



2021 Road safety performance overview

2023



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Overview

Safety has always been our top priority. In 2015, we adopted the latest road safety good practice called the Safe System. The Safe System is an approach to road safety management, based on the principle that our life and health should not be compromised by our need to travel. The Safe System considers how roads, vehicles, people, speeds and the emergency services' response come together to improve safety. We will assess in future safety reporting the best way to reflect these considerations.

When we set out our plans for the second road period, we committed to reducing the number of road users killed or seriously injured (KSI) on our roads by 50% by the end of 2025 (from a 2005-2009 baseline). This report provides an overview of our performance for 2021, drawing on data for casualty numbers and rates.

The strategic road network (SRN) is a vital national asset, supporting economic growth, regional development, and employment opportunities across England and the rest of the UK. It connects families, communities, and businesses, enriching the lives of millions of people. Billions of miles are travelled on the SRN each year. The vast majority of these are safe and reliable journeys. We have high levels of safety on our network; but we always strive for more.

We are committed to creating the safest roads in the world.

This report, based on the 2021 STATS19¹ data, published by the Department for Transport (DfT), puts our safety performance into context, including how safety on our roads compares with those in other countries. The STATS19 database is a collection of road traffic collisions that resulted in a personal injury and were reported to the police within 30 days of the collision.

Every road death is a tragedy and every serious injury is a changed life. For everyone affected, we will never cease to strive for the safest network in the world. Improving safety on our roads reduces physical, mental and emotional harm to people. A safer network also improves journey time reliability, providing economic benefits.

¹ <https://www.data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data>

Reporting of road casualty data



Since 2012, many police forces have changed the way they collect safety data². Using the new method an incident is categorised automatically based on the worst injury, rather than (using the previous method) the judgement of a police officer.

Police forces using the new systems report more serious injuries than those which don't.

The Department for Transport (DfT) and the Office for National Statistics (ONS) have developed an approach to adjust the data collected from those police forces not currently using the automated system. This adjusted data is published annually by DfT and is the basis for the safety analysis in this report. By 2021, the automated systems were being used by 25 of the 38 (66%) police forces which cover the SRN.

DfT commissioned the ONS to estimate adjustment factors for historical KSI data.

This enables the production of consistent numbers over time which are independent of the reporting method being used.

The methodology paper *Estimating and adjusting for changes in the method of severity reporting for road accidents and casualty data: final report*³ was published in July 2019. It is complemented by the *Annex: Update to severity adjustment methodology* which was published in September 2019⁴. Adjustments are likely to be needed until all forces have adopted the injury-based reporting system.

The STATS19 values in this report are based on the adjusted figures.

² <https://www.gov.uk/government/publications/guide-to-severity-adjustments-for-reported-road-casualty-statistics/guide-to-severity-adjustments-for-reported-road-casualties-great-britain>

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/820588/severity-reporting-methodology-final-report.odt

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/922708/annex-update-severity-adjustments-methodology.pdf

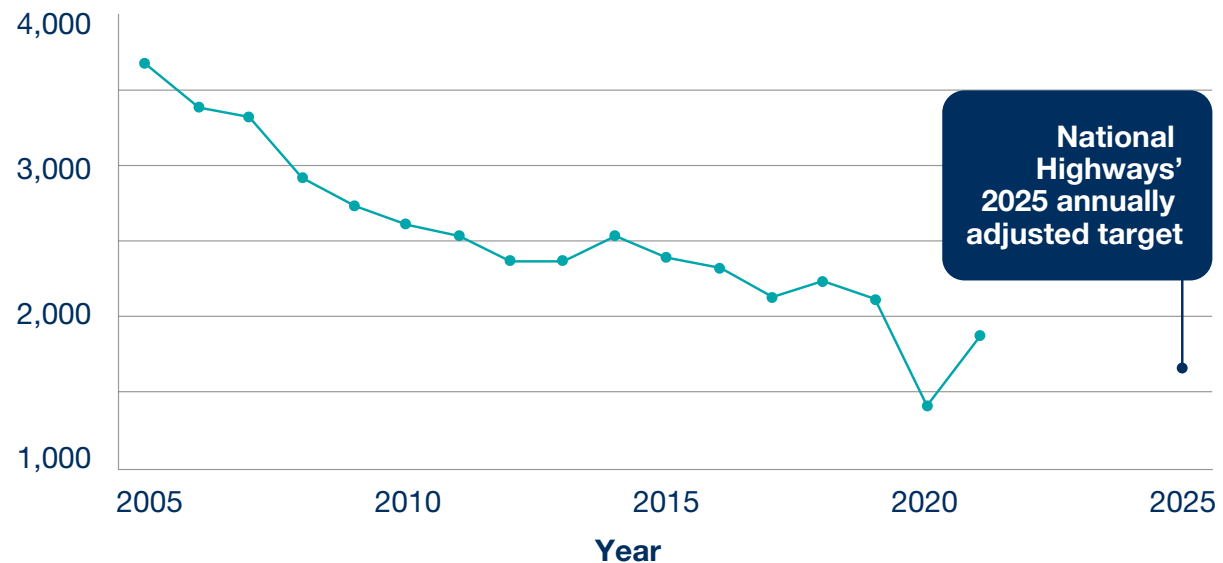


Casualty trends



Figure 1: Killed or seriously injured casualties on the SRN, 2005 to 2021

KSIs (adjusted)



The number of KSI (adjusted) casualties on the SRN in 2021 is the lowest compared to all previous years – except for 2020 which was influenced by the coronavirus pandemic (COVID-19) since 2005, see Figure 1. COVID-19 and associated travel restrictions affected road safety data in 2020 and 2021.

Due to varying restrictions across regions and therefore varying traffic across roads, comparisons of absolute numbers should be made with caution. For example, using the safety rates instead which account for traffic, makes comparisons between road types more representative.

The changes, set out on page 4, to the ways in which collisions are recorded by some police forces have increased the number of serious injuries identified.

The number of fatalities in 2021 was 222, 37.8% lower than the 2005-2009 baseline. However, since 2012 the overall trend in fatalities has been fairly flat, ranging between 210 and 250 per year, until the drop in 2020 which was influenced by COVID-19 restrictions.

There are many factors that affect safety on our network, including vehicle safety and improvements to our roads.

We are committed to reducing all categories of casualties on our roads. This will require a targeted approach with investments informed by evidence. As part of our long-term planning for casualty reduction we are engaged in our Road to Zero Harm project which is designed to ensure that National Highways follows a strictly evidence based, Safe System approach to road safety in collaboration with key industry partners.

Table 1: Casualties and traffic on the SRN by severity for selected years

| | 2005-2009 baseline | 2020 | 2021 | 2021 percentage change from: | |
|--------------------------|--------------------|--------------|--------------|------------------------------|--------------------|
| | | | | 2020 | 2005-2009 baseline |
| Fatalities | 357 | 138 | 222 | 60.9% | -37.8% |
| Seriously injured | 2,849 | 1,295 | 1,635 | 26.2% | -42.6% |
| KSIs | 3,206 | 1,433 | 1,857 | 29.6% | -42.1% |
| Slightly injured | 18,497 | 6,440 | 7,962 | 23.6% | -57.0% |
| All casualties | 21,703 | 7,873 | 9,819 | 24.7% | -54.8% |
| Traffic* (hvmv**) | 834.2 | 725.5 | 831.6 | 14.6% | -0.3% |

*Based on DfT traffic counts **Hundred million vehicle miles
Figures in all tables have been rounded

222 fatalities on the SRN in 2021.

Across the network

3



Compared to the amount of traffic they carry, collisions on the SRN continue to result in proportionately lower fatal and serious injuries than other types of roads.

In 2021, motorways carried 64% of the SRN's traffic, but accounted for only 39% of KSIs⁵. Single carriageway A-roads on the SRN have approximately five times the KSI rate (7.05 KSI casualties per hundred million vehicle miles) of motorways (1.37 KSI casualties per hundred million vehicle miles).

Single carriageway A-roads account for 5.6% of traffic on the SRN and 18% of fatalities.

For an in-depth analysis of safety on smart motorways specifically, see the smart motorways stocktake annual progress reports published on National Highways website.

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1106312/ras0302.ods
Please note data is presented as per billion rather than per HMVM as in this report

Table 2: Casualties and rates by road type and severity on the SRN, 2021 (2019 value comparisons given in brackets)

| | Number of casualties | | | Traffic* (hmv ^m) | Casualties per hmv ^m | | |
|--|----------------------|----------------------|----------------------|------------------------------|---------------------------------|--------------------|--------------------|
| | Fatalities | Serious injuries | KSIs | | Fatalities | Serious injuries | KSIs |
| Motorways | 80 (85) | 649 (751) | 729 (836) | 531.0 (621.0) | 0.15 (0.14) | 1.22 (1.21) | 1.37 (1.35) |
| All A-roads including dual and single carriageway | 142 (125) | 985 (1,157) | 1,127 (1,282) | 300.7 (347.7) | 0.47 (0.36) | 3.28 (3.33) | 3.75 (3.69) |
| Dual carriageway A-roads | 103 (72) | 698 (770) | 801 (842) | 254.4 (294.4) | 0.40 (0.24) | 2.75 (2.61) | 3.15 (2.86) |
| Single carriageway A-roads | 39 (53) | 287 (388) | 326 (441) | 46.2 (53.2) | 0.84 (1.00) | 6.21 (7.28) | 7.05 (8.27) |
| Whole SRN | 222 (210) | 1,635 (1,908) | 1,857 (2,118) | 831.6 (968.7) | 0.27 (0.22) | 1.97 (1.97) | 2.23 (2.19) |

*Traffic based on DfT traffic counts **hmv^m – Hundred million vehicle miles
 Due to the COVID19 pandemic influencing 2020, 2019 figures are given in brackets

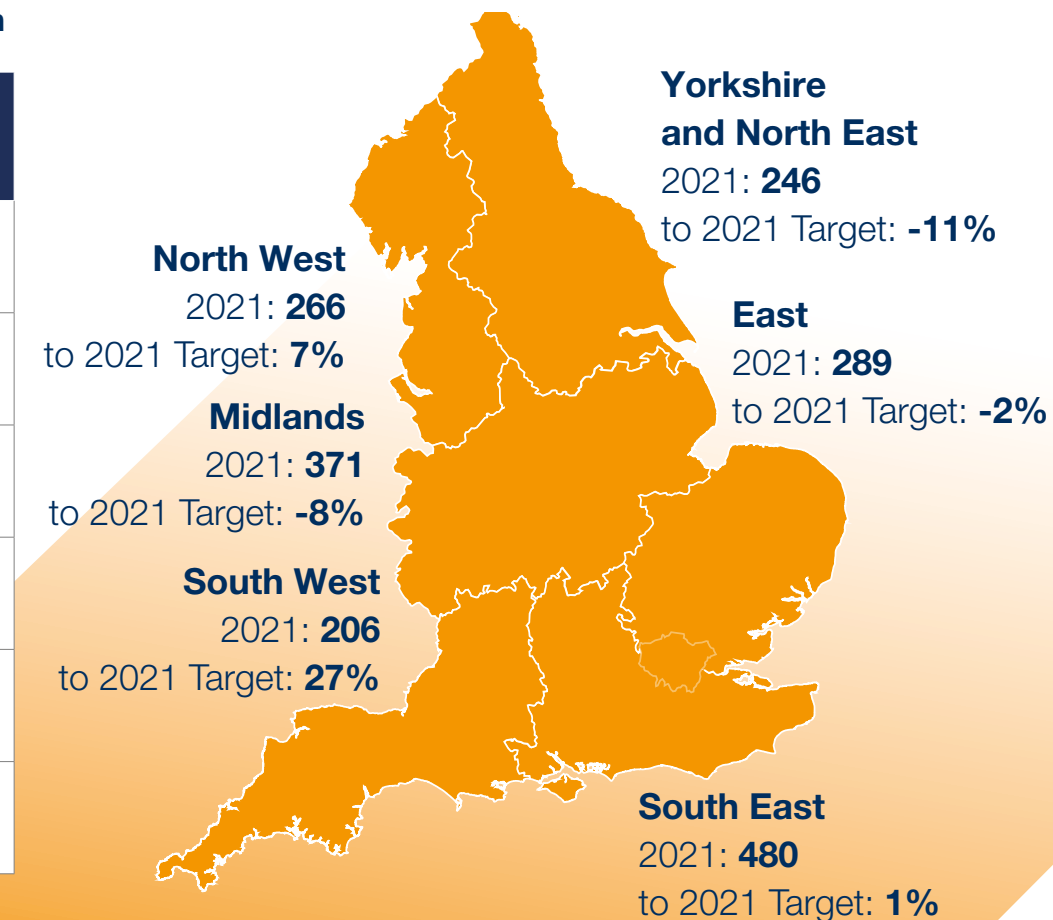


Across every National Highways region, we have been making concerted efforts to further reduce KSIs to meet our 2025 targets. Each region is different because of the mix of road types, traffic patterns and demography.

Table 3: Killed or seriously injured casualties on the SRN by region

| Region | 2021 | 2021 relative to 2005–2009 baseline | 2021 relative to 2021 target | 2021 relative to 2025 target* |
|------------------------|------|-------------------------------------|------------------------------|-------------------------------|
| East | 289 | -43% | -2% (294) | 14% (253) |
| South East | 480 | -42% | 1% (476) | 17% (411) |
| Midlands | 371 | -46% | -8% (402) | 7% (347) |
| South West | 206 | -26% | 27% (162) | 47% (139) |
| North West | 266 | -38% | 7% (248) | 24% (214) |
| Yorkshire & North East | 246 | -49% | -11% (277) | 3% (239) |

*Shows the % change of 2021 against the 2025 target. 2025 target values in brackets



Casualty groups

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KSI rates on the SRN can also be examined by road user type, using traffic survey data to standardise for distance travelled.







Occupants of HGVs and LGVs have the lowest rate: 0.62 and 0.88 KSI casualties per hundred million vehicle miles respectively. However, this does not take into consideration people using other modes injured in collisions with goods vehicles. KSI rates for car occupants are higher at 2.16 KSI casualties per hundred million vehicle miles; the KSI rate for motorcyclists is substantially higher at 113.67 KSI casualties per hundred million vehicle miles.

The SRN motorcycle rate (113.67) is lower than the reported national average for motorcyclists (including passengers)

on all roads in Great Britain. This is approximately 220.3 KSI casualties per hundred million vehicle miles. The number of cyclists on the SRN is subject to some uncertainty and rates for pedestrians are not available. There were 42 pedestrian fatalities reported in 2021 which represents a substantial proportion of fatalities (19%), increasing against the previous two years and the 2005-2009 baseline (13%).

Pedestrian casualties include those who had been travelling in a vehicle on the network and were outside their vehicle at the time of the collision, for example, on the hard shoulder.

Table 4: Casualties by severity and KSI rates on the SRN, baseline (2005 to 2009) and 2021

| | 2005-2009 baseline | | | | 2021 | | | |
|---|--------------------|------------------|-------------------|---------------------|------------|------------------|-------------------|---------------------|
| | Fatalities | Serious injuries | KSIs ¹ | KSI rate (per hmvm) | Fatalities | Serious injuries | KSIs ² | KSI rate (per hmvm) |
| Vulnerable users | 98 | 533 | 631 | | 68 | 360 | 428 | |
|  Pedestrians | 46 | 76 | 122 | - ³ | 42 | 48 | 90 | - ³ |
|  Pedal cyclists | 8 | 43 | 51 | - ³ | 3 | 43 | 46 | - ³ |
|  Motorcyclists | 44 | 415 | 459 | 107.48 | 23 | 269 | 292 | 113.67 |
| Other road users | 256 | 2,275 | 2,531 | | 153 | 1,266 | 1,419 | |
|  Car ⁴ occupants | 221 | 1,972 | 2,194 | 3.49 | 129 | 1,083 | 1,212 | 2.16 |
|  LGV ⁵ occupants | 13 | 138 | 151 | 1.46 | 11 | 130 | 141 | 0.88 |
|  HGV ⁶ occupants | 22 | 165 | 187 | 1.97 | 13 | 53 | 66 | 0.62 |

¹ Excludes 43 KSIs relating to other or unknown road user types.

² Excludes 9 KSIs relating to other or unknown road user types.

³ It is not possible to calculate a rate for pedestrians and measurement of the distance travelled by cyclists on the SRN is subject to considerable uncertainty.

⁴ Includes taxi/private hire car and minibus.

⁵ Goods vehicles where the mgw (maximum gross weight) was equal to or under 3.5 tonnes or unknown.

⁶ Goods vehicles where the mgw was over 3.5 tonnes.

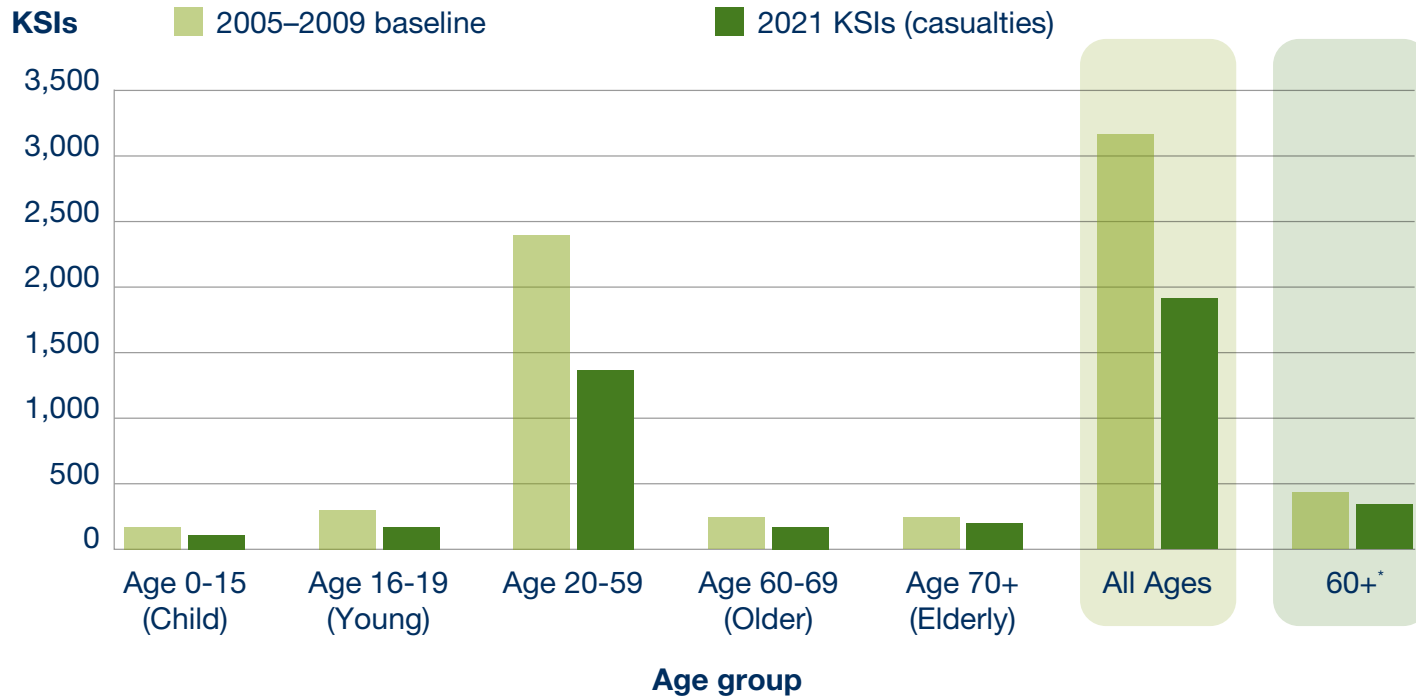


Child casualties (aged 15 or under) represent a much lower proportion of KSIs on the SRN (compared to the whole of Great Britain) with the vast majority injured as vehicle occupants (includes motorcycle riders and passengers). On the SRN in 2021, child casualties accounted for 3.4% of all KSIs (63 of 1,857) with 91% (57 of 63) being vehicle occupants. This differs to the overall Great Britain picture, with child casualties accounting for 8.3% of all KSIs (2,272 of 27,450) of which 27% (607 of 2,272) were vehicle occupants. Of the remainder, 56% (1,269 of 2,272) were pedestrians, and 17% (395 of 2,272) were cyclists.

Although KSIs for those aged below 60 years have decreased by 45% since the baseline (2,759 to 1,507), KSIs for older road users (aged 60 to 69 years) and elderly road users (aged 70+ years) have decreased less notably - down 19% (221 to 180) for 60–69-year-olds and down 18% (195 to 160) for those aged 70+ years. In 2021, 18% of all KSIs on the SRN (339 of 1,857) were aged 60 years or older, compared to 13% (417 of 3,206) in 2005–2009 baseline average.



Figure 2: KSIs by age group on the SRN, baseline (2005 to 2009) and 2021



*60+ (60-69 and 70+ categories combined)

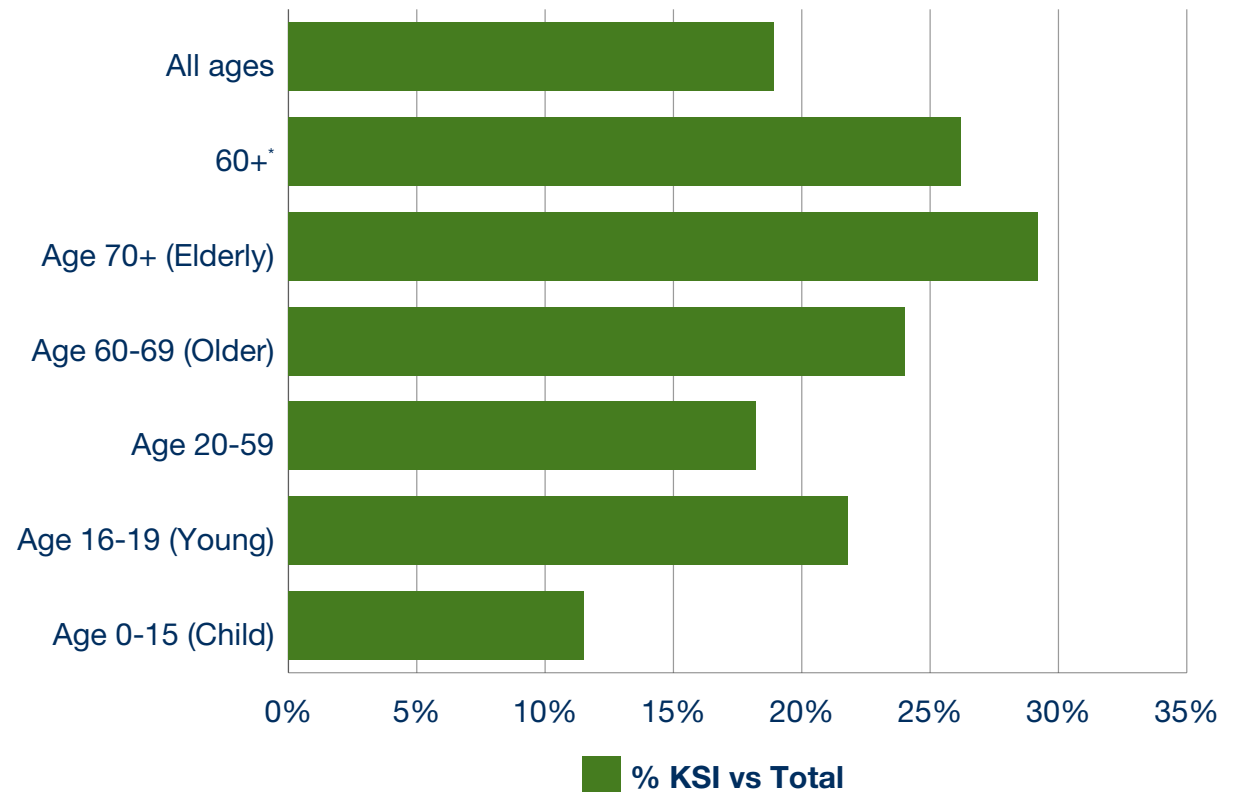


Severity of injuries among casualties increases noticeably with age. In 2021, 26.2% of casualties aged 60 years or older on the SRN were classified as KSIs, compared to 18.9% for all ages of casualties. Within the 60 years and older population, the risk of incurring a higher severity injury increases notably beyond the age of 70.

Analysing KSIs by age groups

Analysis of KSIs on the SRN by age groups only allows for a reflection on the numbers rather than a rate. This is because there is no information available about the number of vehicle miles travelled by age of users. The age profile of SRN users is likely to differ from the national picture due to the mode mix, with higher levels of non-motorised travel on non-SRN roads.

Figure 3: Severity ratio (KSIs to all casualties) by age group on the SRN, 2021



*60+ (60-69 and 70+ categories combined)

Figure 4: Distribution of KSIs on the SRN by mode and road type, 2021 and percentage change from baseline (2005 to 2009)



| | Motorway | | A-road dual carriageway | | A-road single carriageway | | All SRN | |
|-------------------|----------|------|-------------------------|------|---------------------------|------|---------|------|
| Pedestrians | 28 | -30% | 47 | -13% | 16 | -45% | 90 | -26% |
| Pedal cyclists | 1 | - | 31 | -14% | 14 | -2% | 46 | -9% |
| Motorcyclists | 66 | -58% | 149 | -23% | 77 | -29% | 292 | -36% |
| Car occupants | 525 | -50% | 498 | -34% | 188 | -52% | 1,212 | -45% |
| LGV occupants | 74 | -10% | 45 | -9% | 22 | 16% | 141 | -6% |
| HGV occupants | 35 | -66% | 25 | -63% | 6 | -61% | 66 | -65% |
| Not known / other | 1 | - | 6 | - | 2 | - | 9 | - |

Failed to look properly and failed to judge another person's path or speed are by far the most commonly reported contributory factors. For the baseline period (2005-2009), each of these contributory factors were reported in around one in four collisions. For 2021, failed to look properly was reported for 31% of the collisions with slightly less (27%) in the reporting of 'failed to judge other person's path or speed'.

Contributory factors within the impairment or distraction category are relatively less frequent, however they are more reported in 2021 compared to the baseline period. The main ones reported are fatigue,

impaired by alcohol, distraction in vehicle and illness or disability, mental or physical. The latter, as a percentage, was reported almost twice as often in 2021 than in the baseline period.

74%
The proportion of collisions with a contributory factor from the driver/rider error or reaction category

Contributory factors

Contributory factors are reported for most but not all collisions where a police officer attended. Up to six contributory factors can be reported per collision drawing from a list of 78 available factors. It is important to note that the contributory factor(s) assigned to a collision represent the initial opinion of the attending officer relating to possible factors leading to the collision and are not intended to be a definitive representation of actual cause.



Table 5: Share of all collisions where a contributory factor (CF) is reported – selected contributory factors only

| | | Motorways | | | A-roads | | |
|---------------------------------------|--|------------------------|----------|---|------------------------|----------|---|
| Contributory factor category | Description | 2005-2009 baseline (%) | 2021 (%) | 2021 percentage points change from baseline (%) | 2005-2009 baseline (%) | 2021 (%) | 2021 percentage points change from baseline (%) |
| Driver/rider error or reaction | Failed to look properly | 25.7 | 29.3 | 3.6 | 30.1 | 32.9 | 2.8 |
| | Failed to judge other person's path or speed | 24.6 | 27.3 | 2.7 | 25.4 | 26.0 | 0.6 |
| | Loss of control | 21.3 | 13.6 | -7.7 | 19.3 | 13.5 | -5.8 |
| | Sudden braking | 12.3 | 8.2 | -4.1 | 12.4 | 9.6 | -2.8 |
| | Poor turn or manoeuvre | 11.2 | 5.8 | -5.4 | 13.3 | 10.6 | -2.7 |
| Injudicious action | Following too close | 16.6 | 12.9 | -3.7 | 12.6 | 11.3 | -1.3 |
| Behaviour or inexperience | Careless, reckless or in a hurry | 9.8 | 14.0 | 4.2 | 13.3 | 17.9 | 4.6 |
| Impairment or distraction | Fatigue | 6.2 | 6.7 | 0.5 | 4.0 | 4.5 | 0.5 |
| | Impaired by alcohol | 3.8 | 6.4 | 2.6 | 4.2 | 6.5 | 2.3 |
| | Distraction in vehicle | 3.0 | 5.1 | 2.1 | 3.1 | 6.1 | 3.0 |
| | Illness or disability, mental or physical | 1.7 | 3.2 | 1.5 | 1.6 | 3.0 | 1.4 |

NB. Because up to six contributory factors can be reported for an individual collision, the percentages summed across all contributory factors will exceed 100%. Contributory factors are not reported for all collisions. In 2021, they were reported for 76.2% of all reported collisions on the SRN.

A global perspective

5



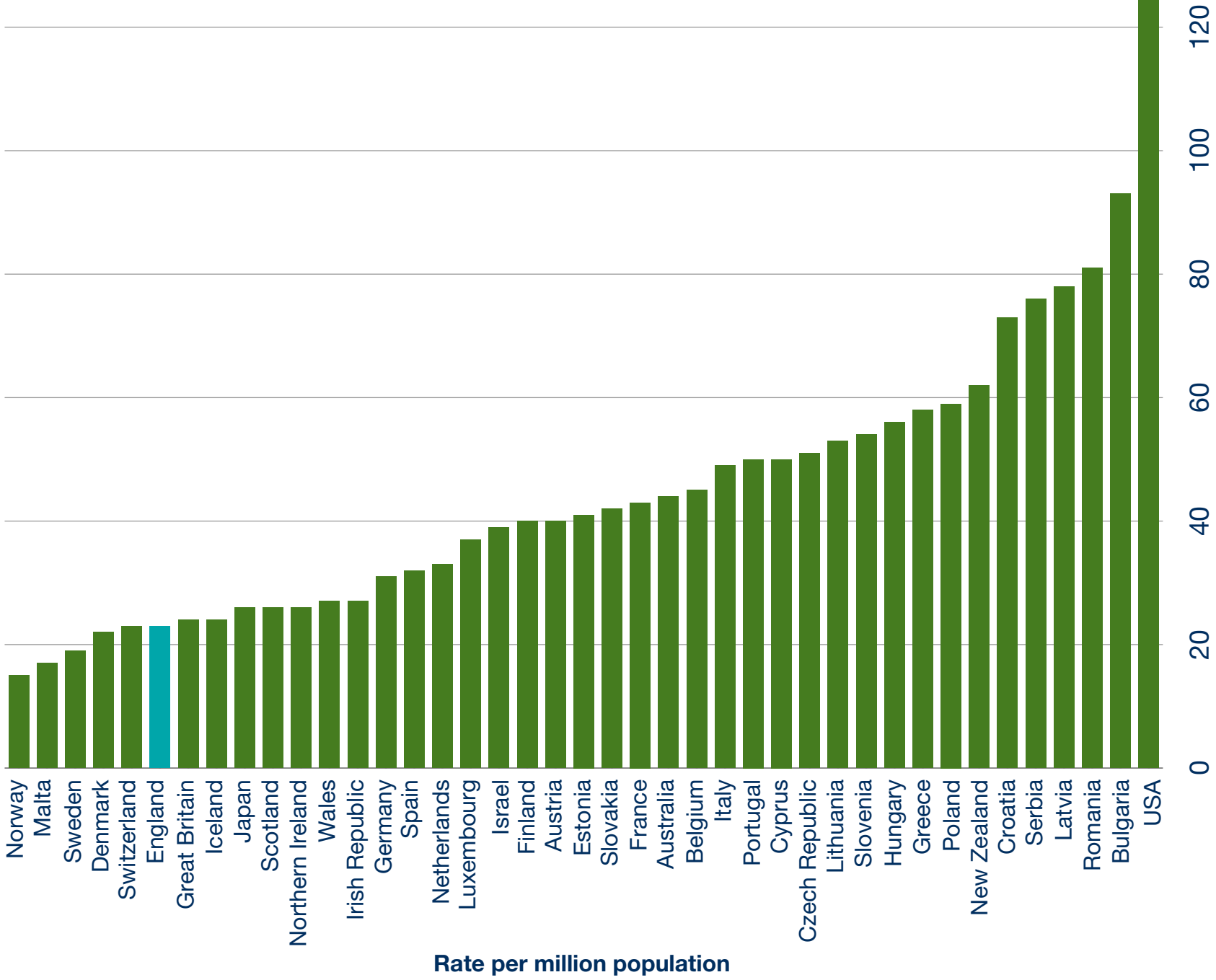
Our national road safety record stands the test of international comparison.

In 2021, the fatality rate by population on England's road network was 23 per million population. This is amongst the best performing road networks globally for which data is available (see Figure 5). Only Norway (15), Malta (17), Sweden (19) and Denmark (22) record lower fatality rates.

We are striving for further improvement. On the SRN this is reflected in our second road period's target to reduce the number of people killed or seriously injured by 50% by 2025 (from a 2005-2009 baseline average) and our long-term ambition of zero harm.



Figure 5: Road deaths per million population in 2021

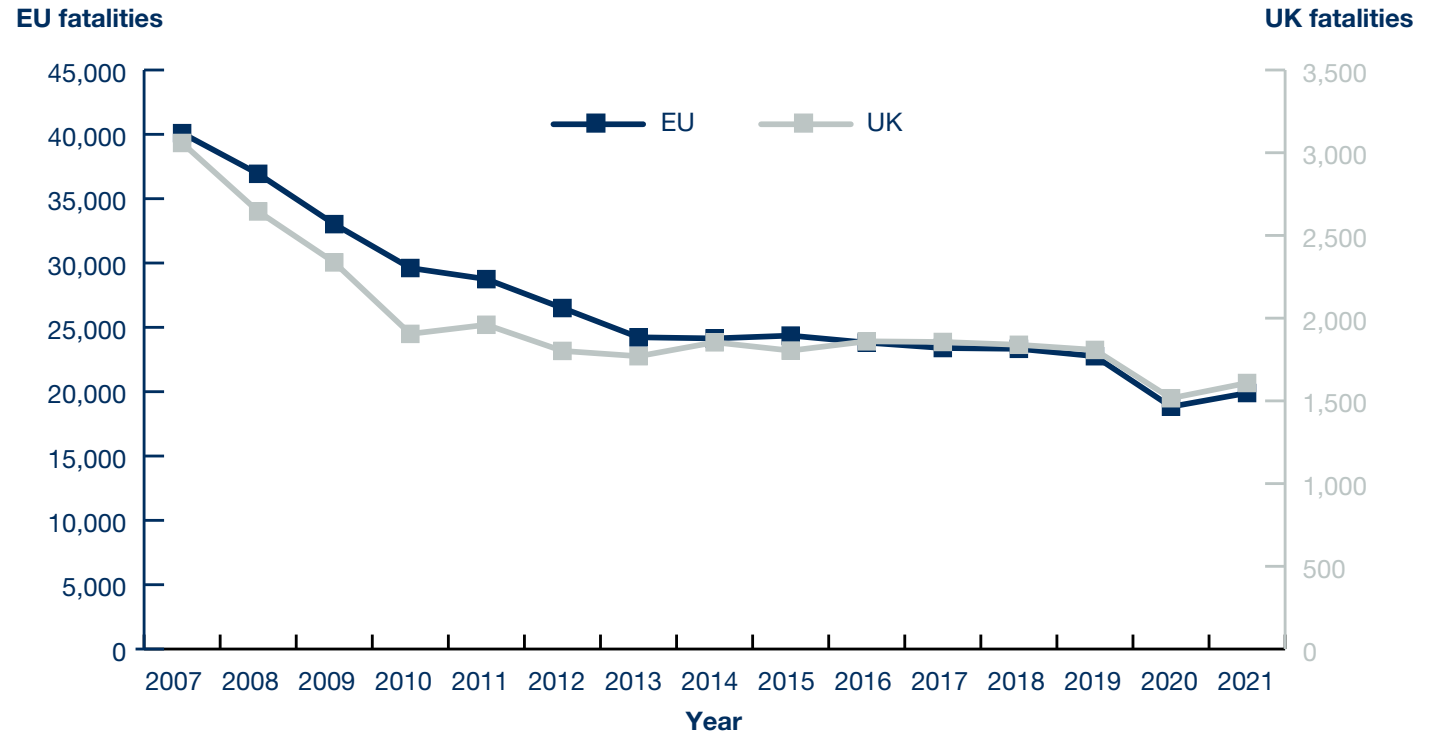


Source: Visualisation from National Highways. Data based on IRTAD (OECD), ETSC, EUROSTAT and CARE (EU road accidents database).

England remains one of the top performing countries internationally in terms of road safety.

Throughout the EU there have been significant reductions in road deaths since the 2005-2009 baseline period. The reduction across the EU (excluding UK roads) from 2007 to 2021 was approximately 50%. Over the same period, the UK reduction was approximately 47%. However, the corresponding reduction from 2010 to 2020 for EU and UK were 33% and 16% respectively. This indicates that following a significant reduction initially, the UK's rate of reduction is subsequently lower to that of the EU.

Figure 6: Road casualty fatalities in the UK compared to the EU



Source: European Road Safety Observatory – Annual statistical report on road safety in the EU, April 2022; and European Commission Annual Accident Report 2018

Summary

6



Safety is our top priority, and we are committed to maintaining a safe and reliable network for our customers. We continue to make significant progress in reducing the number of casualties on

the SRN and our roads are some of the safest in the world. We still have much work to do to reach our target of no one being killed or seriously injured on our roads.

The rate of reduction in casualties across all road types has slowed in recent years (2020 being the exception, due to the reduction in traffic volumes arising from COVID-19 travel restrictions). This slowing of progress is not just on the SRN but across other non-SRN roads in the country and across Europe. We will renew our focus on the areas where we can effect the most benefit.

As the report shows, there are opportunities for improvement across all road types, user groups and age groups. The greater opportunities for reducing the number of casualties on the SRN, however, will come from A-roads (61% of all KSIs) and focusing on the key groups such as car users, motorcyclists and older drivers.

Key definitions

7



Car – includes taxi/private hire car and minibus.

Casualty – A person killed or injured in a reported collision on a public road. Casualties are sub-divided into fatal, seriously injured and slightly injured.

Collision/accident/incident - The terminology used to describe collisions is important. The Department for Transport updated the terminology used in 2022 to refer to collisions in place of accidents. However, this report relates to 2021 data and therefore there may be some instances where the terms collision, accident and incident are used interchangeably.

Fatality – A person who has died from their injuries up to 30 days after the incident.

HGV – classed as Goods Vehicles where the mgw was over 3.5tonnes.

hmvm – Hundred million vehicle miles.

KSI – Killed or seriously injured. The number of people killed or seriously injured in a road traffic collision.

LGV – classed as Goods Vehicles where the mgw was equal to or under 3.5tonnes or unknown.

mgw – Maximum gross weight.

Serious injury/serious casualties
– People sustaining injuries requiring hospitalisation, or any of the following injuries whether or not the individual went to hospital: fractures, concussion, internal

injuries, crushing injuries, burns (excluding friction burns), severe cuts, severe general shock requiring medical treatment and injuries causing death 30 or more days after the incident.

Slight injury/slight casualty – People sustaining a minor injury such as a sprain (including neck whiplash), bruise or cut which is not judged to be severe, or slight shock requiring roadside attention. This definition includes injuries not requiring medical treatment.

SRN – Strategic road network. In England, the SRN is made up of motorways and trunk roads (the most significant A-roads). They are administered by National Highways, a government-owned company.

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