Traffic Safety Basic Facts 2011

Main Figures

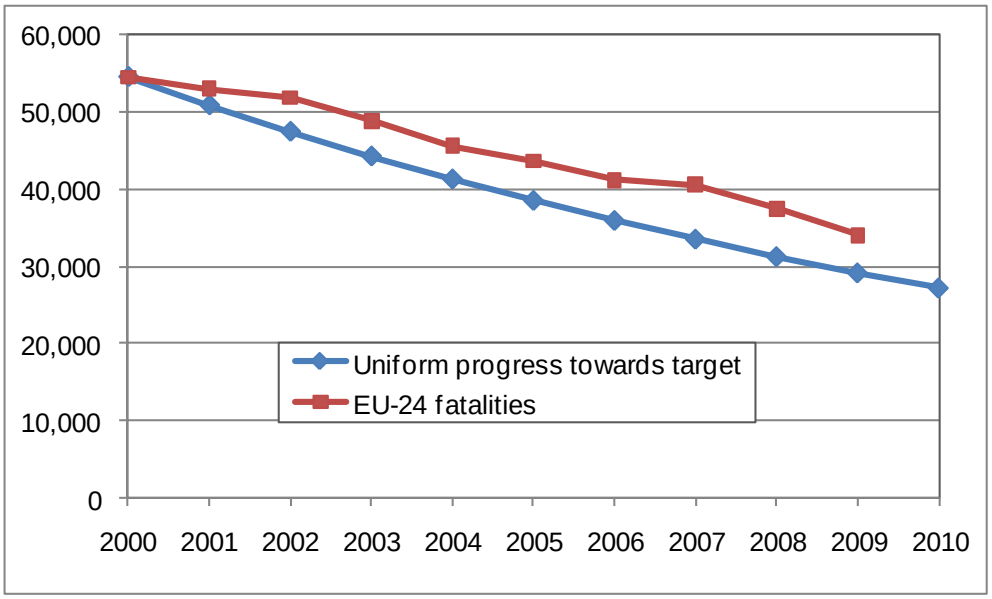
EU road safety targets

The European Commission set the ambitious target of halving the number of road traffic fatalities by 2010 in its White Paper "European transport policy for 2010: time to decide" of 2001. The European Road Safety Action Programme of 2003 underlines the fact that this target is a "shared responsibility" and can thus only be achieved with the joint effort of all stakeholders.

If the fatality trend between 2000 and 2009 continues, the EC's goal of reducing fatalities by 50% by 2010 will not be achieved.

Figure 1 shows that much progress has been made with reducing the number of fatalities, but the number has fallen more slowly than had been envisaged. The number would have needed to fall by 6,7% per year on average to have halved by 2010, as shown by "uniform progress" in the Figure. The average reduction between 2000 and 2007 was 3,6% per year. The number would need to fall by 20% in 2010 to reach the reduction target, so it seems unlikely that the target will be achieved.

Figure 1: The number of road accident fatalities in the EU-24, 2000 -2009, compared with the trend required to reach the 2010 objective [1]



Source: CARE Database
Date of Query: November 2011

[1] As Table 1 shows, CARE data are not available for all 24 EU member states for each year. The data for this Figure have been estimated from the EU-19 data in the Table, plus the available data for the other five countries.

Road accident fatalities in Europe

Table 1 shows that almost 32 thousand people were killed in road traffic accidents in the EU-19 countries in 2009, a reduction of over one third (38%) since 2000. Almost 1.600 were killed in 2009 in the other five countries. Only in Romania was the number of fatalities higher in 2009 than in 2000. Figure 2 shows the relative change in fatality numbers by country over the decade.

Road accident fatalities in the EU-19 countries fell by 38% between 2000 and 2009.

Table 1: Fatalities in Europe by country, 2000-2009 [2]

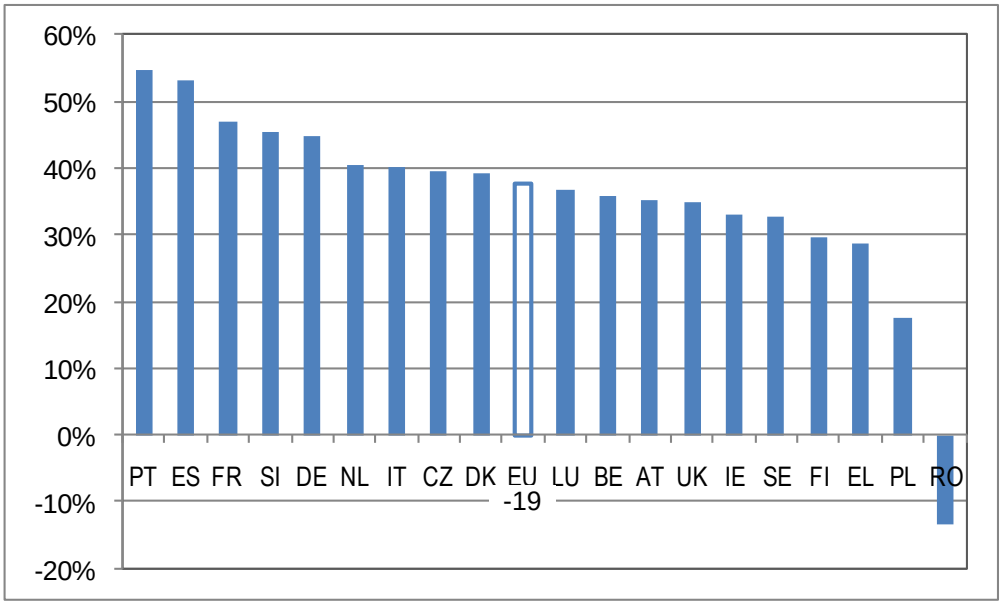
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	1.470	1.486	1.306	1.213	1.162	1.089	1.069	1.071	944	944
CZ	1.486	1.333	1.430	1.447	1.382	1.286	1.063	1.221	1.076	901
DK	498	431	463	432	369	331	306	406	406	303
DE	7.503	6.977	6.842	6.613	5.842	5.361	5.091	4.949	4.477	4.152
IE	418	412	378	337	377	400	365	338	280	-
EL	2.037	1.880	1.634	1.605	1.670	1.658	1.657	1.612	1.553	1.456
ES	5.777	5.516	5.347	5.400	4.741	4.442	4.104	3.822	3.099	2.714
FR	8.079	8.160	7.655	6.058	5.530	5.318	4.709	4.620	4.275	4.273
IT	7.061	7.096	6.980	6.563	6.122	5.818	5.669	5.131	4.725	4.237
LU	76	70	62	53	50	47	43	46	35	48
NL	1.082	993	987	1.028	804	750	730	709	677	644
AT	976	958	956	931	878	768	730	691	679	633
PL	-	5.534	5.826	5.642	5.712	5.444	5.243	5.583	5.437	4.572
PT	1.857	1.671	1.675	1.546	1.294	1.247	969	974	885	840
RO	2.466	2.450	2.411	2.229	2.442	2.629	2.587	2.800	3.061	2.796
SI	314	278	269	242	274	258	262	293	214	171
FI	396	433	415	379	375	379	336	380	344	279
SE	591	583	560	529	480	440	445	471	397	-
UK	3.580	3.598	3.581	3.658	3.368	3.336	3.298	3.059	2.645	2.337
EU-19	51.201	49.859	48.777	45.904	42.872	41.001	38.676	38.176	35.209	31.977
Yearly reduction		2,6%	2,2%	5,9%	6,6%	4,4%	5,7%	1,3%	7,8%	9,2%
EE	-	-	-	-	-	170	204	196	132	98
HU	-	-	-	1.326	1.296	1.278	1.303	1.232	996	822
LV	-	-	-	-	-	-	407	419	316	254
MT	-	-	-	-	-	17	11	12	9	15
SK	-	-	-	-	-	606	614	661	606	384

Source: CARE Database
Date of Query: November 2011

[2] The country abbreviations and definition of EU level are shown on Page 20. Where a value is missing for an EU-19 country in a particular year, its contribution to the EU-19 total is estimated as the previous or next known value.

The number of fatalities fell by more than one half in Portugal between 2000 and 2009, and rose by one eighth in Romania.

Figure 2: Reduction in number of fatalities between 2000 and 2009



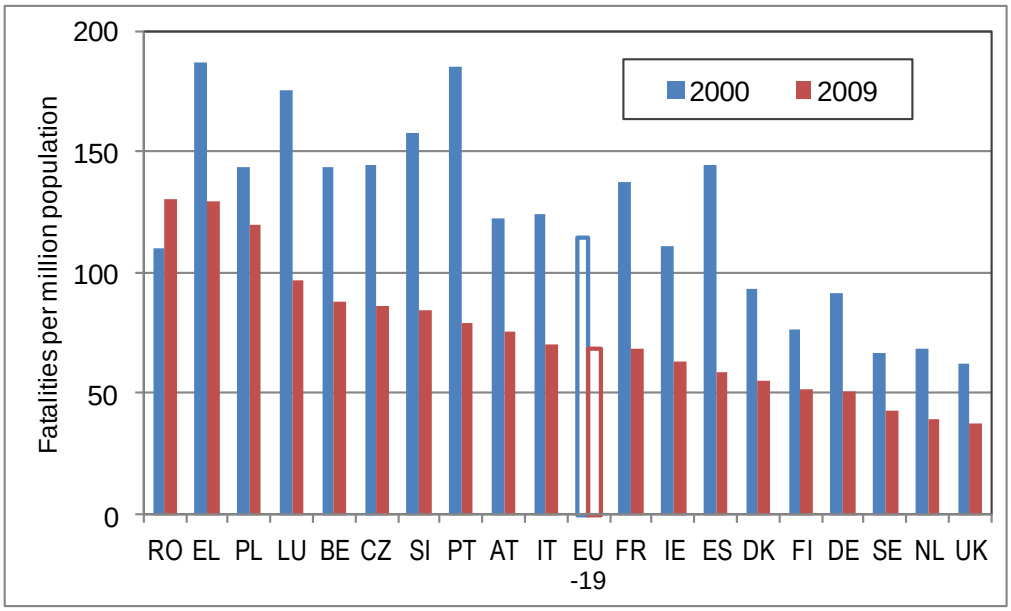
Comparison of 2000 and 2008 data for IE and SE, 2001 and 2009 data for PL

Source: CARE Database
Date of Query: November 2011

Figure 3 shows the rate of fatalities per million population in each of the 19 countries in 2000 and 2009, also the EU-19 average. The largest rate reduction over the decade occurred in Portugal, and only in Romania was there an increase.

Fatality rates decreased between 2000 and 2009 in all EU-19 countries except Romania.

Figure 3: Fatalities per million population by country, 2000 and 2009



Fatality rates for 2008 for IE and SE, 2001 for PL

Source: CARE Database
Source of population data: EUROSTAT
Date of Query: November 2011

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.

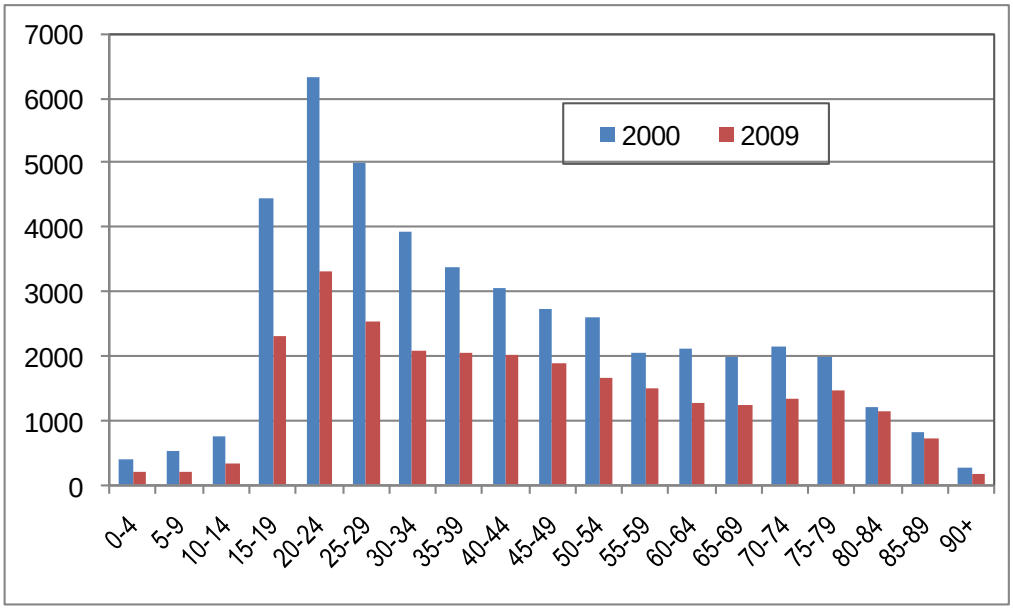
Map 1: Fatality rates: Fatalities in Europe per million inhabitants, 2009

Age and gender

Figure 5 compares the number of fatalities per age group in 2000 and 2009. The distribution remained broadly the same, with the highest fatality numbers between the ages of 15 and 29 years. The relative decrease in fatality numbers was highest for children (aged 0-14) with a reduction of 55%. The reduction was less in the older age groups: 40% for 15-24 year olds, 31% for 25-59 year olds and 29% for the elderly (at least 60 years old). The reduction was least for those aged at least 80: 9%.

The number of fatalities in the EU-18 decreased by more than half among children between 2000 and 2009, but by less than one tenth among those at least 80 years old.

Figure 4: Fatalities by age group, EU-18, 2000 and 2009



EU-18 is EU-19 (Table 1) less PL. 2008 data for IE and SE

Source: CARE Database
Date of Query: November 2011

Table 2 shows the distribution of fatalities by age group in the 24 countries in 2009. There are clear differences between countries, with fatalities in countries such as Ireland being on average younger than in others such as Germany and the Netherlands.

The distribution of fatalities by age varies appreciably among European countries.

76% of all road accident fatalities in 2009 were male.

Table 2: Distribution of fatalities by age group, 2009

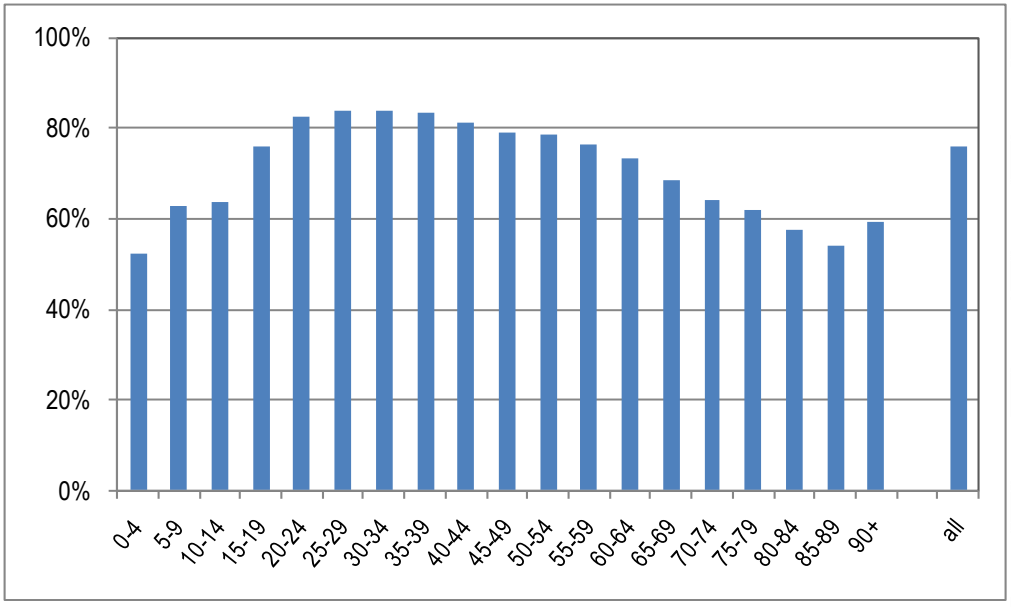
	0-14	15-24	25-59	60-99	Number
BE	2%	20%	54%	24%	944
CZ	2%	16%	57%	25%	901
DK	3%	23%	50%	24%	303
DE	2%	22%	45%	31%	4.152
EE	4%	24%	52%	21%	98
IE	7%	35%	39%	20%	550
EL	3%	20%	52%	26%	1.456
ES	2%	16%	58%	23%	2.714
FR	3%	26%	49%	22%	4.273
IT	2%	17%	49%	32%	4.237
LV	3%	14%	58%	25%	254
LU	13%	21%	42%	25%	48
HU	3%	12%	60%	26%	822
NL	4%	24%	39%	34%	644
MT	7%	13%	47%	33%	15
AT	2%	20%	48%	30%	633
PL	3%	21%	53%	23%	4.572
PT	3%	15%	53%	29%	840
RO	4%	17%	51%	27%	2.796
SI	1%	20%	50%	29%	171
SK	3%	18%	56%	23%	384
FI	2%	27%	42%	30%	279
SE	2%	19%	47%	32%	794
UK	3%	25%	49%	23%	2.337
EU-24	3%	20%	51%	26%	34.217

Fatality data for 2008 for IE and SE

Source: CARE Database
Date of Query: November 2011

Far more males than females are killed in road accidents: 76% of all fatalities were male and 24% were female. Figure 5 shows that this proportion varies by age and exceeds four fifths between the ages of 20 and 44 years.

Figure 5: Proportion of fatalities who were male by age group, EU-24, 2009



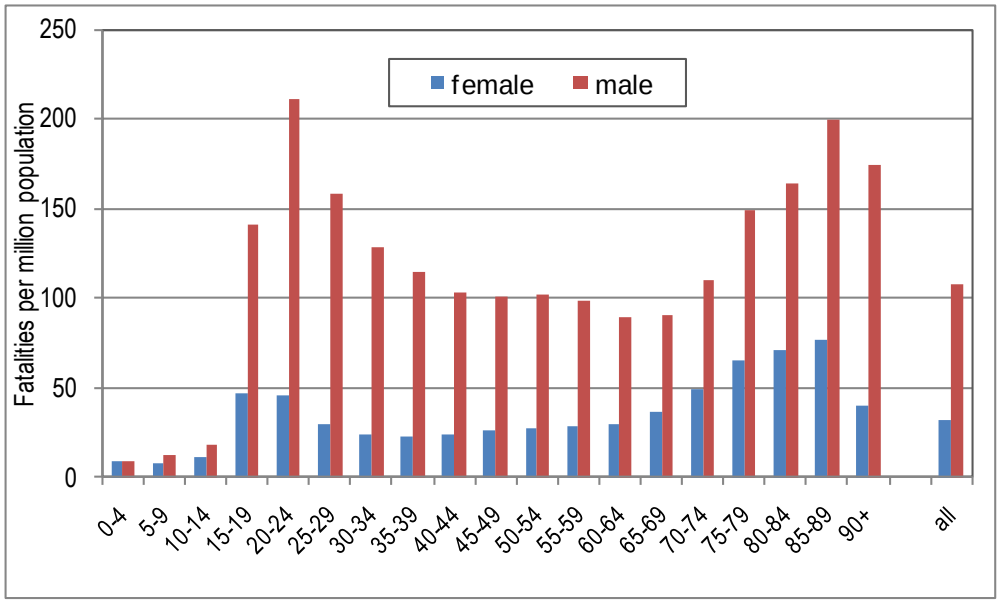
Fatality data for 2008 for IE and SE

Source: CARE Database
Date of Query: November 2011

Figure 4 showed that the number of fatalities varied with age, and Figure 6 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 then 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, 107 deaths per million population compared with 32.

The fatality rate for males in the EU-24 is over three times the rate for females.

Figure 6: Fatality rates by age and gender, EU-24, 2009



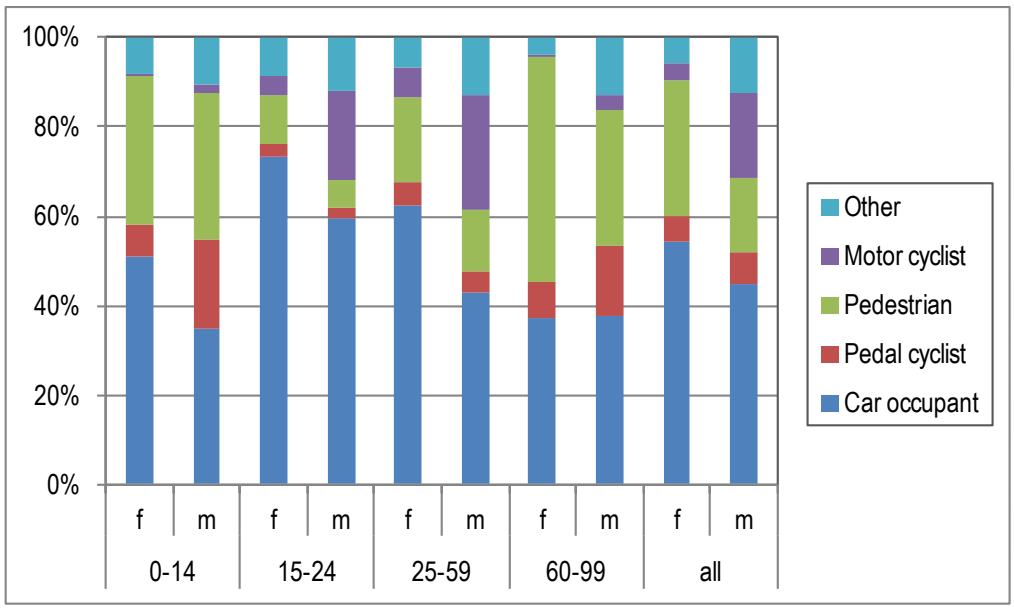
Fatality data for 2008 for IE and SE

Source: CARE Database
Date of Query: November 2011
Source of population data: EUROSTAT

Figure 7 compares the male and female fatality distributions by road user type for four age groups (Figure 10 compares the all-ages distributions in more detail).

The distribution of road user type among fatalities in the EU-24 varies considerably with age and gender.

Figure 7: Distribution of fatalities by road user type, EU-24, 2009



Fatality data for 2008 for IE and SE

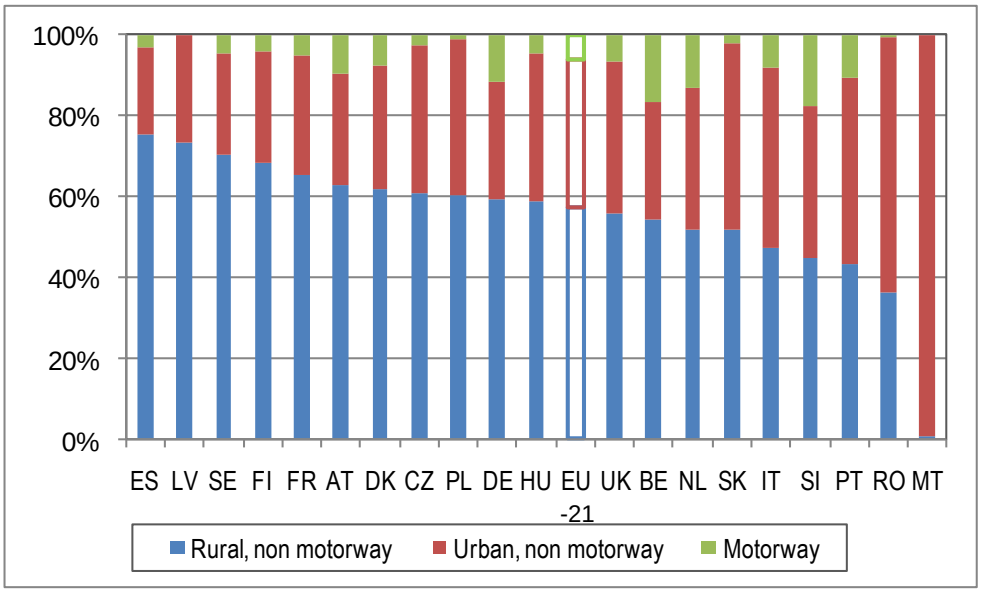
Source: CARE Database
Date of Query: November 2011

Type of road

Figure 8 shows the proportion of fatalities by type of road, with countries sorted by the proportion on rural roads. Overall, only 6% of road accident fatalities in 2009 died in accidents on motorways, and 56% died in accidents on non-motorway rural roads.

In the EU-21, more than half of all fatalities occurred on rural non-motorway roads.

Figure 8: Distribution of fatalities by type of road, EU-21, 2009



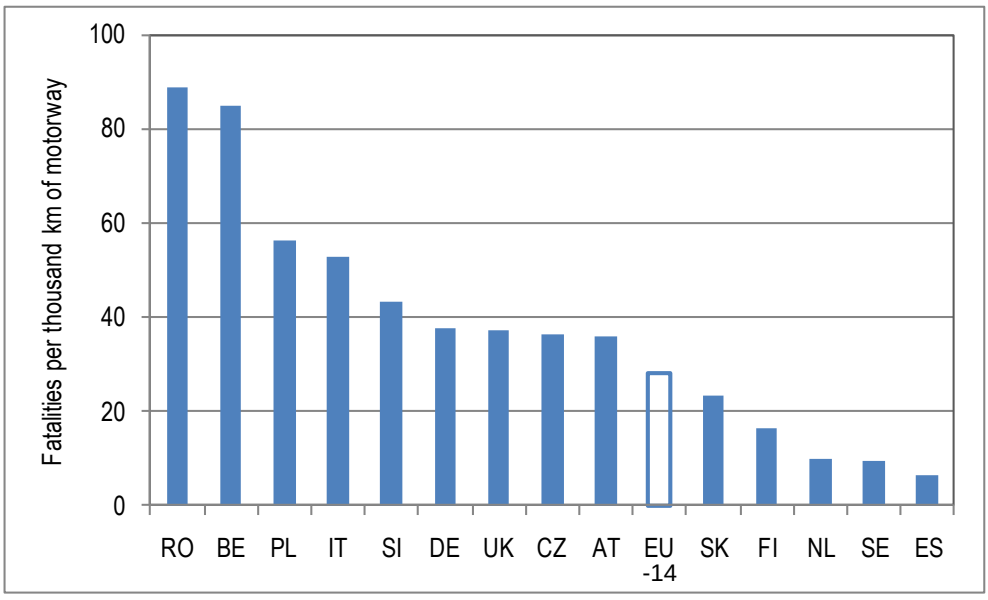
EE, EL and IE excluded because road type is unknown for more than half of fatalities. Fatality data for 2008 for SE.

Source: CARE Database
Date of Query: November 2011

To allow for the differences between their motorway networks, Figure 9 compares the rate of fatalities per thousand km of motorways. The fatality rate in 2009 ranged from 6,6 in Spain to 89 in Romania, and the EU average was 29.

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

Figure 9: Motorway fatality rate by country, 2009



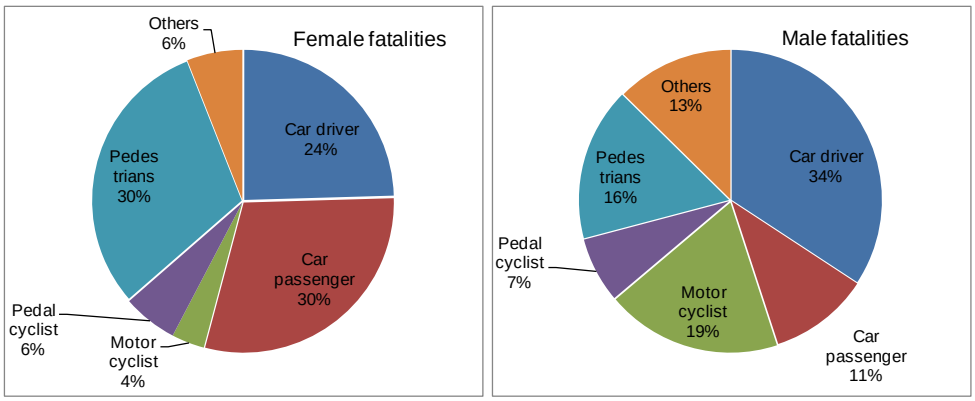
Source: CARE Database
Source of motorway lengths: EUROSTAT
Date of Query: November 2011

Mode of transport and road user type

Figure 10 shows the male and female distributions of fatalities in the EU-24 by road user type, and these differ considerably. Nearly two third of female fatalities were car passengers (30%) or pedestrians (30%) while only 12% of male fatalities were car passengers and 17% pedestrians: 19% were motorcyclists. Figure 11 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.

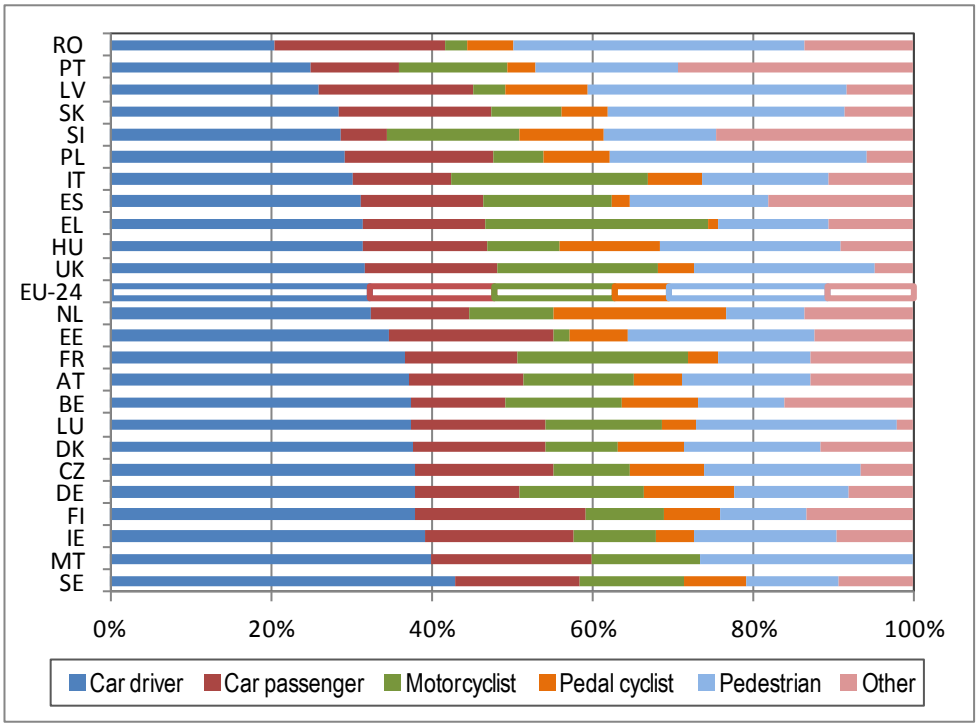
Figure 10: Distribution of male and female fatalities by mode of transport, EU-24, 2009



Fatality data for 2008 for IE and SE

Source: CARE Database
Date of Query: November 2011

Figure 11: Fatalities by road user type and country, 2009



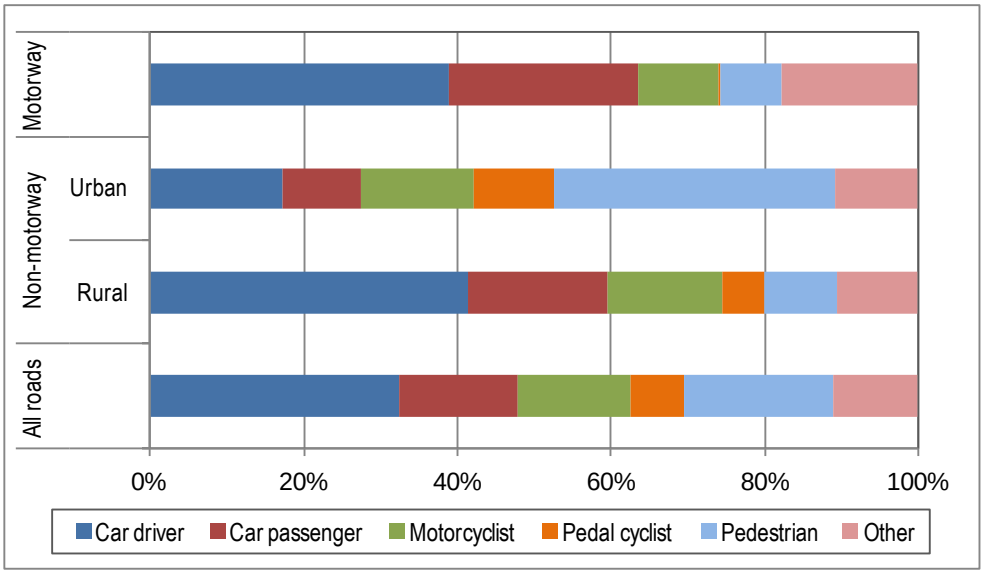
Fatality data for 2008 for IE and SE

Source: CARE Database
Date of Query: November 2011

Almost half of all road fatalities (48%) are car occupants. On motorways this proportion increases to two thirds

Figure 12 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 12: Distribution of fatalities by road user type on three types of road, EU-22, 2009



Fatality data for 2008 for IE and SE
EE and EL excluded as road type not reported

Source: CARE Database
Date of Query: November 2011

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

73% of car driver fatalities and 66% of car passenger fatalities died on rural roads in 2009, compared with 8% and 10% respectively on motorways. 58% of motorcycle fatalities died on rural roads and only 4% on motorways.

Table 3 shows the trends in fatalities by vehicle type in the period 2000-2009. The number of fatalities decreased by 40% in the EU-19 countries over this period. Car occupants accounted for two thirds of the overall reduction.

Figure 12 shows that the number of fatalities for most groups of road user decreased appreciably between 2000 and 2009. In contrast, the number of motorcyclist fatalities scarcely changed over the decade.

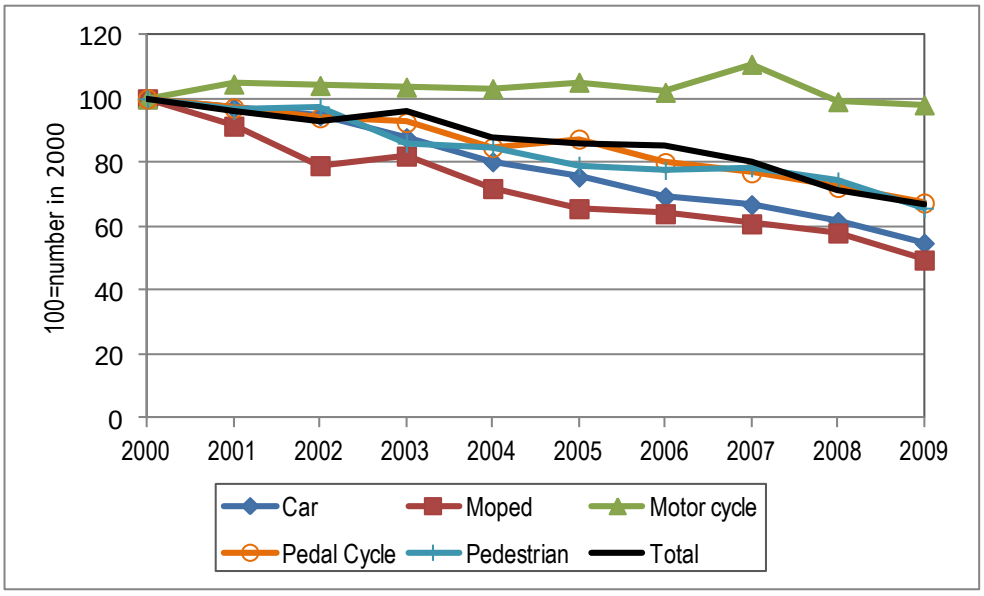
Table 3: Evolution of fatalities by vehicle type in EU-19, 2000-2009

Year	Car	Moped	Motor cycle	Pedal Cycle	Pedest-rian	Other	Total
2000	27.651	2.440	5.029	3.129	9.476	3.476	51.201
2001	26.850	2.231	5.261	3.039	9.131	3.348	49.859
2002	26.194	1.930	5.239	2.944	9.241	3.229	48.777
2003	24.284	2.002	5.214	2.897	8.162	3.345	45.904
2004	22.201	1.755	5.189	2.653	8.032	3.042	42.872
2005	20.879	1.601	5.290	2.734	7.504	2.992	41.001
2006	19.165	1.563	5.132	2.504	7.356	2.956	38.676
2007	18.490	1.485	5.573	2.405	7.436	2.787	38.176
2008	17.036	1.416	4.984	2.261	7.035	2.476	35.209
2009	15.158	1.209	4.934	2.109	6.233	2.334	31.977
Overall reduction	45%	50%	2%	33%	34%	33%	38%

For IE and SE, fatality data for 2008 used for 2009 values
For PL, fatality data for 2001 used for 2000 values
Source: CARE Database
Date of Query: November 2011

The number of motorcycle fatalities changed only slightly between 2000 and 2009, whereas it decreased appreciably for all other vehicle types.

Figure 13: Trends for fatalities by vehicle type, EU-19, 2000- 2009



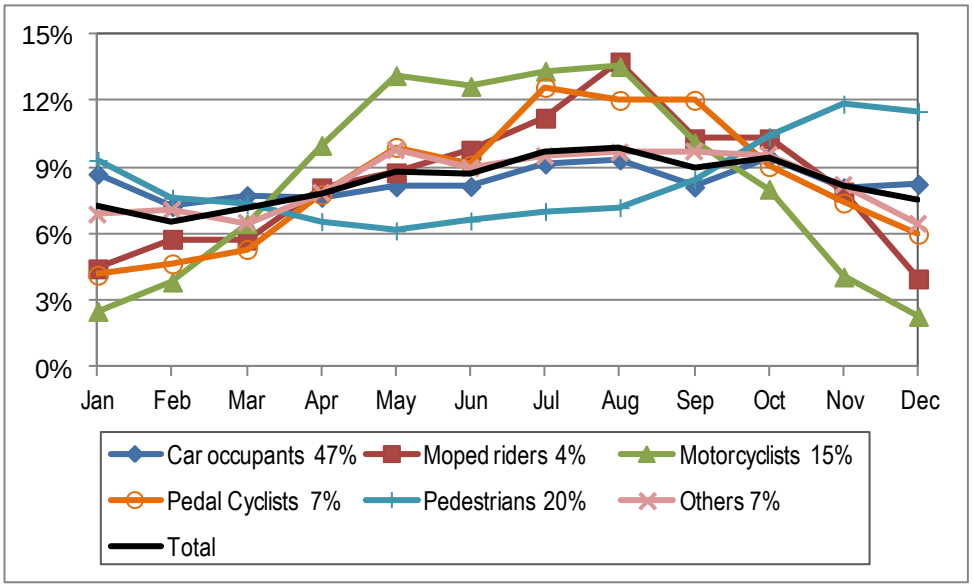
For IE and SE, fatality data for 2008 used for 2009 values
For PL, fatality data for 2001 used for 2000 values
Source: CARE Database
Date of Query: November 2011

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 14 shows that the peak for the fatality total is in the summer, in July and August. Certain modes have distributions that differ considerably from the overall distribution; the peak for pedestrians is in the winter, while the peak for motorcyclists in the summer is especially pronounced.

The overall number of fatalities is greatest between June and August. The monthly number of pedestrian fatalities is greatest in the winter.

Figure 14: Seasonal distribution of fatalities by vehicle type, EU-24, 2009



Fatality data for 2008 used for IE and SE

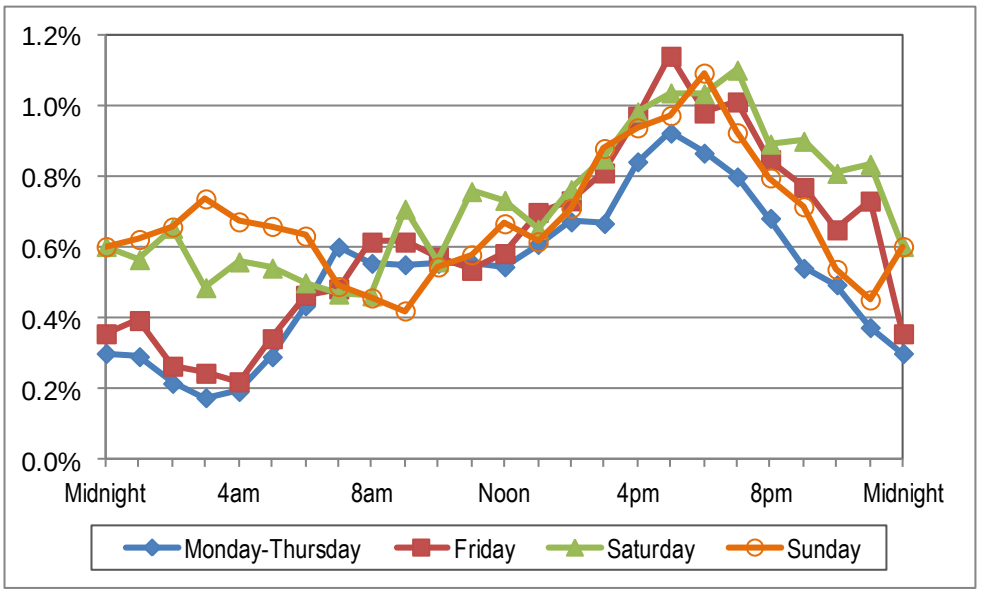
Source: CARE Database
Date of Query: November 2011

Day of week and time of day

The distribution of the fatality total by day of week and time of day is shown in Figure 15. The fatality distribution by time of day is similar from Monday to Thursday, with a daily afternoon peak and fewer during the night, so these are combined in Figure 15. 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 15: Fatalities in EU-23 by day of week and time of day, 2009



Fatality data for 2008 used for IE and SE, DE is excluded as time of day is not reported
Monday-Thursday values are the averages of the daily values from Monday to Thursday

Source: CARE Database
Date of Query: November 2011

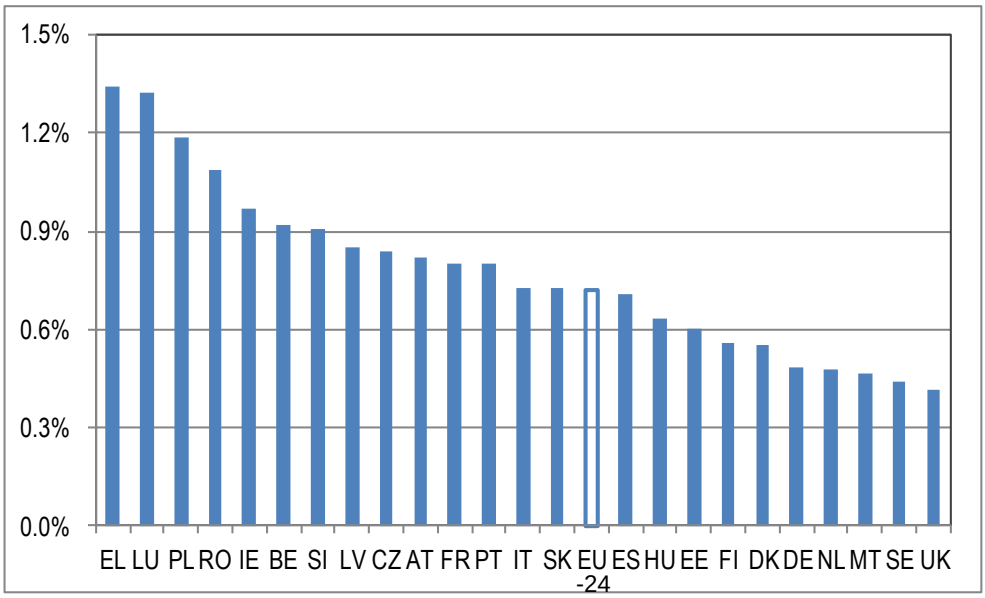
As well as the absolute numbers of fatalities, the weekend distribution by time of day differs from weekday distribution. Between Monday and Friday, 63% of fatalities occurred between 8am and 8pm, compared with 55% on Saturday and Sunday.

Road accidents' share in overall mortality

Road accidents account for 0,71% of all deaths in the EU-24 countries.

Road accidents accounted for 0,71% of all deaths in the EU-24 countries in 2009. Figure 16 shows that the proportion ranged from 1,34% of all deaths in Greece to 0,42% in the UK.

Figure 16: Road accident fatalities as a share of all deaths by country, 2009

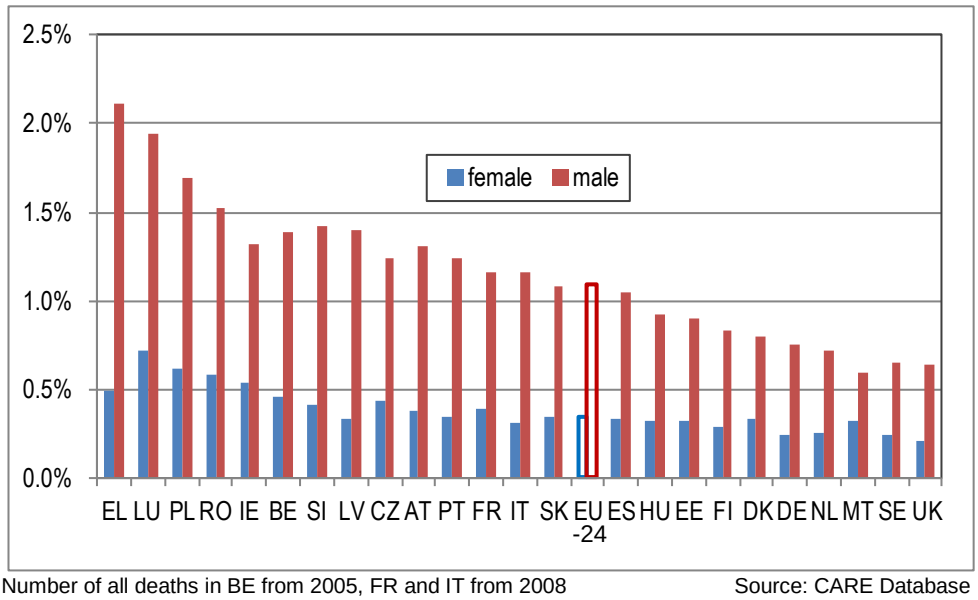


Number of all deaths in BE from 2005, FR and IT from 2008
Number of road deaths in IE and SE from 2008
Source: CARE Database
Source for deaths: EUROSTAT
Date of Query: November 2011

Figure 17 develops this analysis by gender. Road accidents accounted for 1,09% of all male deaths in the EU-24 countries in 2009 and for 0,35% of all female deaths. Among males, the proportion ranged from 2,11% of all deaths in Greece to 0,64% in the UK and 0,60% in Malta. Among females, the proportion ranged from 0,71% of all deaths in Luxembourg and 0,61% in Poland to 0,21% in the UK.

Road accidents account for over one per cent of all male deaths in the EU-24 countries, but only about one third as many female deaths.

Figure 17: Road accident fatalities as a proportion of all deaths, by gender, 2009

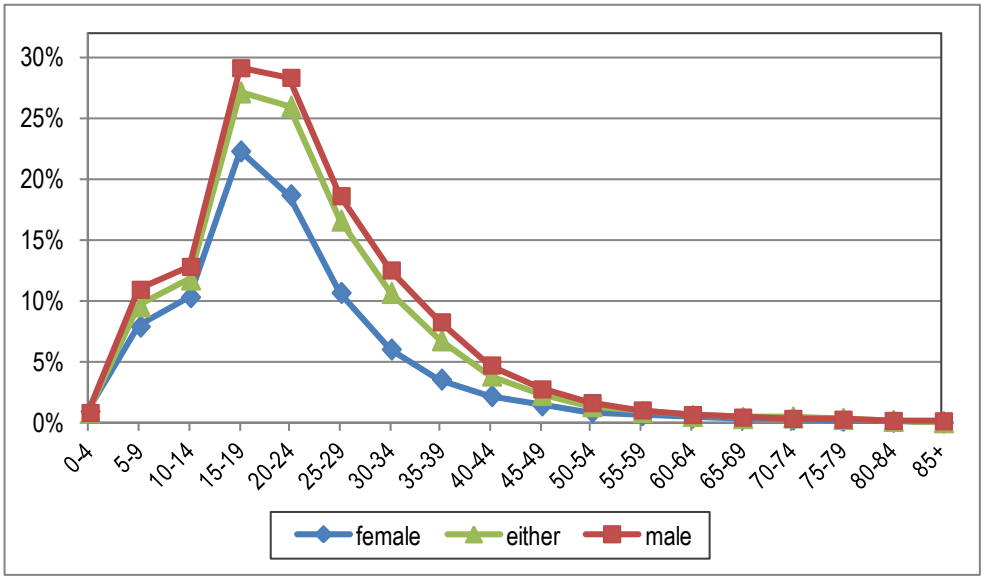


Number of all deaths in BE from 2005, FR and IT from 2008
Number of road deaths in IE and SE from 2008
Source: CARE Database
Source for deaths: EUROSTAT
Date of Query: November 2011

Figure 18 shows that the proportion of fatalities that occur in road accidents varies strongly with age. Road accidents account for over one quarter of fatalities in the 15-19 and 20-24 age groups. Among 0-4 year olds, the proportion is marginally greater for females than for males, but the proportion is clearly greater for males than for females in all other age groups.

Road accidents account for over one quarter of all deaths in the EU-24 countries between the ages of 15 and 24.

Figure 18: Road accident fatalities as a proportion of deaths by age group, EU-24, 2009



Number of all deaths in BE from 2005, FR and IT from 2008.
Number of road deaths in IE and SE from 2008

Source: CARE Database
Source for deaths: EUROSTAT
Date of Query: November 2011

ROAD ACCIDENT HEALTH INDICATORS

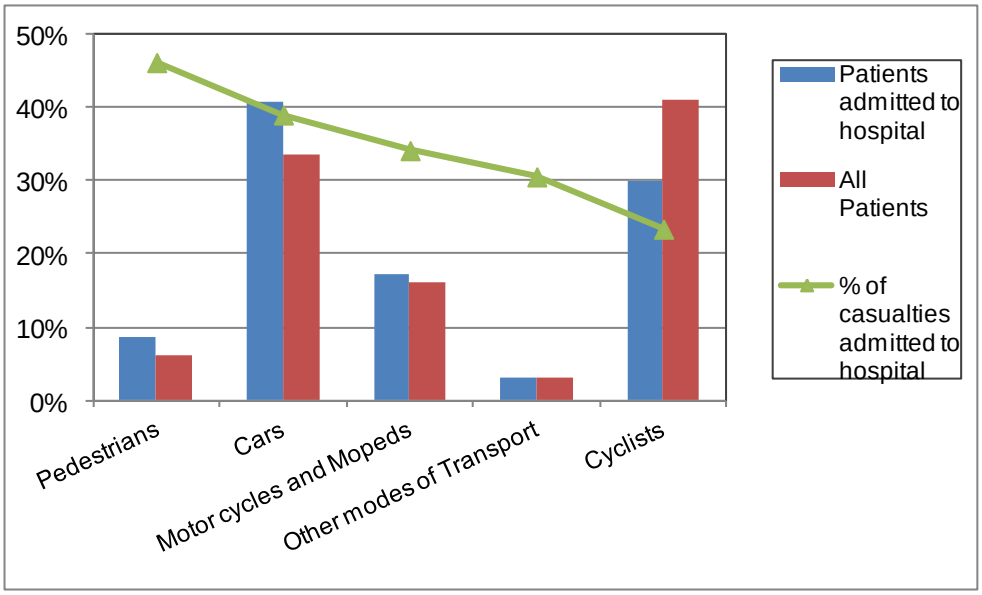
Injury data can be obtained from a wide range of sources, such as police and ambulance reports, national insurance schemes, and hospital records. Each of these provides a specific yet incomplete picture of the injuries suffered in road accidents. In order to obtain a comprehensive view of these injuries, 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.[3] 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).[4]

By 2011, 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.

Figure 19: Distribution of non-fatal road accident casualties attending hospital, by mode of transport



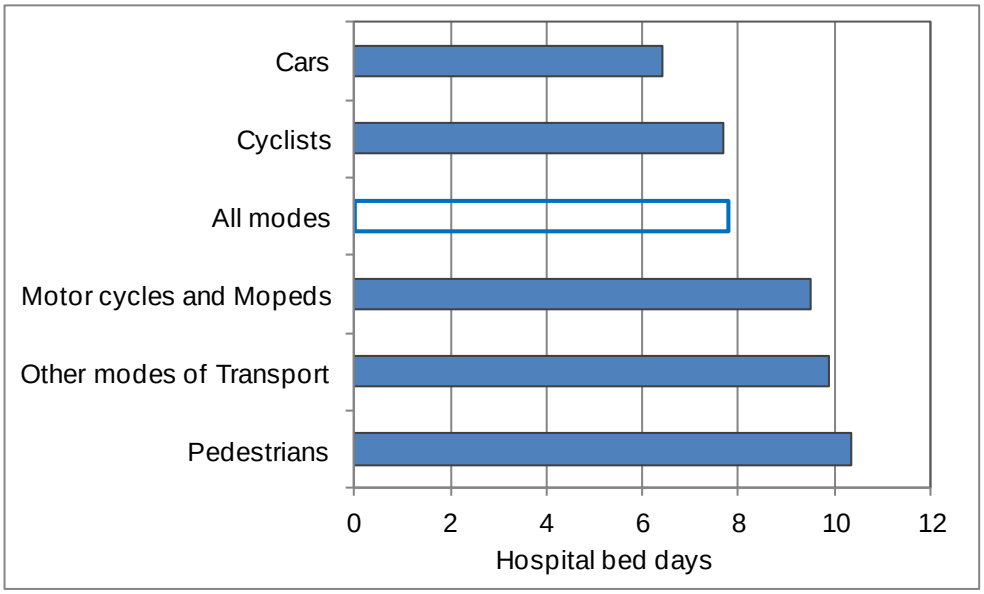
EU Injury Database (EU IDB AI) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n-all = 73.600: n-admitted = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

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

[3] OJ C 164/1, 18.7.2007
[4] https://webgate.ec.europa.eu/sanco/heidi/index.php/IDB

Figure 19 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 20: Average length of stay (hospital bed days), by mode of transport



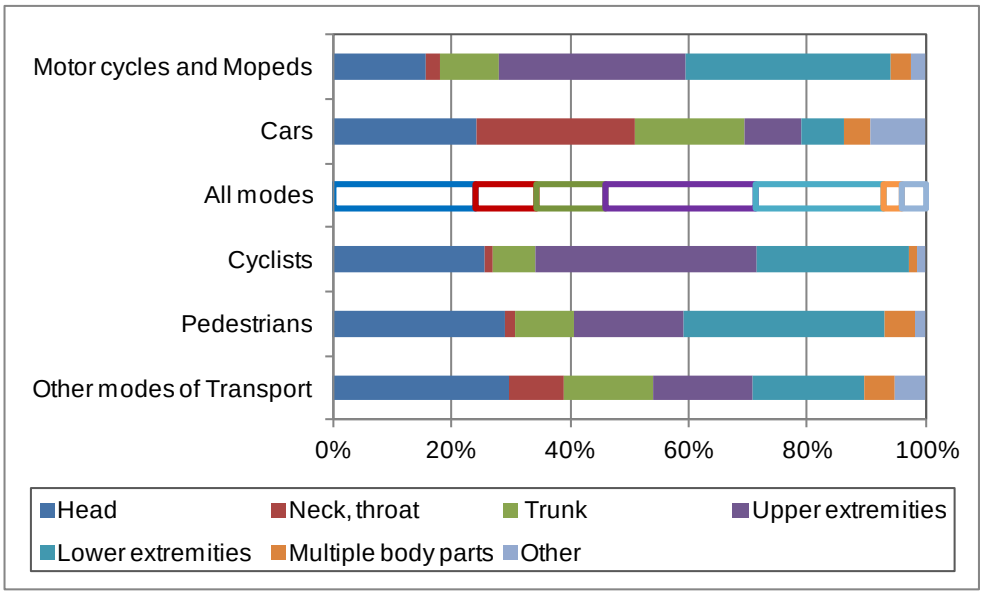
EU Injury Database (EU IDB) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

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

Figure 20 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 21 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 21: Body part injured, 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=71.460 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

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

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 almost 90% of injuries.

Table 4: Type of injury, by mode of transport

	% of all injuries suffered by: vulnerable road users	motorized road users	% of injuries of this type that were suffered by vulnerable 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).

Disclaimer

The information in this document is provided as it is and no guarantee or warranty is given that the information is fit for any particular purpose, Therefore, the reader uses the information at their own risk and liability,

For more information

Further statistical information about fatalities is available from the CARE database at the Directorate General for Energy and Transport of the European Commission, 28 Rue de Mot, B -1040 Brussels.

Traffic Safety Basic Fact Sheets available from the European Commission concern:

- Main Figures
- Children (Aged <15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged >64)
- Pedestrians
- Cyclists
- Motorcycles and Mopeds
- Car occupants
- Heavy Goods Vehicles and Buses
- Motorways
- Junctions
- Urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender

Country abbreviations used and definition of EU-level

EU - 19	
BE	Belgium
CZ	Czech Republic
DK	Denmark
DE	Germany
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
FI	Finland
SE	Sweden
UK	United Kingdom (GB+NI)

EU-24 = EU-19 +	
EE	Estonia
HU	Hungary
LV	Latvia
MT	Malta
SK	Slovakia

Detailed data on traffic accidents are published annually by the European Commission in the Annual Statistical Report. This includes a glossary of definitions on all variables used.

More information on the DaCoTA Project, co-financed by the European Commission, Directorate-General for Mobility and Transport is available at the DaCoTA Website: http://www,dacota-project,eu/index,html,

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