OLDER DRIVERS TASK FORCE

SUPPORTING SAFE DRIVING INTO OLD AGE

A National Older Driver Strategy

SUPPORTED BY

ageas

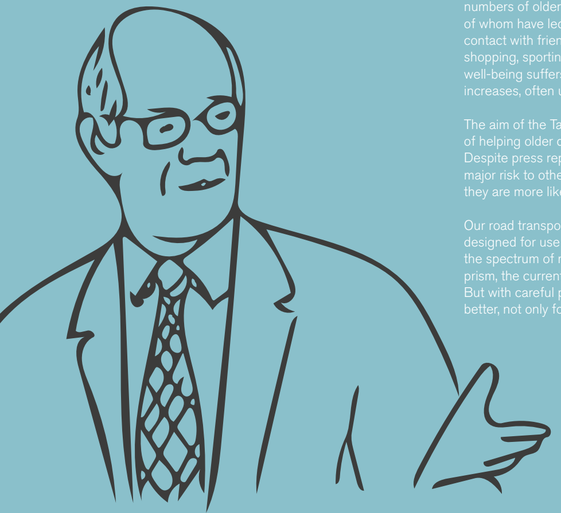
ageas.co.uk
@AgeasUK

ROAD SAFETY FOUNDATION

roadsafetyfoundation.org
@SafeRoadDesign

“in almost every area of activity involving older drivers more needs to be done to help them”

FOREWORDS



John Plowman

Chairman of the Older Drivers Task Force

I have had the privilege of chairing the Older Drivers Task Force, a group of experts from a wide range of disciplines with an interest in the safety of older drivers.

In 30 year's time when autonomous vehicles are king and serious collisions are things of the past, people may be surprised to read about the scale of death and injury on our roads in 2016.

That is what we have to tackle now. There are fast growing numbers of older people and increasingly older drivers, many of whom have led a car-dependent life. Without the car, contact with friends and family is more difficult, other activities shopping, sporting and cultural – are constrained. Health and well-being suffers. The social and economic burden on society increases, often unnecessarily.

The aim of the Task Force was straightforward: to find ways of helping older drivers to continue to drive safely for longer. Despite press reports to the contrary, older drivers are not a major risk to other drivers, though because of their fragility, they are more likely to die in a crash.

Our road transport system, our roads and vehicles, have been designed for use by fit, middle aged motorists in the middle of the spectrum of road users. Looked at through an older driver's prism, the current road system doesn't do them many favours. But with careful planning and design, it could be so much better, not only for the older motorist but for all motorists.

That is what this report is about.

It would not have been possible without the sponsorship and wholehearted support of Ageas's Paul Lynes and Natalie Shale and their colleagues and of John Dawson of the Road Safety Foundation which also provided the secretariat. I am very grateful to them and their staff.

From the start, Department for Transport Ministers and officials welcomed the Task Force and we hope they will give our report a fair wind.

Our work was underpinned by three working groups; the first under Dr Kit Mitchell looked at the evidence. This research is published alongside this report. Its breadth and depth is a tribute to his exceptional efforts. The second group under Andrew Miller, a Director of Thatcham, looked at vehicle, road and information technology. The third group under Sergeant Rob Heard of the Hampshire Constabulary considered support and self-help. I am very grateful to them all.

The Task Force itself, both through correspondence and in plenary sessions, anchored its work in the day-to-day reality of older driving. I am very grateful for the contributions of Task Force members and have attempted, however imperfectly, to take account of their views in this report. It does, I believe, represent a consensus on what needs to be done.

I strongly commend the report to Ministers, officials and others concerned with improving the lives of older drivers and their mobility and safety on our roads.

Lord Whitty

Chairman Road Safety Foundation

We are beginning to understand what supporting longer, healthier and more active lives requires. We are not only living longer but driving longer. The number of drivers over 85 will double to one million by 2025. It is vital that we prepare for this demographic change.

We need to be very aware not just of the social value but also the economic value of supporting safe driving into old age. Driving supports the phased retirement that is becoming more common with pension reforms. It supports childcare by grandparents for working parents.

Being able to drive is a key part of maintaining independence, looking after oneself and the personal well-being that keeps older people healthy and fulfilled. Giving up driving can trigger decline, reliance on others and expensive public services.

Vehicle and road engineering can contribute much to supporting safe driving into what used to be regarded as old age. The support already available in successful schemes around the country can be significantly extended. Improved understanding by friends, family and the medical profession of what is available will help.

The Road Safety Foundation was pleased its proposal to establish an Older Drivers Task Force was welcomed by Government. We are deeply grateful to Ageas for their support.

These recommendations, and the research evidence that supports them, provide a framework for the future. Now these need to be widely discussed and implemented in practice.

Andy Watson

CEO, Ageas UK

Insurers rely on data and understanding their customers. Getting enough of the right information and analysing it in detail is fundamentally important to us as a business. It's not always the most exciting of subjects, but sometimes we find small patterns and trends which have big implications for society. That's what happened to us a few years ago.

Ageas is the third largest motor insurer in the UK and a leading provider of insurance to drivers over 50. We spotted from our claims data that older drivers – the over 75s – became less safe as the years went by and, considering they drive fewer miles, became involved in more really serious crashes than middle-aged drivers. Often accidents involved vulnerable road users like pedestrians, cyclists, or motorcyclists. We could see this could be a concern, to wider society as well as us as an insurer.

In November 2014, the Road Safety Foundation's Making Road Safety Pay report recommended that the UK follow in the footsteps of the USA and devise a strategy for older drivers. Ageas had sponsored that report and readily agreed to fund and support an Older Driver Task Force to look at the issue.

The result was remarkable. Drawing in a wide-range of talent and experts from across many sectors the Task Force undertook a detailed, evidence-based approach to its work. It means that for the first time we have a real understanding of older drivers, their needs and what proportionate action can be taken to make sure they remain safe on our roads, later in life.

The Government has said that it will look at the recommendations in this report and we would urge them to do so. We have an ageing population in this country and the numbers of older drivers in their 70s, 80s, 90s, even 100s, is set to grow. As a group they need and deserve special attention to be kept safe.

Andrew Jones, MP

Last year the Government's road safety statement welcomed the work in progress of the Older Drivers Task Force established by the Road Safety Foundation and supported by the insurer Ageas.

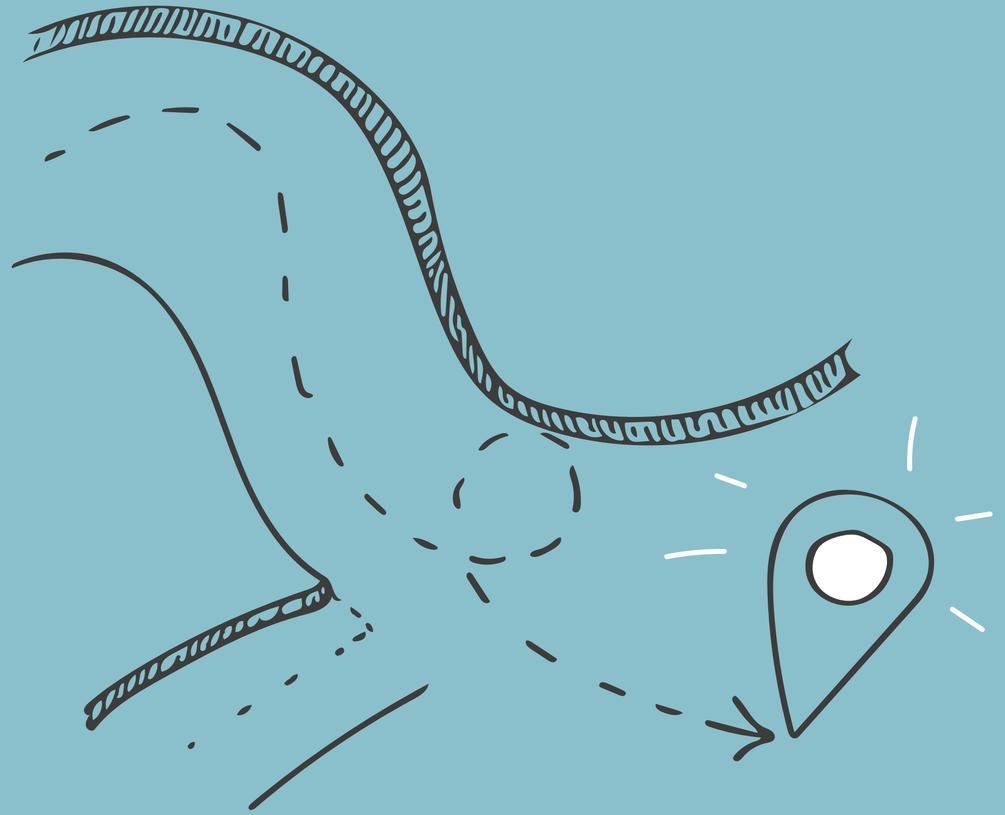
The work of the Task Force fits well with the priorities in our statement, including its focus on better protection for the vulnerable in our society, and a strong evidence-based approach. The research papers published with this report demonstrate the value of this approach.

The Task Force under its independent chairman brought together academics, research institutes, the public sector, the insurance industry, road safety experts, representatives from the charitable sector and others with a knowledge of older drivers.

This is just the sort of collaboration we had in mind when we commended partnerships between public and private sector bodies and civil society working together to save lives.

I am therefore delighted to welcome the report of the Task Force. It is wide ranging, well researched and comprehensive. As such it calls for action from a number of sectors, including Government, and we will consider the recommendations carefully.

For my part, I share with the Task Force and other organisations involved their ambition to support safe driving for older drivers. I look forward to working with them to realise it.



CONTENTS

Conclusions and Next Steps

The following research papers were prepared for the Older Driver Task Force and are referenced and published alongside this report

1. Demographics and Licensing
2. Medical Conditions and Fragility
3. Casualties
4. Crash Types
5. Characteristics of Cars Driven
6. Mobility and Self-Regulation in Driving
7. Highway Design
8. Driving Licence Renewal
9. Driver Appraisals
10. International Comparisons

EXECUTIVE SUMMARY

In autumn 2014, the Government welcomed the establishment of the Older Drivers Task Force and the financial support from Ageas.

The Government acknowledged that we are living and working longer and need to plan for healthier, longer lives which will include driving into what used to be thought of as old age and agreed to participate in the work of the Task Force.

This report includes a focus on seven key recommendations that are both specific and actionable. A major role of the Task Force work has been to create shared understanding across many disciplines, that removing obstacles to safe driving is crucial to healthy ageing and managing our expanding lifespan successfully.

THE NUMBER OF DRIVERS OVER 85 WILL DOUBLE TO

1,000,000

BY 2025 AND IT IS VITAL THAT WE PREPARE FOR THIS DEMOGRAPHIC CHANGE.

THE APPROACH OF THE TASK FORCE

The formal Task Force goal was:

"As Britons live longer healthier lives, to develop a National Older Drivers Strategy which will improve the framework, advice, self-help and technology available to support the fast growing number of older drivers."

There were three main strands of work:

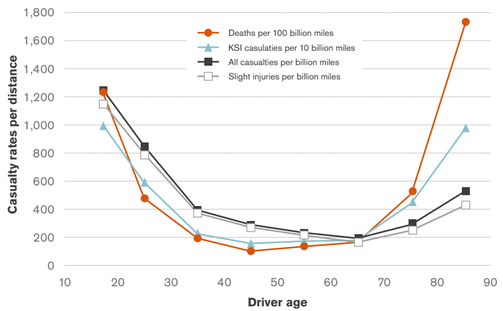
- The evidence base. Published alongside this Task Force Report are 10 research papers from which our conclusions and recommendations are drawn. The papers include new research and a review of national and international data and practice.
- Vehicle, road and information technology. A review of vehicle technologies at, or near, market to assist and protect older drivers; and how road layout might be improved.
- Support and self help. A review of the framework governing licensing of older drivers together with assessment schemes and advice available to drivers, their doctors and families.

The Task Force brought together and adopted a number of principles. It took an evidence-based and "Safe Systems" approach[5] and sought a set of practical, effective and complementary interventions. In line with Equal Opportunities legislation[4], it sought proportionate means of achieving aims (e.g. avoiding impositions on the many to protect against the few). It drew from best practice, considered affordability and chose to nudge rather than regulate wherever possible. Our work considered drivers over 70 - the age where today driving licence entitlement expires. Although all drivers must notify the DVLA of a relevant medical condition regardless of their age. As evidence was collected, the Task Force increasingly focussed on drivers over 80 as an age group at particular risk.

EVIDENCE

Are older drivers at risk?

- When older drivers are involved in a crash, the likelihood of them dying or being seriously injured is up to four times higher simply because of their frailty, particularly women over 70.
- Drivers over 70 are less likely to be involved in crashes involving speed, loss of control or alcohol as a cause. They are more likely to be involved in a right of way violation.
- By 75, older drivers are twice as likely to be killed at T-junctions.
- For every mile driven, the risk of a person aged 80 or more being killed while driving is, overall, some 10 times higher than the lowest risk 40-49 year old.



Are older drivers a danger to others?

- Police records show that the risk of an older driver over 70 killing a pedestrian is less than that of middle-age drivers and half that of drivers aged up to age 25.
- For the first time, the Task Force was given 'catastrophic claims' data from a leading insurer in the older driver market providing important insights. Some older drivers, possibly those in the over 80 group, may be disproportionately involved in crashes leading to very serious third party injuries.
- There have been some high-profile collisions involving older drivers who were clearly unfit to drive. Lessons should be learned from these tragic events, but they need to be kept in proportion.

Is action needed?

- Older drivers have reduced ability to judge and adapt to speed and to read complex driving situations. Vision, reaction times and skills in executing manoeuvres decline with age.
- However, as drivers age, self-regulation is common. Older drivers can consciously make fewer journeys, avoid more demanding situations such as motorways, driving at night, peak periods, and difficult junctions.
- In a study of 15 medical conditions[31], four were placed in a high-risk category[30]. If all drivers with all medical conditions drove (e.g. dementia, sleep apnoea) crashes might be 12% higher.
- Self-declaration of medical conditions has been shown clearly in one study not to be reliable with self-declarations of cardiac problems at 5% compared with 65% by physicians.

VEHICLES, ROADS AND INFORMATION TECHNOLOGY

Safer Roads
Since 1998, the USA has had a comprehensive Highways Design Handbook for Older Drivers[58]. Australia and New Zealand publish similar advice[60, 61]. The UK has not taken the needs of older drivers into account explicitly when developing its road design standards. However, designing well for older drivers often means no more than following existing design principles and standards with greater discipline.

What is especially good for older drivers can be good for everyone. For example, adhering to existing codes of practice for routine maintenance such as renewal of road markings, cleaning of signs, use of reflective back plates, or maximum information carried on signs. Poor signing and marking is estimated to increase the overall death rate on a road by an average of around 15%[63].

On 'A' roads, which are eight times more risky overall than motorways to drivers in general, the major cause of serious injury is crashes at junctions (33% of all serious injury crashes). Older drivers particularly would be expected to benefit from the type of systematic safer intersection programmes being pursued in Victoria, Australia[62].

Safer Vehicles
Fully autonomous, driverless vehicles which could address the travel needs of those without the capacity to drive safely are probably a long way off. There are however major and rapid advances in driver assistance systems and in-vehicle protection which help the safety and comfort of older drivers.

Research for the Task Force shows that older drivers run vehicles broadly the same age as the population at large although they tend on average to be smaller. Older consumers are not slow to adopt technologies where their value is clear yet it can be difficult to explain the value of the new technologies. Manufacturers need to ensure that new technologies appeal to older drivers rather than alienate them.

There are many technologies in today's vehicles which drivers need only to be generally aware of. For example, technologies which cut in during an emergency such as seat belt pre-tensioners, brake assistance that ensures the full braking force available is applied (mandatory in Europe on new cars since 2011), or electronic stability control (mandatory since 2012).

However, drivers need to be aware of various other technologies that can cut in from time-to-time which are fitted to more and more cars on the road. For example, automatic emergency braking, already available on more than a third of new cars has proven effective in reducing crashes.

There are technologies from parking assistance to cornering lighting which can make driving less stressful, more comfortable and safer. Night vision enhancement and blind spot monitoring might particularly help older drivers. Autonomous cruise control can help keep a safe headway and speed on the motorway.

Newer technologies are targeted towards avoiding crashes. Crash protection however remains a major issue for older drivers given their frailty.

One way to help older drivers which has been proposed is to develop a 'silver NCAP' crash protection rating which gives a Star Rating for the protection a car offers older occupants. There is however reluctance from crash testers to add further to a set of tests and scoring which is already complex – male, female, children, pedestrian dummies, vehicles of different weight and size, and electronic systems.

SAFER DRIVERS: SUPPORT AND SELF-HELP

As the number of older drivers grows, we need to provide improved practical self-help and support for responsible older drivers, their families and GPs. There is a need to know what to watch out for and to support the maintenance of driving skills.

Advice to Older Drivers and their Families
There is no shortage of advice. Early in the Task Force's work it was evident that a website was needed to manage the quality and quantity of information. We welcome the DfT's support for the new www.olderdrivers.org.uk/ managed by RoSPA. The DVLA also has information on Gov.uk about when and how to notify about a medical condition that may impact on safe driving.

Advice to GPs
Last year, while the Task Force was still meeting, the General Medical Council reviewed its advice to GPs. The Task Force welcomes the new draft advice prepared by the GMC. This advice recognises that GPs need more knowledge of the specialised support available, not least driving appraisals, so that they can and should more comfortably refer those with a serious medical condition (e.g. dementia) to more specialist services.

GPs have a responsibility towards the wider road user to ensure that drivers who may be unfit to drive are given adequate attention and support.

Driving Appraisals
A major opportunity for the future can come from developing driving appraisals or assessments that help older drivers maintain their confidence, learn tips and tricks (e.g. to increase cognitive skills) and keep up to date with new vehicle technologies. Across Britain there is now a wide range of these courses run by trusted bodies such as RoSPA, the IAM and local authorities. These courses can be short, simple 'entry level' courses with classroom and limited time behind the wheel with an expert. Such appraisals are purely supportive and personal: there is no 'pass' or 'fail' nor need to inform the DVLA or insurers.

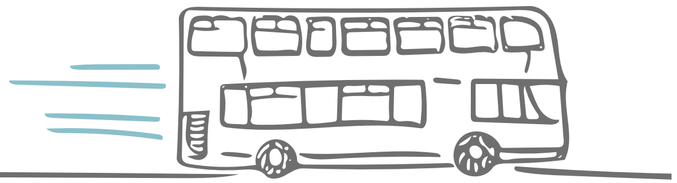
There are other courses at mobility centres for those with a medical condition or disability.

Britain has also, uniquely, developed driver re-education courses of several types which the Police may offer as an alternative to prosecution (*NDORS77). The most well-known is a speed awareness course offered to speeding offenders. NDORS courses are rightly robustly evaluated for effectiveness and content. Hampshire Police report that two thirds of older drivers who accept a local pilot NDORS 'Fitness to Drive' or 'Driver Alertness' course after being stopped for driving without due care and attention or careless driving go on to achieve a safe outcome.

ALTERNATIVES TO DRIVING

Around a third of older drivers let their licences lapse after age 85 either because of a medical condition or a personal choice that they no longer wish to drive. Mobility remains vital but the number of trips by car tends to decline with age.

As technology and ways to pay for travel develop further, there may be ways to craft new offerings. For example, an 'all you can eat' bundle of taxi rides with a quality provider for a fixed monthly fee. Where the DVLA is unable to renew a licence; or insurers have to refuse to renew an older driver's insurance or offer insurance at an unrealistic price; or families or GPs need to discuss hanging up the keys, there is clear appeal in being able to offer a truly equivalent alternative mobility package at the same price as running a car.



SUMMARY OF KEY RECOMMENDATIONS

1 RESEARCH ON CATASTROPHIC CLAIMS

Research, both in Britain and internationally, consistently shows that older drivers pose no greater risk on the roads to third parties than other age groups. However, the new research reports published by the Task Force show there is reasonable concern from insurance catastrophic claims data (claims over £50,000) that older drivers, possibly those over 80, may pose a higher risk of very serious bodily injuries to third parties.

The number of catastrophic claims involving older drivers is small for any one insurer and so difficult to be certain about. The size and frequency of the claims however adversely affects both the willingness of insurers to insure older drivers at all and the premiums charged. It is in the interests of older drivers, insurers and the public that this issue is openly researched and the reasons for higher claims costs identified.

It is recommended that an industry body should be mandated to ensure motor insurers pool research on a set of catastrophic claims data covering a limited time period to enable clear evidence to be obtained on catastrophic claims involving older drivers and the causes.

RAISE MANDATORY SELF DECLARATION AGE TO 75 2

The automatic requirement for drivers to notify the DVLA at age 70 of any medical condition that may affect safe driving should be raised to 75. This recommendation should only be introduced with the next recommendation on eyesight which should prove more relevant in practice than the current self-notification requirement.

The medical condition notification requirement was introduced more than 50 years ago when life spans were a decade shorter. There is no convincing evidence today that drivers in the 70-75 age group present a special general risk justifying this requirement. There is evidence that the risk rate to drivers per mile driven rises more steeply after age 75.

THE DVLA SHOULD REQUIRE EVIDENCE OF A RECENT EYESIGHT TEST 3

The DVLA should require evidence of an eyesight test at age 75. The DVLA, insurers and others should encourage vision checks every two years, particularly from age 60.

There is as yet no general "marker" providing warning that an individual may not be fit to drive. Poor eyesight is a high risk medical condition associated with driving. Eyesight deteriorates with age and the government offers free eyesight tests to those over 60. There is evidence that when the Police offer driving assessments as an alternative to prosecution nearly 70% of those assessed require eyesight correction.

More frequent eye tests would have significant wider health benefits for older people.

4 DEVELOPMENT OF ALTERNATIVES TO SELF-DRIVE

The growing market of older drivers with purchasing power offers opportunities to develop new products which offer alternatives to self–drive. The market should be encouraged to consider piloting new products, such as bundles of taxi rides with quality providers, where the cost of owning and running a car no longer makes financial sense or is the best solution for those with a medical condition. The costs to the public sector of accelerating decline when mobility is lost are clear. The piloting of new products should be encouraged by the Government.

SAFER ROAD DESIGN 5

The UK should develop similar guidance on designing roads for older drivers along the lines already in place in the USA, Australia and New Zealand. Road authorities should more rigorously adhere to existing standards of road design and maintenance where flaws are likely to place older drivers at greater risk of involvement in serious crashes.

6 SAFER VEHICLES

Recognising that developing a 'silver NCAP' would be a complex and time-consuming project, specific advice on modern in-car safety features that are of special significance to older drivers should be prepared by an appropriate consumer body.

Manufacturers should accelerate the development of improved crash protection standards for frailer people, particularly older women, which could help older drivers in manoeuvres they find especially difficult.

DRIVER APPRAISAL SCHEMES 7

As a priority, the DfT research programme should support an evaluation of existing driving appraisal courses offered by the public sector and those in the private sector who wish to participate.

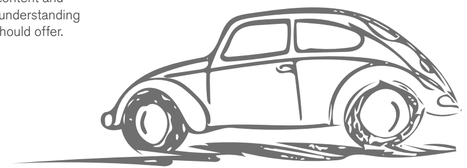
Driver appraisal schemes hold enormous promise for the future. Unthreatening, voluntary courses run by trusted organisations have the potential to become a new (and enjoyable) social norm which any responsible older driver would wish to take to refresh skills and knowledge to support their safe driving into old age.

Today there are very many courses of varying content and quality. The aim must be to develop quickly an understanding of the core content that a recognised course should offer.

CONCLUSION

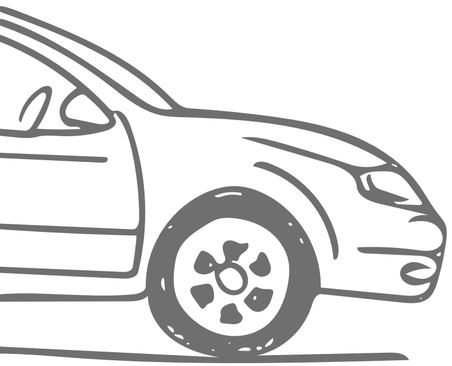
In the future, it will be the norm to drive safely into old age as we live longer, healthier lives. The research supporting our work increasingly lead the Task Force to focus on supporting those driving over 70 better and how to ensure those few older drivers with high risk medical conditions who slip through the net can be identified and helped earlier.

The Government has an important role to play in supporting older drivers and ensuring safety on our roads, so we would like a Minister to be given a specific responsibility for overseeing this area. However, we recognise that it is not solely the responsibility of Government. This report provides a detailed analysis of older drivers and makes informed suggestions about how to proceed. The members of the Task Force who contributed to it stand ready to assist in making it a reality and ensuring that it has a meaningful, long-lasting legacy.



INTRODUCTION

The Older Drivers Task Force was set up as a response to a recommendation in the report: Making Road Safety Pay by the Road Safety Foundation which was commissioned by Ageas[1]. This report is a contribution to a wider road safety strategy.



Specifically, in November 2014, following a workshop on Driving After 80 held in October 2014 with a broad range of expert stakeholders, the government accepted a widely supported recommendation that the UK should develop a National Older Driver Strategy along the lines already being pursued in the USA[2].

The offer of financial support from Ageas for the Road Safety Foundation to manage the research and coordinate the key stakeholders required in a Task Force was also welcomed by Government.

The workshop identified three strands of work that would enable the Task Force to pinpoint the major issues affecting the safety and mobility of older drivers and develop a strategy for them.

The three strands were:

- The evidence base;
- Vehicle, road and information technology; and
- Support and self-help.

The Task Force's goal was:

"As Britons live longer, healthier lives, to develop a National Older Drivers Strategy which will improve the framework, advice, self-help and technology available to support the fast-growing number of older drivers."

The intention of this report is to provide an independent, informed focus for action by Government, local authorities, the medical profession, the emergency services and the many other organisations with a stake in older driver mobility and safety.

This report is supported by a separate research report that provides details of the evidence on which its findings are based. Particular thanks are due to the Department for Transport for their help on this.

The overall purpose of the strategy is to enable older drivers to drive safely for longer. The longer people can drive safely, the greater the benefit to their well-being and to the taxpayer, family or local authority who would otherwise have to support their mobility needs or the effects of lack of mobility, which could include residential care.

There are many priorities for road safety interventions, judged by the relatively high casualty rates of motorcyclists and younger drivers and the high risks from driving when impaired by, for example, drink, drugs or drowsiness. But there are already a number of policies and plans in place to tackle these issues.

The question for the Task Force was whether the present arrangements for keeping the growing number of older people driving safely were sufficient or could improvements be made? We were conscious of media accounts of the risks posed by older drivers and the call to do something about them.

We have defined "old" in a loose sense. People age at different rates and their requirements at any particular age will vary. For the most part we are looking at those aged 70 or over, though our evidence base often looks at those below this age.

Older drivers have fewer casualties than many younger groups but have relatively high death rates per kilometre driven. Their fragility is an important factor. As people have healthier life styles and better medical treatment, they live longer and should be capable of driving safely for longer.

Many older drivers will no longer be working but need to be able to get around. If older drivers lose their capability for independent mobility, the consequential burden will fall on families and friends, charities and local and central Government.

It is therefore important that we do all we can to develop the opportunities for greater mobility while addressing the legitimate concerns of those who want to ensure that older drivers are not a risk to themselves or others.

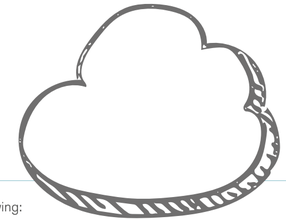
In a wider context, the United Kingdom with its outstanding road safety record has a chance to extend its leadership into the provision it makes for its older drivers. In doing so, there are economic and social benefits for UK science in physiology, neurosciences and socio-economics, vehicle technology, hazard perception, education and training systems, assessments, road and vehicle engineering, innovative insurance packages and communications.

Making provision for older drivers to drive safely reduces risks and burdens (not least for the NHS), and can make the road system safer for all drivers. The UK already does much that assists and supports older drivers, but more could be done. Keeping older drivers safely mobile offers economic savings for society as a whole, in addition to practical and psychological benefits for individuals. It also provides a major opportunity for UK plc. We should seize it.

One issue that we have not addressed in depth, deliberately, is the impact of autonomous vehicles on the older driver. Some experts believe that given the money currently being invested in driverless car programmes across the world that they will become a reality in the next decade or so.

The driving task is nonetheless becoming more automated. As collision avoidance and lane keeping technology improves, the risks associated with reduced fitness to drive will reduce. The autonomous vehicle in time may well take anyone including children and the seriously impaired from A to B regardless of whether they are fit to drive a conventional vehicle.

We believe technology has much to offer but completely driverless vehicles are a long way off. This report is primarily concerned with the here, now and the decade or more ahead.



GUIDING PRINCIPLES

Among the main principles that have guided our work are the following:

The Safe System

It is now widely recognised internationally and in the UK (see the Department for Transport's latest Road Safety Statement of December 2015[3]) that the Safe System approach to managing road safety is the best way to achieve reductions in the numbers of those killed and injured on our roads[5]. The Safe System calls for long-term goals (typically Vision Zero or Sustainable Safety), an exacting intervention strategy and strong institutional management and leadership.

Proportionality

It would be easy to solve the "older driver problem" by keeping older people off the road and making it far more difficult for them to renew or obtain a licence. However that could not be justified by the limited risk they pose to themselves and others as drivers and the significant risk they would then run as pedestrians, quite apart from the social and psychological consequences of not being able to drive.

Evidence based

We have drawn on extensive national and international research into older driver issues to come to our conclusions. This is important. It is easy to make snap judgements based on anecdotal evidence which may well lead to poor policy decisions, making life ultimately more difficult for the older driver.

Best practice

We have drawn on the best information available to us about what works and what does not work to recommend particular actions, preferably those which have the potential to be adopted nationally. Services for older drivers are geographically patchy but could be resolved by, for example, web-based advice.

Affordability

Where possible we have attempted to address the question of affordability, recognising that resources at central and local Government level are likely to remain tight.

Avoiding recourse to legally backed enforcement when other routes are open

We are persuaded that in certain circumstances seeking to change older driver behaviour by training and/or education rather than by legal penalty is a better way to achieve desired outcomes.

Spotting gaps or weaknesses

We have looked at what can be done to improve the safety of older drivers by recommending particular actions to close gaps and offset weaknesses in the system. It will be for others to decide how best to do this.

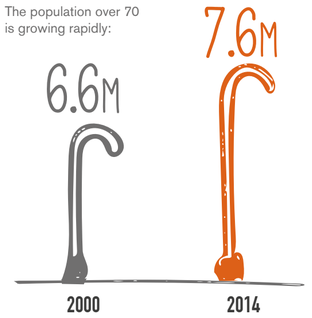
SECTION 1: SAFER DRIVERS – THE EVIDENCE

We have looked at data on older drivers in a number of ways to narrow down the issues that need to be addressed. The issues include:

- How many older people are there? And how much do they drive?
- Are older people at risk? And are they a danger to others?
- Are older drivers medically fit to drive? Is their eyesight good enough?
- Do we really need to take action? Is there an alternative to driving?

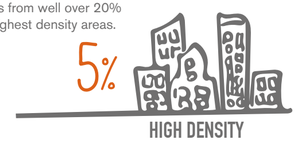
AGEING SOCIETY AND OLDER DRIVERS

The population over 70 is growing rapidly:

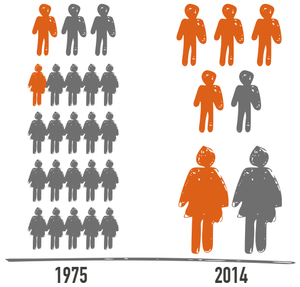


By **2035** the population aged 70 or over is expected to be about 12.7 million (about 18% of the population)[6].

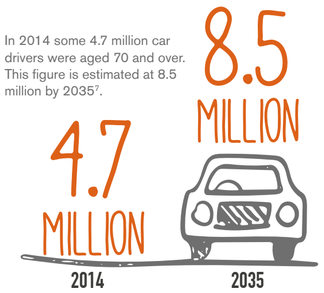
In Great Britain the proportion of the population aged 70 and over ranges from well over 20% in low density areas where they are car dependent, to under 5% in the highest density areas.



In 1975 only one in three men and one in twenty women over 70 held a driving licence. By 2014 four out of five men and one in two women over 70 were licensed to drive.

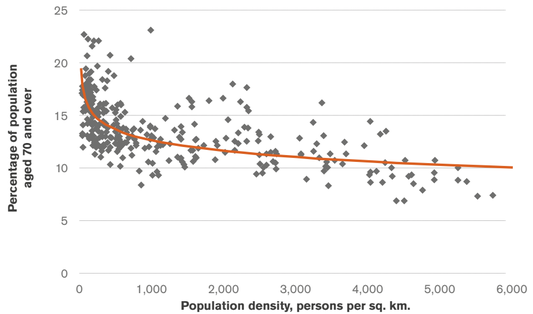


In 2014 some 4.7 million car drivers were aged 70 and over. This figure is estimated at 8.5 million by 2035[7].



By age 85, about 30% of women and 25% of men who have held driving licences will have allowed their licence to lapse.

Figure 1.1
Percentage of persons aged 70 and over in local authority areas, Great Britain 2014, ONS Regional Profiles[8]

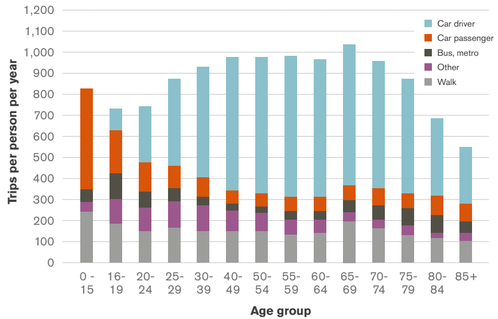


ARE CARS IMPORTANT FOR OLDER PEOPLE?

The importance of cars, and particularly car driving, is clear. From age 40 to over 70 about 70 percent of all journeys are made by car. Women tend to make more journeys as car passengers, and men as car drivers. For both men and women, the reductions with age in the number of journeys and distance travelled are largely due to reductions in the journeys and distance as a car driver (Figures 1.2a and 1.2b).

Given the role of the car in providing mobility, and hence independence and quality of life, care is needed to avoid well-intentioned initiatives to improve the safety of older drivers from unnecessarily reducing the mobility of older people[10].

Figure 1.2a
Journeys per person per year-men 2013-14
National Travel Survey[9]



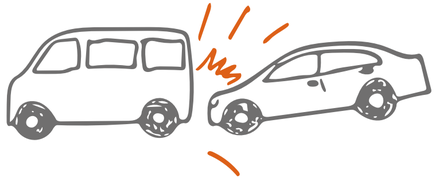


Figure 1.2b
Journeys per person per year-women 2013-14
National Travel Survey

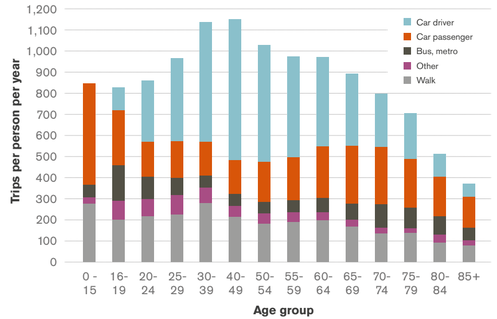
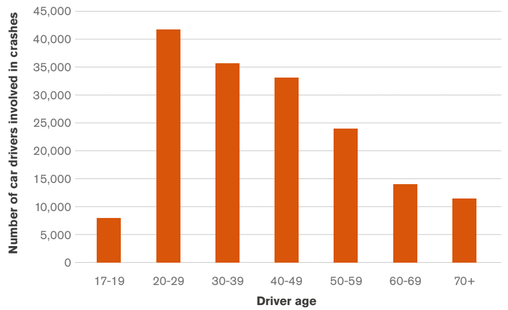


Figure 1.3
Number of car drivers involved in crashes – Great Britain 2014 Reported Road Casualties Great Britain[10]



ARE OLDER PEOPLE AT RISK?

Number and risk by age
Older drivers are relatively safe in purely numerical terms. Drivers over 70 are involved in fewer injury crashes on the roads than all other drivers except those under 21 (Figure 1.3).

However, these simple figures do not show the whole picture and disguise areas of concern. Older drivers are more vulnerable than other age groups. If involved in a crash, older people are more likely than other age groups to be injured and, if injured, to die.

In 2014, people aged 70 and over represented 13% of all car driver licences, 9% of distance driven, less than 7% of all car driver casualties, but 20% of car driver deaths.

From 2000 to 2013, for all the age groups between 20 and 79, car driver casualties have decreased fairly steadily. There has been a steady rise in casualties aged 80 and over, albeit from a lower base[10].

From 1985 to 2014, the percentage of casualties who died in crashes fell for both pedestrians and car drivers[10]. In the case of pedestrians, this could be due to improved medical services (speed of response and quality of care), better health generally and greater compliance by drivers with speed limits. Pedestrian protection from vehicles has also improved. For car drivers, better occupant protection is the likely reason.

Figure 1.4a
Casualty rates for car drivers per driving licence – Great Britain 2014. Reported Road Casualties Great Britain and National Travel Survey

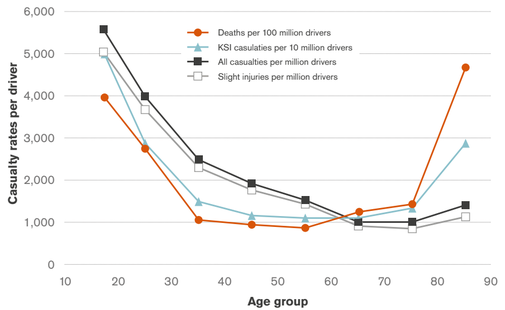
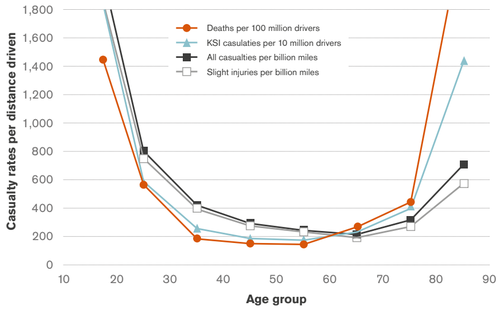


Figure 1.4b
Casualty rates for car drivers per distance driven – Great Britain 2014. Reported Road Casualties Great Britain and National Travel Survey



Car driver casualties by licence and by distance

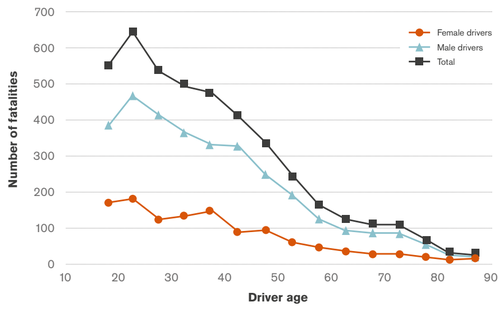
The car driver casualty rate-per-driver is the risk that a driver will be injured compared with the number of licences held. The rate-per-distance is the risk of a driver being injured for every vehicle mile driven.

Figures 1.4a and 1.4b show these two measures of driver risk. In each case, casualty rates fall with increasing age up to at least age 50 and often 70 or 80, then rise with increasing age. Because there are about 100 slight injuries for every death, the rates are shown on different scales. The rate for slight injuries is the best measure of accident involvement, unbiased by the effects of fragility, and this is lowest per driver for drivers aged 70 – 79, and well below that of younger drivers.

Fragility makes the fatality rate rise sharply with increasing age, after age 70. Because the mileage driven reduces with increasing driver age, the risk per mile driven rises faster with age than the risk per driver per year.

For deaths, the rates for older drivers per driving licence are similar to those drivers in their teens or twenties. For fatal casualties per distance driven, the rate for drivers aged 80 and over is higher than that for teenagers, and for drivers in their 70s, between that of drivers in their 20s and 30s.

Figure 1.5
Pedestrian fatalities by driver age and gender - USA 1997 Hakamies-Blomqvist 1999 and FARS (Fatal Accident Reporting System)[15]



ARE OLDER DRIVERS A DANGER?

Probability of drivers being at fault

As you get older you are more likely to be at fault after middle age[11]. From Dutch research[12], the reduction in the number of drivers involved in injury crashes with increasing age is clear but so too is the relatively high number of drivers who are responsible in the oldest age group (and the youngest). A similar result for Britain has been found by studying the contributory factors cited in accidents involving car drivers[13].

Risk to other road users

How much of a risk are older drivers to other road users? Evidence from the USA (Figure 1.5) shows that from age 70 onwards drivers kill far fewer pedestrians than drivers under 70; in 1997, five percent of all pedestrians were killed by drivers aged 71 and over[14]. Most of the older drivers (75%) were men.

For Great Britain, 2012 figures show that of the 447 pedestrians killed by cars, drivers over 70, who represented 13% of all drivers and 9% of all car miles driven, were responsible for 7% of all pedestrian deaths[15]. The risks posed by those aged under 40, and especially under 25, are much higher.

Research on Catastrophic Claims

Research both in Britain and internationally consistently shows that older drivers over 70 generally pose no greater risk on the roads to third parties than other age groups. However, there is a suggestion from some British catastrophic third party claims data (claims over £50,000) that older drivers, particularly those over 80, pose a higher risk of causing very serious bodily injuries to vulnerable road users[16].

The number of catastrophic claims involving older drivers is small for any one insurer and so it is difficult to be certain about. The uncertainty however adversely affects both the willingness of insurers to insure older drivers at all and the premiums charged. It is in the interests of older drivers, insurers and the public that this issue is openly researched, and if claims costs prove to be higher, the reasons identified.

Figure 1.6
Percentages of casualties that are fatal – Great Britain 2010-14

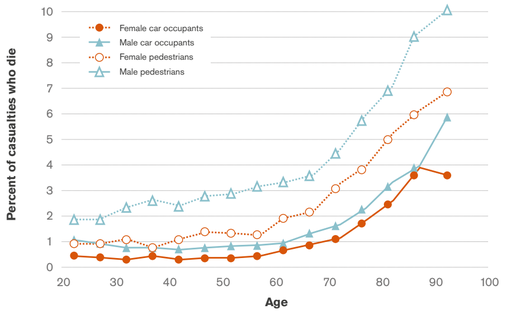
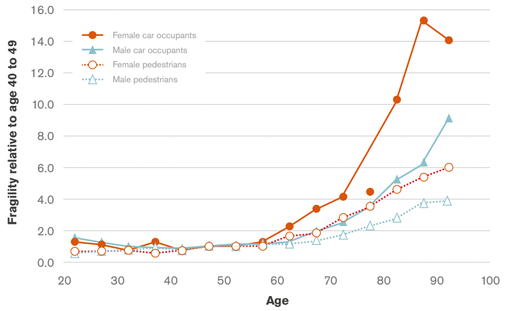


Figure 1.7
Fragility of car users and pedestrians - Great Britain 2010-14



FRAGILITY

Aside from medical conditions, the physical deterioration of older people, their fragility, is a major factor in the deaths of older drivers and their passengers.

Fragility is the major cause of the increase in the rates of deaths of older road users in road safety statistics. Essentially, older people are far more likely to die in a crash than other age groups.

This applies whether the older person is a driver, passenger or pedestrian (Figure 1.6).

The way the physical fragility of the person injured varies with age is shown by the fragility index, which is the percentage that die, relative to the percentage for 40-49 year olds (Figure 1.7).

Using 2010 - 14 data, a consistently higher percentage of male than female pedestrian casualties die. Deriving a fragility index from this shows that conversely, women from the age of 70 are significantly more fragile; this is consistent with the greater probability of women having osteoporosis in later life.

The same pattern is observable for car occupants with the percentage of those who die being higher for men than women, but with women having a higher fragility index and strikingly higher from 70 upwards.

These figures may well be influenced by the likelihood that older drivers, and particularly older women, drive small cars that provide less occupant protection for a given NCAP rating when in a crash with a larger, heavier vehicle[17]. The magnitude of this effect has not yet been established.

Figure 1.8
Percentage of fatal car crashes in which speed was a causal factor. DfT Road Safety Research Report 75, Clarke et al (2007)[17]

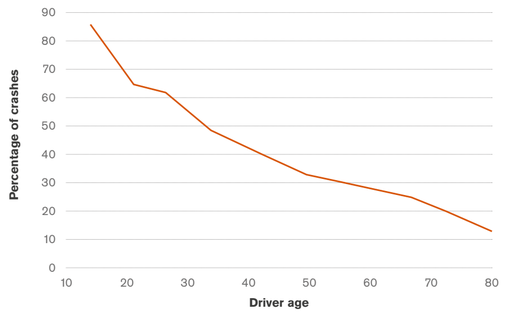
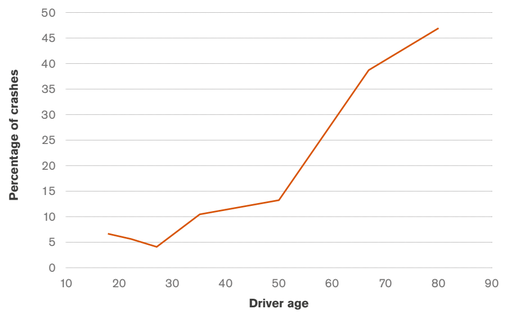


Figure 1.9
Percentage of fatal car crashes involving right of way violations. DfT Road Safety Research Report 75, Clarke et al (2007)



CRASH CAUSES

The types of crash that drivers have vary with age and gender. A study of 1,185 fatal car crashes in 2007 showed that older drivers were less likely to be in crashes in which speed was a cause (Figure 1.8), less likely to be in crashes involving loss of control, less likely to be impaired by alcohol, but more likely to be in a crash involving a right of way violation (Figure 1.9)[18].

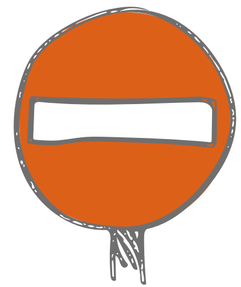
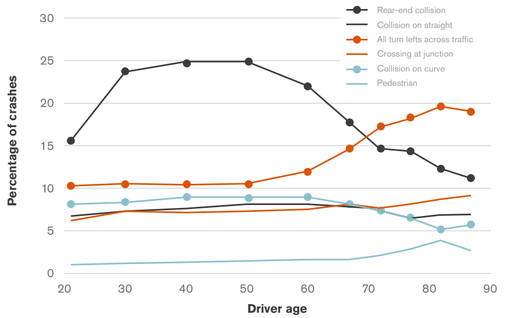
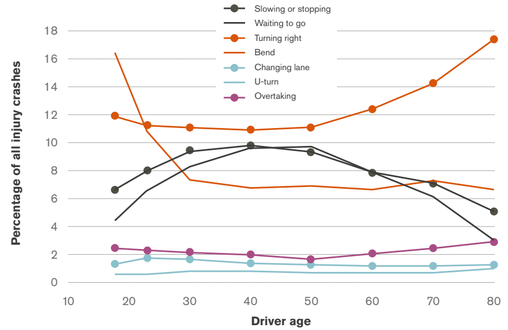


Figure 1.10
Percentage of all injury car crashes by crash type and driver age. Norway 1983 – 2006. VTI Report 656A, Levin et al, 200918



A Norwegian study (1983-2006) involving over 200,000 drivers found crashes from turning across traffic rose from some 10% for all crashes at age 50 to 20% for drivers aged 80+ (Figure 1.10), while rear end crashes reduced from 25% to 11%[19] .

Figure 1.11
Percentage of all injury car crashes of all severities by manoeuvre and driver age, Great Britain, 2013



An analysis of STATS 19 data for Britain for 2013 shows some similarities. For car crashes for all severities, the percentage that involve turning right increases from 11% up to age 50 to 18% over age 75 (Figure 1.11).

ARE OLDER PEOPLE FIT TO DRIVE?

The legal basis for fitness to drive is the third European Directive on Driving Licences which came into effect in 2013.

The Directive (2006/126/EC)[20] requires that:

"… the knowledge, skills and behaviour connected with driving motor vehicles should be defined….and the minimum standards of physical and mental fitness for driving such vehicles should be redefined."

It adds that:

"Specific provisions should be adopted to make it easier for physically disabled persons to drive vehicles."

The Directive shows a table of 10 medical conditions and associated risks. Those conditions that show an above average risk are alcoholism, neurological disease, mental disorders and drugs and medicines.

A 2010 study[21] by Charlton in Australia looked at chronic illness and crash involvement and gave overall crash risk ranges for eight conditions, amongst which epilepsy and sleep apnoea were potentially the greatest risks, though lower ranges of crash risk were also given for both.

A major review of medical conditions and driving for the US National Highway Traffic Safety Administration (NHTSA)[22] summarises the scientific evidence available to 2000 and ends with appendices recommending criteria on fitness to drive for a variety of conditions. A more recent but less detailed review[23] brings the evidence up to date.

These reviews distinguish between acute conditions, such as epileptic seizure or a hypoglycemic reaction, which can cause sudden loss of consciousness and control, and chronic effects which are relatively predictable and stable. The impact of chronic effects on an individual's driving ability is measurable, so decisions about continued driving can be based on measures of individual performance rather than on estimates of risk.

Of chronic conditions, damage caused by a stroke can affect ability to drive[24], and dementia has long been recognised as potentially affecting fitness to drive and has been reported as increasing the risk of crashing. Practitioners at mobility centres report that deciding whether a driver with the early stages of dementia is still fit to drive is one of their greatest challenges.

There are a number of batteries of cognitive tests to screen drivers for dementia. These include the Rookwood Driving Battery[25] and the Nottingham Dementia Drivers Screening Assessment[26], as well as individual tests such as Mini-mental State Examination (MMSE), trail making and mazes. Validation of these tests against performance during an on-road assessment (for example, Vella and Lincoln, 2014)[27] show that these can provide useful pointers to drivers who may have problems, but are not sufficiently accurate to be considered anything more than an initial screening tool.

In Canada, the province of Quebec has a substantial database as it provides motor insurance and healthcare for its residents and is starting to match health and crash data. One paper[28] concludes that the majority of drivers over the age of 70 have a medical condition associated with increased crash risk.

Reporting by the individual driver of such medical conditions is inefficient. For example, driver self-declarations of cardiac problems were just over 5% whereas the declaration by physicians was about 65%.

So – and this should come as no surprise – there is under-reporting of medical conditions.

This needs to be set against the fact that medical or other screening of older drivers for licence renewal may have unintended consequences:

- Some drivers are discouraged by tests and stop driving before they need to
- It does not improve the safety of drivers who continue to hold a licence
- It increased the number of elderly pedestrians killed or injured in a case study in Finland, probably because of older former drivers switching to more dangerous ways of travelling, such as walking or bicycling[29].

Another Quebec report[30] assessed the relative risk of crash involvement caused by 15 medical conditions. Crash risk increased slightly for most of the conditions believed to influence driver fitness but the risks were generally assessed to be lower than those in the Charlton report.

Of the 15 medical conditions, five showed no increase in risk, seven showed an increase in crash risk of 15% or less, and of the four conditions in a higher risk category, two conditions were found in small sections of the population (epilepsy 0.28% and substance abuse 1.23%). The implications are that if all drivers with medical conditions continued to drive, crashes would be 12% higher, with the biggest contributions being respiratory disease (4.2%), psychiatric conditions (3.7%) and locomotive conditions (2.6%).

Of the many medical conditions that are relevant to fitness to drive, several are age-related including those that cause long-term cognitive impairment such as Parkinson's and dementia.

An as yet unpublished research report notes that there is little population level data identifying the risk of crashing for people with brain injury or illness. It goes on to state that there is some evidence of increased risk of crashes for older people with dementia and an estimated eight-fold increase in risk of crashes in Alzheimer's patients relative to controls[31,32].

The Legal and Regulatory Background

The Road Traffic Act, 1988 refers to prescribed, relevant and prospective disabilities. A prescribed disability is one that is a legal bar to holding a licence, though it may be possible to obtain a licence if certain conditions are met.

A relevant disability is any medical condition that is likely to render the person a source of danger while driving, for example a visual field defect.

A prospective disability is any medical condition which may develop into a prescribed or relevant disability such as Parkinson's disease or dementia.

Car licences are normally valid until age 70. There is no upper limit but after 70 a renewal is required every three years. All licence applications require a medical self – declaration by the applicant.

The Government's website states:

"You can decide when to stop as long as you don't have any medical conditions that affect your driving."

The licence holder or applicant must notify the DVLA of any medical condition that may affect safe driving.

The role of Doctors and the DVLA

The General Medical Council has recently issued new guidelines to doctors as part of a public consultation on confidentiality[33]. The guidance is expected to be published in late 2016.

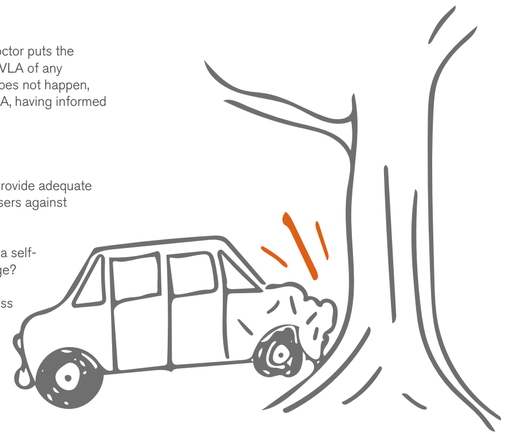
The chief executive of the GMC is quoted as saying:

"A confidential medical service is a public good and trust is an essential part of the doctor-patient relationship. But confidentiality is not absolute and doctors can play an important part in keeping the wider public safe if a patient is not safe to drive."

The thrust of the advice remains that the doctor puts the responsibility on the patient to inform the DVLA of any relevant medical condition and only if this does not happen, the onus is on the doctor to inform the DVLA, having informed the patient of his or her intention.

The key questions on fitness to drive are:

- Does self-declaration of fitness to drive provide adequate protection for the driver and other road users against crashes?
- Is the age 70, at which the DVLA require a self-declaration of fitness to drive, the right age?
- Is the voluntary process of declaring fitness to drive the best way to protect driver and road user or should there be compulsory screening/testing?



SELF-DECLARATION

As noted above from the Quebec research, the evidence is that while some drivers may admit to a physical disability, even fewer are likely to acknowledge a mental one[34]. In other words, self-declaration on its own is only of limited value.

The main safeguard is the medical practitioner. Provided people with medical conditions go to their doctor and the doctor acts on the advice from the GMC and the DVLA, the risk can be contained. Patients at risk can be referred to a specialist mobility assessment service. The ultimate advice to the DVLA on fitness to drive, as opposed to the existence of medical conditions, rests with trained assessors and not the GP or other health professionals.

GPs are busy people and are not trained to assess a patient's driving skills. They can only act on advice from the GMC and particularly the DVLA on those medical conditions that may raise doubts about the patient's fitness to drive.

In a study for the Warwick Medical School in 2010[35], researchers found that:

- Although Health Care Professionals (HCP) were aware of DVLA standards on Fitness to Drive they showed poor knowledge of how the DVLA medical standards apply to specific conditions.
- Most HCPs believe that more training and clearer guidelines on giving advice on Fitness to Drive is needed.
- Systems and procedures for implementing DVLA medical standards are poorly communicated to some HCP groups.
- There was uncertainty about whose role it is to advise patients on Fitness to Drive.
- Three quarters of patients were not advised correctly about the DVLA rules for their medical condition.

Additionally much more could be done to make GPs and other health professionals aware of the driver appraisal services available in many parts of the country, to which patients could be referred.

A problem may arise over the GP's need to balance the risk of allowing the patient to continue driving despite his or her risky medical condition against the probable loss of mobility and independence, and of, possibly, the risk of isolation and depression.

Giving advice in this context is therefore not straightforward. GPs will also be conscious of liability questions. Oversimplified this might be: "If I don't refer a patient to the DVLA, will I be held responsible if they have a crash? Yet if I do refer them, they may be put off driving altogether, even before being assessed when, with help, they may be safe to drive".

As the population ages and the number of people with cognitive impairment increases (the Alzheimer's Society estimates that more than 850,000 people have dementia diagnoses[36]), the risks to drivers, passengers and other road users is increasing.

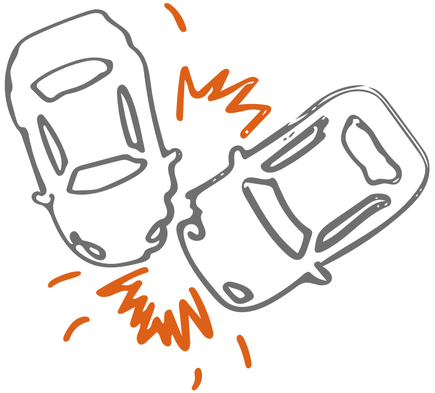
Is 70 the right age to self-declare?
Seventy is not a magic number. The age limit was set in 1971 for reasons which are unclear. Life expectancy for men was 68 and for women 72. Since then more people are living longer, enjoying better medical treatment and services, are healthier and driving safer vehicles. Life expectancy in 2015 was 79 for men and 83 for women.

There is some evidence in the DfT Road Safety Research Report 29 'The Ageing driver[37]' that on average serious difficulties with manoeuvring a car and driving safely occurs after age 75, but of course individuals are different and for some, difficulties can develop earlier. Results of assessments by a mobility centre also show a sharp increase in the percentage of drivers assessed as unsafe around the age of 80.

In these circumstances a higher age limit of 75 to start to self-declare fitness to drive would be reasonable. It would reduce administrative costs and burdens and be welcomed by older drivers.

CONCLUSION

The Equal Opportunities Act 2010 requires arguments to discriminate on grounds of age in transport to be based on good reason ('objective justification'). Raising the age of self-declaration to 75 appears reasonable. There could also be administrative benefits. The crucial issue from a safety viewpoint is that the present system which relies heavily in the first instance on GPs in particular to identify health risks which may affect driving ability should be fully effective.



KEY RECOMMENDATION

The automatic requirement for drivers to notify the DVLA at age 70 of any medical condition that may affect safe driving should be raised to 75.

This recommendation should only be introduced with the recommendation on eyesight which should prove more relevant in practice than the current self-notification requirement.

TESTING/SCREENING

The present arrangements are a hybrid since a patient of any age with a notifiable condition who informs the DVLA of this is in effect embarking on a regulatory process as the issue of a licence will be conditional on the outcome of required assessments.

The problem with screening all drivers after some arbitrary age is that people age at different rates and self-regulate to avoid or reduce risk. The rate of progression of diseases is also highly variable. It therefore seems more sensible to leave the present arrangements in place at least for the time being (eyesight apart, see below). That in effect means that medical practitioners are on the front line as they are responsible in the case of significant mental or physical disability for assessing whether their patients are fit to drive or need a further assessment.

The British road system is one of the safest in the world for older drivers, as for all road users. Comparisons between States in Australia[38] and Member States in Europe[39,40], show that more stringent renewal systems offer no safety benefits but can cause mobility problems.

RECOMMENDATION

The DVLA should require evidence of an eyesight test at age 75. The DVLA, insurers and others should encourage vision checks every two years, particularly from age 60.

The Government should commission research into visual tests to establish ones that are fit for purpose

Eyesight

Eyesight deteriorates with age. The normal eyesight test (as part of the driving test) is inadequate as far as the older driver is concerned as it does not measure, for example, peripheral vision. However, a recent review of vision and driving safety shows that no standard vision test correlates well with accident risk[41]. It showed, surprisingly, that visual acuity was at best very weakly linked to driver safety so was not a good indicator of future crash involvement.

The only (non-standard) test that is linked to driver safety is one of slowed processing speed, such as Useful Field of View. Older drivers with a slowed visual processing speed were over twice as likely to crash as those without it. Despite this: "there is currently little or no clear evidence that visual acuity and other visual sensory tests are good screening tools for identifying drivers who are likely to crash in the next couple of years. However a driver with certain types of vision impairments is at increased risk of crash involvement."[41] The reason for this apparent contradiction is that even when a condition causes an increase in risk, a test for the condition that produces many false positive and negative results is not a useful screening tool.

On contrast sensitivity deficits (which are common for older drivers with cataracts) the literature is thinner than for visual acuity but it is clear that drivers have greater difficulty in driving and may well moderate their pattern of driving to reduce the problem. Cataract surgery improves vision and reduces future crash risk[42].

There are a number of issues associated with eyesight:

- Is the current eyesight test adequate for a lifetime of driving?
- If not, what are the alternatives in terms of the test itself and the frequency of the test?

Adequacy of the current eyesight test

It would be hard to argue that the number plate test (the ability to read a car number plate at 20 metres, probably passed at an early age and currently only checked subsequently if the driver chooses to do so) properly reflects the importance of having good all round vision.

Recent research on visual impairment and road safety[43] concluded inter alia that:

- Drivers should have a vision check every five years and every two years for drivers over 60.
- Drivers aged 70 and over should have a mandatory sight test on renewal of their driving licence.
- Research is needed to gain consensus on the best combination of visual tests for driver licensing, and the intervals between sight tests.

In Hampshire, those who opt for a referral course as an alternative to prosecution for careless driving after a crash have to have an eyesight test beforehand. Of those, 69% had eyesight deficiencies. Even if these were not a direct contributory factor to the crash, they may well have been indicators of some other problem which did directly contribute to the crash.

Adding a tick box to the licence renewal form, requiring drivers to certify that they have had a satisfactory vision test in the previous 12 months, could provide a useful prompt to drivers to get their vision checked.

Do we need to take action?

Drivers reduce their risk of crashes by making fewer journeys and driving fewer miles as they become elderly, at least in part because they have fewer reasons to travel[44,45].

In addition they consciously tend to avoid demanding driving situations such as driving at night, using motorways, driving in congested areas or at peak times[46]. Specific manoeuvres such as right turns on to busy roads, large roundabouts and gyratory systems also tend to be avoided.

Number and length of trips

Data for Great Britain for 2013-14 shows that the number of car driver trips made by men changes little between the ages of 50 and 70; for women, the number falls steadily by 40% in this period[47].

The average length of male car driver trips is longer than those of females, although the difference is smaller after 65. Both reduce with age.

Changes over time

Looking at driving patterns over the past 20 years, men have taken rather more trips from age 65 than previously (though fewer for ages up to 65); women of all ages have taken slightly more trips[47]. Trips have lengthened slightly for men and rather more for women, particularly for those aged 80 and over.

Driving frequency

Swedish data[48] shows older licence holders driving several times a week: 40% of men, 20% of women.

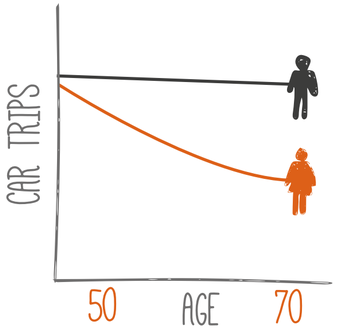
Analysis of British National Travel Survey data shows that of drivers aged 70 and over, 47% of women and 71% of men made at least six, one-way car driver trips in the week of the survey[47]. For drivers aged 80 and over, the corresponding figures are 39% and 60%.

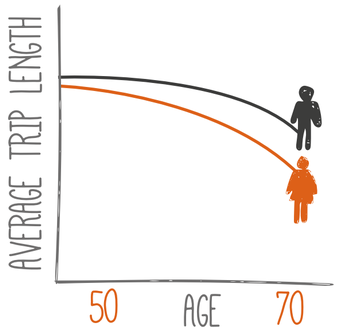
In a study of British drivers aged 50 and over conducted from 1997 to 2001[38] some 40% had a gap of more than a month in their driving and of those, about half did so for medical reasons, with an average gap of about five months.

Table 1.1 shows data from Sweden on how often a car was used for different journey purposes.

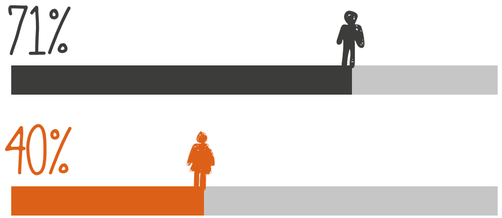
Table 1.1
How often a car was used for different journey purposes

Activity	At least 1-2 times/week	Sometimes (about once a month)	About once a year or never
Shopping, bank and post errands etc.	79	17	4
To participate in leisure and cultural activities	51	29	20
Visit relatives and/or friends	41	48	11
Doing errands for relatives/friends, either myself or together with them	22	37	41
Participate in societal and/or public activities	12	22	66
Other reason (e. g. professional)	15	22	63

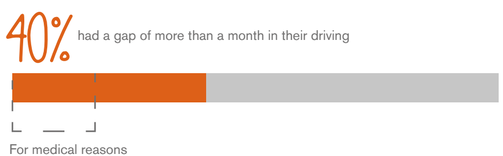




Drivers aged 70 and over who make at least six, one-way car driver trips in a week.



British drivers aged 50 and over



Reason for driving less

Australian data[50] (Table 1.2) shows the reasons for driving less. The majority are to do with lifestyle rather than issues with driving, health or ageing. A study in Denmark came to rather different conclusions[51]. Listing 22 reasons for driving less, the top three were to do with lifestyle, but 13 of the remainder involved issues over driving including "the traffic has become more complex"; "other road users are more reckless" and "I do not like driving any longer".

Situations drivers avoid

As noted, older drivers try to avoid testing situations such as busy times, multi-story car parks and town centres. They also limit the pressure on their actual or believed limitations by avoiding roundabouts, right turns, one-way systems and merging into traffic.

Swedish research[52] distinguished between those who had considered stopping driving and those who had not. Both groups gave adverse weather, slippery roads, driving in an unfamiliar town or darkness as the main circumstance they tried to avoid, the former group scoring these factors (and others) more highly.

One expert[53] has suggested that merging into fast traffic on a major road is the most demanding task for older drivers. Attention has to be divided between several tasks and this is the one manoeuvre that the driver has to make at speed, not slowly, as he or she might prefer.

A US study[54] found that self-regulation did not have a road safety benefit and another study suggests that some may self-regulate more than is necessary at the expense of their own mobility.

More research is needed to determine whether older drivers with particular medical conditions such as visual limitations or cognitive problems are likely to self-regulate their driving behaviour and whether this has any effect on their risk of a crash.

Table 1.2
Reasons for driving less than five years ago – Australians aged 60 and over

Source	Charlton et al (2003)		Charlton et al (2006)	
Sample size	Current drivers n=272		Current drivers n=597	
Reason	Frequency	Percent	Frequency	Percent
General lifestyle changes	104	38	250	42
Cut back on activities/less need	38	14	18	3
Moved house	28	10	24	4
Changed family commitments	21	8	34	6
Lifestyle changes – unspecified	13	5	174	29
Financial reasons	**7**	**3**	**9**	**2**
Employment changes*	92	34	191	32
Retired/semi-retired	80	29	182	30
Changed job	12	4	9	2
Health/age (of self or spouse)	**45**	**17**	**112**	**19**
Use alternative transport	**35**	**13**	**51**	**9**
Driving issues	15	6	14	2
Avoidance of certain road situations	7	3		
Lack of confidence in safe driving	11	4		
Other	**13**	**5**	**24**	**4**

DEVELOPMENT OF ALTERNATIVES TO DRIVING

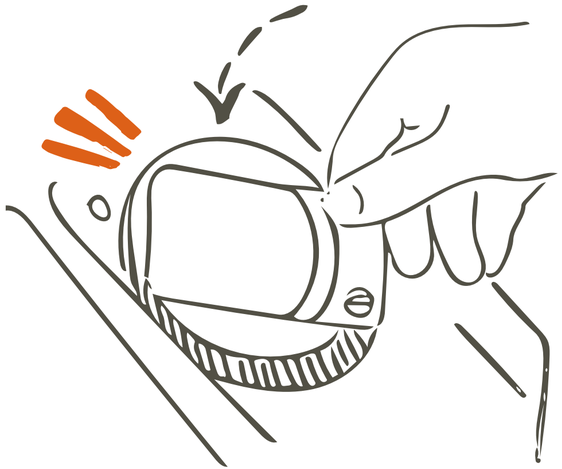
Our focus has been on finding ways of enabling people to drive themselves for as long as possible, consistent with safety. But running a car is expensive with capital depreciation, fuel, maintenance, tax and insurance costs, quite apart from any inhibiting medical condition. The costs of running a car can amount to hundreds a month yet older drivers make use of it for less than a dozen trips a month. The car in the drive represents freedom and flexibility.

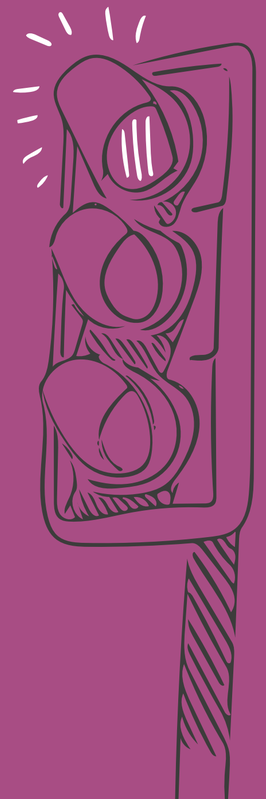
Older drivers with the purchasing power to own and run a car will grow substantially in number. Technology and financial engineering are advancing too. Personal vehicle leasing, smart apps to hail taxis, and advances in billing and ticketing illustrate how models to pay for mobility are evolving rapidly. For example, Transport for London enables senior citizen railcard discounts to be selectively applied on an Oyster card for off-peak travel and have introduced daily cost capping. Capping deals address consumer fears that monthly budgets will be exceeded.

The importance of access to affordable, accessible and flexible public transport systems in place of the car should not be overlooked where this is practical in meeting needs.

KEY RECOMMENDATION

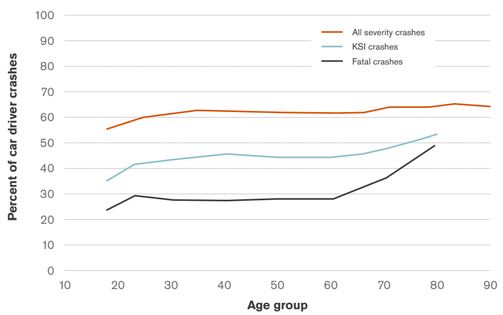
The piloting of new alternative to self-drive products should be encouraged by the Government

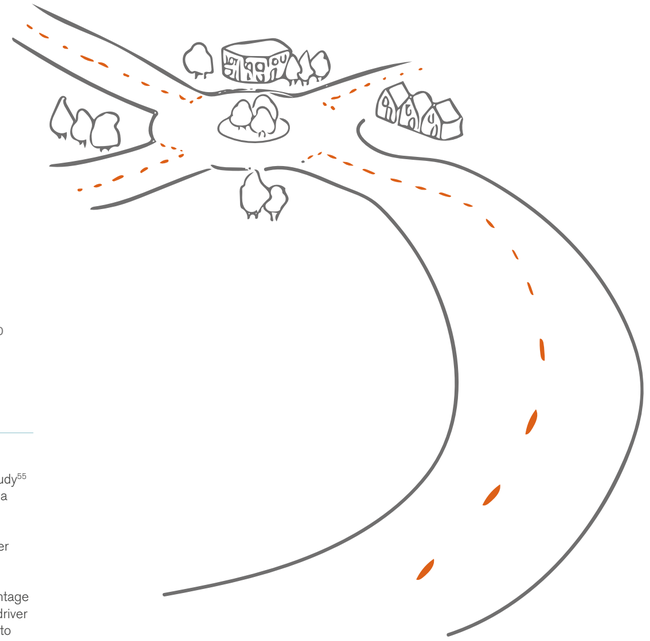




SECTION 2: VEHICLE, ROAD DESIGN AND INFORMATION TECHNOLOGY

Figure 2.1
Percentage car driver crashes at junctions, Great Britain 2012-14





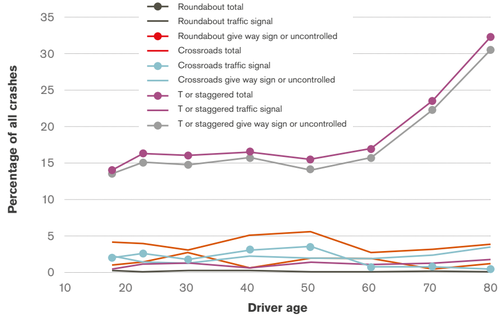
SAFER ROADS

Crash Locations
US studies show that a high proportion of fatal crashes happen at intersections. A 2011 study[55] showed that for drivers aged 60-69 over 40% of fatal crashes took place at intersections, a figure rising to over 60% for drivers aged 80 or over.

About twice as many such crashes happen at intersections where there is a stop sign rather than a traffic signal.

An analysis of car drivers killed or injured in Britain during 2012-14 showed that the percentage of all car crashes at or within 20 metres of a junction is 55-65% and hardly changes with driver age (Figure 2.1)[56]. However for fatal crashes, the percentage at or near a junction is close to 30% for all ages up to age 65 and then increases to 50% for those aged over 75, a similar trend to that for the USA. Serious injuries fall between those curves.

Figure 2.2
Fatal car crashes at junctions by traffic control device Great Britain 2012-14

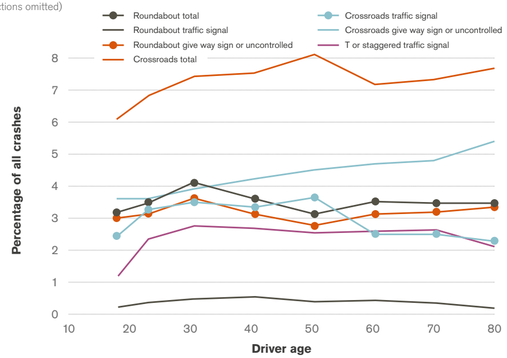


The majority of crashes at intersections are at three-way ('T') junctions with no traffic control device or a give way sign only. For fatal crashes, these increase from 15% of all crashes for ages up to 65 to over 30% of crashes for drivers aged over 75 (Figure 2.2). This accounts for almost all the increase with age in the percentage of fatal crashes that are at intersections.

The percentage of crashes at four-way junctions (crossroads) and roundabouts is low and does not increase with age.

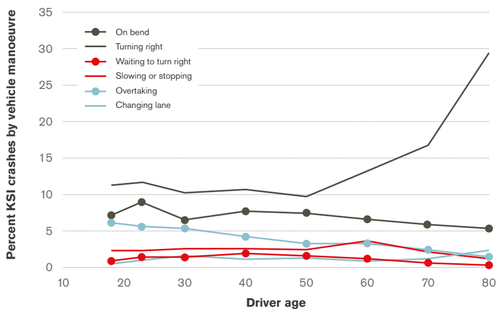
Traffic signals reduce the percentage of crashes at intersections with increasing age, as shown by Figure 2.3 for KSI crashes (the graphs for fatal crashes are difficult to interpret because the small number of crashes causes much statistical scatter). For crossroads, traffic signals reduce the percentage of serious crashes for drivers aged over 65, while the percentage of crashes at crossroads with yield signs increases with driver age. There are virtually no fatal crashes for older drivers at crossroads with traffic signals.

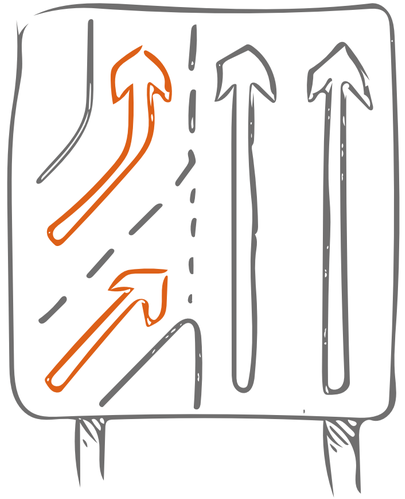
Figure 2.3
KSI car crashes at junctions by traffic control device Great Britain 2012-14. (STATS19 data, uncontrolled T junctions omitted)



The percentage of KSI crashes involving turning right across traffic increases from 10% of all crashes aged up to 50 to 30% for drivers aged over 80 (Figure 2.4). A similar pattern of crashes of all severity was found in Norway[57].

Figure 2.4
KSI car crashes, all roads, vehicle manoeuvres
Great Britain 2013





Road Design

Older drivers avoid certain situations, often related to aspects of road design that they find difficult or stressful. Their pattern of road crashes reflects that. The evidence suggests that these aspects of highway design could be changed or modified to make driving easier and safer for older drivers and indeed for all drivers.

As noted, in the USA the Federal Highways Administration has, since 1998, provided a comprehensive Highway Design Handbook for Older Drivers[58]. This has recently been updated[59]. Austroads (the association of Australian and New Zealand road transport and traffic authorities) has published similar advice[60,61,62].

These Handbooks deal specifically with those features of the road that cause particular difficulties for older drivers, in particular:

- Merges onto main roads
- Edge and lane markings
- Intersections
- Stop and give way signs
- Traffic signals
- Signage

Back plate on road sign

It is clear that with a better understanding of older drivers' needs and limitations, road design and engineering can be made much safer for older and, in fact, all drivers. As far as we can tell, an understanding of older drivers did not inform UK design standards when they were developed.

Many of the changes required would not be expensive to introduce when highways are being constructed, repaired or modified, and if, as expected, the risk of a crash were reduced, the cost-benefit equation is likely to be positive. Some of these features, such as reflective back plates on road signs and traffic signals, and protected entry lanes at slip roads onto major highways, are already being applied in some parts of Britain.

M27 junction 10 and the north going A32, near Fareham. Traffic on the A32 has been moved to the outer lane to provide a protected entry lane for merging traffic.

Given that the percentage of serious accidents at T-junctions increases significantly with age after 65, and that this does not happen at roundabouts, it would be worth studying the value of installing mini-roundabouts at busy T-junctions with little or no change to the kerb lines. The challenge would be to ensure that all drivers perceived the roundabout, particularly where there is no deflection of the traffic lanes approaching the roundabout.

Florida State DOT has been applying the Federal Highways Administration handbook since the early 1990s.

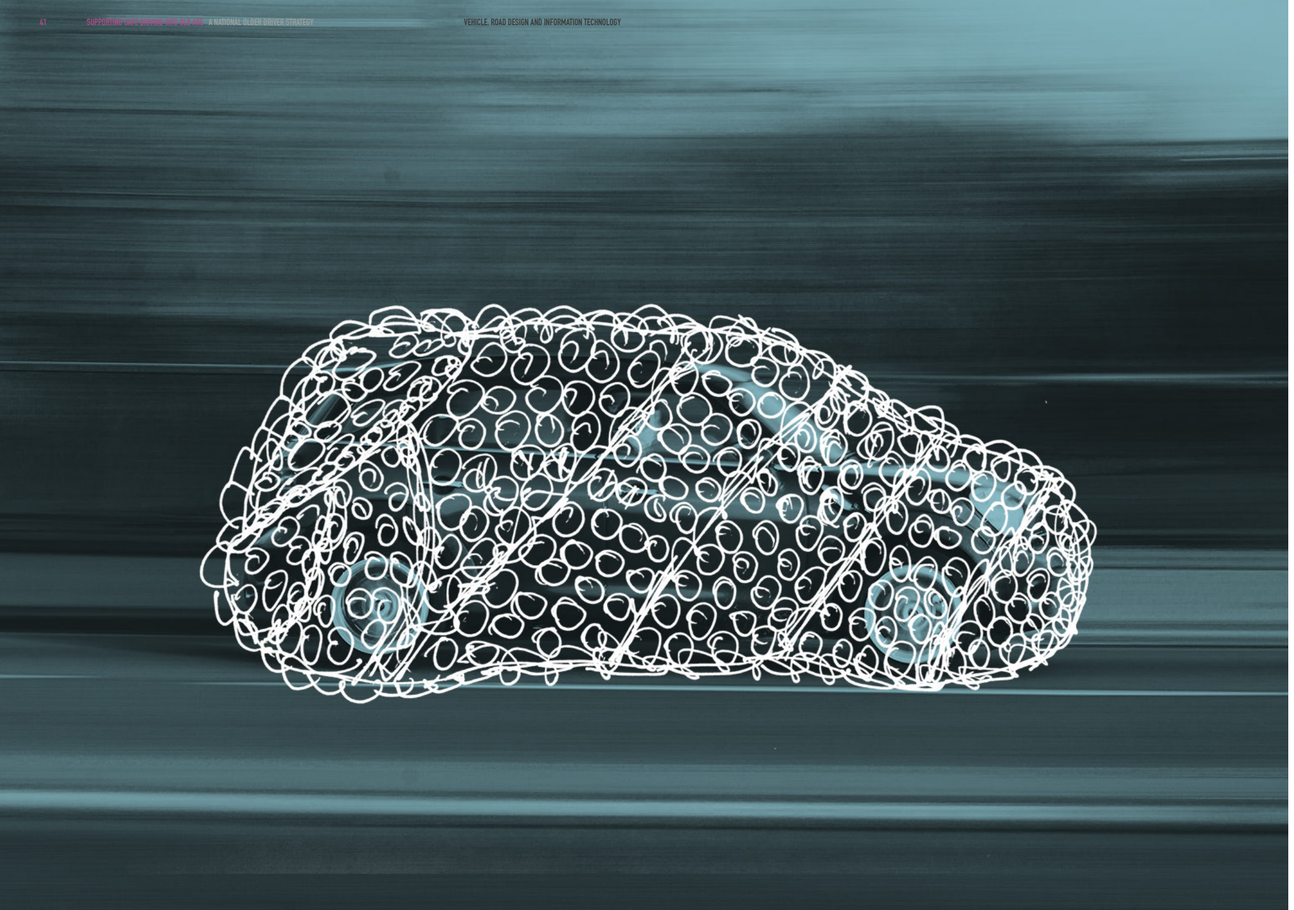
KEY RECOMMENDATION

The UK should develop similar guidance on designing roads for older drivers along the lines already in place in the USA, Australia and New Zealand.

Road authorities should more rigorously adhere to existing standards of road design and maintenance where flaws are likely to place older drivers at greater risk of involvement in serious crashes.

Examples are:

- Six-inch wide pavement markings
- Reflective back plates on traffic signals
- Reflective pavement markers at 40-foot spacing
- Larger lettering on direction signs



SAFER VEHICLES

Older people set great store by being able to drive a car. This is particularly so in rural areas where buses and trains are infrequent and often quite expensive; a car may be the only practical way to visit friends, shops, the doctor or for recreational reasons.

Our focus has been on what can be done to improve the safety of drivers and passengers, recognising that the 'safe system' approach accepts that drivers, being human beings, will make mistakes. Safe system design as seen in rail and air systems means minimising the consequences of routine human error.

Modern vehicles are one of the most complex products purchased by consumers. They have to meet a range of demanding requirements, delivering occupants to their destination in comfort and safety. They must be able to operate in physical extremes, very low and high temperatures, in low and high humidity, in the dark and in bright light, and sometimes in driving rain or snow. All this performance has to be achieved at an affordable price. To do this, car makers have to make compromises and in safety engineering they design the vehicle to deliver the maximum amount of protection to the widest possible population.

Given the variability of human beings, those at the extremes may not be as protected as the bulk of the population. The evidence suggests that fragility, especially of older women, is a problem. The inadequacy of restraint systems may account for the higher levels of death and serious injury among old people, especially women both as drivers and passengers.

However, as already noted, the vulnerability of older drivers is increased by the tendency of older drivers, particularly women, to choose smaller-than-average cars with less occupant protection at a given level of NCAP rating.

We are some way from fully autonomous mass market vehicles but many intermediate technologies offer benefits for older drivers. Autonomous Emergency Braking (AEB) systems (provided the car restraint issues are solved) compensate for slower reaction times and an inability to apply brakes with sufficient force. An analysis of European data published by Euro NCAP showed a 38% reduction in front to rear crashes for this technology, which is now developed to react to pedestrians and is also appearing on new vehicles. AEB is now becoming widely available and insurers are providing lower premiums for owners/operators of vehicles fitted with it.

Electronic Stability Control may offset a loss of control; intelligent speed adaptation could slow vehicles automatically on the approach to a stop or yield sign; crash avoidance systems especially at junctions may offset a risk particular to older people.

Other features which help include variable power steering, automatic gearboxes, cruise control, hill start assist, parking sensors and cameras. Satnavs, blind spot mirrors and adjustable seating also help[63].

Fully autonomous vehicles are likely to offer significant benefits to those older drivers where capability to drive is impaired. But the introduction of such vehicles in the mass market is some way off. The important point to recognise is that any studies of the feasibility and cost-benefit of having autonomous vehicles should take account of the very substantial benefits they could offer to the growing number of older drivers, and to others who for one reason or another cannot hold a driving licence.

Leaving aside autonomous vehicles, there are several issues that are relevant now, including;

- How long will it take for intermediate technologies to enter the fleet?
- Is there a problem of older drivers driving older (and therefore less safe) cars?
- How can we accelerate the introduction of safer vehicles?

KEY RECOMMENDATION

Manufacturers should accelerate the development of improved crash protection standards for frailer people, particularly older women. They should also find ways that could help older drivers in manoeuvres they find especially difficult.

Fleet Turnover
As a rough rule of thumb, it is estimated that it takes around seven to 10 years for an innovation to enter the market through high-end cars and work its way down to the mass market. For the whole fleet to change it normally takes about 10 to 15 years.

If particular innovations are legally required, change can take place more rapidly – seat belts, Electronic Stability Control (ESC) and Autonomous Emergency Braking (AEB) in HGVs are examples of where regulators have acted to ensure that changes in vehicle safety technology are brought in quickly in the absence of market pressure.

Age of car
We examined the data for average age of older drivers' cars and rather surprisingly found that there is little difference between the age distribution of cars owned by older drivers and those owned by middle-age drivers[64]. This suggests that the benefits of innovation will be reasonably quickly felt by older people.

Acceleration
Legislation apart, one way of speeding up the introduction of safety improvements for older people would be to have a specific vehicle testing programme that awards points to those innovations that can best contribute to the safety of older drivers, similar to the safety star ratings under the Euro NCAP regime. Now that safety has some consumer attraction, safer cars for older people may well prove to be worth marketing.

We know that the Euro NCAP system Star Ratings are now a powerful marketing tool and a ratings system for older people, a 'Silver NCAP', might lead to shortening the time to market of the best safety innovations. Such arrangements are under consideration in the United States[65].

If such innovations were fitted as standard rather than as bespoke, they could become more affordable.

Against this, specific protection for a minority population could be expensive and would come with implementation challenges.

One way forward would be to broaden the approach and suggest to Euro NCAP that a consumer assessment be developed with pointers to some key content (e.g. visibility rating).

AUTONOMOUS VEHICLES – FURTHER ACTION NEEDED

The Government and industry should use their current initiatives to establish the feasibility and development path of the deployment of autonomous vehicles to take account of the particular benefits of such vehicles to older drivers in enabling them to drive safely for longer.

RECOMMENDATION

Specific advice on modern in-car safety features that are of special significance to older drivers should be prepared by an appropriate consumer body

NCAP – FURTHER ACTION NEEDED

We strongly urge that Euro NCAP should consider developing Euro NCAP ratings to:

- Either include specific assessment criteria to take into account the needs of older drivers
- Or develop a separate Silver NCAP scheme

If neither course is possible, the Task Force suggests that other consumer bodies should develop their own rating scheme so that older drivers can make an informed choice about the suitability of particular vehicles for their need.

SIZE OF CARS

The National Travel Survey provides a number of measures of the sizes of cars owned by drivers of different ages. Figures 2.5a and 2.5b show the percentages of different classes (defined by the Society of Motor Manufacturers and Traders (SMMT) by the age of the owner or main holder). Super-minis, which make up more than half the cars used by women aged over 75, are cars such as the Fiesta, Corsa and Polo.

Smaller cars provide less protection for their occupants at a given NCAP rating, so the increase with owner's age in the percentage of cars that are superminis implies a reduction in protection for older drivers, even if all the cars are in the highest safety rating (NCAP 5*)[66].

Figure 2.5a
Sizes of cars by owners age - SMMT - men 2013-14
DfT National Travel Survey special tabulation

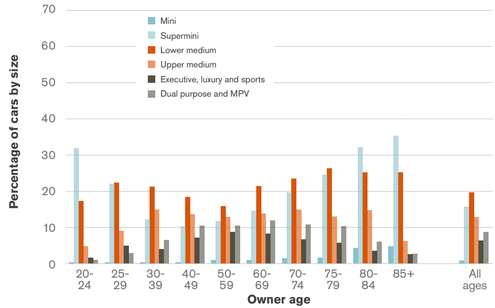
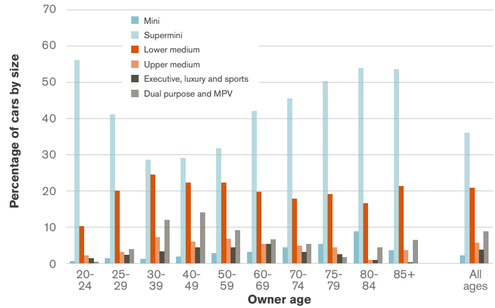


Figure 2.5b
Sizes of cars by owners age - SMMT - women 2013-14
DfT National Travel Survey special tabulation



Connected Vehicles
By monitoring the driving performance of young people and providing feedback, telematics technology is making an important contribution to the understanding of what needs to be done to improve young people's driving and so reduce the risk of crashes. The incentive to use a telematics device and submit one's driving to scrutiny is the promise of a reduced insurance premium.

Older drivers have a different fingerprint: they have distinctive driving patterns. But these could be monitored in a similar way to those of young people and could no doubt earn them a similar reduction in insurance premium if driving performance merited it. Many of these telematics devices record not only vehicle location and driving events (sharp braking, accelerating and cornering), and for some applications minor bumps, but can also automatically notify the insurer of a crash so that the emergency services can be alerted. Insurers will therefore be better able to support their customers and reduce their risk of crashes.

RECOMMENDATION TELEMATICS – FURTHER ACTION NEEDED

We believe that, after a development programme to identify measurable parameters that link to increased risk of crashes, an optional telematics monitoring scheme or other similar technologies should be made available for older drivers and would like to see insurance companies, charities associated with the third sector and others concerned encouraging older people to accept these sort of technologies, especially where their driving abilities may have been called into question.

Our understanding of older drivers may well be helped by a US Strategic Highway Research Programme which monitored over five million trips by 3,500 drivers aged up to 98[67]. This is now being analysed by the Virginia Tech Transportation Institute to identify particular behaviour that correlates with involvement in dangerous incidents. The Road Safety Foundation plans to liaise with this project.

SECTION 3: SAFER DRIVERS: SUPPORT AND SELF-HELP

The questions we have sought to answer include:

What advice is available to help older drivers?

How well known are the available driving assessment centres and how effective are they?

Is there a case for standardisation and accreditation of older driver assessment schemes?

What part can assessment schemes play as an alternative to prosecution?

ADVICE

There is no shortage of advice. National examples include:

- RICA that carries out research for older and disabled people and has recently published (with RAC Foundation help) "Driving safely for life", a compendium of advice on health and wellbeing, the law, safe driving and alternatives to driving[68]
- The Older Drivers Forum has created a brochure called "Managing without a car" which explains how to remain independent and get around without a car[69]
- Age UK
- The AA and RAC
- ROSPA produces advice and information on all areas of road safety and crash prevention
- Many local authorities offer low-cost driver appraisal schemes and older driver workshops
- Mobility Centres: a network of 17 independent, accredited centres which can assess driving and advise on how to make it safer, easier and more comfortable
- The Institute of Advanced Motorists which aims to increase skills for road users and raise driving standards[73].

There are a number of websites that have links to advice for older drivers, from those run by local councils to those of commercial business, like RIAS (a trading name for Ageas Retail Ltd) for which the site www.rias.co.uk called Drive Fit offers advice to older drivers. Hampshire has a stand-alone website www.olderdriversforum.com which provides advice and support.

In addition, there are a number of initiatives at for example local council, police, fire and rescue service and Mobility Centre level.

A study in 2012[70] which looked at the safety and mobility of older people concluded that an information pack to raise awareness and give advice should be developed. This has been partially achieved through the publications and websites of the many organisations listed above, though standardisation is some way off.

For service providers, the Road Safety Observatory (www.roadsafetyobservatory.com) is an excellent source of independent evidence-based information on older drivers and a repository of sound advice. It is of particular value for road safety experts rather than the older driver seeking simple, practical advice. Any of the national organisations mentioned above could and do already provide an entry point for information of this sort.

Website

A national website for older drivers should ideally be a stand-alone site with no link to any business or authority and used only for giving advice and support. Advertising could put off potential users and produce possible conflict from others wishing to give their information to be used or signposted from the site. Much depends on the ability of local authorities or others to fund the website. The site should be free to access and use.

The website could include information such as advice on or for:

- Older drivers
- Friends and family
- The Law, DVLA and renewing your licence
- Eyesight and medicines
- Common medical conditions such as stroke, dementia, high blood pressure and cardiovascular conditions
- GPs

Additionally, the website could include:

- A map of the UK where people can enter their postcode or click on the county where they live to be signposted or linked to local schemes and support in their area
- Details of current events and news
- Videos giving advice and support
- A national database of older driver groups, resources and training
- A member's area where local practitioners can share ideas

Once established, the cost of the website would be relatively low but it would need to be maintained and refreshed. Funding may be an issue.

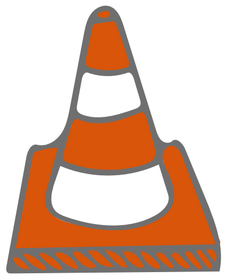
RoSPA, with support from other groups, has recently received funding from the DfT and set up a new Older Drivers website[71]. We believe this offers good advice and support for older motorists, family and other interested parties. The website additionally signposts people to local schemes, assessments and support in their area and for their needs.

Literature
There is already a wide range of information in writing, though it is not always in a standard form.

There should be a national standard template for literature which can be brief and adapted locally. This will generally be of two kinds: tips and advice on how older drivers can continue driving safely and what to do to remain independent when they decide to stop driving.

The RICA brochure mentioned in the section on advice is excellent and easy to read, giving guidance to the older motorist on driving safely for longer, and is available on various websites[72]. This brochure can be localised to give information and schemes which exist in a certain areas.

A brochure created by the Older Drivers Forum gives tips and signposting for support to help remain independent when a person decides to retire from driving[73].

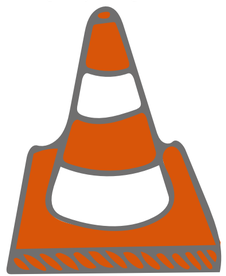


Raising Awareness
Much needs to be done to raise the awareness of older drivers, their families, medical practitioners and the general public. Incidents involving older drivers often hit the headlines for the wrong reasons and make older drivers worried about driving and seeking help.

One way of countering this and generally improving the safety of older drivers would be to have an 'Older Drivers Awareness Week'. This would allow people to focus on support and helping older drivers to drive safely for longer. It would create a positive attitude and encourage people to seek support rather than shy away from it.

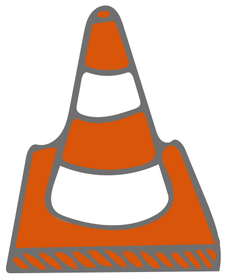
A partnership approach may prove successful, utilising skills and resources from different organisations to find the best way to assist in spreading information and support to older drivers and interested parties. This partnership approach could involve local authorities, emergency services, mobility centres, local charities and interested parties.

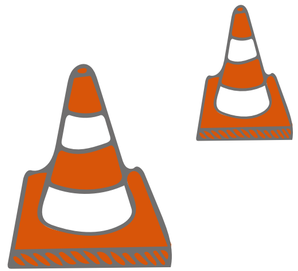
In Hampshire a group led by the Police service has set up an 'Older Drivers Forum' and found this beneficial in sharing resources, keeping momentum and support to keep older drivers driving safely for longer[74].

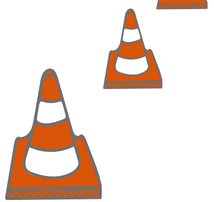


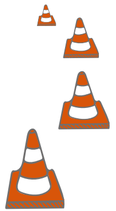
Older Driver Appraisals and Assessments
There are a large number of assessment schemes running nationally by trusted bodies such as RoSPA, the IAM and local authorities. These can be short, simple, entry-level courses with classroom teaching and limited time behind the wheel with an expert or longer. An entry-level assessment to direct the older driver to the appropriate training or other form of intervention would seem sensible. Such assessments would be purely supportive and personal: there is – and would be – no pass or fail nor need to inform the DVLA or insurers.

There are other courses at mobility centres for those with a medical condition or disability.









Effectiveness
The PACTS study examined existing education and training for older drivers to see how much evaluation had been undertaken, what further work would be needed to develop a national template and to highlight good practice[75].

A literature review by Devon County Council[76] identified a number of key components for success:

- A combination of in-class education and on-road training
- Recognition of gender differences
- An interactive lecture style of teaching
- A focus on increasing cognitive skills
- Workbooks both before and after sessions to increase knowledge and help self assessment.

An RAC Foundation report[77] noted that the key predictors of performance were motor ability, visual attention and decision-making ability. Standardised tests for each of these have been developed for formal assessment by professional practitioners.

The research suggests that there are a number of components that make for a successful intervention in older driver improvement schemes. But in practice there are a wide range of courses available of different character, length, cost and almost certainly effectiveness. Some are provided on a national basis such as the IAM and Mobility Centres, others are geographical; at least 18 of them, mainly county-based.

While there is a case for encouraging diversity of provision and taking account of local circumstances, the PACTS conclusion, with which we agree, is that there is a need for leadership at the national level to encourage further provision of training and education courses that follow best practice.

We have looked at existing assessment processes for older drivers and have drawn up a framework of good practice for those providing initial assessments[78].

We envisage three stages:

1. A light touch assessment for older drivers. An example is Safer Driving with Age (SAGE), a preliminary assessment of capability and needs.
2. Following involvement with a GP or other medical professional, the older driver could be referred to the DVLA and on to a Driving Mobility Centre. These are already accredited and approved and need no further standardisation.
3. A driver involved in a blameworthy driving incident could be diverted from prosecution to a stage two driving assessment at a Mobility Centre.

Standardisation and Accreditation

The leadership issues re-surfaced at a Road Safety GB event in 2015 at which support was expressed for a national body to give guidance and direction on driving schemes for the older motorist. Support also was given for a national accreditation scheme with local flexibility.

Assessment as an alternative to prosecution

In much of the UK, National Driver Offender Retraining Schemes (NDORS[79]) exist as an alternative to prosecution for a number of offences, such as speeding, mobile phone use or careless driving. These schemes are excellent in re-educating motorists and encouraging safer driving. A client can be offered the opportunity to attend and pay for such a course if sufficient evidence exists to support a prosecution and they have not completed a similar course in the last three years. These courses are open to all age groups.

Following review of the NDORS alternative to prosecution course for careless driving (Drivers Awareness Course) in relation to utilising this for older drivers or other vulnerable groups, Hampshire Constabulary has been running a pilot scheme since September 2013, called a 'Fitness to Drive' assessment[80] as an alternative to prosecution for careless and inconsiderate driving.

This pilot scheme has been developed to give individual help and support to the most vulnerable drivers, looking at their individual needs and requirements, whilst assessing a person's ability to drive safely. Hampshire Constabulary felt that the national course, although excellent, does not cater for a person's individual needs and is group based and lasts all day, which can be too long and tiring for certain vulnerable groups.

This 'Fitness to Drive' pilot assessment is an alternative to prosecution for careless driving that is a better option than the standard NDORS course for the following groups:

1. Drivers aged 70 and over

2. Drivers of any age using specially adapted vehicles

3. Drivers of any age who are involved in a collision where an underlying medical condition is stated to be the likely cause of the collision

The scheme utilises the Driving Mobility centres to undertake the assessments. These are not only accredited by the DVLA for such assessments but are also adaptation centres, which can advise motorists on various adaptations to keep them mobile and safe depending on their needs.

The assessment educates a person on safe driving and hazard awareness, but also, unlike any other referral course, identifies whether a person is safe or unsafe to continue driving and identifies those who just need further driving instruction to bring them back to being a safe driver again.

This scheme has been independently reviewed with a number of recommendations for any organisation wishing to take on such a scheme. It is seen as fair, proportionate and appropriate[81].

However, the scheme requires full Police support as well as recognition of the extra workload, assessment at a Driving Mobility Centre, and cost to the driver of no more than they would pay for a National Driver Offender Road Safety (NDORS) course.

The principle of a referral process is already widely established under the NDORS scheme so a wider roll out should not be difficult and pilots are already being established elsewhere. It is nonetheless important for success to have a high level of Police commitment, recognition of the extra time needed and careful and compassionate handling.

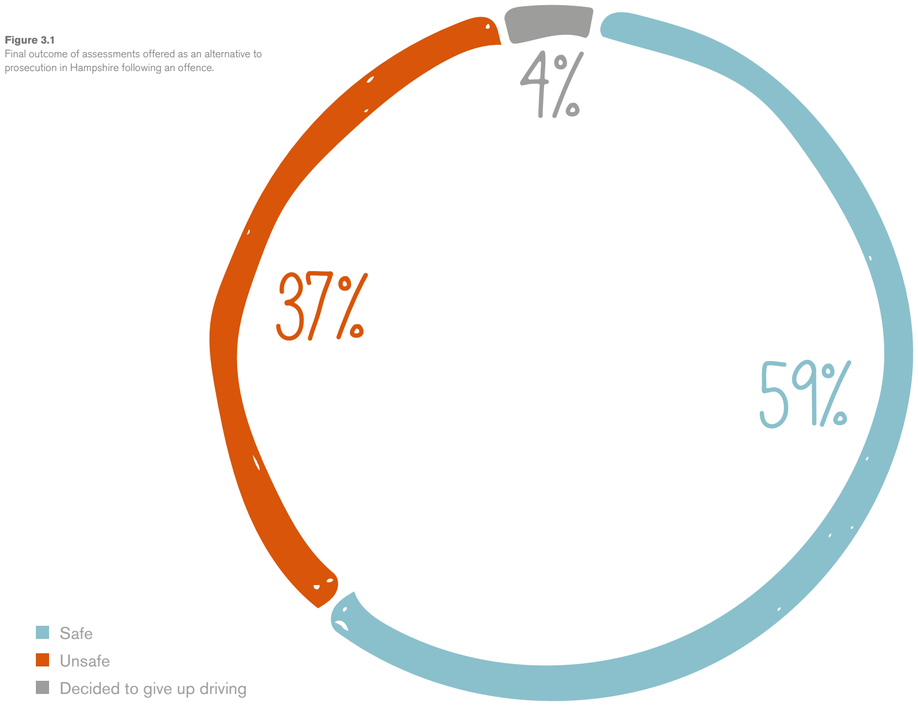
The evidence from Hampshire is that about two thirds achieve a safe outcome either at the assessment or following some further instruction. The remainder are notified to the DVLA as unsafe or need to stop driving.

This pilot scheme recognises how much vulnerable and older drivers' conditions can change over a year and therefore allows a person under the scheme's criteria to be able to retake such an assessment every 12 months as alternative to prosecution, rather than the NDORS three-year criteria.

Additionally, the scheme checks a driver's eyesight, requiring an optician's eyesight test, with field of vision check, to be conducted prior to the assessment day. This has shown that 67% of clients have required a substantive prescription change or need to start to wear glasses, whilst another 3% were referred immediately to the eye hospital. An opticians test has been shown to be a good way to pick up medical conditions of which the driver had not previously been aware, thus allowing treatment earlier and keeping them safer drivers.

It has been found that it is beneficial to introduce such a scheme where it forms just one of the support measures available to older motorists and comes into play when all else has failed and the person has committed the offence of careless driving.

Figure 3.1
Final outcome of assessments offered as an alternative to prosecution in Hampshire following an offence.



INFORMATION – FURTHER ACTION NEEDED

On advice, every local authority, medical centre (including GP practices) and Police force should have at least one individual who is responsible for raising awareness among the older driver community of the risks of driving and, importantly, what can be done to help, drawing on DVLA advice. We encourage local partnership approaches.

A practitioners toolkit giving guidance on best practice and methods of engaging and supporting the older motorist should be created.

A standard information package should be created in written format and online covering everything an older driver requires to carry on driving safely for longer, as well as for those thinking of giving up driving (or are compelled to do so) might need: alternatives to the car, advice on shopping, financial savings and so on.

The RoSPA website covers the online support well for older drivers and consideration and funding should be considered to develop this further to have a practitioners section requiring log on. This section could be a source of information and reports for practitioners as well as a forum section for asking advice and guidance. It could also hold an older driver practitioners toolkit.

KEY RECOMMENDATION

As a priority, the DfT research programme should support an evaluation of existing driving appraisal courses offered by the public sector and those in the private sector who wish to participate.

A step-by-step guide to evaluating driving appraisal courses:

The Government should commission research on driving assessments to establish or confirm the key features of successful schemes and develop a staged framework to signpost and direct drivers to appropriate assessments for their individual needs. Thereafter they should encourage the provision nationwide of high-quality assessment programmes that are proven to work, ensuring that information about what works is widely understood. The assessments themselves could continue to be carried out by the private and third sectors.

An accreditation system to ensure that any driving programme is sound should be the long-term aim. To this end:

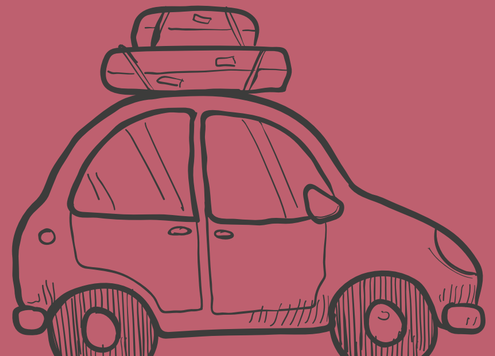
The Government should evaluate the research carried out by Devon County Council and other similar research (referred to earlier) to see whether it provides sufficient information from which to draw up national guidance on effective training and education for older drivers.

If necessary, the Government should commission additional research to identify the best ways to train and educate older drivers and to encourage them to undertake courses or assessments.

We fully support the principle of offering an alternative to prosecution through tailor-made driving assessments and believe that this should be offered on a national basis. In particular:

The Government should consider a national referral scheme that offers a positive alternative to prosecution for people whose driving is likely to have been affected by a medical condition, to include older people, to be run as a National Driver Offender Retraining Scheme (NDORS) course / assessment.

Such tailor–made assessments should be in place in areas where a package of support already exists or is created to support older drivers to carry on driving safely for longer.



SECTION 4: THE SAFE SYSTEM: LEADERSHIP AND MANAGEMENT

The Safe System calls for strengthened institutional management and leadership. The problem is that there is no one organisation or individual with lead responsibility for older drivers. This makes the conventional Safe System route to managing safety through goals and interim targets or milestones much more difficult.

One way forward would be to give a Government Minister overall responsibility for older drivers. It could be an explicit responsibility within a general Road Safety brief. He or she could then set a goal for casualty reduction. Highways England has a vision, consistent with the Safe System, that no one should be harmed on its roads; in effect a Vision Zero. If applied to older drivers this would signal an ambition and provide a sense of direction. It could be supplemented by interim targets or desired outcomes which would give people something to aim for.

As indicated above, there are a large number of organisations with an interest in the safety and well-being of older drivers. At the moment each will have actual or implied goals which may or may not coincide with those of the other organisations or institutions. At the strategic level there is a leadership void. The Government is best placed to give a lead.

The arguments against giving the job to a Minister are familiar. Why single out older drivers when there are other important categories – cyclists, motorcyclists, young drivers, the disabled and so on. The answer is that Ministers do from time-to-time take on or appoint people to tackle single issues: for example, the disabled, drugs, representation of women on boards.

It would be a great fillip to those organisations and individuals dealing with older drivers, many in the voluntary sector, to have support and recognition for what they do. In discussion with stakeholders, a Minister could define the goal and the steps to achieve it drawing out commitments from other departments, local authorities and the third sector to work collaboratively to achieve it. Such a Minister would need to liaise with the Department of Health, within which the responsibilities of the Minister of State for Community and Social Care include older people.

THE FUTURE FOR OLDER DRIVERS – FURTHER ACTION NEEDED

We recommend that the Government should give specific responsibility for older drivers to a Minister with the aim of bringing together all interested parties to define the vision, goal and interim milestones and work out how best to achieve them.

This report provides a detailed analysis of older drivers and makes informed suggestions about how to proceed next. The members of the Task Force who contributed to it stand ready to assist in making it a reality and ensuring that it has a meaningful, long-lasting legacy.

CONCLUSIONS AND NEXT STEPS

The Task Force's work has, as we expected, revealed that in almost every area of activity involving older drivers more needs to be done to help them drive more safely for longer. They are not a particularly high-risk group, except in advanced old age, but they can be helped by improved road design, the introduction of more safety features on vehicles, eyesight testing so the weaknesses can be corrected, better advice, better access to driving appraisals that become the norm, and so on.

Many of our recommendations will improve the safety of the public at large so the cost-benefit equations are almost always going to be positive.

The burden of change needs not be prohibitive as it is spread widely. Almost every sector of society is involved. For example, the Government as a regulator of last resort, health professionals, the Police, the charitable sector, insurance companies, vehicle designers, and highway authorities.

The Task Force believes that, assuming there is broad support for its findings, there is a case for some organisation or group to advise on implementation of the report and to monitor progress, reporting annually.

The Chairmen of the Older Drivers Task Force and the Road Safety Foundation are grateful for the financial support from Ageas for the Task Force which has made possible the review and research work together with the publication of this report.

Elizabeth Box
Head of Research, RAC Foundation

The RAC Foundation is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

Jolyon Carroll
Principal Researcher in the Safety & Technology Group, TRL

Bringing expertise regarding biomechanics and human tolerance in the context of traffic collisions and vehicle safety – in particular with regard to the vulnerable group of older drivers and car occupants.

Kristin Fernández-Medina
Psychologist, TRL.

David Davies
Executive Director, PACTS

PACTS recognises older drivers as an important and growing road safety issue. PACTS intends to use the Task Force research and recommendations in our advice to Parliamentarians and others.

Neil Greig
Director of Policy & Research, IAM RoadSmart

Leading research body on older driver issues and provider of mature driver assessments.

Becky Hadley
Director, Hadstrong

Becky has 30 years' PR and Public Affairs experience in-house and in consultancy mainly in transport, road safety and road infrastructure.

Mike Hallam
Head of Technical Services British Insurance Brokers Association (BIBA)

Leading UK general insurance trade association representing the interests of insurance brokers and their customers and promoting access to suitable insurance for businesses and individuals including older people.

Martin Bridges
Technical Services Manager

British Insurance Brokers Association.

Dr Carol Hawley
Principal Research Fellow, University of Warwick

Research on medical aspects of fitness to drive (FTD). Symptomatic reviews of FTD. Work for DfT, IAM etc.

Sergeant Rob Heard
Road Safety Sergeant for Hampshire and Thames Valley Police and Founder and Chair of the Older Drivers Forum.

The Forum is a partnership. Since its creation in 2013, it has successfully reduced older driver incidents and increased support for Older Drivers and other interested parties.

George Lee
Chief Executive, Road Safety Markings Association

The RSMA is the largest specialist trade association in the UK highways sector.

Stephen Linklater
Director of Underwriting & Pricing, Ageas.

Natalie Shale
Head of Communications and Public Affairs, Ageas – contributor and sponsor.

Matthew Jupp
Public Affairs Manager, Ageas.

Ageas is the UK's third largest motor insurer and a leading insurer of older drivers through its brands RIAS and Castle Cover and its long-term partnership with Age UK. Ageas's support for the Task Force reflects its wish to keep its four million UK personal motor insurance customers safe on the road.

Andrew Miller
Chief Technical Officer Thatcham Research

Thatcham Research is the motor insurers' automotive research centre. Established by the motor insurance industry in 1969, the centre's main aim is to contain or reduce the cost of motor insurance claims whilst maintaining safety standards.

Kit Mitchell
Road Safety Foundation Research Panel
Former Chief Scientific Officer, TRL.

Bert Morris
The former AA motoring policy manager/director is an independent research and policy consultant whose clients include IAM, Road Safety Foundation, FIA and European Commission.

Joe Oldman
Policy Manager, Age UK

Age UK is the largest national charity for older people. It carries out and commissions transport research and offers a wide range of information and advice, including guidance for older drivers.

Andrew Parkes
Professor and Executive Director, Mobility and Transport Research Centre

Coventry University
Providing research evidence base of driver behaviour and performance and impact of future vehicle systems.

Ron Paterson
Vice-Chair Road Safety, GB Road Safety

GB is the organisation that supports and helps to develop road safety teams and individual practitioners across the UK.

John Plowman
Chairman. Trustee of the Road Safety Foundation, PACTS and RoadSafe.

Former Director of Road and Vehicle Safety and Driver and Vehicle Operator Group Department for Transport. Former Chairman of the London Sustainable Development Commission.

Professor Patrick Rabbitt
Emeritus Professor, Applied Cognitive Research Centre University of Manchester Associate Department of Experimental Psychology, University of Oxford Biological, Neurophysiological and Ergonomics of Mental Ageing.

Peter Rayner (FCIHT)
Age-Platform Europe

Chair of CIHT Accessibility and Inclusion Forum

Age Platform Expert for "Universal Access and Independent Living".

Steve Taylor
Plymouth University and Professional Adviser to the Optical Confederation and Visiting Chair in Optometry at the University of Plymouth. The optical confederation represents professional organisations in Optics and has a special interest and expertise in Vision and Driving.

Adrian Walsh
Director, Roadsafe

A high level forum which brings together expertise from government, the vehicle and component manufacturing, insurance and road transport industries, road safety professionals and specialist media, to find new approaches to reducing casualties amongst vulnerable groups.

Paul Watters
Head of Road Policy, Automobile Association (AA)

The AA Foundation for Road Safety Research – now Road Safety Foundation – produced one of the first major older driver studies. The AA continues to provide advice and guidance to drivers especially those in an ageing society.

Observers

Clare Boam
Head of Vulnerable Road Users, Department for Transport

Derek Bastin
Head of Driver Licensing Policy, DVLA

Ben Livingstone
Oakhill Communications

Tom Pilgrim
Oakhill Communications

REFERENCES

1 Making road safety pay http://roadsafetyfoundation.org/media/32191/digital_format_mrsp_4.pdf

2 Road Safety Foundation (2014) Workshop: Driving after 80 16 October 2014

3 Working Together to Build a Safer Road System, British Road Safety Statement, Moving Britain Ahead, Department for Transport, 1 December 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/487704/british_road_safety_statement_print.pdf

4 Equality Act 2010: Guidance, Equalities Office last Updated 16 June 2015 https://www.gov.uk/guidance/equality-act-2010-guidance

5 Organisation for Economic Co-operation and Development (OECD) (2008). Towards Zero: Ambitious Road Safety Targets and the Safe System Approach. OECD Publishing http://www.internationaltransportforum.org/jtrc/safety/targets/08TargetsSummary.pdf

6 ONS 2012-based Principal Population Projection Office for National Statistics http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171778_334975.pdf

7 See Appendix A.1 Demographics and licensing

8 ONS Table MYE2: Population Estimates by single year of age and sex for local authorities in the UK, mid-2014

9 Department for Transport National Travel Survey (special tabulation) https://www.gov.uk/government/collections/national-travel-survey-statistics

10 See Older Driver Task Force Research Report Appendix A.3 Casualties and Accidents Source of statistics: Department for Transport (annual) Reported Road Casualties Great Britain https://www.gov.uk/government/collections/road-accidents-and-safety-statistics

11 See Older Driver Task Force Research Report Appendix A.3 Casualties and Accidents.

12 Ragnhild Davidse (2007) Assisting the older driver - Intersection design and in-car devices to improve the safety of the older driver Professorial thesis, Rijksuniversiteit Groningen, available from SWOV, 2262 AR Leidschendam https://www.swov.nl/rapport/Proefschriften/Ragnhild_Davidse.pdf

13 Britta Lang Personal communication Transport Research laboratory, Crowthorne

14 Hakamies-Blomqvist, L (1999) Safety of Older Persons in Traffic Paper to a TRB Conference on Transportation in an Aging Society: A Decade of Experience, held in November 1999; published in Transportation in an Aging Society - A Decade of Experience TRB Conference Proceedings 27, Transportation Research Board, Washington DC

15 See Older Driver Task Force Research Report Appendix A.3 Casualties and accidents Source of statistics: Department for Transport (annual) Reported Road Casualties Great Britain https://www.gov.uk/government/collections/road-accidents-and-safety-statistics

16 Statistical material provided by Ageas UK Ltd

17 See Older Driver Task Force Research Report Appendix A.5 Characteristics of cars and Appendix A.2 Medical conditions and fragility, Appendix A Ageing and Sex Difference in Car Impacts by Adrian Hobbs

18 David D. Clarke, Pat Ward, Wendy Truman and Craig Bartle (2007) Fatal Vehicle-occupant Collisions: An In-depth Study Road Safety Research Report No. 75, Department for Transport, London

19 Lena Levin, Tania Dukic, Per Henriksson, Selina Mårdh and Fridulv Sagberg (2009) Older car drivers in Norway and Sweden https://www.vti.se/en/publications/pdf/older-car-drivers-in-norway-and-sweden--studies-of-accident-involvement-visual-search-behaviour-attention-and-hazard-perception.pdf

20 DIRECTIVE 2006/126/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 December 2006 on driving licences (Recast), Official Journal of the European Union L 403/18, 30.12.2006, Luxembourg

21 Charlton, J et al (2010) Influence of chronic illness on crash involvement of motor vehicle drivers: 2nd edition Report No.300, Monash University Accident Research Centre, Melbourne, NSW

22 Dobbs B (2005) conditions and driving; a review of the scientific literature (1960-2000) Report DOT HS 809 690, National Highway Traffic Safety Administration, Department of Transportation, Washington DC

23 PACTS (2016) Fit to drive? Parliamentary Advisory Council for Transport Safety, London

24 Simms B (1992) Driving after a stroke TRL Contractor Report CR276, Transport Research Laboratory, Crowthorne

25 McKenna, P. (2009). Rookwood Driving Battery. London: Pearson.

26 Lincoln, N. B., Taylor, J. L., Vella, K., Bouman, W. P., & Radford, K. A. (2010). A prospective study of cognitive tests to predict performance on a standardised road test in people with dementia. International Journal of Geriatric Psychiatry, 25, 489–496

27 Kristina Vella, K and Lincoln, Nadina B (2010) Comparison of assessments of fitness to drive for people with Dementia Neuropsychological Rehabilitation: An International Journal, DOI: 10.1080/09602011.2014.903197 http://dx.doi.org/10.1080/09602011.2014.903197

28 Langford J, Dow J and Turmel É (2011) Ageing and Medical Conditions. Proceedings of the 21st Canadian Multidisciplinary Road Safety Conference, Halifax, Nova Scotia, May 8 – 11, 2011

29 Hakamies-Blomqvist, L., K. Johansson, and C. Lundberg. (1996) Medical Screening of Older Drivers as a Traffic Safety Measure — A Comparative Finnish–Swedish Evaluation Study. Journal of the American Geriatric Society, Vol. 44, 1996, pp. 650–653.

30 Jamie Dow, Michel Gaudet and Émilie Turmel (2013b) Crash Rates of Quebec Drivers with Medical Conditions 57th AAAM Annual Conference, Annals of Advances in Automotive Medicine, September 2013

31 Bieliauskas, L.A., Roper, B.R., Trober, J., Green, P., & Lacy, M. (1998). Cognitive measures, driving safety, and Alzheimer's disease. Clinical Neuropsychologist, 12, pp.206-212.

32 Bieliauskas, L.A. (2005) Neuropsychological assessment of geriatric driving competence PubMed PMID: 15832896 National Institute of Health, Bethesda http://www.ncbi.nlm.nih.gov/pubmed/15832896

33 Disclose to the DVLA if a patient should not be driving, doctors told GMC Press Release 25 Nov 2015 http://www.gmc-uk.org/news/27477.asp

34 Lapham, Smith et al (2001) Prevalence of Psychiatric Disorders Among Persons Convicted of Driving While Impaired http://archpsyc.jamanetwork.com/article.aspx?articleid=481831 Can't find Smith 2005

35 Hawley, C (2010) The Attitudes of Health Professionals to Giving Advice on Fitness to Drive Warwick Medical School (Ref S601K)

36 What is dementia? Alzheimer's Society Factsheet, downloaded 26 March 2016 https://www.alzheimers.org.uk/site/scripts/download_info.php?fileID=1754

37 P. Rabbitt and D. Parker (2002) The ageing driver: a programme of research Road Safety Research Report No. 29, Department for Transport, London

38 Langford, J., Fitzharris, M., Koppell, S., and Newstead, S (2004) Effectiveness of mandatory license testing for older drivers in reducing crash risk among urban older Australian drivers. Traffic Injury Prevention 5 (4), pp. 326-335.

39 Hakamies-Blomqvist, L., K. Johansson, and C. Lundberg (1996) Medical Screening of Older Drivers as a Traffic Safety Measure—A Comparative Finnish–Swedish Evaluation Study. Journal of the American Geriatric Society, Vol. 44, 1996, pp. 650–653.

40 Anu Sirena, Annette Meng (2012) Cognitive screening of older drivers does not produce safety benefits Accident Analysis and Prevention Vol.45, pp.634– 638

41 Cynthia Owsley and Gerald McGwin Jr (2010) Vision and Driving Vision Res. 2010 November 23; 50(23): 2348–2361. doi:10.1016/j.visres.2010.05.021. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2975746/

42 Owsley C, McGwin G Jr, Sloane ME, Wells J, Stalvey BT, Gauthreaux S (2002) Impact of cataract surgery on motor vehicle crash involvement by older adults. JAMA. 2002, Vol.288, pp.841–849. [PubMed: 12186601] http://jama.jamanetwork.com/article.aspx?articleid=195208

43 Carol A Hawley, Claire Roberts and Tanya Fosdick (2015) Vision and health as factors contributing to injury collisions in Great Britain - Comparisons between older and younger drivers. Submitted to Accident Analysis and Prevention

44 Simms (1993) The characteristics and driving patterns of drivers over seventy TRL Project Report PR26, Transport Research Laboratory, Crowthorne

45 Annette Meng and Anu Siren (2012) Older Drivers' Reasons for Reducing the Overall Amount of Their Driving and for Avoiding Selected Driving Situations Journal of Applied Gerontology published online 5 November 2012 http://jag.sagepub.com/content/early/2012/11/02/0733464812463433.abstract

46 P. Rabbitt and D. Parker (2002) The ageing driver: a programme of research Road Safety Research Report No. 29, Department for Transport, London

47 See Older Driver Task Force Reseatch Report Appendix A.6. Self-regulation and mobility. Data source: Department for Transport, National Travel Survey

48 Per Henriksson, Lena Levin, Tania Willstrand Björn Peters (2014). Challenging situations, self-reported driving habits and capacity among older drivers (70+) in Sweden VTI notat 9A–2014, VTI, Linköping

49 Per Henriksson, Lena Levin, Tania Willstrand Björn Peters (2014). Challenging situations, self-reported driving habits and capacity among older drivers (70+) in Sweden VTI notat 9A–2014, VTI, Linköping https://www.vti.se/en/publications/pdf/challenging-situations-self-reported-driving-habits-and-capacity-among-older-drivers-70-in-sweden-a-questionnaire-study.pdf

50 Judith Charlton, Jennifer Oxley, Brian Fildes, Penny Oxley, Stuart Newstead, Mary O'Hare and Sjaanie Koppel (2003) Self-regulatory driving practices of older drivers in the Australian Capital Territory and New South Wales MUARC Report No 208, Monash University Accident Research Centre, Clayton, Victoria and Judith Charlton, Jennifer Oxley, Jim Scully, Sjaanie Koppel, Melinda Congiu, Carlyn Muir and Brian Fildes (2006) Self-regulatory driving practices of older drivers in the Australian Capital Territory and New South Wales MUARC Report No 254, Monash University Accident Research Centre, Clayton, Victoria

51 Annette Meng and Anu Siren (2012) Older Drivers' Reasons for Reducing the Overall Amount of Their Driving and for Avoiding Selected Driving Situations Journal of Applied Gerontology published on line 5 November 2012

52 Per Henriksson, Lena Levin, Tania Willstrand Björn Peters (2014) Challenging situations, self-reported driving habits and capacity among older drivers (70+) in Sweden VTI notat 9A–2014, VTI, Linköping https://www.vti.se/en/publications/pdf/challenging-situations-self-reported-driving-habits-and-capacity-among-older-drivers-70-in-sweden-a-questionnaire-study.pdf

53 Hakamies-Blomqvist, L (1999) Safety of Older Persons in Traffic Paper to a TRB Conference on Transportation in an Aging Society: A Decade of Experience, held in November 1999; published in Transportation in an Aging Society - A Decade of Experience TRB Conference Proceedings 27, Transportation Research Board, Washington DC

54 C Owsley, G McGwin Jr, JM Phillips, SF McNeal, BT Stalvey, (2004) Impact of an educational program on the safety of high-risk, visually-impaired, older drivers, American Journal of Preventative Medicine, Vol. 26, No. 3, pp 222-229

55 Kathy J. Sifrit, Jane Stutts, Carol Martell and Loren Staplin (2011) Intersection Crashes Among Drivers in Their 60s, 70s, and 80s Paper DOT HS 811 495, NHTSA, US Department of Transportation, Washington DC

56 See Older Driver Task Force Research Report Appendix A.4 Types of crashes

57 Lena Levin, Tania Dukic, Per Henriksson, Selina Mårdh and Fridulv Sagberg (2009) Older car drivers in Norway and Sweden https://www.vti.se/en/publications/pdf/older-car-drivers-in-norway-and-sweden--studies-of-accident-involvement-visual-search-behaviour-attention-and-hazard-perception.pdf

58 Federal Highway Administration (2001) Highway Design Handbook for Older Drivers and Pedestrians https://www.fhwa.dot.gov/publications/research/safety/humanfac/01103/ (retrieved 3rd December 2015)

59 Marcus Brewer, Debbie Murillo, Alan Pate (2014) Handbook for Designing Roadways for the Aging Population Report FHWA-SA-14-015, Federal Highways Administration, US Department of Transportation, Washington DC

60 Brian Fildes, Jennifer Oxley, Bruce Corben and Jim Langford (2004) Road environment and design for older drivers: stage II Volume 1 – Overview Volume 2 – Handbook of Suggestions for Road Design Changes Austroads Research Report AP-R261/04, Austroads, Sydney

61 Victoria's Road Safety Strategy 2013-2022 https://www.towardszerovic.gov.au/__data/assets/pdf_file/0011/171659/road_safety_strategy.pdf

62 iRAP Road Attribute Risk Factors http://irap.org/en/about-irap-3/methodology

63 EU Project Goal (2011) Older people and driving needs Deliverable D3.1, GOAL (Growing Older, staying mobile: Transport needs for an ageing society) Coordinator TNO, The Netherlands http://www.goal-project.eu/images/reports/d3-1_goal_final_20130131.pdf

64 See Older Driver Task Force Research Report Appendix A.5 Characteristics of cars

65 NHTSA (2013) Traffic safety for older people — 5-year plan Report No. DOT HS 811 837, National Highway Traffic Safety Administration, Department of Transportation, Washington, DC www.nhtsa.gov/staticfiles/nti/older_drivers/../Older_People_811873.pdf

66 See Older Driver Task Force Research Report Appendix A.2 Medical conditions and fragility Appendix A Ageing and Sex Difference in Car Impacts by Adrian Hobbs

67 John Njord and Kirk Streudle Big data hit the road – The first year of use of the SHRP 2 safety databases TR News No.300, November/December 2015, Transportation Research Board, Washington DC http://onlinepubs.trb.org/onlinepubs/trnews/trnews300toc.pdf

68 RICA (2013) Driving Safely for Life RICA UK, London http://www.rica.org.uk/sites/default/files/documents/pdfs/mobility/driving-safely-for-life.pdf

69 Older Drivers Forum (2014) Managing Without a Car https://olderdriversforum.files.wordpress.com/2014/09/managing-without-a-car-a5-booklet-for-web-v2.pdf

70 PACTS (2012) Update – Safer Mobility for an Ageing Population Parliamentary Advisory Council for Transport Safety, Westminster

71 http://www.olderdrivers.org.uk/

72 https://olderdriversforum.files.wordpress.com/2014/09/driving-safely-for-life-2014.pdf

73 Older Drivers Forum Managing without a car? Older Drivers Forum, Hampshire Constabulary, Winchester https://olderdriversforum.files.wordpress.com/2014/09/managing-without-a-car-a5-booklet-for-web-v2.pdf

74 http://olderdriversforum.com/

75 PACTS (2012) Update – Safer Mobility for an Ageing Population Parliamentary Advisory Council for Transport Safety, Westminster

76 Husband, P. A. (2010). A literature review of older driver training interventions: implications for the delivery programmes by Devon County Council and Devon Road Casualty Reduction Partnership, Devon County Council

77 Lang, Parkes and Fernández Medina (2013) Driving Choices for the Older Motorist - The role of self-assessment tools RAC Foundation, London

78 See Older Driver Task Force Research Report Appendix A.9 Driver Assessment Appendix A Report of the Subgroup of Working Group 3 Stage 1 Assessment - Guidance for Older Driver Service Providers

79 National Driver Offender Retraining Scheme – see https://ndors.org.uk

80 See Older Driver Task Force Research Report Appendix A.9 Driver Assessment

81 See Older Driver Task Force Research Report Appendix A.9 Driver Assessment Appendix B A précis of the Review of Hampshire Constabulary's Fitness to Drive Assessment Pilot by Ian Edwards

The following organisations and individuals made contributions to the work of the Task Force and its members are in broad agreement with its findings:

AA
Age UK
Ageas UK
Age Platform Europe
British Insurers Brokers Association (BIBA)
Department for Transport (Observer)
DVLA (Observer)
Hadstrong PR
Hampshire Constabulary
IAM RoadSmart
Kit Mitchell
Bert Morris
Oakhill Communications (Observer)
Professor Andrew Parkes, Coventry University
Parliamentary Advisory Committee on Transport Safety (PACTS)
Professor Patrick Rabbitt, Emeritus Professor, Applied Cognitive Research, University of Manchester
RoadSafe
Road Safety Foundation
Road Safety GB
Road Safety Markings Association
Professor Steve Taylor, Visiting Chair in Optometry, University of Plymouth
RAC Foundation
Thatcham Research
Transport Research Laboratory (TRL)
Dr Carol Hawley, Principal Research Fellow, Warwick University

The following organisations were consulted on the work of the Task Force:

Aioi Nissay Dowa
Honda
Leeds University
Older Driver Program, National Highways Transport Safety Administration (NHTSA), USA

Large print and black and white formats available on request.