

Road Safety and Public Health Guide Update

March 2019

The original [Road Safety and Public Health guide](#)ⁱ was written RoSPA in 2014 with support from an advisory group comprising Duncan Vernon, RoSPA, Bristol City Council, Public Health England (PHE), Road Safety GB, Child Accident Prevention Trust (CAPT) and the Transport and Health Study Group.

There were four main recommendations from original report, all of which are still very relevant:

Healthy transport is the wider issue that links road safety with public health

The way we travel is a major determinant of how healthy people are. Road safety activities can be integrated with wider public health work by considering it alongside healthy transport and efforts to increase physical activity. Joint Strategic Needs Assessments (JSNA) should include road safety issues. There are opportunities to integrate the work of public health and road safety teams by developing mechanisms, such as joint funding of interventions. Relationships and the trust between the two teams must build over time.

Identify shared agendas between public health and road safety teams

Often the underpinning causes of poor health and injury are the same and should be identified as part of collaborative working. Public health and road safety are linked by factors related to the roads such as the speed and volume of traffic, which can cause injuries and prevent opportunities for healthy activity outside of the home. Social status is a large predictor of health and risk of traffic injury.

Identify the co-benefits that public health and road safety activities have on each other

Co-benefits describe the impact that an activity has beyond its primary aim. Where road safety and public health activities have wider impact, these are the co-benefits of that activity. To integrate road safety and public health, these co-benefits must be considered when planning and evaluating work. Many road safety activities can have a positive impact on other health issues. Sometimes road safety activities may also have an unintended negative impact on wider health.

Evidence can support joint working

Both public health and road safety teams have access to data and evidence. Sharing this can improve the effectiveness of actions and set evidence based objectives. Joint evaluations can identify whether activities are having an impact across a broad range of health issues. Greater use of already published guidance by organisations such as The National Institute for Health and Care Excellence (NICE) and World Health Organisation (WHO) can be used to identify effective actions.

Since the guide was published in 2014, local authorities across the country have been introducing a range of measures to reduce the risk and number of road casualties and to promote public health activity related to road use. This short update provides a progress update on some of the key activities. For example, local authorities across the country have introduced a range of road safety interventions, adopted a Safe System Approach, promoted walking and cycling, worked to improve the safety of the cycling environment and introduced 20mph limits and clean air zones.

This short update paper outlines some of the main changes in road safety policies and activities in recent years.

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Reported Road Casualties 2017

Although virtually all fatal road crashes are reported, a considerable proportion of non-fatal casualties are not, even when those involved require medical or hospital treatment. The real number of road casualties in Great Britain every year is likely to be substantially higher than the number of reported road casualties.

Apart from the human cost, road accidents cost billions of pounds and so preventing them saves billions as well as saving lives and injuries. Reported road accidents, including damage-only ones, cost around £17 billion a year (reported injury accidents £12bn and damage-only £5bn). If unreported injury accidents are included, this increases to about £35 billion.²

Since 2015, there have been changes to the police reporting systems, almost half of the forces in England have adopted a computer-based road collision and injury reporting system. This system known as CRASH has inbuilt validation systems to make it more accurate than the previous STATS19 system. As CRASH provides a more accurate method of assessing injury severity, a higher proportion of casualties are now being classed as 'serious' rather than 'slight'. The DfT issued a warning in 2017 that the data should be interpreted with caution due to changes in severity reporting. London has introduced its own reporting system, COPA (Case Overview Preparation Application) which has also led to a substantial increase in the levels of serious injury reporting.

In 2017, there were 24,831 seriously injured casualties in road traffic accidents reported to the police. However, assuming all police forces were using injury-based severity reporting systems, it is estimated that there were 27,288 serious injuries and 29,081 people killed or seriously injured in 2017.

In 2017, there were 144,369 slightly injured casualties in reported road traffic accidents, but assuming that all police forces were using injury-based severity reporting systems, it is estimated that there were 141,912 slightly injured casualties.

Figure 1: Reported road casualties by severity and road user type, 2017

Road user group	Killed	Serious	Slight	All
Car Occupants	787	8,894	90,401	100,082
Pedestrians	470	5,594	17,741	23,805
Motorcyclists	349	5,592	12,101	18,042
Pedal Cyclists	101	3,698	14,522	18,321
Other Road Users	86	1,053	9,604	10,743
Total	1,793	24,831	144,369	170,993

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High Risk Groups

Some road users are at higher risk than others, including young drivers, older drivers, at-work drivers, motorcyclists, pedestrians, pedal cyclists and children. When planning road safety activities and priorities, the links between road accidents and deprivation should be considered to ensure that inequalities are addressed.

Children

3% of road deaths were children in 2017. There were 48 child deaths, a 30% decrease from 2016. However, child fatalities have fluctuated between 48 and 69 a year between 2010 and 2017 with no clear trend. There were 15,721 child road casualties in 2017, the lowest year on record and a 2% decrease from 2016. It was 11% lower than the 2010-14 average.

Most child fatalities are pedestrians (22 in 2017) and car occupants (20 fatalities) because this is mainly how children travel on the road.

Young Adult Road Users

The number of 17 to 24 year olds killed in reported road traffic accidents decreased from 299 in 2016 to 279 in 2017. However, young drivers aged 17-24 are still over represented as they make up only 7 per cent of UK full driving licence holders yet are involved in just over 20 per cent of fatal or serious collisions in which they were the driver.

There were fewer young car occupants killed in 2017 (166 in 2017 against 179 in 2016), fewer motorcyclists (53 in 2017 against 61 in 2016) and fewer pedestrians (35 in 2017 against 42 in 2016).

The number of people in this age group decreased by 3% from the 2010-14 average, which may also partly explain the reductions.

Older Road Users (aged 60 years and over)

The population of this age group was 15 million, an increase of 8% compared with the 2010-2014 average and 18% compared with 2007. It had increased by 2% rise from 2016. There were 22,375 older casualties of all severities, a 4% decrease from 2016.

In 2017, 165 drivers over the age of 60 years were killed in road accidents, 1,351 were seriously injured and 8,433 slightly injured. Although the casualty trend for this age group is decreasing, it is decreasing more slowly than for other ages. The risk of being involved in a road accident increases after the age of 70 years, but up to that age, drivers are no more likely to cause a crash than to be the victim of another road user's mistake. However, drivers over 70 years, and especially over 80 years, are more likely to be at fault when they crash.

Overall there were 559 fatalities, a 5% rise from 2016 and a 13% rise from 2010-14 average. The number of fatalities aged 60 and over in reported road traffic accidents increased from 533 in 2016 to 559 in 2017. This was due to more older pedestrian deaths in 2017 (186 deaths in 2016 and 216 in 2017) and older motorcyclist deaths (36 in 2016 and 47 in 2017).

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The Main Causes

Almost all road crashes involve human error, ranging from simple mistakes to deliberately dangerous, illegal behaviour. There are usually a number of contributory factors, the most common of which are basic errors, such as failing to look properly, losing control of a vehicle, inappropriate speed and impairment or distraction. However, this does not mean that road users are solely responsible for preventing road casualties.

Poor Driving

Some road accidents are caused by poor driving, such as a driver or rider disobeying road signals and markings, following the vehicle in front too closely or driving aggressively, recklessly or in a hurry.

In 2017, 102 people were killed (7% of all road fatalities) and 3,326 injured (4% of all injury accidents) in an accident where a driver or rider had been driving aggressively. 249 people were killed (17% of all road fatalities) and 13,532 were injured (15% of all injury accidents) in an accident where the driver or rider involved was described as 'careless, reckless or in a hurry'³.

Inappropriate Speed

Inappropriate speed contributes to around 11% of all injury collisions reported to the police, 14% of crashes resulting in a serious injury and 24% of collisions that result in a death⁴. This includes both 'excessive speed', when the speed limit is exceeded but also driving or riding within the speed limit when this is too fast for the conditions at the time (for example, in poor weather, poor visibility or high pedestrian activity).

In 2017, 203 people were killed in crashes involving someone exceeding the speed limit and a further 136 people died when someone was travelling too fast for the conditions⁵.

Not Wearing a Seatbelt

Seatbelts are designed to retain people in their seats, and so prevent or reduce injuries suffered in a crash. They ensure that as little contact is made between the occupant and vehicle interior as possible and significantly reduce the risk of being thrown from a vehicle.

Seatbelts are designed to work as the key part of wider injury prevention measures and safety systems, such as airbags and head restraints, which will not be as effective in reducing the risk of injury if an occupant is not wearing a seatbelt.

Car occupants form almost 60% of all road casualties. In 2017, 100,082 people were killed or injured while travelling in cars, of these 68,290 (68%) were drivers.

Alcohol

In 2016, figures show that 230 people were killed and there were over 9,000 casualties in total in drink drive accidents⁶. Although the level of drinking and driving has dropped dramatically over the last three decades, over 200 people are still killed in drink drive accidents every year. Despite over 30 years of drink drive education and enforcement, over 40,000 people are still caught drink driving annually.

Often it is an innocent person who suffers, not the driver who is over the drink drive limit. In 2016, 100 pedestrians were killed or seriously injured by drink drivers, as were 390 car passengers. 40 children were killed or seriously injured by drink drivers that year⁷.

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In 2017, 325,887 roadside breath tests were carried out by the police, of which 44,893 drivers or riders (14% of those tested) failed or refused to take the test.⁸

Distraction

There have been a range of estimations about the number of accidents that are caused by, or contributed to, by driver distraction. It is hard to make an accurate estimate as accident databases are generally constructed from reports following an accident and it is probable that not every driver admits to being distracted or inattentive at the time of the accident.

Road accident data suggests that in 2017, 'distraction in vehicle' contributed to 2,823 accidents (3% of all reported road accidents) and 'distraction outside vehicle' contributed to a further 1,319 accidents (1% of all accidents)⁹.

Driving for Work

Police road accident data shows that every year almost 500 people are killed (almost one third of all road deaths), 5,000 seriously injured and more than 36,000 slightly injured in collisions involving drivers or riders who are driving for work. This includes other road users, as well as at-work drivers and riders themselves. In fact, 70% of those killed in a work-related journey are passengers, pedestrians and riders rather than the at-work drivers and riders.

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The Safe System Approach

There has been increasing focus on developing a [Safe System approach](#). This recognises that road crashes (for example, a car hitting a pedestrian at 40mph) can cause injuries that are higher than human tolerance to withstand. It seeks to modify roads and vehicles, and change behaviour, to minimise the risk of crashes occurring and to ensure that when crashes occur, the impacts are unlikely to result in death or serious injury. This means that injury prevention measures extend beyond trying to change individual behaviour and include changing vehicles, roads and vehicle speeds.

The Safe System seeks to modify roads and vehicles, and change behaviour, to minimise the risk of crashes and ensure that when they do occur, the impacts are unlikely to result in death or serious injury. This means that measures to prevent injuries extend beyond trying to change individual behaviour and include changing vehicles, roads and vehicle speeds.

One element of the Safe System is safer speeds. The Safe System aims to establish appropriate speed limits according to the features of the road, the function it serves and the physical tolerance of road users present. The setting of speed limits should also be determined by the protective quality of the road sections and vehicles in use rather than the behaviour of road users. The Safe System also works to enforce existing speed limits and to educate road users to ensure that they comply with speed limits.

In 2014, the Department for Transport (DfT) commissioned engineering consultancy firm Atkins to conduct an evaluation¹⁰ into signed-only 20mph limits without physical traffic calming measures based on 12 case study schemes in England and various comparable areas with a 30mph speed limit in place. The report was published in November 2018.

The study explored the enablers and barriers to implementing a successful 20mph speed limit scheme and found that early engagement and buy-in from relevant stakeholders, clear articulation of the scheme's rationale, objectives and outcomes and tailoring of schemes to the local circumstances are crucial to a scheme being accepted by the public. It had long been thought that most residents and drivers support 20mph schemes, and this study confirmed it. However, there was a concern amongst members of the public regarding a lack of enforcement of 20mph limits and a view that the chance of being caught exceeding the speed limit is very small.

Overall, the introduction of 20mph limits led to a small reduction in median speed (0.7mph in residential areas and 0.9mph in cities), but vehicles travelling at higher speeds before the change of speed limit reduced their speed more than those already travelling at lower speeds.

There is not yet enough evidence to conclude that in residential areas the introduction of 20mph limit had led to a significant change in casualty and collision rates, but this may change as more data becomes available. However, there was a small but statistically significant rise in reported levels of cycling and walking. 5% of residents said they were walking more and 2% said they were cycling more since the introduction of 20mph limits.

The Department for Transport¹¹ advise traffic authorities to keep their speed limits under review with changing circumstances, and to consider the introduction of more 20 mph limits and zones, over time, in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists.

It also advises that 20mph limits over a larger number of roads should be considered where mean speeds at or

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below 24mph are already achieved over a number of roads.

Embedding a Safe System approach is evident in the Department for Transport's [British Road Safety Statement](#) (and its [2018 Progress Report](#)), [Road Safety Management Capacity Review](#), [Highways England's safety performance framework](#) and [Transport for London \(TfL\) Vision Zero for London](#) and [Vision Zero Action Plan](#).

A recent report¹² recommended that the Government adopts performance indicators to help understand the processes that lead to crashes and recommended a set of performance indicators to measure progress.

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Public Health

Public Health England (PHE) also recognises the importance of the safe system approach as a proactive way of addressing road safety issues. A recent report published by PHE in conjunction with RoSPA and CAPT recommends key actions for reducing child road casualties¹³:

Children and young people have the right to safe roads.

The [document](#) provides a five year trend analysis of injuries and deaths on the roads of children and young people under the age of 25 years in England for the period 2012-2016. Based on police and hospital unintentional injury data, the document also sets out the evidence for preventative action.

The updated report showed that rates of children and young people killed or seriously injured in road traffic collisions had fallen by 16% since the 2008-2012 5 year period of the previous report. This included a 26% decrease among car occupants, 19% decrease among pedestrians, 8% decrease in cyclists, but a 1% increase in motorcyclists. Over the 5 year period, it equated to a total of 32,607 children and young people killed or seriously injured, around 5,500 fewer than the previous analysis, suggesting an average of 1,100 fewer per year. Deaths had also decreased since the last report, with a decrease of over 600 deaths across all road users over the five year period. This included a 35% decrease among car occupants, 21% in pedestrians and cyclists, and 10% in motorcyclists.

The report highlights that although this reduction is welcomed, we cannot be complacent. In 2017, there were 48 child deaths, down from 69 the year before. However, child fatalities have fluctuated between 48 and 69 over 2010 to 2017 with no clear trend. Using the five year trend data (2012-2016), on average every day more than 17 children and young people suffer a serious or fatal injury on our roads.

Local authorities across the country have been introducing a range of measures to reduce the number of casualties, and these measures have a positive effect locally. The document builds on this work, the evidence and sets out three key actions that can be taken by local authorities and their partners to further reduce the numbers of children and young people injured and killed. Drawing on what works in local areas, the document describes a four-step model to help build robust injury prevention strategies. The report highlights the need for more information to understand fully the wider costs and benefits of injury prevention. This will help local areas prioritise investments and is an issue which PHE will continue to work on with leading experts and organisations.

The document also identifies unintentional injuries as a major health inequality. Children and young people who live in more deprived areas are at a much greater risk than children from the most affluent. The report estimates that there would be around 810 fewer serious or fatal injuries to pedestrians annually, and 100 fewer serious or fatal injuries to cyclists, if all children and young people had a risk of injury as low as those in the least deprived areas.

The report concludes that a focus on the following three priority actions will have an important impact in reducing injuries and deaths.

1. Improve safety for children travelling to and from school

The largest numbers of child pedestrian injuries occur between 8am to 9am and between 3pm to 7pm. During these times there are approximately 16 deaths or serious injuries to children aged 16 and under every week.

Local authorities can work with schools to develop school travel plans that encourage active travel to and from school and address safety issues throughout the whole journey. School travel plans can be supported by road

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engineering measures to reduce vehicle speeds and activities to enforce traffic law. Safer cycling can also be supported by road engineering measures to separate pedestrians and cyclists from traffic.

In addition, careful consideration should be given to the periods between 15:00hrs-19:00hrs when children may be travelling for a wide range of purposeful and non-purposeful travel to clubs, play areas, religious centres etc.

The priority would be to encourage both safe and active travel before and after school.

2. Introduce 20mph limits and zones in priority areas as part of a safe system approach to road safety

Many local authorities are introducing 20 mph limit areas to reduce road risk, and encourage active travel, increase walking and cycling and improve air quality. Introducing 20mph limits and 20mph zones in priority areas can reduce vehicle speeds and thereby prevent injuries and reduce their severity.^{14 15, 16}. Lower vehicle speeds can also help to reduce health inequalities due to traffic injury.

The introduction of 20mph speed limits and zones should be supported with education and publicity, appropriate road engineering measures, and enforcement activities to make sure that road users know which roads have 20 mph speed limits, why, when they apply and that they are legal limits with which drivers should comply.

On roads where 20mph limits are not introduced, segregated infrastructure as part of a convenient walking and cycling network improves safety and encourages active travel.

The introduction of 20mph limits and zones and the safe system approach can be embedded in strategic documents such as the local transport plan (LTP), joint strategic needs assessment (JSNA) or road safety plan.

RoSPA's view is that to be effective 20mph speed limits need to be supported by street design that indicates that a lower speed is appropriate and that gives a clear message about the type of street they are driving on. They also need to be supported by measures, including and publicity campaigns to promote 20 mph limits and the importance of driving at safe speeds.

3. Action to prevent traffic injury and improve health works best when it is coordinated

There are many actions that are known to prevent traffic injuries. Often these can be ways of achieving other public policy goals and can improve other areas of public health. Actions to prevent traffic injury are therefore most effective when coordinated by local authorities with the efforts to encourage active travel and create liveable streets.

Strong local partnerships are better placed than a single agency to tackle the wide range of factors that cause these inequalities¹⁷.

Local partnerships can consist of voluntary organisations and communities, fire and rescue, police, schools and colleges, health services and businesses. The planning and evaluation of road safety activities should consider the impact on other health issues.

Safe and Active for All Ages: A National Strategy for England

From 2016-2018, RoSPA, together with many partners, worked on a project to produce a national strategy for England, which would serve as a call to action for a step-change in the delivery of accident prevention across the country.

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The document, launched in October 2018, is entitled [Safe and active at all ages: a national strategy to prevent serious accidental injuries in England.](#)

The strategy quantifies and addresses the different safety challenges faced across the whole life course, advocates a public health approach to accident prevention and shows how action by a wide range of local and national players could deliver reductions in accident rates and the associated injury burden. It recognises the links between accident prevention and other issues on the public health agenda and highlights how programmes that seek to reduce accidental injury can also support healthy activity and other indicators of wellbeing.



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Local Authorities

Most local authorities have a road safety team or at least a road safety officer. They provide professional expertise to identify the causes of problems and to help to identify, develop and deliver solutions to these problems. They do so through educational programmes, skills training e.g. cyclist and young driver training, and publicity campaigns and programmes to inform, raise awareness and to encourage positive and discourage negative behaviours by road users.

Local Highways Authorities also have road safety engineering teams who identify and implement road design and engineering solutions to road casualty problems in their areas. The road safety education and engineering teams should work together, as well as in co-operation with other agencies, such as the Police, Fire and Rescue Service and others.

Local Authority officers also share knowledge and experience with each other across the country, in many ways, including through [Road Safety GB](#), the [Chartered Institute of Highways and Transportation \(CIHT\)](#) and the [Road Safety Knowledge Centre](#).

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