



ROAD SAFETY ANNUAL REPORT 2019

ITALY

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Italy recorded 3 325 road fatalities in 2018, representing a 1.6% decrease on the 3 378 fatalities recorded in 2017. The mortality rate is 5.5 deaths per 100 000 population. Since 2010, road fatalities have decreased across all road user groups and age categories, except for the elderly. The main vision of the National Road Safety Plan Horizon 2020 is "No child should die on the road" and the main target is to halve the number of road fatalities by 2020 using 2010 as a baseline. To achieve this goal, road deaths must fall by about 20% annually in the years remaining to 2020.

Trends

Italy registered an overall **decrease in the number of road deaths in 2018**. According to latest available data, 3 325 persons lost their lives in traffic crashes in Italy in 2018. This represents a 1.6% decline on 2017. In 2017, 3 378 road deaths were reported, a 2.9% increase on 2016.

The **longer-term trend for road deaths** in Italy is encouraging. Between 2000 and 2018, the number of annual road fatalities fell by 53%.

The greatest reductions were achieved in the 2000-13 period when fatalities fell by 52%. Since 2013, the reduction in the number of road deaths has slowed, dropping only 2.2% in the five years to 2018.

The number of **traffic deaths per 100 000 inhabitants** in Italy has fallen by 56% between 2000 and 2018. In 2018, 5.5 traffic deaths per 100 000 inhabitants were recorded, compared to 12.4 in 2000. By way of comparison, the average in the European Union is 4.9 deaths per 100 000 inhabitants in 2018.

Italy recorded 0.6 **road fatalities per 10 000 registered vehicles** in 2018. This represents a decrease of 60% compared to the year 2000, when the rate of deaths to registered vehicles stood at 1.6.

Country Profile

Population in 2018: 60.5 million

GDP per capita in 2018: 34 288 USD

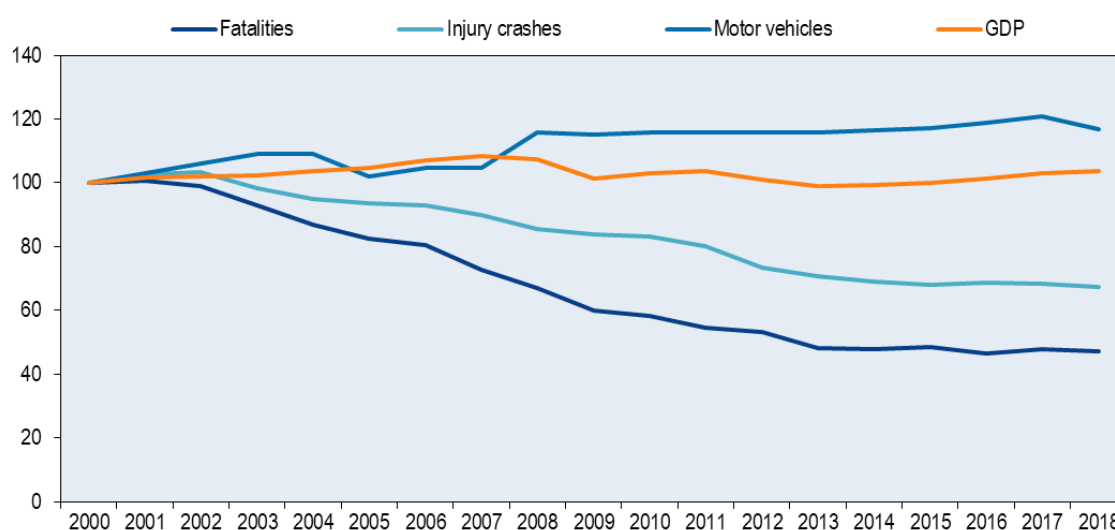
Cost of road crashes: 1.1% of GDP (2018)

Registered motor vehicles in 2017: 53.5 million (cars 72%; goods vehicles 9%; motorcycles 13%)

Speed limits: 50 km/h on urban roads; 70-90 km/h on rural roads; 110-130 km/h on motorways

Limits on Blood Alcohol Content: 0.5 g/l for general drivers; 0.0 g/l for professional drivers and novice drivers

Figure 1. Road safety, vehicle stock and GDP trends
Index 2000 = 100

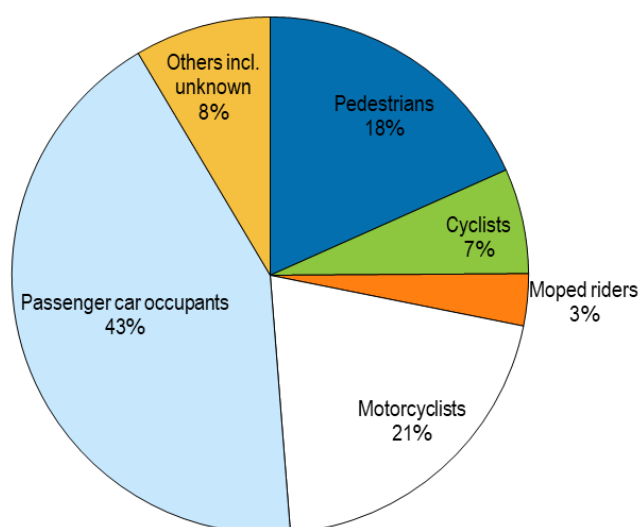


The graph for **fatalities by road user groups** shows that passenger car occupants continue to be the group the most affected by road crashes. In 2018, passenger car occupants accounted for a plurality of road deaths with 43% of the total. They were followed by motorcyclists (21%), pedestrians (18%) and cyclists (7%). It should be noted that cars and motorcycles represent, respectively, 72% and 13% of the vehicle fleet.

The largest increase in 2018 was registered among moped users with 16 more deaths (+17.4%) compared to 2017. They were followed by pedestrians with 9 more deaths (+1.5%) than in 2017. Cyclists saw 35 fewer fatalities (-13.8%).

The long-term trend shows that traffic in Italy has become safer for all road user groups. The strongest decline was registered among moped riders, who saw an 83% drop in the number of annual road fatalities between 2000 and 2018. Passenger car occupants also saw significant road safety improvements since the turn of the century with 63% fewer deaths in 2018 than in 2000.

The user group that has benefitted least are motorcyclists, who saw the number of crash deaths fall by 11% since 2000.

Figure 2. Road fatalities by road user group in percentage of total, 2018

Road deaths by age group in 2018 showed some changes compared to 2017. In 2018, people older than 75 saw 84 fewer road deaths (-11.6%) than in 2017. On the other hand, the number of fatal casualties increased by 36.9% for 18-20 year olds, who experienced 45 more deaths in 2018 than the year prior.

Looking at the longer-term trend, since 2000, the number of road deaths decreased for all groups. The strongest reduction in fatalities over this period occurred among youth under 25 years of age, who saw road deaths fall by about 70%. The elderly above 75 benefitted the least from road safety improvements during this time period with annual road fatalities dropping by only 15%.

More recently, since 2010, road mortality has decreased the most for young people. While the average reduction in the number of road deaths for between 2010 and 2018 was 19.2%, the number of annual road fatalities decreased by 51% for the 0-14, by 50% for the 15-17 and by 34% for the 18-20 age ranges. The reduction in road deaths experienced by the youngest population is partly explained by a change in the age structure of the population and by the lower use of mopeds.

However, despite these recent improvements, young people were in 2018 the age group at highest risk in traffic, with a mortality rate much above the average. People aged 18-20 and 21-24 bore mortality rates of 9.5 and 7.7 per 100 000 inhabitants, respectively. Senior citizens are at similarly heightened risk, however. The elderly above 75 experience traffic fatalities at a rate of 9.2 per 100 000 inhabitants.

Road safety for the elderly portends to be a significant issue for Italy in the decades to come. As of 2014 data, 21.4% of Italians are aged 65 or older – the second highest ratio among OECD countries (OECD, 2019). The elderly share of the population is forecasted to grow in the coming decades thus increasing the traffic participation of this vulnerable road user group. The aging of the population is also reflected in those who operate vehicles: when comparing the data of active driver's licences in 2018 with those of 10

years prior, a marked increase in the number of drivers older than 65 years of age is observed. For these elderly drivers, the share of total active licences rose from 13% to 21% between 2010 and 2018. On the other hand, the number of licensed young people decreased, especially amongst those under 25 years of age, according to the ISTAT and ACI.

Figure 3. Road fatality rates by age group, 2000-2018
Deaths per 100 000 population in a given age group

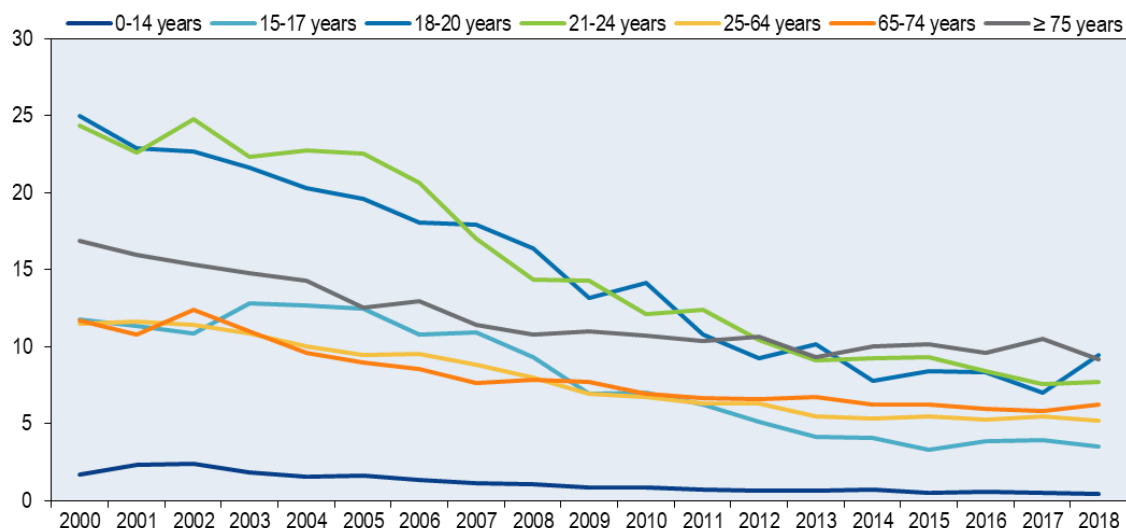
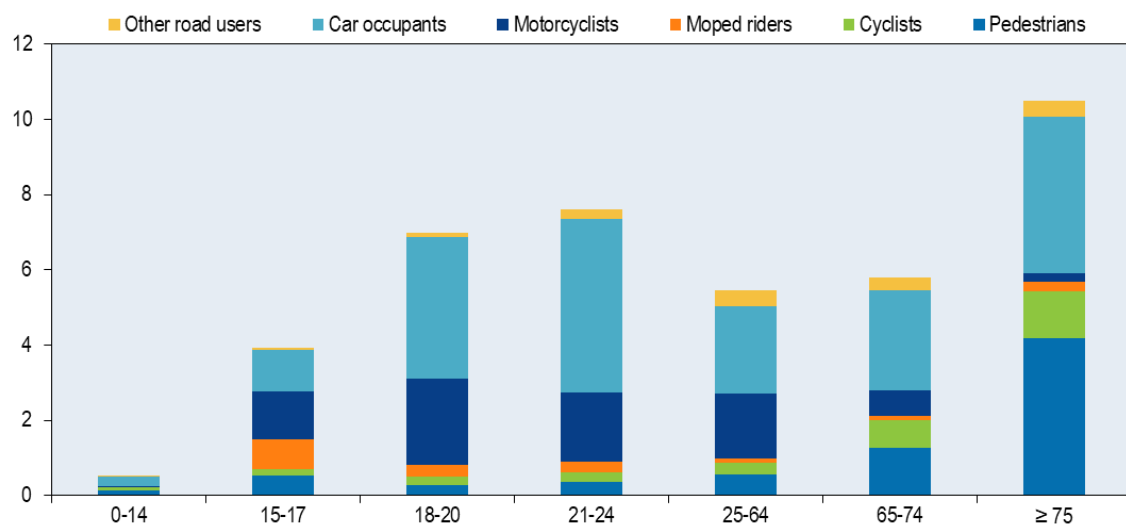


Figure 4. Road fatality rate by age and road user group, 2017
Fatalities per 100 000 population in a given age group



Analysis of **fatalities by road type** shows that the rural network is the deadliest. In 2018, 48% of deaths occurred on rural roads, 42% on urban roads and 10% on motorways. This repartition has remained relatively stable in recent years.

In 2018, in comparison to 2017, the number of road deaths decreased by 4.4% on urban roads and 1.2% on rural roads but increased by 10.5% on motorways.

On 14 August 2018, the Morandi Bridge on the A10 motorway connecting Genoa-Savona-Ventimiglia collapsed claiming 43 lives. Part of the year-on-year increase for motorways can be attributed to this dramatic incident. The total number of fatal crashes on motorways remained stable rising from 253 to 255 cases between 2017 and 2018 (ISTAT-ACI, 2019).

Since 2000, fatalities in urban areas decreased by 56%, on rural roads by 49% and 57% on motorways.

Figure 5. Road fatalities by road type

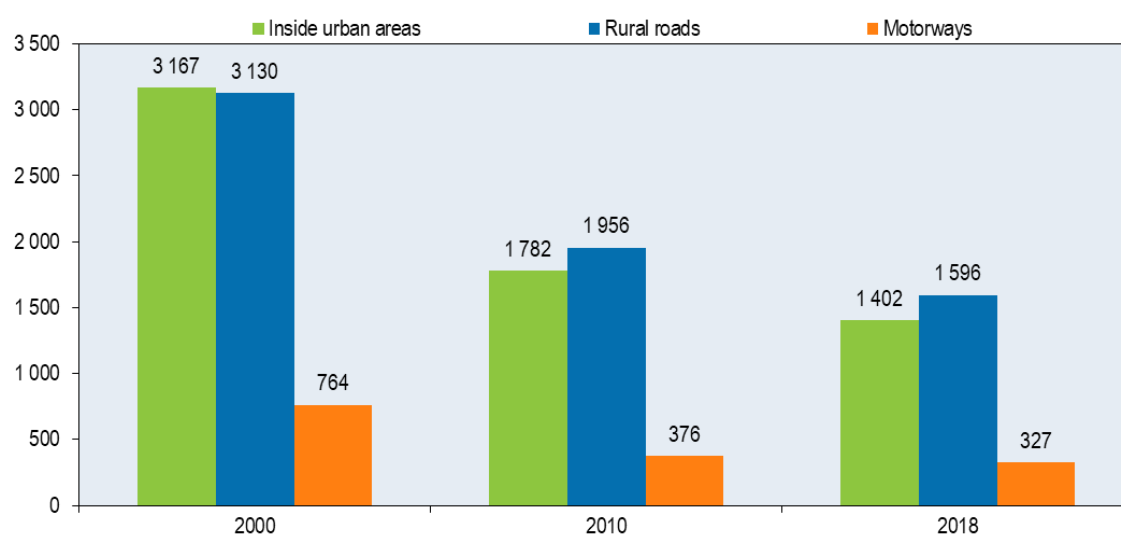
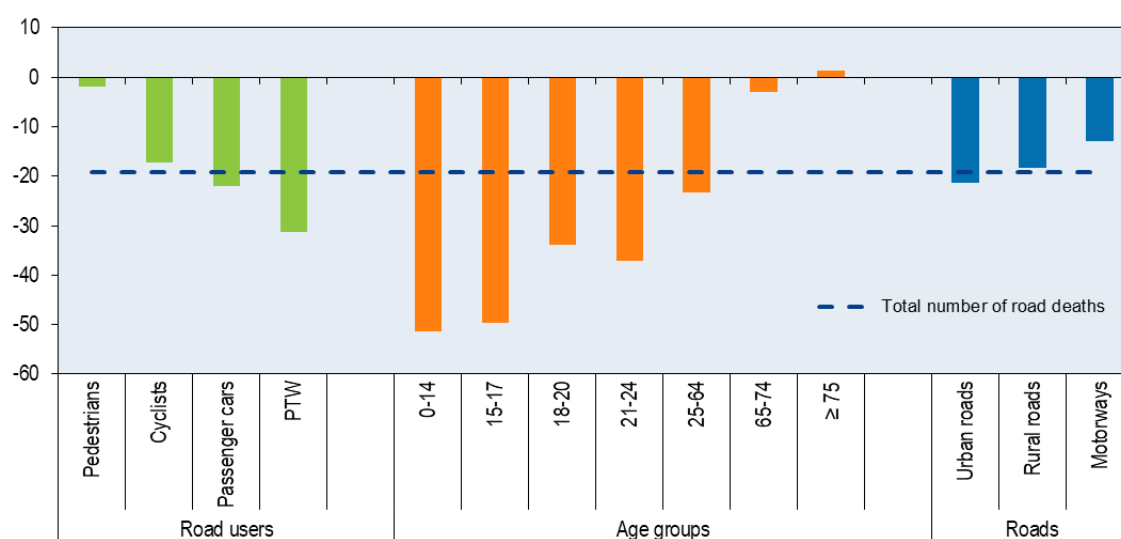


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-2018



Fatality data are essential to understand road safety issues but hardly sufficient. Information on **serious injuries from crashes** is also critically important. Yet injury data are much more difficult to obtain, validate and - where available - compare. In 2018, 242 621 injuries (both serious and minor) were recorded in Italy. This represents a 1.7% decrease on 2017's figures. Serious injuries represent around 7% of all injuries, according to 2016 and 2017 hospital data (ISTAT-ACI, 2019).

Economic costs of road crashes

Road crashes represent a huge cost in terms of human lives and the national economy. According to estimates by the Ministry of Infrastructure and Transport in 2018, the total cost for traffic crashes resulting in death or injury was estimated at around EUR 18.6 billion representing 1.1% of GDP. This value is based on the single social cost assessed by the Ministry in 2010 using the human capital approach and applying the revaluation of the value of money.

Table 1. Costs of road crashes, 2018

	Unit cost [EUR]	Total [EUR]
Fatalities	1 618 800	5.38 billion
Injuries	45 475	11.03 billion
Crash	12 914	2.22 billion
Total		18.6 billion
Total as % of GDP		1.1%

Behaviour

The behaviour of road users is an important determinant of a country's road safety performance. **Inappropriate speed**, in particular, is one of the main causes of road crashes. According to the Italian National Institute of Statistics, speeding was the cause of 10.2% of road crashes in 2018. In 2017, according to police data, inappropriate speeds were reported as a main contributing factor in 10.3% of injury crashes and 18.5% of fatal crashes in Italy.

The table below summarises the main speed limits in Italy.

Table 2. Passenger car speed limits by road type, 2019

	General speed limit	Comments
Urban roads	50 km/h	
Rural roads	70-90 km/h	110 km/h on some main dual carriageways
Motorways	130 km/h	110 km/h in case of rain or snow 100 km/h for novice drivers In theory, the motorway operator may decide to increase the limit up to 150 km/h, if stringent requirements are met

Since 2004, the Safety Tutor, a section speed control system, has been progressively installed along all sections characterized by above average mortality rates. The system now covers approximately 2 500 km of roadways and has decreased peak speeds (-25%) and average speeds (-15%) such as to cause a significant reduction in accidents and consequences to people and the fatality rate.

In 2018, after two months of a system shutdown (June and July 2018) to ensure greater speed control efficiency for the Traffic Police, Autostrade per l'Italia has activated a new average speed detection system called SICVe-PM. Currently, 46 sections are controlled for a total of approximately 420 km of extended motorway. A similar system called Vergilius is operating on some sections of national roads and the A2 motorway.

Driving under the influence of alcohol is another major cause of road crashes in Italy. Based on national police data in 2018, which take into account around one third of all injury crashes, 8.7% of injury crashes were related to driving under the influence of alcohol. Based on local police data, 3.9% of injury crashes were alcohol-related in 2018. In light of the proportion of alcohol related crashes in other countries, these figures could be underreported.

Drink-driving crashes are defined in police reports as crashes in which a driver has blood alcohol content (BAC) above the legal limit. The current BAC limit in Italy, which came into force in 2002, is 0.5 g/l. Since July 2010, there is a zero tolerance policy in place for young, novice and professional drivers, for whom the BAC limit is 0.0 g/l. Driving with a BAC higher than 0.8 g/l can result in imprisonment and the licence suspension.

In 2018, approximately 40 000 fines were issued for drink-driving.

Drivers **under the influence of drugs** can be imprisoned for a period varying from six months to one year, fined from EUR 1 500 to EUR 6 000 and can have their driving licence suspended for one to two years, or two to four years if the vehicle does not belong to the driver. Based on national police data for 2018, 3.2% of injury crashes were related to drivers under the influence of drugs. Based on local police data, 1% of injury crashes were drug-related.

In 2018, **distraction** was presumed to be the primary cause of 16.3% of road crashes. This follows closely on 2017 when **distraction** was considered a contributing factor in 16% of injury crashes, 14.6% on urban roads and 20.1% on inter-urban roads.

Since 2002, the use of hand-held mobile phones or full headsets while driving is not permitted. The use of hands-free devices, including those with a single earpiece headset, is permitted. According to the "Ulisse" monitoring system in 2015-16, about 5.1% of drivers used a phone without a headset while driving.

Seat belt use has been compulsory in front seats since 1988 and rear seats since 1994. It has also been compulsory on microcars since mid-2010. Children under 12 and less than 150 cm in height should be seated in a dedicated and approved child restraint system adapted to their weight and stature. In 2018, more than 200 000 fines (2.6% of

the violation of rules of conduct on the road) were issued for children not wearing seat belts or not using a child restraint.

An observational survey “Ulisse” carried out by the National Institute of Health and the Ministry of Infrastructure and Transport focused on the use of helmets, seat belts in front and rear seats, restraint systems for children and hand-held phones. Data were collected in two stages (2015 and 2016) from a sample of 28 selected urban and suburban areas throughout the country. The results, summarised in the table below, show that the use of a seatbelt is relatively low in Italy; seatbelts are used by 63% of front seat occupants and by only 11% of rear seats occupants.

Table 3. Seat belt and helmet wearing rates
Percentages

	2015-16
Front seats	
General	63
Urban roads (driver)	64-67
Rural roads (driver)	55
Rear seats	
General	11
Children (use of children restraint)	43
Helmet	
Riders of mopeds	98
Riders of motorcycles and scooters	98

In 1986, **helmet use** was made compulsory for motorcyclists and moped riders under 19 years old. Since 2000, helmets are required for all users of powered two-wheelers for all ages. The observational study “Ulisse” showed that the observed use of helmets is about 98%.

Road safety management and strategies

There are several **factors of influence on Italy’s road safety performance** as captured by the above indicators. The National Plan for Road Safety developed in 1999 was the first normative and legislative act through which the issue of road safety started to be systematically analysed in Italy. Since 2001, several road safety measures have been implemented under the National Road Safety Plan including the improvement of the road traffic legislation, the introduction of automatic speed control including section control, increased enforcement, the improvement of road infrastructure, communication and awareness campaigns and road safety education interventions.

The **responsibility for the organisation of road safety** in Italy lies with the Ministry of Infrastructure and Transport through its Directorate for Road Safety. National and local road authorities are responsible for the improvement of road infrastructure. Police forces are responsible for the enforcement of traffic law. The Italian Institute of Statistics

(ISTAT) is responsible for collecting road safety statistics on injury crashes at the national level. A national structure has been created for consultation with stakeholders.

The National Road Safety Plan, Horizon 2020, was released in 2010. It was expected to be updated with a mid-term review document in 2017 but no updates have been approved. The Plan is in accordance with the actions and targets (-50% fatalities) recommended by the European Commission. The main vision of the plan is “No child should die on the road”.

The main target of the plan is to halve the number of road fatalities by 2020 compared to the amount recorded in 2010. Intermediate targets were set for 2017, based on an average annual reduction of fatalities of 7%, corresponding to a reduction of 38% in 2017 compared to 2010. This target was not achieved.

Figure 7. Trends in road fatalities towards national target



Measures

Several measures to improve road safety management have recently been put into place.

Road safety management

- On 1 January 2019, the National Agency for the Safety of Railways and Road and Highway Infrastructures (ANSFISA) was created. The Agency will take care of the control and improvement of the safety of infrastructures. Given the complexity of the new tasks, a path has been outlined to enable a progressive start of the new agency in order to ensure a smooth transfer of powers both during the initial restructuring and the early days of full operation of the Agency.

Road users

- Distraction caused by mobile phone use while driving, excessive speed, poor pedestrian attention and failure to use rear seat belts are the topics of the 2019 campaign "Sulla Buona Strada" launched by the Ministry of Infrastructures and Transport.
- In July 2018, the section system of speed control "Tutor" was reintroduced on 22 sections of motorway with high crash risk. The previous system ended in April 2018 due to issues with the patent.
- In July 2018, the campaign "Kids in the car: vision zero" was launched by the Minister of Infrastructure and Transport. The main aim is to stress the importance of child restraint in every trip made by car, including short distances.

Vehicles

- In June 2019, the Ministry of Infrastructures and Transport delegated the establishment of experimental guidelines concerning the regulation of electric micro-mobility operators to the level of Municipalities for a two-year period following a specific resolution and authorization.
- Throughout 2018, checks on goods vehicles were intensified. The campaign "High Impact", focused on dangerous goods transport in September, and the campaign of extraordinary checks "Truck and Bus", dedicated to industrial vehicles and buses in October, were conducted throughout Europe. As a result, ticket issuances increased by 27%.
- In 2018, incentives were provided for the renewal and technological upgrading of the transport companies' vehicle fleets. The incentives were renewed for 2019.

Infrastructure

- A Ministerial decree (1/4/2019) establishes guidelines for replacement and upgrading of safety barriers installed on road infrastructure with particular attention for safety barriers suitable for motorcyclists. The first phase of inspection activity on the trans-European road network (Ten network), in accordance with Directive 2008/96/EC on infrastructure safety management, began in July 2019. Inspections will be carried out on two-thirds of the TEN network, for a total of 6 280 km. 53 selected inspectors will be responsible for this project.

Post-crash response

- In Italy, the Emergency Number 112 service is active. The service is carried out through Unique Response Centers (CUR), where all emergency calls are received and then transferred to the body responsible for managing the specific emergency (State Police, Carabinieri, Fire Brigade, Health Emergency).

- Pending the expansion of the national territory of the CUR, where the CUR are not present throughout, the NUE 112 Service is assured by the Operations Centers of Carabinieri. To date, the 10 CUR serve over 30 million citizens.

Definition, methodology, data collection

- Road fatality: a person who died immediately or within 30 days as a result of a road crash.
- Injured: injured persons are not differentiated by degree of severity.

Italy is following the recommendations of the International Road Traffic Safety Data and Analysis Group (IRTAD) and the European Commission regarding the use of the Maximum Abbreviated Injury Scale of 3 or more (MAIS3+) to define a serious injury. An estimate of the number of serious injuries, based on hospital discharge data, has been calculated since 2013 using a conversion table to translate data from the International Classification of Diseases (ICD).

In Italy, road crash data are collected by the National Road Police, the National Military Police (*Carabinieri*) and the local police. Data collection is centrally organised for the National Road Police and National Military Police, but local police may have different crash investigation procedures.

The Italian National Institute of Statistics (ISTAT) is responsible for collecting and validating road safety statistics on all injury crashes occurring in Italy. All police forces are obliged to send a standard crash form to ISTAT for each injury crash collected. ISTAT checks data consistency, both quantitatively and qualitatively, reviews any deficiencies and proceeds with data correction. The statistical survey is conducted in cooperation with the Automobile Club of Italy (ACI). Since 2007, a voluntary Memorandum of Understanding (MoU) has transferred to the regions the ability to collect data on their territory.

In 2013, representatives from ISTAT, the Automobile Club of Italy, the Ministry of Infrastructure and Transport, the National Road Police, the National Military Police, the local police, regions, provinces and municipalities defined a new crash data collection form. The form is more comprehensive and compatible with the requirements of the European accident Community database on Accidents on the Road in Europe and the Common Accident Database (CARE/CADAS).

This amendment to the form should bring a number of improvements, including a unique data collection process and a full set of information gathered for each road crash. However, the introduction of the new format requires significant changes to existing databases and programmes. For this reason, the complete adoption of the new form is not realistic at the moment. Some small changes have been progressively introduced since 2011 to improve data concerning the localisation of crashes, accident time and nationality of drivers. Since 2013, geographic coordinates have been progressively implemented and, since 2016, approved by the European Commission.

Matching police and hospital data to assess the underreporting of injury crashes is not carried out at a national level, although this occurs occasionally at a local level.

Resources

Recent research

Road transport accident statistics: <http://www.mit.gov.it/index.php/node/9443>

Use of open street map for the calculation of indicators for road accident on the Italian road network: <https://www.istat.it/it/archivio/231732>

The recovery of the underdeveloped maintenance of the secondary road network, http://www.fondazioneacaracciolo.aci.it/fileadmin/documenti/notizie/Il_recupero_dell_arretrato_manutentorio_2018.pdf

Road safety in the two-wheeled capital - analysis of accidents in Rome: http://www.fondazioneacaracciolo.aci.it/fileadmin/immagini/notizie/Studio_due_ruote_2019_1.pdf

Determinants of the Use of Safety Restraint Systems in Italy, AIIT 2nd International Congress on Transport Infrastructure and Systems in a changing world (TIS ROMA 2019), *in publication*

Road safety on ANAS network – monitoring and analysis of road accidents 2011-2017, *the study is not available online but can be requested to i.coppa@stradeanas.it or l.pennisi@aci.it.*

Websites

Ministry of Infrastructure and Transport: <http://www.mit.gov.it/>

National Institute of Statistics: <https://www.istat.it/>

Automobile Club of Italy: <http://www.aci.it/> and <http://www.lis.aci.it/dati/>

Centre for Transport Logistics of the University La Sapienza: <http://www.ctl.uniroma1.it/>

Autostrade per l'Italia (main motorway concession company): <http://www.autostrade.it/it/home>

AISCAT (Association of motorway concession companies): <http://www.aiscat.it/>

ANAS (National Road Authority): <http://www.anas.it/>

ISS (National Health Institute): <http://www.iss.it/>

INAIL (National institute for accident insurance at work):

<https://www.inail.it/cs/internet/home.html>

ANIA (National Association of Insurance Companies): <http://www.ania.it/it/index.html>
and <http://www.fondazioneania.it/it/>

IVASS (National Authority on Insurance Companies): <https://www.ivass.it/>

ISFORT (Transport Research Institute): <http://www.isfort.it/>

Polizia di Stato (National Police) data: <http://www.poliziadistato.it/pds/stradale/archivio>

References

ISTAT-ACI (2019), *Road Accidents 2018*, Istituto Nazionale di Statistica,
https://www.istat.it/it/files//2019/07/EN_road-accidents_2018.pdf

OECD (2019), *Elderly population (indicator)*, doi: <https://doi.org/10.1787/8d805ea1-en>

Road safety and traffic data

							2018 % change over			
	1990	2000	2010	2016	2017	2018	2017	2010	2000	1990
Reported safety data										
Fatalities	7 151	7 061	4 114	3 283	3 378	3 325	-1.6%	1.3%	-52.9%	-53.5%
Injury crashes	161 782	256 546	212 997	175 791	174 933	172 344	-1.5%	-2.0%	-32.8%	6.5%
Deaths per 100,000 population	12.6	12.4	7.0	5.4	5.6	5.5	-1.4%	1.6%	-55.7%	-56.4%
Deaths per 10,000 registered vehicles	2.1	1.6	0.8	0.6	0.6	0.6	2.0%	3.2%	-59.6%	-68.8%
Fatalities by road user										
Pedestrians	1 069	982	621	570	600	609	1.5%	6.8%	-38.0%	-43.0%
Cyclists	477	401	265	275	254	219	-13.8%	-20.4%	-45.4%	-54.1%
Moped riders	620	637	206	116	92	108	17.4%	-6.9%	-83.0%	-82.6%
Motorcyclists	713	770	950	657	735	685	-6.8%	4.3%	-11.0%	-3.9%
Passenger car occupants	3 797	3 850	1 822	1 470	1 464	1 420	-3.0%	-3.4%	-63.1%	-62.6%
Other road users	474	421	250	195	233	284	21.9%	45.6%	-32.5%	-40.1%
Fatalities by age group										
0-14 years	247	136	70	49	43	34	-20.9%	-51.4%	-75.0%	-86.2%
15-17 years	429	211	121	66	68	61	-10.3%	-49.6%	-71.1%	-85.8%
18-20 years	640	485	253	145	122	167	36.9%	-34.0%	-65.6%	-73.9%
21-24 years	786	740	294	207	184	185	0.5%	-37.1%	-75.0%	-76.5%
25-64 years	3 245	3 637	2 218	1 737	1 799	1 701	-5.4%	-23.3%	-53.2%	-47.6%
65-74 years	..	683	429	389	382	416	8.9%	-3.0%	-39.1%	..
≥ 75 years	..	754	635	656	727	643	-11.6%	1.3%	-14.7%	..
Fatalities by road type										
Urban roads	2 867	3 167	1 782	1 463	1 467	1 402	-4.4%	-4.2%	-55.7%	-51.1%
Rural roads	3 542	3 130	1 956	1 546	1 615	1 596	-1.2%	3.2%	-49.0%	-54.9%
Motorways	741	764	376	274	296	327	10.5%	19.3%	-57.2%	-55.9%
Traffic data										
Registered vehicles (thousands)	34 729	44 296	51 218	52 659	53 539	51 682	-3.5%	-1.9%	16.7%	48.8%
Registered vehicles per 1,000 population	612.6	778.2	865.3	868.0	883.6	854.5	-3.3%	-1.6%	9.8%	39.5%