Proposals to amend driving licence standards for vision, diabetes and epilepsy (Annex III to Directive 91/439/EEC and 2006/126/EC)

Optical Confederation Response

Together the Optical Confederation represents the 12,000 optometrists, the 6,000 dispensing opticians and 7,000 optical businesses in the UK who provide high quality and accessible eye care services to the whole population. The Confederation is a coalition of the five optical bodies: the Association of British Dispensing Opticians (ABDO); the Association of Contact Lens Manufacturers (ACLM); the Association of Optometrists (AOP); the Federation of Manufacturing Opticians (FMO) and the Federation of Ophthalmic and Dispensing Opticians (FODO).

Executive Summary

We welcome the opportunity to comment on the proposed changes to the medical and, in particular, visual requirements. However, we do not support the proposed plan for implementation of the Driving Licence Standards with respect to vision. Furthermore, we have a number of serious concerns about the impact of the proposals on road safety.

We are seriously concerned that, not only will the number plate test remain, but also it will be made easier by shortening the distance from which it is read.

We have outlined a number of problems with the number plate test below, and we therefore strongly believe that it should be replaced by an assessment of visual acuity in a controlled environment, performed by a healthcare professional, for example by using a letter chart (Snellen chart or equivalent). This is the routinely used and standardised assessment of visual acuity. Our chief concerns with the number plate test are, as follows:

- The number plate test does not produce consistent results and can be affected by environmental conditions. Drivers can fail the test in different lighting or weather conditions.
- A number of scientific publications have questioned the accuracy and reliability of the number plate test as a method of screening visual acuity.
- The number plate test is not equivalent to the underlying 6/12 standard in the Directive 2009/113/EC and should be replaced by an established method of assessing visual acuity.
- Lowering the required visual acuity standard would send out the wrong message to drivers, who may already undervalue the importance of good vision for driving.

- Replacing the number plate test with a Snellen acuity test would make it easier for health professionals to give advice to patients on fitness to drive.

We strongly believe that peripheral vision (visual fields), i.e. side vision, should be assessed alongside visual acuity (when renewing a driving licence). In addition to this, best practice would be to assess a driver at the age of 50 years and over, as is already the case in a number of other EU Member States.

We also advocate ongoing assessment of all drivers' vision throughout their driving career for the following reasons:

- Many drivers do not notice a gradual change in their vision (over time) and are therefore unaware that they may fall below the required legal eyesight standard.

- Self-reporting is reliant on all drivers knowing the required standard (surveys have shown that the vast majority do not), realising they do not meet it, and being aware that it is a criminal offence not to notify the DVLA if they have a problem with their vision.

- All drivers should have a further vision assessment later in their driving career. Given the established link between visual field loss and accidents, this should include an assessment of their peripheral vision.

- The Department of Transport's own research has concluded that regular visual tests should be introduced for all drivers, and that the current visual standards be raised to bring the UK in line with other European countries.

We hope that the DVLA will take this opportunity to introduce a better system of vision screening for drivers in the UK. We are confident that we have the support of a number of road safety stakeholders, and also the general public who have consistently backed this proposal in a number of recent surveys.

Due to the concerns outlined above, we have made a number of general supporting comments, before making specific comments about the proposed changes in Annex C.

Introduction

The UK has a good record of improving road safety and, in this regard, has for many years led our European partners. The implementation of the EU Driving Licence Directives presents a great opportunity for the UK to improve what we see as a neglected aspect of road safety, namely, the importance of systematic assessment of drivers' visual acuity and visual fields.

The Republic of Ireland has moved ahead to implement the same Directives and we have used their model as an example of appropriate implementation because the UK and Ireland share a number of legal, cultural, linguistic and institutional similarities, as well as a geographic border and high volumes of traffic between the two countries. The Republic of Ireland, for example has chosen to implement the Directives by requiring that a completed declaration about the applicant's visual capability be submitted when applying for a learner (provisional) licence (please find this attached seperately).

There are a number of problems with relying on the UK accident statistics to inform policy, mainly because vision is not measured as a potential cause or contributory cause to accidents on UK roads. Statistical data are generally not recorded as there is usually a more pressing need to attend to the injured or to clear the road at a site of an accident. Gross problems with vision where the driver falls substantially below the visual requirements tend only to be uncovered at a later point in the investigation and we have seen examples in the past year where this is only uncovered by chance. Given these problems with the data and the rarity of vision (visual acuity and visual fields) being assessed by an accident investigator, there is no proper mechanism to uncover those with inadequate vision that are involved in an accident.

The Optical Confederation strongly believes that the DVLA (and the Department for Transport) has adopted an overly relaxed approach to the importance of good vision for safe driving. It would be both sensible and proportionate to assess all drivers' visual acuity and visual fields when renewing their licence. Furthermore, there should be a requirement for documented evidence that demonstrates this to be submitted when renewing a licence. The cost of this type of assessment would be modest compared to the overall cost of motoring and would only fall on renewal (which would be every ten years for Group 1 drivers and every five years for Group 2). We also feel that given the high and rising cost of accidents, there would be an offsetting saving if it resulted in fewer accidents on the UK's roads.

EC Directive 2006/126/EC as amended by 2009/113/EC

We have a number of concerns regarding the UK's proposals for implementation of the EU Directives, which we feel meet neither the legal requirements nor the spirit of the EU changes.

Proposals for Group 2 drivers

We very much welcome the holistic approach taken to assess the vision of Group 2 drivers on an ongoing basis, at every five years on renewal. In our view this assessment must include visual acuity, visual fields, and whether diplopia is present. We have concerns that there is no explicit proposal to assess visual fields, for example, paragraphs 2.34 and 2.35 note that the standard for visual fields will be the new standard but do not specify that all drivers will need to be assessed prior to renewal of a Group 2 licence.

We feel the best approach to implementing this in practice would be to have an assessment of driving vision performed by a medical practitioner or optometrist as has recently been implemented in the Republic of Ireland (see attached form D.502 which must be submitted by Group 2 drivers when renewing their licence). We feel that a similar model form should be produced for the UK by the DVLA, to be submitted on renewal of a Group 2 category licence, and we would be happy to assist in its production.

Group 2 drivers must demonstrate a higher standard of visual function and eye health than Group 1 under Directive 2009/113/EC. We would like to take this opportunity to comment that a growing number of drivers in the UK effectively drive for a living, including for example couriers, sales people, and long distance commuters, yet are classified as Group 1 drivers. Due to development in the modern economy, there is in effect a blurring distinction between Group 1 and Group 2 drivers. For this reason, we would strongly argue that the visual acuity

and visual fields (above the age of 50) of Group 1 drivers should be assessed in a systematic manner (similar to Group 2, but less frequently) when applying for a first licence and on its renewal (as detailed below).

Number plate test for Group 1 drivers

The DVLA has proposed to retain the number plate test for Group 1 drivers (under paragraph 2.15) and to shorten the distance from which it is read to 17.5 metres. The evidence for this reduction appears to be from a study by Drasdo and Haggerty[1,2] over 30 years ago and based on a statistical modelling exercise on the results of 30 individuals who failed the number plate test. In their comments Drasdo and Haggerty state that the conclusions "only provide a basis for approximate predictions" and therefore the evidence for reducing the required distance is flawed.

The number plate test dates back to the 1930s and is undertaken prior to sitting the practical driving test in the UK. We are concerned that provisional licence holders can drive on the roads here in advance of having their vision assessed, albeit under supervision, with the supervisor often being a relative or friend with little or no experience in this role. We believe that visual acuity should be assessed in advance of issuing a provisional licence, as is done in the Republic of Ireland and Finland, particularly as this sends an important signal to the learner driver of the importance of always driving with good vision.

We are seriously concerned about the fairness of the number plate test as a screening tool for visual acuity. The test to read the number plate is neither standardised, nor validated, meaning that the results are unrepeatable and inconsistent. As a consequence, this makes it an inappropriate method of determining whether a person has adequate vision for driving.

The number plate test can also be affected by environmental conditions. Drivers can fail the test in different lighting or weather conditions. In unfavourable conditions, for example, individuals may fail the test, even though their vision would fulfil the requirements of the Directive.

A number of scientific publications have questioned the accuracy and reliability of the number plate test. Charman[3] (1997) calculated from angular subtense that the number plate test was in fact equivalent to a Snellen acuity of approximately 6/15 i.e. already worse than the underlying 6/12 standard. Other studies have found the number plate test to be inconsistent with Snellen acuity, results were variable and unlikely to be repeatable.[4,5] As already mentioned, the variability is also highlighted in the Drasdo and Haggerty study.[1,2] However, the number plate test has additional drawbacks because of the close spacing of the letters, much closer than the spacing of letters on a Snellen chart. This close spacing

[1] Drasdo N and Haggerty CM. A comparison of the British number-plate and Snellen vision tests for car drivers. Leaflet LF 676. Transport and Road Research Laboratory, Crowthorne, Berkshire, 1977.
[2] Drasdo N and Haggerty CM. A comparison of the British number-plate and Snellen vision tests for car drivers. *Ophthal Physiol Opt* 1981; **1**(1): 39–54.
[3] Charman WN Vision and driving – a literature review and commentary. *Ophthal Physiol Opt* 1997; 17: 371-391.
[4] Kiel AW, Butler T and Alwitry A. Visual acuity and legal visual requirements to drive a passenger vehicle. *Eye* 2003; 17: 579-582.
[5] Currie Z, Bhan A and Pepper I. Reliability of Snellen charts for testing visual acuity for driving: prospective study and postal questionnaire. *BMJ* 2000; 321: 990-992.

increases the difficulty of reading the number plate and further separates the test from a Snellen acuity of 6/12.

The 2009 Directive specifies that the applicant should have an appropriate assessment to ensure that they have adequate visual acuity to drive safely. In our view an appropriate assessment of visual acuity can only be performed in a standardised manner under carefully controlled conditions of lighting, contrast and measurement of distance. This should be undertaken by a competent authority with a clear understanding of the assessment and potential reasons for failing. The number plate test does not meet these criteria and in our view cannot be described as an 'appropriate assessment of visual acuity'. The established method of assessing visual acuity is the Snellen chart. Prior to the implementation of the 2009 Directive, the Republic of Ireland and Finland required this assessment of visual acuity to be done by a medical practitioner or optometrist, which we feel is the correct approach.

For the reasons outlined above, we strongly believe that the number plate test should be replaced with an assessment of visual acuity using a Snellen chart, or equivalent, performed by a person with appropriate authority, who fully understands the assessment and can discuss reasons for failing, and repeat the assessment, if necessary.

Visual fields for Group 1 drivers

There is an established evidential link between visual field loss and accidents which in our view underlines the importance of screening for visual field loss.[6,7] Directive 2009/113/EC, recognises this in including a clearly stated requirement for central and peripheral vision. The incidence of monocular visual field loss in the population rises significantly after the age of 50, due to increasing prevalence of conditions such as glaucoma.[8,9] Directive 2009/113/EC (Annex III 6.1) also includes a requirement that 'no defects should be present within the central 20 degrees', which presumably includes the monocular field of each eye. In order to capture monocular defects, we believe that best practice would be for Group 1 drivers aged 50 years and over to be screened for visual field problems every ten years, on renewal of their driving licence.

Visual field loss can advance significantly without the individual becoming aware of a problem. Conditions such as glaucoma can cause asymptomatic loss of visual field in their early stages. The National Institute for Health and Clinical Excellence Clinical Guideline on Glaucoma (2009) states that, 'individuals with early to moderate chronic glaucoma are mostly asymptomatic and unaware of any damage to their field of vision. Once vision loss becomes apparent up to 90% of optic nerve fibres may have been irrecoverably damaged'.[10]

There is a clearly specified standard for overall binocular visual fields under the Annex III 6.1 Directive that all Group 1 drivers must meet. In our view. this cannot be left to Group 1 drivers to self assess against, as for example more than half of those who displayed visual field loss in the Johnson and Keltner (1983) study had not been aware that they had a

[6] Johnson CA and Keltner J L. Incidence of visual field loss in 20,000 eyes and its relationship to driving performance. *Arch Ophthalmol* 1983; 101: 371-375.
[7] Wood JM and Troutbeck R. Effect of restriction of the binocular visual field on driving performance. *Ophthal Physiol Opt* 1992; 12, 291-298.
[8] Henson DB. In *Visual Fields* 2nd Edition, Butterworth-Heinemann, Oxford.
[9] Tuck M and Crick R. The age distribution of primary open angle glaucoma. *Ophth Epid* 1998; 5: 173-183.
[10] NICE Clinical Guideline CG85 (2009). Glaucoma: Diagnosis and Management of Chronic Open Angle Glaucoma and Ocular Hypertension.

problem.[6] We feel that there is substantial evidence from the same study to introduce assessments of visual fields for drivers aged 50 and over as an absolute minimum. If following best practice from other European countries, such as, Finland, Italy and the Republic of Ireland, this should be introduced for those aged 50 and over, which we feel can be justified by the rising prevalence of monocular visual field problems.

Reliance on self-assessment and self-reporting by Group 1 drivers

Surveys indicate that there is widespread ignorance of the safe levels of visual acuity among the general driving population in the UK. Many drivers are unaware of the current vision standards and the legal implications of driving with poor vision. Even when drivers are aware they have poor vision they are often reluctant to admit that they fail to meet the standard. It has been shown that less than 10% of drivers are able to recall accurately the required number plate test distance to enable them to self-assess and that up to 40% of drivers would underestimate the required distance, making the task easier.[11,12]

Given this background we feel that it is not acceptable for the DVLA to rely on self-assessment by drivers against a detailed technical standard for vision function when renewing their licence. If they suffer from a problem with their vision some drivers will not go to have this checked out of a fear that they will lose their driving licence. In many such cases, the problem can be easily rectified. Moreover, as changes in eyesight can occur gradually, a driver may not even be aware that they have a problem with their vision, so it is important that they have this checked regularly. We feel the best way to address this is by regular assessments of vision tied to licence renewal.

It is also unclear what is being proposed for Group 1 drivers at the age of 70. Paragraph 1.18 sets out that Group 1 drivers will be first assessed against the new standards 'in Great Britain at the age of 70 or earlier if they require renewal of a short period licence on medical grounds'. No explanation is given as to what this means in practical terms. We have long argued that the current system of self-declaration of fitness to drive at the age of 70 is fundamentally flawed for the reasons outlined above. We would strongly recommend that visual acuity and visual fields should be assessed, with an accompanying declaration completed by a competent authority and submitted to the DVLA to demonstrate that this has been done.

Research carried out by Warwick University, and commissioned by the Department of Transport, found that there was widespread support among health professionals, the police, insurers and driving instructors for improvements to the current system of assessing drivers' vision.[13] However, a key recommendation of the report was that regular eye tests should be introduced for all drivers and that the current visual requirements for drivers should be brought into line with other European countries. Clear standards would also assist healthcare professionals when advising their patients on their fitness to drive.

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[11] Taylor SP. Accuracy of recall of the legal number plate testing distance by UK drivers. *Ophthal Physiol Opt* 1997; 17: 473-477.

[12] Pointer JS. Poor recognition of the UK minimum driving vision standard by motorists attending optometric practice. *Ophthal Physiol Opt* 2007; 27: 238-244.

[13] Hawley C. The Attitudes of Health Professionals on Giving Advice on Fitness to Drive, 2010. http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme6/report91/pdf/report91summary.pdf

Simple reminder when renewing tax disc

In order to reinforce the importance of always driving with good vision at all times we would recommend that the DVLA includes a clear reminder to drivers when they are renewing their tax disc (online or in paper format) that if they have any doubts about their vision when driving, especially in poor light conditions, then they should go to have their vision checked and always wear their vision correction for driving when prescribed for this purpose.

Public and stakeholder opinion

A number of recent surveys on public attitudes to driving and vision have consistently demonstrated high levels of support for the introduction of ongoing assessments of vision throughout a driving career.[14,15,16] The Optical Confederation is confident that a number of other road safety stakeholders share our concerns about the DVLA's proposals and they would also favour ongoing systematic assessments of all drivers' visual acuity and visual fields.

Proposed changes under Annex III (from Annex C of Consultation Document)

Group 1 Proposed Amendments

Annex 6.0 – Notes 1 and 2: Proposal to provide for exemptions

The Optical Confederation believes this is the wrong approach and is unfair to drivers. We would favour a system that allows for drivers that fall just below the visual acuity and visual fields standard to have an opportunity to continue driving following a more detailed assessment of their vision and having successfully passed a practical driving test (as is specified in Directive 2009/113/EC and has recently been implemented in the Republic of Ireland). Under the 2009 Directive (Annex III 6.0) a licence may be issued with conditions attached, for example, driving allowed only during daylight conditions.

Annex 6.1 – Note 1: Changing the distance of the number plate test

We strongly believe this is the wrong approach and that lowering the required standard would send out the wrong message to drivers, who may already undervalue the importance of good vision for driving. The number plate test should instead be abolished and replaced with an assessment of Snellen acuity which is the established and comparable method of assessing visual acuity. Moreover, the level of visual acuity of an applicant for a first licence should be measured in the same units as is expressed in the Directive under Annex III 6.1, which is in Snellen acuity.

As is also argued above, given that vision changes over time (usually due to the ageing process of the eye) there should be an ongoing assessment of visual acuity and visual fields throughout the driving career. Indeed if there is a change in vision, for example in one eye,

[14] RAC Foundation 2011 Survey. http://www.racfoundation.org/media-centre/vision-of-the-future
[15] College of Optometrists 2011 Survey. http://www.opticianonline.net/Articles/2011/04/15/27490/Survey+backs+drivers'+tests+.html
[16] Brake 2011 Survey. http://www.brake.org.uk/310311

that affects driver performance, which can affect licensing (under Annex 6.2 or 6.3), it would be helpful for the DVLA to have a documented record of that driver's recorded Snellen acuity.

Annex 6.1 – Note 2: Visual field standard

Similarly and for the reasons outlined above we feel that best practice would be to assess the visual fields of all drivers above the age of 50 when renewing their licence, alongside an assessment of visual acuity. Below the age of 50 years there is a very low level incidence of visual field loss in the population; however, the DVLA might wish to consider including this assessment for all drivers to underline the importance of always driving with good vision.

Annex 6.1 – Note 3: Presence of progressive eye disease

The wording in the Directive which states 'when a progressive eye disease is detected or declared', this would imply that the driver should be assessed for the presence of eye disease (in order for eye disease to be 'detected') when applying for a driving licence or its renewal. Indeed this is the approach taken by the Republic of Ireland as is evident in the attached D.502 form.

All drivers should be confident that they meet and continue to meet all of the visual requirements throughout their driving career. Given the problems we have outlined with reliance on self-assessment and self-reporting, we feel that the best way to achieve this in practice is to have a documented assessment of visual acuity, visual fields, and an assessment for the presence of eye disease performed by a competent authority, which has recently been introduced in the Republic of Ireland (see attached D.502 form).

Annex 6.2 – Note 1: Loss of vision in one eye

The wording in the Directive would imply that the competent authority undertaking an assessment of visual acuity would understand the implications of monocular vision and would also be in a position to perform an analysis of visual fields to conclude that the monocular individual meets the requirements to drive safely.

We strongly believe that the number plate test performed by the Driving Test Examiner would not meet this requirement, and as above should be replaced with an assessment of Snellen visual acuity (or similar) and visual fields.

Annex 6.3 – Note 1: Presence of diplopia or loss of vision in one eye

While there might not be any change to the underlying UK standards, we believe that in order to be fair to drivers, they should be given sufficient information about their condition and the limitations (usually temporary) that it would impose on their driving performance. In our view this can only be achieved by drivers attending in person for an assessment of their visual function.

We would also like to request a clear instruction from the DVLA on what they would consider to be 'loss of vision in one eye' in terms of Snellen acuity. Does this mean total functional loss of vision as above under Annex 6.2, or does it mean for example the loss of two lines on a Snellen chart?

Group 2 Proposed Amendments

Annex 6.4 – Note 1: Visual acuity standard changes to 0.8 (6/7.5)

We agree with the proposal to raise the standard for Group 2 drivers to that specified in the EC Directive.

We are unclear how the DVLA will ensure that Group 2 drivers have visual acuity of at least 0.1 (6/60) in the worse eye, or indeed how the DVLA will enforce the requirement to wear contact lenses if the spectacle prescription is above 8 dioptres.

We would recommend the model of implementation in use in the Republic of Ireland (see attached D.502 form) under which medical doctors or optometrists assess Group 2 (and indeed Group 1) drivers against all of the required visual requirements from the Directive when renewing their licence. Under the Irish model, Group 2 drivers who are over the 8 dioptre requirement would have this explained to them when having their screening done and could be informed of the options available. The Group 2 licence could also be annotated to specify that the Group 2 driver needs to wear contact lenses to meet the standard.

Annex 6.4 – Note 2: Visual field requirements

We agree with the proposal to implement the visual field requirement from the EC Directives. As above we would recommend the model of implementation in use in the Republic of Ireland.

Annex 6.4 – Note 3: Contrast sensitivity and diplopia

We would welcome more research into a safe cut-off point or standard for contrast sensitivity for all drivers, beyond which it is not considered safe to drive. We would be happy to work with the DVLA in planning this research.

As for Group 1 drivers we are uncertain how the UK standard on diplopia would be implemented in practical terms. We would favour a system as in the Republic of Ireland whereby drivers who suffer from diplopia attend for driver vision screening performed by any medical doctor or optometrist. Under this model the driver would be assessed in person and talked through the consequent limitation on his or her ability to renew a driving licence, which in most cases would be a temporary restriction.

Annex 6.4 – Note 4: Period of adaptation after a substantial loss of vision in one eye

We have concerns that the onus will be on drivers to self-report to the DVLA when they have a problem with their vision such as the loss of vision in one eye. Clear guidance from the DVLA would greatly assist health care professionals when informing Group 2 drivers (and indeed Group 1) of their suitability to drive, or where to refer drivers to following a change in their eye health, for example the DVLA Medical Advisory Panel. (We would be happy to assist in drafting this and any guidance on driving and vision.)

We would also like to have a clear instruction from the DVLA of what they would consider to be ‘substantial loss of vision in one eye’ in terms of Snellen acuity.

We would support having a degree of flexibility in the interpretation of individual cases.

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