion increases to almost 60%.

On motorways, where cars are the prevalent mode of transport, almost 60% of all fatalities were car occupants. There is more non-motorised traffic on urban roads, however; almost half of fatalities on these roads were pedestrians or cyclists, and about one quarter were car occupants.

71% of car driver fatalities and 66% of car passenger fatalities occurred on rural roads in 2013, compared with 9% and 12% respectively on motorways. 56% of motorcycle fatalities occurred on rural roads and only 5% on motorways.

Table 3 shows the trends in fatalities by vehicle type in the period 2004-2013. The number of fatalities decreased by 45% in the EU countries over this period. Car occupants accounted for almost 60% of the overall reduction.

Table 3: Number and reduction of road fatalities by mode of transport, EU, 2004-2013

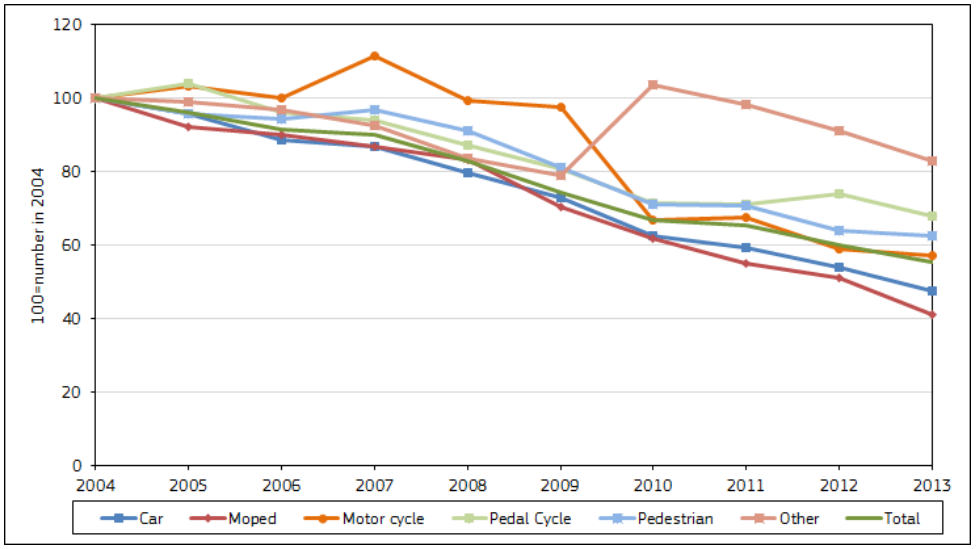
Year	Car	Moped	Motor cycle	Pedal Cycle	Pedest-rian	Other	Total
2004	23.072	1.792	5.285	2.868	8.573	2.861	47.149
2005	22.085	1.648	5.445	2.980	8.197	2.823	45.207
2006	20.370	1.613	5.275	2.755	8.087	2.760	42.994
2007	20.013	1.552	5.875	2.686	8.281	2.646	42.447
2008	18.345	1.487	5.240	2.494	7.791	2.390	39.060
2009	16.757	1.260	5.142	2.311	6.937	2.251	34.989
2010	14.406	1.102	3.526	2.048	6.076	2.957	31.351
2011	13.641	984	3.560	2.037	6.055	2.811	30.675
2012	12.432	911	3.105	2.120	5.481	2.603	28.276
2013	10.950	733	3.011	1.946	5.335	2.363	26.090
Overall reduction	53%	59%	43%	32%	38%	17%	45%

Source: CARE database, data available in May 2015
* Totals for EU include latest available data (Lithuanian data not included in totals)

The number of motorcycle fatalities increased in 2007 and then fell, with the most significant reduction occurring in 2010. For all other vehicle types, the number of fatalities decreased appreciably over the decade.

Figure 14 shows that the number of fatalities for most groups of road user decreased appreciably between 2004 and 2013. In contrast, the number of motorcyclist fatalities increased in 2007 and then fell, with most significant reduction occurring in 2010.

Figure 14: Index (2004=100) of road fatalities by mode of transport, EU, 2004-2013



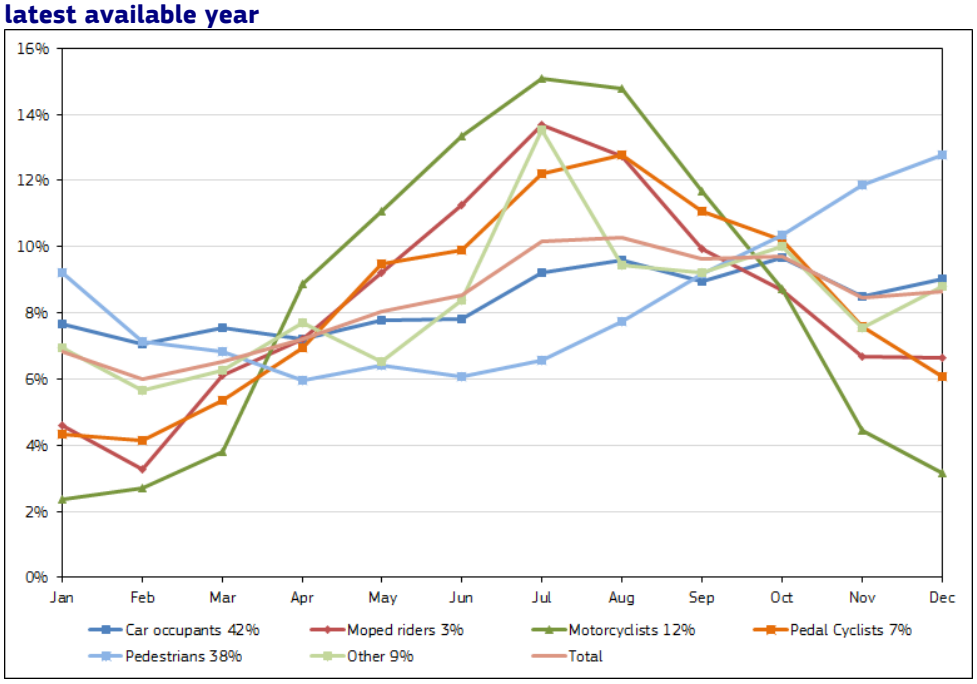
Source: CARE database, data available in May 2015

Seasonality

The distribution of fatalities by month is studied in the Seasonality Basic Fact Sheet, which shows that this distribution has not changed appreciably over the years. Figure 15 shows that the fatality total peaks in the summer, with the greatest number in August. Certain modes have distributions that differ considerably from the overall distribution; the peak for pedestrians is in December, while the peak for motorcyclists in the summer is especially pronounced.

The overall number of fatalities is highest between July and August. The monthly number of pedestrian fatalities is highest in the winter.

Figure 15: Distribution of fatalities by month and road user type, EU, 2013 or latest available year



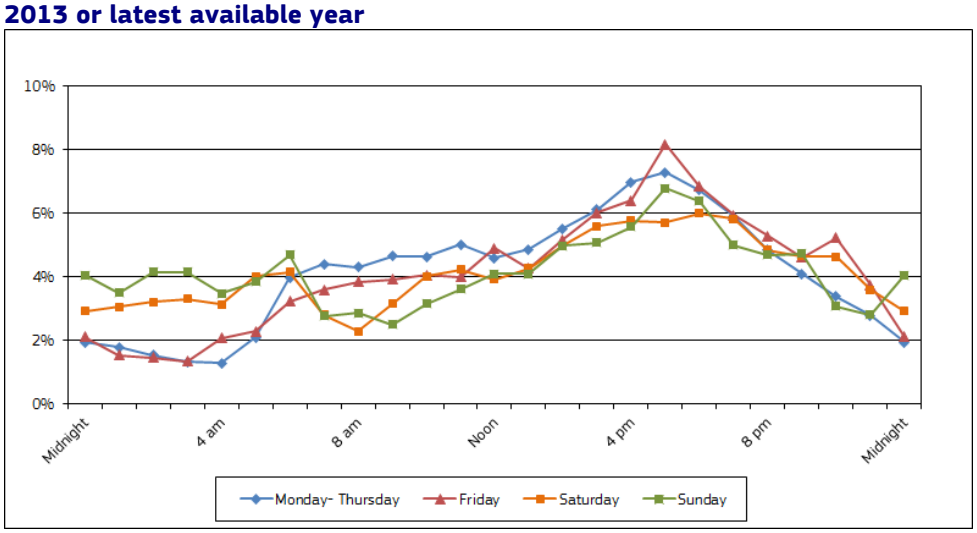
Source: CARE database, data available in May 2015

Day of the week and time of the day

The distribution of the fatality total by day of the week and time of the day is shown in Figure 16. There are 168 hours per week, so on average 0,60% of fatalities would occur per hour through the week, if equally distributed. The fatality distribution by time of the day is similar from Monday to Thursday, with a daily afternoon peak and relatively few during the night, so these days are combined in Figure 16. The high number of fatalities early on Saturday and Sunday mornings is also notable.

There are more fatalities between midnight and 6am on Saturdays and Sundays than on other days of the week.

Figure 16: Distribution of fatalities by day of the week and time of the day, EU, 2013 or latest available year



Source: CARE database, data available in May 2015

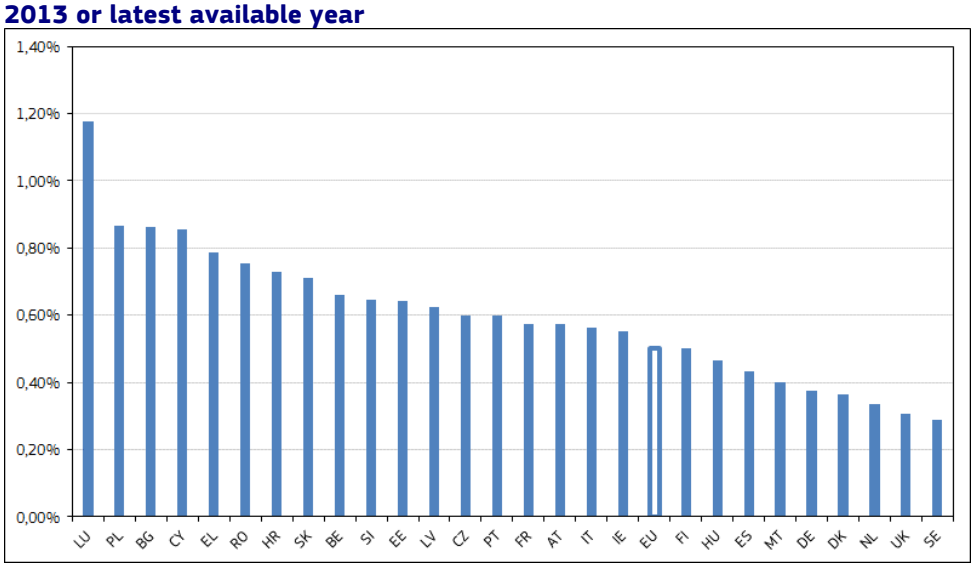
As well as the absolute numbers of fatalities, the weekend distribution by time of the day differs from weekday distribution. Between Monday and Friday, 70% of fatalities occurred between 8am and 8pm, compared with 60% on Saturday and Sunday.

Road accidents' share in overall mortality

Road accidents accounted for 0,50% of all deaths in the EU countries in 2013. Figure 17 shows that the proportion ranged from 0,87% of all deaths in Poland to 0,29% in Sweden.

Road accidents accounted for 0,50% of all deaths in the EU countries in 2013.

Figure 17: Percentage of road accident fatalities of all fatalities by country, 2013 or latest available year

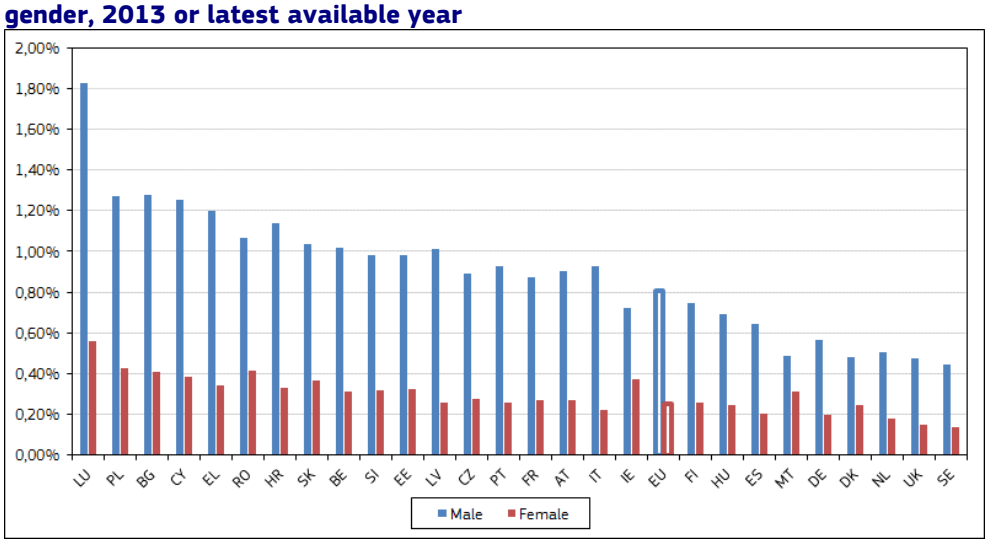


Source: CARE database (EUROSTAT for deaths), data available in May 2015

Figure 18 develops this analysis by gender. Road accidents accounted for 0,81% of all male deaths in the EU countries in 2013 and for 0,25% of all female deaths. Among males, the proportion ranged from 1,28% of all deaths in Bulgaria to 0,45% in Sweden. Among females, the proportion ranged from 0,43% of all deaths in Poland to 0,14% in Sweden.

Road accidents account for almost 1% of all male deaths in the EU countries, but only about 0,25% of all female deaths.

Figure 18: Percentage of road accident fatalities of all fatalities by country and gender, 2013 or latest available year

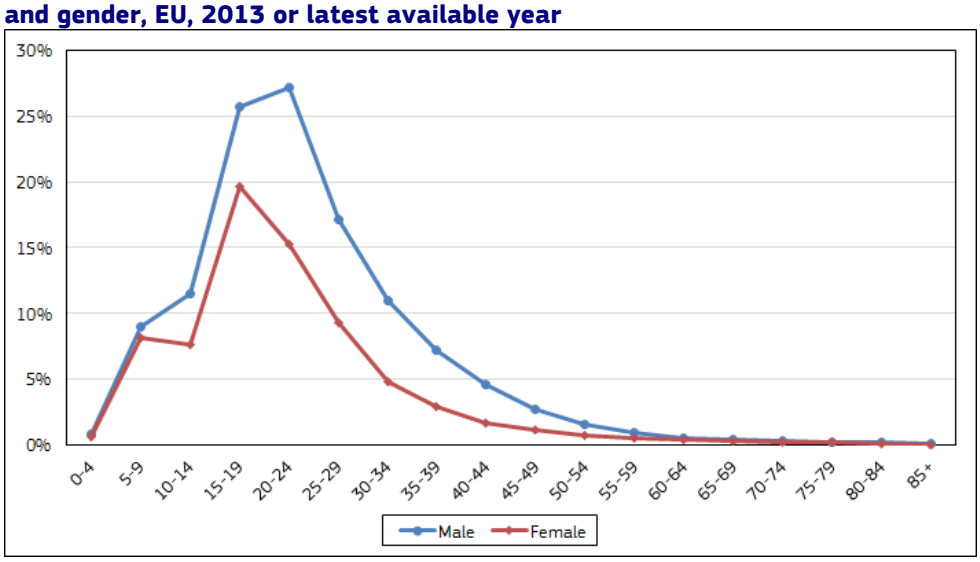


Source: CARE database (EUROSTAT for deaths), data available in May 2015

Figure 19 shows that the proportion of fatalities that occur in road accidents varies strongly with age. Road accidents account for one quarter of fatalities in the 15-19 age group. The proportions for females and for males are nearly equal up to the age of 9, but the proportion is clearly greater for males than for females thereafter and up to the age of 60.

Road accidents account for about one quarter of all deaths in the EU countries in the 15-19 age group.

Figure 19: Percentage of road accident fatalities of all fatalities by age group and gender, EU, 2013 or latest available year



Source: CARE database (EUROSTAT for deaths), data available in May 2015

Road Accident Health Indicators

Injury data can be obtained from a wide range of sources, such as police and ambulance reports, national insurance schemes, and hospital records. Each of these provides a specific yet incomplete picture of the injuries suffered in road accidents. In order to obtain a comprehensive view of these injuries, the EU Council issued a Recommendation that urges member states to use synergies between existing data sources and to develop national injury surveillance systems rooted in the health sector. At present, thirteen member states are routinely collecting injury data in a sample of hospitals and delivering these data to the Commission. This system is called the EU Injury Database (EU IDB).

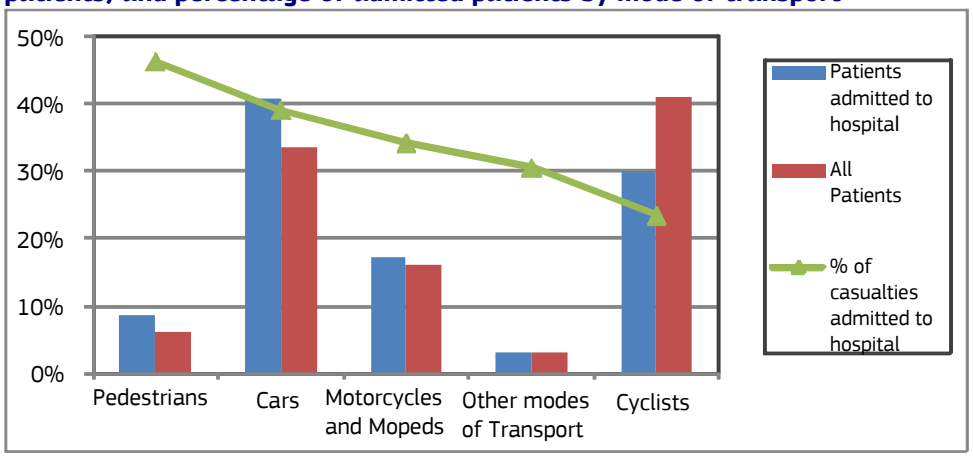
By 2012, thirteen member states routinely collected injury data in a sample of hospitals and contributed them to the EU Injury Database.

Within the EU IDB "transport module", injuries suffered in road accidents are recorded by "mode of transport", "role of injured person" and "counterpart". These variables can complement information from police records, in particular for injury patterns and the improved assessment of injury severity. The indicators used include the percentage of casualties attending hospital who are admitted to hospital, the mean length of stay of hospital admissions, the nature and type of body part injured, and potentially the long term consequences of injuries.

According to estimates based on the EU IDB, more than four million people are injured annually in road traffic accidents in Europe, one million of whom have to be admitted to hospital.

Almost half of pedestrian casualties who attended a hospital were admitted to the hospital, compared with one quarter of pedal cyclists.

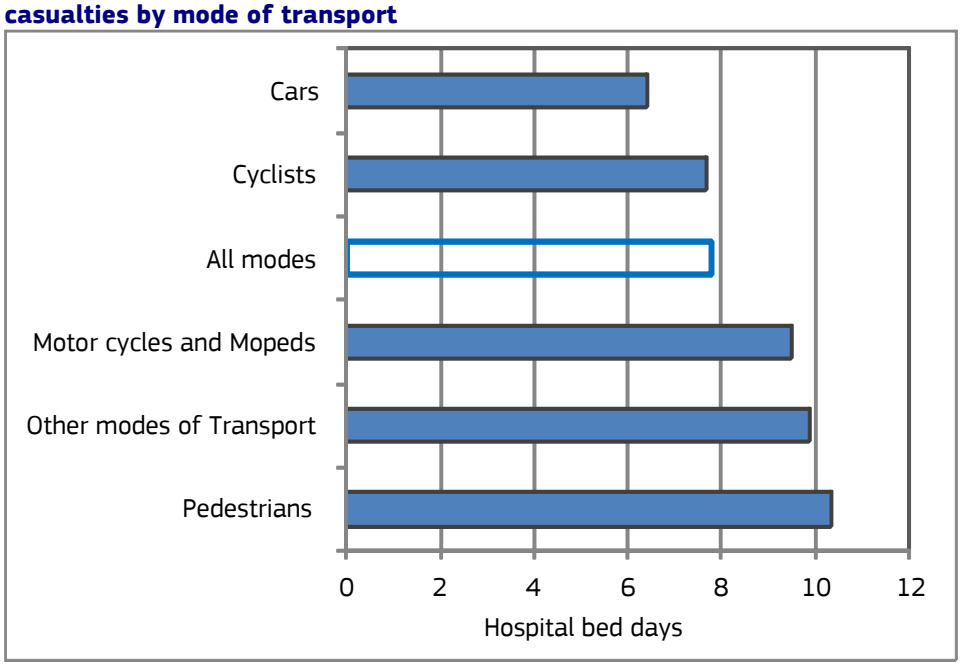
Figure 20: Distribution of non-fatal road accident casualties (admitted and all patients) and percentage of admitted patients by mode of transport



EU Injury Database (EU IDB AI) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n-all = 73.600: n-admitted = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

Figure 20 is based on IDB data from nine countries for accidents that occurred between 2005 and 2008. Vulnerable road users accounted for almost two thirds of road accident casualties attending hospital: 6% were pedestrians, 16% used motorcycles and mopeds, 41% were pedal cyclists. They accounted for over half of casualties admitted to hospital: 9% were pedestrians, 16% used motorcycles and mopeds, 30% were pedal cyclists. Almost half of pedestrian casualties who attended a hospital were admitted to the hospital, twice the proportion found for pedal cyclists. Overall, 32% of road accident casualties recorded in the IDB were admitted to the hospital.

Figure 21: Average length of stay (hospital bed days) of non-fatal road accident casualties by mode of transport



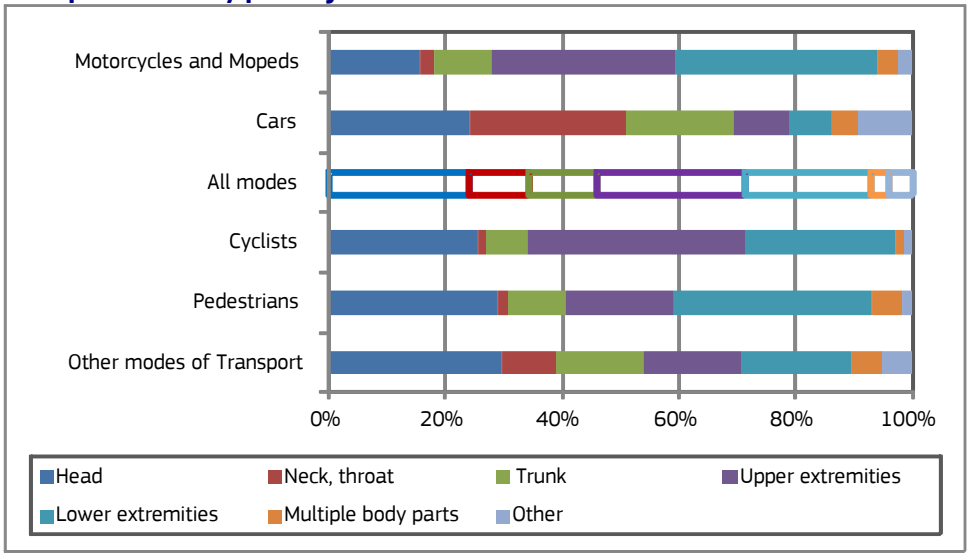
EU Injury Database (EU IDB) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

The average stay in hospitals is longest for pedestrians and shortest for car occupants.

Figure 21 compares the average length of stay of casualties who were admitted to hospital. This was longest for pedestrians and shortest for car occupants.

Naturally, hospital data can provide information on the injury patterns sustained by the accident victims. For example, Figure 22 illustrates the distribution of body parts injured of the various road user types. It shows that the proportion with head injuries is least among users of motorcycles and mopeds. On the other hand, the proportion with neck and throat injuries is greatest among car occupants, presumably linked to the incidence of whip-lash.

Figure 22: Distribution of non-fatal road accident casualties by mode of transport and body part injured



EU Injury Database (EU IDB) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n=71.460 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

Table 4 shows the full range of injury types within the EU IDB. It compares the distribution of injuries among vulnerable road users (pedestrians, pedal cyclists, motorcycle and moped users) and motorized road users. Contusions, fractures, open wounds, distortions and concussions are the five most common types and account for about 90% of injuries.

Contusions, fractures, open wounds, distortions and concussions are the five most common injury types and account for about 90% of all injuries.

Table 4: Distribution of non-fatal road accident casualties by type of injury and type of road user

	% of all injuries suffered by:		% of injuries of this type that were suffered by vulnerable road users
	vulnerable road users	motorized road users	
Contusion, bruise	31%	38%	43%
Fracture	34%	22%	59%
Open wound	13%	7%	62%
Distortion, sprain	6%	10%	33%
Concussion	7%	9%	41%
Other specified brain injury	2%	2%	56%
Luxation, dislocation	3%	1%	63%
Injury to muscle and tendon	1%	2%	23%
Abrasion	1%	2%	44%
Other specified type of injury	1%	1%	37%
Unspecified type of injury	1%	1%	32%
Injury to internal organs	0%	1%	27%
Injury to blood vessels	1%	0%	53%
Multiple injuries	0%	1%	26%
Injury to nerves and spinal cord	0%	0%	32%
Crushing injury	0%	0%	35%
Burns, scalds	0%	0%	4%
Traumatic amputation	0%	0%	44%
Total	100%	100%	48%

EU Injury Database (EU IDB) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n=71. 460 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

Notes

1. Country abbreviations

Belgium	BE	Italy	IT	Romania	RO
Bulgaria	BG	Cyprus	CY	Slovenia	SI
Czech Republic	CZ	Latvia	LV	Slovakia	SK
Denmark	DK	Lithuania	LT	Finland	FI
Germany	DE	Luxembourg	LU	Sweden	SE
Estonia	EE	Hungary	HU	United Kingdom	UK
Ireland	IE	Malta	MT		
Greece	EL	Netherlands	NL	Iceland	IS
Spain	ES	Austria	AT	Liechtenstein	LI
France	FR	Poland	PL	Norway	NO
Croatia	HR	Portugal	PT	Switzerland	CH

2. Sources: CARE (Community database on road accidents)
The full glossary of definitions of variables used in this Report is available at:
http://ec.europa.eu/transport/road_safety/pdf/statistics/cadas_glossary.pdf

3. Data available in May 2015.

4. Data refer to 2013 and when not available the latest available data are used (2009 data for BG and EE, 2010 data for MT and SK, and 2012 data for IE). Totals and related average percentages for EU also include latest available data.

5. Lithuanian data not included in the totals.

6. Data for 2013 for Italy have been modified after the publication of the 2015 edition of Traffic Safety Basic Facts.

7. This 2015 edition of Traffic Safety Basic Facts updates the previous versions produced within the EU co-funded research projects SafetyNet and DaCoTA.

8. Disclaimer
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9. Please refer to this Report as follows:
European Commission, Traffic Safety Basic Facts on Main Figures, European Commission, Directorate General for Transport, June 2015.


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