

Traffic Safety Basic Facts 2012

Young People (Aged 18-24)

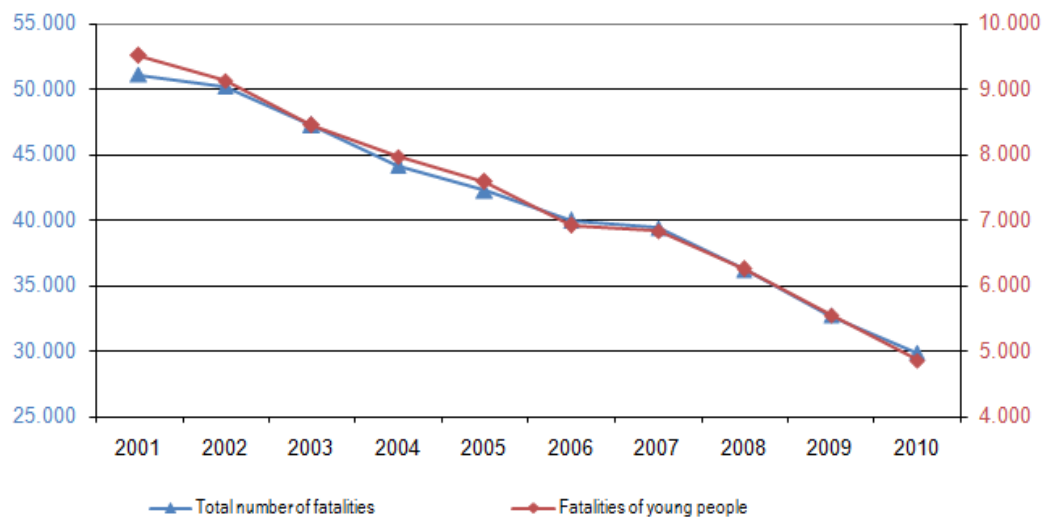
The number of young people killed in road accidents almost halved between 2001 and 2010

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 73.000 persons aged 18-24 years old were killed in traffic accidents, in 20¹ European Union countries within the decade 2001 - 2010. This number represents less than a fifth of all traffic accident fatalities in those countries (18%).

The number of young people killed in road accidents in 2010 almost halved compared to the respective number in 2001. The total number of fatalities also fell by 42% in the 20 European Union countries over the same period.

Figure 1: Distribution of road traffic fatalities in the EU-20¹ 2001-2010²



Source: CARE Database / EC
Date of query: October 2012

¹ See Table "Country abbreviations used and definition of EU-level" on page 21.

² Where a number is missing for an EU-20/23 country in a particular year, its contribution to the EU-20/23 total is estimated as the most recent known value

More than 73.000 persons aged 18-24 years old were killed in road accidents in the EU-20 between 2001 and 2010, less than a fifth of all road accident fatalities in those countries

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

In 2010, the number of young people killed in Romania was 26% less than in 2009, and the reduction in Greece was over 23%. On the other hand, the number increased in Belgium (16%) and Austria (3%). The most significant reduction in young fatalities between 2001 and 2010 occurred in Slovenia (37%).

Table 1: Fatalities aged 18-24 by country, 2001-2010²

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BE	281	262	241	240	196	195	215	177	147	171
CZ	236	222	243	219	223	183	190	193	133	125
DK	68	76	67	67	52	65	58	69	53	42
DE	1.606	1.550	1.392	1.269	1.076	1.011	971	887	796	690
IE	114	79	82	96	110	95	76	75	64	56
EL	385	283	296	304	326	305	280	246	242	186
ES	971	935	972	793	733	601	550	469	357	311
FR	1.807	1.644	1.283	1.276	1.206	1.037	984	956	901	831
IT	1.088	1.109	989	956	919	825	723	634	579	546
LU	16	10	10	8	9	8	8	8	10	10
HU	-	-	129	138	159	134	139	103	81	73
NL	162	205	179	154	122	112	134	107	126	-
AT	188	172	174	169	140	129	135	134	99	102
PL	894	958	908	851	933	895	953	948	833	677
PT	329	270	245	213	221	125	148	113	109	88
RO	311	274	267	293	294	293	402	437	416	307
SI	52	57	51	49	44	54	64	38	30	19
FI	84	73	59	74	53	67	75	50	51	48
SE	100	100	93	78	67	75	86	64	60	-
UK	691	725	772	728	700	706	639	542	467	385
EU-20	9.513	9.133	8.452	7.975	7.583	6.916	6.831	6.250	5.555	4.853
Yearly change (EU-20)	-	-4,0%	-7,5%	-5,6%	-4,9%	-8,8%	-1,2%	-8,5%	-11,1%	-12,6%
EE	-	-	-	-	26	35	41	28	21	-
LV	-	-	-	71	63	59	44	48	31	35
SK	-	-	-	-	83	100	87	92	53	59
EU-23	-	-	-	-	7.755	7.110	7.003	6.418	5.660	4.968
CH	-	-	-	108	-	-	-	44	68	36

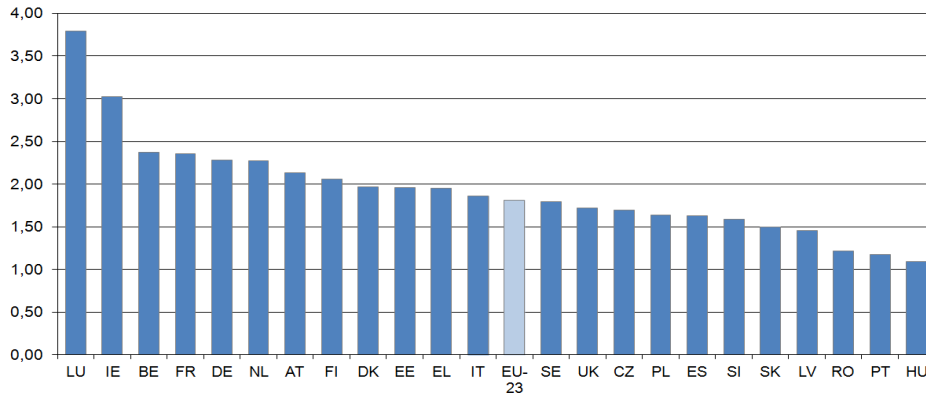
The most significant reduction in young fatalities between 2001 and 2010 occurred in Slovenia (37%)

Source: CARE Database / EC
Date of query: October 2012

Almost 17% of people killed in road accidents in 2010 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 2010 (this is the relative fatality rate, calculated as the % young people fatalities divided by % young people population).

As shown in Figure 2, Ireland has the highest relative fatality rate (3,0) whereas Hungary and Portugal have the lowest relative rate (1,1) among the 23 countries in 2010.

Figure 2: Relative fatality rate for young people, 2010²



Source: CARE Database / EC
Date of query: October 2012
Source of population data: EUROSTAT

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

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, 2001-2010²

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BE	19%	20%	20%	21%	18%	18%	20%	19%	16%	20%
CZ	18%	16%	17%	16%	17%	17%	16%	18%	15%	16%
DK	16%	16%	16%	18%	16%	21%	14%	17%	17%	16%
DE	23%	23%	21%	22%	20%	20%	20%	20%	19%	19%
IE	28%	21%	24%	25%	28%	26%	22%	27%	27%	26%
EL	20%	17%	18%	18%	20%	18%	17%	16%	17%	15%
ES	18%	17%	18%	17%	17%	15%	14%	15%	13%	13%
FR	22%	21%	21%	23%	23%	22%	21%	22%	21%	21%
IT	15%	16%	15%	16%	16%	15%	14%	13%	14%	13%
LU	23%	16%	19%	16%	19%	19%	17%	23%	21%	31%
HU	10%	9%	10%	11%	12%	10%	11%	10%	10%	10%
NL	16%	21%	17%	19%	16%	15%	19%	16%	20%	-
AT	20%	18%	19%	19%	18%	18%	20%	20%	16%	18%
PL	16%	16%	16%	15%	17%	17%	17%	17%	18%	17%
PT	20%	16%	16%	16%	18%	13%	15%	13%	13%	9%
RO	13%	11%	12%	12%	11%	11%	14%	14%	15%	13%
SI	19%	21%	21%	18%	17%	21%	22%	18%	18%	14%
FI	19%	18%	16%	20%	14%	20%	20%	15%	18%	18%
SE	17%	18%	18%	16%	15%	17%	18%	16%	17%	-
UK	19%	20%	21%	22%	21%	21%	21%	20%	20%	16%
EU-20	18,6%	18,2%	17,9%	18,1%	17,9%	17,3%	17,3%	17,3%	17,0%	16,2%
EE	-	-	-	-	15%	17%	21%	21%	21%	-
LV	-	-	-	14%	14%	14%	11%	15%	12%	16%
SK	-	-	-	-	14%	16%	13%	15%	14%	16%
EU-23	-	-	-	-	17,8%	17,3%	17,2%	17,2%	16,9%	16,3%
CH	-	-	-	21%	-	-	-	12%	19%	11%

Source: CARE Database / EC
Date of query: October 2012

In 2010, Ireland has the highest relative fatality rate (3,0) for young people whereas Hungary and Portugal have the lowest relative rate (1,1) among the 23 countries

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Age and Road user type

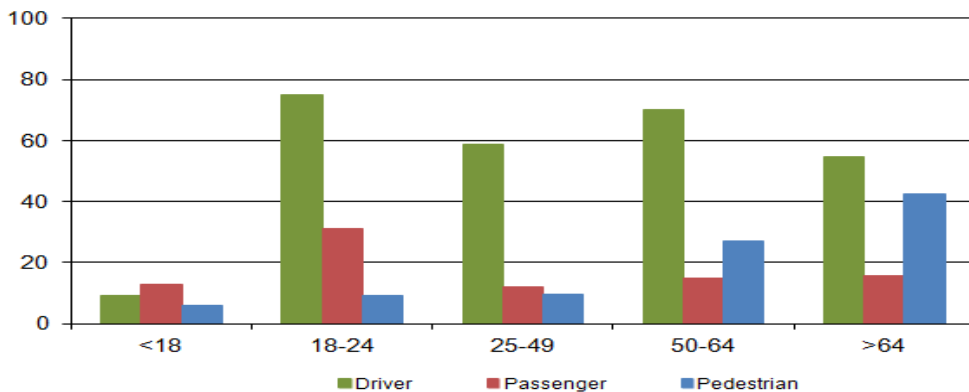
Table 3: Percentage of fatalities by age group for drivers³, passengers and pedestrians by country, 2010²

	Person Class			Age group					Total
	Driver	Passenger	Pedestrian	<18	18-24	25-49	50-64	>64	
BE	64%	29%	7%	5%	19%	39%	14%	17%	879
CZ	59%	33%	8%	4%	15%	39%	17%	21%	836
DK	60%	36%	5%	6%	15%	30%	18%	25%	272
DE	72%	22%	6%	5%	18%	32%	16%	24%	3.852
EE	52%	48%	0%	6%	20%	38%	13%	17%	103
IE	48%	41%	11%	6%	25%	38%	12%	14%	221
EL	72%	26%	2%	5%	14%	40%	15%	21%	1.303
ES	60%	33%	7%	5%	12%	42%	16%	20%	2.587
FR	73%	22%	5%	7%	19%	35%	14%	18%	4.283
IT	71%	25%	5%	4%	13%	37%	15%	25%	4.184
LV	60%	31%	9%	5%	16%	34%	24%	16%	221
LU	70%	30%	0%	0%	31%	41%	19%	9%	32
HU	53%	27%	19%	4%	9%	39%	24%	19%	770
NL	68%	27%	5%	7%	18%	28%	13%	27%	693
AT	75%	19%	7%	6%	17%	30%	16%	24%	589
PL	58%	30%	12%	6%	16%	35%	21%	16%	4.109
PT	55%	41%	5%	3%	9%	39%	17%	29%	961
RO	48%	41%	11%	6%	12%	34%	23%	20%	2.517
SI	67%	33%	0%	4%	13%	38%	20%	21%	144
SK	46%	39%	15%	5%	18%	38%	20%	14%	336
FI	65%	23%	13%	7%	16%	32%	16%	22%	292
SE	75%	18%	7%	9%	15%	26%	18%	23%	392
UK	62%	23%	15%	7%	18%	34%	16%	19%	2.103
EU-23	65,0%	27,1%	7,9%	5,5%	15,7%	35,6%	17,1%	20,7%	31.679
CH	61%	22%	17%	6%	10%	30%	19%	29%	347

Source: CARE Database / EC
Date of query: October 2012

The majority of the young people (18-24) killed in road accidents in the 23 European countries were drivers (3.223, corresponding to 65% of all fatalities at that age group), whereas only 8% (391) were pedestrians in 2010.

Figure 3: Rate of fatalities per million population by age group for drivers, passengers and pedestrians, EU-23¹, 2010²



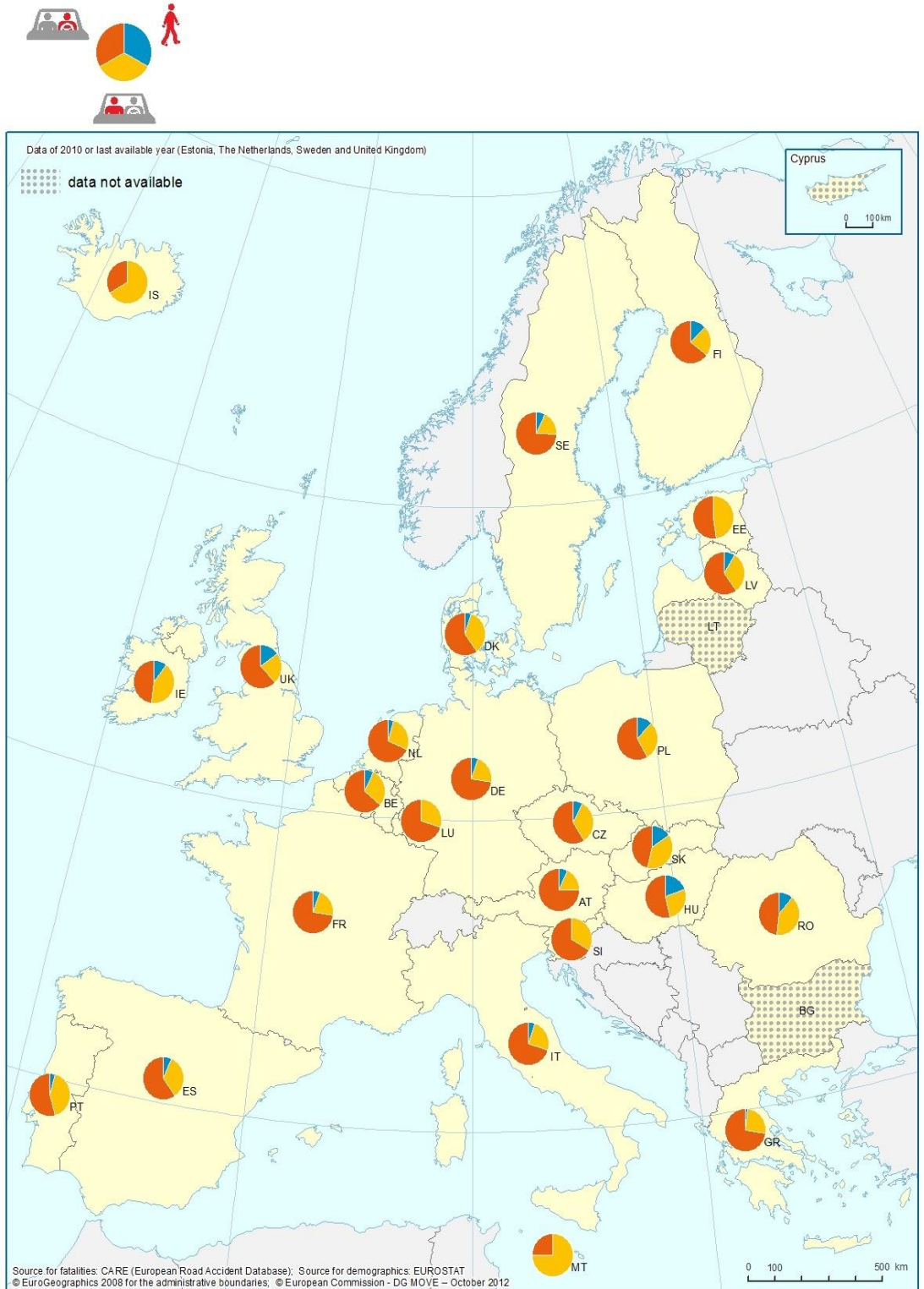
Source: CARE Database / EC
Date of query: October 2012
Source of population data: Eurostat

In 2010, the majority of the young people killed in road accidents in the EU-23 countries were drivers whereas only 8% 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 1: Proportion of fatalities of young people per person class, 2010²



Source: CARE Database / EC

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

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 21% in the EU-23 countries.

Table 4: Fatalities of young people by mode of transport, 2010²

	Car / taxi	Lorries	Two-wheelers	Pedestrian	Other	Total
BE	75%	1%	15%	7%	2%	171
CZ	75%	3%	14%	8%	0%	125
DK	74%	2%	18%	6%	0%	42
DE	71%	10%	14%	5%	0%	690
EE	67%	24%	5%	0%	5%	21
IE	75%	4%	11%	11%	0%	56
EL	48%	1%	50%	2%	0%	186
ES	72%	4%	15%	7%	2%	311
FR	64%	3%	27%	5%	1%	831
IT	59%	3%	33%	5%	0%	546
LV	51%	6%	20%	9%	14%	35
LU	90%	10%	0%	0%	0%	10
HU	64%	1%	15%	19%	0%	73
NL	62%	6%	28%	5%	0%	126
AT	83%	0%	9%	7%	1%	102
PL	69%	3%	16%	12%	1%	677
PT	58%	10%	19%	5%	8%	88
RO	69%	2%	18%	11%	0%	307
SI	42%	0%	21%	0%	37%	19
SK	70%	2%	14%	15%	0%	59
FI	77%	0%	10%	13%	0%	48
SE	78%	2%	13%	7%	0%	60
UK	63%	2%	20%	15%	0%	385
EU-23	3.326	141	1.064	391	47	4.968
%	66,9%	2,8%	21,4%	7,9%	0,9%	100,0%
CH	33%	11%	39%	17%	0%	36

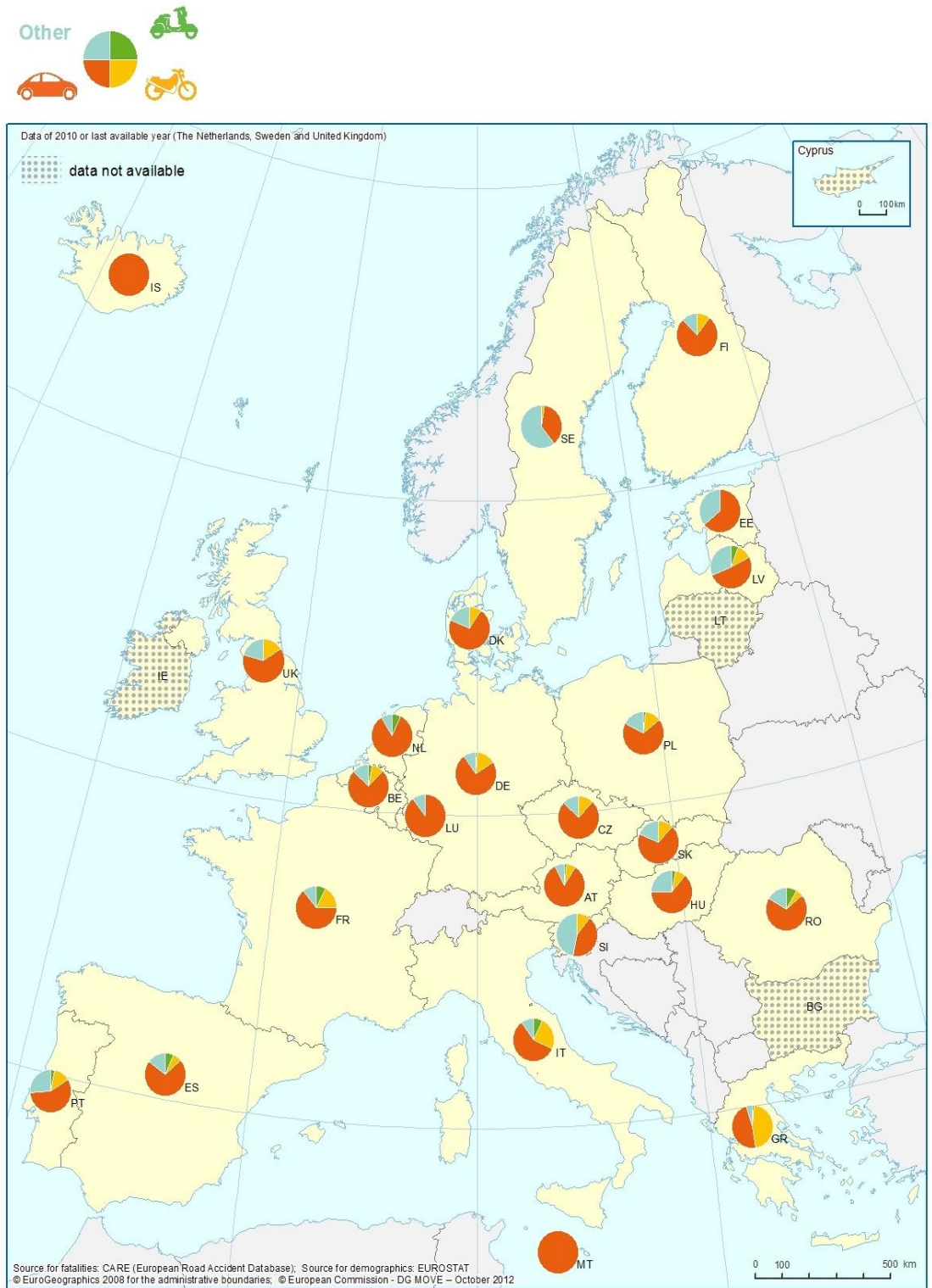
Source: CARE Database / EC
Date of query: October 2012

Figure 4 shows that the highest proportion among the 23 European countries of young people fatalities by mode of transport in 2010 was in Austria (84% were travelling by car/taxi). The second highest proportion of young people fatalities by car/taxi was in Sweden (78%). The lowest car/taxi proportion was in Greece 48% and Slovenia 42%.

49% of the young people fatalities in Greece were riding two-wheelers, the highest proportion among the EU-23 countries

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

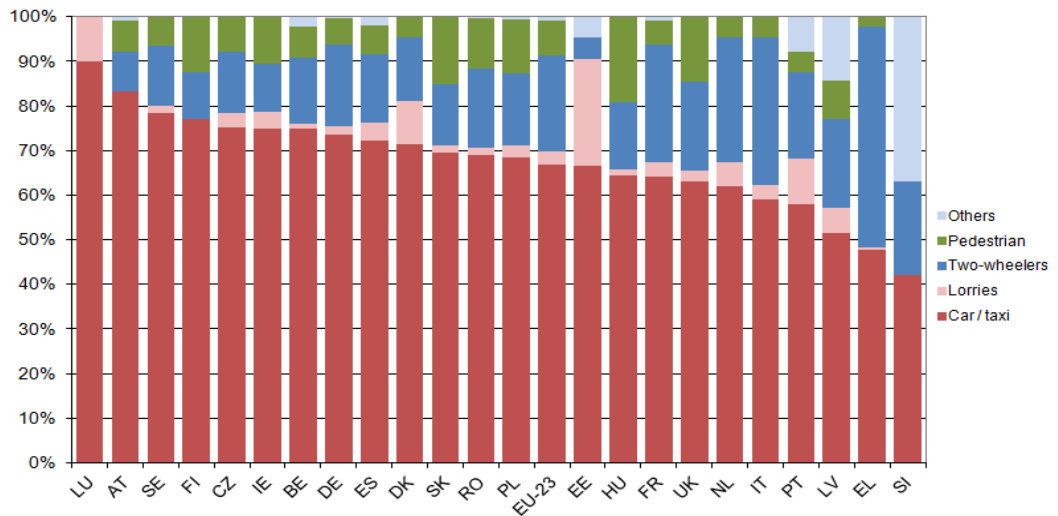
Map 2 Proportion of fatalities of young people per vehicle type, 2010²



Source: CARE Database / EC

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Figure 4: Proportion of young (or 18-24 years old) fatalities by mode of transport, 2010²



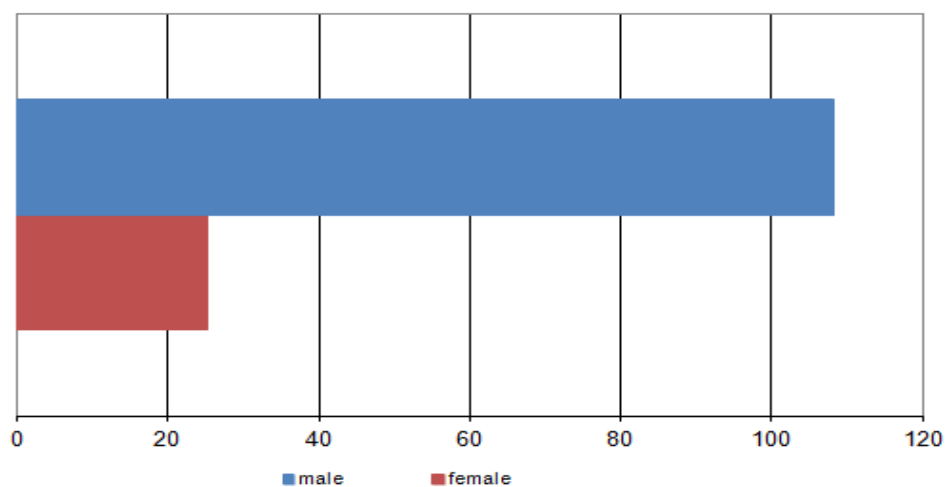
Source: CARE Database / EC
Date of query: October 2012

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 (5%) and Finland (9%). Greece had the highest proportion of 18-24 year old two-wheeler fatalities (50%) among the 23 countries considered. Estonia had the highest proportion of young people fatalities in lorries (24%). Hungary 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 (108), 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, 2010²



Source: CARE Database / EC
Date of query: October 2012

81% of the fatalities among young people were men

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Area and Road type

In the EU-23, the majority (69%) of young fatalities occurred outside urban areas (excluding motorways) in 2010 and only 7% occurred on motorways. The percentage of young people fatalities inside urban areas was 31% for the EU-23 countries.

Table 5: Distribution of fatalities amongst young people by area and road type, 2010²

	inside urban area	outside urban area	
		motorway	non-motorway
BE	29%	9%	62%
CZ	32%	2%	66%
DK	12%	21%	67%
DE	16%	9%	75%
EE	10%	0%	90%
IE	25%	2%	73%
EL	53%	6%	41%
ES	16%	17%	67%
FR	26%	5%	69%
IT	40%	10%	50%
LV	43%	0%	57%
LU	10%	0%	90%
HU	37%	4%	59%
NL	25%	17%	57%
AT	13%	6%	81%
PL	41%	1%	58%
PT	36%	17%	47%
RO	54%	1%	45%
SI	37%	21%	42%
SK	36%	5%	59%
FI	17%	2%	81%
SE	40%	13%	47%
UK	32%	3%	65%
EU-23	31,1%	6,8%	62,0%
CH	14%	14%	72%

Source: CARE Database / EC
Date of query: October 2012

69% of young fatalities in road accidents occurred in rural areas in 2010

Main Figures

Children (Aged < 15)

Youngsters (Aged 15-17)

Young People (Aged 18-24)

The Elderly (Aged > 64)

Pedestrians

Bicycles

Motorcycles & Mopeds

Car occupants

Heavy Goods Vehicles

Motorways

Junctions

Roads in urban areas

Roads outside urban areas

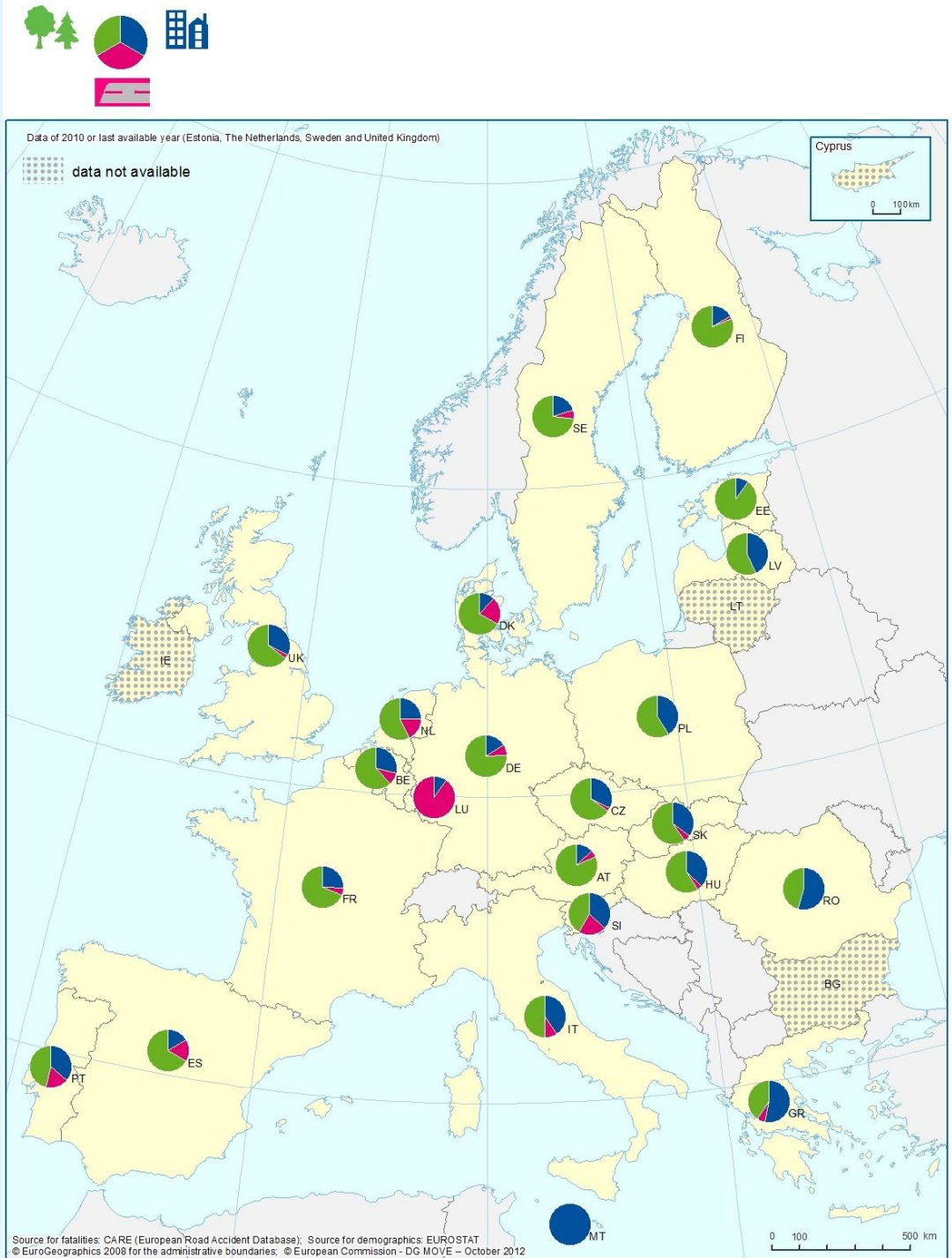
Seasonality

Single vehicle accidents

Gender

Causation

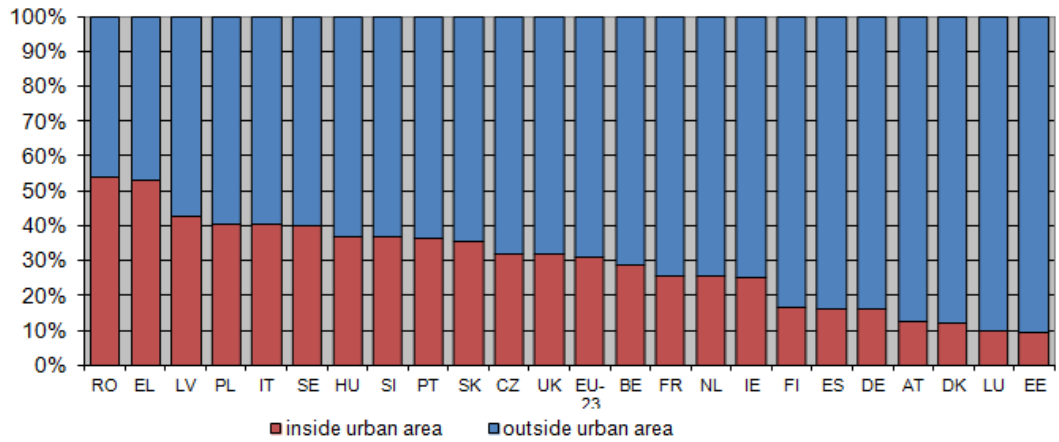
Map 3: Proportion of fatalities of young people per area type, 2010²



Source: CARE Database / EC

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Figure 6: Distribution of fatalities amongst young people by area type, 2010²



Source: CARE Database / EC
Date of query: October 2012

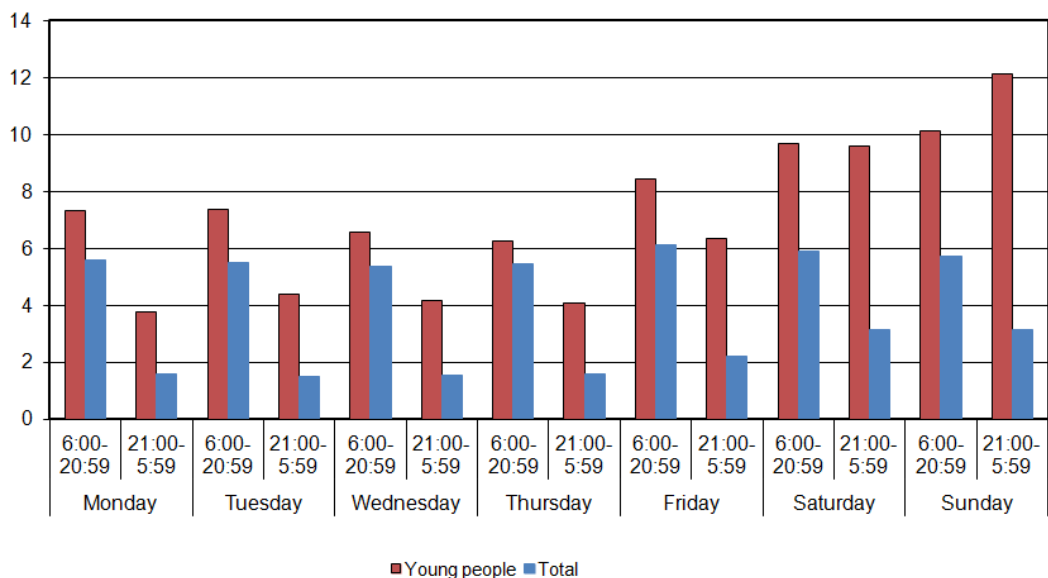
Figure 6 shows that in 2010 Estonia had the lowest percentage of young people fatalities inside urban areas (10%) whereas Romania had the highest percentage (54%) amongst the EU-23 countries.

Day of week and Time of day

Figure 7 shows that in 2010 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 05:59 (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, 2010²



Source: CARE Database / EC
Date of query: October 2012
Source of population data: Eurostat

Estonia had the lowest percentage of young people fatalities inside urban areas (10%) whereas Romania had the highest amongst the EU-23 countries in 2010

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

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Table 6 shows that in 2010 in the EU-23 countries, almost half (43%) of the young people who were 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, 2010²

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
BE	10%	9%	11%	11%	15%	20%	24%
CZ	12%	13%	12%	10%	16%	16%	22%
DK	14%	14%	17%	7%	10%	21%	17%
DE	12%	12%	12%	12%	17%	16%	19%
EE	5%	5%	19%	19%	5%	29%	19%
IE	7%	16%	9%	9%	4%	16%	39%
EL	13%	11%	15%	9%	13%	17%	23%
ES	10%	11%	10%	9%	15%	20%	23%
FR	10%	12%	10%	10%	17%	20%	20%
IT	13%	12%	10%	7%	15%	19%	24%
LV	3%	11%	26%	11%	6%	17%	26%
LU	30%	0%	10%	0%	20%	20%	20%
HU	11%	8%	7%	12%	22%	19%	21%
NL	12%	5%	13%	13%	17%	19%	20%
AT	12%	8%	8%	11%	22%	14%	26%
PL	12%	13%	11%	12%	13%	19%	21%
PT	13%	9%	14%	14%	6%	25%	20%
RO	10%	13%	11%	10%	15%	17%	24%
SI	5%	0%	21%	11%	11%	37%	16%
SK	8%	10%	10%	14%	8%	19%	31%
FI	10%	15%	2%	10%	10%	31%	21%
SE	15%	12%	5%	15%	8%	20%	25%
UK	9%	14%	10%	10%	16%	21%	20%
EU-23	11,1%	11,7%	10,9%	10,5%	15,1%	18,8%	21,8%
CH	8%	19%	19%	17%	3%	19%	14%

In 2010 in the EU-23 almost half (41%) of young people were killed on weekends

Source: CARE Database / EC
Date of query: October 2012

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

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, 2010²

	January/ February	March/ April	May/ June	July/ August	September/ October	November/ December
BE	19%	15%	19%	18%	18%	13%
CZ	9%	15%	16%	20%	26%	14%
DK	12%	12%	14%	26%	17%	19%
DE	11%	19%	18%	19%	18%	14%
EE	33%	19%	5%	33%	5%	5%
IE	13%	16%	23%	16%	27%	5%
EL	11%	18%	18%	20%	19%	14%
ES	16%	17%	15%	20%	16%	16%
FR	12%	14%	18%	23%	18%	16%
IT	15%	16%	17%	20%	19%	13%
LV	3%	14%	26%	26%	14%	17%
LU	0%	10%	30%	0%	40%	20%
HU	16%	11%	18%	26%	18%	11%
NL	12%	14%	23%	13%	19%	18%
AT	15%	17%	18%	24%	15%	13%
PL	7%	13%	21%	25%	23%	11%
PT	11%	14%	24%	19%	16%	16%
RO	13%	15%	13%	21%	23%	15%
SI	0%	11%	42%	16%	26%	5%
SK	14%	12%	14%	20%	22%	19%
FI	8%	6%	25%	33%	17%	10%
SE	13%	12%	13%	25%	22%	15%
UK	17%	16%	16%	19%	17%	16%
EU-23	12,4%	15,3%	18,0%	21,0%	19,2%	14,2%
CH	11%	25%	8%	28%	19%	8%

Source: CARE Database / EC
Date of query: October 2012

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, Portugal and Belgium is in May/June, while for Czech Republic, Romania, Slovenia, Slovakia and Ireland 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 2010.

In the EU-23, the peak period for fatalities in 2010 is July/August (21%)

Main Figures

Children (Aged < 15)

Youngsters (Aged 15-17)

Young People (Aged 18-24)

The Elderly (Aged > 64)

Pedestrians

Bicycles

Motorcycles & Mopeds

Car occupants

Heavy Goods Vehicles

Motorways

Junctions

Roads in urban areas

Roads outside urban areas

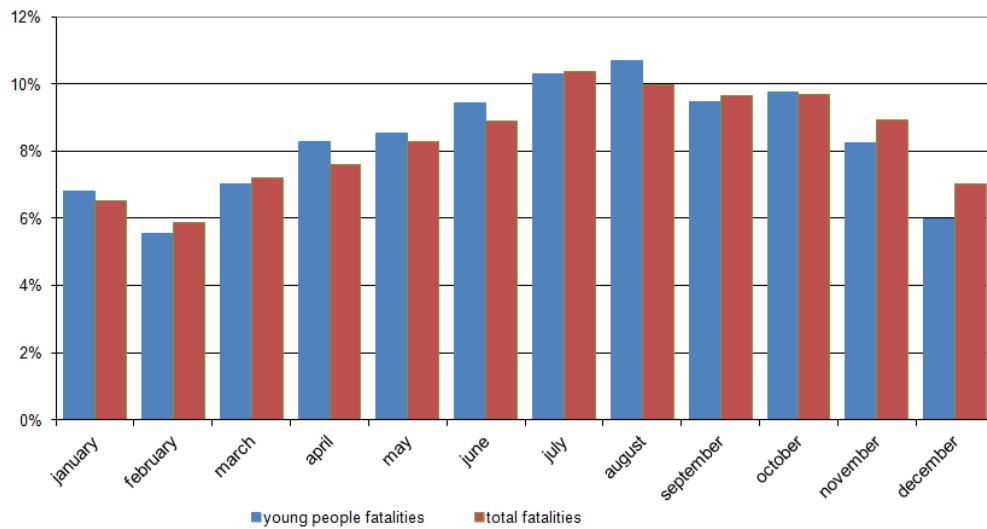
Seasonality

Single vehicle accidents

Gender

Causation

Figure 8: Distribution of total and young people fatalities by month in the EU-23- 2010²



Source: CARE Database / EC
Date of query: October 2012

Figure 8 shows that the highest proportion of young people fatalities in 2010 occurred in August (11%) in the EU-23 countries whereas the lowest proportion occurred in February (6%). 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 occurred in February (6%).

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.

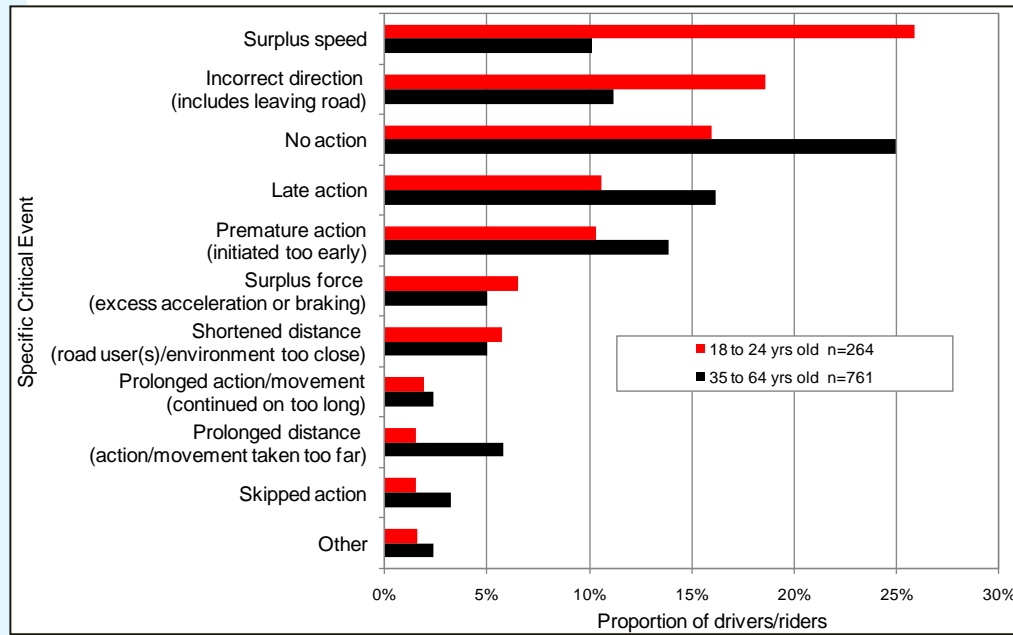
In the database, 25% (249) of the accidents involve a driver or rider between 18 and 24 years old. Males account for 75% of this group and 79% are drivers of passenger cars. Figure 9 compares the distribution of specific critical events for drivers and riders of young age against the distribution for 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

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

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.

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

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).

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

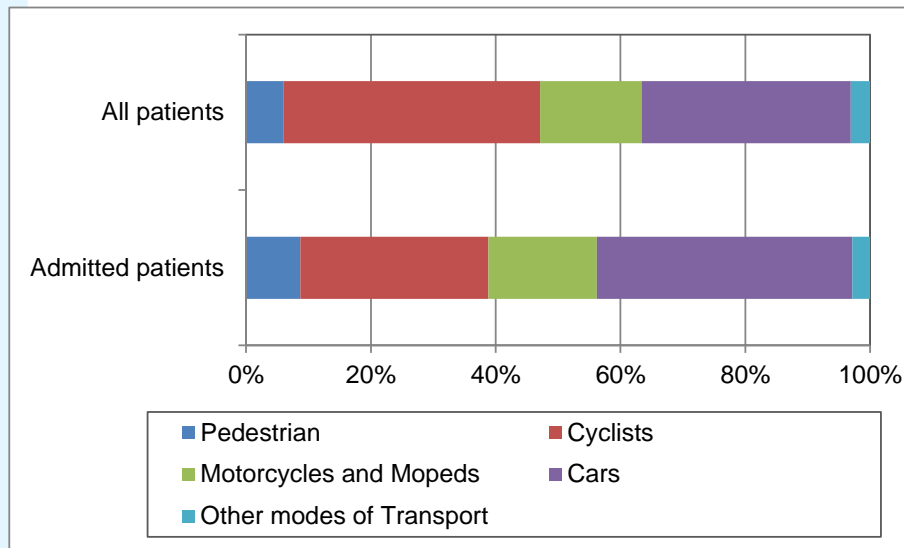
ROAD ACCIDENT HEALTH INDICATORS

Injury data can be obtained from a wide range of sources, such as police and ambulance reports, national insurance schemes, and hospital records, each of which provides a specific but yet incomplete picture of the injuries suffered in road accidents. In order to obtain a comprehensive view of these injuries, the EU Council issued a Recommendation that urges member states to use synergies between existing data sources and to develop national injury surveillance systems rooted in the health sector.⁶ 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).⁷

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

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).

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%).

⁶ OJ C 164/1, 18.7.2007

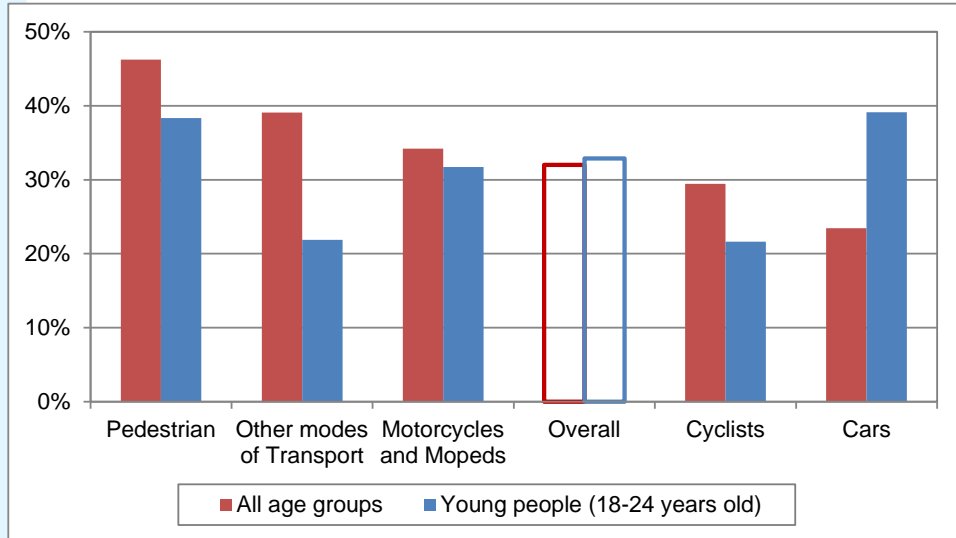
⁷ <https://webgate.ec.europa.eu/sanco/heid/index.php/IDB>

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.

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Overall, 32% of road accident casualties recorded in the IDB were admitted to the hospital, about 30% for youngsters (Figure 3); with an average length of stay of eight days, about six days for youngsters (Figure 2).

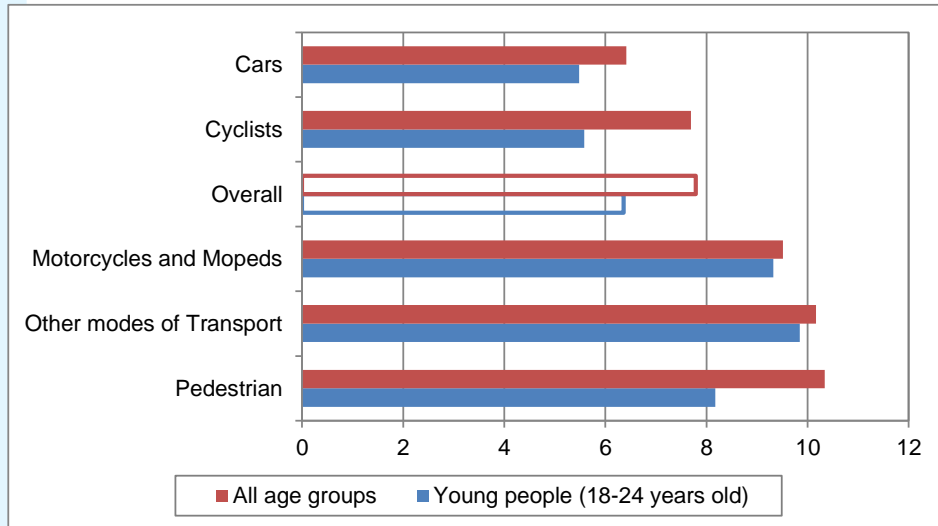
Figure 11: Proportion of casualties who were admitted to hospital, by age group and mode of transport



About 30% of injured young people who attended a hospital were admitted to the hospital; their average stay in hospital was six days.

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-youngsters = 13.190, n- youngsters admitted = 4.336 (DE, DK, LV, MT, AT, NL, SE, SI, CY, years 2005-2008).

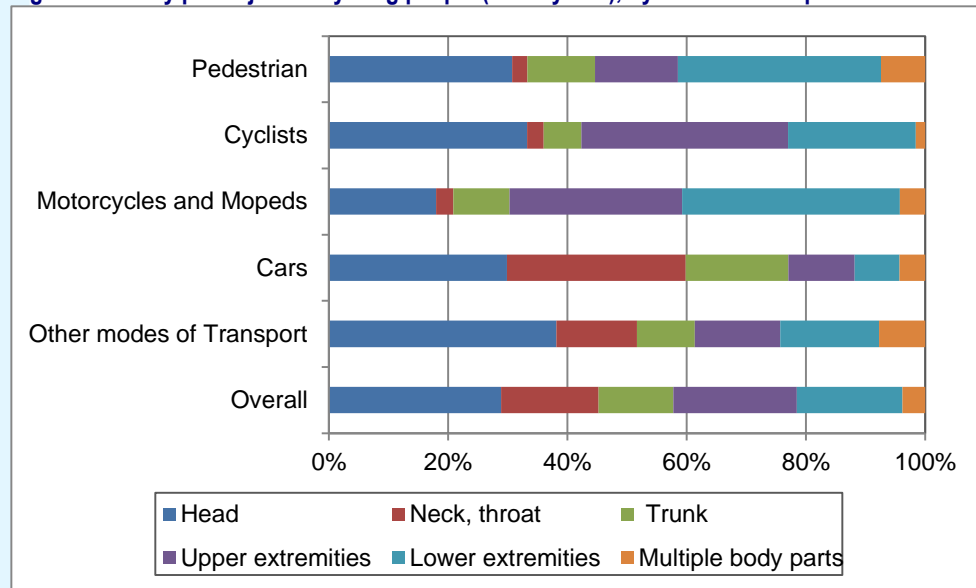
Figure 12: Average length of stay (hospital bed days), by age group and mode of transport



Source: See Figure 11

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

Figure 13: Body part injured in young people (18-24 years), by mode of transport



Source: See Figure 11.

Naturally, hospital data can provide information on the injury patterns sustained by the accident victims. Figure 4 illustrates the distribution of body parts injured in young people's casualties by type of road user.

Table 9 shows the types of injuries most frequently recorded in the EU IDB. It compares the distribution of injuries among young people and road users of all ages.

Table 9: Ten most frequently recorded types of injury, by age group

	Young people (18-24 years)	All age groups
Contusion, bruise	38%	34%
Fracture	18%	27%
Open wound	10%	10%
Distortion, sprain	10%	8%
Concussion	9%	7%
Other specified brain injury	2%	2%
Luxation, dislocation	1%	2%
Injury to muscle and tendon	2%	2%
Abrasion	1%	1%
Injury to internal organs	1%	1%
Other specified types of injury	8%	6%
Total	100%	100%

Source: See Figure 11.

Contusions and bruises account for almost 40% of all traffic injuries suffered by young people attending hospital.

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation

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:

- Main Figures
- Children (Aged <15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged >64)
- Pedestrians
- Cyclists
- Motorcycles and Mopeds
- Car occupants
- Heavy Goods Vehicles and Buses
- Motorways
- Junctions
- Urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Accident causation

Main Figures

Children
(Aged < 15)

Youngsters
(Aged 15-17)

Young People
(Aged 18-24)

The Elderly
(Aged > 64)

Pedestrians

Bicycles

Motorcycles
& Mopeds

Car
occupants

Heavy Goods
Vehicles

Motorways

Junctions

Roads in
urban areas

Roads outside
urban areas

Seasonality

Single vehicle
accidents

Gender

Causation

Country abbreviations used and definition of EU-level

EU - 20		EU-23 = EU-20 +	
BE	Belgium	EE	Estonia
CZ	Czech Republic	LV	Latvia
DK	Denmark	SK	Slovakia
DE	Germany		
IE	Ireland		
EL	Greece		
ES	Spain		
FR	France		
IT	Italy		
LU	Luxembourg		
HU	Hungary		
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>.

Authors

George Yannis, Petros Evgenikos, Panagiotis Papantoniou	NTUA, Greece
Jeremy Broughton	TRL, UK
Christian Brandstatter	KfV, Austria
Nimmi Candappa, Michiel Christoph, Kirsten van Duijvenvoorde, Martijn Vis	SWOV, The Netherlands
Jean-François Pace, María Teresa Tormo, Jaime Sanmartín	INTRAS-UEG, Spain
Mouloud Haddak, Léa Pascal, Marie Lefèvre, Emmanuelle Amoros	IFSTTAR, France
Pete Thomas, Alan Kirk, Laurie Brown	Loughborough University, UK

- Main Figures
- Children (Aged < 15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged > 64)
- Pedestrians
- Bicycles
- Motorcycles & Mopeds
- Car occupants
- Heavy Goods Vehicles
- Motorways
- Junctions
- Roads in urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Causation