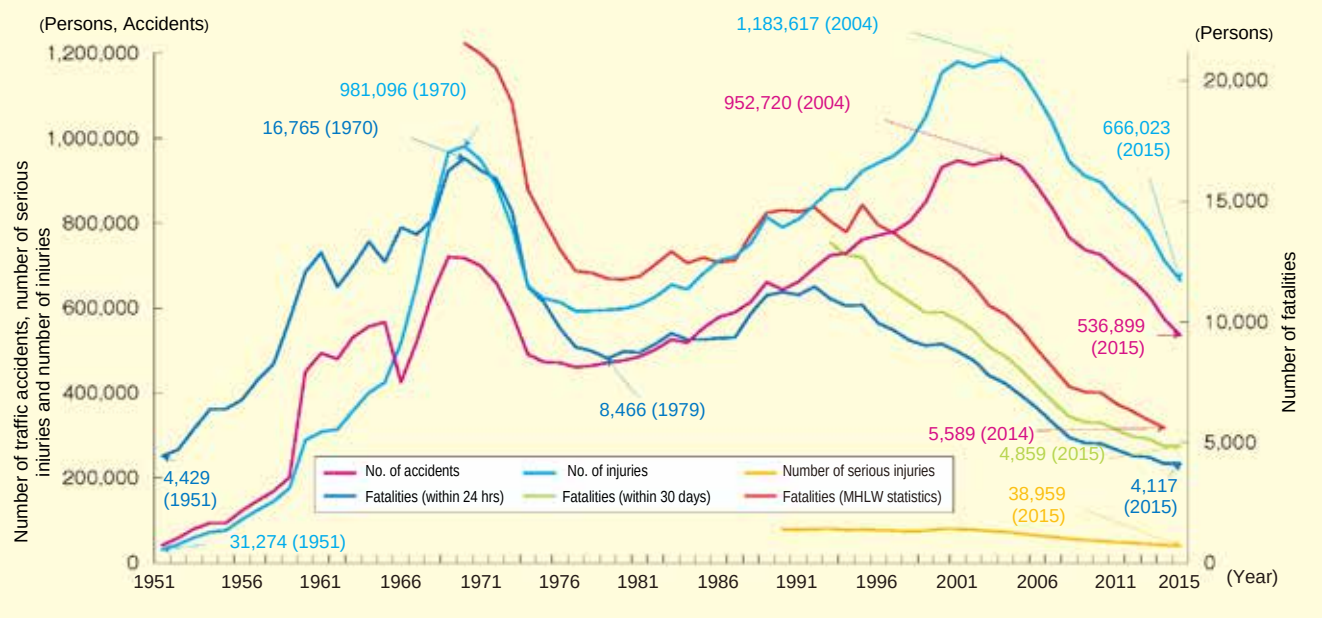
# Part 1 Road Transport

## Chapter 1 Road Traffic Accident Trends

### 1. Long-Term Change of Road Traffic Accidents

The number of fatalities in traffic accidents increased for the first time in 15 years.

u Chart 1-1 Number of traffic accidents, number of fatalities and number of serious injuries caused by road transport accidents




Note:
1. Source: National Police Agency
2. Figures in 1966 and after do not include any property damages. Figures before 1972 do not include Okinawa Prefecture.
3. "Fatalities (within 24 hours)" shows the number of persons who died due to a traffic accident within 24 hours after its occurrence.
4. "Fatalities (within 30 days)" shows the number of persons who died due to a traffic accident within 30 days after its occurrence (counting the day of the traffic accident as the first day).
5. The "number of fatalities (MHLW statistics)" is prepared by the National Police Agency based on the "Vital Statistics" of the Ministry of Health, Labour and Welfare and is the number of fatalities due to traffic accidents in each year (which excludes anyone who died later than a year after the accidents or due to an after-effect). Incidentally, the figures before 1995 represent those fatalities due to car accidents and the figures in 1995 and after represent those fatalities due to road accidents except those not due to them.

**[Changes in the number of fatalities (fatalities within 24 hours), accidents and injuries in traffic accidents]**

- The worst fatality record was registered in 1970 with 16,765 people.

The Traffic Safety Measures Basic Acts was established in 1970 and since then the Traffic Safety Basic Plan was formulated every 5 years based on the Act.

- The number of fatalities fell to 8,466 in 1979 and started to increase again. Since 1992, however, the number started to decline again.
- The number of both traffic accidents and injuries registered the worst record of 952,720 and 1,183,617, respectively in 2004.
- The number of fatalities in traffic accidents in 2015 was 4,117, an increase for the first time in 15 years. The number of both traffic accidents and injuries fell over 11 years in a row.

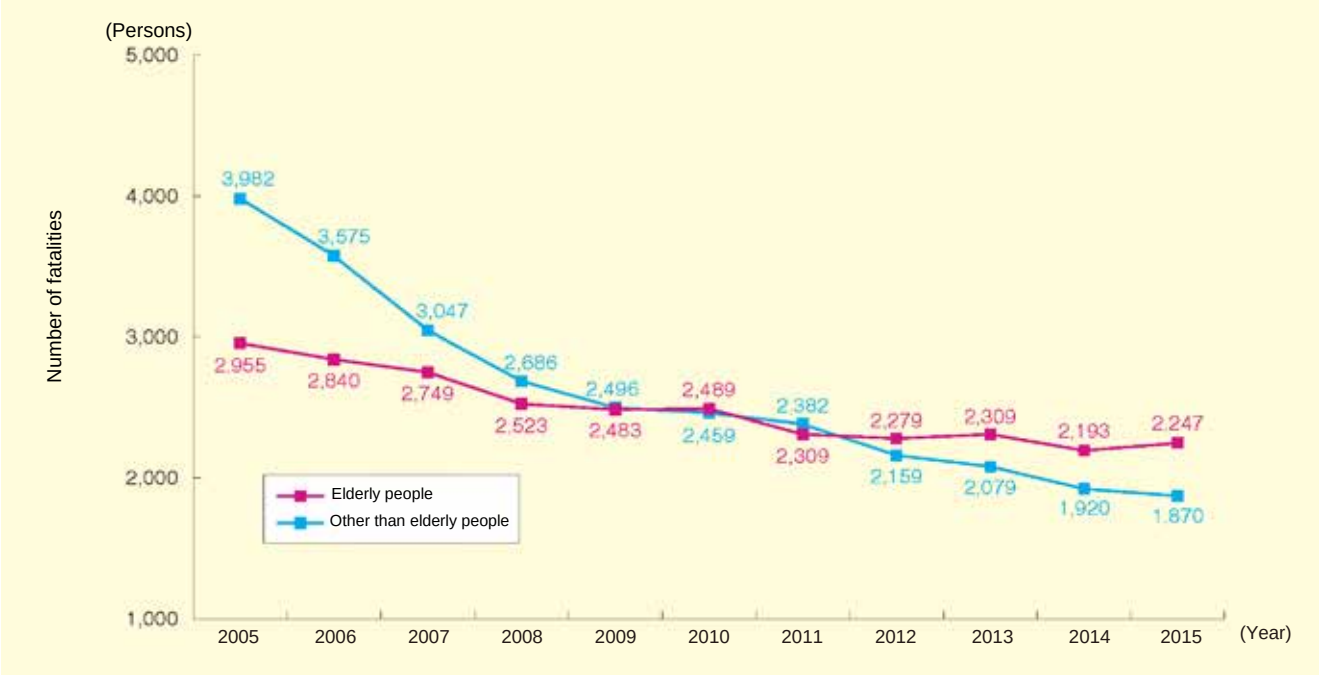
## 2. Road Traffic Accident Conditions during 2015

### l Overall Condition

| | | | |
|---|---|---|---|
| ™ | Number of accidents: | 536,899 | (- 36,943, - 6.4 % over the previous year) |
| ™ | Number of casualties: | 670,140 | (- 45,347, - 6.3 % over the previous year) |
| ™ | Number of injuries: | 666,023 | (- 45,351, - 6.4 % over the previous year) |
| ™ | Number of fatalities (within 24 hours): | 4,117 | (4, + 0.1 % over the previous year) |
| | (within 30 days): | 4,859 | (21, + 0.4 % over the previous year) |

Both the number of traffic accidents and the number of injuries in traffic accidents have decreased for 11 years in a row and the number of fatalities has decreased to less than one fourth of the peak time (1970: 16,765) to increase for the first time in 15 years, however.
Although the number of fatalities of elderly people per population in traffic accidents has been decreasing, the number of fatalities of elderly people in traffic accidents has increased as a result of an increase of the population of elderly people. The increase in the overall number of fatalities in traffic accidents can be attributed to this fact. (Chart 1-4 and Chart 1-5).
In addition, the fatality rate has increased for 3 years in a row. This can be attributed to the fact that while the population of elderly people with the fatality rate about 6 times higher than other age groups has been increasing, the population of other age groups has been decreasing (Chart 1-6).

u Chart 1-4 Change in the number of fatalities of the elderly and others

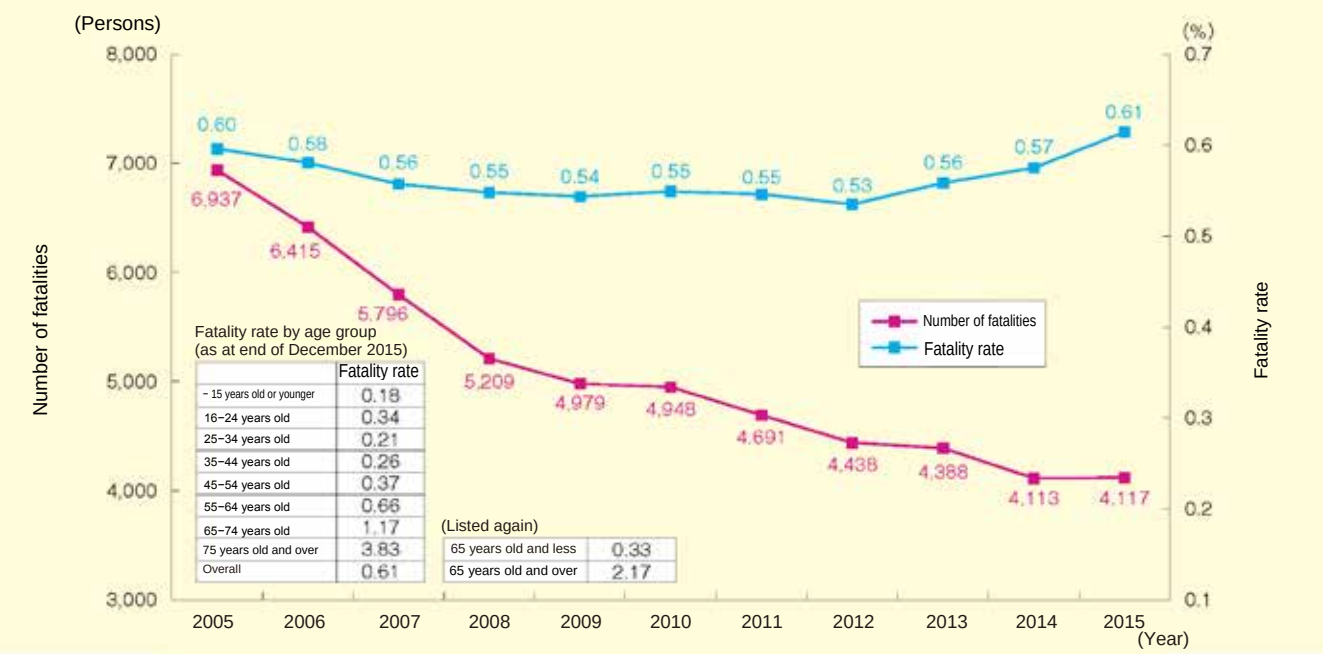



Note:
1. Source: National Police Agency

## u Chart 1-5 Changes in the number of fatalities of elderly people and people other than elderly people in traffic accidents per a population of 100,000


Note:
1. Source: National Police Agency
2. The population used for the calculation is from the statistical data “Population Estimates (as at October 1 of each year) “of each previous year or “Population Census” of the Ministry of Internal Affairs and Communications.

## u Chart 1-6 Changes in the fatality rate and the number of fatalities

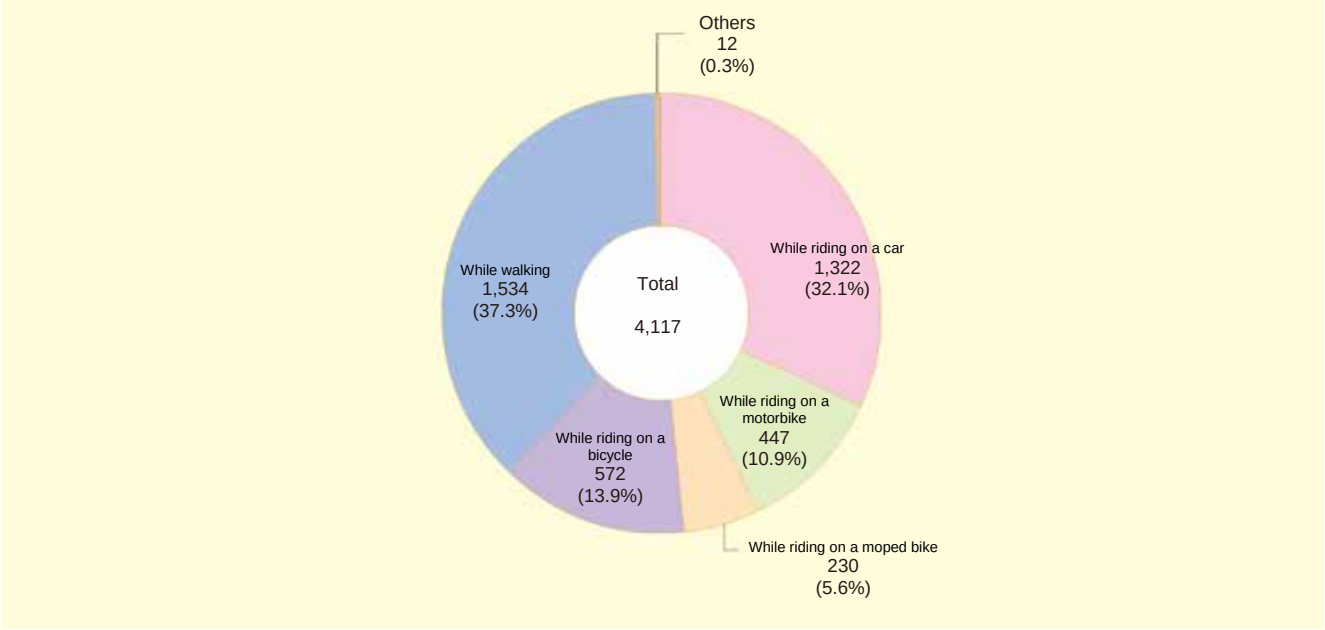



Note:
1. Source: National Police Agency
2. Fatality rate = Number of fatalities/number of casualties x 100

### Number of Fatalities and Injuries in Traffic Accidents by Age Group

- The number of fatalities is the highest while walking (1,534 with the composition ratio of 37.3%) followed by while riding on a car (1,322 with the composition ratio of 32.1%) and the sum of both accounts for 69.4% of the total (Chart 1-11). If we look at the number of fatalities in traffic accidents (per a population of 100,000) in the past 10 years by state, the number of fatalities in traffic accidents while walking did not decrease when compared to others (Chart 1-12).
- The number of injuries is the highest while riding on a car (442,319 with the composition ratio of 66.4%) (Chart 1-13). If we look at the number of injuries in traffic accidents (per a population of 100,000) in the past 10 years by state, the number of injuries while walking did not decrease when compared to others (Chart 1-14).

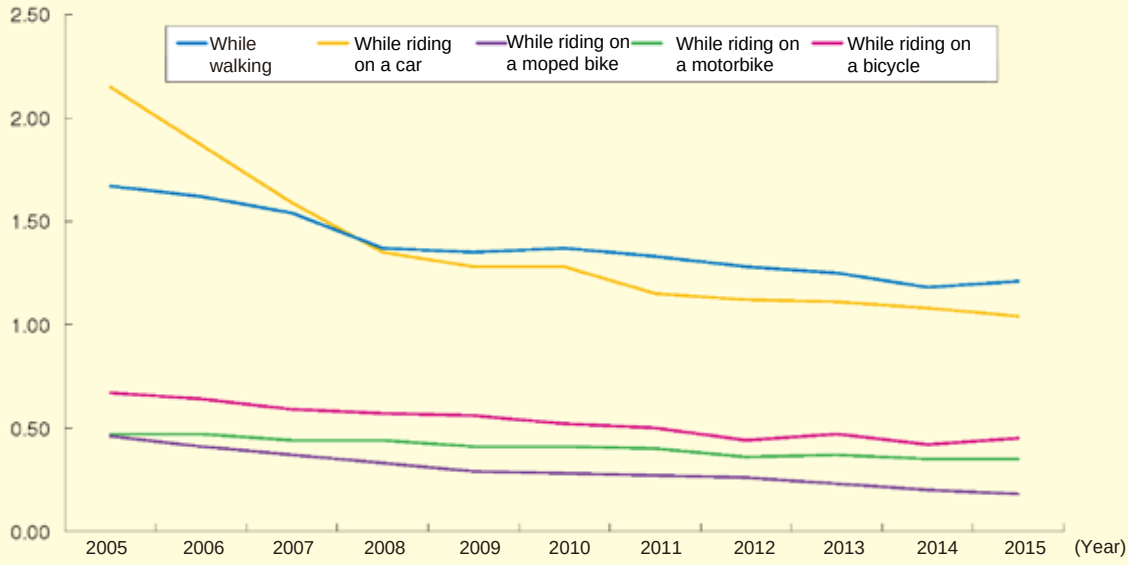
u Chart 1-11 Number of fatalities in traffic accidents by state (2015)




Note:
1. Source: National Police Agency
2. The figure in the bracket ( ) shows the composition ratio.

## u Chart 1-12 Changes in the number of fatalities in traffic accidents by state per a population of 100,000

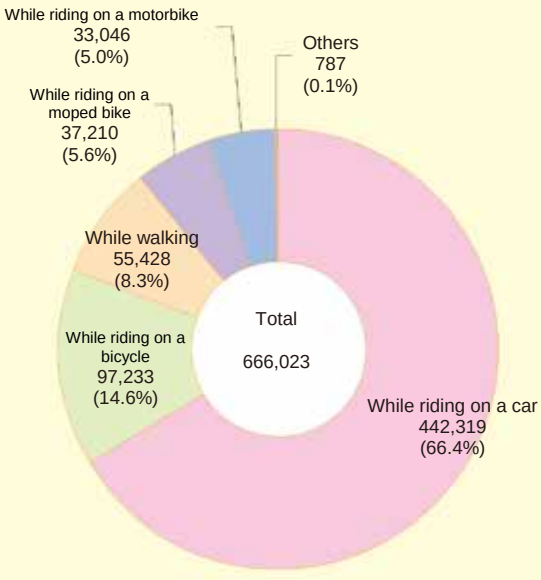
(Persons /Population of 100,000)




| (Persons /Population of 100,000) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Rate of change (compared to 2005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| While walking | 1.67 | 1.62 | 1.54 | 1.37 | 1.35 | 1.37 | 1.33 | 1.28 | 1.25 | 1.18 | 1.21 | −27.8 |
| While riding on a car | 2.15 | 1.87 | 1.59 | 1.35 | 1.28 | 1.28 | 1.15 | 1.12 | 1.11 | 1.08 | 1.04 | −51.6 |
| While riding on a moped bike | 0.46 | 0.41 | 0.37 | 0.33 | 0.29 | 0.28 | 0.27 | 0.26 | 0.23 | 0.20 | 0.18 | −60.4 |
| While riding on a motorbike | 0.47 | 0.47 | 0.44 | 0.44 | 0.41 | 0.41 | 0.40 | 0.36 | 0.37 | 0.35 | 0.35 | −25.6 |
| While riding on a bicycle | 0.67 | 0.64 | 0.59 | 0.57 | 0.56 | 0.52 | 0.50 | 0.44 | 0.47 | 0.42 | 0.45 | −32.6 |

Note:
1. Source: National Police Agency except that “others” is omitted.
2. The population used for the calculation is from the statistical data “Population Estimates (as at October 1 of each year)” of each previous year or “Population Census” of the Ministry of Internal Affairs and Communications.

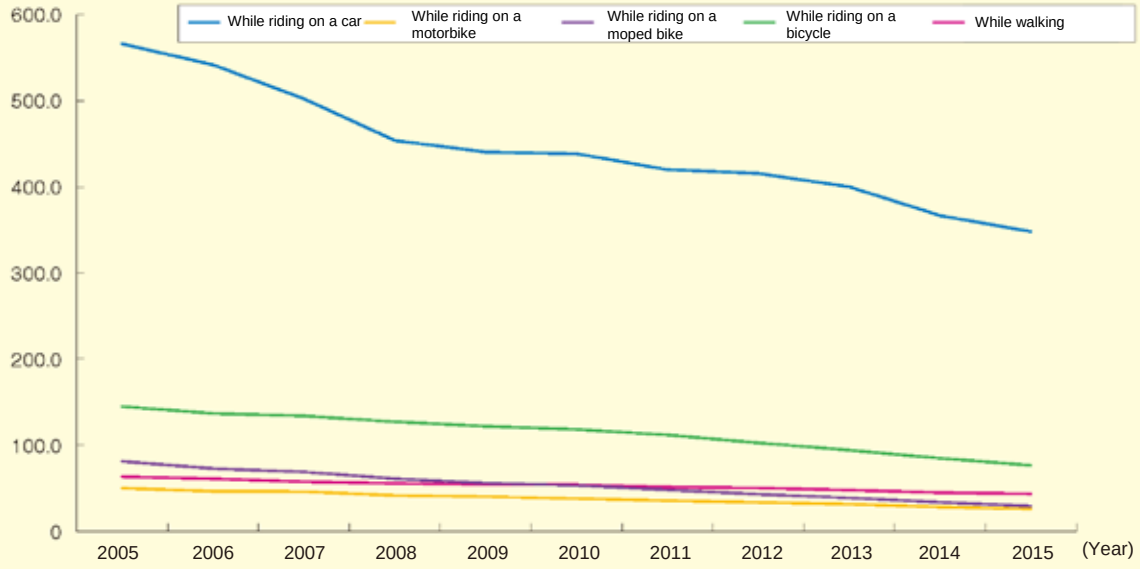
## u Chart 1-13 Number of casualties in traffic accidents by state (2015)




Note:
1. Source: National Police Agency
2. The figure in the bracket ( ) shows the composition ratio.

## u Chart 1-14 Changes in the number of fatalities in traffic accidents by state per a population of 100,000

(Persons /Population of 100,000)




| (Persons /Population of 100,000) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Rate of change (compared to 2005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| While riding on a car | 566.2 | 541.9 | 502.4 | 454.0 | 440.6 | 438.6 | 420.1 | 415.7 | 400.1 | 366.7 | 348.1 | −38.5% |
| While riding on a motorbike | 50.0 | 46.5 | 46.1 | 41.7 | 40.2 | 37.9 | 35.5 | 33.5 | 31.5 | 28.3 | 26.0 | −48.0% |
| While riding on a moped bike | 81.1 | 72.9 | 68.9 | 61.0 | 56.1 | 53.2 | 48.0 | 43.1 | 38.7 | 33.6 | 29.3 | −63.9% |
| While riding on a bicycle | 144.9 | 136.8 | 134.1 | 127.1 | 121.9 | 118.4 | 111.8 | 102.7 | 94.1 | 84.8 | 76.5 | −47.2% |
| While walking | 63.3 | 61.0 | 57.6 | 55.8 | 54.1 | 54.2 | 51.3 | 50.2 | 47.8 | 44.9 | 43.6 | −31.1% |

Note:
1. Source: National Police Agency except that “others” is omitted.
2. The population used for the calculation is from the statistical data “Population Estimates (as at October 1 of each year)” of each previous year or “Population Census” of the Ministry of Internal Affairs and Communications.

## Number of Fatalities and the Number of Injuries in Traffic Accidents by Age Group

- The number of fatalities (per a population of 100,000) is the highest in people of 80 years old and over (10.0) followed by people of 70 to 79 years old (6.6) and people of 60 to 69 years old (3.4) (Chart 1-15), and the sum of the number of fatalities of these 3 age groups accounts for 61.1% of the total (Chart 1-16).

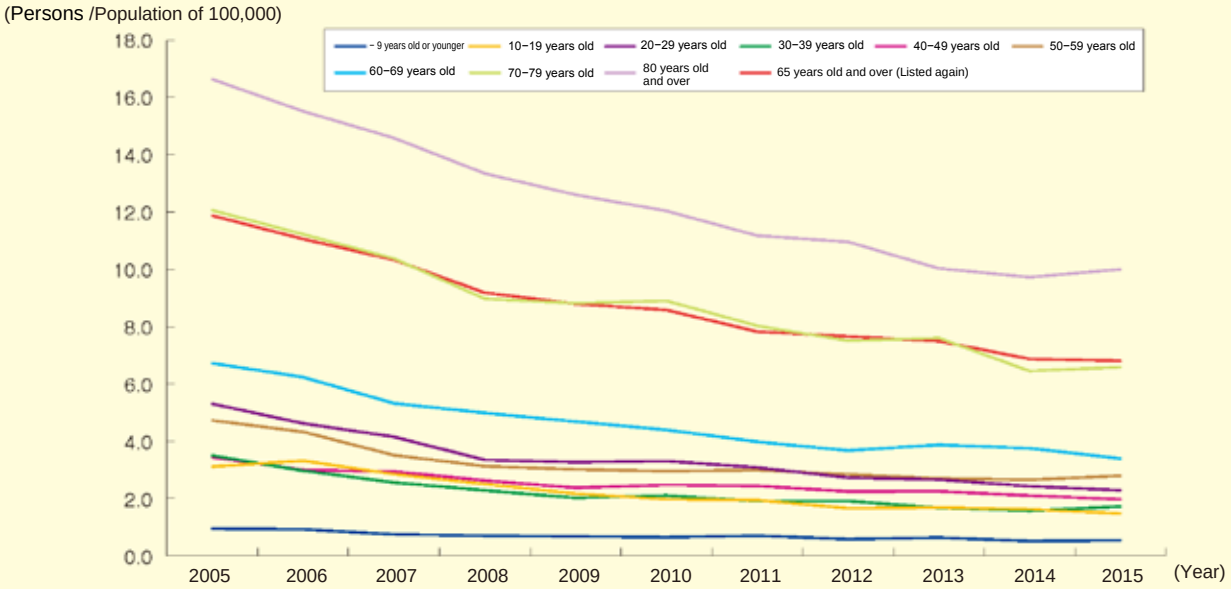
, Although the number of fatalities of elderly people of 65 years old and over per population has been decreasing, the number of fatalities of elderly people in traffic accidents has increased compared to last year as a result of an increase of the population of elderly people, and the percentage of elderly people in the number of fatalities in traffic accidents is the highest in history (54.6%).

ƒ If we look at the number of fatalities in traffic accidents (per a population of 100,000) by age group in the past 10 years, the number in the age group of 80 years old and over which shows the lowest decrease has also decreased compared to 2005 in the same manner as in the average of all age groups. (Chart 1-15).

„ The number of injuries (per a population of 100,000) is the highest in the age group of 30 to 39 years old (909.4), followed by those of 30 to 39 years old (749.4) and 40 to 49 years old (668.9) (Chart1-17), and the sum of the number of injuries of these 3 age groups accounts for 54.2% of the total (Chart 1-18).

… If we look at the number of injuries in traffic accidents (per a population of 100,000) by age group in the past 10 years, the number in the age groups of 40 to 49 years old and 50 to 59 years old has not decreased much in comparison to other age groups (Chart 1-17).

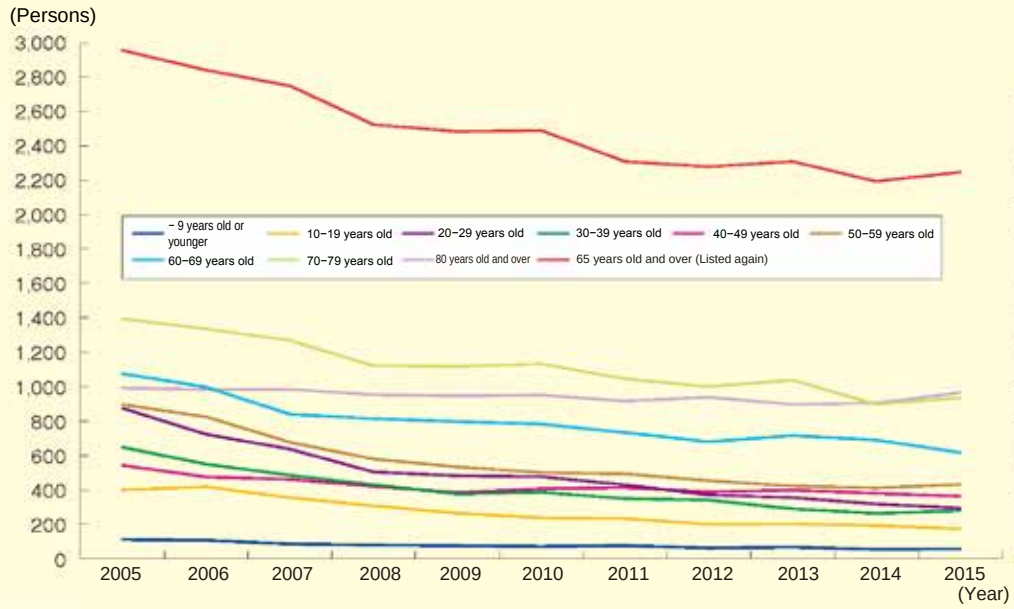
u Chart 1-15 Changes in the number of fatalities in traffic accidents by state per a population of 100,000




| (Persons /Population of 100,000) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Rate of change (compared to 2005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~ 9 years old or younger | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | −43.0% |
| 10~19 years old | 3.1 | 3.3 | 2.9 | 2.5 | 2.2 | 2.0 | 1.9 | 1.7 | 1.7 | 1.6 | 1.5 | −52.7% |
| 20~29 years old | 5.3 | 4.6 | 4.2 | 3.4 | 3.3 | 3.3 | 3.1 | 2.7 | 2.7 | 2.4 | 2.3 | −56.9% |
| 30~39 years old | 3.5 | 3.0 | 2.6 | 2.3 | 2.0 | 2.1 | 1.9 | 1.9 | 1.7 | 1.6 | 1.7 | −50.7% |
| 40~49 years old | 3.4 | 3.0 | 2.9 | 2.6 | 2.4 | 2.5 | 2.4 | 2.3 | 2.3 | 2.1 | 2.0 | −42.7% |
| 50~59 years old | 4.7 | 4.3 | 3.5 | 3.1 | 3.0 | 3.0 | 3.0 | 2.8 | 2.7 | 2.7 | 2.8 | −40.9% |
| 60~69 years old | 6.7 | 6.2 | 5.3 | 5.0 | 4.7 | 4.4 | 4.0 | 3.7 | 3.9 | 3.8 | 3.4 | −49.4% |
| 70~79 years old | 12.1 | 11.2 | 10.4 | 9.0 | 8.8 | 8.9 | 8.0 | 7.5 | 7.6 | 6.5 | 6.6 | −45.4% |
| 80 years old and over | 16.6 | 15.5 | 14.6 | 13.3 | 12.6 | 12.0 | 11.2 | 11.0 | 10.0 | 9.7 | 10.0 | −39.9% |
| 65 years old and over (Listed again) | 11.9 | 11.1 | 10.3 | 9.2 | 8.8 | 8.6 | 7.8 | 7.7 | 7.5 | 6.9 | 6.8 | −42.7% |
| All age groups | 5.4 | 5.0 | 4.5 | 4.1 | 3.9 | 3.9 | 3.7 | 3.5 | 3.4 | 3.2 | 3.2 | −40.4% |

Note:
1. Source: National Police Agency
2. The population used for the calculation is from the statistical data “Current estimated population as at October 1” of each previous year or “Population Census” of the Ministry of Internal Affairs and Communications

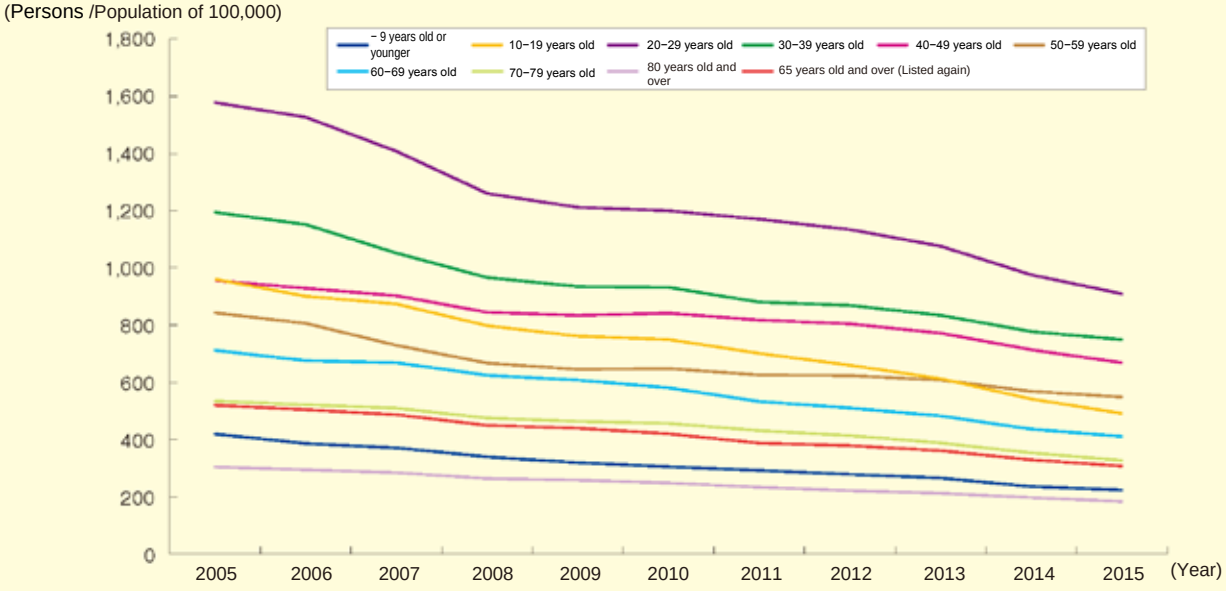
## u Chart 1-16 Changes in the number of fatalities in traffic accidents by age group




| | 2015 | |
|---|---|---|
| | Number of fatalities | Composition ratio |
| – 9 years old or younger | 57 | 1.4% |
| 10–19 years old | 173 | 4.2% |
| 20–29 years old | 295 | 7.2% |
| 30–39 years old | 279 | 6.8% |
| 40–49 years old | 363 | 8.8% |
| 50–59 years old | 432 | 10.5% |
| 60–69 years old | 617 | 15.0% |
| 70–79 years old | 936 | 22.7% |
| 80 years old and over | 965 | 23.4% |
| 65 years old and over (Listed again) | 2,247 | 54.6% |

Note: Source: National Police Agency

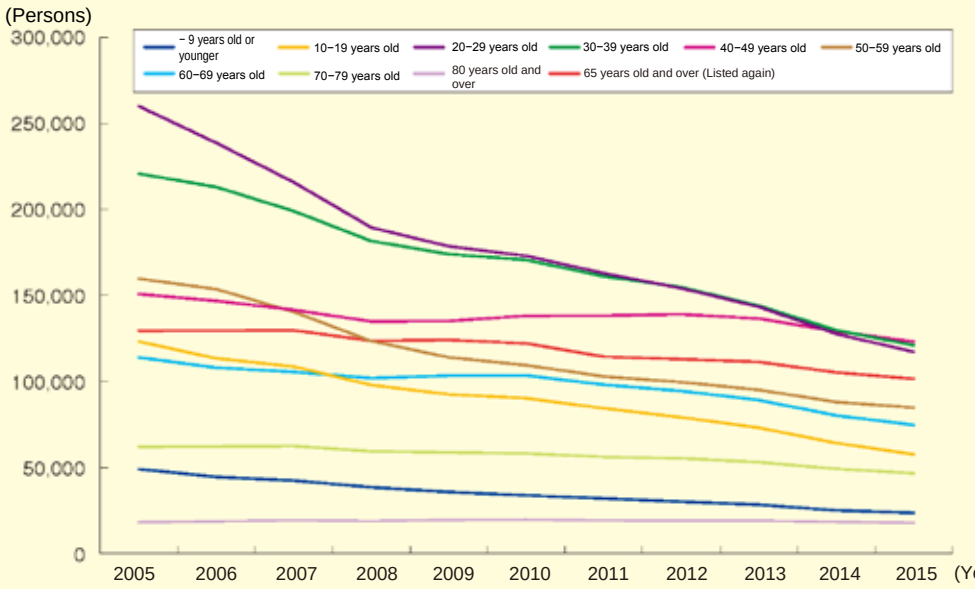
## u Chart 1-17 Changes in the number of injuries in traffic accidents by state per a population of 100,000




| (Persons /Population of 100,000) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Rate of change (compared to 2005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| – 9 years old or younger | 419.9 | 386.6 | 371.4 | 340.0 | 319.6 | 305.4 | 293.0 | 279.0 | 266.0 | 236.2 | 224.1 | –46.6% |
| 10–19 years old | 960.3 | 901.1 | 873.9 | 798.1 | 761.7 | 750.0 | 701.5 | 660.1 | 613.1 | 542.1 | 491.7 | –48.8% |
| 20–29 years old | 1,577.3 | 1,526.2 | 1,407.3 | 1,260.0 | 1,211.3 | 1,199.6 | 1,170.1 | 1,134.0 | 1,075.9 | 975.7 | 909.4 | –42.3% |
| 30–39 years old | 1,194.2 | 1,151.5 | 1,051.6 | 966.3 | 934.9 | 931.8 | 880.5 | 869.1 | 834.4 | 777.7 | 749.4 | –37.2% |
| 40–49 years old | 955.9 | 928.7 | 902.9 | 844.9 | 834.1 | 841.9 | 818.0 | 804.6 | 772.1 | 714.1 | 668.9 | –30.0% |
| 50–59 years old | 843.0 | 806.3 | 729.4 | 667.6 | 645.5 | 648.3 | 626.1 | 624.0 | 608.0 | 569.1 | 548.9 | –34.9% |
| 60–69 years old | 712.1 | 675.9 | 668.7 | 625.0 | 608.0 | 581.4 | 533.4 | 510.6 | 483.1 | 436.7 | 411.5 | –42.2% |
| 70–79 years old | 535.2 | 521.8 | 510.0 | 475.7 | 464.0 | 457.1 | 431.5 | 414.5 | 388.6 | 353.8 | 327.8 | –38.8% |
| 80 years old and over | 304.7 | 295.1 | 285.1 | 264.2 | 258.8 | 249.0 | 233.7 | 222.0 | 213.2 | 197.9 | 184.0 | –39.6% |
| 65 years old and over (Listed again) | 520.1 | 504.8 | 487.3 | 450.1 | 439.8 | 420.6 | 388.0 | 379.4 | 361.5 | 329.7 | 307.6 | –40.9% |
| All age groups | 906.2 | 859.8 | 809.8 | 740.2 | 713.6 | 702.9 | 667.4 | 645.9 | 612.9 | 558.8 | 524.1 | –42.2% |

Note:
1. Source: National Police Agency
2. The population used for the calculation is from the statistical data “Current estimated population as at October 1” of each previous year or “Population Census” of the Ministry of Internal Affairs and Communications

u Chart 1-18 Changes in the number of injuries in traffic accidents by age group



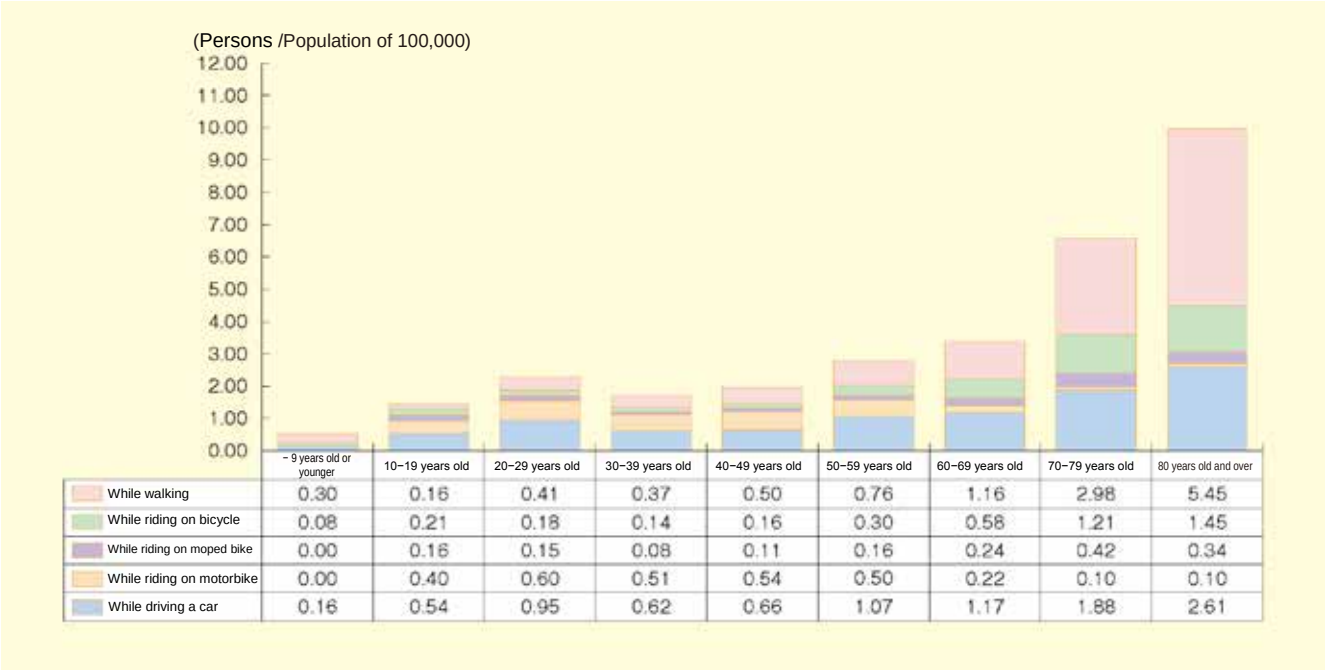

| | 2015 | |
|---|---|---|
| | Number of fatalities | Composition ratio |
| − 9 years old or younger | 23,578 | 3.5% |
| 10−19 years old | 57,621 | 8.7% |
| 20−29 years old | 117,134 | 17.6% |
| 30−39 years old | 120,919 | 18.2% |
| 40−49 years old | 123,080 | 18.5% |
| 50−59 years old | 84,784 | 12.7% |
| 60−69 years old | 74,619 | 11.2% |
| 70−79 years old | 46,537 | 7.0% |
| 80 years old and over | 17,751 | 2.7% |
| 65 years old and over (Listed again) | 101,515 | 15.2% |

Note: Source: National Police Agency

## Number of fatalities in traffic accidents by age group and by state per a population of 100,000

- Changes in the number of fatalities while walking in traffic accidents by state in the past 10 years (per a population of 100,000) has not decreased so much compared to others (Chart 1-12).
- The number of fatalities while walking in 2015 (per a population of 100,000) is high in elderly people, and in particular, that in people of 80 years old and over (5.45) is more than 4 times compared to the average (1.21) of all age groups (Chart 1-19).

u Chart 1-19 Changes in the number of fatalities in traffic accidents by age group and by state per a population of 100,000 (2015)




| | ~ 9 years old or younger | 10~19 years old | 20~29 years old | 30~39 years old | 40~49 years old | 50~59 years old | 60~69 years old | 70~79 years old | 80 years old and over |
|---|---|---|---|---|---|---|---|---|---|
| While walking | 0.30 | 0.16 | 0.41 | 0.37 | 0.50 | 0.76 | 1.16 | 2.98 | 5.45 |
| While riding on bicycle | 0.08 | 0.21 | 0.18 | 0.14 | 0.16 | 0.30 | 0.58 | 1.21 | 1.45 |
| While riding on moped bike | 0.00 | 0.16 | 0.15 | 0.08 | 0.11 | 0.16 | 0.24 | 0.42 | 0.34 |
| While riding on motorbike | 0.00 | 0.40 | 0.60 | 0.51 | 0.54 | 0.50 | 0.22 | 0.10 | 0.10 |
| While driving a car | 0.16 | 0.54 | 0.95 | 0.62 | 0.66 | 1.07 | 1.17 | 1.88 | 2.61 |

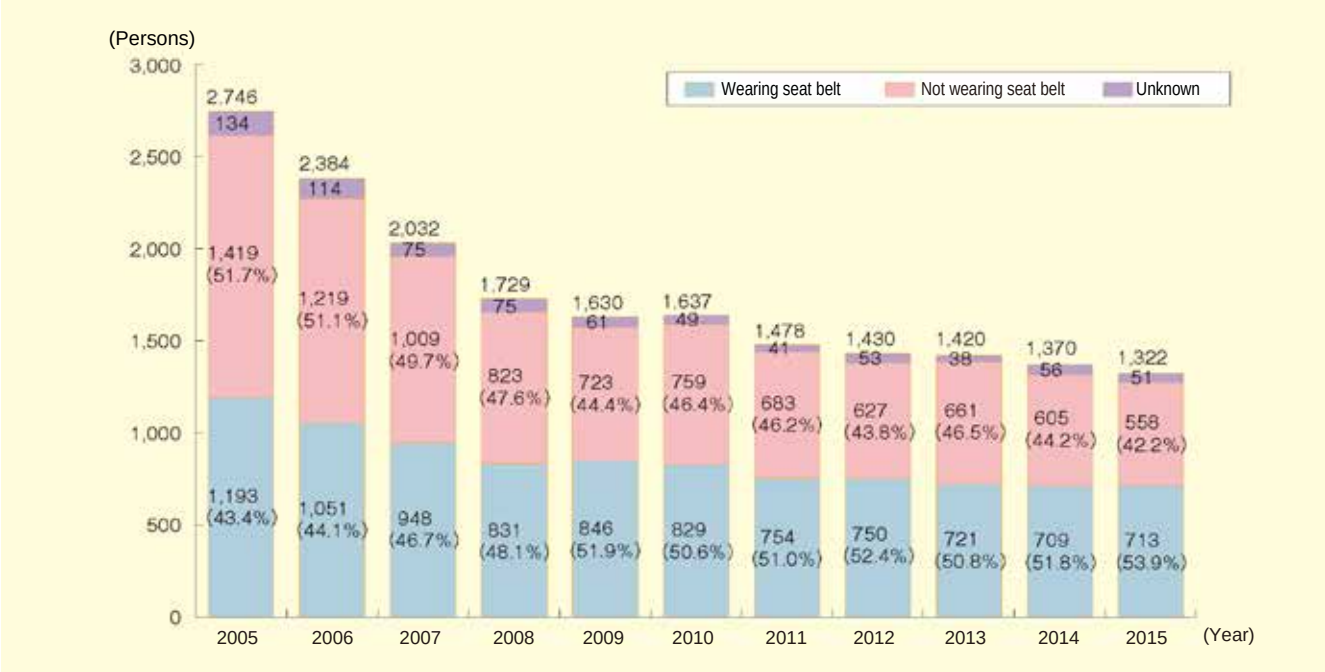
Note:
1. Source: National Police Agency
2. The population used for the calculation is from the statistical data “Population Estimates (as at October 1 of each year) of 2014.”

## Number of Fatalities with or without the Use of Seat-belt

- In terms of the number of fatalities while riding in a car with or without the use of a seat-belt in 2015, that without the use was 558 people, which was a decrease by 47 people (7.8%) (Chart 1-27).

, The fatality rate of people not wearing seat belts (percentage of fatalities over the number of casualties) is 13.9 times as high as that of people wearing them (Chart 1-29).

u Chart 1-27 Changes in the number of fatalities with or without the use of child-seats while traveling in a car




Note:
1. Source: National Police Agency
2. The figure in the bracket ( ) shows the composition ratio.

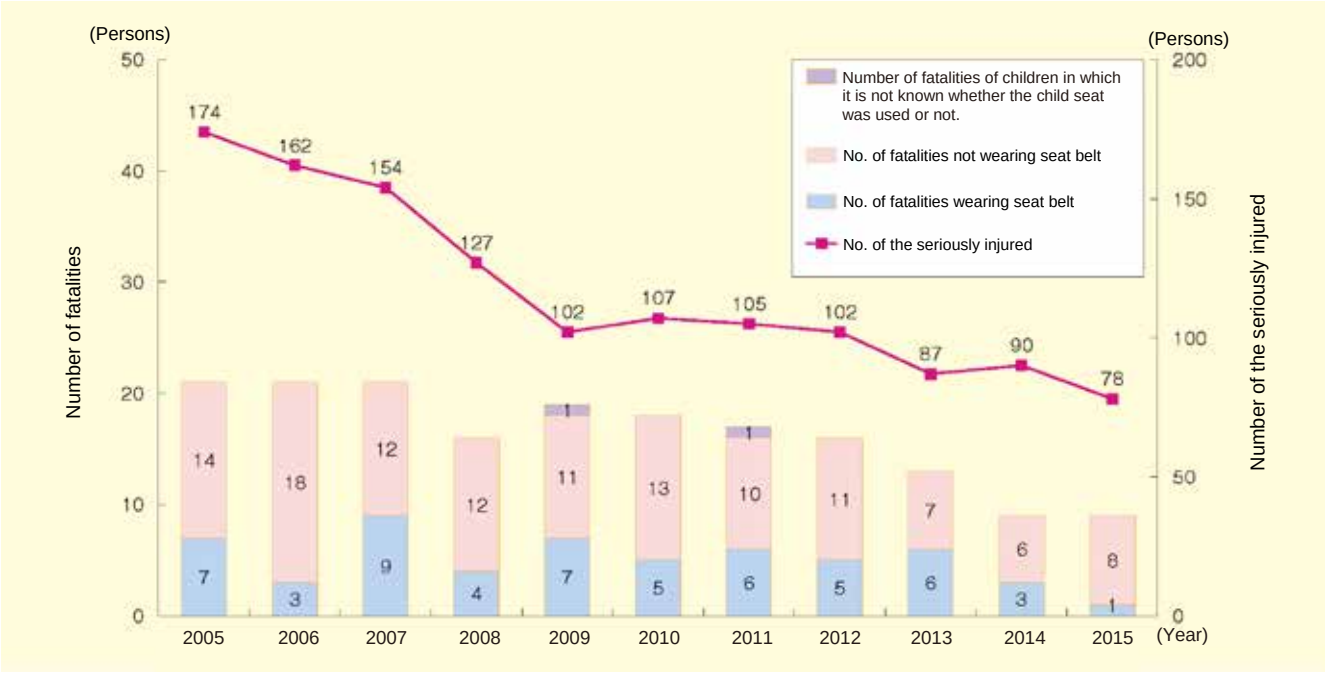
u Chart 1-29 Fatality rate with or without the use of child-seats while traveling in a car (2015)


Note: Source: National Police Agency

## Number of Fatalities with or without the Use of Child seats

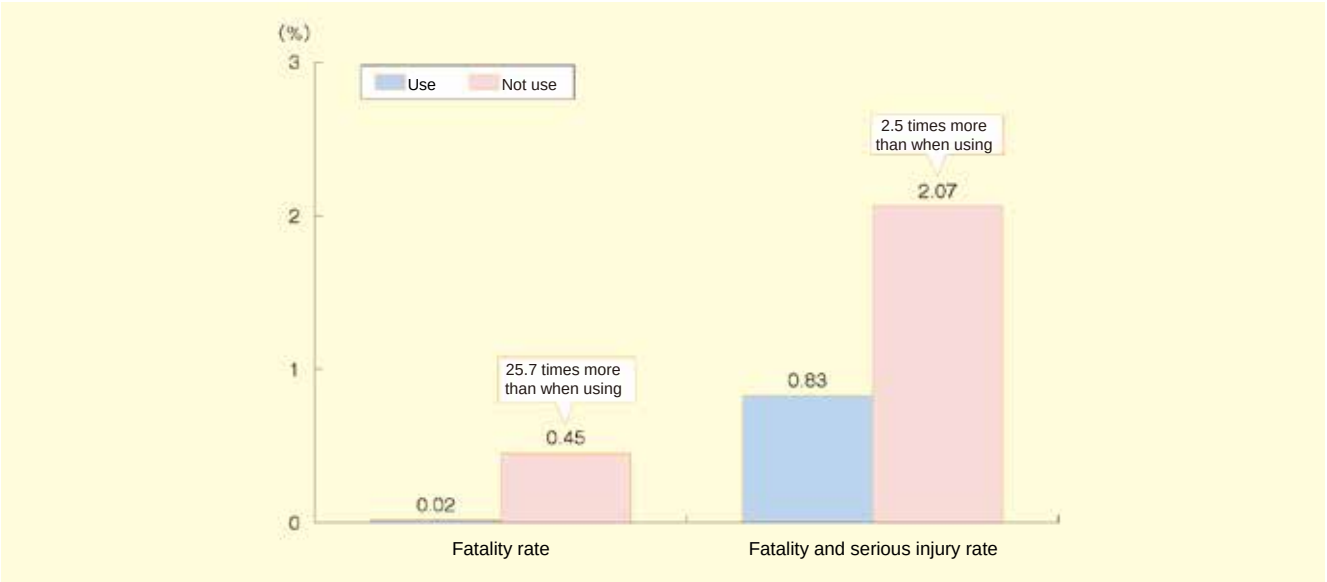
- The number of fatalities of children under 6 years old while driven in a car was 9 (1 used child seat) and the number of serious injuries was 78 in 2015 (Chart 1-30).
- If we look at the fatality and serious injury rate of children under 6 years old by using and by not using child-seat, not using child seat is 2.5 times higher than when using it, and, not using child seat is 25.7 times higher than when using it in the fatality rate (Chart 1-32).

u Chart 1-30 Changes in the number of fatalities and serious injuries of children under 6 years old while driven in a car using child seat.




Note: Source: National Police Agency

u Chart 1-32 Fatality and serious injury rate of children under 6 years old while driven in a car using child seat (2015)




Note: Source: National Police Agency

# Chapter 2 Overview of Current Road Traffic Safety Measures

## 1. Improvement of Road Traffic Environment

### Development in People-First Walking Spaces Offering Safety and Security on Community Roads

With support from communities, traffic safety measures focused on people including the improvement of sidewalks were promoted on routes to schools, community roads, arterial roads in urban areas and others.

- In order to ensure safety on community roads in urban areas, traffic safety measures for pedestrians and bicycle users such as the establishment of 30km/hr. zones were promoted through collaboration between the prefectural public safety commissions and road administrators. The establishment of 30km/hr. zones is composed of the following measures in areas where the reduction of through traffic and reduction of the traveling speed are required; the area restriction of the maximum speed limit of 30 kilometers per hour. The installation and expansion of side strips, traffic regulation such as one-way traffic and the road development such as the installation of bumps. Furthermore, the following measures were also promoted; traffic regulations aimed to decrease the amount of through traffic and the reduction of the travelling speed; development of walking space network in which people can move with peace of mind by developing traffic signals, road signs and road markings as well as sidewalks; registration of areas where it is intensively promoted to take safety measures focused on entry restrictions and speed reductions; standardization of specifications of bumps etc. in order to promote effectively and efficiently the measures in cooperation with communities; building of a mechanism whereby analysis using big data of ETC 2.0 is carried out and technical advice is given by knowledgeable people installation of bumps and narrow spaces.

, In light of the results of emergency joint inspections carried out on school roads in FY 2012, efforts aimed at ensuring traffic safety in school roads were promoted, including not only support of traffic safety measures implemented by related organizations such as schools, education boards, road administrators, and police, but also support of continuous efforts such as the implementation of regular joint inspections in each community based on the school road traffic safety program as well as improvement and enhancement thereof.
In addition, in order to ensure safety of transit of students going to middle-schools and children and infants going to elementary schools, kindergartens, nursery schools and children's houses, including places requiring measures as a result of the emergency joint inspections, the safety of schools was ensured through the development of sidewalks in school roads, installation of physical devices such as bumps, color pavement of road shoulders, installation of protection fences, development of push-button traffic signals and pedestrian signal lamps, development of grade separation facilities for pedestrians and amplification of pedestrian crossings.

ƒ Based on the Act on Promotion of Smooth Transportation of Elderly Persons, Disabled Persons, etc. (Act No. 91 of 2006) to ensure independent and self-sustained daily life and social activities for the elderly, disabled persons and others, roads leading or connecting to stations, governmental facilities, hospitals and others were actively provided with wide and leveled sidewalks.
In addition, the safe and smooth transit for the elderly, disabled persons and others was pursued and an increase in the number of elderly drivers was dealt with by developing barrier-free traffic lights, easy-to-see roadway signs and markings, pedestrian overpasses with lifting and lowering devices, resting facilities for pedestrians, parking for bicycles, car parking with parking grids for disabled persons and others and also promoting the use of LED lights in traffic lights and the elimination of electric poles.

### Promotion of Traffic Safety Measures in Arterial Roads

- In implementing road development projects with the aim of improving traffic safety, the "Traffic Accident Zero Plan (strategy for concentrated relief of accident prone sections)" targeted the eradication of traffic accidents. This effort was promoted in arterial roads in a focused and intensive manner based on the principles of "selection and concentration" and "community participation and community engagement" by scientifically checking the effects and applying the management cycle in an efficient and cost-effective manner.

, In July 2013, 3,490 places on arterial roads with a particularly high accident occurrence rate were designated as "Black Spots." For these places, prefectural public safety commission and road administrators intensively implemented road traffic accident prevention measures in a joint and coordinated manner, which included the installation and greater sophistication of traffic lights, separate and independent traffic lights for vehicles and pedestrians, installation of intensely illuminated roadway signs and improvement of sidewalks, etc., improvement of intersections, improvement of visual distances, development of additional lanes, construction of central islands, installation of parking zones on bus routes, etc., improvement of defense

guards and compartment lines, installation of road illumination and visual guidance signs, etc. among others.

**| Comprehensive Development of the Bicycle Usage Environment**

In order to develop a sustainable urban transport system with highly efficient clean energy, it is necessary to create an environment which allows safe and comfortable use of bicycles by clarifying the role played by the bicycles in the society. This required dividing pedestrians, bicycles and cars adequately depending on the traffic situation, and by providing measures to prevent accidents between pedestrians and cyclists. To this end, the Ministry of Land, Infrastructure, Transport and Tourism and the National Police Agency developed the "guidelines for the development of an environment which allows safe and comfortable use of bicycles" in November 2012 to create a plan for a bicycle network, develop such a network, and promote full compliance with riding rules. Relevant organizations such as the road administrators and the police collaborated to promote the development of bicycle lanes based on the guidelines in a coordinated manner.

**| Use of Intelligent Transport Systems**

The “Intelligent Transport System” (ITS) which is a new road transport system designed to build people, road and vehicle as an integrated system by using the latest technologies is continuously promoted. For this reason, based on the “Declaration to be the World's Most Advanced IT Nation” adopted by the Cabinet in June, 2013 and revised in June, 2015, there was active promotion of not only research and development, field tests*, study for development, dissemination and standardization of infrastructures were further promoted in an industry-government-academia cooperation, but also international cooperation for information exchange and international standardization at the ITS World Conference and others was actively promoted.

- For the sake of optimization of traffic control using the cutting-edge information and communication technology, etc., the development and improvement of the Universal Traffic Management Systems (UTMS) utilizing the function of infrared beacons, including the Public Transportation Priority Systems (PTPS), FAST Emergency Vehicle Preemption Systems (FAST), and Driving Safety Support Systems (DSSS), was pursued in an effort to promote ITS and produce a safe, smooth, and comfortable traffic society with a low environmental load.
- Dissemination and promotion of the ETC 2.0 Service based on the communication technologies of ETC will be implemented by the government and private sector.
  Information provision services such as traffic jam avoidance support and safe driving support will be provided by ETC 2.0 compatible car navigation systems and ETC 2.0 on-board unit, in addition to ETC. In addition, an effort will be made to smartly use roads through reduction of traffic jams and accidents and highly productive physical distribution management using a wide variety of finely-tuned big data including speed data and used routes as well as time data collected from ETC 2.0.

## 2. Dissemination and Reinforcement of Traffic Safety

**| Promotion of Traffic Safety Education for the Elderly**

In order to elevate traffic safety awareness based on the mutual edification of elderly communities, the establishment of traffic safety divisions in seniors’ clubs and retirement homes as well as the training of elderly traffic safety instructors (silver leaders) were promoted. Subsequently, voluntary traffic safety activities such as the creation of “*Close-call* maps” were implemented, and instruction and support was given so as to fulfill the leading role of traffic safety activities in local areas and households.

**| Promotion of the Safe Usage of Bicycles**

Public relations enlightenment activities were promoted by making use of the “Five Rules for Safe Bicycle Ride” adopted by the Traffic Countermeasures Headquarters in order to make bicycle users understand that a bicycle is a vehicle and that bicycle users must abide by the rules applicable to vehicles and observe the traffic manners when transiting a road. In particular, in addition to publicizing the bicycle driver training system enforced as from June 1 2015 and operating the system appropriately to raise awareness in bicycle users of complying with the rules, traffic safety education focused on participation, experience and practice was promoted using driving school practice course practice, audio-visual instruction materials, simulators and the scared-straight method (an on-the-job training method to face fear. A traffic accident using a stuntman is reproduced), etc., to all sorts of users for the correct riding of a bicycle in consideration of pedestrians and other vehicles.

* Field tests
Practical tests, outdoor tests and others

## 3. Ensuring Safe Driving

### | Promotion of Measures for Elderly Drivers

The compulsory training courses for elderly drivers aged are aimed at checking their driving aptitude, by asking them to drive by themselves, using equipment to test driving aptitude etc. so that they become conscious of changes in their physical functions, and proper advice and guidance are provided based on the checking results. It is provided that those who have attended these courses are not required to take other courses when renewing their driving licenses. A total of 2,589,265 people took these courses in 2015.
In addition, in the course at the time of renewing the license, an effort was made to hold classes for people between 65 and 69 years old focused on the characteristics of elderly drivers as well as of traffic accidents in which they were involved.

### | Augmentation of Supervision for Road Transport Operators

In the wake of the accident of an expressway limousine bus occurred on the Hokuriku Expressway in March 2014, not only the use of the “Health management manual for drivers of business vehicles” revised in April 2014 was strongly urged, but also the “Council for measures against health-related accidents of business vehicles was launched in September of 2015 in order to disseminate a variety of screening checks that contribute to early discovery of main diseases such as sleep disordered breathing, brain disease, heart disease, etc., as recommended by the manual more effectively, and the study of the method for its dissemination and promotion was started.
In addition, aggravated business operators in violation of law were subjected to audits in a priority and dedicated manner as well as in an efficient and effective manner, and, in the wake of the Karuizawa ski bus accident occurred in January 2016, on-road audit and focused audit were conducted in an emergency to chartered bus operators.

### | Enhancement of Transport Safety Management System

In accordance with the “transport safety management system” which was introduced in October of 2006, the transportation companies build and improve the safety management system company-wide, and the government implement “The Transport Safety Management Audit” which is the system that the government checks the implementation status of The Transport Safety Management system of transportation companies.
In 2015, the government implemented this audit on 146 companies.

## 4. Ensuring Vehicle Safety Measures

### | Development, Practical application and Dissemination of Advance Safety Vehicles (ASV) and Ensuring Safety of Automatic Traveling System

The Fifth Advanced Safety Vehicle (ASV) Promotion Plan started in FY 2011 was compiled with the aim to promote the development, practical application and dissemination of advanced safety vehicles (ASV) which support safe driving of a driver using advanced technologies, and a guideline for a system to deal with driver’s anomaly and a next-generation safe driving support system using communication was formulated.
In addition, subsidies continued to be provided for ASV devices such as collision damage mitigation brakes, vehicle stability control systems, and lane departure warning systems. In addition, special tax provisions that became effective in FY 2012 for vehicles with collision damage mitigation brakes were applied to a wider range of vehicles in the FY 2015 tax revision, and new special provisions were established for vehicles with vehicle stability control systems.

## 5. Development of Rescue and Emergency Medical Systems

### | Promotion of the “Doctor-Helicopter Business”

To enhance medical treatment in the emergency site and on the way to hospital, the dissemination and promotion of helicopters for emergency medical treatment are currently conducted based on the “Act on Special Measures Concerning Ensuring Emergency Treatment Using Helicopters for Emergency Medical Treatment” (Act No. 103 of 2007) and as of August 2015, 46 doctor helicopters in 38 prefectures are deployed.

### | Augmentation of Fire Department and Collaborative Systems for Medical Agencies

The time it takes to transport sick people to hospitals from the time a request for an ambulance is received through 119 is getting longer every year and there occur cases where it is difficult to find a medical facility to hospitalize a sick person quickly. In view of this situation, the Fire Service Act (Act No. 186 of 1948) was revised in 2009. In order to help the fire institutions to transport sick persons as a rescue operation and the medical institutions to receive them and provide adequate treatment quickly, the prefectural governments established standards on the transportation

and reception of sick persons (hereinafter “practice standard”) and it became compulsory to establish consultative councils made up of members of fire institutions and medical institutions to discuss matters concerning the practice standard. Currently, the practice standard is in place in all the prefectures.

# Part 2 Railway Transport

## Chapter 1 Railway Traffic Accident Trends

### 1 Operational Accidents over Recent Years

- The number of operational railway accidents* has been in a long-term decline. There were 1,035 accidents in 1995 and the number fell to 909 in 2005, 742 in 2015 decreasing by 4.0%.
- The number of fatalities in driving accidents was 273, a decrease of 10.5% and the number of fatalities of passengers was none.
- The number of accidents at railway crossings* is in a decreasing tendency. There were a total of 242 accidents in 2015, a 4.7% decrease of over the previous year and the number of fatalities at railway crossing was 97, a 2.1% increase over the previous year.
- A total of 44 passengers were injured when a truck that had broken the railroad crossing collided with a train at the railroad crossing of the first class between the Nishiachi station and the Shin-Kurashiki station on the Sanyo Main Line of JR West in February 13, 2015.

u Chart 1-40 Changes in the number of operational accidents and casualties


Note:
1. Source: Ministry of Land, Infrastructure, Transport and Tourism
2. The number of fatalities was registered within 24 hours after accidents.

* Operational accidents
Operational accidents include accidents caused by collision, derailment, fire, crossing obstruction, road obstruction, accidents causing injury or fatality and property damage. Incidentally, operational accidents on railway tracks are treated as operational railway accidents.

* Accidents at railway crossings
Accidents at railway crossings refer to the train accidents where a train or vehicle collide or make contact with a pedestrian or another vehicle at railway crossings and the accidents involving injuries that occur at railway crossings.

# Chapter 2 Overview of Current Railway Traffic Safety Measures

## 1 Improvement of Railway Environment

### Improving Operational Safety Devices

Based on the technical standards revised in the wake of JR Fukuchiyama Line Train Derailment Accident, installation of automatic train stop devices (ATS) and other measures were facilitated and promoted to the places such as curves, turnouts, track ends, and so on where serious accidents are likely to occur.

### Strengthening of the Earthquake Resistance of Railway Structure

In light of the Hanshin-Awaji Earthquake and the Great East Japan Earthquake and in preparation for capital epicentral earthquake and Nankai Trough Earthquake which are the immediate problems in the strengthening of disaster prevention and disaster mitigation, aseismic measures were promoted in the main railway stations and viaducts in order to ensure the safety of railway users and in consideration of public function as temporary shelters and securing of emergency transport ways.

## 2 Dissemination of Knowledge about the Safety of Rail Traffic

In addition to conducting campaigns to prevent accidents at railway crossings using posters and others, dissemination of knowledge and awareness-raising on the manner to safely cross railroad crossings and on the prevention of railway accidents were conducted for schools, residents along the railway tracks and road transport operators among others.

Furthermore, it was recommended to railway operators and others to take measures for accident prevention making use of the railway safety guidebook and the educational materials designed to promote safety education on the use of railways for children.

## 3. Ensuring the Safe Operation of Railways

### Retaining the Quality of Train Operators

To ensure the qualifications of train drivers, driving license tests were conducted in an appropriate manner. It was also instructed to operation administrators to adopt adequate measures for education to ensure the qualification of the crew.

### Analysis and Utilization of Risk Information

In order to prevent serious railway accidents, information on the past incidents and accidents is collected to be shared among interested people. In addition, it is intended to share risk information which is not a compulsory report to the government among railway operators.

### Enhancement of Transport Safety Management System

The evaluation of transport safety management whereby operators build and improve a safety management system in a concerted effort with all employees and the government checks its implementation status was conducted to 75 companies in 2015 in accordance with the “Transport Safety Management System” introduced in October, 2006.

### Appropriate Response in Cases of Large-Scale Accident Occurrence

In order to cope with emergency situations such as a large accident or a disaster, procedures were taken to check and validate the emergency contact system at night and on a holiday which enables the establishment of contact with relevant persons in the government and railway operators in a quick and appropriate manner.

In addition, railway operators were instructed to provide appropriate information to railway users and establish systems to quickly restore services in case of accidents including transportation failure with a view to reducing social impact in major cities and trunk railway lines.

Moreover, in addition to the verification of the evacuation guidance situation at the occurrence of tsunami in the East-Japan Big Earthquake, policies and specific examples designed to secure safety of railway passengers at the occurrence of a tsunami based on the basic ideas of evacuation (quick and early evacuation is the most useful and important reassure, etc) from a super tsunami such as the Nankai Trough Gigantic Earthquake have been compiled to encourage railway operators to follow the effort.