

UK Road Safety

SEIZING THE OPPORTUNITIES

SAFER ROAD USERS



•PACTS is grateful to the Rees Jeffreys Road Fund and to the Road Safety Trust for their financial support for this project.

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Seizing The Opportunities

SAFER ROAD USERS

A Paper for PACTS by Tanya Fosdick, Dan Campsall, and Richard Owen, Road Safety Analysis Ltd

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This paper explores the challenges and priorities for achieving safer road users, and the opportunities identified in the UK Government's *Working Together to Build a Safer Road System – British Road Safety Statement* of December 2015. It is one of three papers in the PACTS project UK Road Safety – Seizing the Opportunities. The other papers address safer roads and safer vehicles.

Road Safety Analysis is grateful to the various people and organisations who were consulted in the course of compiling this paper. The views expressed in the paper, however, are those of the authors. They do not necessarily reflect the views of PACTS, the Road Safety Trust or the Rees Jeffreys Road Fund.

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Summary

This paper examines the major issues related to the 'Safer Road Users' pillar of a 'Safe System' approach. It identifies the road user groups which most warrant attention and the behaviours that contribute most to fatal and serious casualty collisions. It then considers whether the behavioural interventions proposed in the Government's 2015 Road Safety Statement address the major issues.

Analysis of fatal and serious collisions shows that there are various ways of interpreting the casualty data and the priority groups. However, it is clear that:

- In order to minimise total casualties – towards zero – car occupants are the key road user group in most places since they form the largest casualty group and cars are the vehicle type involved with most killed and seriously injured casualties (KSI) . Young drivers and their passengers are a key sub-group.
- In order to support active travel modes and reduce inequalities, more emphasis is needed on the safety of vulnerable modes. This still implies a strong focus on drivers of cars and, to a lesser extent, of goods vehicles. HGVs feature more highly if preventing fatalities is the priority.

The behaviours contributing most to KSIs (according to police data) are

- Inattention, carelessness and failure to look
- Excessive or inappropriate speed
- Alcohol.

Different data sources and methods of research or collision investigation indicate different problem behaviours and the degrees to which they contribute to KSI casualties. This should be of concern in relation to targeting the most serious issues. More detailed studies suggest that mobile phone and drug use are significant. Fatigue is also an issue. Though not behaviours in themselves, ill-health and inexperience contribute substantially to problem behaviours. Driving for work is a significant contextual factor.

Often this behaviour is clearly illegal and can be partly tackled through enforcement (speed, drink-driving, mobile phone use); other behaviours are more attitudinal (carelessness, inattention and aggressiveness) and may be amenable to behavioural change techniques designed to persuade road users to alter how they act on the roads. Enforcement needs to be supported by other measures in a systems approach. The paper summarises how education and enforcement should be used within a systematic approach and models such as the Behaviour Change Wheel.

The paper considers the Safer Road User actions in the British Road Safety Statement and assesses the extent to which the behaviours contributing most to KSI casualties are addressed. It finds that the actions outlined in the Statement cover a broad spectrum of road user groups and behaviours. However, more detail would be needed to assess the extent to which the actions will deliver significant casualty reductions. Despite the broad scope of the actions, it says little about levels of police enforcement, which are reducing. There are also some gaps, notably measures to address drink driving and indicators to assess progress.

Safer Road Users

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Introduction

Safe System

This paper examines the issues related to the 'Safer Road Users' pillar of a 'Safe System' approach. The World Bank advocates that all countries adopt a 'Safe System' approach to reducing road casualties by recognising:

- We can never entirely eradicate road collisions because there will always be some degree of human error;
- When collisions do occur the human body is inherently vulnerable to death or injury; and
- Because of this, we should manage our infrastructure, vehicles and speeds to reduce crash energies to levels that can be tolerated by the human body.¹

Safe System approaches generally include five pillars for managing road safety, which include Safer Road Users alongside Road Safety Management; Safer Roads and Mobility; Safer Vehicles and Post Crash Response. These five pillars are used as a structure in the British Road Safety Statement.

For the Safer Road Users pillar, the major challenges and opportunities identified in relation to road safety in Britain include:

Evaluating the most effective driver education interventions that can be incentivised by both the state and industry, improving compliance with current rules, and promoting safer driving behaviours and equipment choices.²

This paper will look at the issues and challenges related to reducing risk to road users and will examine actions that are actually being undertaken in addition to what could be done to reduce road user risk further.

Determining priorities

The first questions to answer when determining where to prioritise actions are:

- "What is going wrong?"
- "Who is doing it wrong?"

With the answers to these questions, behavioural interventions can start to be designed. Whilst these questions might appear simple, the factors involved in collisions are complex. One of the first issues is how to interpret the data in order to prioritise actions.

MAST Online³ has been used here to extract casualty and vehicle data, and the contributory factors, as recorded by the police using STATS19 collision forms and collated by the Department for Transport.

Analysis of road user casualties

Casualties by road user group

Table 1 and Figure 1 show the number of casualties reported to the police in the most recent 10 years for which data are available. There has been a 45% reduction in the number of fatal casualties in this

¹ *Working Together to Build a Safer Road System: British Road Safety Statement*, (Department for Transport, London, 2015), p.14

² *ibid.* p.15

³ www.roadsafetyanalysis.org



time period, with a 23% reduction in serious casualties. However, most of this reduction took place in the first five years. There has been no significant reduction in KSI casualties since 2010.

Table 1 - Numbers of reported road casualties in Great Britain, 2006-2015

	Fatal	Serious	Slight	Total
2006	3,172	28,673	226,559	258,404
2007	2,946	27,774	217,060	247,780
2008	2,538	26,034	202,333	230,905
2009	2,222	24,690	195,234	222,146
2010	1,850	22,660	184,138	208,648
2011	1,901	23,122	178,927	203,950
2012	1,754	23,039	170,930	195,723
2013	1,713	21,657	160,300	183,670
2014	1,775	22,807	169,895	194,477
2015	1,730	22,144	162,315	186,189

Figure 1 – Numbers of reported road casualties in Great Britain, 2006-2015

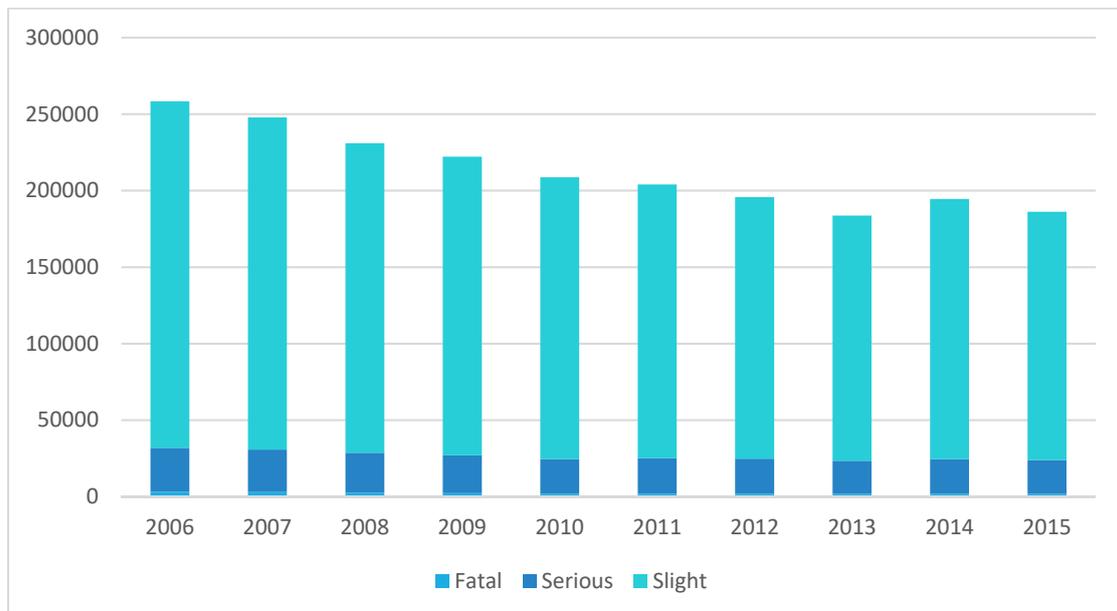


Figure 2 shows the proportions of killed or seriously injured (KSI) casualties in Great Britain between 2011 and 2015 by road user type and class. These proportions are based on total numbers and do not account for exposure. So, whilst the numbers show the extent of the issue in terms of absolute casualties, it does not indicate whether the road user is at heightened risk, given the miles driven, ridden or walked. Pedestrians and cyclists have a higher casualty rate per mile travelled while motorised users tend to make much longer journeys.

The chart shows that over a third of the KSI casualties are car occupants, with just under a quarter being motorcyclists and another quarter as pedestrians. Unsurprisingly, car occupants represent the largest number of KSI casualties because of the frequency of use of this mode. However, vulnerable road users (pedestrians, pedal cyclists and motorcyclists) account for a larger percentage together. If deaths only are measured, the share for car occupants rises to almost 50%, with corresponding falls for vulnerable road users.

The picture is somewhat different in large urban areas, particularly in London where car occupants form less than 20% of KSI casualties.

Figure 2 - Killed or Seriously Casualties by Casualty Class and Road User Type (2011-2015)

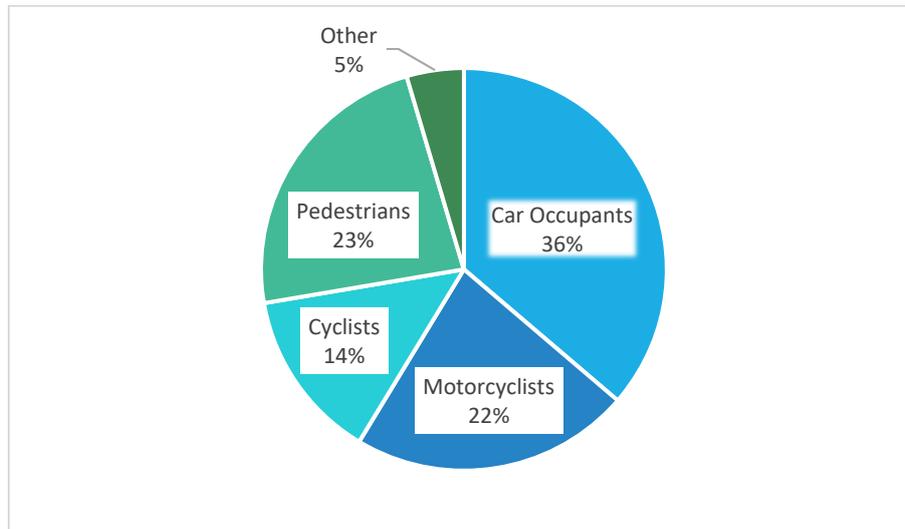


Figure 3 shows how the different KSI casualty types have changed since 2006, using a 100-based index to compare each year with the number of casualties in 2006. It shows that KSI car occupant casualties have reduced by the greatest amount since 2006, with similar downward trends for pedestrian and motorcyclist casualties. There have, however, been increases in KSI cyclist casualties since 2006. Therefore, whilst cyclists represent 14% of the total KSI casualties, with rising numbers, this road user group could be seen as a priority for action. Once again, this is not accounting for exposure, however.

Figure 3 - Changes in KSI casualties since 2006

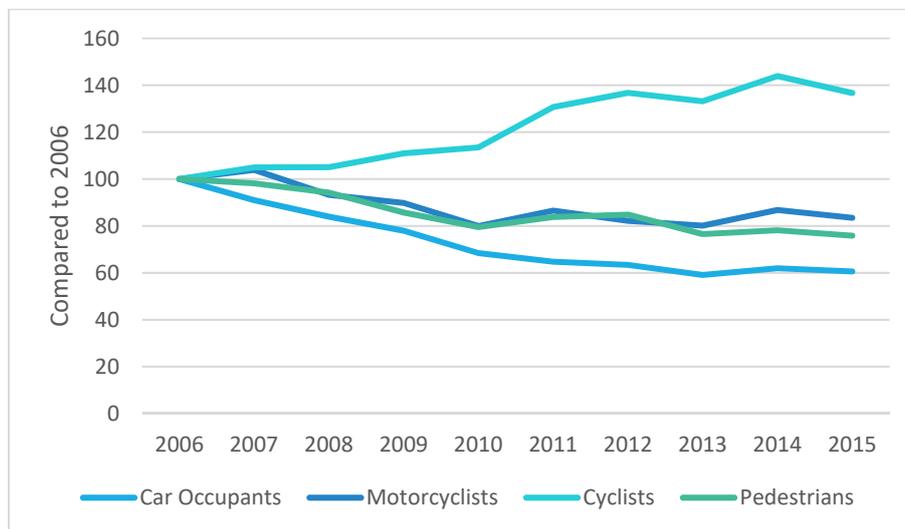
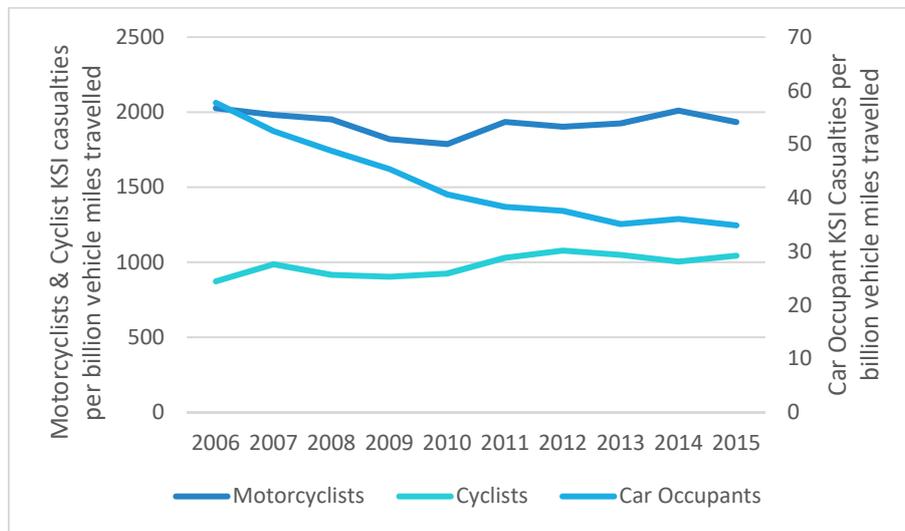


Figure 4 takes exposure into account. It shows the number of KSI casualties over time against billion vehicle miles travelled for that mode. On average between 2011 and 2015, there were 36 car occupants who were killed or seriously injured per billion vehicle miles travelled and this rate has decreased over time. There were 1,941 KSI casualties on motorcyclists per billion vehicle miles travelled on average, with little change in this rate over time. With cyclists, the average rate of KSI casualties is 1,041 per billion vehicle miles and this has increased slightly over time. Despite the disparity in casualty rates, the overall likelihood of being injured in a car is greater. Car journeys tend

to be much longer than pedal cycle journeys and average personal annual mileage travelled by car far exceeds that by pedal cycle for most people.

Figure 4 - KSI Casualties per billion vehicle miles travelled



Analysing road user groups according to age can also highlight risk. Figure 5 shows the proportions of KSI casualties in Great Britain by age group (after taking into account population figures by age). It is calculated by comparing the proportions of casualties in each of the age groups against the proportions of each age group in the British population. Young adults, aged 16 to 24 years, are at increased risk of road injury, regardless of mode. ‘Adult Mid’ are those casualties aged between 25 and 64 years old, whilst ‘Adult Senior’ are those aged 65 years and over. Child casualties are those aged under 16 years.

Figure 5 - Proportions of Killed or Seriously Injured Casualties – By Population (2011-2015)



Figure 6 - Proportions of Killed or Seriously Injured Casualties – Populations and Vehicle Types (2011-2015)



Combining the proportions of casualties by age group and population and the proportions of casualties by vehicle type presents a different picture, as shown in Figure 6. It is calculated by determining the percentages of each age group who were injured as casualties in each mode. These proportions are then combined with the percentage of the population each age group represents to get understand how mode, age and population affect casualty representation.

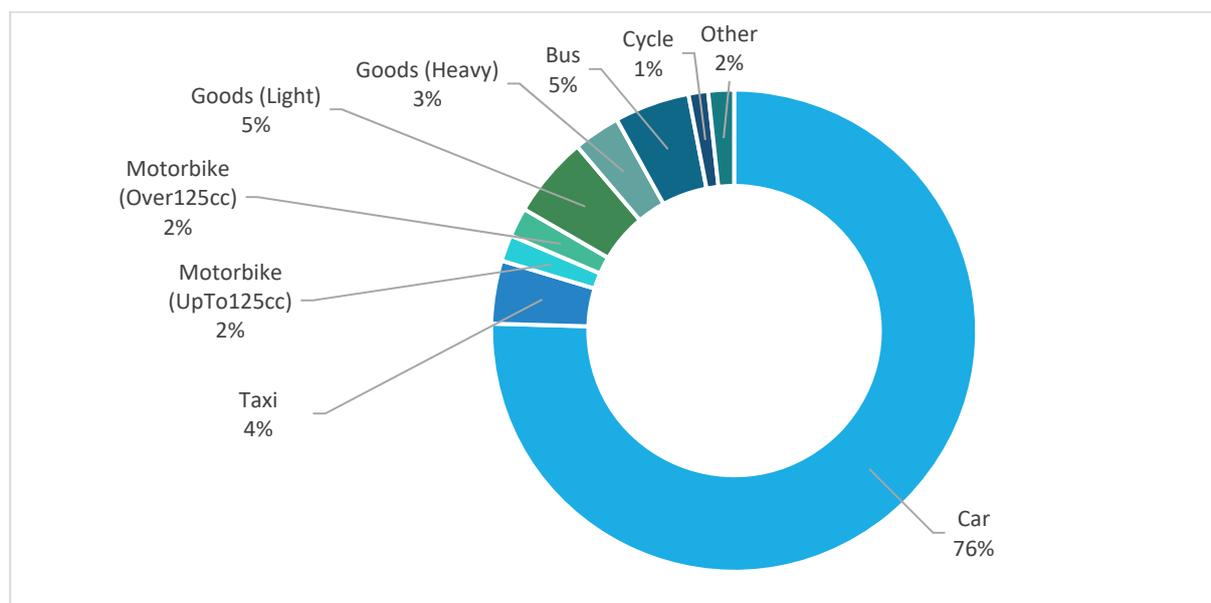
There were 5,727 young riders of small motorcycles (up to 125cc) who were killed or seriously injured in those 5 years, however, given the population rates for young people and the numbers of KSI casualties on smaller motorcycles, this group is over-represented.

Vehicles in collision with vulnerable road users

Without considering blame, it is straightforward to review the relationship between vulnerable road users and the vehicles they are in collision with. For vulnerable road users such as pedestrians, cyclists, horse riders and motorcyclists, we can review how those casualties were injured with respect to the colliding vehicles.

Pedestrians

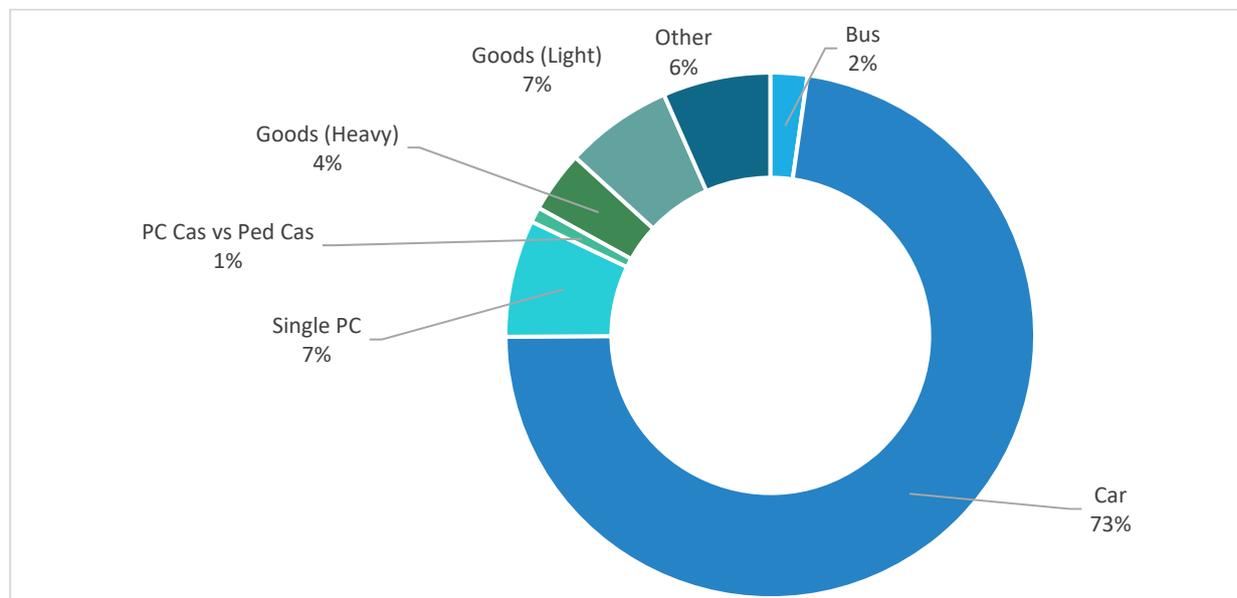
Figure 7 – Type of related vehicle for KSI pedestrians (2011-2015)



For injured pedestrians, the vehicle most commonly associated with the collision is a car with 76%. Buses, light good vehicles and taxis account for between four and six percent each. Only around one percent of injured pedestrians are involved in a collision with a pedal cycle. Injuries not involving a vehicle, such as trips and falls, are not recorded in STATS19.

Pedal Cyclists

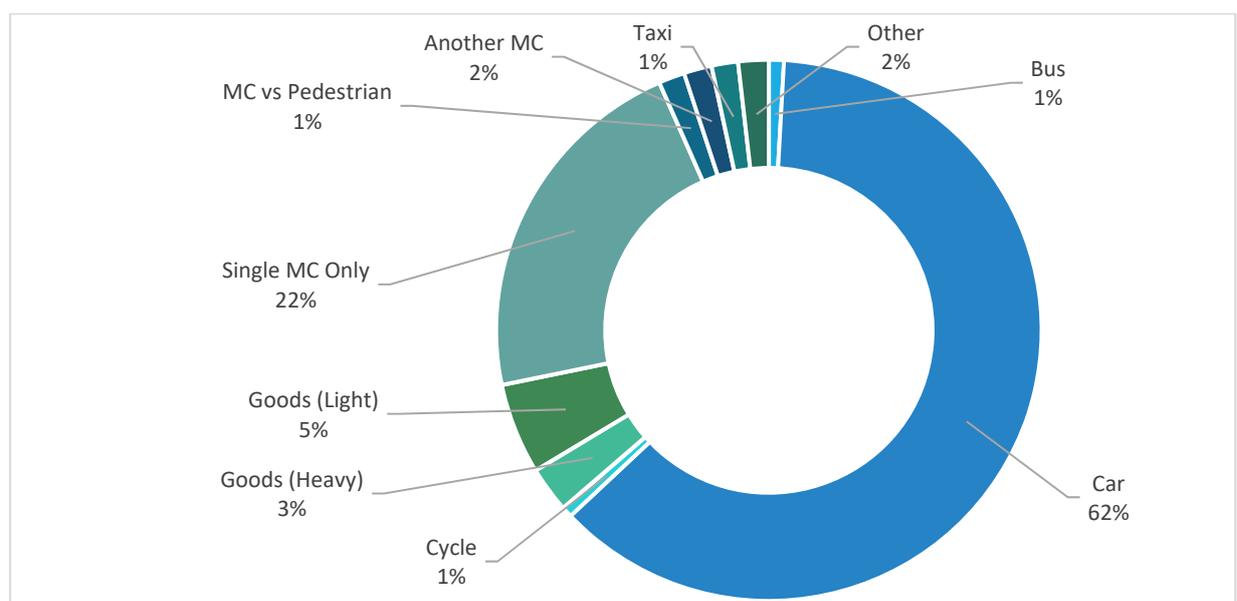
Figure 8 – Type of related vehicle for collisions involving KSI cyclists (2011-2015)



Injured cyclists are involved in collisions with cars most frequently, accounting for 73% of involved vehicles. Most other categories of vehicle appear insignificantly within the statistics although light goods make up seven percent of involved vehicles. It is worth noting that in seven percent of cases only a pedal cycle is involved. This is believed to be underreported. Looking at fatal collisions involving pedal cyclists reveals that 18% of these incidents involved a heavy goods vehicle.

Motorcyclists

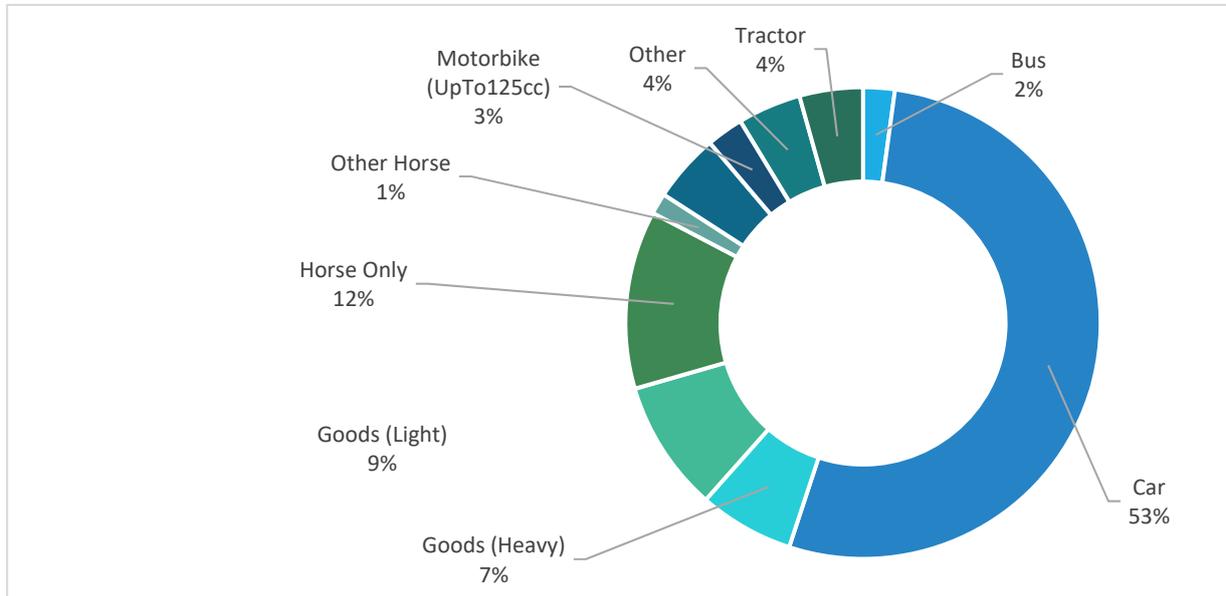
Figure 9 – Type of related vehicle for collisions involving KSI motorcyclist casualties (2011-2015)



The figures for motorcyclist casualties show that significantly, 17% of collisions involve only the motorcycle, much higher than for other VRU groups. Other than cars, only light goods vehicles appear with any frequency out of the remaining vehicle groups.

Horse riders

Figure 10 – Type of related vehicle for collisions involving KSI horse riders (2011-2015)



Collisions involving injured horse riders are not prevalent within the statistics but it is worth noting that the involved vehicles are quite different than for other vulnerable road users. Cars appear much less frequently than in collisions with other vulnerable road users, but still make up a majority of the involved vehicles. Goods vehicles and tractors appear much more frequently than in other VRU collisions.

Target user groups

The analysis shows that there are various ways of interpreting the casualty data and therefore the priority groups can differ accordingly:

- Targeting absolute numbers of KSI casualties:
 - Car occupants
 - Pedestrians
 - Motorcyclists
- Targeting groups experiencing increases or no change in KSI casualties:
 - Cyclists
 - Motorcyclists
 - Pedestrians
- Targeting vehicle types involved in high numbers of KSI collisions with vulnerable road users:
 - Cars
 - Light goods vehicles
 - HGVs
- Targeting high numbers of KSI casualties compared to casualty rates per miles travelled:
 - Motorcyclists
 - Cyclists
- Targeting high numbers of KSI casualties as a result of total miles travelled:

- Car occupants
- Targeting by age compared to population figures:
 - Young (16 to 24 years old)
- Targeting by high numbers of KSI casualties compared to driver/rider age and proportion of vehicle type:
 - Young riders of small motorcycles
 - Young car drivers
 - Adult riders of large motorcycles

However, it is clear that:

In order to minimise total casualties – towards zero – car occupants are a key road user group since they form the largest casualty group and cars are the vehicle type involved with most KSI collisions. Young drivers and their passengers are a key sub-group.

In order to support active travel modes and reduce inequalities, more emphasis is needed on the safety of vulnerable modes. This still implies a strong focus on drivers of cars and, to a lesser extent, of goods vehicles. HGVs feature more prominently if fatalities are the priority.

Analysis by behaviours

Behaviours by road user group

Whilst there are various ways to answer “who is doing it?”, there are key behaviours that contribute significantly to casualties, which are common across the target road user groups.

The main sources of information on behavioural factors contributing to casualties are as follows:

- Contributory factors (CFs) recorded by the police in STATS19 data;
- In-depth collision studies, such as On the Spot and RAIDS (Road Accident In-Depth Study), which collect information at the scene of collisions and data from retrospective investigations;
- Detailed studies into specific behaviours and casualty types, such as use of mobile phones and drink drive casualties.

Table 2 shows the most commonly assigned contributory factors (CFs) which are related to road user behaviour and which were assigned in police attended collisions where at least one CF was assigned. These were for fatal collisions occurring between 2011 and 2015. Only CFs for fatal collisions have been shown for this analysis to allow a comparison with other data sources, namely toxicology data for road fatalities from coroners and procurators fiscal. The factors reflect the reporting officer’s opinion at the time of reporting and may not be the result of extensive investigation. Participants can be assigned up to six CFs so the numbers relate to the percentage of drivers receiving that CF, not the total number of drivers involved. The percentages in the final column are based on all drivers who had received any CF.

In total, 57% of drivers involved in fatal collisions were thought to have contributed in some way. The table shows that the most commonly assigned CF is ‘failed to look properly’ and this was assigned to 2,115 drivers. The next three CFs are all related to speed: ‘careless, reckless or in a hurry’, ‘exceeding the speed limit’ (accounting for 14% of all drivers receiving a CF in a fatal collision) and ‘travelling too fast for conditions’. The table shows that there were 665 drivers who were thought to have contributed to a fatal collision between 2011 and 2015 by being impaired by alcohol. It should be noted that the use of this contributory factor is subjective and does not necessarily suggest that the driver was over the alcohol limit (but was impaired enough to have contributed). Furthermore, a



breath test may not have been taken at the time the collision form was completed, due to the driver in question having already died or being too severely injured for a sample to be taken. The second provisional estimate for 2015 for people killed in collisions in Great Britain where at least one driver was over the drink drive limit is 220. DfT states, however, that “Due to uncertainties in estimates, fatalities should be regarded as having remained unchanged since 2010.”⁴

Table 2 - Behaviour-related CFs of drivers in fatal collisions, attended by a police officer (2011-2015)

Contributory Factor (CF)	Total Number of Drivers	Percentage of All Drivers Receiving any CF
Failed to look properly	2,115	28%
Careless, reckless or in a hurry	1,449	19%
Exceeding the speed limit	1,113	14%
Travelling too fast for conditions	913	12%
Impaired by alcohol	665	9%

Table 3 shows the contributory factors assigned to parties involved in fatal or serious collisions (FSC) involving motorcycles between 2011 and 2015. For riders of small motorcycles (up to 125cc), 68% of those who were in police-attended FSCs received at least one CF. This compares to 59% of the other drivers in those same collisions. Once again, ‘failed to look properly’ is the most commonly attributed CF, with inexperience a particular issue for the riders and both parties reported as ‘careless, reckless or in a hurry.’ Speed features in the top five for both types of motorcycle and is often underreported as a factor.

Table 3 - Contributory factors in police attended motorcyclist FSC - CFs for motorcyclists and other parties (2011-2015)

Up to 125cc Motorcycles (FSCs)				Over 125cc Motorcycles (FSCs)			
Top 5 CFs of small motorcyclists		Top 5 CFs of other vehicles		Top 5 CFs of large motorcyclists		Top 5 CFs of other vehicles	
Failed to look properly	24%	Failed to look properly	71%	Failed to look properly	20%	Failed to look properly	68%
Learner or inexperienced rider	23%	Careless, reckless or in a hurry	17%	Careless, reckless or in a hurry	17%	Careless, reckless or in a hurry	16%
Careless, reckless or in a hurry	18%	Disobeyed ‘Give way’ or ‘Stop’ sign	5%	Travelling too fast for conditions	12%	Fatigue	7%
Travelling too fast for conditions	10%	Learner or inexperienced driver	2%	Exceeding the speed limit	6%	Disobeyed ‘Give way’ or ‘Stop’ sign	4%
Exceeding the speed limit	8%	Following too close	2%	Learner or inexperienced rider	5%	Learner or inexperienced driver	2%

The pattern is similar for riders of larger motorcycles (over 125cc) where 70% of the riders and 55% of the other drivers received at least one CF. Speed plays a part for the motorcyclists and fatigue features for other drivers.

⁴ Department for Transport, *Reported road casualties in Great Britain: Estimates for accidents involving illegal alcohol levels: 2015 (second provisional)*, (2nd February 2017)

Overall, the FSCs involving motorcyclists suggest that inattention, skills and speed are all target behaviours. Additionally, visibility could be an issue, with other drivers failing to comply with Give Way and Stop signs. Of all the collisions involving motorcycles in the UK in 2015, 68% were at a junction. Analysis of collision data shows that these incidents have different characteristics to other classes of road users with junction collisions including ‘looked but failed to see’ incidents.⁵ Motorcyclist and cyclist groups have termed it the SMIDSY problem (‘Sorry mate I didn’t see you’).

Table 4 - Contributory factors in police attended cyclist FSCs - CFs for cyclists and other parties (2011-2015)

Cyclists (FSCs)			
Top 5 CFs of Cyclists		Top 5 CFs of other vehicles	
Failed to look properly	42%	Failed to look properly	45%
Careless, reckless or in a hurry	16%	Careless, reckless or in a hurry	17%
Cyclist entering road from pavement	12%	Disobeyed ‘Give way’ or ‘Stop’ sign	5%
Cyclist wearing dark clothing at night	6%	Aggressive Driving	2%
Travelling too fast for conditions	6%	Travelling too fast for conditions	2%

Table 4 shows the contributory factors assigned to parties in cyclist FSCs. For cyclists in FSCs which were attended by a police officer, 55% were assigned a contributory factor. Conversely, 68% of the other drivers in a FSC involving a cyclist received a contributory factor. There are particular cycling-related behaviours which emerge as targets to reduce FSCs, including unpredictable behaviour and visibility. In a study examining cycling casualties between 2005 and 2007, it was found that children were most likely to be assigned the CF related to entering the road from the pavement (34% of FSC involving children). ‘Loss of control’, ‘dark clothing being worn at night’ and ‘travelling too fast for conditions’ were more common factors in fatal collisions (being reported in twice as many fatal as serious collisions).⁶ For drivers, recklessness, carelessness and inattention around cyclists appear to be issues. Oddly, the speed of the motor vehicle rarely features as a contributory factor.

Table 5a - Contributory factors in police attended young driver FSCs - CFs assigned to young car drivers in FSCs

Young Car Drivers (FSCs)	
Top 5 CFs of Young Car Drivers	
Failed to look properly	28%
Careless, reckless or in a hurry	22%
Travelling too fast for conditions	16%
Learner or inexperienced driver	14%
Exceeding the speed limit	14%

Table 4a shows the contributory factors of young car drivers in FSCs which were police attended. Inexperience, inattention and speed are key target behaviours for this user group. Recklessness could be related to over-confidence – workshops investigating the impact of young driver attitudes on their driving found that for many, driving ability is seen as a matter of natural talent. Additionally, some

⁵ Department for Transport, *Reported Road Casualties in Great Britain: 2015 Annual Report*, (2016)

⁶ Knowles, J., Adams, S., Cuerden, R., Savill, T., Reid, S. and Tight, M., *Collisions involving pedal cyclists on Britain’s roads: establishing the causes*, (TRL report PPR445, Crowthorne, 2009)

emphasised the extent to which their own behaviour was influenced by the need to build and maintain a particular image and identity for themselves.⁷

Table 6 - Contributory factors in police attended pedestrian FSCs - CFs for pedestrians and other parties (2011-2015)

Pedestrians (FSCs)			
Top 5 CFs of Pedestrians		Top 5 CFs of related vehicles	
Failed to look properly	74%	Failed to look properly	48%
Careless, reckless or in a hurry	33%	Careless, reckless or in a hurry	17%
Failed to judge vehicle's path or speed	24%	Exceeding the speed limit	5%
Crossing road masked by stationary or parked vehicle	19%	Aggressive Driving	5%
Impaired by alcohol	16%	Travelling too fast for conditions	5%

Table 6 shows the contributory factors assigned in pedestrian FSCs. For pedestrians, 75% of them received at least one CF, suggesting that the police thought that three-quarters of the pedestrians contributed in some way. For the other drivers and riders in pedestrian FSCs, 48% received at least one CF and these tended to be inattention and speed-related.

Other sources of information about causes of collisions

Although STATS19 data tends to be the cornerstone of our assessment of collision causation, particularly for local authorities, it is not suited to identifying certain behavioural factors, such as fatigue, ill-health, pressure from employers, etc. These require smaller-scale, specialist, in-depth analyses that offer a greater understanding of risk. Where these are undertaken, they tend to indicate a somewhat different picture. Some notable examples are given here:

- Based on detailed investigation by the police and coroners, the DfT estimates that drivers who have exceeded the legal drink-drive limit are involved on some 13% of fatal casualty collisions – some 240 deaths per annum in GB. This is higher than the STATS19 CFs suggest.
- The On The Spot (OTS) studies⁸ for DfT, in which detailed information is collected about the crash and the site, indicate that inappropriate speed is a factor in a far higher number of cases. For STATS19 CF307 (travelling too fast for conditions), OTS found this to be present for 8.7% of injury collisions compared to 2.9% of matched events in STATS19. For STATS19 CF306 (exceeding speed limit), OTS found this to be present for 4.2% of injury collisions compared to 1.4% of matched events in STATS19.⁹
- This level of under-reporting of injudicious actions is seen elsewhere, notably with mobile phone and drug use. STATS19 records only 0.34% for all drivers as contributing to a crash through their use of a mobile phone but this was found to be present in 2.47% of collisions in the RAIDS database.¹⁰ Similarly, drug use is only recorded as a factor for 0.34% of drivers but the same RAIDS study showed that for male car drivers it was much higher at 1.49%.

⁷ Christmas, S., *The Good, the Bad and the Talented: Young drivers' Perspectives on Good Driving and Learning to Drive*, (Department for Transport, Road safety Research Report No. 74, 2007)

⁸ Replaced by Road Accident In-Depth Studies (RAIDS)

⁹

<http://webarchive.nationalarchives.gov.uk/20120606181145/http://assets%2E%80%8B.dft.gov.uk/publications/the-characteristics-of-speed-related-collisions/rsrr117.pdf>

¹⁰ <https://trl.co.uk/sites/default/files/PPR808%20-%20The%20methodology%20and%20initial%20findings%20for%20the%20RAIDS%20programme.pdf>

- Drawing on a range of research sources, a report for PACTS found that health issues contributed much more prominently in collisions than was generally recognised. Long-term health factors such as physical or cognitive impairment account for 6% of all fatal crashes, while fatigue is a factor in 3%.¹¹
- About 30% of all reported casualties involve driving for work.¹² Whilst not necessarily a direct contributory factor, studies have found drivers on work journeys have a higher collision rate than drivers on personal business. Time pressures, fatigue, excessive mileages, stress or poor safety cultures may be contributory factors. These will rarely be identified by the police, even in the most serious cases; and the HSE are unlikely to investigate.

The main contributory factors – summing up

The police reports of contributory factors related to road user behaviour clearly indicate that inattention/carelessness and excessive/inappropriate speed are the most problematic behaviours. Inexperience is also noted for young riders and drivers which may also be noted as carelessness or excessive speed. To a much lesser extent, alcohol and fatigue also feature.

The more detailed studies indicate that speed and injudicious actions are indeed major contributors to collisions but that alcohol, drugs and health factors are more prevalent than STATS19 reporting is able to show.

The disparities in the types and frequency of contributory factors identified in STATS19 compared with those identified in more detailed studies are of concern. It may mean that attention and resources are not being targeted at the most critical factors.

Solutions

The role of behavioural interventions

Safe road users is one of the elements in a Safe System approach. All road users are expected to comply with regulations and to take reasonable responsibility for their own safety. The model also says however that people make mistakes and that shared responsibility is the key to strengthening all parts of the system.

With varying degrees of efficacy, unsafe or risky behaviours can be tackled by behavioural interventions, such as education, training and enforcement. They can also be reduced or the consequences mitigated through improved road engineering, speed management or vehicle design. This paper considers behavioural interventions.

- There is much debate about the role and effectiveness of education, including publicity campaigns, and training. Education can raise awareness and reinforce positive behaviours. It can also be a valuable precursor to enforcement actions. Whilst education on its own may not always directly lead to safer behaviour, it needs to be seen as a necessary part of wider approach. Box 1 sets this out.
- Training is intended to provide the road user with new or improved skills to enable safe mobility – for example learning to drive a car or ride a motorcycle. It will also, normally, include messages about safe user attitudes and behaviours, though these may not be taken up by the learner.

¹¹ *Fit to Drive?* PACTS 2016 <http://www.pacts.org.uk/2016/03/fit-to-drive/>

¹² Transport Safety Commission, *UK Road safety. Who is responsible?* 2015 http://www.pacts.org.uk/wp-content/uploads/sites/2/TSCResponsibility_LowRes%20COMPLETE%20FINAL.pdf



- Enforcement can be shown to be an effective intervention to achieve compliance with safety regulations and to reduce casualties. Levels and certainty of enforcement actions are more important than the severity of penalties.



Behavioural Interventions (Box 1)

Behaviour does not occur in a vacuum, it occurs within constantly evolving systems and contexts. This gives rise to a need to move beyond just driver centric approaches, which are all about education – there is a need for more systematic thinking about the behaviour of road users.

Recent years have seen the development of more systematic approaches to the design of behavioural interventions; synthesising research from a range of health domains to understand applicable methods. Recognising that there are a number of actors, intervention functions and policy levers that can interact to influence different aspects of road user behaviour is at the heart of this more systematic approach.

One such tool, the Behaviour Change Wheel¹³ recognises seven categories of policy response that interoperate with other processes to impact on behaviour.

Table 7 - Policy categories from the behaviour change wheel with road safety related examples

Policy Categories	Definition	Examples
Communications & Marketing	Using print, electronic, telephonic or broadcast media	Safe road crossing programme Mass media campaigns Websites and publications
Guidelines	Creating documents that recommend or mandate practice.	Highway code Motorcyclist assessments Speed awareness courses
Regulation	Establishing rules or principles of behaviour or practice	Training & testing regime Driver's hours Speed enforcement
Legislation	Making or changing laws	Change BAC limit Graduated driver licensing New Driver's Act
Service Provision	Delivering a service	Telematics insurance Fleet management solutions Improved vehicle safety features
Environmental/Social Planning	Designing and/or controlling the physical or social environment	Alcohol interlocks Speed limits & zones Traffic calming
Fiscal Measures	Using the tax system to reduce or increase the financial cost	Fuel duty Vehicle excise licence Insurance premium tax

Challenging Received Wisdom

Road safety programmes have often been developed on the basis of 'common sense' approaches or passion, with performance evaluated according to anecdotal measures. Such programmes might actually be harmful and these approaches should not receive continued investment, especially where they are supported by public finances. Intervention designers should note:

¹³ Michie, S., Atkins, L., West, R., *The Behaviour Change Wheel, A Guide to Designing Interventions* (Silverback Publishing, 2014)

¹³ Kinnear, N., Lloyd, L., Helman

- Reliance on threat based approaches will not have the desired effect as threat appeals can lead to increased fear arousal, but do not appear to have the desired impact on driving behaviour.¹⁴
- Mass media campaign delivery *alone* shows little associated change in behaviour and may even have a detrimental effect.¹⁵ Communication-only approaches will only succeed with large budgets over extended periods, and may be rebutted by hard to reach groups.¹⁶ However, media campaigns can help gain public understanding and acceptance of engineering and enforcement measures and road users will expect information and attempts at persuasion.
- Common sense approaches or skills based activities cannot be assumed to have the desired effect.¹⁷

Which Behavioural Interventions Work?

There is not a definitive list of standardised interventions which are proven to work and which can provide a set of expectancy values for the size of the effect you might hope to see, however, a variety of reviews have given strong evidence around a range of measures.

Legislation & Regulation

- Graduated driver licensing schemes and the New Drivers Act – Kinnear et al.¹⁸ presents evidence of the efficacy of a graduated driver licencing system and that the New Drivers Act (1995) appears to have had a beneficial effect through deterrence from driving.
- Speed Enforcement – there is a large body of international evidence as to the effectiveness of safety camera systems (both spot and average speed) offering reductions of 36.4% in fatal and serious casualties.¹⁹
- Consistent drink drive enforcement, coupled with education and awareness campaigns, has been shown to reduce the incidence of drink driving. Reducing the BAC limit from 80mg to 50mg or below would be consistent with a Safe System approach. Adequate levels of enforcement and penalties would remain critical.

Education & Training

- Child pedestrian training – given the age of the participants most programmes focus on knowledge and skills acquisition, sometimes accompanied by parental engagement. Evidence based programmes report increased knowledge, skills and improved sensitivity to risky situations.²⁰

¹⁴ Carey, R., McDermott, D. & Sarma, K., 2013. *The impact of threat appeals on fear arousal and driver behavior: a meta-analysis of experimental research*, PLOS ONE

¹⁵ Phillips, R., Ulleberg, P., Vaa, T., Meta-analysis of the effect of road safety campaigns on accidents, 2011, *Accident Analysis and Prevention*

¹⁶ Bird, S. & Tapp, A., *Encouraging road safety amongst young drivers: how can social marketing help?* (British Social Marketing Centre, 2008)

¹⁷ Williams, A. Young driver risk factors: successful and unsuccessful approaches for dealing with them and an agenda for the future, 2006, *Injury Prevention*, British Medical Journal

¹⁸ Kinnear, N., Lloyd, L., Helman, S., Husband, P., Scoons, J., Jones, S., Stradling, S., McKenna, F., & Broughton, J. (2013). *Novice drivers: evidence review and evaluation – pre-driver education and training, graduated driver licensing, and the New Drivers Act*. (PPR673, TRL, 2013)

¹⁹ Owen, R., Ursachi, G., Allsop, R., *The Effectiveness of Average Speed Cameras in Great Britain* (RAC Foundation, 2016)

²⁰ Whelan, K., Towner, E., Errington, G., Powell, J., *Evaluation of the National Network of Child Pedestrian Training Pilot Projects* (Department for Transport, 2008)



- Young driver education and training – there has been a huge amount of focus on this area of road user behaviour with often very limited success. A recent review of interventions²¹ highlighted the following as worthy of additional research because of the promise they showed as behaviour change programmes:
 - Parental engagement in managing post-test driving in specific risky situations
 - Increasing the amount and breadth of pre-test on-road experience
 - Utilising technology to manage driver behaviour post-test
 - Training hazard perception skills (post-test)
- Speeding drivers – driver offender rehabilitation courses have been used extensively since 2004 as a disposal option for drivers caught exceeding the speed limit, though not for the more serious speeding offences. Studies to date have shown improvements in drivers' intentions not to speed and in self-reported behaviour. There remains, however, a gap in the evidence for the effectiveness of these programmes in reducing rates of recidivism. A major study for DfT, due to report in 2017, is designed to provide evidence on the effectiveness of these programmes in terms of reoffending.

Environmental or Social Planning & Service Provision

- Alcohol interlocks – used to prevent a driver who is in excess of the limit from being able to start the vehicle, alcohol interlocks have been shown to have a reasonable level of effectiveness even as a remedial measure for drivers who have previously been caught drink driving.²²
- Physical measures – the introduction of physical changes to the environment or to the vehicle can have a significant impact on the behaviour of road users. This topic is too large to address properly here. It is – to a degree - considered in the accompanying papers on safer roads and safer vehicles.
- Telematics – independent analyses of telematics approaches are still required to evidence the effect that 'black box' technology can have, meanwhile industry led analysis²³ suggests that dangerous driving incidents and crash risk are lower for telematics based insurance policy holders.

The RAC Foundation has recently published guidance for the road safety community on the use of behaviour change techniques in road safety interventions.²⁴ Again, the interplay between environmental, vehicle and behavioural changes is apparent.

²¹ Pressley, A., Fernández-Medina, K., Helman, S., McKenna, F. P., Stradling, S. and Husband, P, *A review of interventions which seek to increase the safety of young and novice drivers* (PUBLISHED PROJECT REPORT PPR781, TRL, 2016)

²² Stead, M., McDermott, L., Broughton, P., Angus, K., Hastings, G., *Review of the Effectiveness of Road Safety and Pro-Environmental Interventions* (National Institute of Health and Clinical Excellence, 2006)

²³ Young Driver Report, Ingenie Insurance, <https://www.ingenie.com/wp-content/uploads/2014/11/ingenie-young-driver-report-2014.pdf>

²⁴ <http://www.racfoundation.org/research/safety/behaviour-change-techniques-guidance-for-the-road-safety-community>



The British Road Safety Statement

In December 2015, the Department for Transport published *Working Together to Build a Safer Road System: British Road Safety System*²⁵ which sets out the Government's plans for addressing road safety issues. It culminates in a number of actions, listed under the five Safe System pillars, which the Government intends to deliver.

The safer road user actions in the Statement, i.e. those intended to improve road user behaviour, are set out in Appendix A – Relevant Actions in the Road Safety Statement. These actions have been assessed against the target audience and target behaviours outlined earlier. In other words, does the Statement address the key safety issues and propose adequate solutions?

In addition to the quantitative analysis presented here, the views of road safety stakeholders were sought, including via the PACTS Road User Behaviour Working Party and at the PACTS conference *UK road safety and Brexit*²⁶ in November 2016.

The general response was that the areas for action outlined in the Statement were important and addressed many of the main safety issues, such as young drivers and driving for work. However, stakeholders wanted more information about the details of the actions proposed. It was difficult to judge if the actions would have impact. There were concerns about whether the “working together” concept extended to collaboration with industrial partners, particularly vehicle manufacturers regarding distraction and the safety impact associated with “infotainment” systems, and connected and autonomous vehicles.

There was also a clear view that adoption of a Safe System approach still requires significant improvements in the quality and timeliness of incident and monitoring data – echoing the points made above regarding STATS19 and contributory factors.

In addition, the imbalance in capital expenditure on the strategic road network and low levels of funds, particularly revenue, available at a local level is leading to significant disparity of performance. Concerns were raised that some risk aggravating factors such as poor vehicle maintenance and inadequate driving standards, were leading to crashes.

Training

Across the road user groups, training appears to be an issue where improvements could be made to address target groups and behaviours identified above, such as young riders.

One of the Road Safety Statement actions was to consult on improving motorcyclist training and this has been undertaken.²⁷

²⁵ Department for Transport, *Working Together to Build a Safer Road System: British Road Safety Statement*, (London, December 2015)

²⁶ <http://www.pacts.org.uk/2016/07/pacts-conference-uk-road-safety-and-brexit-1st-november-2016/>

²⁷ <https://www.gov.uk/government/news/dvsa-sets-out-proposals-to-improve-motorcycle-training>





Figure 11: DVSA Proposals to Improve Motorcyclist Training

The consultation included proposals to revoke CBT certificates from riders who get 6 penalty points; theory tests for learner riders; restricting riders who take a CBT course on automatic motorcycles to only ride automatics; changes to the CBT syllabus; and improving instructor qualifications and standards. Given that inexperience was a key factor for motorcyclists in collisions whilst riding machines of all engine sizes, increasing skills through training seems to be a positive approach.

Young drivers are a high priority for casualty reduction and inexperience is a key problem for this user group. A short-term action in the Statement is to increase the uptake of pre-test practice and include more real-world driving experience. This has the potential for casualty reduction as research into the benefits of Graduated Driving Licensing (GDL) found lower crash involvement where minimum learning periods were implemented.²⁸

Other elements of GDL related to the learner stage are a minimum learning period and a minimum age before being able to sit the practical test. After passing, restrictions on solo night-time driving for all novice drivers and passenger restrictions based on age, as well as a lower alcohol limit and ban on hands-free mobile phone are all believed to be likely to reduce collisions and encourage positive habits.²⁹ However, the Statement makes clear that the Government is opposed to a formal GDL scheme.

Whilst a consultation on incentivising pre-test practice has not yet been implemented, a consultation on allowing learner drivers to take lessons on motorways was launched on 30th December 2016. The consultation asked for opinions on whether learner drivers should be allowed to have lessons on motorways to:

- Gain a broad range of experience before driving independently
- Develop a practical understanding of how to use motorways safely³⁰

The Government has also set out to develop and test new Hazard Perception Test materials to improve learners' awareness in different conditions and scenarios. This is important as there is little research

²⁸ Kinnear, N., Lloyd, L. Helman, S., Husband, P., Scoons, J., Jones, S., Stradling, S., McKenna, F. and Broughton, J., *Novice drivers: Evidence Review and Evaluation*, (PPR673, Transport Research Laboratory, 2013), p.50

²⁹ *ibid.*, p.v

³⁰ <https://www.gov.uk/government/consultations/allowing-learner-drivers-to-have-driving-lessons-on-motorways/allowing-learner-drivers-to-take-lessons-on-motorways>

evidence that increased formal driver training improves safety (as opposed to increasing the level of on-road practice). A number of themes have emerged that offer the hope of improving the effectiveness of training, one being the desirability of improving the hazard perception skills of learner drivers.³¹

Both cyclists and pedestrians exhibited skills deficits in the STATS19 collision analysis. Training children not to cycle onto the road from the pavement and to teach children safe crossing procedures are priorities. It may also lead to good habits in adulthood when travelling as other types of road user.³² The Government announced that £50 million will be provided over the next 4 years for Bikeability in schools. The aim is to increase children's road awareness and improve future motorists' empathy for vulnerable road users.

Mobile phones and inattention

Whilst mobile phone use while driving is not a contributory factor which features prominently in the CF analysis, this is more likely to be due to reporting procedures than a reflection on actual levels of use. A reporting officer is unlikely to assign that particular CF unless there is a suspicion to do so and that may not emerge until further investigations have taken place. The most recent observational count of mobile phone use while driving found that 1.6% of drivers in England and Scotland were observed using a hand-held mobile phone while driving.³³ 'Failing to look properly', being 'careless, reckless or in a hurry' and 'disobeying Give Way or Stop signs' are all factors which could be influenced by distraction or attention. Texting, interacting with social media and phone calls have all been shown to reduce driving performance.^{34 35 36}

Following a consultation, the Government raised the fixed penalty points issued under a fixed penalty notice for this offence from 3 to 6 and the fixed penalty notice fine from £100 to £200 for drivers of all motor vehicles. The change came into effect on 1st March 2017.

One of the problems with mobile phone enforcement, unlike speed enforcement, is that it needs to be undertaken by police officers on the road, rather than through automated means. In 2015, the RAC Foundation reported a 23% reduction in traffic officers between 2010 and 2014.³⁷ If there is to be a strategy to target moving traffic offences the traffic officer numbers will need to be maintained or even increased.

Speed

Exceeding the speed limit featured amongst the top five contributory factors for motorcyclists of all engine sizes, young car drivers and the other vehicles involved in collisions with pedestrians. The

³¹ Baughan, C. and Simpson, H., *Graduated driving licensing – a review of some current systems*, (TRL PPR529, 2002)

³² Johnson, M., Oxley, J., Newstead, S., Charlton, J., *Safety in numbers? Investigating Australian driver behaviour, knowledge and attitudes towards cyclists*, 2014

³³ Department for Transport, *Seat belt and mobile phone use surveys: England and Scotland, 2014*, (Department for Transport, 2015)

³⁴ Reed, N. and Robbins, R., *The effect of text messaging on driver behaviour: a simulator study*, (TRL PPR367, 2008)

³⁵ Basacik, D., Reed, N. and Robbins, R., *Smartphone use while driving: a simulator study*, (TRL PPR592, 2012)

³⁶ Caird, J.K., Johnstone, K.A., Willness, C.R., Asbridge, M. and Steel, P., A meta-analysis of the effects of texting on driving, (*Accident Analysis and Prevention*, 71, 311-318, 2014)

³⁷ <http://www.rac.co.uk/press-centre#/pressreleases/traffic-police-numbers-cut-by-1-279-officers-in-five-years-1212060>



relationship between speed and collisions is very clear and has been studied extensively: the higher the speed, the greater the probability of a crash and the severity of crashes.³⁸

There are no specific actions in the Road Safety Statement related to speed but there are a variety of ways in which this target behaviour could be addressed.

Education can play a part, specifically by increasing knowledge about the consequences of speed and the lack of extra time gained by travelling faster.³⁹ However, wide-scale road safety campaigns are unlikely to be effective at tackling the worst offenders unless supported by effective levels of enforcement.⁴⁰ Speed Awareness Courses are offered to drivers detected speeding within a certain threshold and are an alternative to points and a fine. These courses are currently being evaluated by DfT to determine their effectiveness in reducing reoffending and collision involvement.

The DfT have not updated their guidance on the use of speed cameras⁴¹ since 2007 and there could be an opportunity to review this in the light of advances in technology that make average speed camera systems more affordable, and could therefore be seen as an alternative to fixed 'spot' cameras. Average speed systems have been shown to achieve significant casualty reductions⁴² of 36% for fatal and serious collisions. On safety grounds, there is a case for installing average speed cameras widely on the motorway and trunk road network.

Drink and drug driving

Action on drug driving has been stepped up substantially over the past few years. The number of offences now being detected suggests the scale of the problem was previously underreported.⁴³ The statement includes further specific funding (£750,000) for drug drive enforcement by the police.

By contrast, there is only one action to address drink driving – to develop evidential breath testing equipment. This is seen by the police and others as an important priority. Home Office Type Approval for mobile evidential breath testing equipment has been in the DfT's road safety plans since 2011 if not much earlier. All previous deadlines have been missed and, although this is classed a short-term action, no new target date has been set.

The Government believes that enforcing the current breath test laws is a better strategy than reducing the BAC limit. However, the Statement makes no proposals on levels of drink-drive enforcement. The number of breath tests undertaken by the police has declined substantially in recent years and deaths from drink driving have shown no reduction since 2010.

Attitudes and other behaviours

The analysis of contributory factors also revealed that attitudes and other behaviours are potential issues in fatal and serious collisions. Visibility is potentially a problem, with other road users often

³⁸ ETSC, *Reducing traffic injuries resulting from excess and inappropriate speed*, (European Transport Safety Council, 1995)

³⁹ Stradling, S., Broughton, P., Kinnear, N., O'Dolan, C., Fuller, R., Gormley, M. and Hannigan, B., *Understanding inappropriate high speed: a quantitative analysis*, (Department for Transport, Road Safety Research Report No. 93, 2008)

⁴⁰ Fylan, F., Hempel, S., Grunfeld, B., Conner, M. and Lawton, R., *Effective interventions for Speeding Motorists*, (Department for Transport, Road Safety Research Report No.66, 2006)

⁴¹ <https://www.gov.uk/government/publications/use-of-speed-and-red-light-cameras-for-traffic-enforcement-guidance-on-deployment-visibility-and-signing>

⁴² <http://www.racfoundation.org/research/safety/effectiveness-average-speed-cameras-great-britain>

⁴³ Jackson, P., Hilditch, C., *A Review of Evidence Related to Drug Driving in the UK: A Report Submitted to the North Review Team*, 2010



failing to see both motorcyclists and cyclists. This issue is not only about encouraging vulnerable road users, such as motorcyclists and cyclists, to make themselves more visible through the use of appropriate clothing and lighting, but also to change the attitudes of drivers towards these road users. The theory of inattentional or perceptual blindness can explain why some drivers 'look but did not see' motorcyclists especially:

A related theory – that of cognitive conspicuity – shed further light. Conspicuity – or 'mental visibility' – "greatly increases if a stimulus is relevant to the observer (Green, 2003)." Could it be that motorcyclists were simply not relevant or meaningful to the observer, or driver? Did they not care enough?⁴⁴

Efforts to encourage drivers to see motorcyclists as real people have been made through recent THINK! Campaigns. With cyclists, there appears to be a division between them and other road users, with other road users often holding a negative stereotype of cyclists.⁴⁵ This can then manifest in aggressive or inconsiderate behaviour towards them. Breaking down psychological barriers between road user groups could increase empathy and consideration for others and this has been encouraged through campaigns such as Share the Road in London.⁴⁶

With young drivers, it should be remembered that personality characteristics such as sensation-seeking, external locus of control, impulsivity and aggressiveness are predictive of risky driving⁴⁷, suggesting that behavioural interventions need to go beyond training, education and enforcement and should be tailored to alter the emotional responses evoked by driving.

Safe System indicators

On the road towards a Safe System, there are a number of indicators that can be used to measure progress. The ultimate outcome target of a Towards Zero approach supported by Safe System is zero road deaths or serious injuries. However, monitoring intermediate outcomes and outputs are an important aspect of road safety management. No targets or indicators are included in the Statement, though the Strategic Framework for Road Safety Indicators, reported annually by DfT in *Reported Road Casualties Great Britain*, are a valuable source. We recommend the following key indicators with regard to safer road users:

- Compliance with speed limits by road type
- Seatbelt use
- Mobile phone use
- Level of sober driving
- Helmet use.

Conclusions

Achieving "Safer Road Users" will require sustained and effective actions. Some, if not most, problem behaviours will need to be mitigated by highway and vehicle safety improvements. But educational and enforcement interventions remain a necessary part of casualty reduction and the Safe System approach. They feature prominently in the Government's British Road Safety Statement and in the

⁴⁴ 2010 Named Rider Post Campaign Research Summary, (Department for Transport, London, 2010), p. 2

⁴⁵ Christmas, S., Helman, S., Buttress, S. and Newman, C., *Cycling, Safety and Sharing the Road: Qualitative Research with Cyclists and Other Road Users*, (Department for Transport, Road Safety Web Publication No.17, 2010)

⁴⁶ <https://tfl.gov.uk/campaign/share-the-road>

⁴⁷ Durkin, K. and Tolmie, A., *The Development of Children's and Young People's Attitudes to Driving: A Critical Review of the Literature*, (Department for Transport, Road Safety Web Publication No.18, 2010)



approach of other local and national bodies. This paper has tried to show where the focus should lie. In reviewing the road user focussed aspects of the British Road Safety Statement a number of issues that emerge.

Whilst there are some strengths in the available data, its limitations are also widely recognised. In order to truly understand road user risk, more in-depth analyses are required which shine a light on the interaction between road users, their vehicles and the environment.

Human behaviour is a central component of the safe system, but changing human behaviour is a complex process that involves the interaction of factors such as social context and perceived control which might be affected by a range of measures. More evidence is needed to understand how road user behaviour can be influenced through a range of intervention types; in particular, how educational initiatives can be developed, scaled-up and delivered on the basis of high quality research and evaluation.

Utilising the existing evidence is critical for the delivery of good road safety policy, and ignoring the extensive, robust, international evidence for proven road safety policies such as graduated driver licensing lacks explanation.

Stressing the importance of enforcement of road traffic offences, without addressing the current decline in specialist roads policing resources, demonstrates a lack of coherence in policy development.



Appendix A – Relevant Actions in the Road Safety Statement

Pillar	Action	Review Comment
Road Safety Management Short term	Provide £750,000 funding to police forces in England and Wales to build drug-driving enforcement capability.	£1million provided in 2015/16 to train officers and provide equipment. Some concerns about policing levels available to utilise this money. Also, whether the current focus on drug-driving is proportionate when compared to other risky behaviours.
	Develop our drug-driving and evidential breath testing equipment.	There should continue to be a strong focus on drink-drive collisions, given the evidence. Home Office Type Approval for mobile evidential breath testing equipment has been promised for years but with no result.
Medium term	Work with bus and taxi operators to ensure appropriate but proportionate legislation and good practice is in place for safe passenger transport.	More clarity on details needed. Amendment to Bus Services Bill to require confidential incident reporting rejected by Government.
	Work with commercial fleets, employers' organisations and drivers to identify and promote good practice in work related road safety.	A major action area with potential for wide impact. HSE-type pressure also needed for employers not interested in good practice.
	Continue to develop, influence and implement a wide range of European road safety directives, including the Cross Border Enforcement Directive.	The Cross Border Directive is being implemented but, in the light of legal differences and Brexit, there is a question mark over the extent to which this action can or will be effective.
Long term	Ensure that the medical assessment and licensing regime for older drivers keeps pace of current life expectancy and health trends.	Although not a current casualty priority, this will become an increasingly important safety issue. The Government should make clear its response to the 2016 report of the Older Drivers Task Force.
Safer Road Users Short term	Consult on dangerous in-car mobile phone use with a view to increasing penalties for offenders.	The consultation has been completed and the penalties increased on 1 st March 2017.
	Consult on ways to incentivise and reward the uptake of more pre-test practice and inclusion of a broader range of real-world driving experience.	Evidence suggests that increasing the amount of pre-test practice is beneficial, especially if there is a focus on hazard perception and attitudes, rather than skills.
	Strengthen the compulsory basic training regime for motorcyclists and consult on a range of further proposals to support safer motorcycling.	The consultation was closed on 17 th February 2017. Improving training for motorcyclists is important for addressing key target behaviours.
	Introduce a new performance indicator for DVSA to encourage the heavier targeting of enforcement against serious and serial non-compliance of transport operators.	Enforcement activity by DVSA has been declining.
	Continue with £50 million investment to deliver Bikeability training in schools, providing the next generation of cyclists with	Bikeability has transformed cycle training. But no equivalent funding or national framework exists for child pedestrians.

	the skills and confidence to cycle safely on local roads.	
	Provide targeted safety communication materials to young drivers and their parents.	Motivations and attitudes play an important role in the self-identity of young drivers and related evidence should be drawn upon when developing targeted communications.
	Continue to run our THINK! campaigns, including an additional £2.2 million of funding for 2015/16 to promote behavioural change.	Needs to be underpinned by sound behavioural theory and supported by enforcement actions.
	Undertake a major research programme to identify the best technological and behavioural interventions for learner and novice drivers.	A long term research programme will be started soon to examine the efficacy of the different types of intervention available to learner and novice drivers.
Medium term	Engage with insurers to help support innovation within the motor insurance market so that premiums become more responsive to safer driver behaviour and vehicle choice.	Insurers now have huge amounts of telematics data about driver behaviour. Sharing this with DfT and researchers could provide valuable safety benefits.
	Collaborate with the Ministry of Justice on future reviews of motoring offences to ensure that appropriate penalties are in place for dangerous driving.	MoJ consultation undertaken on creating a new offence of causing serious injury by careless driving and penalties for serious driving offences.
	Review and develop our road safety educational materials for school aged children.	See Bikeability comment.
	Work with the motorcycle industry to explore how to improve and increase the take up of post-test rider training and development.	Inexperience on all motorcycle types appears to be a collision issue and therefore post-test training would be a benefit.
	Drug-drivers: consult on options for a rehabilitation scheme course and a High Risk Offenders regime.	DfT is trialling a combined drink and drug rehabilitation course. There are concerns that this is not optimal for drink-drive offenders.
	Complete evaluation of the current pilot of more realistic driving experience in the practical test, and determine whether to incorporate as standard.	Improving the practical test is a key priority for equipping young people with the best skills as they become drivers. DVSA has announced this will go ahead, as below.
	Develop and test new Hazard Perception Test materials to improve learner drivers' awareness of developing hazards in varying weather and lighting conditions, and broaden the scope of scenarios providing experience of real life situations such as encountering vulnerable road users.	Improving hazard perception skills has been shown to have potential in reducing collision involvement.
Long term	Reform the driving test and pre-test learning to encourage more real life driving experience and ensure that it takes account of local variations and increasing vehicle automation.	Increasing on-road experience is linked to reducing collisions. The new driving test will change on 4 th December 2017, which focuses on an increase in independent driving and using a sat nav, rather than increasing pre-test learning experience.







UK Road Safety
SEIZING THE
OPPORTUNITIES
SAFER ROAD USERS



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