

Traffic Safety Basic Facts 2011

Young People (Aged 18-24)

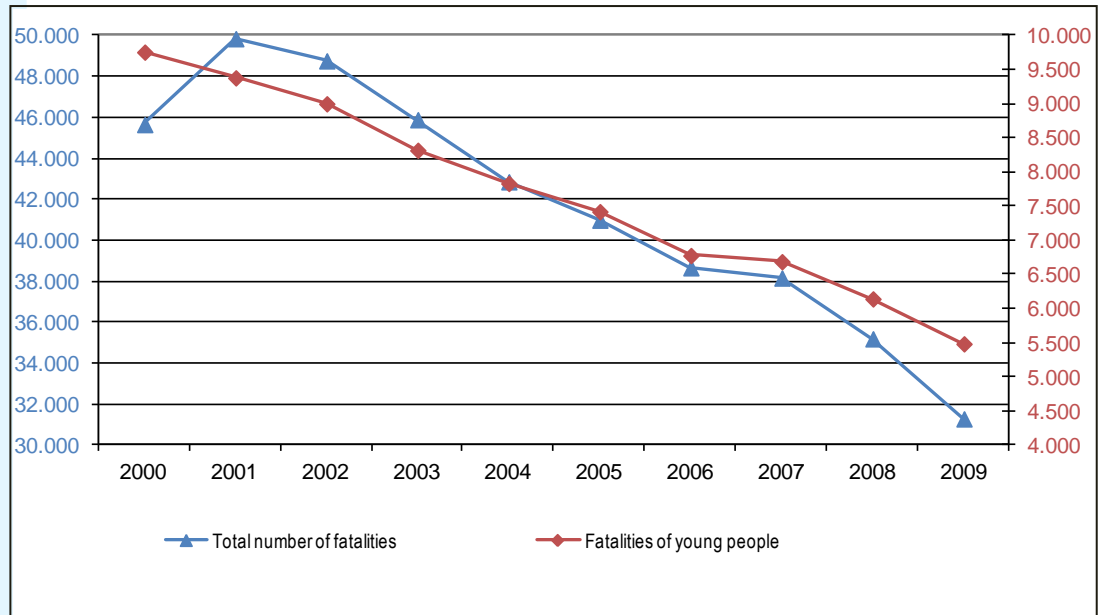
The number of young people killed in road accidents decreased by 44% between 2000 and 2009

In this Basic Fact Sheet, 'young people' are defined as those who are between 18 and 24 years old. In general, young people worldwide are far more likely to be victims in road accidents than people in any other age group.

More than 76.000 persons aged 18-24 years old were killed in traffic accidents, in 19¹ European Union countries within the decade 2000 - 2009. This number represents almost a fifth of all traffic accident fatalities in those countries (18%).

The number of young people killed in road accidents in 2009, was 44% less than the respective number in 2000. The total number of fatalities also fell by 38% in the 19 European Union countries over the same period.

Figure 1: Distribution of road traffic fatalities in the EU-19¹ 2000-2009²



Source: CARE Database / EC
Date of query: December 2011

¹ See Table "Country abbreviations used and definition of EU-level" on page 18.

² Where a number is missing for an EU-19/23 country in a particular year, its contribution to the EU-19/23 total is estimated as the closer known value

More than 76.000 persons aged 18-24 years old were killed in road accidents in the EU-19 between 2000 and 2009, almost a fifth of all road accident fatalities in those countries

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In 2009, the number of young people killed in Slovakia was 42% less than in 2008, and the reduction in Czech Republic was 31%. On the other hand, the number increased in Netherlands (18%) and Finland (2%). The most significant reduction in young fatalities between 2000 and 2009 occurred in Portugal (69%).

Table 1: Fatalities aged 18-24 by country, 2000-2009²

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	328	281	262	241	240	196	195	215	177	147
CZ	258	236	222	243	219	223	183	190	193	133
DK	85	68	76	67	67	52	65	58	69	53
DE	1.736	1.606	1.550	1.392	1.269	1.076	1.011	971	887	796
IE	117	114	79	82	96	110	95	76	75	-
EL	375	385	283	296	304	326	305	280	246	242
ES	1.082	971	935	972	793	733	601	550	469	357
FR	1.704	1.807	1.644	1.283	1.276	1.206	1.037	984	956	901
IT	1.225	1.088	1.109	989	956	919	825	723	634	579
LU	16	16	10	10	8	9	8	8	8	10
NL	227	162	205	179	154	122	112	134	107	126
AT	204	188	172	174	169	140	129	135	134	99
PL	-	894	958	908	851	933	895	953	948	833
PT	355	329	270	245	213	221	125	148	113	109
RO	305	311	274	267	293	294	293	402	437	416
SI	51	52	57	51	49	44	54	64	38	30
FI	51	84	73	59	74	53	67	75	50	51
SE	102	100	100	93	78	67	75	86	64	-
UK	646	691	725	772	728	700	706	639	542	467
EU-19	9.760	9.384	9.004	8.323	7.837	7.424	6.782	6.692	6.147	5.489
Yearly change (EU-19)	-	-3,9%	-4,1%	-7,6%	-5,8%	-5,3%	-8,7%	-1,3%	-8,1%	-10,7%
EE	-	-	-	-	-	26	35	41	28	21
LV	-	-	-	-	71	63	59	44	48	31
HU	-	-	-	129	138	159	134	139	103	81
SK	-	-	-	-	-	83	100	87	92	53
EU-23	-	-	-	-	-	7.755	7.110	7.003	6.418	5.675
CH	-	-	-	-	108	-	-	-	44	68

Source: CARE Database / EC
Date of query: December 2011

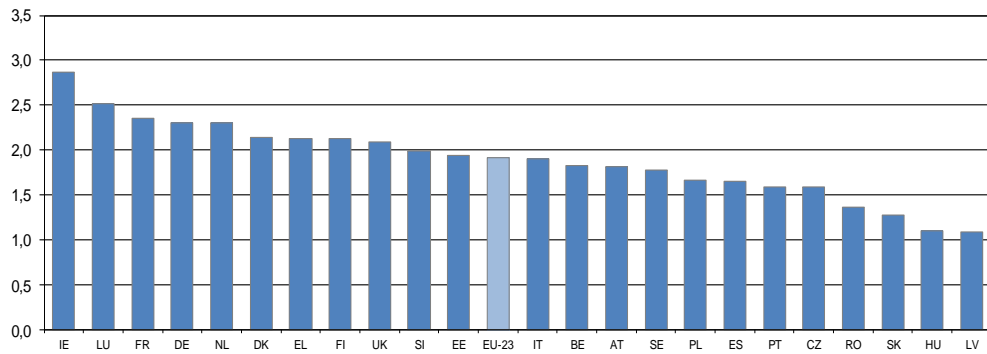
17% of people killed in road accidents in 2009 in the 23 European countries were aged 18-24. However, only 9% of the population falls within this age group. Young people were at almost twice the average risk of being killed in a road accident across the EU-23 countries in 2009 (this is the relative fatality rate, calculated as the % young people fatalities divided by % young people population).

The most significant reduction in young fatalities between 2000 and 2009 occurred in Portugal (69%)

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As shown in Figure 2, Ireland has the highest relative rate (2,9) whereas Hungary and Latvia have the lowest relative rate (1,1) among the 23 countries in 2009.

Figure 2: Relative rate for fatality proportions in young people, 2009²



Source: CARE Database / EC
Date of query: December 2011
Source of population data: EUROSTAT

The number of fatalities amongst young people, expressed as a proportion of all fatalities, has been gradually reducing over the last ten years, although this is not the case in every country.

Table 2: Proportion of fatalities who were aged 18-24 by country, 2000-2009²

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	22%	19%	20%	20%	21%	18%	18%	20%	19%	16%
CZ	17%	18%	16%	17%	16%	17%	17%	16%	18%	15%
DK	17%	16%	16%	16%	18%	16%	21%	14%	17%	18%
DE	23%	23%	23%	21%	22%	20%	20%	20%	20%	19%
IE	28%	28%	21%	24%	26%	28%	26%	23%	27%	-
EL	18%	21%	17%	18%	18%	20%	18%	17%	16%	17%
ES	19%	18%	18%	18%	17%	17%	15%	14%	15%	13%
FR	21%	22%	22%	21%	23%	23%	22%	21%	22%	21%
IT	17%	15%	16%	15%	16%	16%	15%	14%	13%	14%
LU	21%	23%	16%	19%	16%	19%	19%	17%	23%	21%
NL	21%	16%	21%	17%	19%	16%	15%	19%	16%	20%
AT	21%	20%	18%	19%	19%	18%	18%	20%	20%	16%
PL	-	16%	16%	16%	15%	17%	17%	17%	17%	18%
PT	19%	20%	16%	16%	17%	18%	13%	15%	13%	13%
RO	12%	13%	11%	12%	12%	11%	11%	14%	14%	15%
SI	16%	19%	21%	21%	18%	17%	21%	22%	18%	18%
FI	13%	19%	18%	16%	20%	14%	20%	20%	15%	18%
SE	17%	17%	18%	18%	16%	15%	17%	18%	16%	-
UK	18%	19%	20%	21%	22%	21%	21%	21%	21%	20%
EU-19	19,1%	18,8%	18,5%	18,1%	18,3%	18,1%	17,5%	17,5%	17,5%	17,2%
EE	-	-	-	-	-	15%	17%	21%	21%	21%
LV	-	-	-	-	14%	14%	15%	11%	15%	12%
HU	-	-	-	10%	11%	12%	10%	11%	10%	10%
SK	-	-	-	-	-	14%	16%	13%	15%	14%
EU-23	-	-	-	-	-	17,8%	17,3%	17,2%	17,2%	16,9%
CH	-	-	-	-	-	29%	27%	33%	22%	13%

Source: CARE Database / EC
Date of query: December 2011

Young people are at almost twice the risk of being killed in a road accident than the average member of the population across the EU-23 countries as a whole

In 2009, Ireland has the highest relative rate (2,9) for fatality proportion whereas Hungary and Latvia have the lowest relative rate (1,1) among the 23 countries

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Age and Road user type

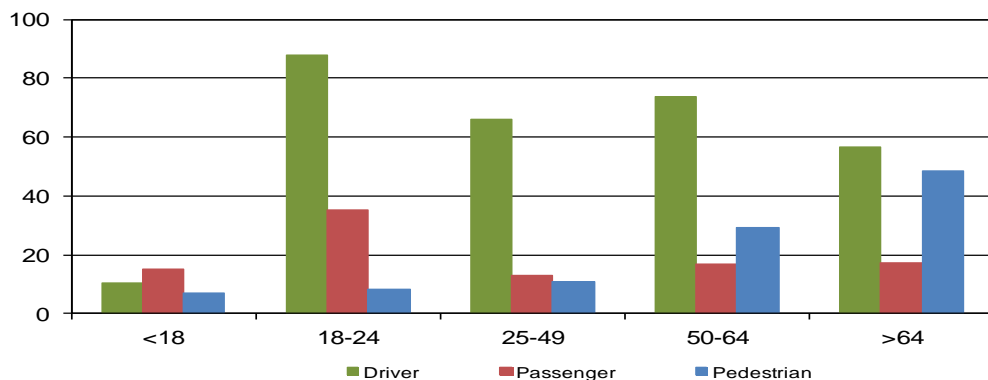
Table 3: Percentage of fatalities by age group for drivers³, passengers and pedestrians by country, 2009²

	Person Class			Age group					Total
	Driver	Passenger	Pedestrian	<18	18-24	25-49	50-64	>64	
BE	82%	6%	12%	4%	17%	42%	18%	19%	850
CZ	60%	20%	20%	3%	15%	45%	18%	19%	900
DK	65%	17%	17%	9%	17%	40%	14%	20%	303
DE	71%	15%	14%	5%	19%	33%	16%	27%	4.152
EE	51%	27%	23%	6%	22%	40%	13%	19%	97
IE	62%	20%	18%	14%	27%	16%	26%	17%	275
EL	67%	20%	13%	6%	17%	43%	15%	19%	1.425
ES	63%	20%	17%	5%	13%	47%	15%	19%	2.681
FR	71%	17%	12%	7%	21%	39%	14%	19%	4.273
IT	70%	14%	16%	5%	14%	38%	16%	27%	4.147
LV	46%	22%	32%	5%	13%	48%	20%	15%	240
LU	56%	19%	25%	13%	21%	25%	23%	19%	48
HU	60%	18%	23%	5%	10%	43%	22%	20%	822
NL	76%	14%	10%	8%	20%	30%	14%	29%	643
AT	66%	18%	16%	7%	16%	36%	16%	25%	633
PL	48%	21%	32%	5%	18%	37%	21%	18%	4.529
PT	61%	21%	17%	5%	13%	39%	18%	24%	838
RO	38%	26%	36%	7%	15%	36%	21%	21%	2.789
SI	65%	21%	14%	4%	18%	36%	21%	22%	170
SK	46%	25%	30%	4%	17%	38%	25%	16%	320
FI	66%	24%	11%	10%	18%	30%	16%	25%	279
SE	71%	17%	13%	9%	16%	28%	20%	26%	350
UK	59%	18%	22%	8%	20%	39%	14%	18%	2.337
EU-23	62%	18%	20%	6%	17%	38%	17%	21%	33.101
CH	70%	12%	17%	7%	19%	28%	19%	26%	349

Source: CARE Database / EC
Date of query: December 2011

The majority of the young people (18-24) killed in road accidents in the 23 European countries were drivers (3.778, corresponding to 67% of all fatalities at that age group), whereas only 6% (365) were pedestrians in 2009.

Figure 3: Rate of fatalities per million population by age group for drivers, passengers and pedestrians, EU-23¹, 2009²



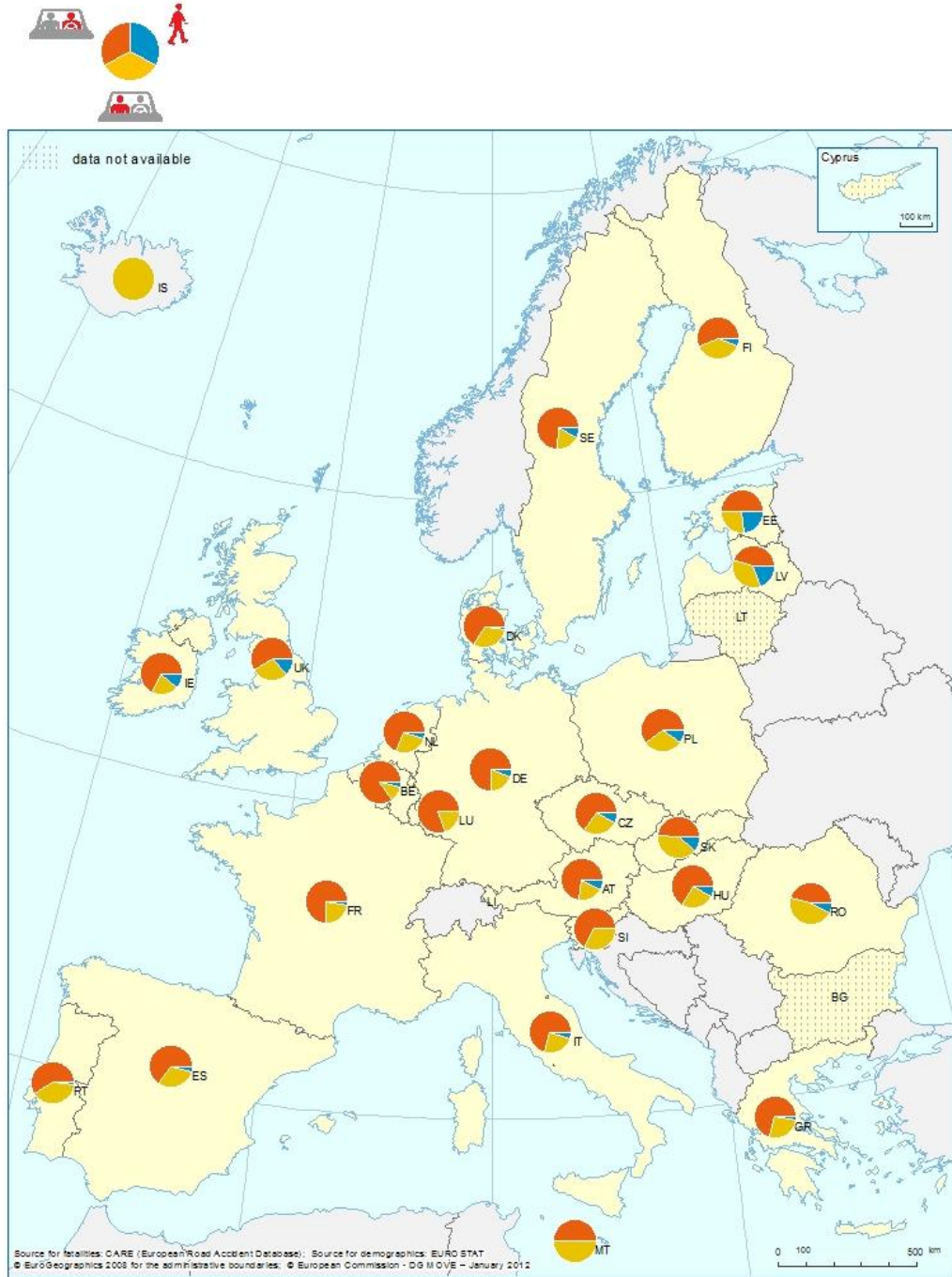
Source: CARE Database / EC
Date of query: December 2011
Source of population data: Eurostat

In 2009, the majority of the young people killed in road accidents in the EU-23 countries were drivers whereas only 6% were pedestrians

The driver and passenger fatality rates for 18-24 years old are higher than those of other age groups

³ The category of driver refers to all motor vehicle drivers (including moped riders).

Map 2: Fatality rate of young people per person class, 2009²



Source: CARE Database / EC

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Figure 3 compares the rate of fatalities per million population for 18-24 year olds with the rates of other age groups.

Mode of transport

More than two-thirds of fatalities of young people across the European countries are in cars or taxis, with mopeds and motorcycles accounting for 22% in the EU-23 countries.

Table 4: Fatalities of young people by mode of transport, 2009²

	Car / taxi	Lorries	Two-wheelers	Pedestrian	Other	Total
BE	102	10	19	6	10	147
CZ	99	3	18	10	3	133
DK	44	3	5	1	0	53
DE	584	12	132	46	22	796
EE	14	5	0	0	2	21
IE	52	3	10	9	1	75
EL	116	3	111	7	5	242
ES	242	16	77	16	6	357
FR	547	26	283	26	19	901
IT	337	0	195	30	16	578
LV	21	1	2	6	1	31
LU	8	0	2	0	0	10
HU	52	4	14	6	5	81
NL	78	7	24	6	11	126
AT	66	5	19	8	1	99
PL	586	14	125	81	27	833
PT	52	10	26	2	18	109
RO	301	17	55	31	11	415
SI	20	2	4	0	4	30
SK	38	2	7	6	0	53
FI	44	0	2	3	2	51
SE	51	1	8	4	0	64
UK	308	8	79	61	11	467
EU-23	3.763	152	1.217	365	172	5.497
%	68,5%	2,8%	22,1%	6,6%	3,1%	100%
CH	42	0	16	5	5	63

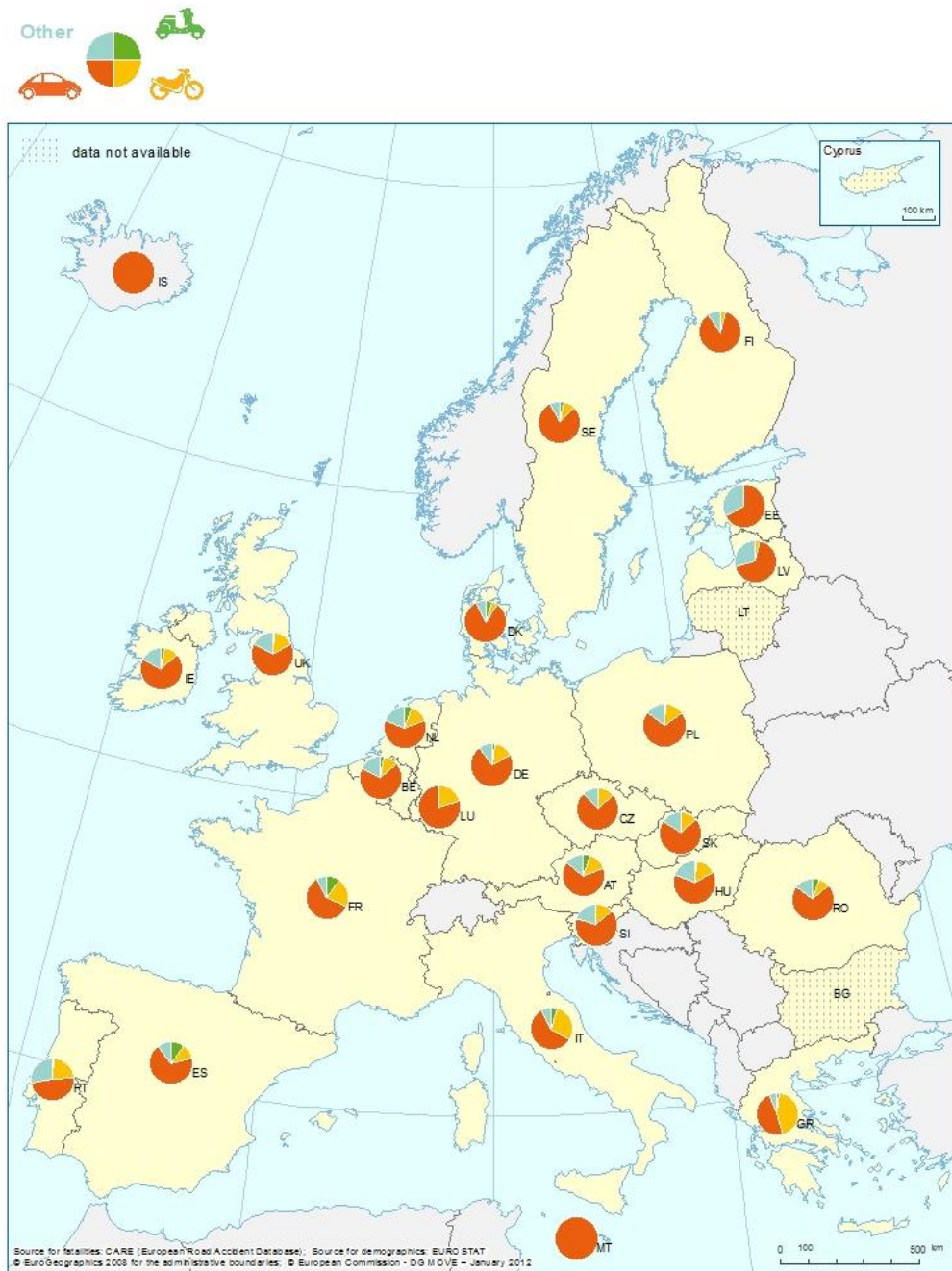
Source: CARE Database / EC
Date of query: December 2011

Figure 4 shows that the highest proportion among the 23 European countries of young people fatalities by mode of transport in 2009 was in Finland (86% were travelling by car/taxi). The second highest proportion of young people fatalities by car/taxi was in Denmark (83%). The lowest car/taxi proportion was in Greece and Portugal 48%.

46% of the young people fatalities in Greece were riding two-wheelers, the highest proportion among the EU-23 countries

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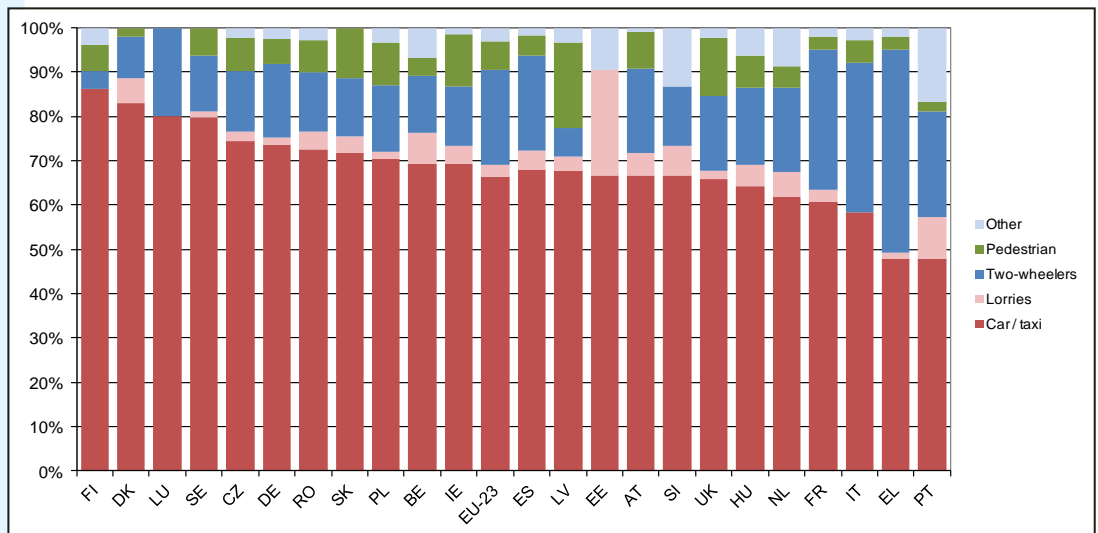
Map 1: Fatality rate of young people per vehicle type, 2009²



Source: CARE Database / EC

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Figure 4: Proportion of young (or 18-24 years old) fatalities by mode of transport, 2009²



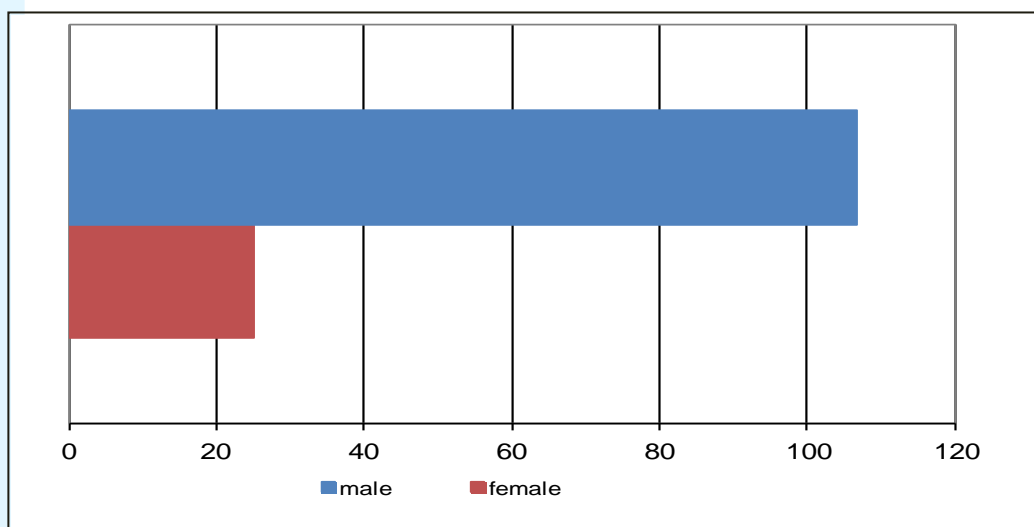
Source: CARE Database / EC
Date of query: December 2011

Figure 4 shows that as far as two-wheeler fatalities (users of motorcycles, mopeds or pedal cycles) are concerned, the lowest proportion was in Estonia (0%) and Finland (4%). Greece had the highest proportion of 18-24 year old two-wheeler fatalities (46%) among the 23 countries considered. Estonia had the highest proportion of young people fatalities in lorries (24%). Latvia had the highest proportion of young pedestrian fatalities (19%) whereas Estonia and Slovenia did not have any.

Gender

81% of the fatalities among young people were men. Moreover, males have a significantly higher fatality rate per million population (107), compared to females (25). This can possibly be attributed in part to young men tending to drive farther than young women.

Figure 5: Young people fatality rates per million population, per gender in the EU-23¹, 2009²



Source: CARE Database / EC
Date of query: December 2011

81% of the fatalities among young people were men

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Area and Road type

In the EU-23, the majority (60%) of young fatalities occurred outside urban areas (excluding motorways) in 2009 and only 6% occurred on motorways. The percentage of young people fatalities inside urban areas was 33% for the EU-23 countries.

Table 5: Distribution of fatalities amongst young people by area and road type, 2009²

	inside urban area	outside urban area		
		motorway	non-motorway	not defined
BE	21%	18%	57%	3%
CZ	27%	1%	72%	0%
DK	23%	8%	70%	0%
DE	18%	10%	71%	0%
EE	10%	0%	90%	0%
IE	21%	0%	0%	79%
EL	50%	6%	43%	0%
ES	21%	13%	66%	0%
FR	28%	4%	68%	0%
IT	42%	8%	50%	0%
LV	35%	0%	65%	0%
LU	0%	100%	0%	0%
HU	28%	5%	67%	0%
NL	25%	17%	57%	0%
AT	17%	5%	78%	0%
PL	42%	0%	58%	0%
PT	50%	9%	41%	0%
RO	52%	1%	47%	0%
SI	30%	23%	47%	0%
SK	28%	4%	68%	0%
FI	31%	0%	69%	0%
SE	16%	3%	81%	0%
UK	41%	5%	54%	0%
EU-23	33,2%	5,6%	60,2%	1,1%
CH	21%	15%	65%	0%

Source: CARE Database / EC
Date of query: December 2011

60% of young fatalities in road accidents occurred in rural areas in 2009

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Urban areas

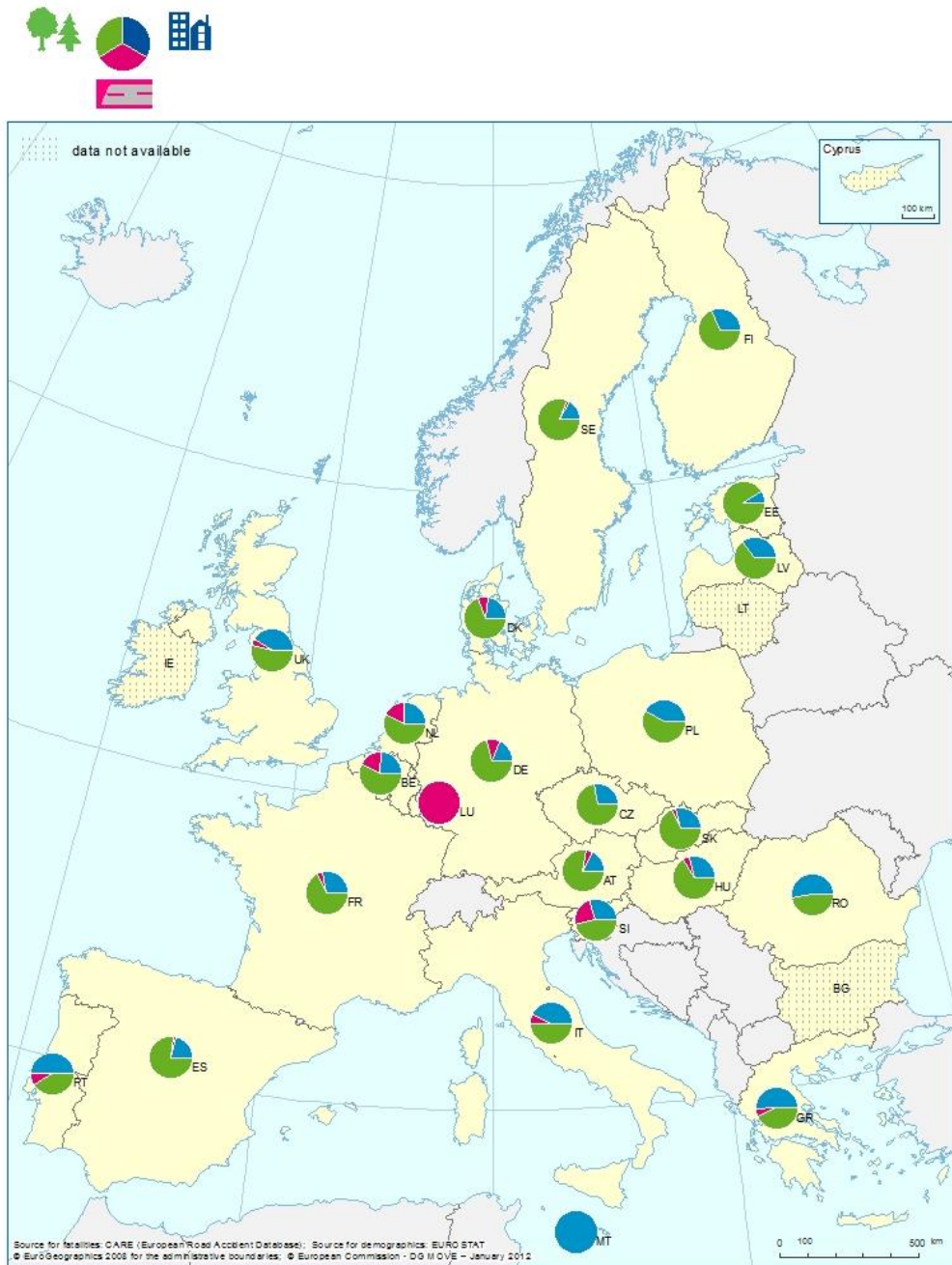
Roads outside urban areas

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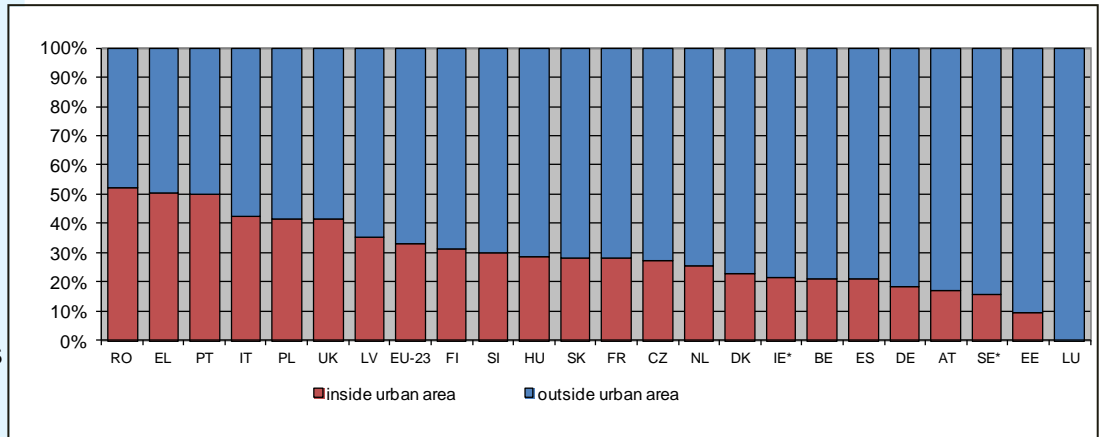
Map 3: Fatality rate of young people per area type, 2009²



Source: CARE Database / EC

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Figure 6: Distribution of fatalities amongst young people by area type, 2009²



Source: CARE Database / EC
Date of query: December 2011

Estonia had the lowest percentage of young people fatalities inside urban areas (10%) whereas Romania had the highest amongst the EU-23 countries in 2009

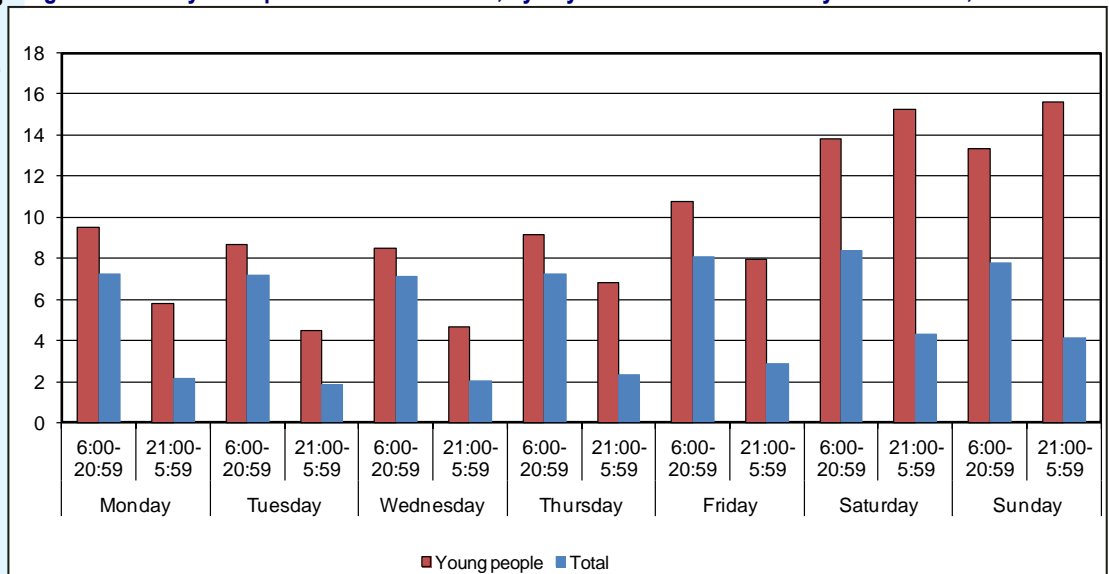
Figure 6 shows that in 2009 Estonia had the lowest percentage of young people fatalities inside urban areas (10%) whereas Romania had the highest percentage (52%) amongst the EU-23 countries.

Day of week and Time of day

Figure 7 shows that in 2009 more people aged 18-24 were killed between 06:00 and 20:59 on week-days in the EU-23 countries than between 21:00 and 5:59 (the night-time and early morning).

On the contrary, more young people were killed between 21:00 and 5:59 during the weekends, when young people tend to stay out until late.

Figure 7: Fatality rates per million inhabitants, by day of week and time of day in the EU-23, 2009²



Source: CARE Database / EC
Date of query: December 2011
Source of population data: Eurostat

On Saturdays and Sundays fatality rates for young people are much higher than the rates for the population as a whole

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Table 6 shows that in 2009 in the EU-23 countries, almost half (43%) of young people killed died at the week-end. The proportions are lower between Tuesday and Wednesday.

Table 6: Distribution of fatalities amongst young people by day of week, 2009²

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
BE	11%	12%	8%	9%	10%	33%	18%
CZ	14%	13%	8%	11%	16%	24%	14%
DK	11%	11%	6%	6%	19%	26%	21%
DE	12%	11%	10%	12%	15%	19%	22%
EE	5%	5%	19%	19%	5%	29%	19%
IE	11%	9%	9%	15%	9%	20%	27%
EL	12%	12%	9%	11%	13%	17%	26%
ES	10%	11%	10%	11%	14%	23%	23%
FR	12%	10%	10%	13%	14%	21%	21%
IT	11%	10%	9%	13%	11%	21%	25%
LV	10%	3%	19%	16%	16%	32%	3%
LU	0%	10%	0%	20%	30%	10%	30%
HU	11%	7%	9%	21%	24%	12%	16%
NL	12%	5%	14%	14%	18%	19%	20%
AT	12%	11%	12%	18%	9%	17%	20%
PL	12%	8%	9%	13%	15%	21%	23%
PT	13%	13%	16%	8%	9%	27%	15%
RO	10%	10%	11%	11%	16%	18%	24%
SI	7%	20%	13%	10%	23%	17%	10%
SK	17%	15%	8%	4%	25%	23%	9%
FI	14%	10%	8%	10%	14%	29%	16%
SE	15%	12%	5%	15%	8%	20%	25%
UK	11%	9%	11%	9%	15%	26%	21%
EU-23	11,4%	10,0%	9,8%	11,9%	14,0%	21,3%	21,5%
CH	6%	6%	9%	9%	19%	31%	21%

Source: CARE Database / EC
Date of query: December 2011

In 2009 in the EU-23 almost half (43%) of young people were killed on weekends

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Seasonality

Table 7 shows the distribution of road traffic fatalities amongst young people through the year, using pairs of months, with the totals displayed in Figure 8 on a monthly basis.

Table 7: Distribution of fatalities amongst young people by month, 2009²

	January/ February	March/ April	May/ June	July/ August	September/ October	November/ December
BE	12%	17%	20%	18%	14%	18%
CZ	14%	14%	17%	26%	17%	13%
DK	23%	30%	13%	9%	13%	11%
DE	13%	16%	20%	17%	19%	15%
EE	33%	19%	5%	33%	5%	5%
IE	19%	20%	16%	17%	15%	13%
EL	12%	18%	17%	22%	19%	12%
ES	18%	14%	15%	18%	18%	16%
FR	13%	16%	19%	18%	21%	14%
IT	13%	15%	16%	23%	17%	15%
LV	16%	13%	19%	19%	3%	29%
LU	0%	20%	10%	20%	50%	0%
HU	6%	22%	24%	20%	16%	12%
NL	12%	14%	23%	14%	19%	18%
AT	18%	9%	22%	20%	19%	11%
PL	11%	16%	18%	23%	19%	13%
PT	7%	14%	9%	28%	26%	16%
RO	14%	13%	15%	22%	23%	13%
SI	17%	20%	27%	3%	23%	10%
SK	8%	17%	25%	23%	17%	11%
FI	12%	10%	29%	20%	22%	8%
SE	13%	12%	13%	25%	22%	15%
UK	17%	18%	16%	20%	16%	13%
EU-23	13,5%	15,8%	17,8%	20,0%	18,9%	14,1%
CH	10%	10%	16%	22%	21%	21%

Source: CARE Database / EC
Date of query: December 2011

The peak period for most of the countries is in July/August, though Denmark, Hungary and Ireland have their peak in March/April, the peak in the Netherlands, Austria, Belgium, Germany and Slovenia is in May/June, while for France the peak is in September/October. Fewest fatalities occur in January/February.

In EU-23 the proportion of fatalities aged 18-24 is relatively high in July and August, and relatively low between January and April in 2009.

In the EU-23, the peak period for fatalities is July/August (20%)

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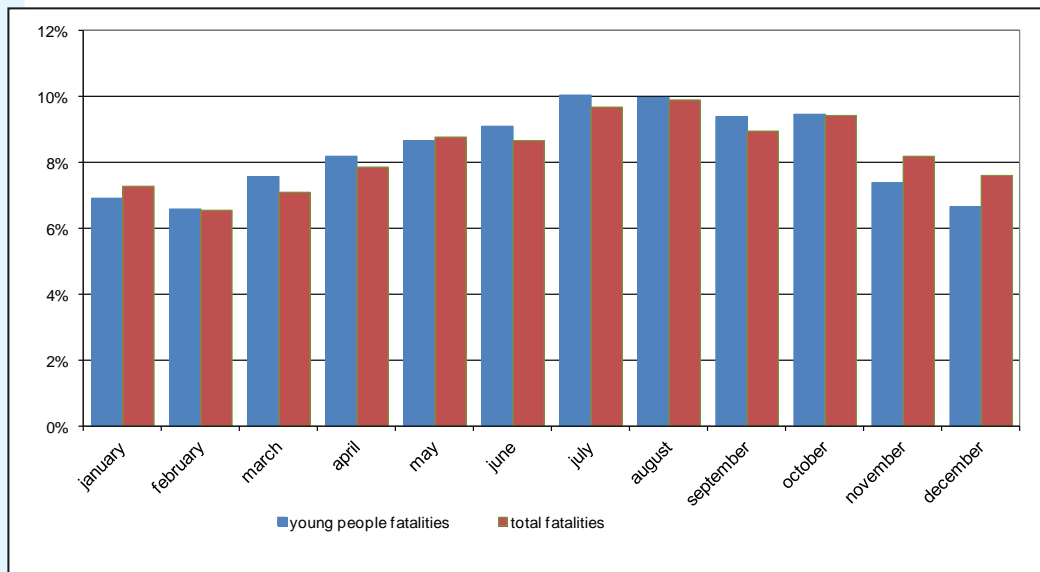
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Figure 8: Distribution of total and young people fatalities by month in the EU-23- 2009²



Source: CARE Database / EC
Date of query: December 2011

Figure 8 shows that the highest proportion of young people fatalities in 2009 occurred in August (10%) in the EU-23 countries whereas the lowest proportion is observed in February (7%). As far as total fatalities are concerned, the highest proportion of total fatalities occurred in July (10%) and in August (10%) whereas the lowest proportion is observed in February (7%).

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^{4, 5}. 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, 25% (249) of the accidents involve a driver or rider between 18 and 24 years old. Males account for 75% of this group and 79% are drivers of passenger cars. Figure 9 compares the distribution of specific critical events for drivers and riders of young age against the distribution for 35 to 64 year olds.

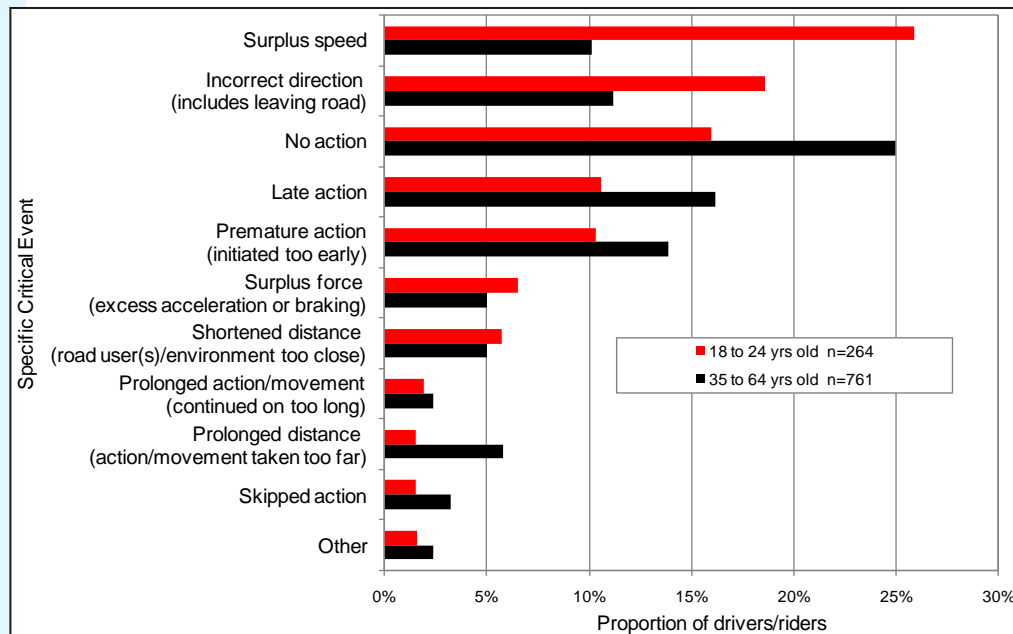
⁴ SafetyNet D5.5, Glossary of Data Variables for Fatal and Accident Causation Databases

⁵ SafetyNet D5.8, In-Depth Accident Causation Database and Analysis Report

Fatalities amongst young people vary seasonally, with higher percentages in summer and lower percentages in winter

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Figure 9: Distribution of specific critical events - 18 to 24 yr and 35 to 64 yr old drivers/riders



N=1025

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

The clearest difference between the two age groups relates to the specific critical event of surplus speed, attributed to just over one quarter of the young age group but only 10% of the older group. 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 a speed unexpected by other road users. Incorrect direction is also recorded more frequently for the younger age group. This 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.

The specific critical events under the general category of 'timing', no action, premature action and late action, are the next three most frequently recorded events but each is recorded more frequently for the older group, especially no action. No action describes those drivers/riders 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. Figure 9 gives the most frequent links between causes for young drivers/riders. For this group there are 371 such links in total.

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Table 8: Ten most frequent links between causes – young drivers/riders

Links between causes	Frequency
Inadequate plan - Insufficient knowledge	55
Faulty diagnosis - Information failure (driver/environment or driver/vehicle)	38
Observation missed - Distraction	25
Observation missed - Faulty diagnosis	21
Inadequate plan - Under the influence of substances	18
Observation missed - Temporary obstruction to view	17
Observation missed - Inadequate plan	15
Inadequate plan - Psychological stress	13
Observation missed - Permanent obstruction to view	12
Faulty diagnosis - Communication failure	12
Others	145
Total	371

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

15% of the links between causes are observed to be between 'inadequate plan' and 'insufficient knowledge'.

Inadequate plan is the most frequently recorded cause and describes a lack of all the required details or that the driver's/rider's ideas do not correspond to reality. The causes leading to inadequate plan are lack of knowledge and impairment from substances and psychological stress.

Faulty diagnosis and observation missed then follow. 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/rider 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 for a turn too early). The causes leading to observation missed can be seen to fall into two groups, human factors (for example, not observing a red light due to distraction) and physical 'obstruction to view' type causes (for example, parked cars at a junction).

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Disclaimer

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

For more information

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

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

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Country abbreviations used and definition of EU-level

EU - 19		EU-23 = EU-19 +	
BE	Belgium	EE	Estonia
CZ	Czech Republic	LV	Latvia
DK	Denmark	HU	Hungary
DE	Germany	SK	Slovakia
IE	Ireland		
EL	Greece		
ES	Spain		
FR	France		
IT	Italy		
LU	Luxembourg		
NL	Netherlands		
AT	Austria		
PL	Poland		
PT	Portugal		
RO	Romania		
SI	Slovenia		
FI	Finland		
SE	Sweden		
UK	United Kingdom		

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

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

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