



# European Road Safety Observatory

Facts and Figures - Children - 2022

This document is part of a series of 16 *Facts and Figures* reports. The purpose of these *Facts and Figures* reports is to provide recent statistics related to a specific road safety topic, for example a specific age group or transport mode. The *Facts and Figures* reports replace the Basic Fact Sheets series that were available until 2018 (containing data up to 2016). The most recent figures in this *Facts and Figures* report of 2022 refer to 2020. These reports can be found on the ERSO website ([https://road-safety.transport.ec.europa.eu/statistics-and-analysis/data-and-analysis/facts-and-figures\\_en](https://road-safety.transport.ec.europa.eu/statistics-and-analysis/data-and-analysis/facts-and-figures_en)).

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Sources	Information in this document is based largely on data in the CARE database (Community database on Accidents on the Roads in Europe). Other data are taken from Eurostat. Date of extraction: 5 May 2022

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# 1 Key Facts

In this Facts and Figures report, road fatalities among children are discussed. All differences reported were derived from the available data, the statistical significance of the differences between values has not been tested.

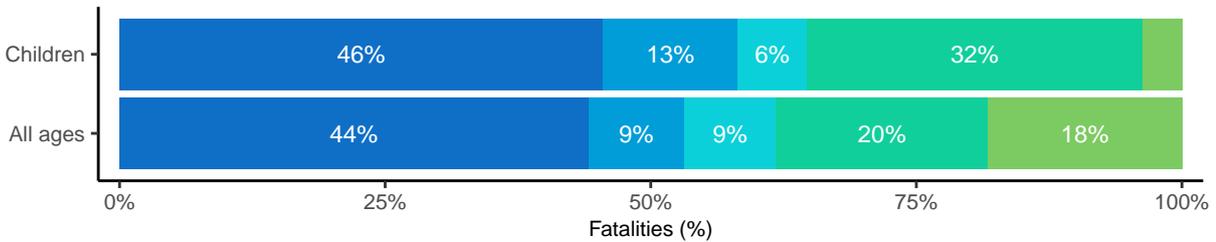
## Fatalities among children, 2020



- 336 fatalities
- 2% of all road fatalities
- 47% decrease since 2011, compared to 34% decrease for all fatalities

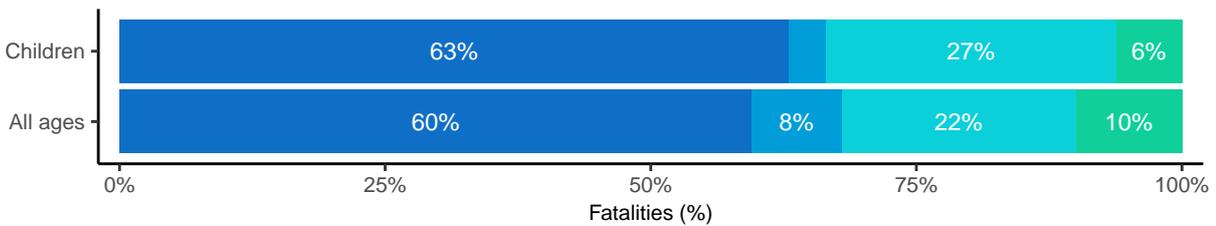
### Transport mode

- Car occupant
- Cyclist
- Other/unknown
- Pedestrian
- Powered two-wheeler



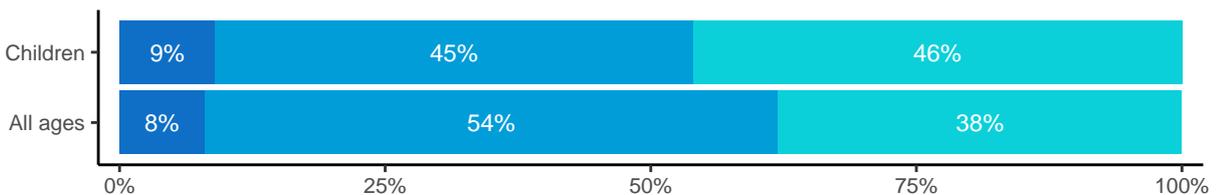
### Period of the week

- Working week – daytime
- Working week – night-time
- Weekend – daytime
- Weekend – night-time



### Road type

- Motorway
- Rural
- Urban



## 2 Summary

Children have the lowest mortality rate compared to other age-groups, and the mortality rate has also decreased the most out of all age groups over the last decade.

The absolute number of road fatalities among children between 2011 and 2020 decreased by 47%, from 733 fatalities in 2011 to 386 fatalities in 2020. As the total number of road fatalities was decreasing less rapidly, their relative share decreased slightly. Within the group of children, the largest decrease in fatalities could be observed among the age-group of 5-9 year olds.

In terms of transport mode, children had a very high death toll among the most vulnerable modes of transport: 32% of children killed were pedestrians, 13% were cyclists. These figures are EU averages but there are much higher percentages in a number of EU countries. In Romania and Greece, more than one in two fatalities among children was a pedestrian. In the Netherlands, 47% of fatalities among children were cyclists. The differences between the percentages for children and all fatalities reflect the mobility behaviour of children.

Compared to all road fatalities combined, fatalities among children occur more often during the working week in daytime and especially in the weekend in daytime. There is a clear peak in fatalities among children between 12pm and 8pm, even during the weekend.

Road fatalities among children also differed from all fatalities combined in terms of gender and the location of the fatal crashes:

- At 61%, the proportion of young boys dying on the road is slightly lower compared to all fatalities.
- There were proportionately more fatalities in dry weather compared to all fatalities.
- The share of fatalities on rural roads is proportionally lower for children (45% compared to 54%), and the share of fatalities on urban roads is proportionally higher compared to all road fatalities (46% compared to 38%).
- Among children, there are relatively more fatalities at junctions (18% versus 13% for all fatalities).

Comparison between EU countries gives a different picture depending on the indicator used. According to the mortality indicator (fatalities per million population) the countries in the east of the EU had the worst performance. Most of these countries had a better ranking when using the proportion of children killed within the total number of road fatalities as the indicator. This means that the high road mortality for children in those countries is linked to the high mortality for all road users, regardless of their age. Nevertheless, there were also countries that score above average on both indicators, such as Latvia, Romania and Bulgaria.

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**Basic definitions***Children:*

Persons aged 0-14 years.

*Fatalities:*

Total number of persons fatally injured; correction factors applied when needed. Death within 30 days of the road crash, confirmed suicide and natural death are not included.

*Seriously injured:*

Total number of seriously injured persons corrected by correction factors when needed. Injured (although not killed) in the road crash and, in principle, hospitalised for at least 24 hours within 30 days from the crash.

**More detailed data:**

This Facts and Figures report is accompanied by an Excel file (available online) containing a large set of additional detailed data. Each sheet in the excel file corresponds to a Figure/Table in the report.

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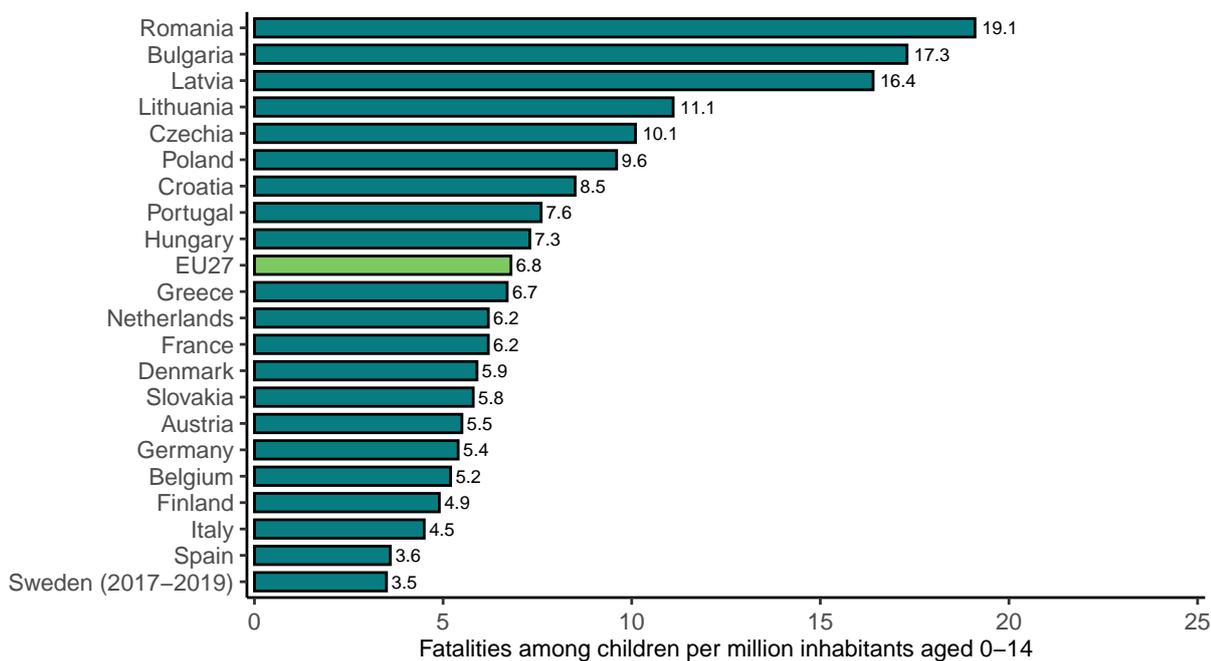
### 3 Main trends

#### 3.1 Mortality rate: number of road fatalities per million inhabitants

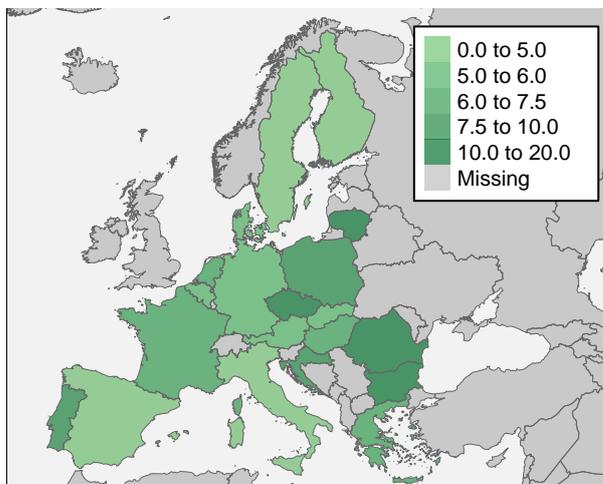
**The number of road fatalities among children per million inhabitants aged 0 to 14 is above the EU27 average in Eastern Europe.** The mortality rate is highest in Romania, Bulgaria and Latvia. Portugal also lies above the EU average.

Of the countries with the highest number of fatalities among children (France, Germany, Romania, Poland and Italy), Romania and Poland have a mortality rate above the European average.

**Figure 1.** Fatalities among children per million inhabitants aged 0-14 per country in the EU27 (2018-2020). Source: CARE, EUROSTAT



Notes:  
 - Ireland and Malta are not included in the Figure because of missing data in the time series 2018-2020  
 - Cyprus, Estonia, Luxembourg and Slovenia are not included in the Figure because of small numbers



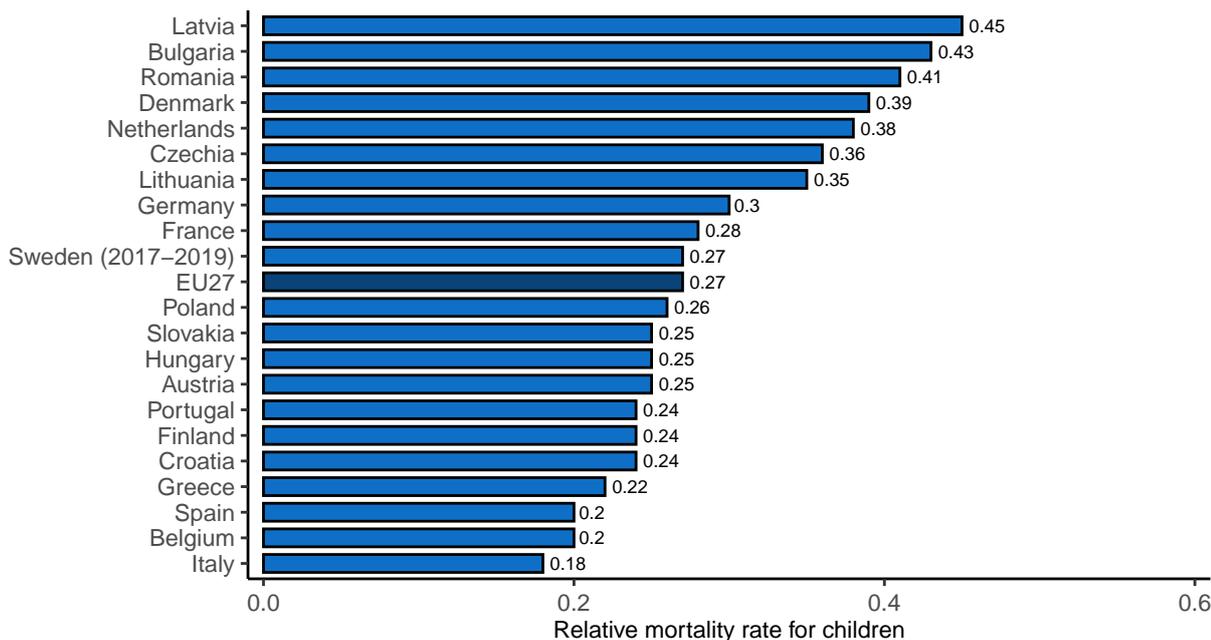
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### 3.2 Relative mortality rate

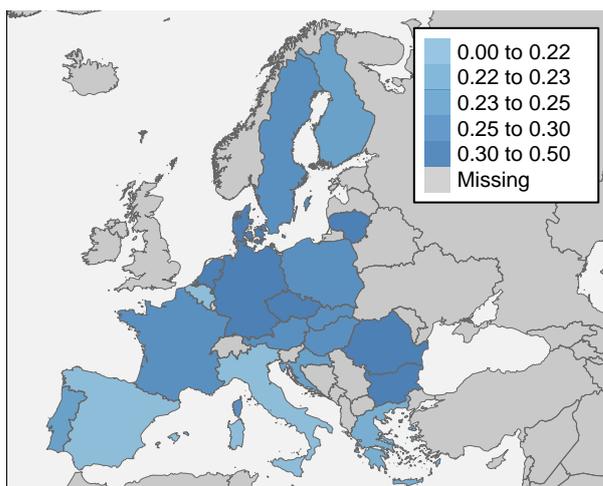
The relative mortality rate is calculated by dividing the mortality rate for children by the mortality rate for all ages, it shows whether this age group is more or less likely to be killed on the road compared to the population as a whole.

**The relative mortality rate for children is 0.27, which means that children are less likely to be killed in traffic than the population as a whole.** There are however differences between the Member States: the relative mortality rate is lowest in Italy, Belgium and Spain.

**Figure 2.** Relative mortality rate for children per country in the EU27 (2018-2020). Source: CARE, EUROSTAT



- Notes:
- Ireland and Malta are not included in the Figure because of missing data in the time series 2018–2020
  - Cyprus, Estonia, Luxembourg and Slovenia are not included in the Figure because of small numbers
  - The relative mortality rate is calculated by dividing the mortality rate for children by the mortality rate for all ages



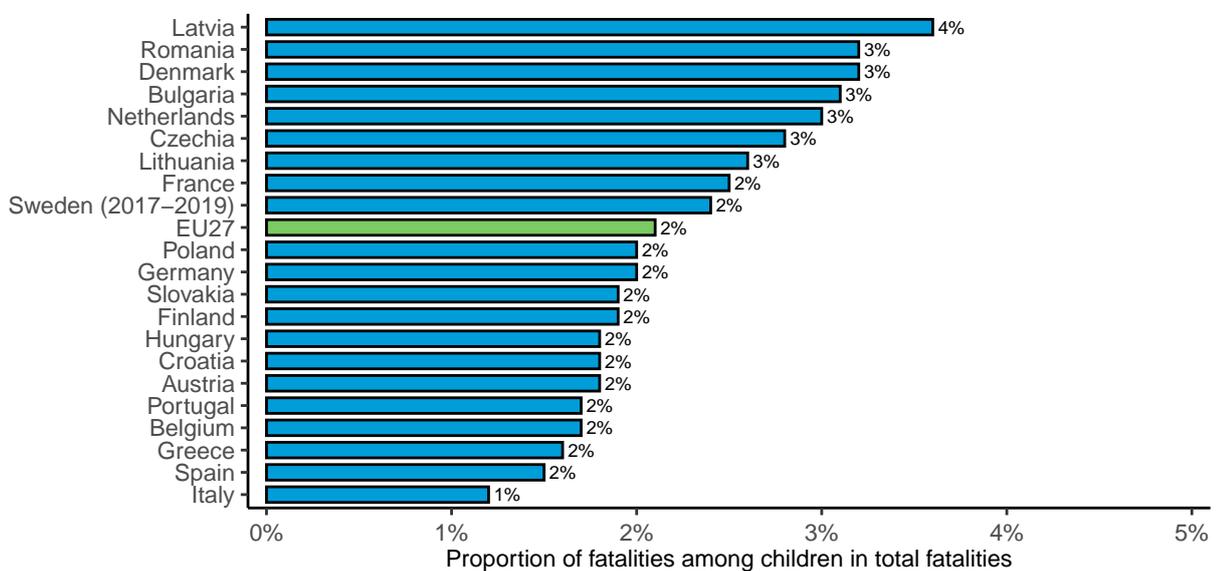
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### 3.3 Number of road fatalities among children as a proportion of total fatalities

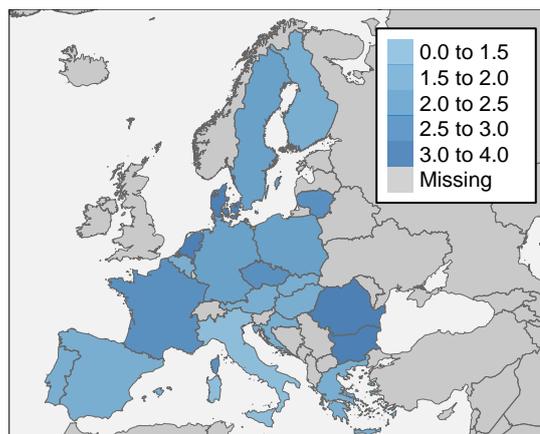
Mortality is an important indicator, but does not take into account differences in the general road safety performance across countries. In other words, the mortality for children may be high because the total mortality for all age groups is high. Therefore, it is important to also look at the proportion or share of fatalities among children within the total number of road fatalities.

**Most Eastern European Member States have a better ranking when it comes to the share of children killed within the total number of fatalities** than on the mortality rate. This means that the high road mortality for children in those countries can partly be explained by the high mortality for all road users, regardless of their age. Latvia, Romania and Bulgaria score above average for these two indicators.

**Figure 3.** Proportion of fatalities among children in the total number of fatalities, per country in the EU27 (2018-2020). Source: CARE



Notes:  
 - Ireland and Malta are not included in the Figure because of missing data in the time series 2018-2020  
 - Cyprus, Estonia, Luxembourg and Slovenia are not included in the Figure because of small numbers

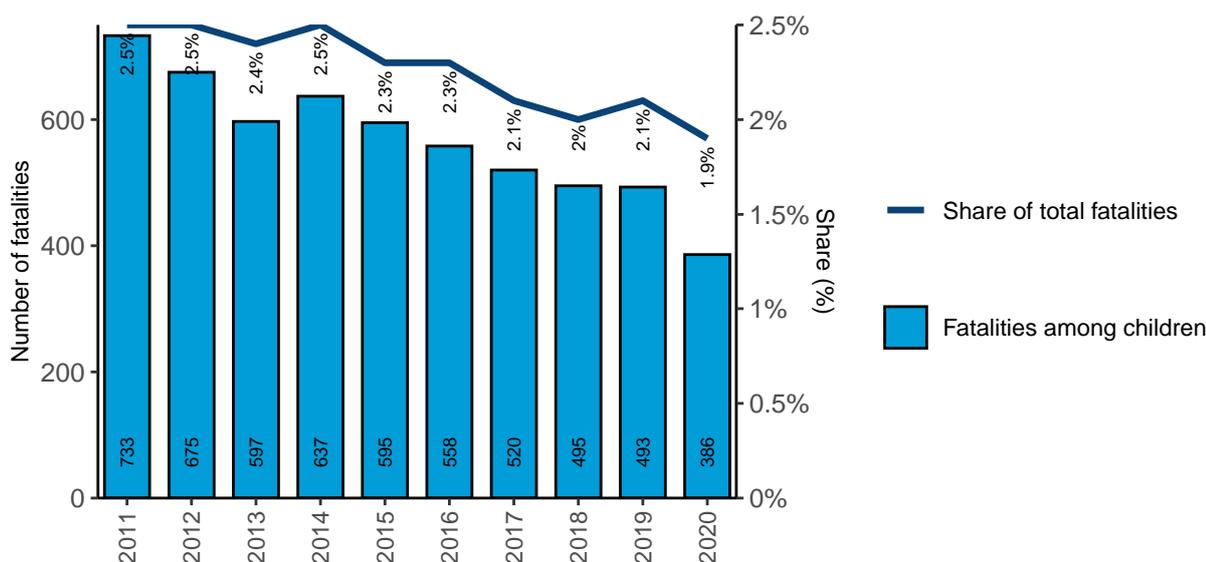


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### 3.4 Trend in the number of road fatalities

In the EU, **the number of road fatalities among children decreased by 47% between 2011 and 2020**. Since the total number of road fatalities (all ages combined) decreased by 34% during the same period, **the proportion of fatalities among children in the total number has decreased slightly**.

**Figure 4.** Annual number of fatalities among children, and their share in the total number of fatalities in the EU27 (2011-2020). Source: CARE



The group of children is broken down into age categories in the Table below. **The strongest decrease in the number of road fatalities occurs in the age category 5-9 year olds**. Looking at the population, we notice that the youngest age group has decreased while the population for the age groups 5-9 year olds and 10 to 14 year olds has increased slightly.

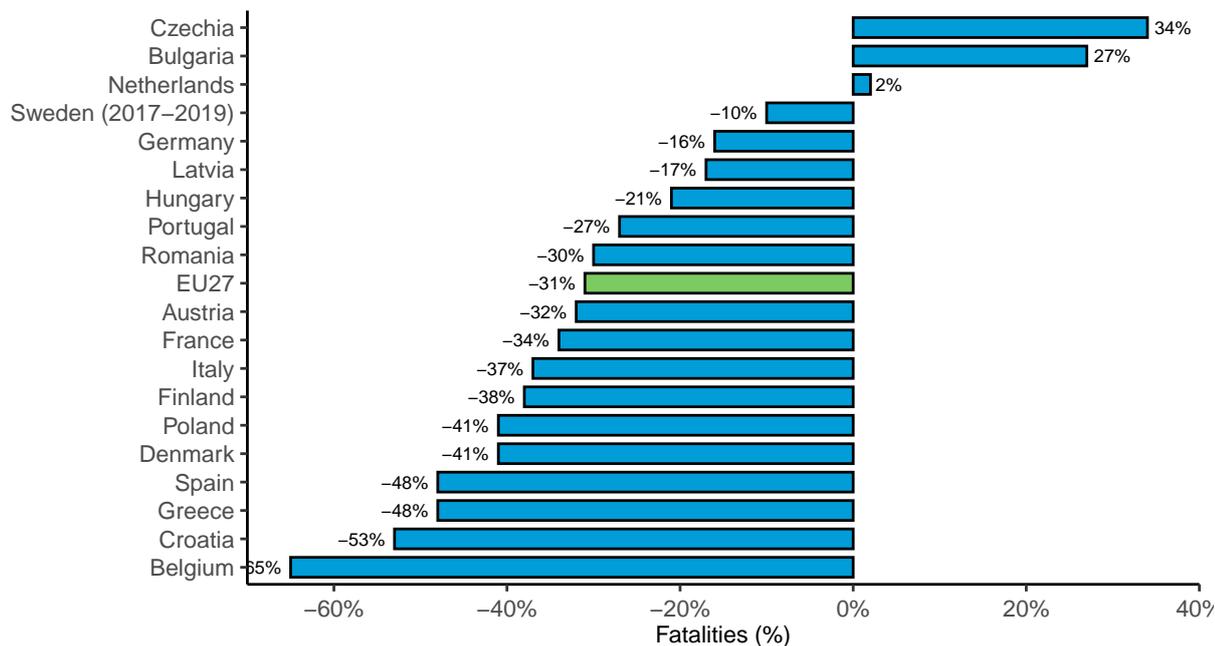
**Table 1.** Annual number of fatalities among children by 5-year age categories (2011-2020). Source: CARE

	2011	2018	2019	2020	Trend fatalities 2011 - 2020	Trend population 2011 - 2020
<b>00-04</b>	198	145	159	99	-50%	-6%
<b>05-09</b>	222	155	143	98	-56%	2%
<b>10-14</b>	314	195	191	189	-40%	3%
<b>Total</b>	734	495	493	386	-47%	0%

The evolution in fatalities among children for individual EU countries is calculated by comparing three-year averages, i.e. 2018-2020 versus 2011-2013.

Countries that show the least favourable trend are Czechia and Bulgaria: the number of fatalities among children in these countries has increased. There is also a slight increase in the number of fatalities among children in the Netherlands. Most countries with the highest number of fatalities among children show an evolution equal to or better than the EU average. The exception is Germany, where the evolution for fatalities among children is less favourable compared to the EU average.

**Figure 5.** Percentage change in the number of fatalities among children per country in the EU27 (2011-2013 and 2018-2020). Source: CARE



Notes:  
 - Ireland, Malta and Slovakia are not included in the Figure because these countries have missing values  
 - Cyprus, Estonia, Luxembourg and Slovenia are not included in the Figure because of small numbers

**Table 2.** Number of and trend in fatalities among children per country in the EU27 and EFTA (2011-2013 versus 2018-2020). Source: CARE

	2011	2018	2019	2020	Trend 2018 - 2020 vs 2011 - 2013	Miniplot: trend since 2010
Austria	13	3	16	2	-32%	
Belgium	41	14	11	5	-65%	
Bulgaria	9	22	21	9	27%	
Croatia	14	3	9	3	-53%	
Cyprus	1	3	1	0		
Czechia	12	22	18	11	34%	
Denmark	9	6	5	6		
Estonia	4	2	2	2		
<b>EU27</b>	<b>733</b>	<b>495</b>	<b>493</b>	<b>386</b>	<b>-31%</b>	
Finland	8	5	5	3		
France	128	86	66	74	-34%	
Germany	86	79	55	48	-16%	
Greece	22	10	12	9	-48%	
Hungary	12	6	15	10	-21%	
Iceland	2	1	0	0		
Ireland	7	0	0	0		
Italy	61	34	35	37	-37%	
Latvia	5	5	4	6		
Lithuania	0	5	7	2		
Luxembourg	1	1	0	0		
Malta	0	0	1	0		
Netherlands	18	22	12	17	2%	
Norway	7	1	0	2		
Poland	102	56	68	44	-41%	
Portugal	19	7	15	10	-27%	
Romania	83	58	68	48	-30%	
Slovakia	0	6	2	7		
Slovenia	6	0	1	3		
Spain	43	25	32	17	-48%	
Sweden	10	7	4	0	-48%	
Switzerland	10	11	4	4	-64%	

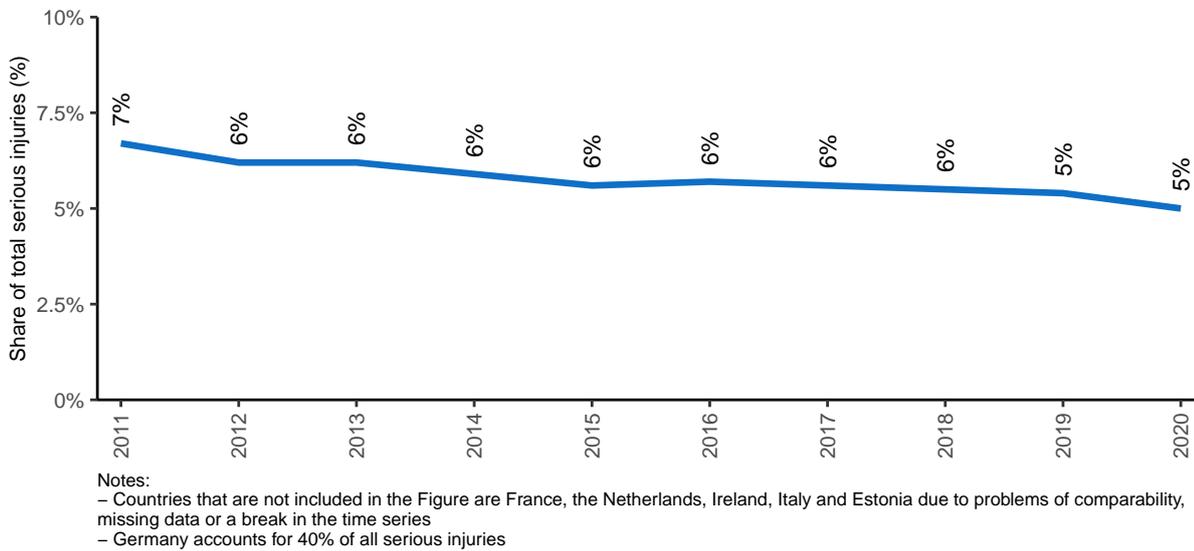
Note:

The trend is not shown if there are fewer than 10 fatalities in one year

### 3.5 Trend in the number of serious injuries

Of all serious injuries in the EU27 in 2020, 5% are incurred by children. The relative proportion of serious injuries has decreased in the time period 2011-2020.

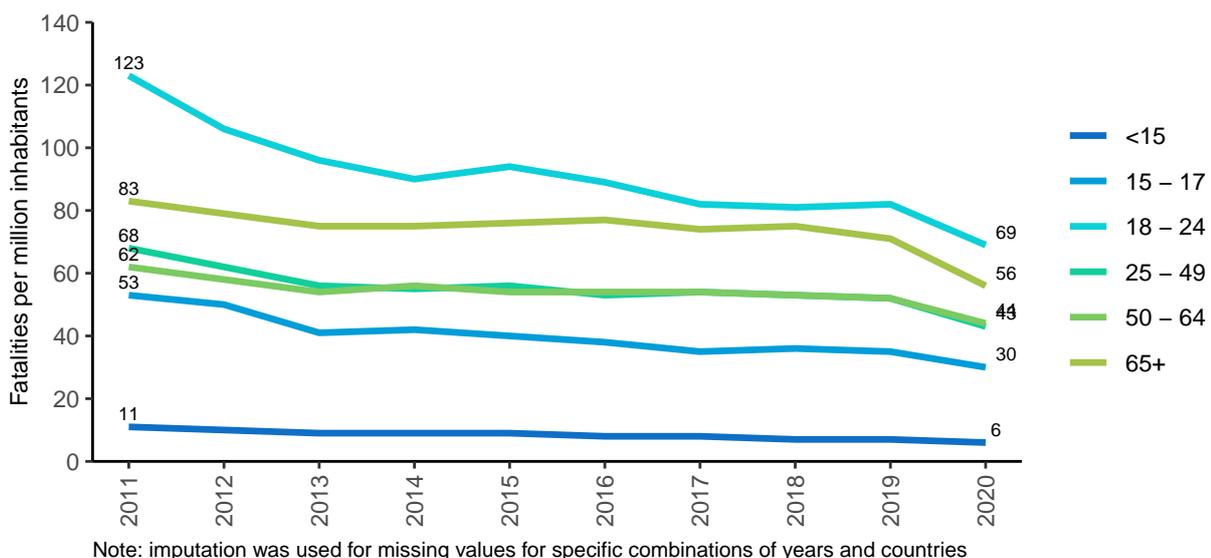
**Figure 6.** Share of serious injuries for children in the total number of serious injuries in the EU27 (2011-2020). Source: CARE



### 3.6 Comparison of children with other age groups

In general, the lower the age, the lower the mortality rate. The age group of 0-14 year olds has the lowest mortality rate among all the age groups. The youngest age groups also have the most favourable trend: **the mortality of children has decreased most, by 45% in the time period 2011-2020.**

**Figure 7.** Annual number of fatalities per million inhabitants (=mortality) by age group in the EU27 (2011-2020). Source: CARE & EUROSTAT

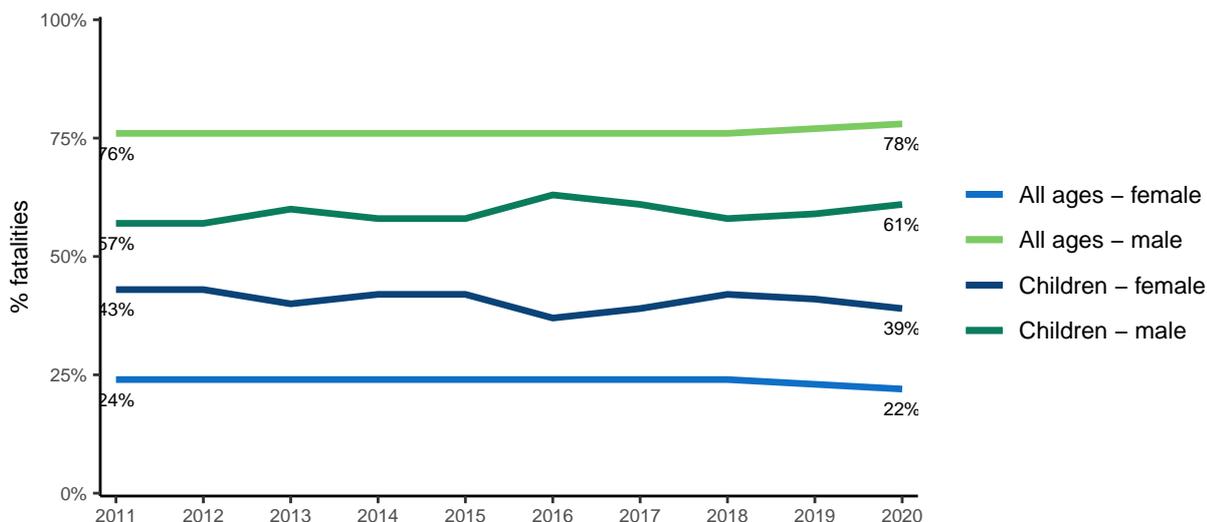


## 4 Road user

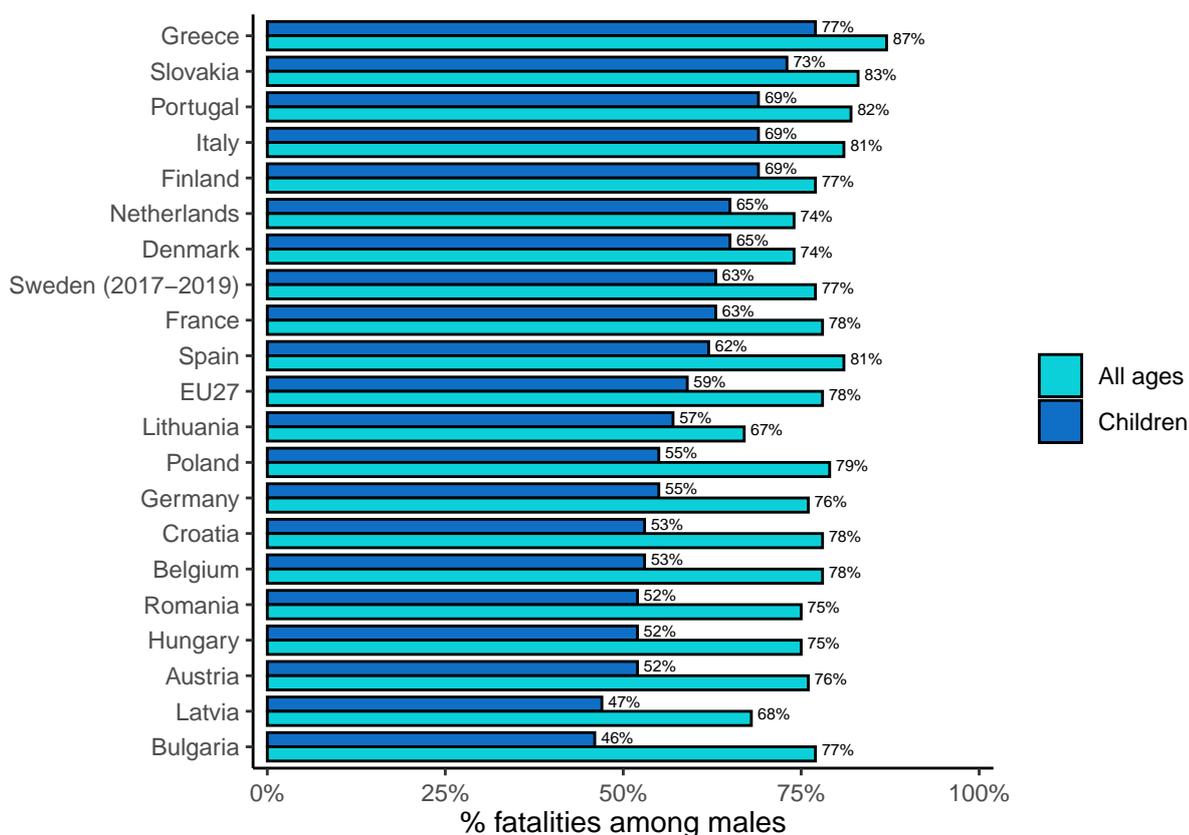
### 4.1 Gender

78% of all road fatalities in the EU are male. **At 61%, the proportion of male fatalities among children is significantly lower.** While the proportion of all males within all fatalities has remained relatively stable since 2011, the proportion of male fatalities among children has decreased slightly in the last ten years.

**Figure 8.** Distribution of fatalities among children and all fatalities by gender in the EU27 (2011-2020). Source: CARE



The proportion of boys dying on the road is generally higher in Western European Member States, compared to the European average. In Eastern Europe (Bulgaria, Latvia, Romania) the proportion of male fatalities among children is lower than average.

**Figure 9.** Share of males in road fatalities among children per country in the EU27 (2020). Source: CARE**Notes:**

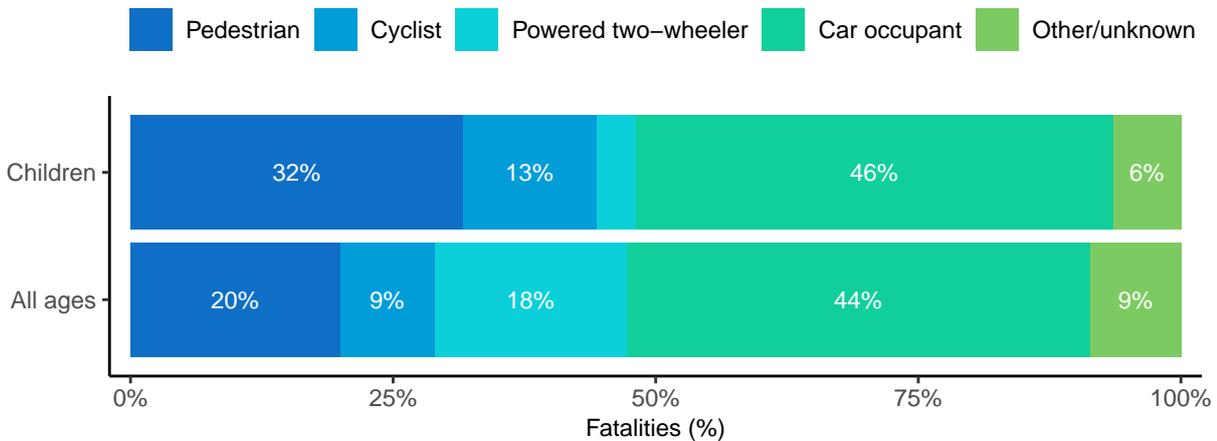
- Czechia, Ireland and Malta are not included in the Figure because of missing data in the time series 2011–2020
- Cyprus, Estonia, Luxembourg & Slovenia are not included in the Figure because of small numbers

## 4.2 Transport mode

Almost half of all road fatalities among children are car occupants, which is similar to the proportion of car occupants within all fatalities. **Children have proportionally more fatalities as pedestrians (32% of all fatalities among children) and as cyclists (13% of all fatalities among children).** The proportion of powered two-wheeler fatalities is lower among children, compared to all road fatalities.

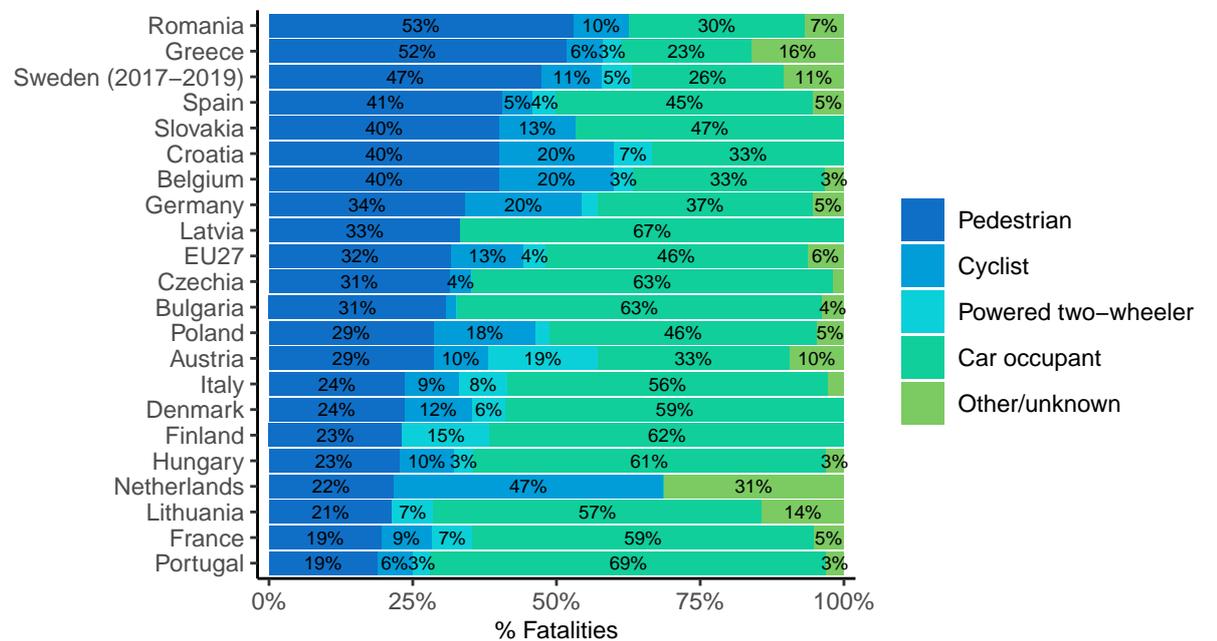
The differences between the percentages for children and all fatalities reflect the mobility behaviour of children. The shorter the distance, the more children walk and cycle. Independent and active mobility is increasingly restricted because of parents safety concerns, which could explain the increasing proportion of car occupant fatalities for children (European Commission, 2018).

**Figure 10.** Distribution of fatalities among children and all fatalities by transport mode in the EU27 (2011-2020). Source: CARE



The distribution of road fatalities among children across various transport modes differs from country to country. Both in Romania and Greece, more than half of all fatalities among children are pedestrians, while this proportion is far below the EU average in France and Portugal. In Portugal and several Eastern European countries, the proportion of car occupant fatalities among children is high. In these countries, the proportion of cyclist fatalities among children is lower than average. These national differences can probably be explained, in part, by the specific mobility behaviour of children in each specific country.

**Figure 11.** Distribution of fatalities among children by transport mode per country in the EU27 (2018-2020). Source: CARE



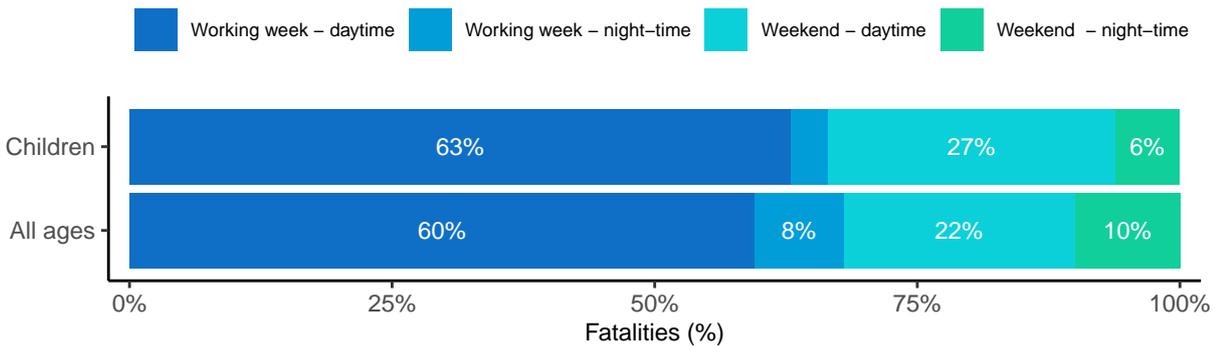
Notes:  
 - Ireland and Malta are not included in the Figure because of missing data in the time series 2011-2020  
 - Cyprus, Estonia, Luxembourg & Slovenia are not included in the Figure because of small numbers

## 5 Time

### 5.1 Period of the week

**Compared to all road fatalities, fatalities among children occur more often in daytime, both during the working week and in the weekend.** The proportion of road fatalities among children during night-time (from 10 p.m. to 5.59 a.m.) is much lower, at 10% compared to 20% for all fatalities combined.

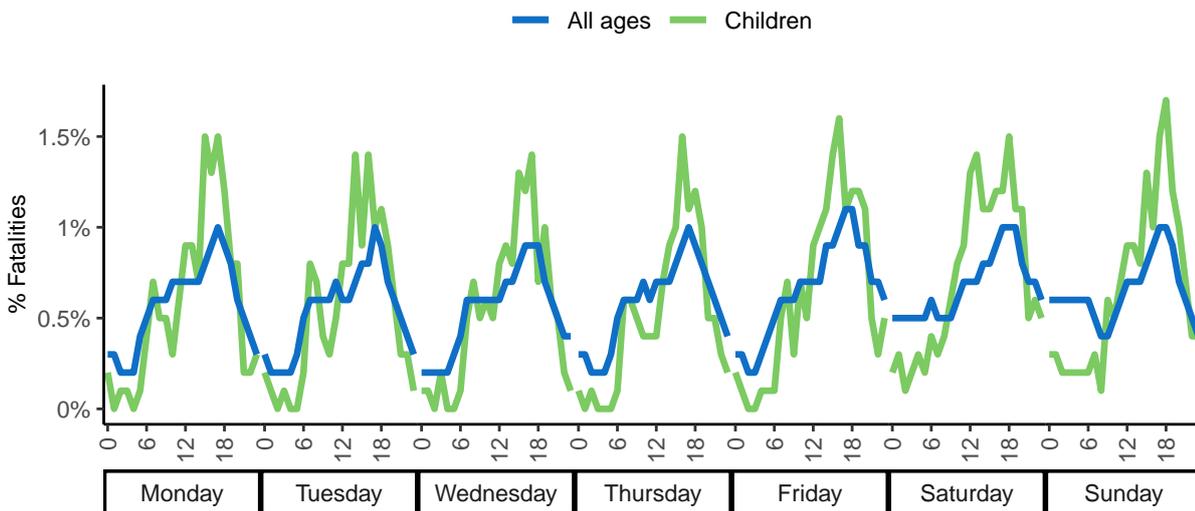
**Figure 12.** Distribution of fatalities among children and all fatalities according to period of the week in the EU27 (2018-2020). Source: CARE



### 5.2 Day of the week and hour

**There is a clear peak in road fatalities among children between 12pm and 8pm, even during the weekend.** There are relatively few child fatalities between midnight and the early morning hours.

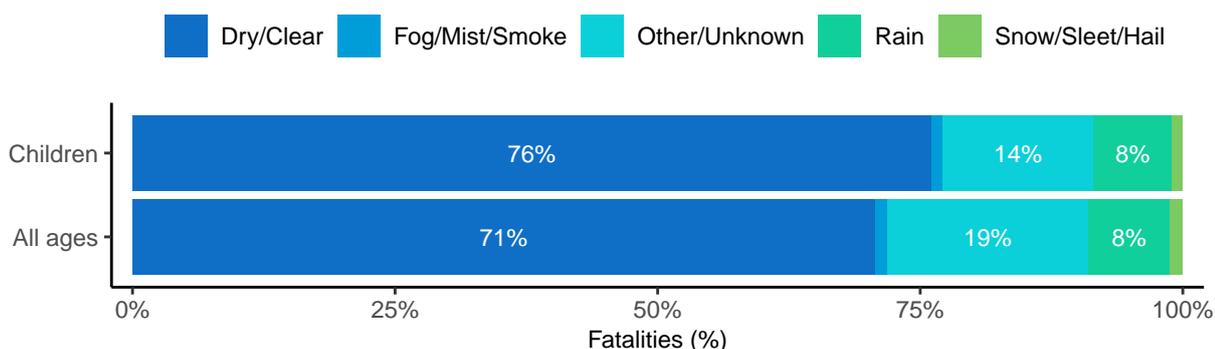
**Figure 13.** Distribution of fatalities among children and all fatalities by day of the week and hour in the EU27 (2016-2020). Source: CARE



### 5.3 Weather

The Figure below shows that there is a slight difference in the weather conditions between road fatalities among children and all road fatalities. **76% of fatalities among children occur in dry/clear weather**, compared to 71% of all fatalities. 8% of fatalities among children occur in the rain. Very rarely do fatalities occur in less prevalent weather conditions such as fog, fog, snow or hail.

**Figure 14.** Distribution of fatalities among children and all fatalities according to weather conditions during the crash in the EU27 (2018-2020). Source: CARE

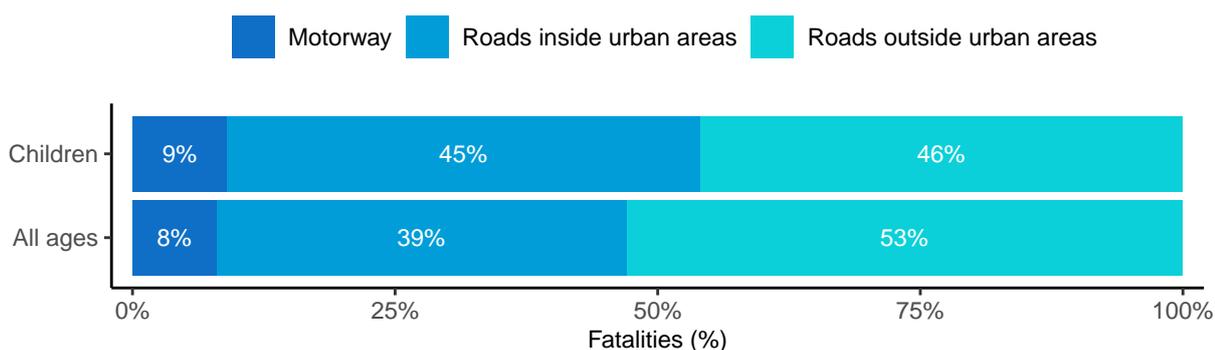


## 6 Location

### 6.1 Road type

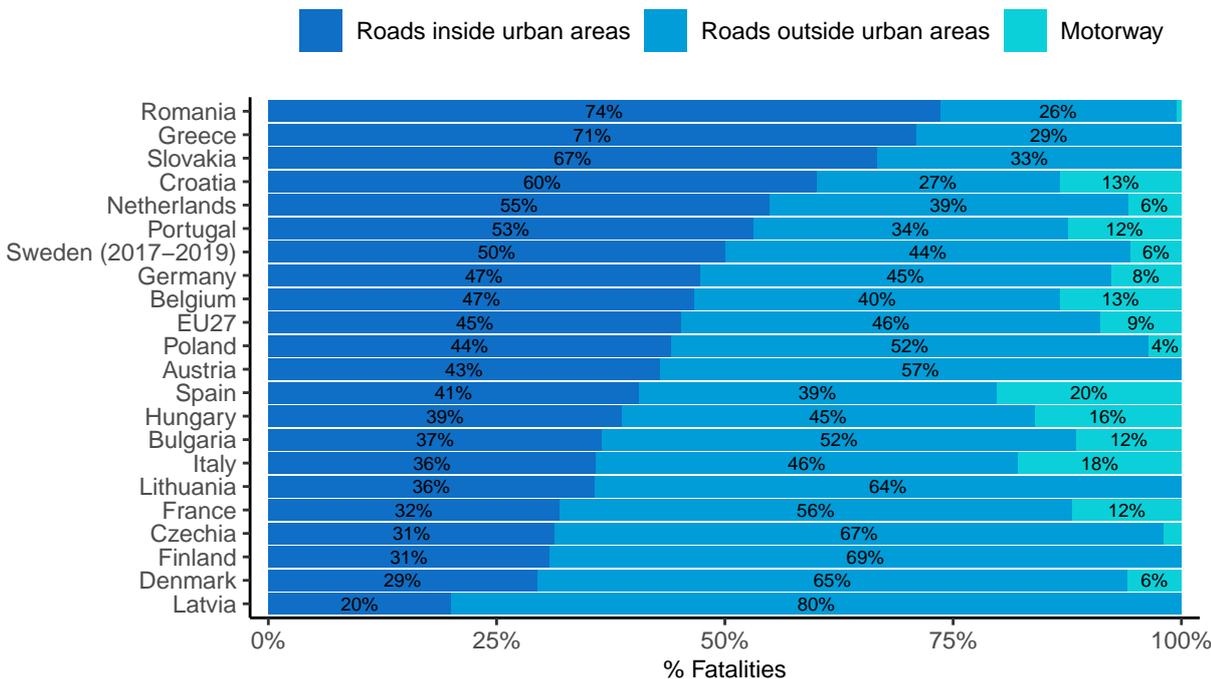
An equal share of road fatalities among children occurs on roads outside urban areas and roads outside urban areas. **The share of fatalities on roads outside urban areas is proportionally lower for children**, and consequently the share of fatalities on roads inside urban areas is proportionally higher compared to all road fatalities.

**Figure 15.** Distribution of fatalities among children and all fatalities by road type in the EU27 (2018-2020). Source: CARE



There are large differences between EU countries in terms of distribution across the various road types. Countries with a high proportion of children killed on urban roads (60% or more) include Croatia, Slovakia, Greece and Romania. These are also countries with an above-average proportion of pedestrian fatalities among seniors.

**Figure 16.** Distribution of fatalities among children and all fatalities by road type per country in the EU27 (2018-2020). Source: CARE

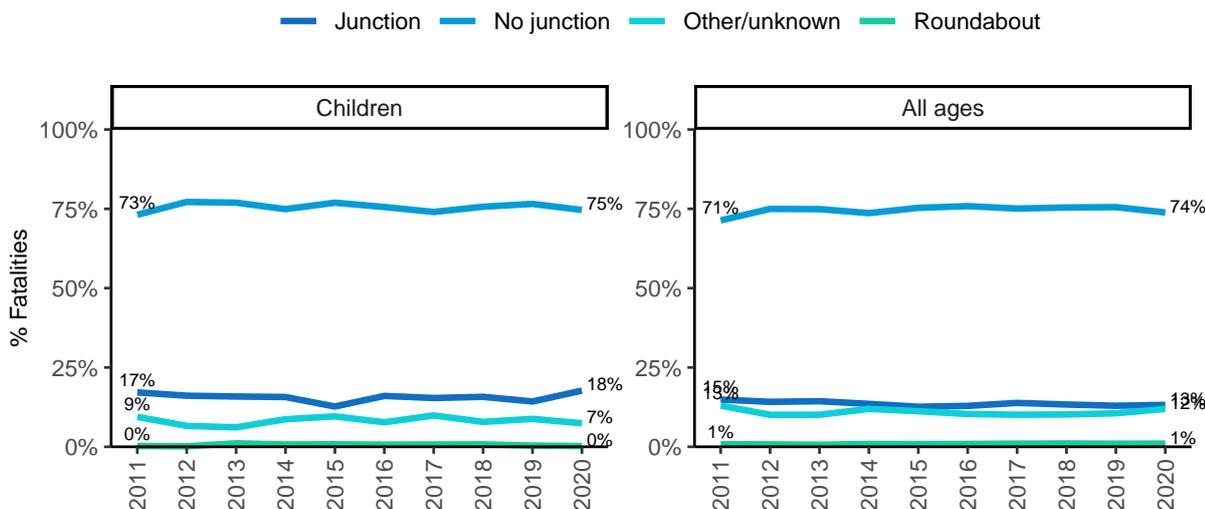


Notes:  
 - Ireland and Malta are not included in the Figure because these countries have missing values in the 2011-2020  
 - Cyprus, Estonia, Luxembourg & Slovenia are not included in the Figure because of small numbers

## 6.2 Junction type

The vast majority of road fatalities, regardless of their age, are on road stretches and not at junctions or roundabouts. This is also the case for fatalities among children. **Among children, there are relatively more fatalities at junctions** (18% versus 13% for all fatalities).

**Figure 17.** Distribution of fatalities among children and all fatalities by junction type in the EU27 (2011-2020). Source: CARE



## 7 Notes

### 7.1 Definitions

The definitions below are taken from the CADAS Glossary and the UNECE Glossary.

CADAS Glossary: [https://road-safety.transport.ec.europa.eu/system/files/2021-07/cadas\\_glossary\\_v\\_3\\_8.pdf](https://road-safety.transport.ec.europa.eu/system/files/2021-07/cadas_glossary_v_3_8.pdf)

UNECE/ITF/Eurostat Glossary: <https://www.unece.org/index.php?id=52120>

#### **Accident / crash**

Definition: injury road accident, concerns an incident on a public road involving at least one moving vehicle and at least one casualty (person injured or killed). Note: the definition of “injury” varies considerably among EU countries thus affecting the reliability of cross country comparisons.

#### **Fatalities**

Definition: total number of persons fatally injured; correction factors applied when needed. Death within 30 days of the road crash, confirmed suicide and natural death are not included.

#### **Victims**

Total of fatalities, seriously injured and slightly injured and injured.

#### **Children**

Persons aged 0-14 years.

#### **Working week – daytime**

Monday to Friday 6.00 a.m. to 9.59 p.m.

#### **Working week – night**

Monday 10 p.m. to Tuesday 5.59 a.m.

Tuesday 10 p.m. to Wednesday 5.59 a.m.

Wednesday 10 p.m. to Thursday 5.59 a.m.

Thursday 10 p.m. to Friday 5.59 a.m.

#### **Weekend – daytime**

Saturday to Sunday 6.00 a.m. to 9.59 p.m.

#### **Weekend – night**

Friday 10 p.m. to Saturday 5.59 a.m.

Saturday 10 p.m. to Sunday 5.59 a.m.

Sunday 10 p.m. to Monday 5.59 a.m.

### 7.2 Data source

The main data source for this report is CARE (Community database on Accidents on the Roads in Europe). The database contains data obtained from national data sources, not only EU members but also from the UK (up to 2018) and the 4 EFTA countries (Switzerland, Norway, Iceland, and Liechtenstein). The data in the report were extracted on 6 September 2021. As the database is not complete for all countries and all years, additional data were provided by the European Commission in order to be able to calculate the general total for fatalities for the EU27.

### 7.3 References

European Commission, Traffic Safety Basic Facts on Children, European Commission, Directorate General for Transport, June 2018

### 7.4 Small cells

Absolute numbers of fatalities can be very small for small countries, which can strongly influence trend indicators and other derived indicators such as mortality. Care should be taken when interpreting these numbers. When commenting on the Figures, countries with small numbers were omitted.

### 7.5 Missing data

Some countries did not provide data for all years and/or all variables to the CARE database. When data are missing for specific combinations of years and countries, imputation is used to fill in the empty cells. Imputation results for individual countries are never published in the Facts and Figures reports, but they are aggregated to generate an imputed number at EU27 level. The following imputation method for individual countries is used:

- Values missing at the end of a time series are given the last known value in the series.
- Values missing at the beginning of a time series are given the first known value in the series.
- If values are missing in the middle of a time series, linear extrapolation is used.

