



Automobile Club d'Italia



November 3, 2015

## Road accidents in Italy

Year 2014

In 2014, there were 177,031 road accidents resulting in deaths or injuries in Italy, with 3,381 killed (deaths within 30 days) and 251,147 injured persons.

Comparing 2014 data with the previous year (2013), a decrease by 2.5% for accidents, 2.7% for injuries and 0.6% for killed persons is recorded. (Chart 1).

In the EU28 Countries, in 2014, 25,896 persons died in road accidents; in 2013, 26,025 fatalities were registered, with a percentage change in the number of deaths, between 2014 and 2010, equal to -18.0%. In Italy the variation has been equal to -17.8%. The number of deaths per million inhabitants for each country was 51, in the EU28. Italy registered a value of 55.6, that is the fourteenth position in the European ranking, behind United Kingdom, Spain, Germany and France.

For the first time- and on an experimental basis - the number of serious injuries in road accidents has been calculated in Italy, following the recommendations of the European Commission. On the basis of the Hospital Discharge data, the seriously injured in road accidents were approximately 15,000 against 13,000 in 2013(+16 %). The number of serious injuries in road accident, for every death, is equal 4.4 (3.8 in 2013).

On the urban area roads occurred 133,598 road accidents, 180,474 injured and 1,505 killed persons; on motorways, the road accidents were 9,148, with 15,290 injured and 287 killed persons. On the other rural roads, motorways excluded, 34,285 road accidents, 55,383 injured and 1,589 killed were recorded.

The most dangerous accidents occurred on rural roads (motorways excluded), where 4.63 deaths every 100 road accidents happened. The victims were 1.13 per 100 accidents for road accidents inside the urban area and 3.14 on motorways. The number of deaths decreased on motorways and rural roads (compared to 2013: -10.6% and -3.8%), increased inside the urban area (+5.4%).

Friday is the day recording the highest number of road accidents (27,021, equal to 15.4% out of total). The most dangerous accidents happen on Sunday (3.1 deaths per 100 accidents), followed by Saturday (2,3). During the night (between 10 p.m. and 6 a.m.) the mortality index is higher on rural roads or motorways than inside the urban area.

In 2014, 1,491 deaths among cars drivers and passengers were registered, followed by motorcyclists (704), pedestrians (578), cyclists (273), occupants of trucks (159), moped (112) and other road users (64).

The mortality Index for pedestrian (killed per 100 accidents) is four time higher than the same index for car occupants (2.75 against 0.67). For motorcyclists and cyclists the indicator level is more than double in respect of car drivers and passengers (1.69 e 1.41).

### A halt in the decline of road accidents and deaths on Italian roads

During 2014, the number of **road accidents** resulting in deaths or injuries **in Italy** was **177,031**, with **3,381 killed** and **251,147 injured persons**.

In 2014 every day, an average number of **485** road accidents, **9** deaths and **688** injuries occurred on the Italian roads. Comparing these data with the previous year (2013), a decrease of 2.5% for accidents, 2.7% for injuries and 0.6% for killed persons is recorded (Table 1).

**TABLE 1. ROAD ACCIDENTS, KILLED AND INJURED PERSONS.** Years 2001-2014 (absolute values, deaths per million and percentage change)

YEARS	Road accidents	Killed	Injured	Deaths per million inhabitants (a)	% change of the number of deaths in respect to the previous year (b)	% change of the number of deaths in respect to 2001 (c)	% change of the number of deaths in respect to 2010 (c)
2001	263,100	7,096	373,286	124.5	-	-	-
2002	265,402	6,980	378,492	122.3	-1.6	-1.6	-
2003	252,271	6,563	356,475	114.5	-6.0	-7.5	-
2004	243,490	6,122	343,179	106.1	-6.7	-13.7	-
2005	240,011	5,818	334,858	100.4	-5.0	-18.0	-
2006	238,124	5,669	332,955	97.5	-2.6	-20.1	-
2007	230,871	5,131	325,850	87.8	-9.5	-27.7	-
2008	218,963	4,725	310,745	80.3	-7.9	-33.4	-
2009	215,405	4,237	307,258	71.7	-10.3	-40.3	-
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 (e)	181,660	3,401	258,093	56.2	-9.4	-52.1	-17.3
<b>2014</b>	<b>177,031</b>	<b>3,381</b>	<b>251,147</b>	<b>55.6</b>	<b>-0.6</b>	<b>-52.4</b>	<b>-17.8</b>

Source: Istat – Road accidents resulting in deaths or injuries register 2001 – 2014

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.

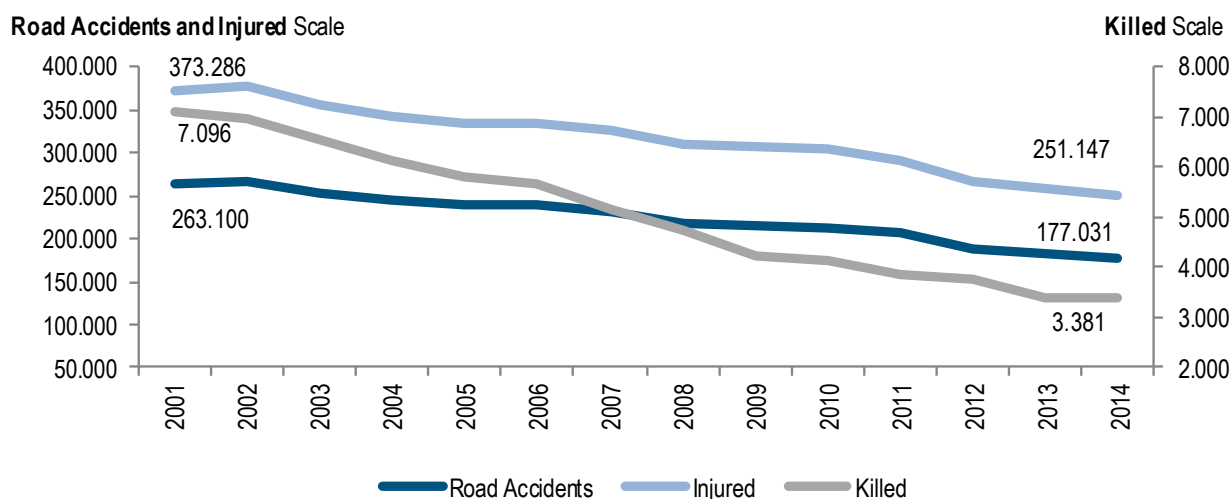
(a) Deaths out of resident population (per 1,000,000)

(b) The variations in change of the number of deaths in respect to the previous year is:  $\left(\frac{M^t}{M^{t-1}} - 1\right) * 100$ .

(c) The percentage change of the number of deaths in respect to 2001 or 2010 is:  $\left(\frac{M^t}{M^{2001}} - 1\right) * 100$ ;  $\left(\frac{M^t}{M^{2010}} - 1\right) * 100$

(e) 2013 data has been revised during 2015.

**CHART 1. NUMBER OF ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INJURED PERSONS.** Years 2001-2014 (absolute values)



## The European Union 2020 target: limited decrease in the number of deaths in EU28

In 2014, 25,896 people died in the Eu28 in road accidents, in 2010 the victims were 31,595, a decrease of 18.0% between 2013 and 2010. A similar decrease is registered for Italy (17.8%).

The percentage change in Italy between 2014 and 2013 is -0.6%, compared with -0.5% at Eu28 level.

In order to provide a standard measure of the level of mortality in road accidents, harmonized and comparable between different European countries, we calculated the death rate, obtained by the ratio of the number of victims in road accidents and the resident population. In 2014 the number of deaths per million inhabitants in Eu28 is 51.0, and 55.6 in Italy (in 2010 respectively equal to 62.8 and 69.4). With this result, Italy is in 2014, is in fifteenth place in the European ranking (Table 2 and Chart 2).

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

Years 2010, 2013 and 2014 (absolute values, percentage change and deaths per million of inhabitants) (a)

EU28 COUNTRIES	Absolute values			% change of the number of deaths (b)		Deaths per million of inhabitants	
	2010	2013	2014 (c)	2014/2013	2014/2010	2010	2014
Austria	552	455	430	-5.5	-22.1	65.9	50.3
Belgium	841	724	715	-1.2	-15.0	77.6	63.7
Bulgaria	776	601	655	9.0	-15.6	104.6	90.7
Cyprus	60	44	45	2.3	-25.0	73.2	52.8
Denmark	426	368	308	-16.3	-27.7	99.0	72.7
Croatia	255	191	183	-4.2	-28.2	46.1	32.5
Estonia	79	81	78	-3.7	-1.3	59.3	59.3
Finland	272	258	224	-13.2	-17.6	50.8	41.0
France	3,992	3,268	3,384	3.5	-15.2	61.7	51.2
Germany	3,651	3,340	3,368	0.8	-7.8	44.6	41.6
Greece	1,258	879	793	-9.8	-37.0	112.5	73.0
Ireland	212	188	195	3.7	-8.0	46.6	42.2
<b>Italy</b>	<b>4,114</b>	<b>3,401</b>	<b>3,381</b>	<b>-0.6</b>	<b>-17.8</b>	<b>69.4</b>	<b>55.6</b>
Latvia	218	179	212	18.4	-2.8	102.8	106.3
Lithuania	299	258	265	2.7	-11.4	95.2	90.4
Luxembourg	32	45	35	-22.2	9.4	63.7	62.9
Malta	15	18	10	-44.4	-33.3	36.2	23.4
The Netherlands	640	570	570	0.0	-10.9	38.6	33.8
Poland	3,907	3,357	3,202	-4.6	-18.0	102.4	84.2
Portugal	937	637	607	-4.7	-35.2	88.6	58.4
United Kingdom	1,905	1,769	1,807	2.1	-5.1	30.5	28.0
Czech Republic	802	654	688	5.2	-14.2	76.7	65.4
Romania	2,377	1,861	1,818	-2.3	-23.5	117.1	91.3
Slovakia	353	223	258	15.7	-26.9	65.5	47.6
Slovenia	138	125	108	-13.6	-21.7	67.4	52.4
Spain	2,478	1,680	1,661	-1.1	-33.0	53.3	35.7
Sweden	266	260	270	3.8	1.5	28.5	27.8
Hungary	740	591	626	5.9	-15.4	73.9	63.5
<b>EU28</b>	<b>31,595</b>	<b>26,025</b>	<b>25,896</b>	<b>-0.5</b>	<b>-18.0</b>	<b>62.8</b>	<b>51.0</b>

(a) Source European Transport Safety Council, Annual PIN report. Year 2015 - <http://etsc.eu/9th-annual-road-safety-performance-index-pin-report/> European Commission CARE (Community Data Base on Road Accidents) [http://ec.europa.eu/transport/road\\_safety/specialist/statistics/index\\_en.htm](http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm)

(b) The variations in change 2014/2010 or 2013 is calculated by means the formulas :  $((M^{2014} / M^{2010 \text{ or } 2013}) - 1) * 100$

(c) Provisional data 2014 for Bulgaria.

## Seriously injured in road accidents: about four every killed person on the road in 2014<sup>1</sup>

The performance evaluation of the implemented measures for road safety is usually linked to the reduction in the number of deaths. The 2020 target set by the General Assembly of the United Nations and the European Commission is a further halving of the number of deaths in road accidents in Europe and globally, and the decrease in the number of serious injuries<sup>2</sup>.

In compliance with the recent programmes for road safety and the new 2020 targets to set new standards for an international and harmonized definition of serious injury was required. In 2015, the European Commission defined guidelines for Eu28 countries. The use of the existing scale of the trauma AIS (Abbreviated Injury Scale) and, specifically, MAIS (Maximum Abbreviated Injury Scale), was proposed. According to the international recommendations, Italy calculated for 2014 the number of seriously injured in road accidents, using data based on hospital discharge records.

In 2014 the number of the seriously injured in road accidents was about 15,000, +16% from the previous year. They were respectively 12,899 in 2013 and 13,112 in 2012. The ratio between the seriously injured (Hospital discharge by Ministry of Health) and killed in road accidents (by Istat) measures the number of serious injuries per one death occurred in road accidents. In 2012, 2013 and 2014, respectively 3.5, 3.8 and 4.4 seriously injured per each death were recorded. In 2014, the values varied between 3.4 in the North-eastern Italian regions and 5.6 in the Islands (Sicilia and Sardegna).

**TABLE 3. NUMBER OF SERIOUSLY INJURED IN ROAD ACCIDENTS AND RATIO BETWEEN SERIOUSLY INJURED AND KILLED IN ROAD ACCIDENTS, BY HOSPITAL DISCHARGE GEOGRAPHICAL AREA (a). Italy - Years 2012, 2013 and 2014**

HOSPITAL DISCHARGE	Year 2012		Year 2013		Year 2014	
	Absolute	Ratio between	Absolute	Ratio between	Absolute	Ratio between
North-west	3,107	3.3	3,025	3.8	3,555	4.5
North-east	3,028	3.3	2,725	3.5	2,737	3.4
Centre	2,776	3.5	2,532	3.4	3,542	4.6
South	2,609	3.3	3,076	4.3	3,402	4.8
Islands	1,592	4.9	1,541	4.1	1,707	5.6
<b>Total Italy</b>	<b>13,112</b>	<b>3.5</b>	<b>12,899</b>	<b>3.8</b>	<b>14,943</b>	<b>4.4</b>

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

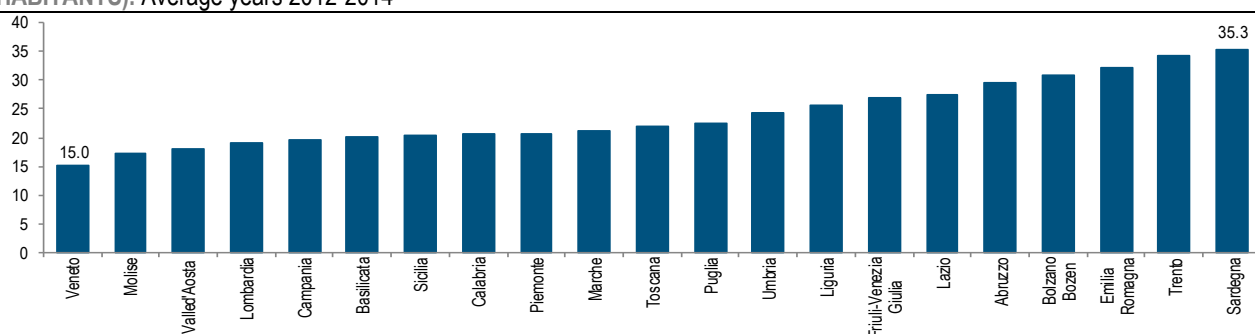
(a) For each processed data year only the first hospital admission, for each inpatient, has been considered; the case selection includes the main and secondary diagnosis. All inpatients dead within 30 days after the hospital admission were excluded.

During the 2012-2014 period, in Italy there were, as average, 22.6 serious injuries in road accidents per 100 thousand inhabitants. High values were recorded for Sardegna, the Autonomous Province of Trento, Emilia-Romagna, the Autonomous Province of Bolzano, Abruzzo, Lazio (levels range 35.3-27.6); lower values were recorded for Veneto, Molise, Valle d'Aosta, Lombardia, Campania and Basilicata (values between 15.0 and 20.3 per 100,000), (Chart 3).

<sup>1</sup> Study carried out by Istat with Ministry of Health - DG Health Planning and DG Prevention and in agreement with Ministry of Infrastructure and Transport – DG Road Safety.

<sup>2</sup> The AIS is a classification based on the International Classification of Diseases ICD9-CM or ICD10 codes and on a scale to measure the injury severity by the body region interested. 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 2 NUMBER OF SERIOUSLY INJURED IN ROAD ACCIDENTS AMONG ITALIAN REGIONS (PER 100,000 INHABITANTS). Average years 2012-2014



## Tables and graphics collection

TABLE 4. ROAD ACCIDENTS, KILLED AND INJURED PERSONS BY ROAD TYPE. Year 2014 (absolute values, mortality index and % change 2014/2013)

ROAD TYPE	Road accidents	Killed	Injured	Mortality Index (a)	% change Accidents 2014/2013	% change Killed 2014/2013	% change Injured 2014/2013
Inside urban area roads	133,598	1,505	180,474	1.13	-2.2	5.4	-2.4
Motorways	9,148	287	15,290	3.14	-1.3	-10.6	-1.0
Rural roads	34,285	1,589	55,383	4.63	-4.1	-3.8	-4.0
<b>Total</b>	<b>177,031</b>	<b>3,381</b>	<b>251,147</b>	<b>1.91</b>	<b>-2.5</b>	<b>-0.6</b>	<b>-2.7</b>

(a) The mortality index is the ratio between the number of killed persons in road accidents out of total road accidents resulting in death or injury (per 100).

TABLE 5. ROAD ACCIDENTS, KILLED AND INJURED PERSONS BY DAY WEEK AND ROAD TYPE, DURING THE NIGHT. Year 2014 (absolute values) (a)

DAY WEEK	Urban roads			Rural roads (b)			Total		
	Road accidents	Killed	Injured	Road accidents	Killed	Injured	Road accidents	Killed	Injured
Monday night	1,761	33	2,725	767	50	1,233	2,528	83	3,958
Tuesday night	1,545	27	2,306	679	43	1,037	2,224	70	3,343
Wednesday night	1,845	37	2,743	751	53	1,191	2,596	90	3,934
Thursday night	1,770	32	2,610	755	51	1,318	2,525	83	3,928
Friday night	2,081	41	3,207	886	59	1,485	2,967	100	4,692
Saturday night	3,067	63	4,952	1,338	78	2,393	4,405	141	7,345
Sunday night	3,111	74	5,246	1,530	99	2,873	4,641	173	8,119
<b>Total night</b>	<b>15,180</b>	<b>307</b>	<b>23,789</b>	<b>6,706</b>	<b>433</b>	<b>11,530</b>	<b>21,886</b>	<b>740</b>	<b>35,319</b>

(a) Between 10 p.m. and 6 a.m. (b) Included rural roads called: Statali, Regionali and Provinciali, Comunalì out of urban area and highways.

CHART 3. MORTALITY INDEX BY DAY TIME. Year 2014 (a)

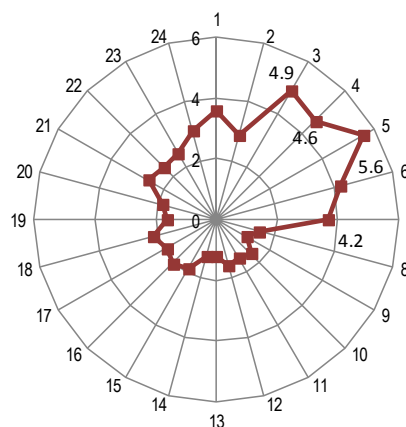


TABLE 6. ROAD ACCIDENTS, KILLED AND INJURED PERSONS BY ACCIDENT TYPE. Year 2014 (absolute values, mortality index) (a)

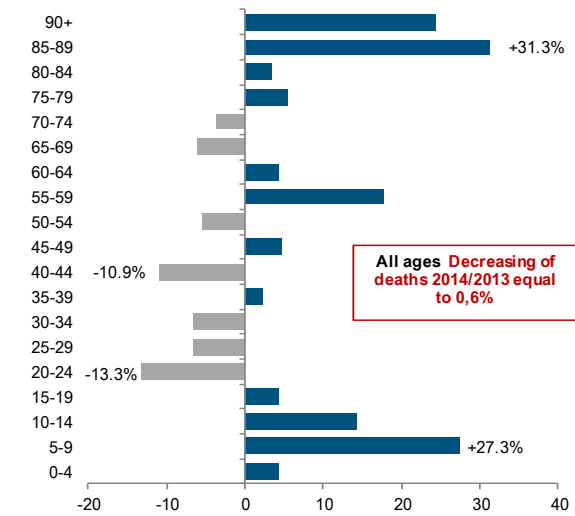
ACCIDENT TYPE	Absolute values			Percentage (out of total)			Mortality Index (a)
	Road accidents	Killed	Injured	Road accidents	Killed	Injured	
Head on and side collision	59,026	759	87,771	33.3	22.4	34.9	1.29
Overtaking	32,947	336	54,026	18.6	9.9	21.5	1.02
Side collision	19,643	163	25,573	11.1	4.8	10.2	0.83
Head on collision	10,369	537	17,856	5.9	15.9	7.1	5.18
Accidents with temporary stopped vehicle	5,708	84	7,830	3.2	2.5	3.1	1.47
<b>Total accidents between vehicles</b>	<b>127,693</b>	<b>1,879</b>	<b>193,056</b>	<b>72.1</b>	<b>55.6</b>	<b>76.9</b>	<b>1.47</b>
Accidents with pedestrian	19,905	548	22,310	11.2	16.2	8.9	2.75
Leaving straight road	16,200	632	20,068	9.2	18.7	8.0	3.90
Single vehicle accidents with obstacles	7,624	254	9,507	4.3	7.5	3.8	3.33
Fall by vehicle	2,729	39	2,868	1.5	1.2	1.1	1.43
Accidents with parked vehicle	2,128	27	2,483	1.2	0.8	1.0	1.27
Sudden braking	746	2	849	0.4	0.1	0.3	0.27
Accidents between train and vehicle	6	-	6	-	-	-	-
<b>Total accidents with single vehicles</b>	<b>49,338</b>	<b>1,502</b>	<b>58,091</b>	<b>27.9</b>	<b>44.4</b>	<b>23.1</b>	<b>3.04</b>
<b>Total accidents</b>	<b>177,031</b>	<b>3,381</b>	<b>251,147</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>1.91</b>

(a) The mortality index is the ratio between the number of killed persons in road accidents out of total road accidents resulting in death or injury (per 100).

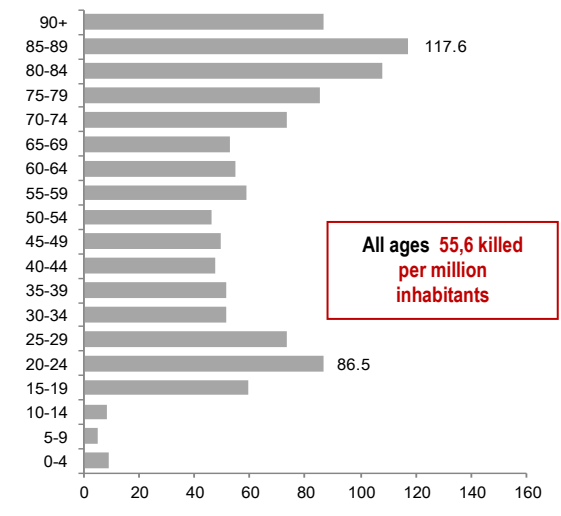
TABLE 7. KILLED AND INJURED PERSONS IN ROAD ACCIDENTS BY SEX AND AGE CLASS. Year 2014 (absolute values)

AGE CLASSES	Killed			Injured		
	Males	Females	Total	Males	Females	Total
0 - 4	10	14	24	1,573	1,310	2,883
5 - 9	6	8	14	2,015	1,678	3,693
10 - 14	15	9	24	3,156	2,485	5,641
15 - 19	136	35	171	11,970	7,209	19,179
20 - 24	219	49	268	16,631	11,071	27,702
25 - 29	195	46	241	14,822	9,960	24,782
30 - 34	162	26	188	13,786	8,979	22,765
35 - 39	187	38	225	13,491	8,901	22,392
40 - 44	186	43	229	14,009	9,143	23,152
45 - 49	206	40	246	12,856	8,512	21,368
50 - 54	173	39	212	11,212	7,593	18,805
55 - 59	195	39	234	8,323	5,640	13,963
60 - 64	162	37	199	6,109	4,160	10,269
65 - 69	141	44	185	5,067	3,672	8,739
70 - 74	166	54	220	4,300	3,022	7,322
75 - 79	164	65	229	3,932	2,723	6,655
80 - 84	162	57	219	2,670	1,679	4,349
85 - 89	110	37	147	1,217	766	1,983
90 +	33	23	56	316	200	516
Unknown	34	16	50	2,653	2,336	4,989
<b>Total</b>	<b>2,662</b>	<b>719</b>	<b>3,381</b>	<b>150,108</b>	<b>101,039</b>	<b>251,147</b>

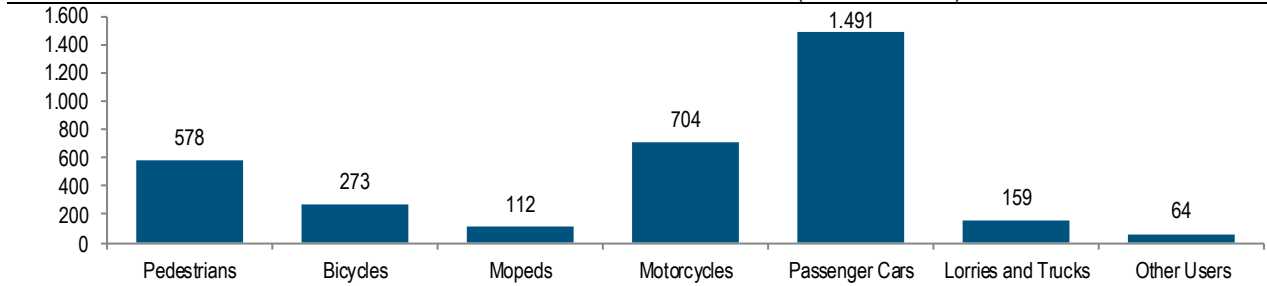
**CHART 4. KILLED IN ROAD ACCIDENTS BY AGE CLASS.**  
Percentage change 2014/2013



**CHART 5. KILLED IN ROAD ACCIDENTS BY AGE CLASS.**  
Year 2014 (per 1,000,000 inhabitants)



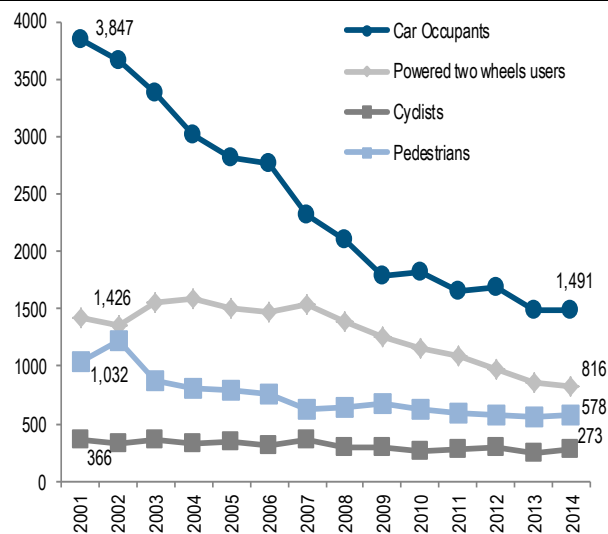
**CHART 6. KILLED IN ROAD ACCIDENTS BY ROAD USER TYPES.** Year 2014 (absolute values)



Mortality Index (a)	<b>2.75</b>	<b>1.41</b>	<b>0.84</b>	<b>1.69</b>	<b>0.67</b>	<b>0.74</b>	<b>0.56</b>
Harmfulness Index (a)	<b>109.56</b>	<b>94.12</b>	<b>101.30</b>	<b>100.46</b>	<b>65.36</b>	<b>34.18</b>	<b>42.59</b>

(a) Number of killed or injured per 100 road accidents involving pedestrians or vehicles by type.

**CHART 7. KILLED IN ROAD ACCIDENTS BY MAIN ROAD USER TYPES.** Years 2001-2014 (absolute values)



**CHART 8. KILLED IN ROAD ACCIDENTS BY MAIN ROAD USER TYPES.** Percentage change 2014/2013, 2014/2010, 2014/2001

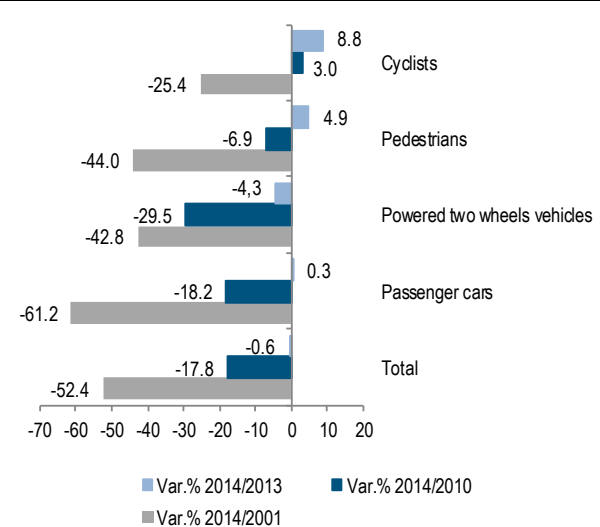
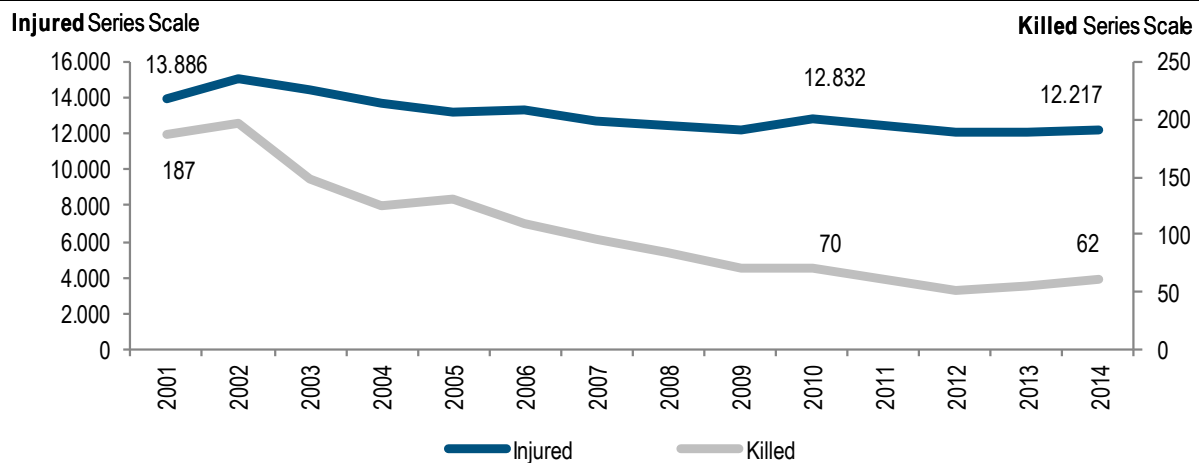


TABLE 8. PEDESTRIAN, KILLED AND INJURED, BY SEX AND AGE CLASS. Year 2014 (absolute values)

AGE CLASSES	Killed pedestrian			Injured pedestrian		
	Males	Females	Total	Males	Females	Total
0-4	5	1	6	251	175	426
5-9	3	2	5	386	238	624
10-14	4	5	9	583	494	1,077
15-19	9	6	15	647	766	1,413
20-24	3	5	8	498	592	1,090
25-29	9	2	11	511	562	1,073
30-34	11	2	13	557	568	1,125
35-39	14	5	19	605	599	1,204
40-44	13	1	14	602	733	1,335
45-49	19	7	26	658	811	1,469
50-54	12	6	18	602	850	1,452
55-59	27	8	35	492	811	1,303
60-64	20	13	33	540	791	1,331
65-69	18	16	34	555	842	1,397
70-74	33	26	59	583	836	1,419
75-79	39	35	74	672	920	1,592
80-84	44	43	87	598	752	1,350
85-89	50	26	76	314	382	696
90-94	16	10	26	105	100	205
95 +	2	2	4	13	12	25
Unknown	5	1	6	106	95	201
<b>Total</b>	<b>356</b>	<b>222</b>	<b>578</b>	<b>9,878</b>	<b>11,929</b>	<b>21,807</b>

CHART 9. KILLED AND INJURED IN ROAD ACCIDENTS. CHILDREN AGE CLASS 0-14. Years 2001-2014 (absolute values)



**For more details please refer to the Italian version**

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