



# Traffic Safety Basic Facts 2018



## Car occupants



# Traffic Safety Basic Facts 2018–Car Occupants

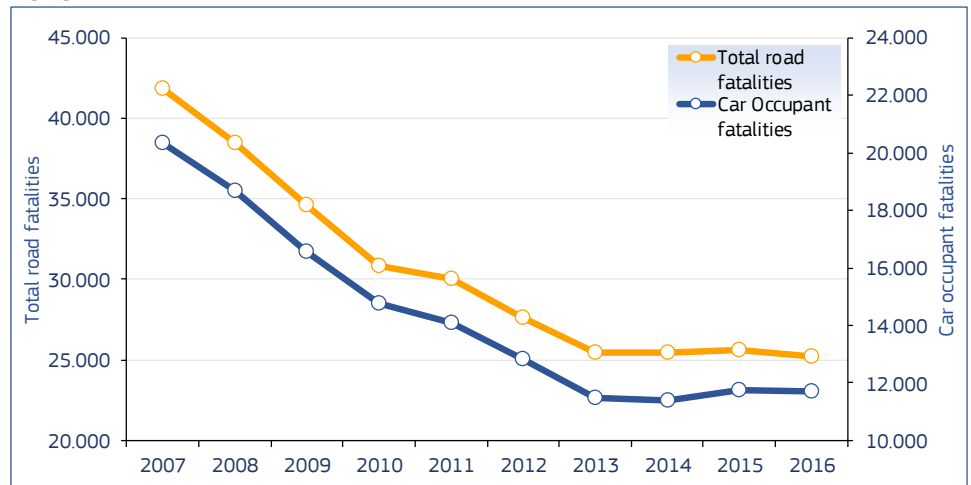
## General

This fact sheet explores several characteristics of car occupant fatalities. As cars comprise a considerable share of the vehicle fleet in the EU, better understanding of the characteristics specific to this user group provides an opportunity to address a high proportion of fatalities.

‘Cars’ refer to both private vehicles as well as vehicles used for commercial purposes (like taxis). ‘Car occupants’ in this context refers to both the driver and any passengers.

In 2016, 11.704 car occupants were killed in road accidents in the EU (excluding Slovakia and Lithuania). This represents 46% of all road fatalities in the EU that year. Of these 11.704 killed car occupants, at least 8.152 were drivers and 3.505 were passengers. Figure 1 presents the evolution of car occupant and total road fatalities in the EU countries for the period 2007–2016. From 2007 to 2016, there was a reduction of 42% in car occupant fatalities in the EU countries, which was about equal to the respective reduction of all road fatalities (41%).

**Figure 1: Number of car occupant fatalities and all road fatalities, EU, 2007–2016**



Source: CARE database, data available in May 2018

Table 1 presents the absolute number of fatalities of car occupants since 2007 by country. From the table it can be derived that in the EU countries in 2015, an annual increase by 3,3% was recorded compared to 2014. There is a significant difference in the number of fatalities between countries and also over the years.

In 2016, 11.704 car occupants were killed in road accidents in the EU.

**Table 1: Number of car occupant fatalities by country, 2007-2016**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>BE</b>	550	479	464	443	457	383	340	379	361	327
<b>BG</b>	-	623	570	478	398	335	367	379	396	-
<b>CZ</b>	661	573	497	403	404	368	308	347	365	328
<b>DK</b>	168	196	164	135	106	81	79	89	74	96
<b>DE</b>	2.625	2.368	2.110	1.840	1.986	1.791	1.588	1.579	1.624	1.537
<b>EE</b>	122	69	54	44	56	42	41	33	35	-
<b>IE</b>	171	160	146	129	95	89	107	103	-	-
<b>EL</b>	771	708	680	545	474	383	347	289	314	340
<b>ES</b>	1.824	1.494	1.260	1.194	977	871	716	722	693	754
<b>FR</b>	2.466	2.205	2.162	2.117	2.062	1.881	1.615	1.664	1.796	1.760
<b>HR</b>	309	303	284	205	215	186	195	141	164	148
<b>IT</b>	2.320	2.115	1.793	1.832	1.673	1.695	1.491	1.497	1.476	1.477
<b>CY</b>	37	26	24	19	31	18	16	15	24	10
<b>LV</b>	203	167	116	91	78	72	71	91	85	71
<b>LT</b>	-	-	-	-	-	-	108	118	115	-
<b>LU</b>	27	20	26	27	21	22	30	24	16	19
<b>HU</b>	555	448	386	330	268	253	254	256	304	269
<b>MT</b>	4	4	12	9	-	-	-	-	4	5
<b>NL</b>	299	299	288	219	209	218	180	171	214	225
<b>AT</b>	378	367	325	291	289	282	194	191	241	191
<b>PL</b>	2.582	2.540	2.179	1.853	1.897	1.615	1.448	1.346	1.332	1.417
<b>PT</b>	417	358	301	367	331	255	214	223	214	225
<b>RO</b>	1.096	1.324	1.168	973	780	798	721	724	787	785
<b>SI</b>	126	82	59	44	46	53	40	41	38	45
<b>SK</b>	293	292	182	171	-	-	-	-	-	-
<b>FI</b>	241	202	165	159	172	147	152	121	156	150
<b>SE</b>	279	234	219	151	159	142	144	122	144	138
<b>UK</b>	1.489	1.312	1.123	859	911	829	815	835	798	853
<b>EU</b>	<b>20.343</b>	<b>18.676</b>	<b>16.575</b>	<b>14.757</b>	<b>14.104</b>	<b>12.818</b>	<b>11.477</b>	<b>11.386</b>	<b>11.758</b>	<b>11.704</b>
<b>Yearly change</b>		-8,2%	-11,3%	-11,0%	-4,4%	-9,1%	-10,5%	-0,8%	3,3%	-0,5%
<b>IS</b>	11	10	9	4	7	6	11	3	12	13
<b>NO</b>	138	151	127	127	102	73	105	72	67	67
<b>CH</b>	162	156	136	129	119	104	103	97	75	75

Source: CARE database, data available in May 2018

Totals for EU include latest available data (Data for Lithuania and Slovakia not included in totals)

Table 2 shows the percentage of car occupant fatalities of all road fatalities for the 2007-2016 decade in the EU countries, Iceland, Norway and Switzerland. Over the 10 year period, the percentage of car occupant fatalities in the EU fell from 49% to 46%.

Finland had the highest percentage of car occupant fatalities in 2016 among the EU countries (58%), followed by the Czech Republic (54%). On the contrary, the lowest percentage was recorded in Slovenia (35%).

The highest numbers of car occupant fatalities in 2016 were recorded in France (1.760), Germany (1.537) and Italy (1.477).

# Traffic Safety Basic Facts 2018–Car Occupants

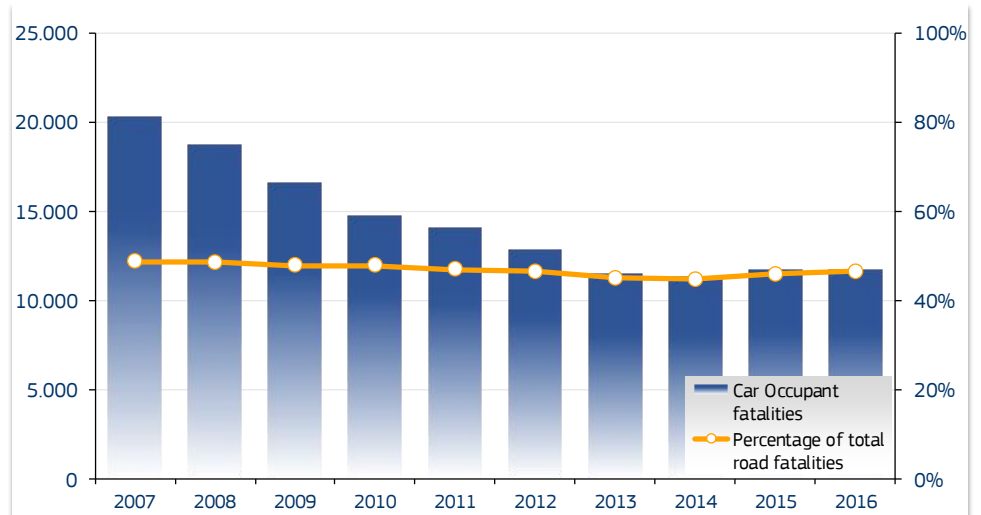
**Table 2: Percentage of car occupant fatalities of all road fatalities, 2007-2016**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>BE</b>	51%	51%	49%	53%	53%	50%	47%	52%	49%	51%
<b>BG</b>	-	59%	63%	62%	61%	56%	61%	57%	56%	-
<b>CZ</b>	54%	53%	55%	50%	52%	50%	47%	50%	50%	54%
<b>DK</b>	41%	48%	54%	53%	48%	49%	41%	49%	42%	45%
<b>DE</b>	53%	53%	51%	50%	50%	50%	48%	47%	47%	48%
<b>EE</b>	62%	52%	55%	56%	55%	48%	51%	42%	52%	-
<b>IE</b>	51%	57%	61%	61%	51%	55%	57%	53%	-	-
<b>EL</b>	48%	46%	47%	43%	42%	39%	39%	36%	40%	41%
<b>ES</b>	48%	48%	46%	48%	47%	46%	43%	43%	41%	42%
<b>FR</b>	53%	52%	51%	53%	52%	51%	49%	49%	52%	51%
<b>HR</b>	50%	46%	52%	48%	51%	47%	53%	46%	47%	48%
<b>IT</b>	45%	45%	42%	45%	43%	45%	44%	44%	43%	45%
<b>CY</b>	42%	32%	34%	32%	44%	35%	36%	33%	42%	22%
<b>LV</b>	48%	53%	46%	42%	44%	41%	40%	43%	45%	45%
<b>LT</b>	-	-	-	-	-	-	42%	44%	48%	-
<b>LU</b>	59%	57%	54%	84%	64%	65%	67%	69%	44%	59%
<b>HU</b>	45%	45%	47%	45%	42%	42%	43%	41%	47%	44%
<b>MT</b>	33%	44%	80%	69%	-	-	-	-	36%	22%
<b>NL</b>	42%	44%	45%	41%	38%	39%	38%	36%	40%	42%
<b>AT</b>	55%	54%	51%	53%	55%	53%	43%	44%	50%	44%
<b>PL</b>	46%	47%	48%	47%	45%	45%	43%	42%	45%	47%
<b>PT</b>	43%	40%	36%	39%	37%	36%	34%	35%	36%	40%
<b>RO</b>	39%	43%	42%	41%	39%	39%	39%	40%	42%	41%
<b>SI</b>	43%	38%	35%	32%	33%	41%	32%	38%	32%	35%
<b>SK</b>	44%	48%	47%	46%	-	-	-	-	-	-
<b>FI</b>	63%	59%	59%	58%	59%	58%	59%	53%	59%	58%
<b>SE</b>	59%	59%	61%	57%	50%	50%	55%	45%	56%	51%
<b>UK</b>	49%	50%	48%	45%	46%	46%	46%	45%	44%	46%
<b>EU</b>	<b>49%</b>	<b>49%</b>	<b>48%</b>	<b>48%</b>	<b>47%</b>	<b>46%</b>	<b>45%</b>	<b>45%</b>	<b>46%</b>	<b>46%</b>
<b>IS</b>	73%	83%	53%	50%	58%	67%	73%	75%	75%	72%
<b>NO</b>	59%	59%	60%	61%	61%	50%	56%	49%	57%	50%
<b>CH</b>	42%	44%	39%	39%	37%	31%	38%	40%	30%	35%

Source: CARE database, data available in May 2018

Finland had the highest percentage of car occupant fatalities in 2016 among the EU countries (58%).

**Figure 2: Number of car occupant fatalities and percentage of all road fatalities, EU, 2007-2016**



Source: CARE database, data available in May 2018

# Traffic Safety Basic Facts 2018–Car Occupants

Table 3 compares fatality rates of car drivers, passengers and occupants per million population across the EU countries in 2016. The UK had the lowest driver fatality rate (9) per million population, while the UK had also the lowest occupant rate (13). Considering passengers of cars, Denmark, Sweden and the UK (4) had the lowest fatality rates per million population, whilst Slovenia and the Netherlands have not recorded any car passenger fatalities.

**Table 3: Fatality rate of car drivers, passengers and occupants per million population, by country, 2016 or latest available year**

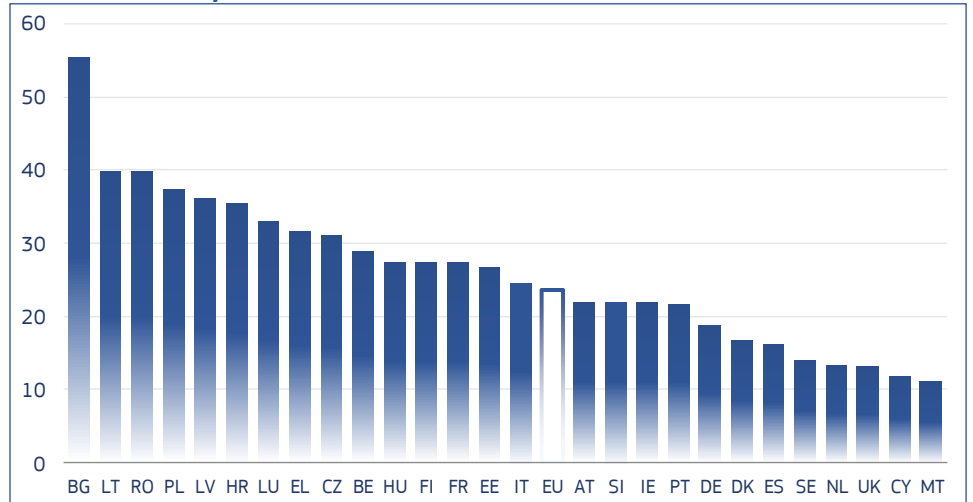
	Driver	Passenger	Car occupants
BE	22	7	29
BG	32	23	55
CZ	21	10	31
DK	13	4	17
DE	14	5	19
EE	16	11	27
IE	14	8	22
EL	23	9	32
ES	11	5	16
FR	20	7	27
HR	25	10	35
IT	18	6	24
CY	9	2	12
LV	23	13	36
LT	23	17	40
LU	21	12	33
HU	17	10	27
MT	4	7	11
NL	11	-	13
AT	17	5	22
PL	23	15	37
PT	14	8	22
RO	21	18	40
SI	22	-	22
SK	19	13	32
FI	22	6	27
SE	10	4	14
UK	9	4	13
<b>EU</b>	<b>16</b>	<b>7</b>	<b>24</b>
IS	30	9	39
NO	10	3	13
CH	7	2	9

Sources: CARE database (EUROSTAT for population data), data available in May 2018

The UK had the lowest car occupant fatality rate per million population in 2016.

# Traffic Safety Basic Facts 2018–Car Occupants

**Figure 3: Car occupant fatality rates per million population by country, 2016 or latest available year**

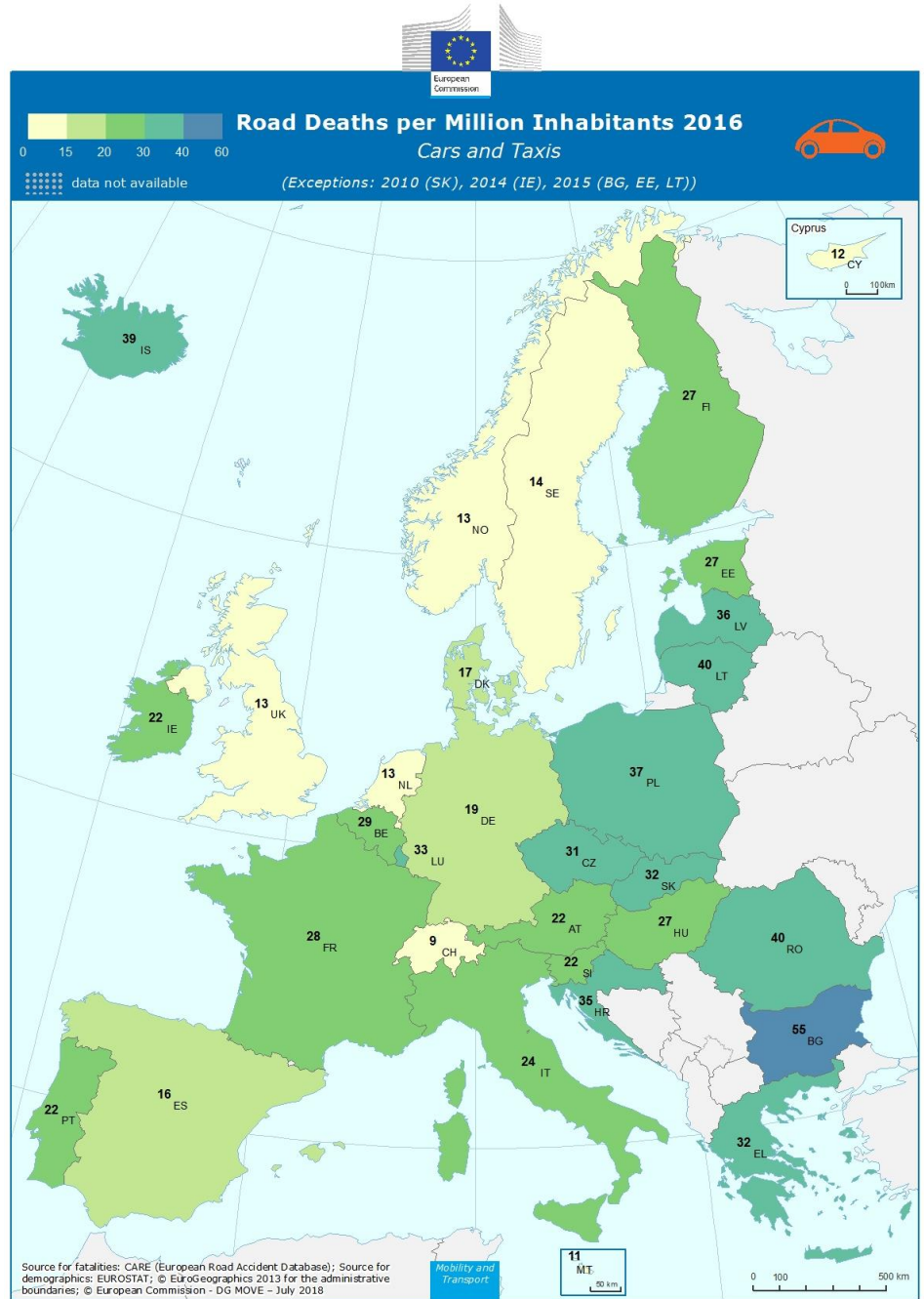


Sources: CARE database (EUROSTAT for population data), data available in May 2018

Although an important comparison basis, fatality rates per million population do not always provide the best indication of safety. The vehicle kilometres travelled indicate the risk to which a road user is exposed while he travels on the road, and so this better indicates relative levels of safety. However, such data are currently not available in adequate quantities to enable analysis.

# Traffic Safety Basic Facts 2018–Car Occupants

**Map 1: Car occupant fatality rates per million population by country, 2016 or latest available year**



In the following tables and figures, the CARE data for 2016 are analysed in greater detail. It should be noted that the latest available data are used, meaning 2010 data for SK, 2014 data for IE and 2015 data for BG, EE and LT.

## Age Group and Gender

Table 4a and Figure 4a indicate that in 2016, the majority of drivers killed in the EU countries were male (82%), and generally aged between 25-49 years. Ireland had the highest percentage of female driver fatalities (30%), while Latvia had the least percentage (4%). When considering the age groups, the highest percentage of driver fatalities in the EU countries was found in the age of 25 to 49 years. Much of these findings are likely to be related to the percentage of drivers within each gender group and age group, as well as to kilometres travelled.

**Table 4a: Total number and distribution of car driver fatalities by country, age and gender, 2016 or latest available year**

	<18		18-24		25-49		50-64		65+		Total
	F	M	F	M	F	M	F	M	F	M	
BE	0%	0%	3%	14%	7%	40%	2%	14%	4%	16%	251
BG	-	-	-	-	-	-	-	-	-	-	229
CZ	0%	0%	4%	12%	7%	33%	4%	16%	4%	20%	225
DK	0%	0%	7%	17%	7%	27%	4%	11%	8%	20%	75
DE	0%	0%	4%	13%	7%	27%	7%	14%	5%	22%	1.159
EE	0%	0%	0%	10%	19%	48%	0%	5%	0%	19%	21
IE	0%	3%	3%	20%	12%	27%	8%	5%	8%	15%	67
EL	0%	0%	2%	10%	7%	34%	3%	22%	1%	21%	248
ES	0%	0%	2%	8%	6%	36%	5%	17%	3%	23%	511
FR	0%	0%	4%	16%	8%	28%	4%	13%	7%	19%	1.313
HR	0%	0%	2%	17%	6%	35%	2%	23%	1%	15%	106
IT	0%	0%	2%	10%	8%	28%	3%	16%	4%	28%	1.106
CY	0%	0%	0%	25%	0%	13%	13%	25%	0%	25%	8
LV	0%	0%	2%	12%	2%	36%	0%	31%	0%	17%	45
LT	0%	2%	0%	9%	11%	38%	3%	17%	2%	20%	66
LU	0%	0%	0%	8%	17%	42%	0%	8%	8%	17%	12
HU	0%	0%	2%	7%	9%	36%	5%	20%	2%	18%	171
MT	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	2
NL	0%	0%	3%	17%	9%	25%	6%	16%	5%	20%	179
AT	0%	1%	5%	16%	8%	28%	5%	11%	7%	18%	148
PL	0%	0%	2%	20%	7%	41%	2%	16%	1%	11%	863
PT	0%	0%	2%	14%	4%	29%	3%	19%	3%	25%	145
RO	0%	1%	2%	14%	6%	44%	2%	19%	0%	11%	423
SI	0%	2%	2%	16%	16%	27%	7%	20%	0%	11%	45
SK	0%	0%	3%	21%	9%	49%	1%	14%	0%	4%	103
FI	0%	0%	3%	17%	3%	39%	3%	13%	4%	19%	119
SE	0%	1%	2%	8%	5%	33%	6%	13%	10%	23%	102
UK	0%	1%	4%	15%	8%	32%	4%	10%	8%	18%	579
<b>EU</b>	<b>0%</b>	<b>0%</b>	<b>3%</b>	<b>14%</b>	<b>7%</b>	<b>32%</b>	<b>4%</b>	<b>15%</b>	<b>4%</b>	<b>20%</b>	<b>8.321</b>
IS	0%	10%	0%	0%	0%	20%	10%	20%	20%	20%	10
NO	0%	0%	0%	24%	8%	24%	6%	12%	10%	18%	51
CH	0%	0%	2%	18%	7%	19%	7%	14%	11%	23%	57

Source: CARE database, data available in May 2018

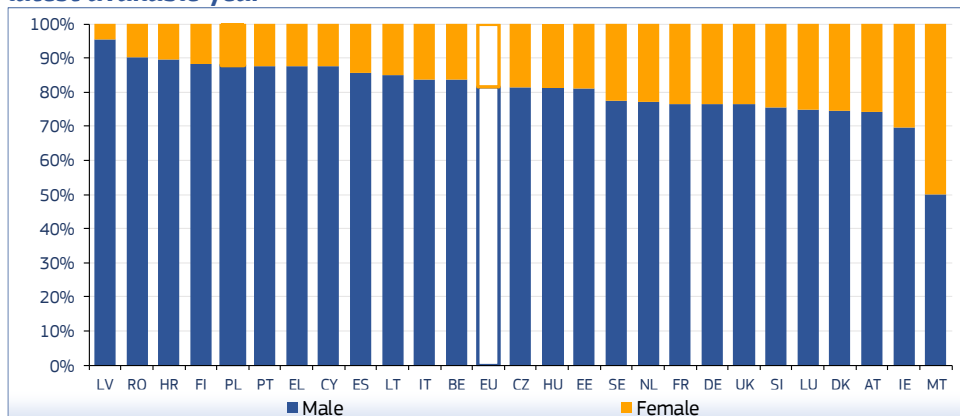
Among the EU countries, Estonia (64%) and Denmark (62%) had the highest percentages of female car passenger fatalities in 2016 (see Table 4b). The lowest percentages of female car passenger fatalities were recorded in Finland (32%). As with driver proportions, passenger fatalities were highest in the 25-49 age group (28%).

The highest percentage of driver fatalities in the EU countries was found in the age of 25 to 49 years.



# Traffic Safety Basic Facts 2018–Car Occupants

**Figure 4a: Distribution of car driver fatalities by country and gender, 2016 or latest available year**



Sources: CARE database, data available in May 2018

**Table 4b: Total number and distribution of car passenger fatalities by country, age and gender, 2016 or latest available year**

	<18		18-24		25-49		50-64		65+		Total
	F	M	F	M	F	M	F	M	F	M	
<b>BE</b>	5%	4%	14%	25%	15%	15%	5%	4%	11%	1%	75
<b>BG</b>	-	-	-	-	-	-	-	-	-	-	167
<b>CZ</b>	2%	4%	9%	13%	13%	20%	9%	9%	17%	4%	103
<b>DK</b>	5%	10%	10%	10%	10%	10%	5%	5%	33%	5%	21
<b>DE</b>	6%	9%	7%	13%	8%	15%	6%	5%	24%	6%	378
<b>EE</b>	36%	0%	7%	7%	7%	29%	14%	0%	0%	0%	14
<b>IE</b>	9%	11%	3%	17%	9%	20%	9%	3%	9%	9%	36
<b>EL</b>	3%	3%	8%	14%	10%	10%	14%	4%	25%	9%	92
<b>ES</b>	5%	4%	6%	10%	12%	10%	10%	7%	25%	9%	243
<b>FR</b>	9%	12%	7%	18%	10%	13%	4%	3%	18%	6%	447
<b>HR</b>	10%	2%	2%	17%	10%	24%	10%	7%	14%	5%	42
<b>IT</b>	6%	6%	5%	16%	12%	17%	8%	2%	16%	9%	371
<b>CY</b>	0%	50%	0%	0%	0%	0%	50%	0%	0%	0%	2
<b>LV</b>	12%	8%	4%	19%	15%	15%	4%	4%	8%	0%	26
<b>LT</b>	4%	6%	2%	20%	12%	27%	4%	4%	14%	6%	49
<b>LU</b>	0%	14%	14%	0%	14%	14%	0%	0%	29%	14%	7
<b>HU</b>	3%	7%	4%	6%	14%	32%	7%	4%	14%	8%	98
<b>MT</b>	33%	0%	0%	0%	0%	0%	33%	0%	33%	0%	3
<b>NL</b>	-	-	-	-	-	-	-	-	-	-	0
<b>AT</b>	9%	7%	2%	16%	9%	19%	2%	0%	26%	9%	43
<b>PL</b>	6%	7%	8%	14%	17%	19%	6%	6%	14%	4%	554
<b>PT</b>	3%	4%	5%	10%	9%	16%	9%	9%	29%	8%	80
<b>RO</b>	4%	5%	7%	15%	14%	20%	10%	8%	12%	6%	362
<b>SI</b>	-	-	-	-	-	-	-	-	-	-	0
<b>SK</b>	4%	9%	10%	22%	10%	13%	7%	6%	7%	1%	68
<b>FI</b>	6%	10%	10%	26%	3%	13%	3%	10%	10%	10%	31
<b>SE</b>	3%	6%	8%	19%	3%	17%	6%	8%	22%	8%	36
<b>UK</b>	10%	8%	7%	14%	12%	13%	6%	4%	20%	7%	274
<b>EU</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>15%</b>	<b>12%</b>	<b>16%</b>	<b>7%</b>	<b>5%</b>	<b>18%</b>	<b>6%</b>	<b>3.622</b>
<b>IS</b>	33%	33%	0%	0%	0%	0%	0%	0%	33%	0%	3
<b>NO</b>	0%	0%	6%	19%	0%	19%	13%	6%	13%	19%	16
<b>CH</b>	22%	0%	6%	0%	11%	17%	11%	6%	11%	17%	18

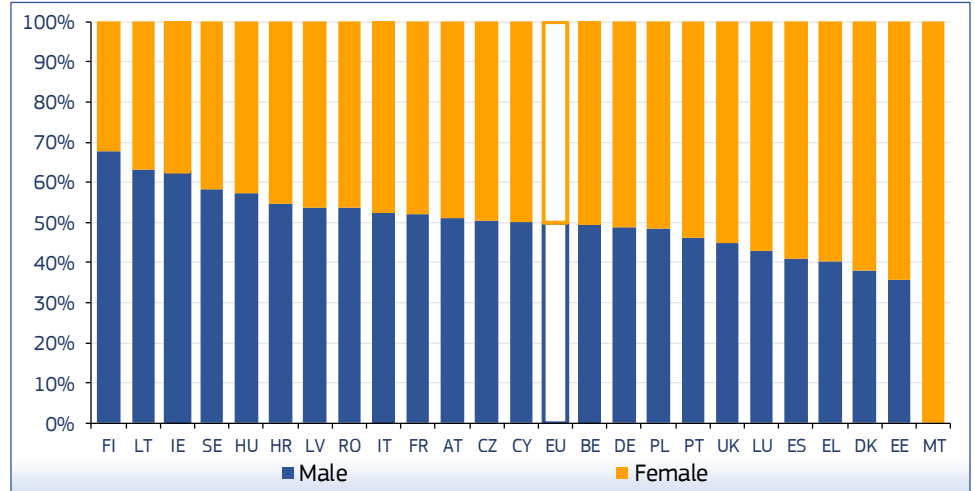
Source: CARE database, data available in May 2018

Across the EU countries the majority of driver fatalities were male (82%).

# Traffic Safety Basic Facts 2018–Car Occupants

Figure 4b shows that 50% of car passenger fatalities in the EU countries were female, whilst for the car drivers the female fatality rate was 18%, as shown in Figure 4a.

**Figure 4b: Distribution of car passenger fatalities by country and gender, 2016 or latest available year**



Source: CARE database, data available in May 2018

The lowest percentages of female car passenger fatalities were found in Finland (32%).

## Area and Road type

Table 5 shows the number of car occupant fatalities by area and type of the road. Most of the car occupant fatalities in the EU countries occurred outside urban areas, on non-motorways (68%). In Latvia even 85% of the car occupant fatalities occurred outside urban areas, followed by Finland (84%), whilst in Croatia only a 38% was recorded. About one-fifth of the car occupant fatalities (21%) in the EU countries occurred inside urban areas. In Spain, only 11% of car occupant fatalities occurred inside urban areas.

# Traffic Safety Basic Facts 2018–Car Occupants

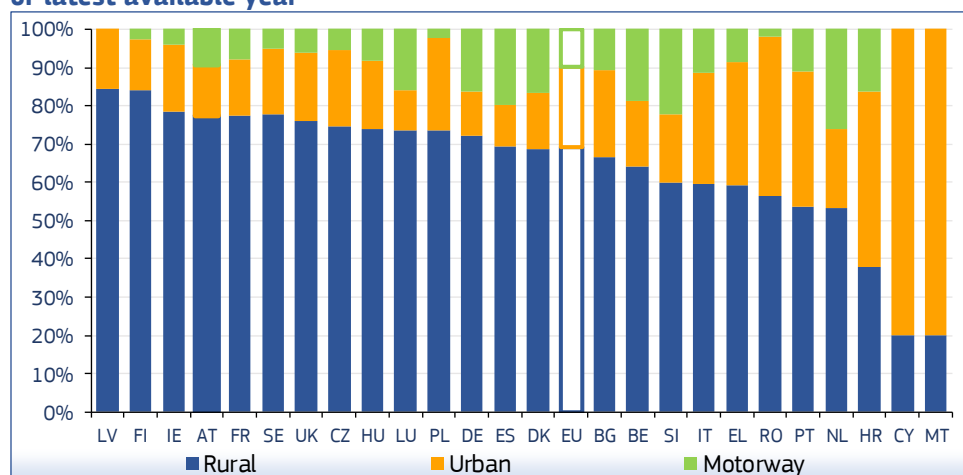
In 2016, 68% of car occupant fatalities in the EU countries occurred outside urban areas on non-motorways.

**Table 5: Total number and distribution of car occupant fatalities by country and road type, 2016 or latest available year**

	Motorway	Non-motorway		Unknown	Total
		Rural	Urban		
<b>BE</b>	19%	64%	17%	0%	327
<b>BG</b>	11%	66%	23%	0%	396
<b>CZ</b>	5%	75%	20%	0%	328
<b>DK</b>	17%	69%	15%	0%	96
<b>DE</b>	16%	72%	12%	0%	1,537
<b>EE</b>	-	-	-	100%	35
<b>IE</b>	4%	79%	17%	0%	103
<b>EL</b>	9%	59%	32%	0%	340
<b>ES</b>	20%	69%	11%	0%	754
<b>FR</b>	8%	77%	15%	0%	1,760
<b>HR</b>	16%	38%	46%	0%	148
<b>IT</b>	11%	60%	29%	0%	1,477
<b>CY</b>	0%	20%	80%	0%	10
<b>LV</b>	-	85%	15%	0%	71
<b>LT</b>	-	-	-	100%	115
<b>LU</b>	16%	74%	11%	0%	19
<b>HU</b>	8%	74%	18%	0%	269
<b>MT</b>	-	20%	80%	0%	5
<b>NL</b>	26%	52%	20%	1%	225
<b>AT</b>	9%	77%	13%	0%	191
<b>PL</b>	2%	74%	24%	0%	1,417
<b>PT</b>	11%	54%	35%	0%	225
<b>RO</b>	2%	56%	42%	0%	785
<b>SI</b>	22%	60%	18%	0%	45
<b>SK</b>	6%	75%	19%	0%	171
<b>FI</b>	3%	84%	13%	0%	150
<b>SE</b>	5%	76%	17%	2%	138
<b>UK</b>	6%	76%	18%	0%	853
<b>EU</b>	<b>10%</b>	<b>68%</b>	<b>21%</b>	<b>1%</b>	<b>11,990</b>
<b>IS</b>		77%	23%	0%	13
<b>NO</b>		90%	10%	0%	67
<b>CH</b>	19%	61%	20%	0%	75

Source: CARE database, data available in May 2018

**Figure 5: Distribution of car occupant fatalities by country and road type, 2016 or latest available year**



Source: CARE database, data available in May 2018

## Junction

**Table 6: Total number and distribution of car occupant fatalities by country and “junction”, 2016 or latest available year**

	junction	not at junction	unknown	Total
BE	9%	88%	3%	327
BG	1%	94%	5%	396
CZ	19%	81%	0%	328
DK	17%	83%	0%	96
DE	0%	87%	13%	1.537
EE	57%	0%	43%	35
IE	16%	0%	84%	103
EL	0%	99%	1%	340
ES	14%	86%	0%	754
FR	10%	90%	0%	1.760
HR	4%	96%	0%	148
IT	19%	81%	0%	1.477
CY	10%	90%	0%	10
LV	6%	94%	0%	71
LT	0%	91%	9%	115
LU	16%	84%	0%	19
HU	15%	85%	0%	269
MT	0%	100%	0%	5
NL	13%	86%	1%	225
AT	12%	88%	0%	191
PL	13%	87%	0%	1.417
PT	8%	91%	1%	225
RO	9%	91%	0%	785
SI	2%	93%	4%	45
SK	7%	93%	0%	171
FI	4%	86%	10%	150
SE	20%	80%	0%	138
UK	24%	76%	0%	853
<b>EU</b>	<b>11%</b>	<b>86%</b>	<b>3%</b>	<b>11.990</b>
IS	15%	85%	0%	13
NO	0%	0%	100%	67
CH	5%	0%	95%	75

Source: CARE database, data available in May 2018

In 2016, only 11% of the car occupant fatalities in the EU countries occurred at junctions.

The majority of car occupant fatalities occurred away from a junction, with only around 11% of the fatalities occurring at junctions in the EU countries (Table 6). The data indicate that among the larger countries, the United Kingdom had the greatest share of fatalities at junctions (24%).

## Day of the week and time of the day

Table 7 presents the distribution of car occupant fatalities over a 24 hour period. A notable difference for the EU is evident between the lowest percentage of fatalities (from 00:00 to 04:00 - 11%) and the highest percentage of fatalities (from 16:00 to 20:00 - 22%). In eleven countries the highest percentages of fatalities were recorded between 12:00 and 16:00 hours.

**Table 7: Total number and distribution of car occupant fatalities by country and time of the day, 2016 or latest available year**

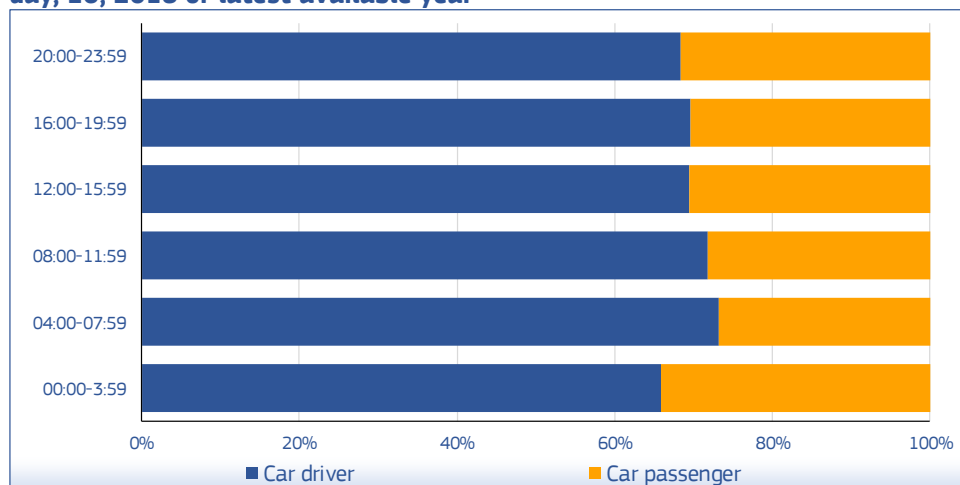
	00.00- 03.59	04.00- 07.59	08.00- 11.59	12.00- 15.59	16.00- 19.59	20.00- 23.59	Total
BE	21%	15%	13%	13%	18%	20%	327
BG	9%	11%	17%	22%	24%	18%	396
CZ	6%	15%	18%	24%	24%	13%	328
DK	6%	17%	18%	19%	21%	20%	96
DE	11%	13%	16%	27%	20%	13%	1.537
EE	3%	17%	9%	20%	26%	26%	35
IE	16%	17%	11%	19%	23%	14%	103
EL	13%	20%	21%	16%	16%	14%	340
ES	11%	11%	18%	24%	21%	15%	754
FR	9%	14%	17%	20%	24%	16%	1.760
HR	12%	14%	13%	18%	28%	16%	148
IT	13%	14%	16%	18%	22%	16%	1.477
CY	40%	10%	0%	20%	20%	10%	10
LV	7%	8%	8%	20%	21%	32%	71
LT	7%	10%	16%	21%	37%	10%	115
LU	5%	16%	0%	26%	26%	26%	19
HU	8%	10%	19%	26%	22%	14%	269
MT	0%	20%	20%	0%	20%	40%	5
NL	12%	18%	18%	17%	23%	12%	225
AT	11%	18%	17%	21%	19%	14%	191
PL	10%	14%	19%	21%	21%	16%	1.417
PT	12%	14%	11%	23%	23%	16%	225
RO	16%	13%	14%	20%	20%	17%	785
SI	18%	13%	11%	18%	20%	20%	45
SK	9%	20%	20%	22%	19%	9%	171
FI	18%	11%	21%	19%	21%	11%	150
SE	12%	14%	12%	28%	20%	13%	138
UK	12%	13%	16%	19%	22%	18%	853
<b>EU</b>	<b>11%</b>	<b>14%</b>	<b>16%</b>	<b>21%</b>	<b>22%</b>	<b>16%</b>	<b>11.990</b>
IS	8%	8%	15%	54%	15%	0%	13
NO	15%	10%	12%	24%	24%	15%	67
CH	8%	16%	19%	21%	19%	17%	75

Source: CARE database, data available in May 2018

Figure 6 presents the proportion of fatalities of car drivers and passengers for the EU countries by time of the day in 2016. The share of car passenger fatalities is highest (34%) between 00:00 and 04:00, but there is little variation during the day.

In the EU, the highest percentage of car occupant fatalities was recorded between 16:00 and 20:00.

**Figure 6: Distribution of car driver and car passenger fatalities by time of the day, EU, 2016 or latest available year**



Source: CARE database, data available in May 2018

**Table 8: Total number and distribution of car occupant fatalities by country and day of the week, 2016 or latest available year**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
BE	9%	11%	10%	16%	15%	18%	21%	327
BG	13%	11%	8%	14%	20%	15%	19%	396
CZ	19%	15%	14%	12%	12%	16%	13%	328
DK	13%	17%	8%	20%	16%	16%	11%	96
DE	15%	15%	13%	11%	17%	13%	16%	1.537
EE	6%	31%	14%	0%	11%	23%	14%	35
IE	15%	6%	9%	20%	14%	19%	17%	103
EL	10%	15%	12%	12%	15%	14%	21%	340
ES	14%	13%	11%	13%	16%	17%	16%	754
FR	14%	12%	12%	13%	16%	17%	16%	1.760
HR	10%	14%	11%	14%	19%	18%	14%	148
IT	13%	11%	13%	12%	16%	17%	18%	1.477
CY	0%	0%	10%	10%	20%	30%	30%	10
LV	18%	13%	15%	15%	14%	13%	11%	71
LT	12%	14%	7%	13%	12%	23%	19%	115
LU	16%	21%	16%	5%	11%	21%	11%	19
HU	13%	14%	12%	15%	14%	18%	14%	269
MT	0%	20%	20%	20%	0%	20%	20%	5
NL	12%	13%	13%	13%	18%	19%	12%	225
AT	15%	15%	12%	12%	13%	16%	18%	191
PL	13%	12%	12%	12%	16%	18%	17%	1.417
PT	13%	12%	11%	10%	15%	18%	21%	225
RO	13%	11%	14%	11%	17%	16%	19%	785
SI	13%	13%	16%	9%	11%	22%	16%	45
SK	12%	14%	11%	15%	12%	19%	17%	171
FI	13%	12%	15%	12%	11%	23%	15%	150
SE	16%	9%	11%	14%	12%	25%	14%	138
UK	14%	12%	13%	14%	18%	15%	15%	853
<b>EU</b>	<b>14%</b>	<b>13%</b>	<b>12%</b>	<b>13%</b>	<b>16%</b>	<b>16%</b>	<b>17%</b>	<b>11.990</b>
IS	8%	0%	8%	15%	23%	15%	31%	13
NO	19%	15%	10%	12%	16%	9%	18%	67
CH	17%	20%	8%	20%	12%	17%	5%	75

Source: CARE database, data available in May 2018

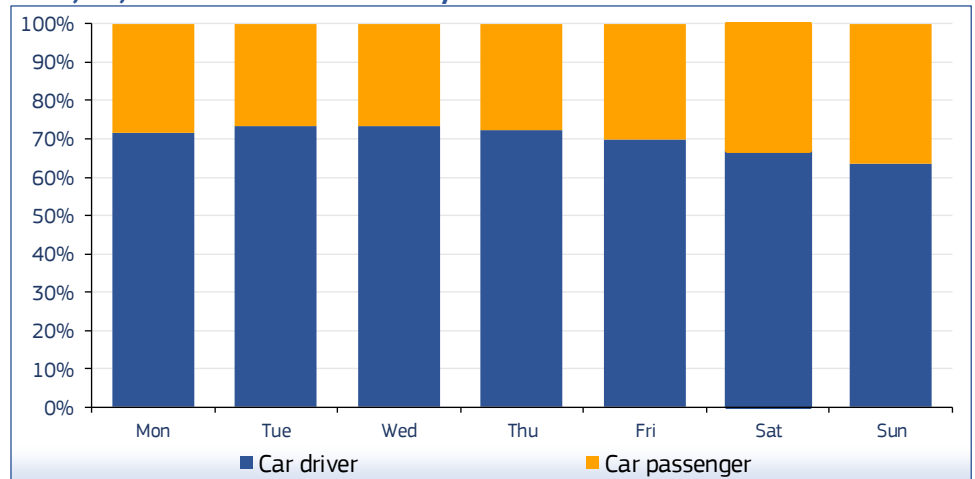
33% of car occupant fatalities occurred either on a Saturday or a Sunday.

# Traffic Safety Basic Facts 2018–Car Occupants

Table 8 presents the percentages of car occupant fatalities across the days of the week. These data indicate that for the EU, 33% of car occupant fatalities occurred either on a Saturday or a Sunday, while the lowest percentage occurred on Wednesdays (12%).

Figure 7 presents the distribution of fatalities of car drivers and passengers in the EU by day of the week for the year 2016. The percentage of passenger fatalities is higher during weekends compared to the respective percentages on weekdays.

**Figure 7: Distribution of car driver and car passenger fatalities by day of the week, EU, 2016 or latest available year**



Source: CARE database, data available in May 2018

During the weekend the percentage of car passenger fatalities is higher than on weekdays.

## Seasonality

Table 9 presents the distribution of car occupant fatalities by pair of months for the EU countries in 2016. The percentages varied between 15% in the winter and 19% in the summer.

Figure 8 presents the distribution of car driver and passenger fatalities in the European Union per month for the year 2016. In general, the distribution is relatively stable over the year and around 30% of the car occupant fatalities are passengers. During the summer, however, the percentage of car passenger fatalities is relatively higher (32%-34%).

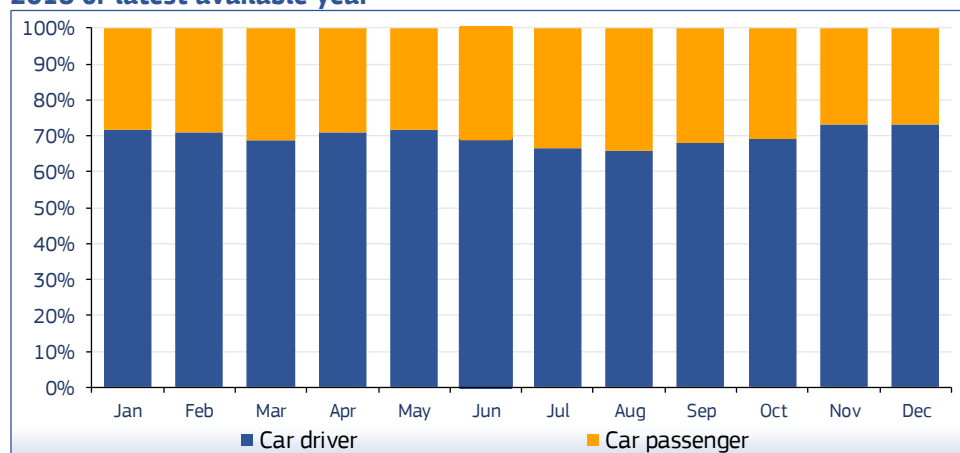
In the summer the share of car occupant fatalities is relatively higher.

**Table 9: Total number and distribution of car occupant fatalities by country and month, 2016 or latest available year**

	Jan/Feb	Mar/Apr	May/Jun	Jul/Aug	Sep/Oct	Nov/Dec	Total
BE	19%	16%	14%	19%	17%	15%	327
BG	12%	15%	19%	20%	20%	14%	396
CZ	10%	17%	13%	22%	22%	17%	328
DK	15%	11%	11%	15%	27%	21%	96
DE	16%	15%	17%	19%	17%	16%	1,537
EE	23%	14%	14%	29%	11%	9%	35
IE	17%	17%	17%	17%	17%	16%	103
EL	15%	16%	21%	16%	16%	15%	340
ES	16%	16%	14%	23%	16%	15%	754
FR	16%	14%	16%	17%	18%	19%	1,760
HR	18%	8%	20%	22%	20%	11%	148
IT	15%	16%	16%	19%	17%	17%	1,477
CY	10%	10%	20%	30%	10%	20%	10
LV	15%	17%	13%	24%	17%	14%	71
LT	23%	15%	13%	13%	23%	13%	115
LU	26%	5%	21%	5%	16%	26%	19
HU	17%	12%	16%	17%	22%	17%	269
MT	20%	40%	20%	20%	0%	0%	5
NL	17%	16%	12%	16%	18%	20%	225
AT	13%	19%	15%	19%	16%	18%	191
PL	11%	15%	18%	19%	21%	16%	1,417
PT	17%	14%	13%	17%	20%	18%	225
RO	14%	12%	19%	20%	20%	16%	785
SI	18%	16%	22%	16%	16%	13%	45
SK	14%	13%	12%	23%	18%	20%	171
FI	20%	15%	14%	20%	17%	15%	150
SE	21%	12%	17%	17%	14%	18%	138
UK	18%	17%	16%	17%	15%	17%	853
<b>EU</b>	<b>15%</b>	<b>15%</b>	<b>16%</b>	<b>19%</b>	<b>18%</b>	<b>17%</b>	<b>11,990</b>
IS	15%	8%	15%	8%	31%	23%	13
NO	28%	10%	7%	22%	16%	15%	67
CH	11%	11%	17%	24%	19%	19%	75

Source: CARE database, data available in May 2018

**Figure 8: Distribution of car driver and car passenger fatalities by month, EU, 2016 or latest available year**



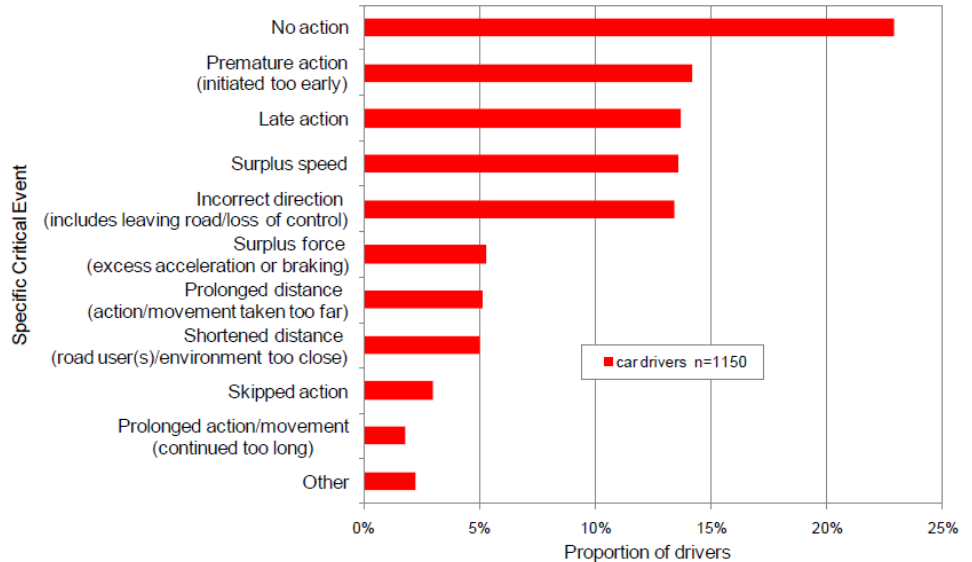
Source: CARE database, data available in May 2018



## Accident Causation

Between 2005 and 2008 in Germany, Italy, the Netherlands, Finland, Sweden and the UK, data of 1.006 accidents (covering all injury severities) was collected. Most accidents (82%) in the accident causation database involve a car. Of the car drivers, 65% were male and the mean age of drivers involved was 41 years. Figure 9 gives the distribution of specific critical events for car drivers.

**Figure 9: Distribution of specific critical events – car drivers**



Source: SafetyNet Accident Causation Database 2005 to 2008 / EC  
 Date of query: 2010  
 N=1150

Specific critical events under the general category of ‘timing’, ‘no action’, ‘premature action’ and ‘late action’ are recorded most often for car drivers. ‘No action’ describes those drivers who have not reacted at all (or at least in an effective time frame) to avoid a collision, for example, to avoid an oncoming vehicle. A ‘premature action’ is one undertaken before a signal has been given or the required conditions are established, for example entering a junction before it is clear of other traffic.

Following these ‘timing’ events, surplus speed and incorrect direction are recorded in equal measure. Surplus speed describes speed that is too high for the conditions or manoeuvre being carried out, travelling above the speed limit and also if the driver is travelling at speed unexpected by other road users. Incorrect direction refers to a manoeuvre being carried out in the wrong direction (for example, turning left instead of right) or leaving the road (not following the intended direction of the road). ‘Loss of control’ type accidents can fall into either critical event depending on the specific situation.

Table 10 gives the most frequent links between causes for injury crashes with car drivers involved, as recorded in the SafetyNet dataset. For this group there are 1.303 links in total.

**Table 10: Ten most frequent links between causes – car drivers**

Links between causes	Frequency
Faulty diagnosis - Information failure (driver/environment or driver/vehicle)	209
Observation missed - Distraction	86
Observation missed - Temporary obstruction to view	83
Observation missed - Faulty diagnosis	77
Faulty diagnosis - Communication failure	66
Inadequate plan - Insufficient knowledge	62
Observation missed - Permanent obstruction to view	60
Observation missed - Inadequate plan	52
Observation missed - Inattention	47
Inadequate plan – Under the influence of substances	45
Others	516
<b>Total</b>	<b>1.303</b>

Source: SafetyNet Accident Causation Database 2005 to 2008 / EC  
Date of query: 2010

Table 10 gives an indication of the most frequently recorded causes and the most frequently recorded links between these causes. ‘Faulty diagnosis’ and ‘observation missed’ are two dominant causes for car drivers. ‘Faulty diagnosis’ is an incorrect or incomplete understanding of road conditions or another road user’s actions. It is linked to both ‘information failure’ (for example, a driver thinking another vehicle was moving when it was in fact stopped and colliding with it) and ‘communication failure’ (for example, pulling out in the continuing path of a driver who has indicated a turn too early).

The causes leading to ‘observation missed’ can be seen to fall into two groups: ‘physical obstruction to view’ type causes (for example, parked cars at a junction) and ‘human factors’ (for example, not observing a red light due to distraction or inattention).

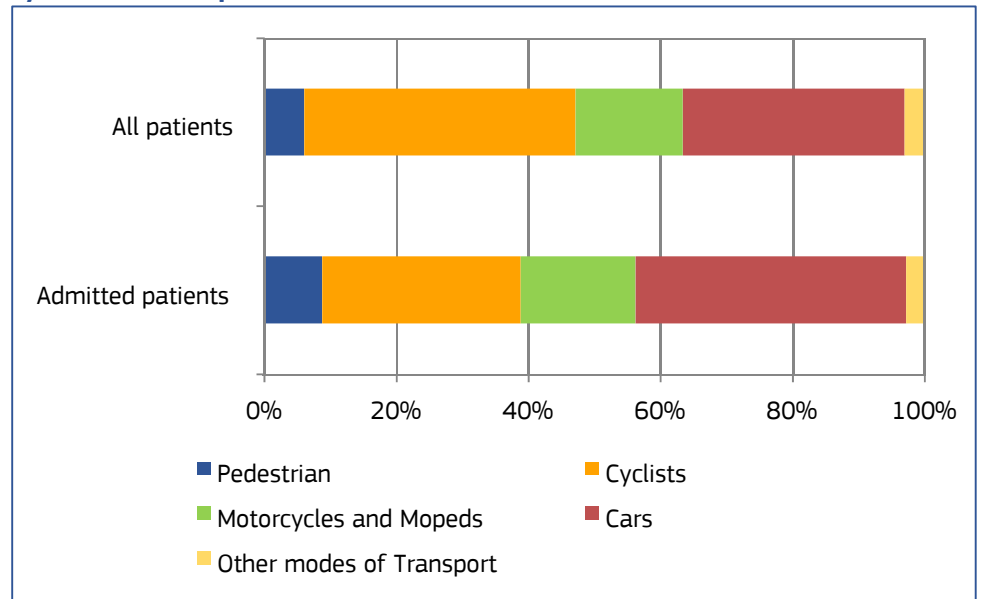
‘Inadequate plan’ can also be seen to be frequently recorded and describes a lack of all the required details or that the driver’s ideas do not correspond to reality. It is most often linked to ‘insufficient knowledge’ (for example, not understanding a complex junction layout) but it is also linked with ‘under the influence of substances’ (alcohol, drugs or medication).

## 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 which provides a specific but 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).

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 also long term consequences of injuries.

**Figure 10: Distribution of non-fatal road accident casualties attending hospital by mode of transport**

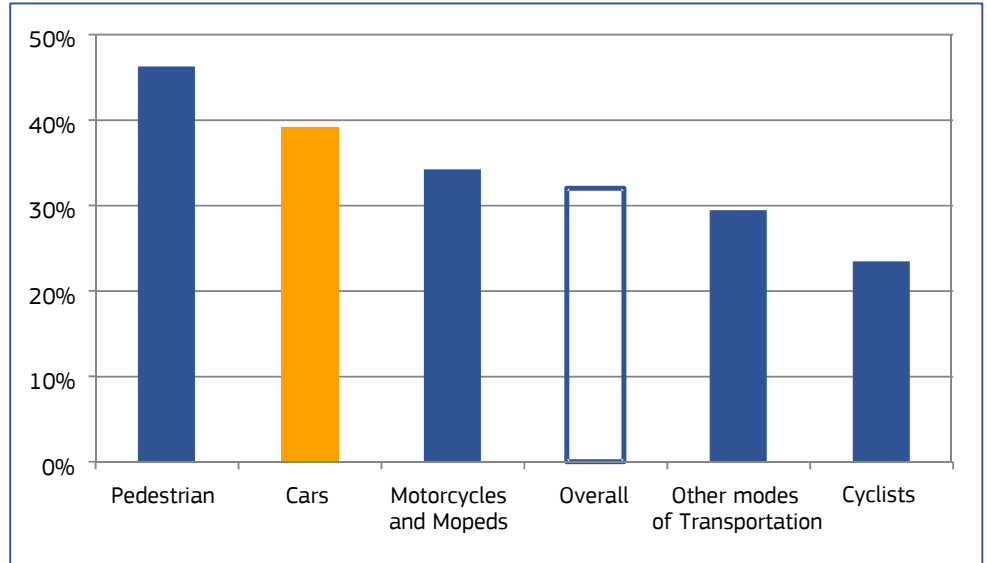


EU Injury Database (EU IDB AI) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n-all = 73.600; n-admitted = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

# Traffic Safety Basic Facts 2018–Car Occupants

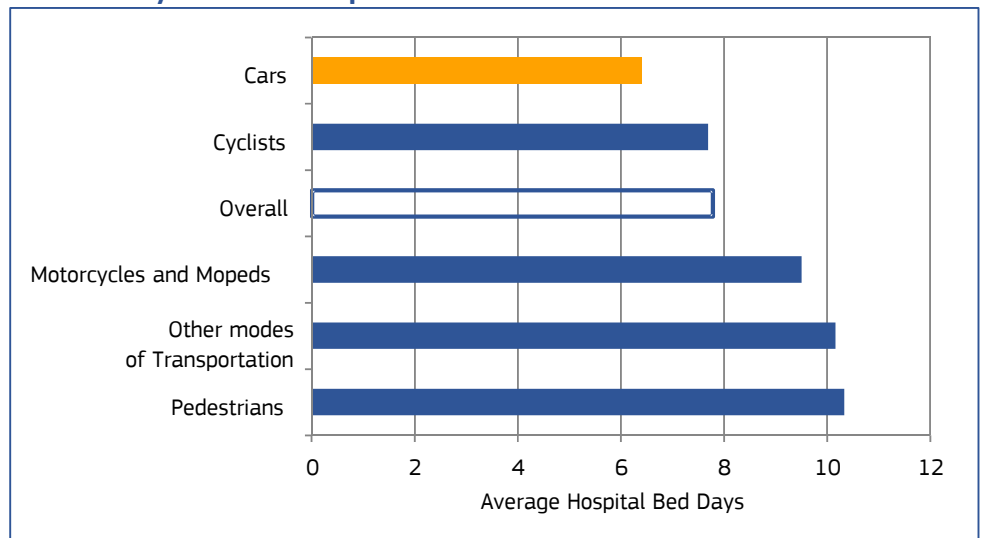
Figure 10 is based on IDB data from nine countries for accidents that occurred between 2005 and 2008. Vulnerable road users (pedestrians, cyclists, motorcycles and mopeds) accounted for almost two thirds (63%) of road accident casualties attending hospital and for over half of casualties admitted to the hospital (56%). Figure 11 shows that overall 32% of road accident casualties recorded in the IDB were admitted to hospital, compared with 39% of car occupants. Figure 12 shows that the overall average length of stay was eight days, but six days for car occupants.

**Figure 11: Percentage of non-fatal road accident casualties who were admitted to hospital by mode of transport**



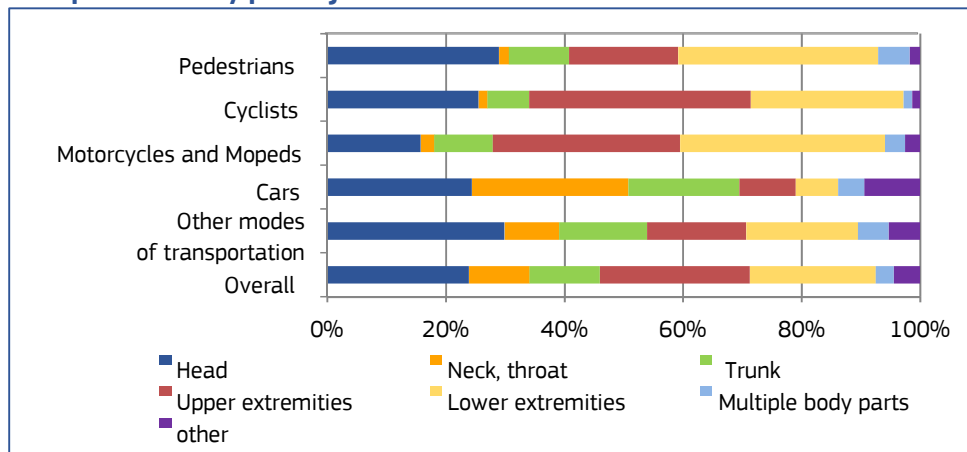
EU Injury Database (EU IDB AI) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n-all = 73.600; n-admitted = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

**Figure 12: Average length of stay (hospital bed days) of non-fatal road accident casualties 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 13: Distribution of non-fatal road accident casualties by mode of transport and body part injured**



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).

Naturally, hospital data can provide information on the injury patterns sustained by the accident victims. Figure 13 illustrates the distribution of body parts injured of the various road user types. Car occupants, for example, show the greatest proportion of neck and throat injuries among all types of road users, presumably linked to the incidence of whip-lash.

Table 11 shows the types of injuries most frequently recorded in the EU IDB. It compares the distribution of injuries among car occupants and all types of road users.

**Table 11: Ten most frequently recorded types of injury by road user type**

	Car occupants	All road users
Contusion, bruise	38%	34%
Fracture	15%	27%
Open wound	6%	10%
Distortion, sprain	12%	8%
Concussion	9%	7%
Other specified brain injury	2%	2%
Luxation, dislocation	1%	2%
Injury to muscle and tendon	3%	2%
Abrasion	1%	1%
Injury to internal organs	1%	1%
Other specified types of injury	12%	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>

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).

## 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](http://ec.europa.eu/transport/road_safety/pdf/statistics/cadas_glossary.pdf)

### 3. Data available in May 2018.

4. Data refer to 2016 and when not available the latest available data are used (2010 data for SK, 2014 data for IE and 2015 data for BG, EE and LT). Totals and related average percentages for EU also include latest available data.

5. Data for Lithuania and Slovakia are not included in the totals of data comparing the years 2007–2016.

6. At the commenting of the tables and figures, countries with small figures are omitted.

7. This 2018 edition of Traffic Safety Basic Facts updates the previous versions produced within the EU co-funded research projects SafetyNet and DaCoTA.

### 8. Disclaimer

This report has been produced by the National Technical University of Athens ([NTUA](#)), the Austrian Road Safety Board ([KFV](#)) and the European Union Road Federation ([ERF](#)) under a contract with the [European Commission](#). Whilst every effort has been made to ensure that the matter presented in this report is relevant, accurate and up-to-date, the Partners cannot accept any liability for any error or omission, or reliance on part or all of the content in another context.

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### 9. Please refer to this Report as follows:

*European Commission, Traffic Safety Basic Facts on Car Occupants, European Commission, Directorate General for Transport, June 2018.*

