European Commission

European Road Safety Observatory
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Traffic Safety Basic Facts 2018

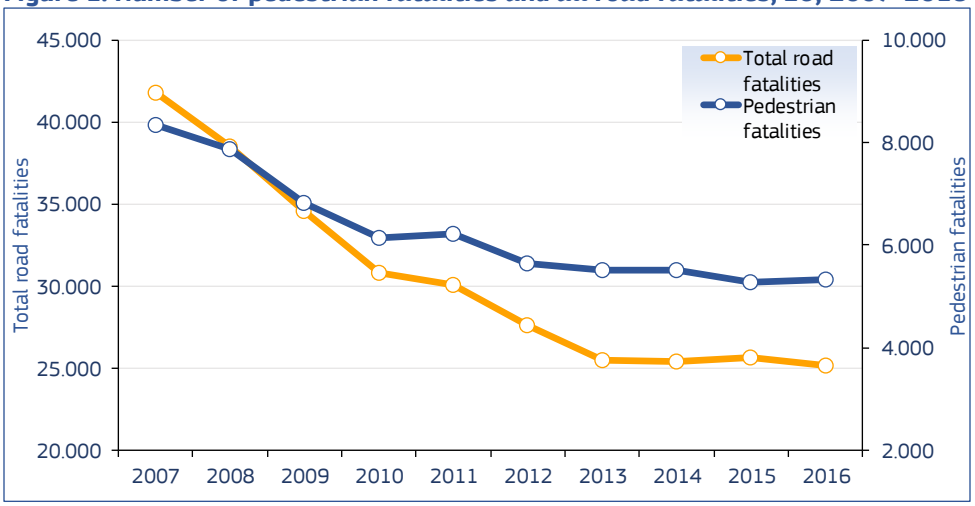
Pedestrians

Transport

General

In 2016, 5.320 pedestrians were killed in road accidents in the EU (excluding Lithuania and Slovakia), which is 21% of all road fatalities. During the decade 2007-2016, in the European Union, pedestrian fatalities were reduced by 36%, while the total number of fatalities was reduced by almost 41%.

Figure 1: Number of pedestrian fatalities and all road fatalities, EU, 2007-2016



Source: CARE database, data available in May 2018

In 2016, 5.320 pedestrians died in road accidents in the EU, 21% of all road fatalities.

Figure 1 shows the trend of the number of pedestrian fatalities over the period 2007-2016 in comparison with the respective trend of total road fatalities over the same period.

Traffic Safety Basic Facts 2018 - Pedestrians

The number of pedestrians who were killed in road accidents decreased by 36% from 2007 to 2016.

The annual data of pedestrian fatalities in the EU Member States, Iceland, Norway and Switzerland from 2007 to 2016 are presented in Table 1.

Table 1: Number of pedestrian fatalities by country, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BE	104	99	101	106	113	104	99	106	92	78
BG	-	278	198	174	149	135	108	156	164	-
CZ	232	238	176	168	176	163	162	130	150	130
DK	68	58	52	44	33	31	33	22	27	36
DE	695	653	591	476	614	527	561	527	545	500
EE	38	41	23	14	26	29	23	26	-	-
IE	81	49	40	44	47	29	31	42	42	-
EL	255	248	202	179	223	170	151	125	128	149
ES	591	502	470	471	380	370	371	336	367	389
FR	561	548	496	485	519	489	465	499	466	553
HR	124	136	103	105	71	72	69	73	61	67
IT	627	646	667	621	589	576	551	578	602	570
CY	17	16	9	13	13	10	8	10	16	14
LV	158	105	82	79	60	62	70	71	63	55
LT	-	-	-	-	-	-	96	109	81	-
LU	7	6	12	1	6	6	5	3	7	8
HU	288	251	186	192	124	156	147	152	149	152
MT	3	1	4	2	-	-	-	-	5	8
NL	86	56	63	62	65	64	51	50	60	44
AT	108	102	101	98	87	81	82	71	84	73
PL	1.951	1.882	1.467	1.236	1.408	1.157	1.140	1.116	915	868
PT	156	155	148	195	199	159	144	145	146	123
RO	1.113	1.067	1.015	868	747	728	726	697	649	717
SI	32	39	24	26	21	19	20	14	16	22
SK	217	204	113	126	-	-	-	-	-	-
FI	48	53	30	35	41	29	34	36	32	29
SE	58	45	44	31	53	50	42	52	28	42
UK	663	591	524	415	466	429	405	464	427	463
EU	**8.342**	**7.865**	**6.828**	**6.140**	**6.232**	**5.647**	**5.503**	**5.506**	**5.265**	**5.320**
Yearly change		-5,7%	-13,2%	-10,1%	1,5%	-9,4%	-2,6%	0,0%	-4,4%	1,0%
IS	1	0	2	2	4	2	1	0	1	2
NO	23	31	26	24	16	22	18	18	12	15
CH	79	59	60	75	69	75	69	43	58	50

Source: CARE database, data available in May 2018
Totals for EU include latest available data (Data for Lithuania and Slovakia not included in totals)

Latvia and Poland experienced the most significant reductions in pedestrian fatalities between 2007 and 2016 (65% and 56% respectively). In the Netherlands and Ireland, pedestrian fatalities almost halved, while in France and Italy the reduction in pedestrian fatalities was lower than 10%.

Latvia and Poland experienced the most significant reductions in pedestrian fatalities (65% and 56% respectively) between 2007 and 2016.

The percentage of pedestrian fatalities per total road fatalities in each EU country is shown in Table 2. In 2016, the percentage is lowest in the Netherlands (8%), Finland (11%) and Belgium (12%) compared to Romania (37%), Estonia (36%) and Latvia (35%). The EU average was 21%.

The percentage of pedestrian fatalities of all road fatalities differs widely across Europe.

In Romania, almost 37% of all road fatalities were pedestrians in 2016; the highest percentage among the EU countries.

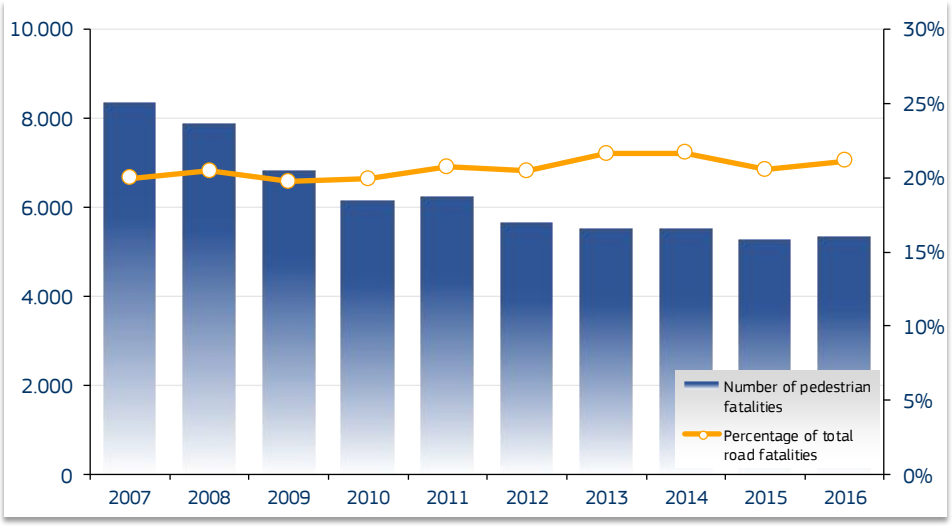
Table 2: Percentage of pedestrian fatalities of all road fatalities, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BE	10%	10%	11%	13%	13%	14%	14%	15%	13%	12%
BG	-	26%	22%	22%	23%	22%	18%	24%	23%	-
CZ	19%	22%	20%	21%	23%	22%	25%	19%	20%	21%
DK	17%	14%	17%	17%	15%	19%	17%	12%	15%	17%
DE	14%	15%	14%	13%	15%	15%	17%	16%	16%	16%
EE	19%	31%	23%	18%	26%	33%	28%	33%	36%	-
IE	24%	18%	17%	21%	25%	18%	16%	22%	-	-
EL	16%	16%	14%	14%	20%	17%	17%	16%	16%	18%
ES	15%	16%	17%	19%	18%	19%	22%	20%	22%	21%
FR	12%	13%	12%	12%	13%	13%	14%	15%	13%	16%
HR	20%	20%	19%	25%	17%	18%	19%	24%	18%	22%
IT	12%	14%	16%	15%	15%	15%	16%	17%	18%	17%
CY	19%	20%	13%	22%	18%	20%	18%	22%	28%	30%
LV	38%	33%	32%	36%	34%	35%	39%	33%	34%	35%
LT	-	-	-	-	-	-	38%	41%	33%	-
LU	15%	17%	25%	3%	18%	18%	11%	9%	19%	25%
HU	23%	25%	23%	26%	19%	26%	25%	24%	23%	25%
MT	25%	11%	27%	15%	-	-	-	-	45%	35%
NL	12%	8%	10%	12%	12%	11%	11%	11%	11%	8%
AT	16%	15%	16%	18%	17%	15%	18%	17%	18%	17%
PL	35%	35%	32%	32%	34%	32%	34%	35%	31%	29%
PT	16%	18%	18%	21%	22%	22%	23%	23%	25%	22%
RO	40%	35%	36%	37%	37%	36%	39%	38%	34%	37%
SI	11%	18%	14%	19%	15%	15%	16%	13%	13%	17%
SK	33%	34%	29%	34%	-	-	-	-	-	-
FI	13%	15%	11%	13%	14%	11%	13%	16%	12%	11%
SE	12%	11%	12%	12%	17%	18%	16%	19%	11%	16%
UK	22%	22%	22%	22%	24%	24%	23%	25%	24%	25%
EU	**20%**	**20%**	**20%**	**20%**	**21%**	**20%**	**22%**	**22%**	**21%**	**21%**
IS	0%	0%	-1%	-1%	0%	-1%	0%	0%	0%	0%
NO	0%	0%	1%	1%	2%	1%	1%	0%	1%	1%
CH	10%	10%	11%	13%	13%	14%	14%	15%	13%	12%

Source: CARE database, data available in May 2018

While the number of pedestrian fatalities in the EU decreased over the decade 2007-2016, the respective percentage of all road fatalities had a slightly increasing trend, as shown in Figure 2.

Figure 2: Number of pedestrian fatalities and percentage of all road fatalities, EU, 2007-2016



Source: CARE database, data available in May 2018

To compare the pedestrian fatality numbers of different countries, Table 3 takes account of the respective population size. The pedestrian fatality rates vary from 2,6 pedestrian fatalities per million population in the Netherlands to 36,3 pedestrian fatalities per million population in Romania.

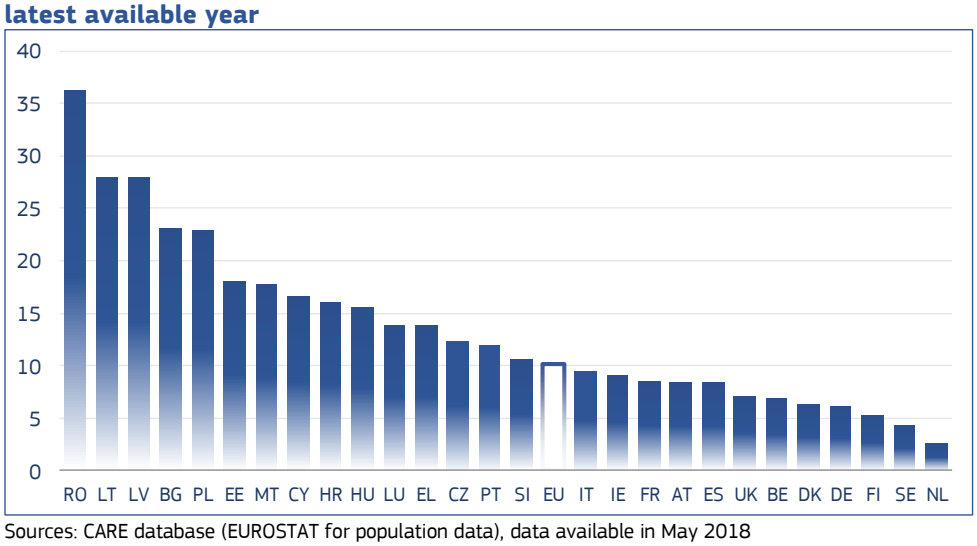
The lowest pedestrian fatality rate in 2016 was in the Netherlands (2,6) and the highest rate was in Romania (36,3).

Table 3: Pedestrian fatality rates per million population by country, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BE	9,8	9,3	9,4	9,8	10,3	9,4	8,9	9,5	8,2	6,9
BG	-	37,0	26,5	23,4	20,2	18,4	14,8	21,5	22,8	-
CZ	22,6	23,0	16,9	16,1	16,8	15,5	15,4	12,4	14,2	12,3
DK	12,5	10,6	9,4	7,9	5,9	5,6	5,9	3,9	4,8	6,3
DE	8,4	7,9	7,2	5,8	7,7	6,6	7,0	6,5	6,7	6,1
EE	28,3	30,6	17,2	10,5	19,6	21,9	17,4	19,8	18,3	-
IE	18,7	11,0	8,8	9,7	10,3	6,3	6,7	9,1	-	-
EL	23,1	22,4	18,2	16,1	20,0	15,3	13,7	11,4	11,8	13,8
ES	13,2	11,0	10,2	10,1	8,2	7,9	7,9	7,2	7,9	8,4
FR	9,1	8,8	7,9	7,7	8,2	7,7	7,3	7,8	7,3	8,6
HR	28,7	31,5	23,9	24,4	16,6	16,8	16,2	17,2	14,4	16,0
IT	10,8	11,0	11,3	10,5	9,9	9,7	9,2	9,5	9,9	9,4
CY	22,4	20,6	11,3	15,9	15,5	11,6	9,2	11,7	18,9	16,5
LV	71,5	47,9	37,9	37,3	28,9	30,3	34,6	35,5	31,7	27,9
LT	-	-	-	-	-	-	-	37,0	27,7	-
LU	14,7	12,4	24,3	2,0	11,7	11,4	9,3	5,5	12,4	13,9
HU	28,6	25,0	18,5	19,2	12,4	15,7	14,8	15,4	15,1	15,5
MT	7,4	2,5	9,7	4,8	-	-	-	-	11,4	17,8
NL	5,3	3,4	3,8	3,7	3,9	3,8	3,0	3,0	3,6	2,6
AT	13,0	12,3	12,1	11,7	10,4	9,6	9,7	8,3	9,8	8,4
PL	51,2	49,4	38,5	32,5	37,0	30,4	30,0	29,4	24,1	22,9
PT	14,8	14,7	14,0	18,4	18,8	15,1	13,7	13,9	14,1	11,9
RO	52,7	51,7	49,7	42,8	37,0	36,2	36,3	34,9	32,7	36,3
SI	15,9	19,4	11,8	12,7	10,2	9,2	9,7	6,8	7,8	10,7
SK	40,4	37,9	21,0	23,4	-	-	-	-	-	-
FI	9,1	10,0	5,6	6,5	7,6	5,4	6,3	6,6	5,8	5,3
SE	6,4	4,9	4,8	3,3	5,6	5,3	4,4	5,4	2,9	4,3
UK	10,9	9,6	8,4	6,6	7,4	6,8	6,3	7,2	6,6	7,1
EU	**17,1**	**16,1**	**13,9**	**12,5**	**12,7**	**11,4**	**11,1**	**11,1**	**10,6**	**10,6**
IS	3,3	0,0	6,3	6,3	12,6	6,3	3,1	0,0	3,0	6,0
NO	4,9	6,5	5,4	4,9	3,3	4,4	3,6	3,5	2,3	2,9
CH	10,5	7,8	7,8	9,6	8,8	9,4	8,6	5,3	7,0	6,0

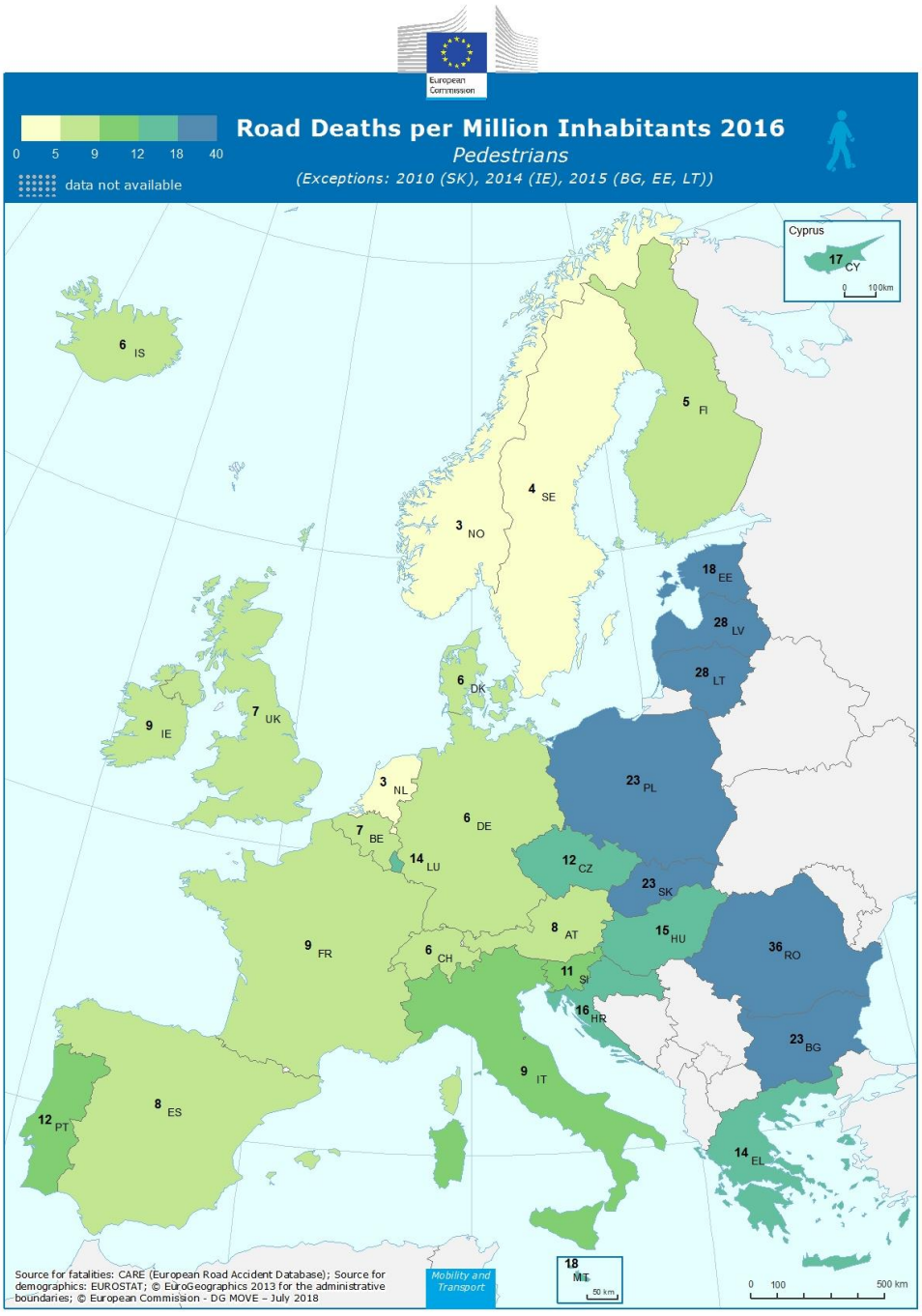
Sources: CARE database (EUROSTAT for population data), data available in May 2018

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



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

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



The rate of pedestrian fatalities per million population is highest in Eastern European countries.

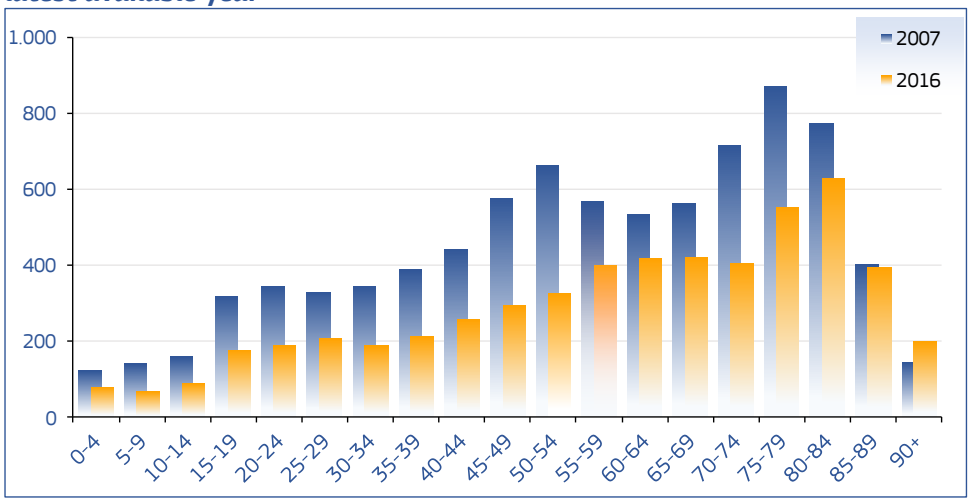
In the following tables and figures, the CARE data for 2016 are analysed in greater detail. It should be noted that the latest available data are used, meaning 2010 data for SK, 2014 data for IE and 2015 data for BG, EE and LT.

Age group and gender

The number of pedestrian fatalities peaks at the age of 80-84.

The elderly form the largest group in pedestrian fatalities. The number of elderly (aged >64) pedestrian fatalities decreased by 25% in the EU between 2007 and 2016, from 3.459 to 2.595, while the total number of pedestrian fatalities decreased by 36%. The change in the number of pedestrian fatalities from 2007 to 2016 by age group is presented in Figure 4a.

Figure 4a: Number of pedestrian fatalities by age group, EU, 2007 and 2016 or latest available year

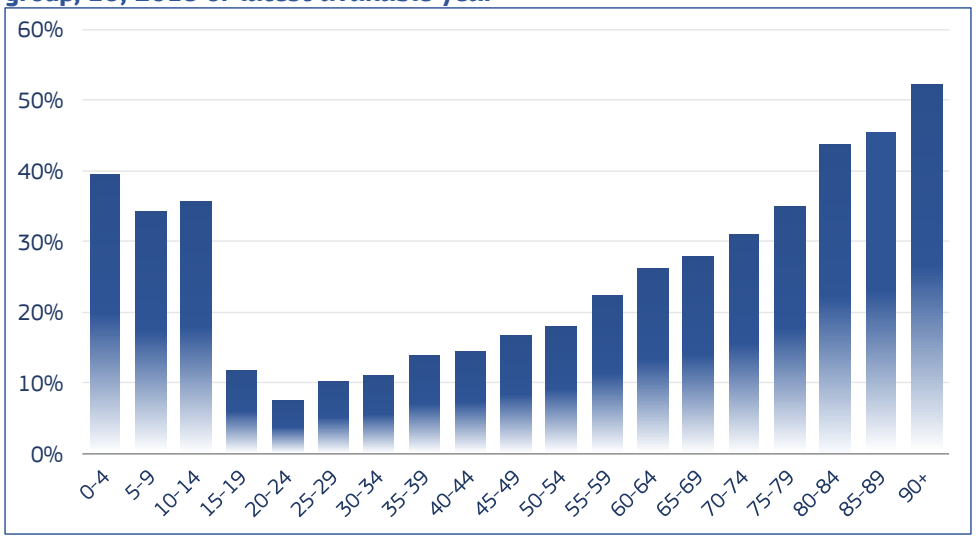


Source: CARE database, data available in May 2018

The percentage of pedestrian fatalities is high for children as well as for the elderly (see Figure 4b). A reason for this could be the lower level of motorization in these age groups, as well as their higher frailty. Table 4, Figure 4c and Figure 4d show that the elderly constitutes a critical age group when dealing with pedestrian road safety.

The percentage of pedestrian fatalities is higher for children and the elderly than for other age groups.

Figure 4b: Percentage of pedestrian fatalities of all road fatalities by age group, EU, 2016 or latest available year



Source: CARE database, data available in May 2018

Table 4 shows the shares of child and elderly pedestrian fatalities. Although a high percentage of child fatalities were pedestrians, they only represent 4% of total pedestrian fatalities. Moreover, Figure 4c shows that the fatality rate for children is below the average (almost 3 pedestrian fatalities per million population). The pedestrian fatality rate of the elderly is well above average and rises quickly from the age of 70 up to over 85.

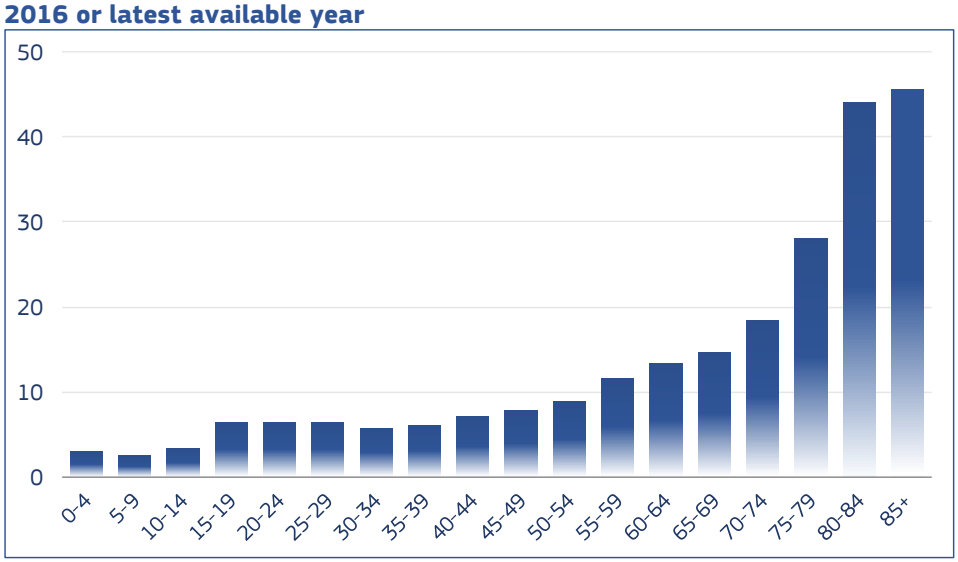
Table 4: Total number and distribution of pedestrian fatalities by country and age group, 2016 or latest available year

	Child pedestrian fatalities (age 0-14)	Elderly pedestrian fatalities (age >64)	Other pedestrian fatalities of known age	Total
BE	5%	51%	44%	78
BG	6%	50%	44%	164
CZ	2%	46%	52%	130
DK	8%	58%	33%	36
DE	5%	56%	38%	500
EE	8%	33%	58%	24
IE	14%	38%	48%	42
EL	8%	59%	34%	149
ES	2%	56%	42%	389
FR	5%	52%	43%	553
HR	3%	54%	43%	67
IT	2%	60%	38%	570
CY	0%	71%	29%	14
LV	0%	38%	62%	55
LT	1%	43%	56%	81
LU	13%	63%	25%	8
HU	1%	38%	61%	152
MT	0%	50%	50%	8
NL	5%	56%	40%	44
AT	4%	58%	38%	73
PL	2%	36%	62%	868
PT	2%	59%	39%	123
RO	6%	43%	51%	717
SI	0%	45%	55%	22
SK	4%	27%	69%	126
FI	10%	41%	48%	29
SE	10%	50%	40%	42
UK	7%	36%	57%	463
EU	**4%**	**47%**	**49%**	**5.527**
IS	0%	50%	50%	2
NO	0%	33%	67%	15
CH	12%	48%	40%	50

Source: CARE database, data available in May 2018

In Greece, Italy and Portugal about 60% of all pedestrian fatalities were elderly.

Figure 4c: Pedestrian fatality rates per million population by age group, EU, 2016 or latest available year

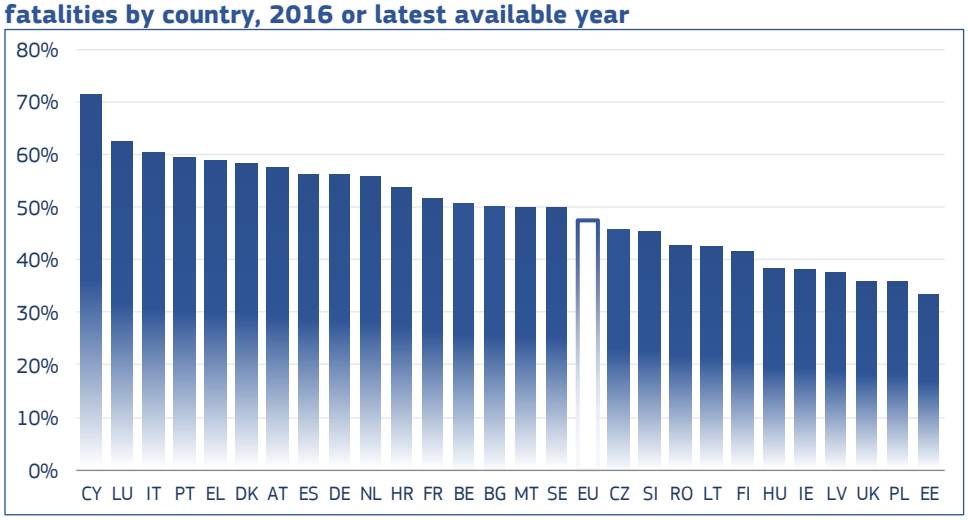


Sources: CARE database (EUROSTAT for population data), data available in May 2018

Figure 4d shows the variation of the percentage of elderly pedestrian fatalities between the EU countries in 2016. About 60% of all pedestrian fatalities in Greece, Italy and Portugal were elderly. Estonia had the lowest rate with 33% of pedestrian fatalities being elderly. The EU average was 47%.

The fatality rate of pedestrians aged at least 80 years old is more than ten times the rate of children.

Figure 4d: Percentage of elderly pedestrian fatalities (age>64) of all pedestrian fatalities by country, 2016 or latest available year

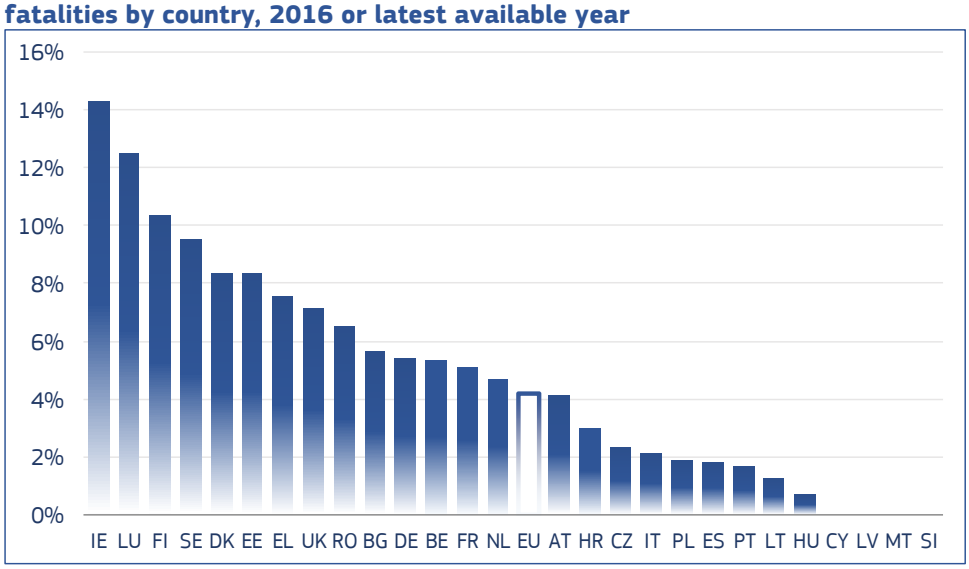


Source: CARE database, data available in May 2018

Figure 4e shows that the percentage of child pedestrian fatalities varies widely among the EU countries. 14% of pedestrian fatalities in Ireland and 10% in Sweden and Finland were children, compared with 1% in Hungary, and Lithuania. In Slovenia, Latvia and Cyprus, no child pedestrian fatalities were recorded in 2016.

The percentage of child pedestrian fatalities in 2016 varies widely among the EU countries.

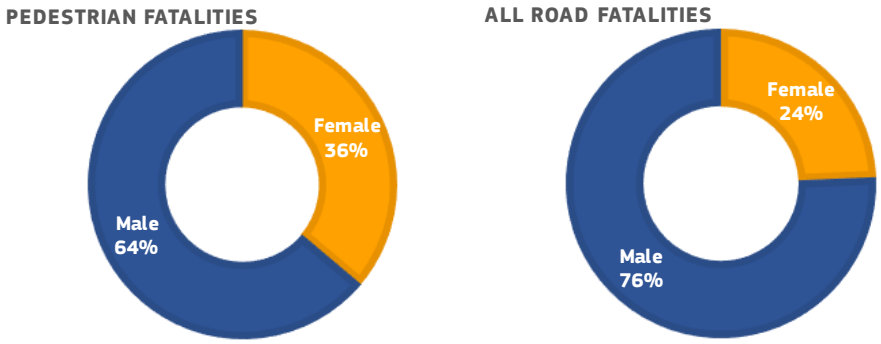
Figure 4e: Percentage of child pedestrian fatalities (age 0-14) of all pedestrian fatalities by country, 2016 or latest available year



Source: CARE database, data available in May 2018

Figure 5 shows the distribution of fatalities by gender, comparing pedestrian fatalities and all fatalities. More than one third of pedestrian fatalities were female, compared with less than one quarter of all fatalities. Map 2 shows the distribution of pedestrian fatalities by gender in the different EU countries, Iceland, Norway and Switzerland.

Figure 5: Distribution of pedestrian and all road fatalities by gender, EU, 2016 or latest available year

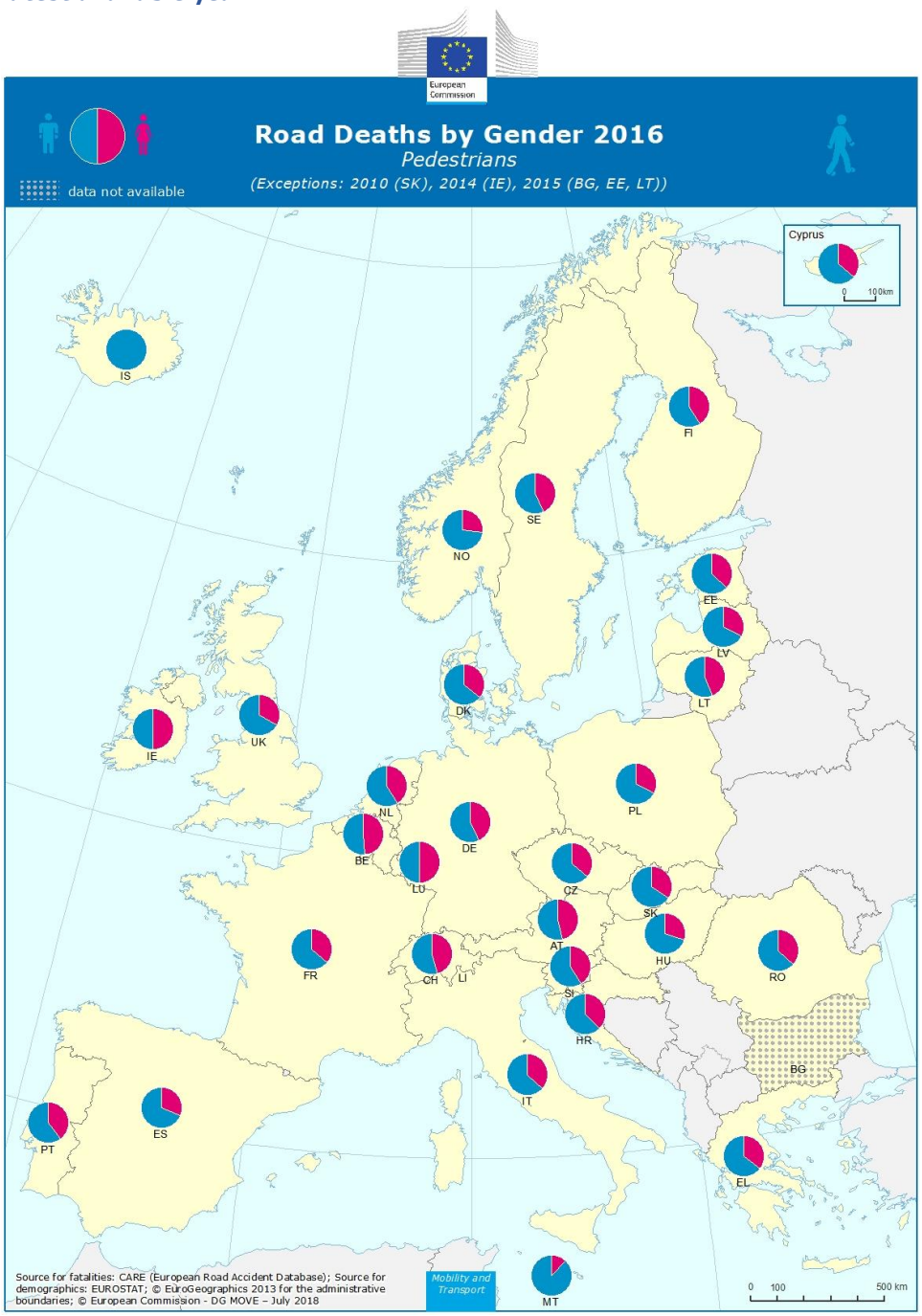


Source: CARE database, data available in May 2018

More than one third of pedestrian fatalities were female, compared with less than one quarter of all road fatalities.

There were more male than female pedestrian fatalities in most EU countries.

Map 2: Distribution of pedestrian fatalities by country and gender, 2016 or latest available year



Day of the week and time of the day

Table 5 shows the distribution of elderly fatalities by time of the day, dividing the day into six 4-hour periods. About 50% of all pedestrian fatalities occurred between 4pm and midnight.

Table 5: Total number and distribution of pedestrian fatalities by country and time of 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	12%	10%	21%	18%	28%	12%	78
BG	2%	12%	19%	15%	34%	18%	164
CZ	8%	18%	12%	12%	32%	19%	130
DK	11%	0%	17%	28%	25%	19%	36
DE	8%	11%	20%	20%	29%	12%	500
EE	4%	13%	13%	8%	42%	21%	24
IE	17%	10%	24%	10%	26%	14%	42
EL	6%	9%	18%	17%	21%	29%	149
ES	6%	13%	22%	16%	26%	18%	389
FR	9%	13%	25%	16%	25%	12%	553
HR	6%	16%	9%	12%	25%	31%	67
IT	7%	7%	24%	12%	27%	23%	570
CY	0%	21%	14%	7%	29%	29%	14
LV	8%	15%	11%	8%	36%	23%	55
LT	11%	9%	5%	10%	47%	19%	81
LU	13%	13%	0%	0%	75%	0%	8
HU	13%	16%	12%	8%	36%	16%	152
MT	25%	38%	25%	0%	13%	0%	8
NL	5%	5%	25%	30%	23%	14%	44
AT	8%	16%	16%	14%	36%	10%	73
PL	6%	12%	12%	10%	39%	22%	868
PT	4%	9%	29%	20%	19%	20%	123
RO	5%	10%	14%	12%	35%	23%	717
SI	9%	14%	23%	18%	14%	23%	22
SK	7%	11%	9%	11%	37%	25%	126
FI	7%	21%	21%	31%	7%	14%	29
SE	7%	10%	12%	36%	21%	14%	42
UK	12%	8%	16%	18%	29%	16%	463
EU	**7%**	**11%**	**18%**	**14%**	**31%**	**19%**	**5.527**
IS	0%	50%	0%	0%	0%	50%	2
NO	0%	7%	20%	13%	40%	20%	15
CH	4%	12%	20%	20%	30%	14%	50

Source: CARE database, data available in May 2018

About 50% of all pedestrian fatalities occurred between 4pm and midnight in the EU.

Table 6 shows the distribution of pedestrian fatalities by day of the week in the EU for 2016. The highest percentage of pedestrians killed in road accidents was recorded on Fridays and Saturdays, while the lowest was recorded on Sundays.

Table 6: Total number and distribution of pedestrian fatalities by country and day of the week, 2016 or latest available year

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
BE	17%	12%	18%	6%	14%	19%	14%	78
BG	15%	12%	11%	16%	17%	16%	13%	164
CZ	17%	11%	14%	13%	20%	8%	18%	130
DK	25%	8%	8%	14%	22%	8%	14%	36
DE	15%	15%	17%	13%	17%	14%	10%	500
EE	13%	13%	13%	21%	17%	17%	8%	24
IE	10%	19%	10%	21%	12%	14%	14%	42
EL	12%	11%	14%	17%	14%	17%	15%	149
ES	16%	11%	17%	17%	15%	13%	11%	389
FR	15%	17%	14%	11%	15%	16%	12%	553
HR	15%	9%	16%	12%	19%	19%	9%	67
IT	15%	13%	15%	13%	17%	17%	10%	570
CY	7%	7%	21%	7%	21%	21%	14%	14
LV	9%	16%	18%	13%	15%	22%	7%	55
LT	15%	12%	12%	7%	20%	22%	11%	81
LU	25%	13%	0%	13%	25%	25%	0%	8
HU	14%	19%	13%	10%	16%	20%	7%	152
MT	0%	25%	0%	13%	13%	25%	25%	8
NL	11%	25%	14%	16%	7%	14%	14%	44
AT	15%	15%	15%	14%	14%	14%	14%	73
PL	14%	14%	14%	13%	18%	16%	11%	868
PT	11%	12%	16%	11%	19%	20%	11%	123
RO	15%	13%	12%	15%	16%	15%	15%	717
SI	9%	18%	9%	18%	14%	18%	14%	22
SK	17%	13%	12%	12%	17%	17%	12%	126
FI	10%	14%	17%	14%	7%	31%	7%	29
SE	17%	17%	14%	12%	17%	5%	19%	42
UK	12%	16%	11%	16%	17%	20%	9%	463
EU	**14%**	**14%**	**14%**	**14%**	**16%**	**16%**	**11%**	**5.527**
IS	0%	0%	0%	0%	50%	50%	0%	2
NO	20%	20%	7%	20%	13%	7%	13%	15
CH	10%	16%	10%	18%	20%	18%	8%	50

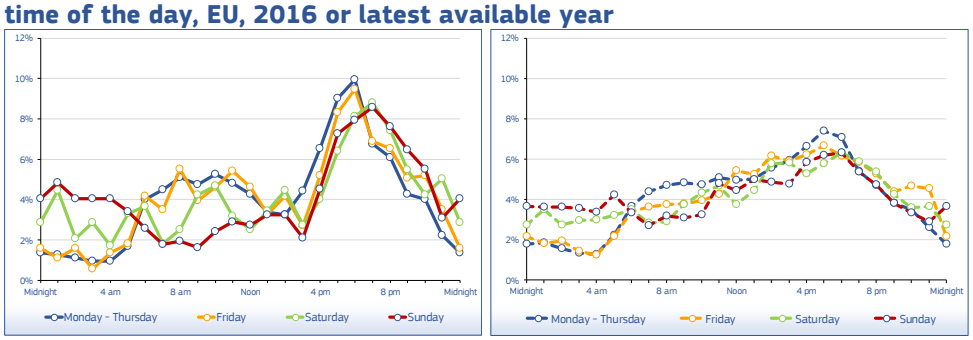
Source: CARE database, data available in May 2018

In 2016, the highest number of pedestrian fatalities was recorded on Fridays and Saturdays in the EU.

Figure 6 investigates whether the EU distribution of fatalities by time of the day varies depending on the day of the week for pedestrians and all road users. The weekday distributions (Monday-Thursday) are similar, so have been combined in the figure.

Pedestrian and total road fatality distributions by day of the week and time of the day are quite similar. However, relatively more pedestrians are killed in road accidents between 6pm and 9pm during the whole week and between midnight and 5am on Sundays.

Figure 6: Distribution of pedestrian and total fatalities by day of the week and time of the day, EU, 2016 or latest available year



Source: CARE database, data available in May 2018

Seasonality

April to June is the period of the year with the lowest number of pedestrian fatalities, whereas pedestrian fatalities peak in the last quarter of the year.

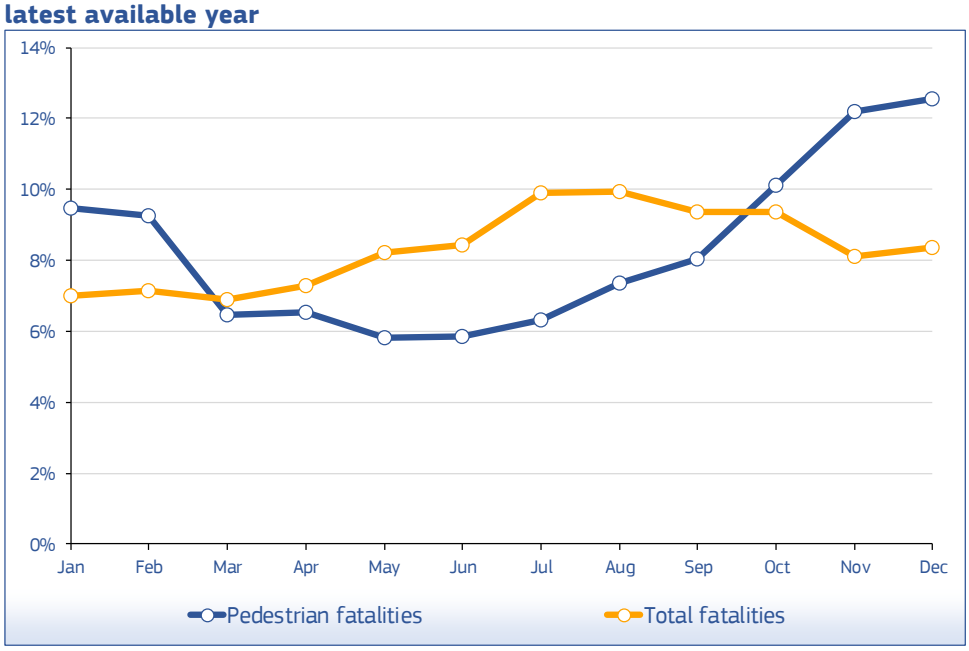
Table 7: Total number and distribution of pedestrian fatalities by country and month, 2016 or latest available year

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Total
BE	31%	26%	21%	23%	78
BG	20%	20%	27%	32%	164
CZ	32%	15%	18%	35%	130
DK	28%	19%	22%	31%	36
DE	28%	20%	20%	31%	500
EE	25%	13%	8%	54%	24
IE	26%	26%	12%	36%	42
EL	20%	18%	31%	31%	149
ES	29%	18%	24%	30%	389
FR	23%	20%	24%	34%	553
HR	28%	25%	22%	24%	67
IT	26%	19%	22%	33%	570
CY	14%	21%	29%	36%	14
LV	24%	13%	20%	44%	55
LT	26%	10%	11%	53%	81
LU	13%	25%	13%	50%	8
HU	29%	13%	17%	41%	152
MT	0%	25%	50%	25%	8
NL	34%	20%	9%	36%	44
AT	29%	19%	19%	33%	73
PL	24%	16%	19%	41%	868
PT	24%	15%	26%	35%	123
RO	21%	18%	25%	36%	717
SI	41%	23%	14%	23%	22
SK	27%	15%	26%	32%	126
FI	17%	14%	34%	34%	29
SE	26%	12%	26%	36%	42
UK	27%	21%	18%	34%	463
EU	**25%**	**18%**	**22%**	**35%**	**5.527**
IS	0%	0%	50%	50%	2
NO	13%	20%	47%	20%	15
CH	22%	24%	26%	28%	50

Source: CARE database, data available in May 2018

Table 7 shows the percentage of pedestrian fatalities in each quarter of 2016. Generally pedestrian fatalities occur most frequently from October to December and least frequently from April to June. The percentage of pedestrian fatalities between October and December is especially high in Estonia (54%) and Lithuania (53%).

Figure 7: Distribution of total and pedestrian fatalities by month, EU, 2016 or latest available year



Sources: CARE database, data available in May 2018

The number of pedestrian fatalities per month peaks in the winter, especially in December, whereas the overall number of fatalities peaks in the summer.

Figure 7 shows that pedestrian fatalities are more seasonal than all road fatalities, i.e. the number per month is more variable. The number increases during the autumn, peaks in December and then decreases in the spring, whereas the total number of fatalities increases during the spring and peaks in July. The increase in pedestrian fatalities during the winter is probably caused by the higher risk for pedestrians in darkness. The duration of darkness/twilight is longer than in other seasons and pedestrians are much less visible than vehicles, which can use lights.

Lighting conditions

Table 8 shows the distribution of pedestrian fatalities by lighting conditions. 45% of pedestrian fatalities in the EU occurred in darkness, whilst 39% of pedestrian fatalities were recorded in daylight. In Italy, lighting conditions for pedestrian fatalities were not recorded in 2016.

In 2016, 45% of all pedestrian fatalities in the EU occurred in darkness.

Table 8: Total number and distribution of pedestrian fatalities by country and lighting conditions, 2016 or latest available year

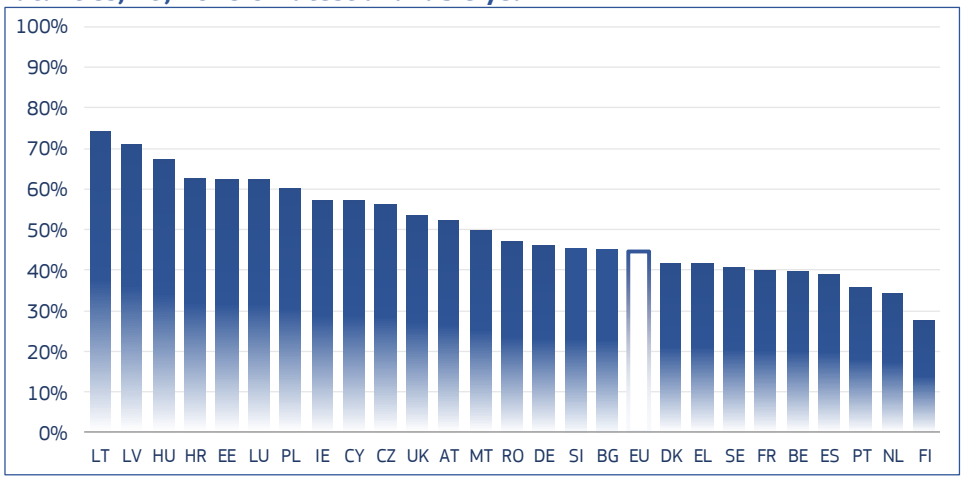
	Darkness no street lights	Darkness no street lights or street lights	Darkness street lights lit	Darkness street lights unknown	Darkness street lights unlit	Daylight	Twilight	Unknown	Total
BE	0%	0%	36%	0%	4%	55%	0%	5%	78
BG	27%	0%	18%	0%	0%	51%	4%	0%	164
CZ	0%	0%	29%	0%	27%	35%	8%	0%	130
DK	8%	0%	25%	3%	6%	56%	3%	0%	36
DE	0%	0%	0%	46%	0%	49%	4%	0%	500
EE	0%	0%	63%	0%	0%	29%	0%	8%	24
IE	17%	0%	38%	0%	2%	43%	0%	0%	42
EL	9%	0%	30%	0%	3%	51%	7%	0%	149
ES	16%	0%	20%	0%	3%	52%	8%	0%	389
FR	23%	0%	15%	0%	1%	56%	4%	0%	553
HR	28%	0%	34%	0%	0%	34%	3%	0%	67
IT	0%	0%	0%	0%	0%	0%	0%	100%	570
CY	14%	0%	43%	0%	0%	43%	0%	0%	14
LV	0%	0%	11%	60%	0%	27%	2%	0%	55
LT	42%	0%	28%	0%	4%	0%	4%	22%	81
LU	0%	0%	63%	0%	0%	25%	13%	0%	8
HU	35%	0%	31%	0%	1%	27%	6%	0%	152
MT	13%	0%	38%	0%	0%	13%	0%	38%	8
NL	9%	0%	18%	7%	0%	59%	7%	0%	44
AT	0%	0%	18%	0%	34%	41%	7%	0%	73
PL	30%	0%	30%	0%	0%	29%	11%	0%	868
PT	15%	0%	20%	0%	0%	60%	4%	0%	123
RO	17%	0%	27%	0%	3%	45%	8%	0%	717
SI	0%	0%	0%	45%	0%	41%	14%	0%	22
SK	0%	0%	29%	33%	0%	33%	3%	2%	126
FI	0%	17%	10%	0%	0%	59%	14%	0%	29
SE	21%	0%	17%	2%	0%	55%	2%	2%	42
UK	16%	0%	32%	4%	2%	47%	0%	0%	463
EU	**16%**	**0%**	**21%**	**6%**	**2%**	**39%**	**5%**	**11%**	**5.527**
IS	50%	0%	0%	0%	0%	0%	50%	0%	2
NO	14%	0%	21%	0%	0%	64%	0%	7%	14
CH	14%	0%	22%	2%	0%	58%	4%	0%	50

Source: CARE database, data available in May 2018

Figure 8 shows that the percentage of pedestrian fatalities in darkness varies between countries, from 74% in Lithuania to 28% in Finland, while the EU average is 45%.

The percentage of pedestrian fatalities in the darkness varies from 74% in Lithuania to 28% in Finland.

Figure 8: Percentage of pedestrian fatalities during darkness of all pedestrian fatalities, EU, 2016 or latest available year



Source: CARE database, data available in May 2018

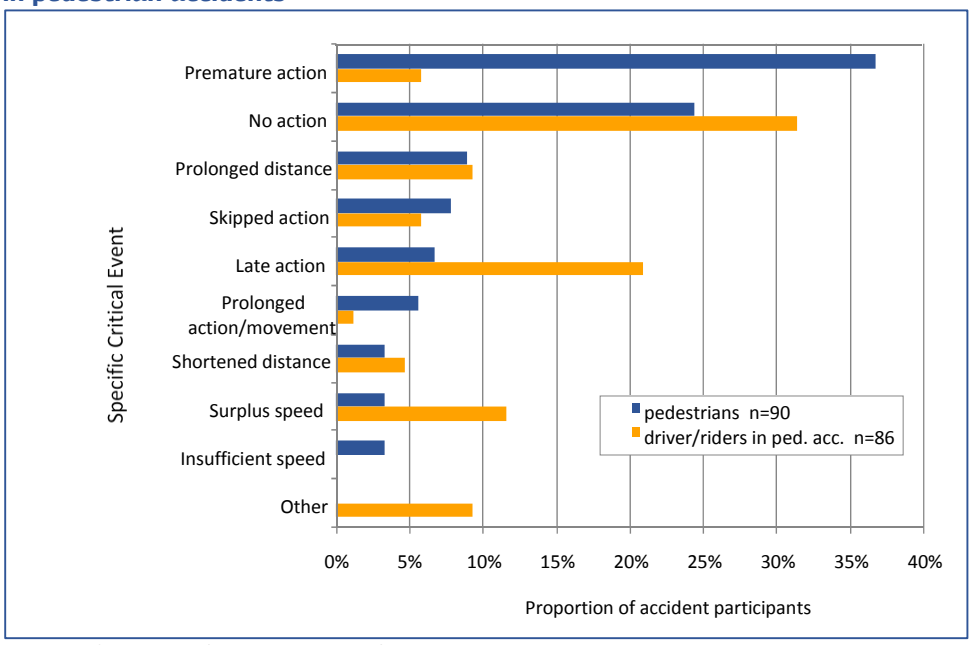
Accident Causation

During the EC SafetyNet project, in-depth data were collected using a common methodology for samples of accidents that occurred in Germany, Italy, the Netherlands, Finland, Sweden and the UK. The SafetyNet Accident Causation Database was formed between 2005 and 2008, and contains details of 1.006 accidents covering all injury severities. A detailed process for recording causation (SafetyNet Accident Causation System – SNACS) attributes one specific critical event to each driver, rider or pedestrian. Links then form chains between the critical event and the causes that led to it. For example, the critical event of late action could be linked to the cause observation missed, which was a consequence of fatigue, itself a consequence of an extensive driving spell.

In the database, 8% (85) of the accidents involve a pedestrian. Males account for 50% of pedestrians and the mean age is 45 years. Figure 9 compares the distribution of specific critical events for pedestrians with the distribution for drivers/riders when they are in an accident with a pedestrian involved.

The specific critical event of 'premature action' is recorded for just over one third of pedestrians in the sample.

Figure 9: Distribution of specific critical events - pedestrians and driver/riders in pedestrian accidents



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

Premature action is recorded far more frequently for pedestrians than the drivers/riders in the accident, whilst no action and, in particular, late action are recorded less frequently. Premature action describes a critical event with an action started too early, before a signal was given or required conditions were established. This contrast between the participant groups indicates scenarios where a pedestrian starts an action too early or without right of way and the drivers/riders react too late or no action is undertaken, or possible.

Table 9 gives the most frequent links between causes for pedestrians in the dataset. For this group there are 101 such links in total.

Table 9: Ten most frequent links between causes - pedestrians

Links between causes	Frequency
Faulty diagnosis - Information failure (between driver and traffic environment or driver and vehicle)	16
Observation missed - Inadequate plan	10
Observation missed - Distraction	10
Observation missed - Temporary obstruction to view	10
Inadequate plan - Psychological stress	5
Inadequate plan - Insufficient knowledge	5
Decision error - Distraction	4
Inadequate plan - Distraction	4
Inadequate plan - Under the influence of substances	4
Observation missed - Faulty diagnosis	3
Others	30
Total	**101**

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

16% of the links between causes are observed to be between 'faulty diagnosis' and 'information failure'.

Table 9 gives both an indication of the most frequently recorded causes and the most frequently recorded links between them. The numbers here are low but the links are similar to those seen for driver and rider groups in other basic fact sheets, with faulty diagnosis, observation missed and inadequate plan being the common causes. Distraction is a factor in pedestrian accidents, leading to missed observations, decision errors and inadequate plans.

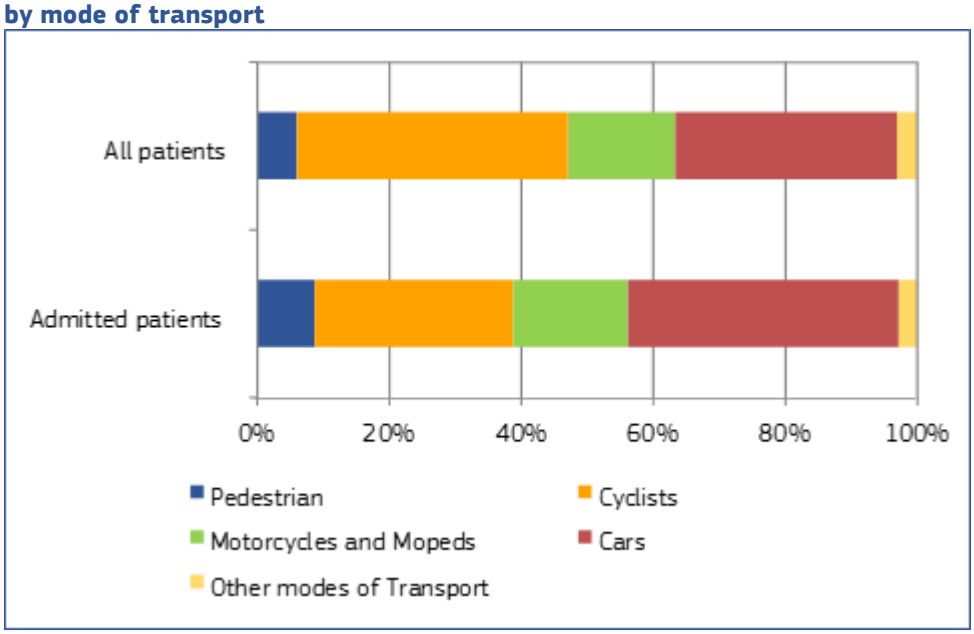
Road Accident Health Indicators

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

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).

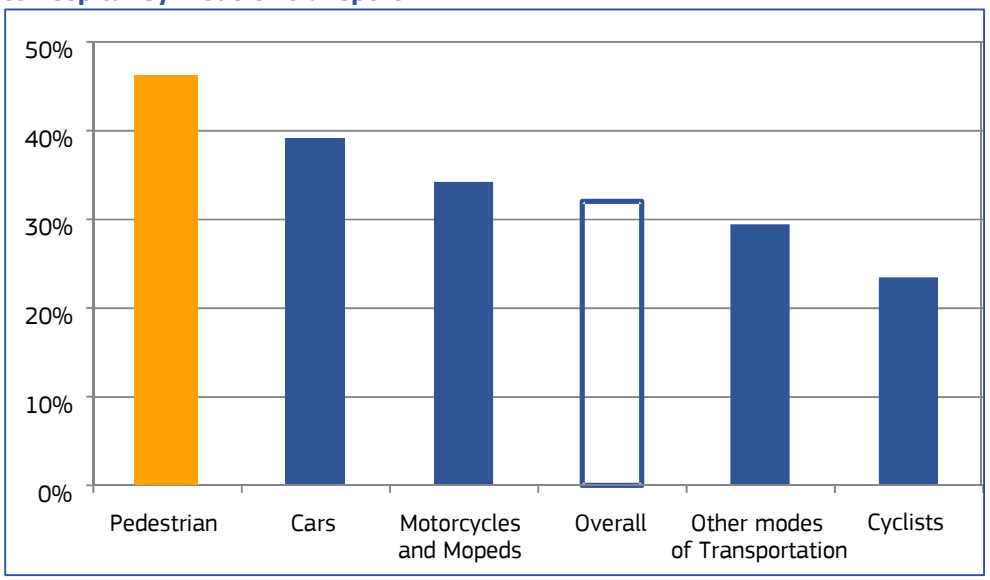
According to estimates based on the EU IDB more than four million people are injured annually in road traffic accidents, one million of whom have to be admitted to hospital.

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 45% of pedestrian casualties recorded in the IDB were admitted to hospital. Figure 12 shows that the average length of stay was almost eight days overall, and ten days for pedestrians.

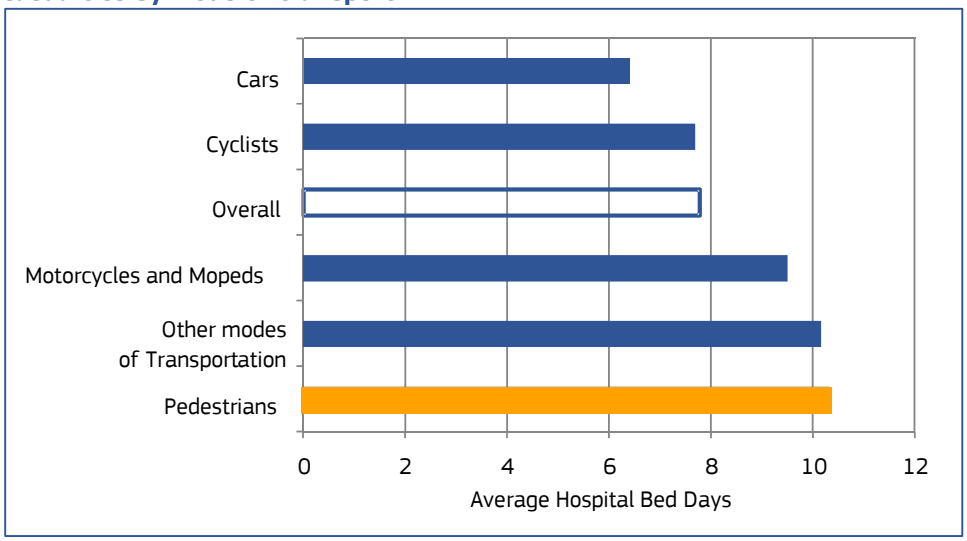
About 45% of the pedestrian casualties who attended a hospital were admitted to the hospital; their average stay in hospital was ten days.

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



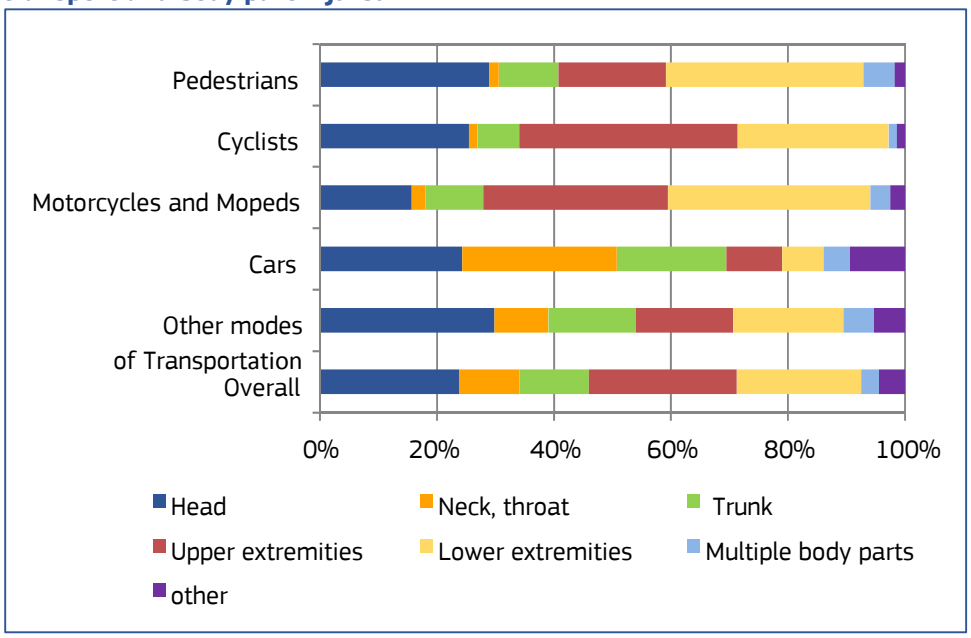
EU Injury Database (EU IDB AI) - hospital treated patients. IDB AI Transport module and place of occurrence (code 6.n [public road]); n-all = 73 600: n-admitted = 23.568 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

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).

Fractures account for more than 40% of all injuries inflicted on pedestrian traffic casualties attending hospital.

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. Pedestrians, for example, suffer a high proportion of injuries to the lower extremities.

Table 10 shows the types of injuries most frequently recorded in the EU IDB. It compares the distribution of injuries among pedestrians and all types of road user.

Table 10: Ten most frequently recorded types of injury by mode of transport

	Pedestrians	All modes of transport
Contusion, bruise	26%	34%
Fracture	42%	27%
Open wound	10%	10%
Distortion, sprain	3%	8%
Concussion	6%	7%
Other specified brain injury	2%	2%
Luxation, dislocation	2%	2%
Injury to muscle and tendon	1%	2%
Abrasion	1%	1%
Injury to internal organs	1%	1%
Other specified types of injury	6%	6%
Total	**100%**	**100%**

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

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 Pedestrians, European Commission, Directorate General for Transport, June 2018.

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