Traffic Safety Basic Facts 2006

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 2004[1], nearly 5.000 seniors died in road traffic accidents in 14 European countries.

In 2004[1], 4.982 elderly people were killed in road traffic accidents in the EU-14 (EU-15 without Germany). This is 18,5% of all fatalities in 2004. With a reduction of one third (-33,8%), senior citizen fatalities have decreased more quickly than all fatalities (-26,5%) in the last decade. Table 1 presents the annual data by country that are available from CARE since 1995, with the totals[1] presented in Figure 1. The line is dashed for years where data up to 2004 is not available for all countries.

Fatalities of elderly people in road traffic accidents were reduced by one third between 1995 and 2004.

Table 1: Elderly fatalities by country and year, 1995 – 2004[1]

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
BE	237	267	237	260	233	238	264	210	240	201
DK	159	129	132	123	117	134	102	103	99	80
EL	454	437	406	445	415	428	385	340	322	317
ES	844	855	900	890	910	849	867	835	817	746
FR	1.522	1.578	1.494	1.587	1.443	1.370	1.393	1.361	1.120	962
IE	67	61	66	80	71	44	47	60	53	-
IT	1.497	1.435	1.548	1.379	1.391	1.365	1.276	1.394	1.266	1.165
LU	8	3	9	7	7	10	7	5	-	-
NL	309	273	266	227	242	235	222	213	221	-
AT	213	195	212	208	225	190	186	211	197	177
PT	430	485	441	365	340	342	320	304	304	230
FI	119	102	123	104	96	106	96	99	95	97
SE	175	181	171	148	173	154	147	139	118	139
UK	890	781	788	771	758	679	652	655	658	589
EU-14	6.925	6.782	6.792	6.593	6.420	6.144	5.965	5.929	5.516	4.982
Yearly Change	-	-2,1%	0,1%	-2,9%	-2,6%	-4,3%	-2,9%	-0,6%	-7,0%	-9,7%

Source: CARE Database / EC
Date of query: October 2006

[1] Using latest data available, i.e. 2004 for all countries except LU (2002), IE and NL (2003).

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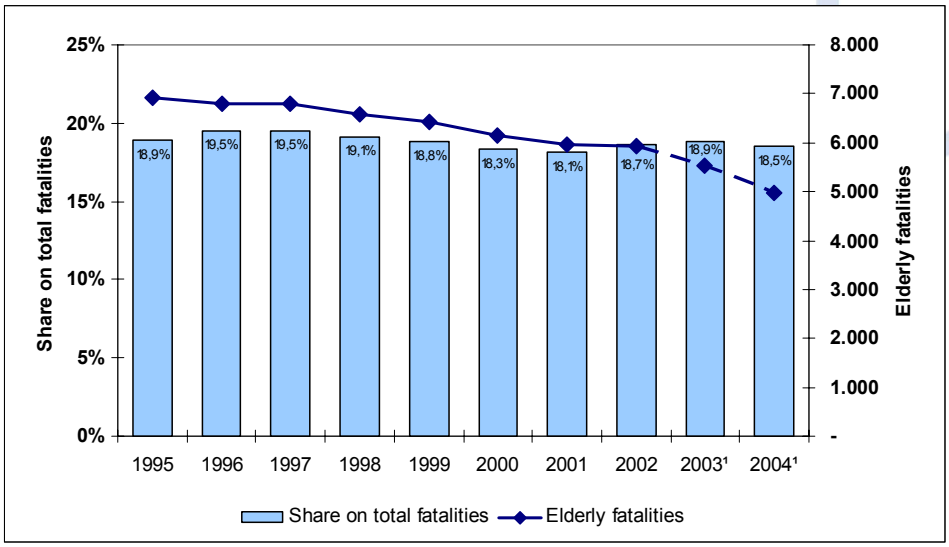
Nearly one in five road traffic fatalities is 65 or older.

Figure 1: Number of elderly fatalities and proportion on total fatalities in EU-14, 1995-2004[1]



Source: CARE Database / EC
Date of query: October 2006

Table 2 compares the fatality rates of elderly people (>64 years) and middle-aged people (45-64 years) with the fatality rate of the whole population. The ratios of middle-aged to elderly 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 those countries, generally showing among the best road safety records, such as Sweden, Finland, The Netherlands, and Denmark, have especially high ratios of elderly to all fatalities.

Table 2: Fatalities per million inhabitants (fatality rates) of the middle-aged and the elderly by country, 2004

	Fatalities per million inhabitants (fatality rate)			Comparisons	
	Middle-aged	Elderly	Total	Middle-aged/ Eldery	Elderly/ Total
BE	88	112	112	0,78	1,01
DK	55	99	68	0,56	1,45
EL	120	159	151	0,75	1,06
ES	100	104	111	0,96	0,93
FR	69	96	89	0,73	1,08
IE*	55	117	83	0,48	1,41
IT	72	104	97	0,69	1,07
LU**	82	78	137	1,05	0,57
NL*	46	97	63	0,48	1,54
AT	93	137	107	0,68	1,28
PT	108	130	123	0,84	1,05
FI	57	118	72	0,48	1,65
SE	41	90	53	0,45	1,68
UK	38	62	56	0,61	1,10
EU-14	69	98	89	0,71	1,10

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006
Source of population data: EUROSTAT

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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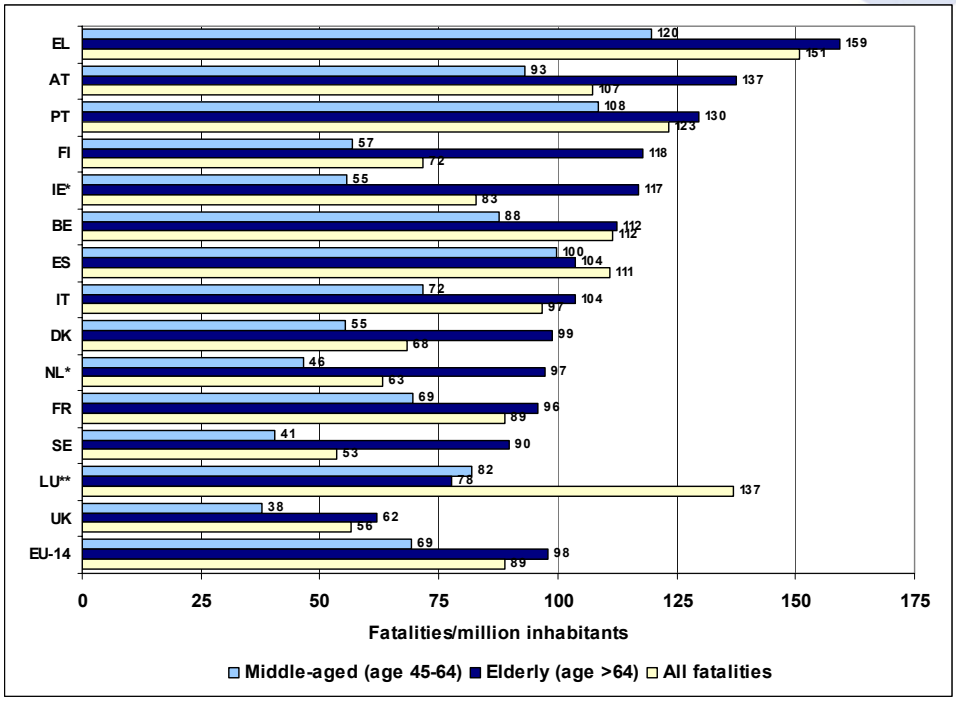
The fatality rates for the middle-aged and the elderly are illustrated in Figure 2, with countries being sorted by the fatality rate for the elderly. Fatality rates, both for the elderly and for the middle-aged, vary greatly in the member states.

Figure 2: Fatalities per million inhabitants for middle-aged, elderly and total fatalities, 2004



* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006
Source of population data: EUROSTAT

The rate of elderly fatalities per million inhabitants ranges from 62 in the UK to 159 in Greece.

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.

Table 3: Elderly fatalities by age group, by gender and by country, 2004

	65-74 years fatalities	75-84 years fatalities	85+ years fatalities	Elderly fatalities (>64 years)			Total fatalities
				total	male	female	
BE	96	90	15	201	135	66	1.162
DK	34	37	9	80	51	29	369
EL	172	123	22	317	222	95	1.670
ES	394	274	78	746	475	270	4.741
FR	381	474	108	962	571	391	5.530
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
NL*	82	100	39	221	136	83	1.028
AT	69	87	21	177	107	70	878
PT	144	70	17	230	148	82	1.294
FI	47	42	8	97	55	42	375
SE	48	64	27	139	86	53	480
UK	196	284	109	589	342	247	3.368
EU-14	2.198	2.203	581	4.982	3.199	1.781	26.919
Share	44,1%	44,2%	11,7%	100,0%	64,2%	35,7%	-

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Most elderly fatalities are 65-84 years old; those aged 85 years or more account for 12% of senior fatalities.

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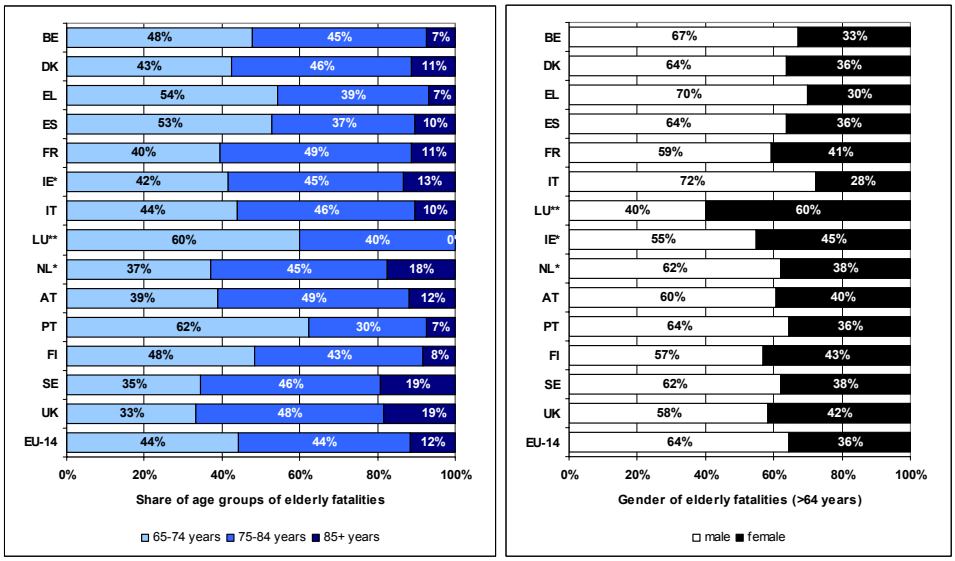
Among the elderly, women are more likely to be killed in road accidents (36%) than within the whole population (23%). In France, Ireland, Austria, Finland and the UK, the proportion of women among elderly fatalities is greater than 40%. The proportion of women increases with age; in the age group 65-74 women account for 34% of fatalities, in the age group 75-84 for 36%, and within the age group 85 and more years for 41%. A reason might be the higher life expectancy of women (5,7 years more on average in EU-14 than men).

Around two thirds of killed seniors in road accidents are men.

Figure 3: Elderly fatalities by age group, by gender and by country, 2004



* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Table 4: Fatality rates of the elderly by age group and by country, 2004

	Fatalities by million inhabitants			
	65-74 years	75-84 years	85+ years	total population
BE	99	136	92	112
DK	79	132	90	68
EL	144	187	159	151
ES	102	107	101	111
FR	74	125	98	89
IE*	86	157	153	83
IT	84	132	105	97
LU**	83	89	-	137
NL*	66	127	166	63
AT	103	176	165	107
PT	142	114	112	123
FI	105	144	97	72
SE	64	110	126	53
UK	39	83	99	56
EU-14	81	120	108	89

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

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

The age group 75-84 years, compared to its proportion of the population, has the highest average fatality rate of all elderly people (120 fatalities by million inhabitants), followed by the oldest group

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aged 85+ (108), while the fatality rate of people between 65 and 74 years (81) is even lower than the fatality rate of the population as a whole (89). An explanation for the lower risk for people of 85 and more years might be the reduced mobility in this age group (see Table 4).

Road user type

Table 5 shows the distribution of elderly fatalities by road user type. More than 40% of elderly fatalities were pedestrians in Greece and Ireland. The Netherlands, Portugal and Denmark had a high proportion of moped riders with more than 10% of elderly fatalities, while only very few of the elderly were riding motorcycles in any country. The proportion of elderly fatalities who were car occupants ranged from almost 60% in France and Sweden to about 30% in Portugal and in The Netherlands. The results from Table 5 are illustrated in Figure 4.

One third of elderly people dying in road accidents were pedestrians (33%).

Table 5: Elderly fatalities by road user type, 2004

	Pedestrian	Moped rider	Motor-cyclist	Car driver	Car passenger	Others	Total
BE	49	3	-	64	14	71	201
DK	16	9	1	24	9	21	80
EL	143	15	16	58	35	50	317
ES	276	43	2	172	168	84	746
FR	300	16	10	398	166	72	962
IE*	22	-	-	14	7	10	53
IT	381	69	27	346	158	184	1.165
LU**	3	-	-	2	-	-	5
NL*	39	27	-	44	24	87	221
AT	59	11	3	48	19	37	177
PT	90	26	1	36	35	41	230
FI	23	5	2	31	17	19	97
SE	35	2	3	50	28	21	139
UK	231	1	7	208	96	46	589
EU-14	1.667	227	72	1.496	777	743	4.982
Share	33,5%	4,6%	1,4%	30,0%	15,6%	14,9%	100,0%

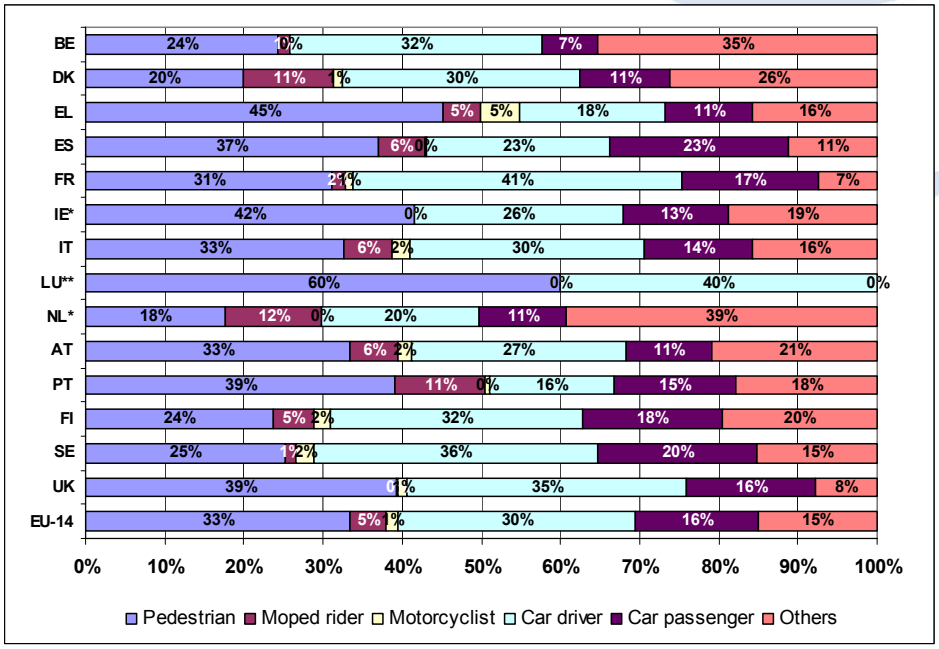
* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Nearly half of elderly fatalities died as car occupants (46%).

More than two out of five pedestrian fatalities were elderly.

Figure 4: Distribution of elderly fatalities by road user type, 2004



* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Table 6 shows the share of elderly fatalities on total fatalities. The percentages reflect the reduced mobility options available to the elderly. More than two out of five pedestrian fatalities were 65 years or older across the 14 countries, the percentage being lowest in the UK and in Ireland and highest in Italy, France, and Sweden. Senior citizens make up 17% of the overall EU-14 population in 2004 (population data source: EUROSTAT).

Table 6: Share of elderly fatalities on total fatalities by road user type by country, 2004

	Pedestrian	Moped rider	Motor-cyclist	Car driver	Car passenger	Others	Total
BE	49%	9%	0%	13%	11%	25%	17%
DK	37%	20%	4%	18%	18%	30%	22%
EL	49%	27%	4%	11%	13%	30%	19%
ES	40%	12%	1%	10%	17%	14%	16%
FR	52%	5%	1%	16%	18%	19%	17%
IE*	34%	-	0%	13%	11%	23%	16%
IT	54%	18%	3%	19%	17%	29%	21%
LU**	50%	-	-	5%	0%	0%	8%
NL*	40%	29%	0%	13%	18%	33%	21%
AT	45%	25%	3%	13%	17%	30%	20%
PT	39%	22%	1%	11%	16%	18%	18%
FI	47%	36%	9%	21%	24%	28%	26%
SE	52%	11%	5%	25%	32%	41%	29%
UK	33%	4%	1%	18%	16%	15%	17%
EU-14	44%	15%	2%	15%	17%	23%	19%

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

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 Finland are not complete.) 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-14 member states.

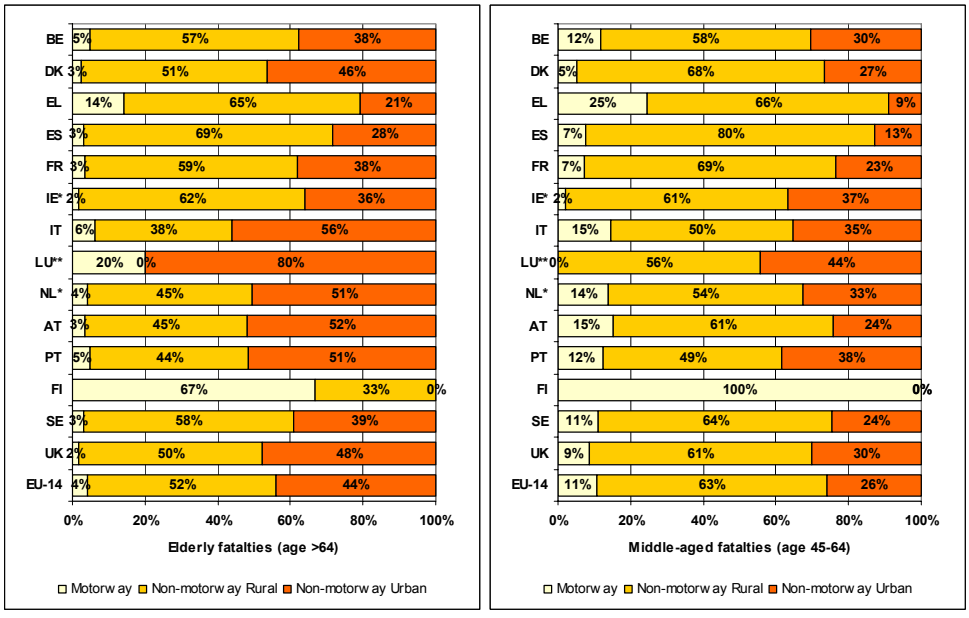
Table 7: Distribution of middle-aged and elderly fatalities by road type, 2004

	Elderly (age >64)				Middle-aged (age 45-64)			
	Motorway	Non-motorway		unknown	Motorway	Non-motorway		unknown
		Rural	Urban			Rural	Urban	
BE	9	104	68	20	25	122	64	17
DK	2	41	37	-	4	54	21	-
EL	9	41	13	254	22	59	8	234
ES	24	511	211	-	73	783	127	-
FR	32	563	367	-	76	727	245	-
IE*	1	33	19	-	1	30	18	-
IT	73	440	652	-	153	527	370	-
LU**	1	-	4	-	-	5	4	-
NL*	9	100	112	-	27	105	64	-
AT	6	79	92	-	29	116	46	-
PT	11	100	119	-	34	136	106	-
FI	2	1	-	94	8	-	-	75
SE	4	78	53	4	10	58	22	5
UK	9	243	231	106	41	292	144	67
EU-14	192	2.335	1.977	478	504	3.014	1.240	398
Share	4%	47%	40%	10%	10%	58%	24%	8%

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Figure 5: Distribution of middle-aged and elderly fatalities by road type, 2004



* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

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

Day of week and time of day

More than 80% of all fatalities happen during the daytime from 8am until 8pm (see Table 8). While elderly fatalities generally decrease after 8pm, they stay high during evening hours in southern countries (Greece, Spain, Italy, and Portugal) and in Ireland (10% which is greater than the average from 8pm until midnight).

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

Table 8: Elderly (age >64) fatalities by time of day by country, 2004

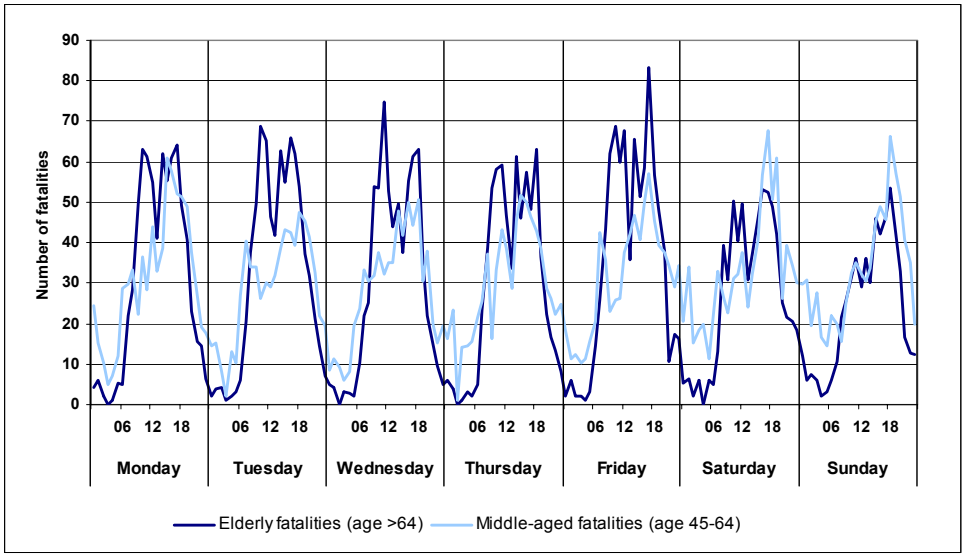
	00:00-03:59	04:00-07:59	08:00-11:59	12:00-15:59	16:00-19:59	20:00-23:59	Total
BE	3	9	62	49	67	11	201
DK	-	1	26	28	20	5	80
EL	13	23	75	79	63	64	317
ES	18	39	167	215	203	104	746
FR	17	40	264	249	331	60	962
IE*	3	1	11	15	13	10	53
IT	36	48	343	215	395	118	1.165
LU**	-	-	1	3	1	-	5
NL*	1	2	65	81	57	15	221
AT	2	12	47	54	58	4	177
PT	5	16	51	52	75	31	230
FI	2	7	24	38	23	3	97
SE	1	6	40	59	22	11	139
UK	10	22	172	178	154	53	589
EU-14	111	226	1.349	1.316	1.482	489	4.982
Share	2%	5%	27%	26%	30%	10%	100%

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Elderly and middle-aged people are not killed as often during night hours as the overall population. This is even more significant for the elderly.

Figure 6: Middle-aged (age 45-64) elderly (age >64) fatalities by day of week and time of day in EU-14, 2004[1]



Source: CARE Database / EC
Date of query: October 2006

Figure 6 illustrates the EU-14 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

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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.

More elderly people are killed between Monday and Friday (75%), compared to all fatalities, two thirds of them die on workdays (see Table 9).

Three quarters of elderly accident victims are killed between Monday and Friday.

Table 9: Elderly fatalities (age >64) by day of week by country, 2004

	Monday	Tuesday	Wednes-day	Thursday	Friday	Saturday	Sunday	Total
BE	26	32	40	25	31	23	24	201
DK	16	14	13	10	9	9	9	80
EL	49	49	31	40	64	50	34	317
ES	118	104	106	116	120	83	98	746
FR	126	162	153	145	169	112	95	962
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
NL*	39	34	29	24	37	38	20	221
AT	30	27	32	28	28	20	12	177
PT	38	36	32	29	33	29	34	230
FI	16	17	16	10	18	12	8	97
SE	24	22	21	25	21	13	13	139
UK	79	99	70	81	116	92	52	589
EU-14	736	765	708	710	841	652	570	4.982
Share	14,8%	15,4%	14,2%	14,2%	16,9%	13,1%	11,4%	100,0%

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Seasonality

Table 10 shows the distribution of elderly fatalities in each quarter of the year. Senior fatalities peak 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 proportion of elderly people deaths is during the summer (July and August).

The peak season for senior fatalities is winter.

Table 10: Elderly fatalities by quarter of year by country, 2004

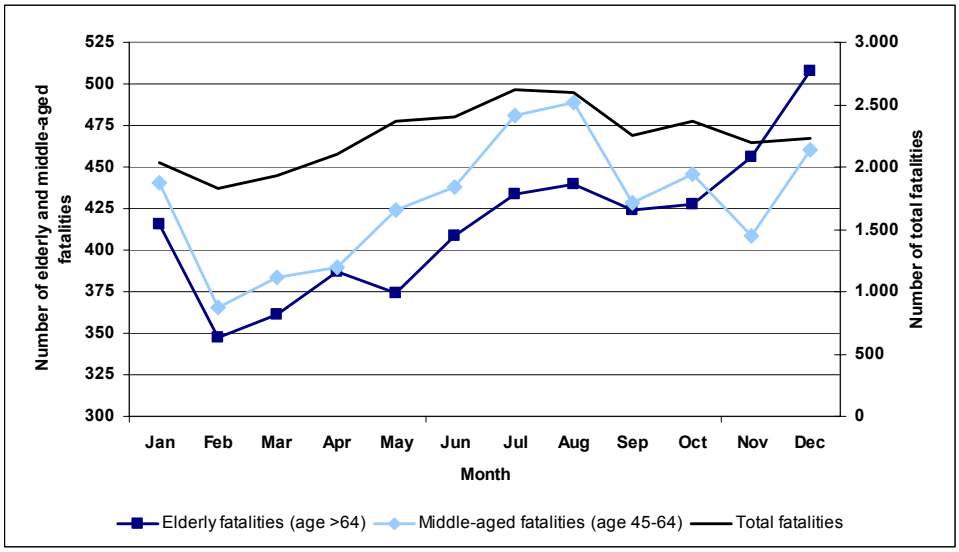
	January - March	April - June	July - September	October - December	Total
BE	56	51	42	52	201
DK	18	20	16	26	80
EL	63	74	102	78	317
ES	187	168	207	184	746
FR	216	220	249	277	962
IE*	14	14	11	14	53
IT	242	280	312	331	1.165
LU**	1	1	-	3	5
NL*	44	64	63	50	221
AT	20	47	52	58	177
PT	57	51	52	70	230
FI	16	23	32	26	97
SE	42	28	34	35	139
UK	148	129	125	187	589
EU-14	1.124	1.170	1.298	1.391	4.982
Share	22,6%	23,5%	26,0%	27,9%	100,0%

* Data from 2003
** Data from 2002

Source: CARE Database / EC
Date of query: October 2006

Figure 7 compares the distribution over the year for elderly and middle-aged fatalities with the total fatality distribution. For both age groups and for total numbers, February and March show the lowest number of fatalities. For all fatalities the peak is during the summer (July and August), while it is during winter for senior fatalities. Middle-aged fatalities show characteristics of both groups, having two peaks, the higher one in summer (July and August) and a lower one in winter (December and January).

Figure 7: Middle-aged, elderly, and total fatalities by month in EU-14, 2004[1]



Source: CARE Database / EC
Date of query: October 2006

Middle-aged, elderly, and total fatalities are all differently distributed over seasons.

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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).

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

- Main Figures
- Children (Aged <16)
- Young People (Aged 16-24)
- The Elderly (Aged >64)
- Pedestrians
- Bicycles
- Motorcycles and Mopeds
- Car Occupants
- Heavy Goods Vehicles & Buses
- Motorways
- Junctions

Detailed data on traffic accidents are published annually by the European Commission in the Annual Statistical Report. This includes country abbreviations and 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.

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