

# ROAD ACCIDENTS

## Year 2017

In 2017, 174,933 road accidents occurred in Italy resulting in death or injury with 3,378 deaths (within 30 days) and 246,750 injured.

After the decrease in the last year, the number of deaths increased again, compared to 2016 (+95 units, +2.9%).

Among the victims, the number of pedestrians (600, +5.3%) and mainly motorcyclists (735, +11.9%) increased, the passenger cars users (1.464, - 0.4%) were stable, while mopeds users (92, - 20.7%) and cyclists (254, - 7.6%) showed a decrease.

Road accidents and injuries recorded a slight decrease, respectively -0.5% and -1.0%, (Chart 1). Based on hospital discharge data, the number of serious injuries was equal to 17,309 and stable compared to 2016. The ratio between serious injuries and deaths reduced to 5.1 in 2017, from 5.3 in the previous year. The serious harmfulness rate, out of resident population, was equal to 28.6 serious injured per 100,000 inhabitants (40.1 for men and 17.7 for women).

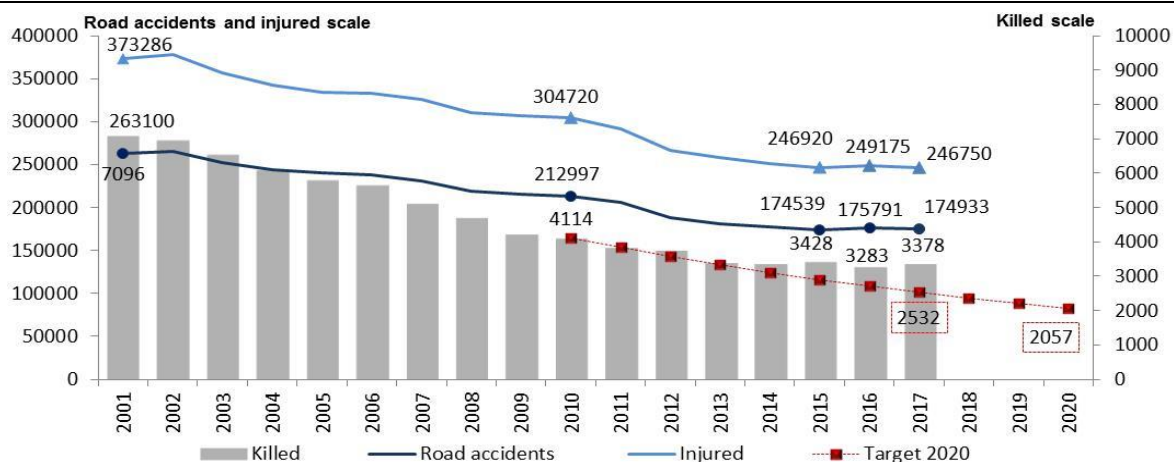
The increase in the number of casualties in Italy was mainly due to the variation on motorways (including ring roads and motorways junctions) and rural roads (296 and 1,615 deaths, +8.0 and +4.5% over the previous year). A slighter increase was reported on urban roads (1,467 dead; +0.3%). An opposite trend was detected for the main municipalities, all in total, for which the number of deaths, in the built up area, decreased by 5.8%.

In the European Union, in 2017, the number of road accidents victims decreased slightly (-1.6% compared to 2016): 25,315 against 25,720 in 2016. Between 2017 and 2010 (benchmark year for the European Road Safety Strategy), deaths decreased by 19.9% at European level. Italy, with a result under the EU average, recorded a reduction of 17.9%. Every million inhabitants, in 2017, 49.7 deaths due to road accident in the EU28 were counted and 55.8 in Italy, which ranked 18<sup>th</sup> in the European classification (was 14<sup>th</sup> in 2016).

Distraction, failure to observe precedence rules and high speed (40.8% in total) were among the most frequent misbehaviors. The most sanctioned violations of the Road Code were, in fact, speed excess, failures to use safety devices and the use of mobile phone driving.

The year 2017 was characterised by a recovery of mobility; the new registrations increased by 7% compared to the previous year, the car fleet was 1.7%. Motorway journeys also increased by 2.2% compared to respect of 2016, with over 84 billion kilometres travelled.

**CHART 1. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INURED. Years 2001-2017. Absolute values**



As usual Istat publish, in July, the final data on road accidents 2017. The early data dissemination, on the eve of the days with intense departures flows linked to summer holidays mobility, aims to support decisions and to assure a better level of road safety and sensitization to responsible driving behaviour.

This result was achieved thanks to an ongoing effort to improve the quality and timeliness in the dissemination of information, which involves ACI (Automobile Club d'Italia) as a partner, the Road Police, Carabinieri (special military body), Local Police, Statistical offices and Monitoring Centres of Municipalities, Provinces, Autonomous Provinces and Regions which agreed to a Memorandum of Understanding for the national coordination of activities related to the statistical road accident survey.

### Victims on Italian roads increased again, but the number of accidents and injuries went down

In 2017, 174,933 road accidents resulting in death or injury<sup>1</sup> occurred in Italy; the victims were 3,378 and the injured 246,750 (Table 1). The number of deaths increased again, compared to the last year (+2.9%), after the decline in 2016, while accidents and injuries decreased slightly (-0.5% and -1.0% respectively). The road mortality rate decreased from 54.2 to 55.8 deaths per million inhabitants, between 2016 and 2017. Compared with 2010, road victims number declined by 17.9%.

**TABLE 1. ROAD ACCIDENTS, KILLED AND INJURED PERSONS.** Years 2001, 2010-2017. Absolute values, deaths per million and percentage change

YEARS	Road accidents (a)	Killed	Injured	Deaths per million inhabitants (b)	% change number of deaths in respect to the previous year (c)	% change number of deaths in respect to 2001 (c)	% change number of deaths in respect to 2010 (c)
2001	263,100	7,096	373,286	124.5	-	-	-
2010	212,997	4,114	304,720	69.4	-2.9	-42.0	-
2011	205,638	3,860	292,019	65.0	-6.2	-45.6	-6.2
2012	188,228	3,753	266,864	63.0	-2.8	-47.1	-8.8
2013	181,660	3,401	258,093	56.2	-9.4	-52.1	-17.3
2014	177,031	3,381	251,147	55.6	-0.6	-52.4	-17.8
2015	174,539	3,428	246,920	56.3	+1.4	-51.7	-16.7
2016	175,791	3,283	249,175	54.2	-4.2	-53.7	-20.2
<b>2017</b>	<b>174.933</b>	<b>3,378</b>	<b>246,750</b>	<b>55.8</b>	<b>+2.9</b>	<b>-52.4</b>	<b>-17.9</b>

(a) Road accident resulting in deaths (within the 30th day) or injuries is defined as the event that involves at least a vehicle circulating on the national road net.

(b) Deaths out of resident population (per 1,000,000). (c) The percentage changes of the number of deaths is calculated as:  $((M^t / M^{t-1} \circ 2001 \circ 2010) - 1) * 100$

The road accidents phenomenon is influenced by a lot of factors, including mobility, road journeys, number of vehicles and fuel consumption. The mobility scenario, in 2017, was affected by a more general and positive economic context with an increase (nominal values) of the average per capita available income (+2.6%) and of the GDP (+2.1%). In this scenario, the mobility of goods seemed to prevail over other flows. Data on motorway kilometers driven in the year, over six thousand km of road network, showed an increase of 2.2% compared to 2016, also in this case higher for heavy vehicles (+3.5%) than for light one (+1.8%).

In 2017, the new vehicle registrations increased by 7%, while, on average, the car fleet grew by 1.7%, in respect of the previous year; with over 635 passenger cars and 841 per 1,000 inhabitants, Italy confirmed to be the European country with the highest motorization rate. The increase of the heavy good vehicles (tractors increases of 6.8%) and of vehicles with electric or hybrid power (+42.6%) and gasoline and liquid or methane gas (+6.2%) was very relevant. Fuel consumption decreased, in general, but the decline mainly was due to gasoline sales (-4.1%), while diesel sales went down only by 0.7%. According to estimates by the Ministry of Economic Development, the request for LPG, instead, in 2017 was equal to 3.4 million tons, in line with 2016, of which 1.7 million for motor vehicle use<sup>2</sup>.

Using the Ministry of Infrastructure and Transport parameters for 2010<sup>3</sup>, revalued in 2017 values, based on the Istat consumer price index, the total social cost for road accidents resulting in death or injury, was estimated equal to around 19.3 billion euros in 2017, 1.1% of the national GDP.

### Slight decrease in number of victims for the European Union in 2017

<sup>1</sup> For data referred to 2017, the survey was based on a Memorandum of Understanding signed with some regions and provinces for the collection and monitoring data activities. Signatory Regions, in 2017, are: Emilia-Romagna, Friuli-Venezia Giulia, Lombardia, Piemonte, Puglia, Toscana, Veneto, Liguria, Calabria and the autonomous provinces Bolzano-Bozen, Trento.

<sup>2</sup> ACI, Aiscat; Unione Petrolifera Italiana; Ministero dello Sviluppo Economico; Istat.

<sup>3</sup> Ministry of Infrastructure and Transport - Evaluation Study of Social Costs of road accidents. Year 2010.

In 2017 the number of victims continued to decrease in the EU28, in respect of previous year. In total, 25,315 people died in road accidents, versus 31,595 in 2010, with a drop of 19.9%. the percentage decline was lower in Italy (-17.9%). Between 2016 and 2017, the number of victims decreased by 1.6% in the European Union, while it raised by 2.9% in Italy.

As in 2016, reduction at European level did not affect all countries. In 2017, road accidents victims were still rising in eight countries, including Spain, Portugal, Romania and Hungary. The road mortality rate (deaths per million inhabitants), indicator used for a comparative analysis, in 2017, was equal to 49.7 in EU28 and 55.8 in Italy (62.8 and 69.4 respectively in 2010). With this result, our country went down to 18<sup>th</sup> position in a European ranking, it was 14<sup>th</sup> in 2016. The countries with the best performance were Sweden and the United Kingdom (25.3 and 27.1), while the last in rates ranking were Bulgaria and Romania (99.3 and 96.0 per million Inhabitants) (Table 2 and Chart 2).

Between 2010 and 2017, the yearly percentage change in the number of road victims was 3.1% in the EU28 and 2.8% in Italy, however, lower than the estimated value in order to reach the 2020 target set. In the period 2018-2020, the number of victims in the European Union and Italy, by now, should decrease by about 15% every year within 2020.

**TABLE 2. KILLED PERSONS IN ROAD ACCIDENTS IN THE COUNTRIES OF THE EUROPEAN UNION (EU28).**

Years 2010, 2016 and 2017. Absolute values, percentage change and road mortality rate per 1,000,000 inhabitants (a)

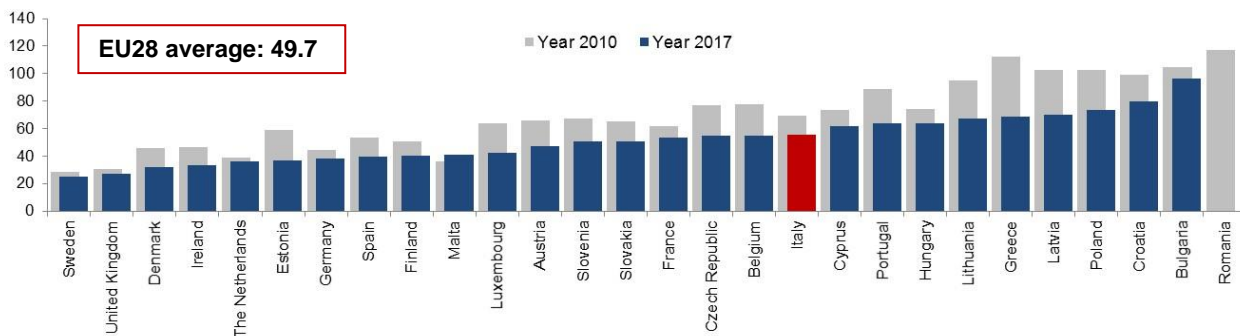
EU28 Countries	Absolute values			Percentage change (b)		Road mortality rate	
	2010	2016	2017*	2017/2016	2017/2010	2010	2017
Austria	552	432	413	-4.4	-25.2	65.9	47.1
Belgium*	841	640	620	-2.7	-26.3	77.6	54.8
Bulgaria	776	708	682	-3.7	-12.1	104.6	96.0
Croatia	426	307	331	7.8	-22.3	99.0	79.7
Cyprus	60	46	53	15.2	-11.7	73.2	62.0
Czech Republic	802	611	577	-5.6	-28.1	76.7	54.5
Denmark*	255	211	183	-13.3	-28.2	46.1	31.8
Estonia	79	71	48	-32.4	-39.2	59.3	36.5
Finland*	272	250	223	-10.8	-18.0	50.8	40.5
France*	3,992	3,469	3,456	-0.6	-13.4	61.7	53.2
Germany*	3,651	3,214	3,177	-0.9	-13.0.0	44.6	38.4
Greece*	1,258	807	739	-10.3	-41.3	112.5	68.6
Hungary*	740	597	624	4.5	-15.7	73.9	63.7
Ireland*	212	188	158	-15.1	-25.5	46.6	33.0
<b>Italy</b>	<b>4,114</b>	<b>3,283</b>	<b>3,378</b>	<b>2.9</b>	<b>-17.9</b>	<b>69.4</b>	<b>55.8</b>
Latvia	218	158	136	-13.9	-37.6	102.8	69.7
Lithuania	299	188	192	-	-35.8	95.2	67.4
Luxembourg	32	32	25	-21.9	-21.9	63.7	42.3
Malta	15	22	19	-13.6	26.7	36.2	41.3
Poland	3,907	3,026	2,831	-6.4	-27.5	102.4	73.7
Portugal*	937	565	624	10.8	-33.4	88.6	63.6
Romania	2,377	1,913	1,951	2	-17.9	117.1	99.3
Slovakia*	353	242	276	0.4	-21.8	65.5	50.7
Slovenia	138	130	104	-20	-24.6	67.4	50.3
Spain*	2,478	1,833	1,846	2	-25.5	53.3	39.3
Sweden	266	270	253	-6.3	-4.9	28.5	25.3
The Netherlands	640	629	613	-2.5	-4.2	38.6	35.9
United Kingdom*	1,905	1,878	1,783	-4.1	-6.4	30.5	27.1
<b>EU28</b>	<b>31,595</b>	<b>25,720</b>	<b>25,315</b>	<b>-1.6</b>	<b>-19.9</b>	<b>62.8</b>	<b>49.7</b>

\* Preliminary estimate 2017: Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Lithuania, Portugal, United Kingdom, Slovakia, Spain, Hungary

(a) Source: European Transport Safety Council, Annual PIN report. Year 2018 - <https://etsc.eu/12th-annual-road-safety-performance-index-pin-report/> European Commission CARE (Community Data Base on Road Accidents) - Brussels 10/4/2018 [http://europa.eu/rapid/press-release\\_IP-18-2761\\_it.htm](http://europa.eu/rapid/press-release_IP-18-2761_it.htm)

(b) The percentage changes of the number of deaths is calculated as:  $((M^{2017} / M^{2016 \text{ or } 2010}) - 1) * 100$ .

**CHART 2. ROAD MORTALITY RATE IN THE COUNTRIES OF THE EUROPEAN UNION (EU28) (a). Years 2010 and 2017**



(a) Road mortality rate (deaths in road accidents per million inhabitants)

Source: European Transport Safety Council, Annual PIN report. Year 2018 - <https://etsc.eu/12th-annual-road-safety-performance-index-pin-report/>

## The number of seriously injured in 2017 was stable: 5 for each death

In 2017, the number of seriously injured in road accidents<sup>4</sup> was 17,309, a stable value in respect of 2016, down only of 0.1%. During the period 2013-2016, the ratio between serious injuries and deaths progressively increased to 2016, with a slight decrease, instead, in 2017; passing from 3.8 injured for each death in 2013 to 5.3 in 2016 and 5.1 in 2017.

In 2017, the serious injuries represented about 7% of the total injured noticed by Police. There were still some differences, in 2017, at geographical level: the values of the ratio between serious injuries and deaths were between 4.7 in the Northern-Eastern Italy and 5.6 in the South and Islands area (Table 3).

TABLE 3. NUMBER OF SERIOUSLY INJURED IN ROAD ACCIDENTS AND RATIO BETWEEN SERIOUSLY INJURED AND KILLED IN ROAD ACCIDENTS, BY HOSPITAL DISCHARGE GEOGRAPHICAL AREA IN ITALY (a). Years 2013-2017

HOSPITAL DISCHARGE GEO-AREA	Year 2013		Year 2014		Year 2015		Year 2016		Year 2017	
	Absolute values	Serious injuries /deaths*	Absolute values	Serious injuries /deaths*	Absolute values	Serious injuries /deaths*	Absolute values	Serious injuries /deaths*	Absolute values	Serious injuries /deaths*
North-west	3,025	3,8	3,555	4,5	3,625	4,4	3,842	5,2	3,850	4,8
North-east	2,725	3,5	2,737	3,4	2,963	3,8	3,932	5,0	3,790	4,7
Centre	2,532	3,4	3,542	4,6	3,963	5,1	4,259	5,8	4,064	5,3
South	3,076	4,3	3,402	4,8	3,695	5,3	3,833	5,3	3,927	5,6
Islands	1,541	4,1	1,707	5,6	1,655	4,9	1,458	4,9	1,678	5,6
<b>Italy</b>	<b>12,899</b>	<b>3,8</b>	<b>14,943</b>	<b>4,4</b>	<b>15,901</b>	<b>4,7</b>	<b>17,324</b>	<b>5,3</b>	<b>17,309</b>	<b>5,1</b>

\* Source: Ministry of Health - DG Health Planning – Hospital Discharge Data - Istat – Survey on Road accidents resulting in death or injury

(a) For each processed data year only the first hospital admission, for each inpatient, has been considered; the case selection includes the main and secondary diagnosis. All inpatients dead within 30 days after the hospital admission were excluded.

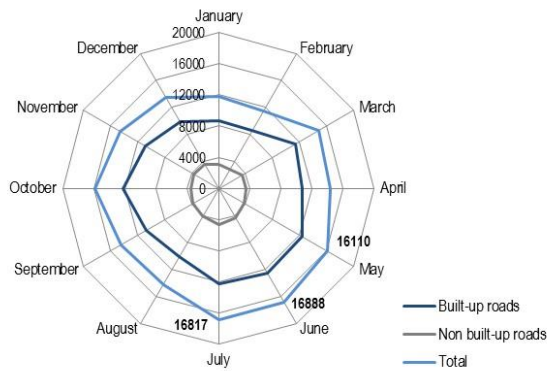
Men seriously injured were about 68%, while women 32%. The age between 40 and 59 years was the class with the highest frequency for males (about 33% out of the total). For women, the highest number of injured was for the age group of over seventy years (around 45% out of the total). Lastly, young people 20-29 years old weighted around 11% on the total of seriously injured people, and children between 0 and 9 years, 1.4%.

The rates of serious injuries out of the resident population showed a national value of 28.6 (serious injuries per 100,000 inhabitants), 40.1 for men and 17.7 for women. The distribution of rates by age showed very high values for classes 70-79 and 80+ years old classes, respectively equal to 51.3 and 70.1 (seriously injured for 100 thousand) for men and 36.9 and 49.7 for women. Considering males, a high level of the rate is also recorded among young people 20-29 years old (46.0 per 100 thousand) and between 50 and 59 (45.2). Young people included in the class 20-29 years are the most disadvantaged even considering the slight and serious injuries all together (806 injured per 100 thousand).

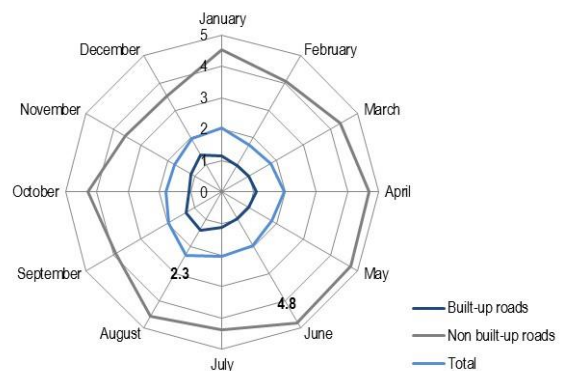
## Tables and charts collection:

<sup>4</sup> Data on serious injuries are processed on the basis of Hospital Discharges by Ministry of Health and Istat. To code serious injuries cases, AIS (Abbreviated Injury Scale) and, specifically, MAIS (Maximum Abbreviated Injury Scale) was adopted. The AIS is a classification based on a scale to measure the injury severity by the body region interested and linked to the International Classification of Diseases ICD9-CM or ICD10. The injury severity is measured by a 6 levels scale. The serious injuries are identified by the score MAIS3+. Copyright Association for the Advancement of Automotive Medicine (AAAM).

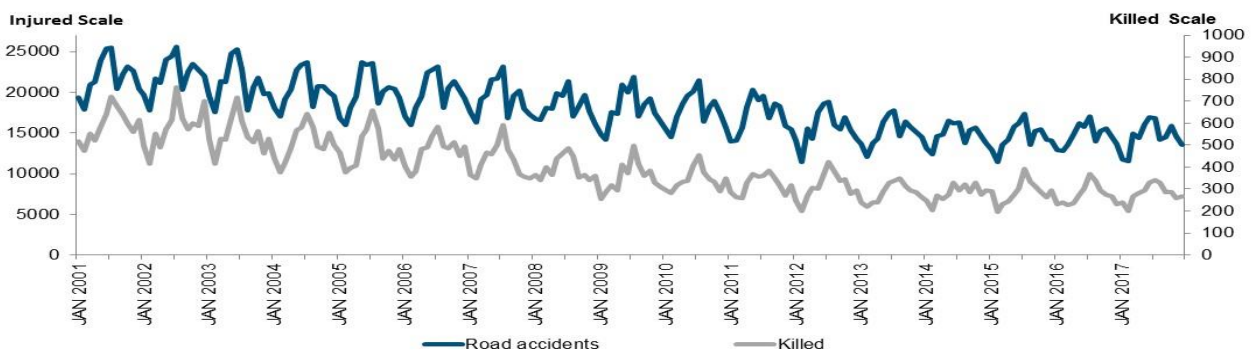
**CHART 3. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY BY MONTH AND ROAD TYPE.** Year 2017. Absolute values (a)



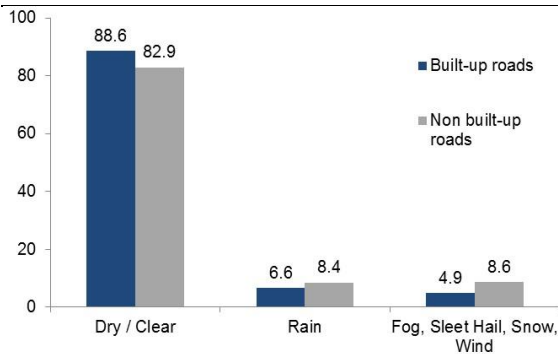
**CHART 4. MORTALITY INDEX BY MONTH AND ROAD TYPE.** Year 2017. (Deaths/Road accidents per 100) (a)



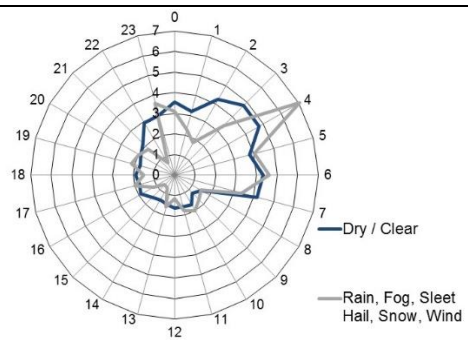
**CHART 5. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY AND KILLED BY MONTH. YEARS 2001-2017.** Absolute values



**CHART 6. ROAD ACCIDENTS BY WEATHER CONDITIONS AND ROAD TYPE.** Year 2017. Percentage values (a)



**CHART 7. MORTALITY BY WEATHER CONDITIONS AND HOUR OF THE DAY.** Year 2017. (Deaths/Road accidents per 100) (a)

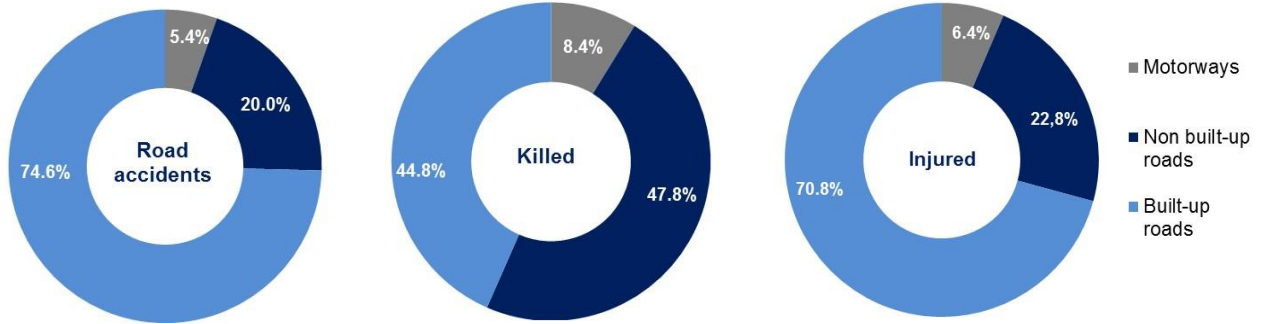


**TABLE 4. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INJURED BY ROAD TYPE.** Years 2017, 2016 and 2015. Absolute values and percentage changes 2017/2016

ROAD CATEGORY	Road accidents 2017	Road accidents 2016	Road accidents 2015	Killed 2017	Killed 2016	Killed 2015	Injured 2017	Injured 2016	Injured 2015	% Change accidents 2017/2016	% Change killed 2017/2016	% Change injured 2017/2016
Built up roads	130,461	131,107	130,457	1,467	1,463	1,502	174,612	176,423	175,156	-0.5	+0.3	-1.0
Motorways	9,395	9,360	9,179	296	274	305	15,844	15,790	15,850	+0.4	+8.0	+0.3
Non built up roads (a)	35,077	35,324	34,903	1,615	1,546	1,621	56,294	56,962	55,914	-0.7	+4.5	-1.2
<b>Total</b>	<b>174,933</b>	<b>175,791</b>	<b>174,539</b>	<b>3,378</b>	<b>3,283</b>	<b>3,428</b>	<b>246,750</b>	<b>249,175</b>	<b>246,920</b>	<b>-0.5</b>	<b>+2.9</b>	<b>-1.0</b>

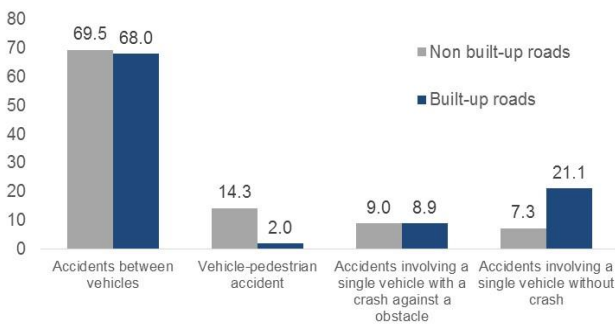
(a) Included rural or not built up roads called: Statali, Regionali and Provinciali, Comunalì out of urban area.

**CHART 8. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INJURED BY ROAD TYPE (a).** Year 2017 percentage values

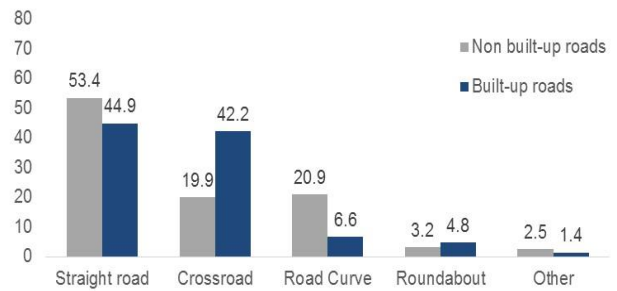


(a) Included rural or not built up roads called: Statali, Regionali and Provinciali, Comunalì out of urban area.

**CHART 9. ROAD ACCIDENTS BY TYPE AND ROAD CLASS. Year 2017, percentage values**

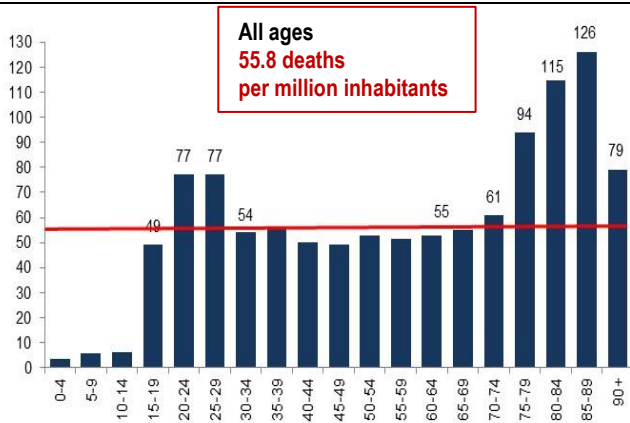


**CHART 10. ROAD ACCIDENTS AT JUNCTION OR STRAIGHT AND ROAD TYPE. Year 2017, percentage values (a)**

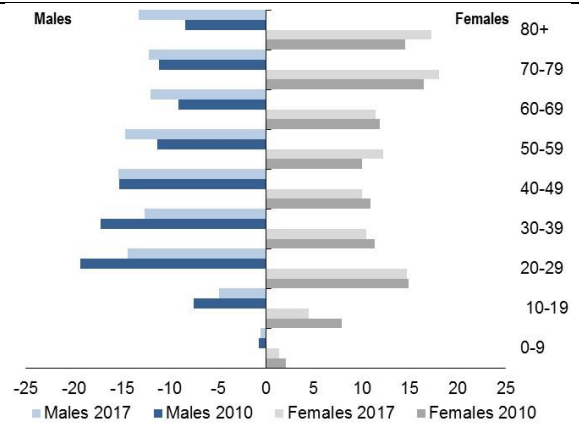


(a) Included rural or not built up roads called: Statali, Regionali and Provinciali, Comunalì out of urban area.

**CHART 11. ROAD MORTALITY RATE BY AGE CLASS. Year 2017 (per 1,000,000 inhabitants)**



**CHART 12. KILLED IN ROAD ACCIDENTS, AGE PYRAMID BY AGE CLASS. Year 2017. Percentage values**

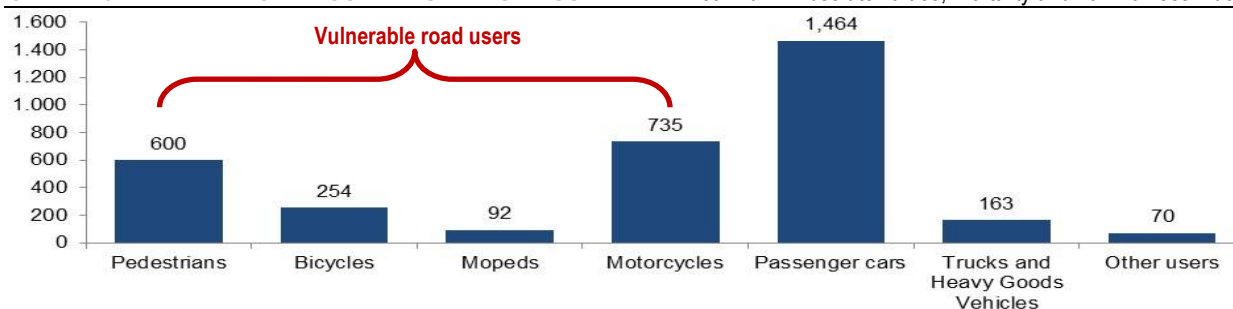


**TABLE 5. KILLED AND INJURED IN ROAD ACCIDENTS BY GENDER AND AGE CLASS. Year 2017, absolute values**

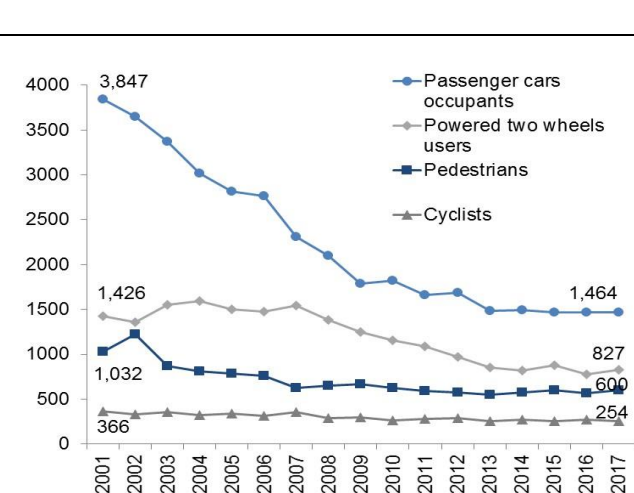
AGE CLASSES (a)	Killed			Injured		
	Males	Females	Total	Males	Females	Total
0 - 4	5	4	9	1,406	1,222	2,628
5 - 9	11	5	16	1,900	1,667	3,567
10 -14	11	7	18	3,014	2,306	5,320
15 -19	120	22	142	12,416	6,876	19,292
20 -24	189	43	232	16,735	9,604	26,339
25 -29	198	53	251	15,007	9,059	24,066
30 - 34	149	38	187	12,768	7,729	20,497
35 - 39	188	31	219	12,182	7,417	19,599
40 - 44	199	36	235	13,290	8,056	21,346
45 - 49	211	29	240	13,108	8,077	21,185
50 -54	217	39	256	12,166	7,757	19,923
55 -59	177	39	216	9,879	5,801	15,680
60 -64	160	35	195	7,166	4,305	11,471
65 -69	160	40	200	5,553	3,516	9,069
70 - 74	145	37	182	4,467	2,979	7,446
75 - 79	181	82	263	4,054	2,761	6,815
80 - 84	182	56	238	2,989	1,781	4,770
85 - 89	130	39	169	1,403	759	2,162
90 +	40	17	57	371	216	587
Unknown	36	17	53	3,003	1,985	4,988
<b>Total</b>	<b>2,709</b>	<b>669</b>	<b>3,378</b>	<b>152,877</b>	<b>93,873</b>	<b>246,750</b>

The age class variable, also includes the "unknown or not indicated" mode. For each accident, in fact, also the occupants of other vehicles involved over the third is counted too. For these individuals, of which we only know the number and the outcome, demographic characteristics, including the age, are not detected

**CHART 13. KILLED IN ROAD ACCIDENTS BY ROAD USER TYPE. Year 2017. Absolute values, mortality and harmfulness index (a)**



**CHART 14. KILLED IN ROAD ACCIDENTS BY MAIN ROAD USER TYPE. Years 2001- 2017. Absolute values**



**CHART 15. KILLED IN ROAD ACCIDENTS BY MAIN ROAD USER TYPE. Percentage changes 2017/2016, 2017/2010 e 2017/2001**

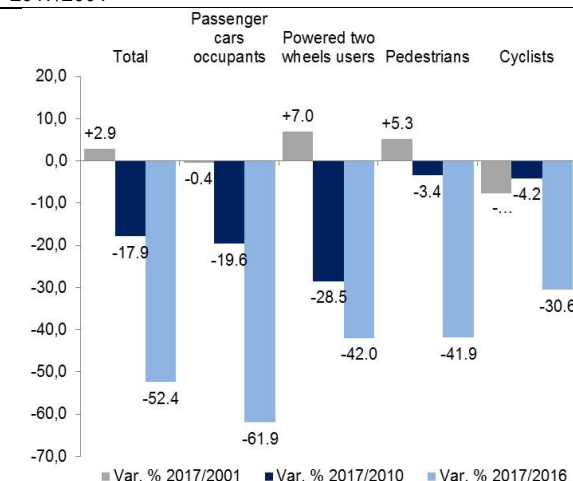


TABLE 6. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY AND KILLED BY ROAD CATEGORY IN LARGE MUNICIPALITIES IN ITALY. Years 2017 and 2016 (a). Absolute values, road mortality rate per 100,000 inhabitants, percentage change 2017/2010

MAIN CITIES	Built up roads				Not built up roads (b)				Road mortality rate Year 2017 (per 100,000)	Road mortality rate Year 2016 (per 100,000)	% Change killed (total) 2017/2010 (d)
	Road accidents 2017	Road accidents 2016	Killed 2017	Killed 2016	Road accidents 2017	Road accidents 2016	Killed 2017	Killed 2016			
Torino	3,037	2,964	37	27	42	49	1	1	4.3	3.2	+31.0
Milano	8,255	8,685	45	45	306	250	8	5	3.9	3.7	-8.6
Verona	1,180	1,217	5	13	133	108	1	1	2.3	5.4	-77.8
Venezia	471	494	5	5	178	192	3	2	3.1	2.7	-27.3
Trieste	831	823	8	4	75	55	2	3	4.9	3.4	-9.1
Genova	4,045	3,984	22	13	234	221	1	-	4.0	2.2	-28.1
Bologna	1,743	1,707	12	13	221	217	3	3	3.9	4.1	-46.4
Firenze	2,552	2,551	10	15	38	87	0	-	2.6	3.9	-60.0
Roma	11,398	11,611	97	105	1,488	1,630	32	35	4.5	4.9	-29.1
Napoli	2,180	2,112	22	27	194	188	3	3	2.6	3.1	-28.6
Bari	1,370	1,328	6	6	202	186	1	2	2.2	2.5	-30.0
Palermo	2,110	2,195	26	25	59	61	1	-	4.0	3.7	-30.8
Messina	694	625	4	11	139	137	1	2	2.1	5.5	-68.8
Catania	1,109	1,140	11	20	61	61	6	-	5.4	6.4	-26.1
<b>Total</b>	<b>40,975</b>	<b>41,436</b>	<b>310</b>	<b>329</b>	<b>3,370</b>	<b>3,442</b>	<b>63</b>	<b>57</b>	<b>3.8</b>	<b>4.0</b>	<b>-29.1</b>

(a) Included rural or not built up roads called: Statali, Regionali and Provinciali, Comunalì out of urban area and motorways.

(b) Percentage change:  $((M^{2016} / M^{2010}) - 1) * 100$ ; the symbol "-" means "no changes".

CHART 16. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY AND KILLED IN THE MAIN MUNICIPALITIES IN ITALY (IN TOTAL). Years 2001-2017. Absolute values (a)





**TABLE 7. KILLED IN ROAD ACCIDENTS IN ITALIAN REGIONS** (a). Years 2010 and 2017. Absolute values, percentage changes, road mortality rate per 100,000 inhabitants

REGIONS	Killed (absolute values)			%changes 2017/2016 (a)	%changes 2017/2010 (b) (a)	Mortality rate 2010 (b)	Mortality rate 2017 (b)
	2010	2016	2017				
Piemonte	327	247	279	+13,0	-14,7	7.5	6.4
Valle d'Aosta/Vallée d'Aoste	11	3	8	+166,7	-27,3	8.7	6.3
Lombardia	565	434	423	-2,5	-25,1	5.9	4.2
Bolzano/Bozen	30	38	30	-21,1	0,0	6.0	5.7
Trento	29	32	29	-9,4	0,0	5.6	5.4
Veneto	396	344	301	-12,5	-24,0	8.2	6.1
Friuli-Venezia Giulia	103	67	69	+3,0	-33,0	8.4	5.7
Liguria	84	58	87	+50,0	3,6	5.3	5.6
Emilia-Romagna	401	307	378	+23,1	-5,7	9.3	8.5
Toscana	306	249	269	+8,0	-12,1	8.4	7.2
Umbria	79	35	48	+37,1	-39,2	9.0	5.4
Marche	109	100	96	-4,0	-11,9	7.1	6.3
Lazio	450	347	356	+2,6	-20,9	8.2	6.0
Abruzzo	79	76	69	-9,2	-12,7	6.0	5.2
Molise	28	17	27	+58,8	-3,6	8.9	8.7
Campania	254	218	242	+11,0	-4,7	4.4	4.1
Puglia	292	254	236	-7,1	-19,2	7.2	5.8
Basilicata	48	42	33	-21,4	-31,3	8.3	5.8
Calabria	138	117	100	-14,5	-27,5	7.0	5.1
Sicilia	279	192	208	8,3	-25,4	5.6	4.1
Sardegna	106	106	90	-15,1	-15,1	6.5	5.5
<b>Italy</b>	<b>4,114</b>	<b>3,283</b>	<b>3,378</b>	<b>+2,9</b>	<b>-17,9</b>	<b>6.9</b>	<b>5.6</b>

(a) Percentage change:  $((M^{2016} / M^{2010}) - 1) * 100$

(b) The number of deaths per 100,000 inhabitants is calculated by the ratio between the total deaths in the region and the average resident population by the year 2016 (Source Istat)

## Glossary:

**Bus:** passenger-carrying vehicle, most commonly used for public transport, having more than 16 seats for passengers.

**Deaths:** the number of people, involved in road accidents, who die immediately or within 30 days after the event occurred. This definition was adopted on 01st January 1999, while in the past (up until 31st December 1998) deaths were considered to include only deaths within seven days of the accident.

**Goods vehicle:** Motor vehicle used only for the transport of goods.

**Injured:** the road user was seriously or slightly injured (but not killed within 30 days) in the road accident.

**Moped:** two or three wheeled vehicle equipped with internal combustion engine, with size less than 50 cc and maximum speed that does not exceed 45 km/h (28mph).

**Motorcycle:** two or three wheeled motor vehicle, with engine size up to 125 cc, or maximum speed exceeding 45km/h (28 mph) or with engine size more than 125 cc.

**Passenger car:** motor vehicle with 3 or 4 wheels, mainly used to transport people, seating for no more than 8 occupants. Motor vehicles with these characteristics used as taxis as well as motor caravans are also included.

**Pedal cycle:** vehicle with at least 2 wheels, without engine. In some cases it can also use electric power.

**Pedestrian:** person on foot; person pushing or holding bicycle, Person who uses a wheel chair ,a pram or a pushchair, leading or herding an animal, riding a toy cycle on the footway, person on roller skates, skateboard or skis. Does not include persons in the act of boarding or alighting from a vehicle.

**Percentage change:** the percentage change is calculated by means the difference between data at **t** time and data **t-1** (or t-x) time, divided by data at **t-1**(or t-x) time, per 100.

**Public motor vehicle registry (PRA):** the registry holding all public deeds relating to the transfer of property and rights of ownership, in addition to the records of loans and mortgages on all motor vehicles registered in Italy.

**Road accident:** the 1968 Vienna Convention defines a road accident as an event occurring on the roads or squares open to traffic involving standing or moving vehicles and which results in injury to people. For this reason, if the accident only involves damage to objects, it is excluded from the statistics. This definition therefore reserves attention exclusively for reported accidents involving injury to people.

**Road accidents harmfulness index:** the ratio of the number of injuries caused by road accidents and the number of collisions, per 100 accidents.

**Road accidents mortality index:** the ratio of the number of fatalities caused by road accidents and the number of collisions, per 100 accidents.

**Road accidents seriousness index:** the ratio of the number of fatalities caused by road accidents and the total number of deaths and injuries as a result of accidents, per 100 accidents.

**Road tractor** road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven (mainly semi-trailers).

**Rural or non-built up roads:** outside urban area, no motorway

**Serious injuries:** the serious injuries are identified by MAIS classification (Maximum Abbreviated Injury Scale). The severity level is measured by a 6-level scale. Serious injuries have a score of 3 or higher (MAIS3+).

**Two wheel motor vehicle:** motor vehicle moving on two wheels. Includes mopeds and motorcycles but not bicycles.

**Urban or built up roads:** inside urban area, no motorway.

## Methodological note

### Data flow and definitions

The survey on road accidents resulting in death (within 30 day) or injury, carried out by the Italian National Institute of Statistics (Istat), with the cooperation of ACI (Automobile Club of Italy) and other local organisations, is an exhaustive and monthly based data collection (National Statistical Programme - PSN – 00142 code).

The survey collects all road accidents involving at least a vehicle, circulating on the national road net, resulting in death or injury and documented by a Police authority.

The detection unit is the single road accident resulting in death or injury; all information is referred to the period when the accident occurred.

As regards the data flow, a flexible model was adopted by Istat, through the subscription of a Memorandum of understanding or special agreements signed with regions (NUTS2 level) and provinces (NUTS3 level), in order to facilitate the local authority information needs and to improve the timeliness and quality of data collected.

### Main information collected:

- Date, time and location of the accident
- Type of road
- Road surface
- Signals
- Weather conditions
- Type of accident (collision, investment, etc.)
- Type of vehicles involved
- Consequences of the accident to people
- Causes of the accident

### Timeliness and dissemination

The figures for every year  $t-1$  are disseminated in July of the year  $t$ , approximately five months after the collection deadline.

### European Union law of reference:

Reference: COUNCIL DECISION of 30 November 1993 on the creation of a Community database on the road accidents [Decision n. 704 of 1993](#)

### Link to database and websites:

- Noi Italia: <http://noi-italia.istat.it/>
- DWH I.stat: <http://dati.istat.it/> (Health Statistics/Road Accidents)
- Time series: <http://seriestoriche.istat.it/>
- CARE - Community database on road accidents resulting in death or injury – DG-MOVE European Commission [http://ec.europa.eu/transport/road\\_safety/specialist/statistics/index\\_en.htm](http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm)