



# Traffic Safety Basic Facts 2007

## The Elderly (Aged >64)

Due to their greater frailty, the elderly are more likely to be seriously injured in any given accident than younger people.

In 2005<sup>1</sup>, 4.939 elderly people were killed in road traffic accidents in the EU-14<sup>2</sup> (EU-15 without Germany). This represents 19,0% of all fatalities in 2005. There was only a slight reduction of -0,9% of senior fatalities from 2004 to 2005. Table 1 presents the annual data by country that are available from CARE since 1996, with the totals<sup>1</sup> presented in Figure 1. The line is dashed for years where data up to 2005 is not available for all countries. Because the data for the new countries are only available for the year 2005, they are not considered in EU total trends.

Table 1: Elderly fatalities by country and year, 1996 – 2005<sup>1</sup>

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE	267	237	260	233	238	264	210	240	201	186
DK	129	132	123	117	134	102	103	99	80	70
EE	-	-	-	-	-	-	-	-	-	20
EL	437	406	445	415	428	385	340	322	317	322
ES	855	900	890	910	849	867	835	817	746	719
FR	1.578	1.494	1.587	1.443	1.370	1.393	1.361	1.120	962	1.014
IE	61	66	80	71	44	47	60	53	-	-
IT	1.435	1.548	1.379	1.391	1.365	1.276	1.394	1.266	1.165	-
LU	3	9	7	7	10	7	5	-	-	-
HU	-	-	-	-	-	-	-	-	-	206
MT	-	-	-	-	-	-	-	-	-	3
NL	273	266	227	242	235	222	213	221	-	-
AT	195	212	208	225	190	186	211	197	177	151
PL	-	-	-	-	-	-	-	-	-	931
PT	485	441	365	340	342	320	304	304	230	222
FI	102	123	104	96	106	96	99	96	97	91
SE	181	171	148	173	154	147	139	118	139	104
UK	781	788	771	758	679	652	655	658	589	616
EU-14 <sup>1</sup>	6.782	6.793	6.594	6.421	6.144	5.964	5.929	5.517	4.982	4.939
Yearly <sup>1</sup> Change	-	0,2%	-2,9%	-2,6%	-4,3%	-2,9%	-0,6%	-7,0%	-9,7%	-0,9%

Source: CARE Database / EC  
Date of query: October 2007

<sup>1</sup> Using latest data available, i.e. 2005 for all countries except LU (2002), IE and NL (2003) and IT (2004). The data from EE, HU, MT and PL are not considered.

<sup>2</sup> See table "Definition of EU-level and used Country abbreviations" on page 13

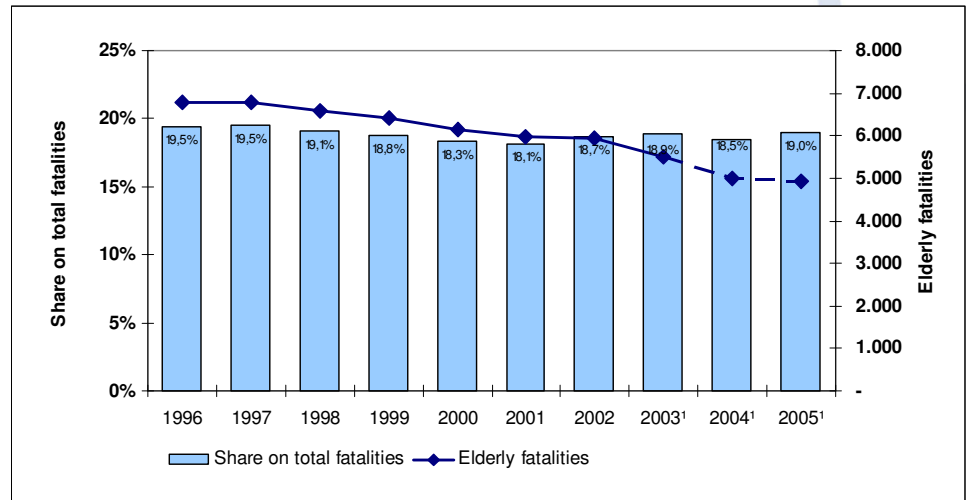
In 2005<sup>1</sup>, more than 4.900 seniors died in road traffic accidents in 14 European countries.

Fatalities of elderly people in road traffic accidents reduced by one third between 1996 and 2005.





**Figure 1: Number of elderly fatalities and their proportion on total fatalities in EU-14, 1996-2005<sup>1</sup>**



Source: CARE Database / EC  
Date of query: October 2007

The number of elderly fatalities in the EU-14 countries has decreased over the last decade, but the number in proportion to the total number of fatalities is stagnating.

Table 2 compares the fatality rates of elderly people and middle-aged people (45-64 years) with the fatality rate of the whole population. The ratios of elderly to middle-aged and of elderly to all fatalities clearly show that the risk of being killed in an accident is higher for the elderly than for the middle-aged and that the elderly have a higher fatality risk than the average in almost all EU-14 countries. Some of the countries with the best overall road safety records, such as Sweden, Finland, The Netherlands and Denmark, have rather high proportions of elderly fatalities.

Nearly one in five road traffic fatalities is 65 or older.





**Table 2: Fatalities per million inhabitants (fatality rates) of the middle-aged and the elderly by country, 2005**

	Fatalities per million inhabitants (fatality rate)			Comparisons	
	Middle-aged	Elderly	Total	Elderly/Middle-aged	Elderly/Total
<b>BE</b>	91	103	104	1,13	0,99
<b>DK</b>	52	86	61	1,65	1,40
<b>EE</b>	143	89	126	0,63	0,71
<b>EL</b>	109	158	149	1,45	1,06
<b>ES</b>	96	99	102	1,04	0,97
<b>FR</b>	67	100	85	1,49	1,18
<b>IE**</b>	54	115	81	2,12	1,41
<b>IT*</b>	71	101	96	1,43	1,06
<b>LU***</b>	80	76	136	0,95	0,56
<b>HU</b>	150	130	127	0,87	1,03
<b>MT</b>	0	56	42	-	1,32
<b>NL**</b>	46	96	63	2,09	1,52
<b>AT</b>	79	113	93	1,43	1,21
<b>PL</b>	151	184	143	1,22	1,29
<b>PT</b>	112	123	118	1,11	1,04
<b>FI</b>	62	109	72	1,77	1,51
<b>SE</b>	46	67	49	1,44	1,37
<b>UK</b>	41	64	55	1,56	1,15
<b>EU-18</b>	80	104	93	1,30	1,13

\* Data from 2004

\*\* Data from 2003

\*\*\* Data from 2002

Source: CARE Database / EC

Date of query: October 2007

Source of population data: EUROSTAT

The fatality rates for the middle-aged and the elderly are illustrated in Figure 2, with countries being sorted by the fatality rate for the elderly. Fatality rates, both for the elderly and for the middle-aged, vary greatly in the member states. In 2005 Poland and Greece have the highest rates of fatalities per million inhabitants for elderly.

In most European countries, the elderly are at greater risk of being killed in a road accident than the overall population. Middle-aged people (age 45-64) are at a lower risk of being killed than seniors.

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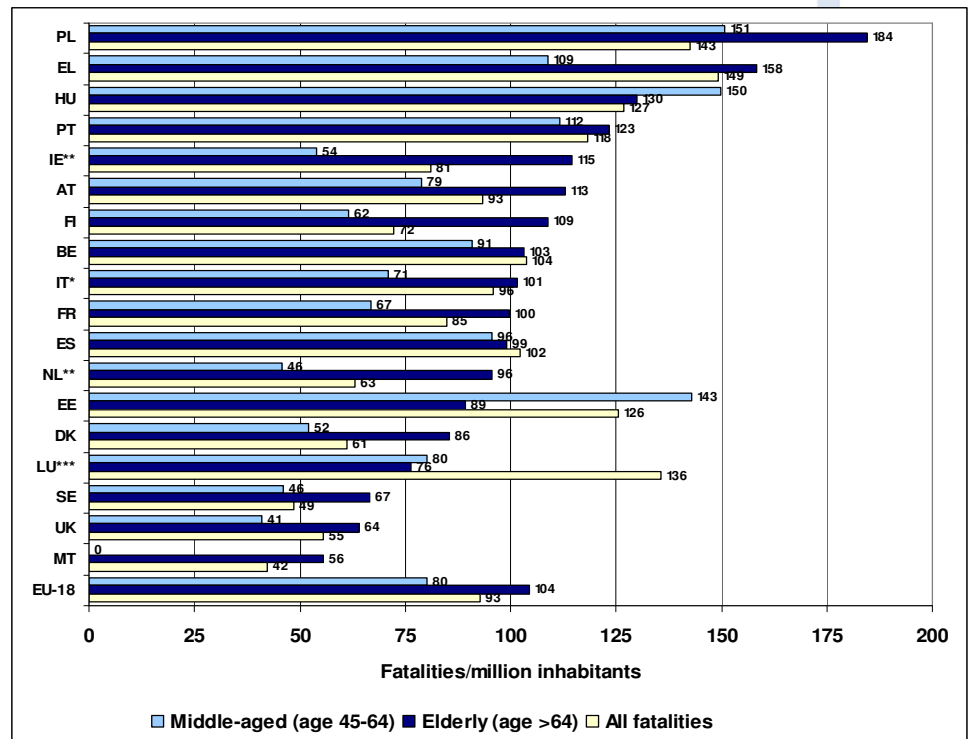
Urban Areas





The rate of elderly fatalities per million inhabitants ranges from 56 in Malta to 184 in Poland.

Figure 2: Fatalities per million inhabitants for middle-aged, elderly and total fatalities, 2005



\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007  
Source of population data: EUROSTAT

### Age and gender

Table 3 and Figure 3 give more details of the age groups and of gender distribution of elderly fatalities, using three age ranges. About two third (64%) of senior fatalities are men.

Table 3: Elderly fatalities by age group, by gender and by country, 2005

	65-74 years fatalities	75-84 years fatalities	85+ years fatalities	Elderly fatalities (>64 years)			Total fatalities
				total	male	female	
BE	90	83	13	186	102	84	1.089
DK	25	29	16	70	41	29	331
EE	13	7	-	20	13	7	169
EL	179	115	28	322	218	104	1.658
ES	384	274	61	719	475	244	4.442
FR	384	491	139	1.014	612	402	5.318
IE**	22	24	7	53	29	24	337
IT*	511	533	121	1.165	840	325	5.625
LU***	3	2	-	5	2	3	62
HU	108	81	17	206	138	68	1.278
MT	1	1	1	3	2	1	17
NL**	82	100	39	221	136	83	1.028
AT	71	57	23	151	100	51	768
PL	482	375	74	931	547	381	5.444
PT	146	67	9	222	161	60	1.247
FI	35	46	10	91	59	32	379
SE	39	49	16	104	70	34	440
UK	217	285	114	616	365	251	3.336
EU-18	2.792	2.619	688	6.099	3.909	2.184	32.968
Share	46%	43%	11%	100%	64%	36%	-

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

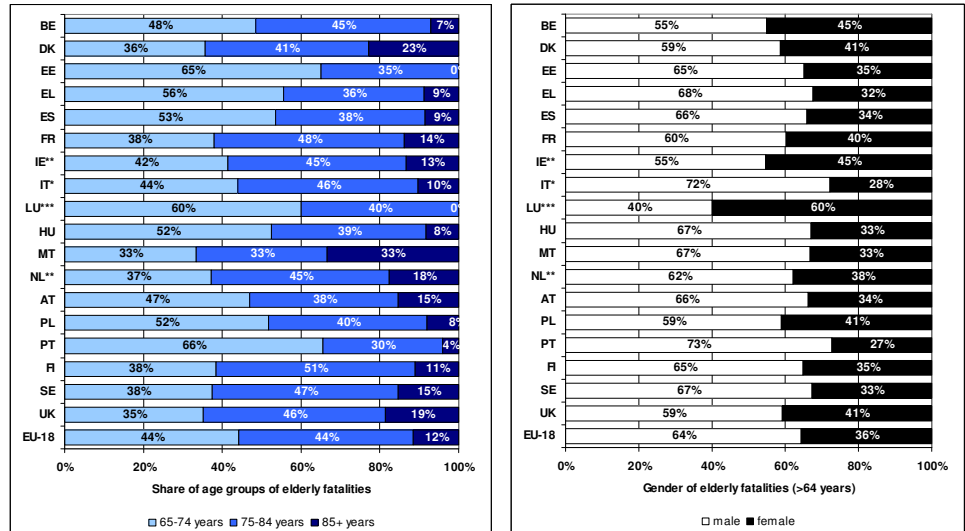
11% of all elderly fatalities are aged 85+.





Among the elderly, women are more likely to be killed in road accidents (36%) than within the whole population (23%). In Belgium, Denmark, France, Ireland, Luxembourg (due to small numbers not significant), Poland and the UK, the proportion of women among elderly fatalities is greater than 40%.

Figure 3: Elderly fatalities by age group, by gender and by country, 2005



\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

Around two thirds of elderly people killed in road accidents are men.

Table 4: Fatality rates of the elderly by age group and by country, 2005

	Fatalities by million inhabitants			
	65-74 years	75-84 years	85+ years	total population
BE	94	123	75	104
DK	57	104	157	61
EE	98	93	-	126
EL	150	165	194	149
ES	101	104	75	102
FR	75	127	120	85
IE**	85	155	145	81
IT*	83	128	101	96
LU***	83	85	-	136
HU	120	143	143	127
MT	31	57	213	42
NL**	65	125	160	63
AT	101	114	171	93
PL	163	214	216	143
PT	143	108	57	118
FI	78	153	117	72
SE	51	85	72	49
UK	43	81	104	55
EU-18	116	162	153	93

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

Elderly people between 75 and 84 years have the highest death risk of all elderly people.

The age group 75-84 years, compared to its proportion of the population, has the highest average fatality rate of all elderly people





(162 fatalities by million inhabitants), followed by the oldest group aged 85+ (153). Also the fatality rate of people between 65 and 74 years (116) is higher than the fatality rate of the population as a whole (93). An explanation for the lower risk for people of 85 and more years might be the reduced mobility in this age group.

## Road user type

Table 5 shows the distribution of elderly fatalities by road user type. About 37,5% of elderly fatalities were pedestrians. In Estonia, Malta, Hungary and Poland the share of senior pedestrian fatalities is high. The proportion of elderly fatalities who were car drivers ranged from almost 10% in Poland and Estonia up to nearly 40% in France, Sweden and Austria. The results from Table 5 are illustrated in Figure 4 (sorted by the share of killed senior pedestrians).

**Table 5: Elderly fatalities by road user type, 2005**

	Pedestrian	Moped rider	Motor-cyclist	Car driver	Car passenger	Others	Total
BE	54	2	-	60	25	45	186
DK	18	5	1	23	10	13	70
EE	10	1	-	2	2	5	20
EL	126	16	18	63	54	45	322
ES	285	43	2	184	121	85	719
FR	325	17	19	398	168	87	1.014
IE**	22	-	-	14	7	10	53
IT*	381	69	27	346	158	184	1.165
LU***	3	-	-	2	-	-	5
HU	90	9	1	32	19	55	206
MT	2	-	-	1	-	-	3
NL**	39	27	-	44	24	87	221
AT	43	9	3	57	13	26	151
PL	512	12	4	96	94	213	931
PT	87	29	-	36	18	52	222
FI	20	1	-	24	15	31	91
SE	22	-	2	44	15	21	104
UK	250	1	16	189	102	58	616
EU-18	2.288	240	93	1.615	845	1.018	6.099
Share	37,5%	3,9%	1,5%	26,5%	13,9%	16,7%	100,0%

\* Data from 2004

\*\* Data from 2003

\*\*\* Data from 2002

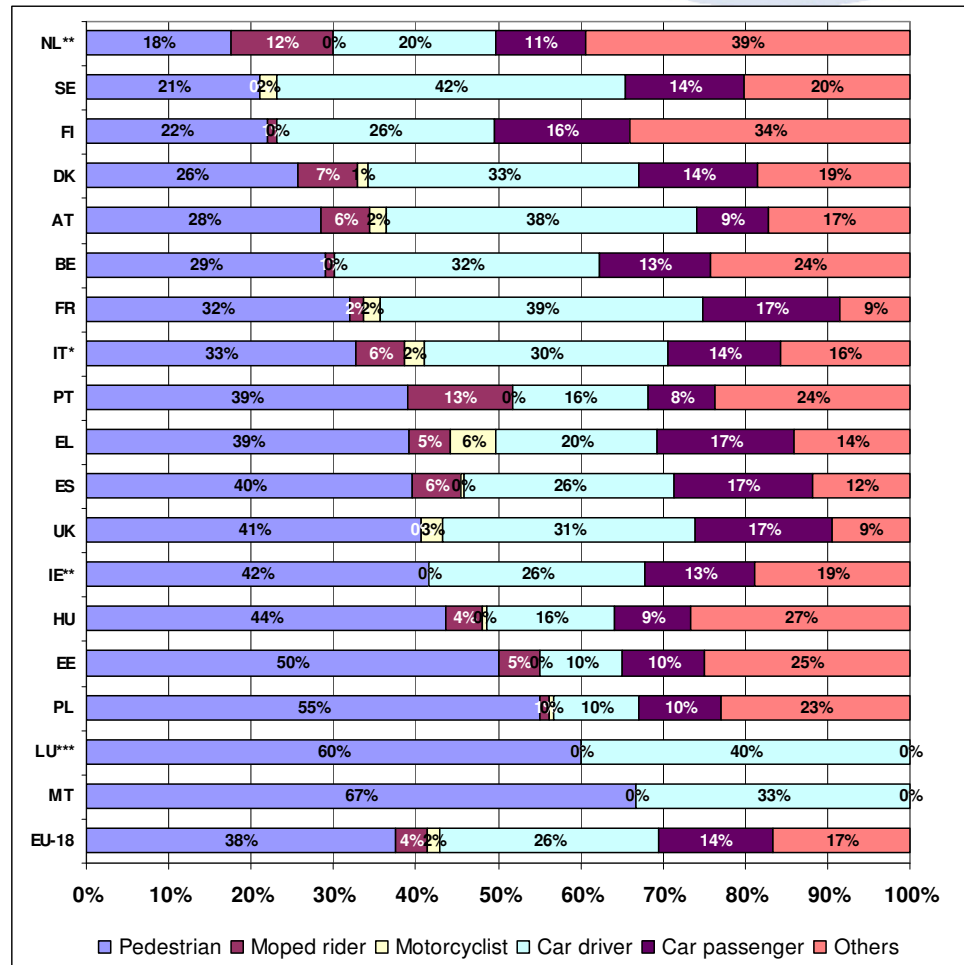
Source: CARE Database / EC  
Date of query: October 2007

More than one third of elderly people dying in road accidents were pedestrians (37,5%).





Figure 4: Distribution of elderly fatalities by road user type, 2005



\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

About 40% of elderly fatalities died as car occupants.

Table 6 shows the percentage of all elderly fatalities by road user type. The percentages reflect the reduced mobility options and the greater frailty of elderly persons. Across the 18 countries, about 40% of fatalities aged 65 years or older were pedestrians, the percentage being lowest in Poland, Estonia and Hungary.





**Table 6: Share of elderly fatalities on total fatalities by road user type by country, 2005**

	Pedestrian	Moped rider	Motor-cyclist	Car driver	Car passenger	Others	Total
BE	50%	7%	0%	13%	16%	22%	17%
DK	41%	17%	6%	19%	21%	18%	21%
EE	22%	50%	0%	4%	7%	16%	12%
EL	54%	28%	5%	12%	18%	30%	19%
ES	42%	14%	0%	12%	15%	15%	16%
FR	51%	5%	2%	18%	20%	24%	19%
IE**	34%	-	0%	13%	11%	23%	16%
IT*	54%	18%	3%	19%	17%	29%	21%
LU***	50%	-	-	5%	0%	0%	8%
HU	31%	23%	1%	9%	8%	24%	16%
MT	33%	-	0%	50%	0%	0%	18%
NL**	40%	29%	0%	13%	18%	33%	21%
AT	44%	22%	3%	17%	13%	26%	20%
PL	29%	23%	3%	7%	9%	22%	17%
PT	40%	27%	0%	12%	10%	21%	18%
FI	44%	25%	0%	15%	22%	46%	24%
SE	44%	0%	4%	23%	19%	33%	24%
UK	36%	4%	3%	16%	18%	19%	18%
EU-18	40%	15%	2%	14%	15%	20%	18%

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

About two out of five elderly fatalities were pedestrian.

### Type of road

Table 7 and Figure 5 show the distribution of elderly fatalities by type of road, and compare it with the distribution for the middle-aged. (Data for Greece and United Kingdom have a high share of "Unknown"). Compared to the overall population and to the middle-aged the elderly have a lower share of fatalities on motorways and on rural roads, but a higher share of fatalities on urban roads. This is a result of the lower mobility and higher emphasis on pedestrians in the modal split of the elderly. The distributions vary greatly between the EU-18 member states.

**Table 7: Distribution of middle-aged and elderly fatalities by road type, 2005**

	Elderly (age >64)				Middle-aged (age 45-64)			
	Motorway	Non-motorway		unknown	Motorway	Non-motorway		unknown
		Rural	Urban			Rural	Urban	
BE	8	102	65	11	44	128	51	18
DK	2	43	25	-	7	50	18	-
EE	-	16	4	-	-	34	14	-
EL	9	43	8	262	27	42	9	220
ES	22	498	199	-	56	779	136	-
FR	53	540	421	-	78	685	270	-
IE**	1	33	19	-	1	30	18	-
IT*	73	440	652	-	153	527	370	-
LU***	1	-	4	-	-	5	4	-
HU	1	70	135	-	14	233	161	-
MT	-	-	3	-	-	-	-	-
NL**	9	100	112	-	27	105	64	-
AT	8	73	70	-	22	107	34	-
PL	3	296	632	-	8	793	690	-
PT	8	106	108	-	34	137	117	-
FI	1	56	34	-	5	67	19	-
SE	3	65	32	4	10	80	18	1
UK	16	230	241	129	45	343	155	61
EU-18	218	2,711	2,764	406	531	4,145	2,148	300
Share	4%	44%	45%	7%	7%	58%	30%	4%

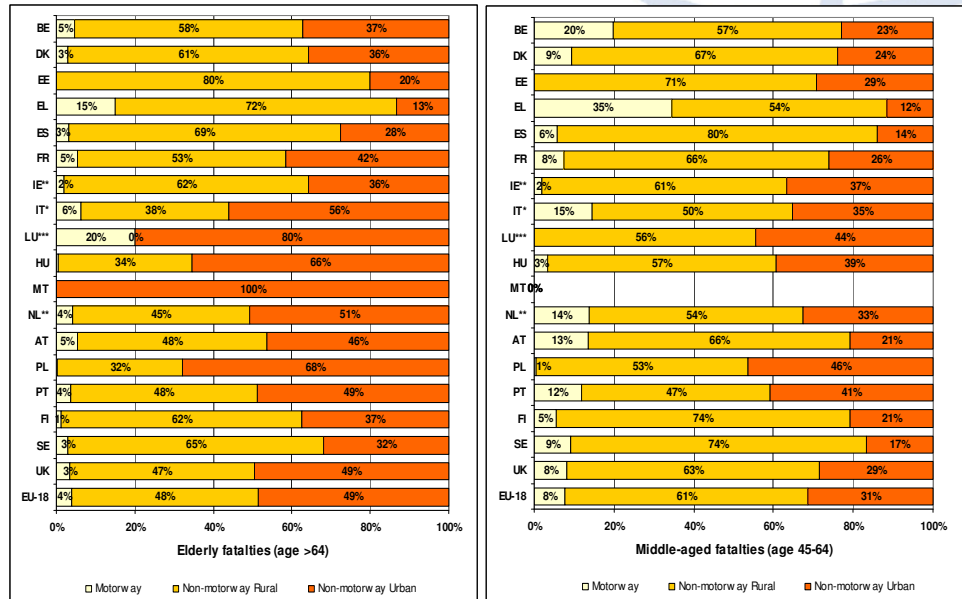
\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007





Figure 5: Distribution of middle-aged and elderly fatalities by road type, 2005



\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

Elderly people are proportionately more likely than middle-aged people to be killed in an accident on a non-motorway urban road.

### Day of week and time of day

More than 80% of elderly fatalities die between 8am and 8pm (see Table 8). While elderly fatalities generally decrease after 8pm, they stay high during evening hours in southern countries Greece and Spain as well as in Estonia and Ireland.

Table 8: Elderly fatalities by time of day by country, 2005

	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	3	10	35	56	64	17	186
DK	1	4	20	20	20	5	70
EE	2	1	5	2	6	4	20
EL	8	28	85	77	74	50	322
ES	20	41	183	200	168	107	719
FR	11	51	289	282	319	62	1.014
IE**	3	1	11	15	13	10	53
IT*	36	48	343	215	395	118	1.165
LU***	-	-	1	3	1	-	5
HU	2	27	46	50	62	19	206
MT	-	-	1	-	2	-	3
NL**	1	2	65	81	57	15	221
AT	6	7	47	33	44	14	151
PL	18	74	222	225	301	91	931
PT	1	21	59	47	65	30	222
FI	1	8	21	34	23	4	91
SE	2	6	20	45	24	7	104
UK	9	12	157	210	164	64	616
EU-18	124	341	1.610	1.595	1.802	616	6.099
Share	2%	6%	26%	26%	30%	10%	100%

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

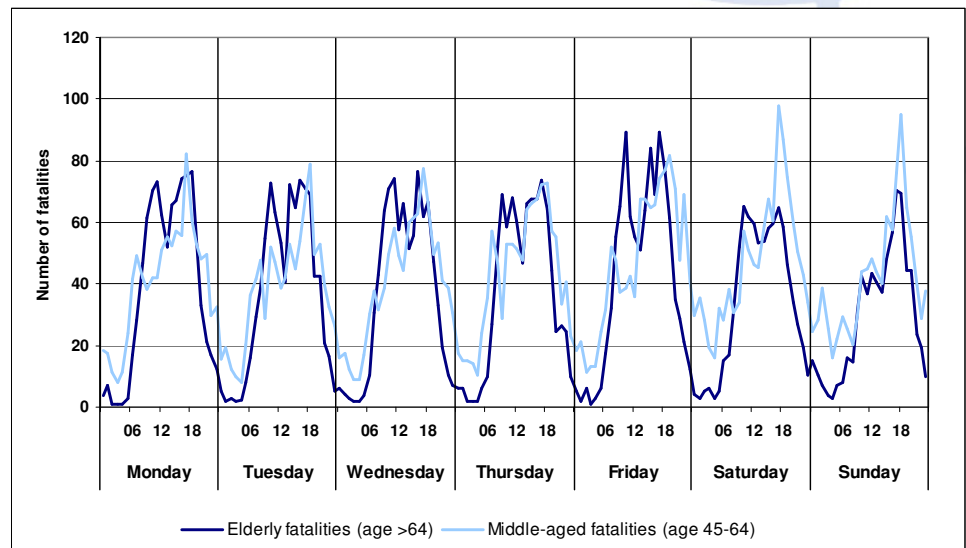
Senior fatality numbers peak in the morning and in the afternoon.

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**Figure 6: Middle-aged (age 45-64) elderly (age >64) fatalities by day of week and time of day in EU-18, 2005<sup>3</sup>**



Source: CARE Database / EC  
Date of query: October 2007

Figure 6 illustrates the EU-18 distribution for day of week and hour, including data for middle-aged fatalities (45 to 64 years old) for comparison. Clear differences can be identified between middle-aged and elderly fatalities: the middle-aged have an obvious daily peak in the afternoon, higher fatality numbers during the weekends and on Friday, Saturday and Sunday nights, whereas more elderly people are killed in road accidents from Monday to Friday, with a morning and an afternoon peak and have very low fatality numbers during the night hours, even on weekend nights.

The number of elderly people killed per day in road accidents is higher between Monday and Friday than on Saturday or Sunday.

While middle-aged people are more often killed during evening and night hours than elderly, elderly are more often killed in the morning.



<sup>3</sup> Using last data available, i.e. 2005 for all countries except LU (2002), IE and NL (2003) and IT (2004).



**Table 9: Elderly fatalities (age >64) by day of week by country, 2005**

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
BE	28	18	40	32	28	22	18	186
DK	12	13	5	8	18	8	6	70
EE	2	2	2	4	4	3	3	20
EL	37	44	40	53	45	57	46	322
ES	116	105	94	106	108	91	98	719
FR	151	154	165	134	168	138	104	1.014
IE**	5	6	7	7	14	8	6	53
IT*	170	162	158	169	178	163	165	1.165
LU***	1	1	-	1	2	-	-	5
HU	33	33	22	30	31	33	24	206
MT	-	1	2	-	-	-	-	3
NL**	39	34	29	24	37	38	20	221
AT	19	32	26	20	34	14	6	151
PL	139	135	122	138	176	116	105	931
PT	40	24	31	36	34	32	25	222
FI	13	13	20	16	13	12	4	91
SE	20	15	18	23	14	8	6	104
UK	93	83	97	93	95	87	68	616
EU-18	918	875	878	894	999	830	704	6.099
Share	15,1%	14,3%	14,4%	14,7%	16,4%	13,6%	11,5%	100,0%

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

Three quarters of elderly fatalities are killed between Monday and Friday.

### Seasonality

Table 10 shows the number of elderly fatalities by quarter with the overall distribution. The number peaks in the winter months, with the highest fatality numbers in most countries in December, although the peak period varies between the different countries. In Spain and Greece the highest number of elderly fatalities occurs in the summer (July to September).

**Table 10: Elderly fatalities by quarter of year by country, 2005**

	January - March	April - June	July - September	October - December	Total
BE	45	51	38	52	186
DK	20	15	16	19	70
EE	4	5	2	9	20
EL	75	70	106	71	322
ES	181	165	204	170	719
FR	241	236	267	270	1.014
IE**	14	14	11	14	53
IT*	242	280	312	331	1.165
LU***	1	1	-	3	5
HU	38	55	51	62	206
MT	1	1	-	1	3
NL**	44	64	63	50	221
AT	31	31	46	43	151
PL	210	206	252	263	931
PT	50	52	58	62	222
FI	17	22	31	21	91
SE	34	15	24	31	104
UK	155	135	151	175	616
EU-18	1.403	1.419	1.632	1.646	6.099
Share	23,0%	23,3%	26,8%	27,0%	100,0%

\* Data from 2004  
\*\* Data from 2003  
\*\*\* Data from 2002

Source: CARE Database / EC  
Date of query: October 2007

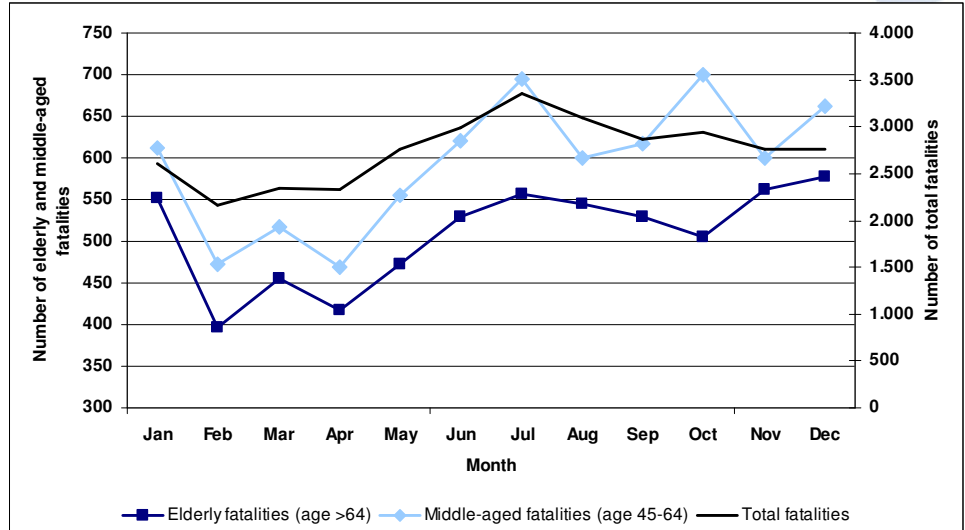
In general the peak season for senior fatalities is winter.





Figure 7 compares the distribution of fatalities by month for the elderly and middle-aged with the overall distribution. For all three, the period from February to April has the lowest proportions. The peak for elderly fatalities is during winter, while for all fatalities the peak is during the summer (July and August).

Figure 7: Middle-aged, elderly, and total fatalities by month in EU-18, 2005<sup>3</sup>



Source: CARE Database / EC  
Date of query: October 2007

The distribution of middle-aged fatalities, elderly fatalities and total fatalities through the year are different.



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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 (see

[ec.europa.eu/transport/roadsafety/road\\_safety\\_observatory/care\\_reports\\_en.htm](http://ec.europa.eu/transport/roadsafety/road_safety_observatory/care_reports_en.htm)).

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

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## Definition of EU-level and used Country abbreviations

### EU 14

BE	Belgium
DK	Denmark
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PT	Portugal
FI	Finland
SE	Sweden
UK	United Kingdom

### EU 18 = EU 14 +

EE	Estonia
HU	Hungary
MT	Malta
PL	Poland

### EU 27 = EU 18 +

BG	Bulgaria
CZ	Czech Republic
DE	Germany
CY	Cyprus
LV	Latvia
LT	Lithuania
RO	Romania
SI	Slovenia
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.





All these reports and more information on the Integrated Project SafetyNet, co-financed by the European Commission, Directorate-General Energy and Transport are also available at the SafetyNet Website: [www.erso.eu/](http://www.erso.eu/).

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KfV, Austria

TRL, United Kingdom

NTUA, Greece

SWOV, The Netherlands

INTRAS-UEG, Spain

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