

CIECA

in partnership with
Driving Mobility

Final summarising report

of the collaborative work of members of the

Fit to Drive Topical Group, Subgroup 1:

Setting Standards for Disabled Driver Assessment

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CIECA

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This report has been written on behalf of members of the CIECA Fit to Drive Subgroup 1: Setting Standards for Disabled Driver Assessment by Sandra Hoggins, Chair of Subgroup 1. The report content represents the extensive contributions and findings from all members of the subgroup and is a result of a collaboration between a range of professionals and organisations involved in the developing field of driver assessment in relation to medical fitness to drive.

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¹ *Fit to Drive Subgroup 2: Setting Standards for the Evaluation of Medical Fitness to Drive*

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² *PracDriva - Practical Clinical Driver Assessment (Guidelines and recommendations for the clinical process of fitness to drive)*

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³ *Fit to Drive Topical Group: Subgroup 1: Setting Standards for Disabled Driver Assessment, and Subgroup 2: Setting Standards for the Evaluation of Medical Fitness to Drive.*

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1. PREFACE

The European Union has been a uniquely progressive force in international terms in promoting medical fitness to drive since 2006, implementing through a series of directives into European (and thereby national law) an array of legally binding standards related to medical fitness to drive based on the advice of high-level expert working groups.

However, the evidence and research base of traffic medicine continues to evolve rapidly, and there are differences arising in the interpretation and operationalization of these laws within the individual countries of the European Union (EU). This means that these directives need to be reviewed by driver licencing and testing bodies, in conjunction with traffic medicine experts and driver reablement specialists as to whether revision and/or additions need to be made to the directives, as well as considerations of how such review should most effectively take place, and to communicate these back to CIECA (The International Commission for Driver Testing)⁴ and the Driving Licence Committee of the European Commission. To this end, CIECA Fit to Drive Topical Group was established in 2017 and consisted of two subgroups which addressed 1) Setting Standards for Disabled Driver Assessment and 2) Setting Standards for the Evaluation of Medical Fitness to Drive. The final reports from each subgroup form the basis of this document.

An increasingly important aspect of traffic medicine and driver reablement has been to ensure that there is clarity and rigour in the methodology of assessing medical fitness to drive, including off-road and on-road assessment. The handbook arising from the PORTARE project (Hunter et al., 2009) was an important development in clarifying elements of on-road assessment but required updating and more advice on operationalization in terms of knowledge and skills of assessors in the light of emerging research over a decade. This was the basis for the formation of Subgroup 1 of the CIECA Fit to Drive Topical Group⁵. Subgroup 1's direction progressed towards the construction of high-level guidelines as core requirements for driver assessment, underpinned by the emergent online resource for practitioners (PracDriva⁶).

Equally important is the increasing attention given to the rigour and applicability of guidelines on medical fitness to drive for healthcare professionals (Rapoport et al., 2015), as well as the opportunities for developing a dialogue between experts in traffic medicine and driver licencing and testing bodies (Langford et al., 2007). Reviewing the stipulations for medical fitness to drive for the range of medical conditions outlined in the directives against emerging knowledge in traffic medicine was the basis for Subgroup 2 of the CIECA Fit to Drive Topical Group.

Although the two subgroups have clearly defined objectives as described in the introduction to the individual reports, it is important to understand the significance and interdependency between them and why this is important, as we believe this is where the true value of the topical group's work is reflected.

⁴ www.cieca.eu

⁵ *Topical Groups are temporary domain-specific groups to focus on discussion and activity around a given area. Topical Groups provide an opportunity for CIECA Members with similar interests to discuss and explore particular areas of driver training and testing. [https://www.cieca.eu/our-organisation/organisational-structure]. Accessed 3 July 2020*

⁶ *PracDriva: Practical Clinical Driver Assessment (Guidelines and recommendations for the clinical process of fitness to drive) website in development 2020*

Subgroup 1: Setting Standards for Disabled Driver Assessment

Subgroup 1 focussed on the importance of, and definition of what is meant by driver assessment. This involved constructing best practice guidelines, sharing experience of practitioners involved in driver assessment, developing knowledge and new insights of all members, and introducing an online resource to be available for all practitioners involved in carrying out driver assessment.

Subgroup 2: Setting Standards for the Evaluation of Medical Fitness to Drive

Subgroup 2 set out to understand and discuss the differences and similarities between the fitness to drive (FTD) evaluation systems in different EU and European Economic Area (EEA) countries. The objectives of Subgroup 2 were to: describe the procedure used, assess medical fitness to drive in each country, learn from each other's procedures and legal requirements, find best practices, discuss differences and find suggestions for changes in Annex III of the EU Directive on driving licences.

Both subgroups acknowledge that road safety and the legal framework relating to medical fitness to drive is fundamental to the work of the FTD Topical Group. Associated with this is the need to ensure that people with a disability or health condition receive a fair and equitable service to optimise their mobility. Throughout the development of the work of both groups, an acceptance grew among the members of the FTD Topical Group that driver assessment is a complex clinical process, which is fundamentally different to the standard process of driver testing, and this project presented a unique opportunity to raise awareness of the significance of an integrated approach.

The majority of the members of FTD Topical Group participated as members of both subgroups. We think it would be fair to say that both groups faced several challenges, with members being aware of their own country or organisation's medical fitness to drive framework, the varied experience of driver assessment, as well as the potential impact of any recommendations from the groups. At the same time, the commitment and motivation of all members to resolutely and actively work towards a common purpose, by sharing their experiences and knowledge, has been remarkable and vital to the success of the work.

Preface written by:

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Chair, Subgroup 1 FTD Topical Group

Professor Des O'Neill
Deputy Chair, Subgroup 2 FTD Topical Group

2. EXECUTIVE SUMMARY

This report documents the work and achievements of the Fit to Drive Topical Group Subgroup 1: Setting Standards for Disabled Driver Assessment, from its inception in 2017, through to the construction in 2019 of guidelines produced by a European group of practitioners involved in driver assessment, driver testing and medical fitness to drive issues. The guidelines form the components of the 'ideal' driver assessment.

The report presents the issues Subgroup 1 faced when considering driver assessment in the context of fitness to drive (FTD), which gave rise to the Fit to Drive Topical Group. It goes on to identify the challenges that arose from the initial meetings of the group, and how the group responded to these.

Recommendations for future actions, significantly the emergent PracDriva website resource, to progress the development of driver assessment within CIECA organisations and beyond are provided.

The six guidelines forming the 'ideal' driver assessment are:

1. Knowledge and skills of professionals undertaking driver assessment
2. Competencies of assessors undertaking driver assessment
3. The physical and cognitive assessment (prior to in car, on-road assessment)
4. Elements to include within the in car, on-road driver assessment
5. How to reach a recommendation
6. Legal aspects following driver assessment outcome.

The guidelines are presented as annex 1 to this report.

A separate work stream: the PracDriva Steering Group ran in parallel to Subgroup 1.

The steering group led the work creating the emergent PracDriva website resource. The PracDriva website is intended to underpin the guidelines by providing practical advice on specific medical conditions in relation to driver assessment. Supported by partnership working with CIECA and Driving Mobility, the intention is for the PracDriva resource to be freely and widely available to assist practitioners involved in or developing driver assessment.

The Subgroup 1 final summarising report outlines the journey the Subgroup members took to achieve its objectives, by reaching a consensus view on:

- the fundamental differences between the standard driving test and a practical driver assessment;
- the elements to be included within the 'ideal' driver assessment;
- the range of medical conditions, where driver assessment is most beneficial and relevant, including the impact of disabilities and the effect of the ageing process;
- the importance of driver assessment in relation to the EU Directive on driving licences;
- making the guidelines accessible to all practitioners involved in undertaking or developing driver assessment.

The FTD Subgroup 1 also presented a learning experience for members, providing an opportunity to present their own country's or organisation's experience of driver assessment within their existing operating framework. This was an important aspect of the Subgroup's development, leading to greater understanding of some of the challenges individual countries may face, when integrating or developing the principles of the 'ideal' driver assessment.

The knowledge, skills and experience of Subgroup 1 members facilitated the open exchange of views and learning. This greatly enhanced the group's ability to provide advice on topics of interest from individual members.

The findings and recommendations of Subgroup 1's work were due to be presented at the CIECA Congress in 2020 in Porto, in an interactive CIECA Members Forum event. Unfortunately, this has been postponed due to the Covid-19 pandemic. However, the findings will be presented at the next Member Forum event; this will provide the opportunity to encourage further exploration and adoption of the guidelines and introduce the developing PracDriva website resource.

Opportunities for ongoing and future collaboration between CIECA members, to promote development of driver assessment is an important longer-term objective of the work.

A formal dissemination event of the work of the FTD Topical Group is planned by CIECA in the future, to include invitation to a wide variety of interested parties, including representatives of the Driving Licence Committee of the European Commission.

3. INTRODUCTION

It is important to remember that the principal reason for this work relates to fairness and equity for people with a health condition or disability, and how this may impact on their ability to drive.

Driving a car may be viewed as a fundamental part of people's lives and provide the means to participate in society. The consequences of having to stop driving are well documented; Choi, Adams and Mezuk (2012) indicate that *"driving cessation likely has consequences for multiple domains in life, including employment, social roles and interactions, and health.* Musselwhite and Shergold (2013) identified that *"Driving cessation for many older people is associated with a poorer quality of life and can lead to health problems such as depression."*

It is essential, therefore, that practitioners involved in driver assessment have the knowledge, skills and expertise to provide recommendations to people with a disability or health condition to enable them to safely access mobility by driving. These recommendations must always be balanced with road safety and be within the overall medical fitness to drive legal framework.

4. THE LINK BETWEEN THE EU DIRECTIVE AND DRIVER ASSESSMENT

EU Directive 2006/126/EC states that standards for driving tests and licensing need to be harmonised. However, there is a lack of information within the directive as to how this relates to the needs of people with health conditions and disabilities.

Article 5(2) of EU Directive 2006/126/EC refers to the conditions and restrictions as follows:

“If, because of a physical disability, driving is authorised only for certain types of vehicle or for adapted vehicles, the test of skills and behaviour provided for in Article 7 shall be taken in such a vehicle.”

There is a requirement for EU countries to comply with the directive. However, information as to how member states should adopt provisions for people with health conditions or disabilities to drive is not explicit within the directive. As the driver assessment provision is so variable across countries, it is understandable that there will be notable variations regarding the assessment approach taken.

Annex III of the European Directive on driving licences (2006/126/EC and amendments 2009/113/EC, 2014/85/EU, 2016/1106) outlines the minimum standards of physical and mental fitness for driving a power-driven vehicle for group 1 and group 2 driving licence holders as follows:

Group 1: “Applicants shall be required to undergo a medical examination if it becomes apparent, when the necessary formalities are being completed or during the tests which they have to undergo prior to obtaining a driving licence, that they have one or more of the medical disabilities mentioned in this Annex.”

Group 2: “Applicants shall undergo medical examinations before a driving licence is first issued to them and thereafter drivers shall be checked in accordance with the national system in place in the Member State of normal residence whenever their driving licence is renewed.”

The final decision on medical fitness to drive rests with a medical practitioner in line with their country’s legislative framework, based on the requirements of Annex III of the EU Directive on driving licences and Amendments (2006/126/EC; 2009/113/EC; 2014/85/EU; 2016/1106). However, making the decision is not always straight forward, in view of the complex nature of how a medical condition or disability affects an individual. The impact of a medical condition or disability on the task of driving may be difficult to ascertain, based on written reports only, without a functional, practical on-road driver assessment.

In some countries, the medical fitness to drive legislative framework accepts driver assessment as having an integral role in determining medical fitness to drive; examples include Belgium, the UK, the Netherlands and Sweden. However, the degree of consistency of approach, who undertakes the assessment, and practical facilities vary from country to country.

The need to establish a harmonised approach within driver assessment has been recognised (Helman et al., 2017). However, despite the acceptance of this need, the challenge remained

as to how to construct a framework that embodies consistent guidelines for countries currently undertaking, or in the process of developing their driver assessment processes.

5. OVERSIGHT OF THE WORK

The CIECA Permanent Bureau and Driving Mobility Board provided oversight of the work; with updates provided to both organisations. Progress reports were presented at the General Assemblies at CIECA Congress meetings in Trondheim (2017), Belfast (2018) and Tbilisi (2019). The final presentation of the work was scheduled for the Members Forum in Porto (2020); however, this was postponed due to the Covid-19 pandemic, and it is anticipated this event will take place as soon as this is possible.

6. BACKGROUND LEADING TO THE INITIATIVE OF THE FIT TO DRIVE (FTD) TOPICAL GROUP

At a CIECA workshop in November 2014, the benefit of CIECA being involved as a platform to assist in defining European standards for driver assessment was established. The workshop recognised that driver assessment was relevant to the existing CIECA membership and CIECA's existing connection to the Driving Licence Committee could potentially further support this. The role of the Handbook of Disabled Driver Assessment, published in 2009, developed by the PORTARE Working Group, was recognised at the workshop for its importance in providing guidance for practitioners involved in driver assessment.

A second Disabled Driver Assessment Workshop in 2015 broadened the overall goals of future work to defining the framework for the development of best practice guidelines for driver assessment to include the necessary qualifications and skill sets of practitioners undertaking assessment. Educational requirements and models of training for practitioners involved in driver assessment were considered as essential components of best practice guidelines.

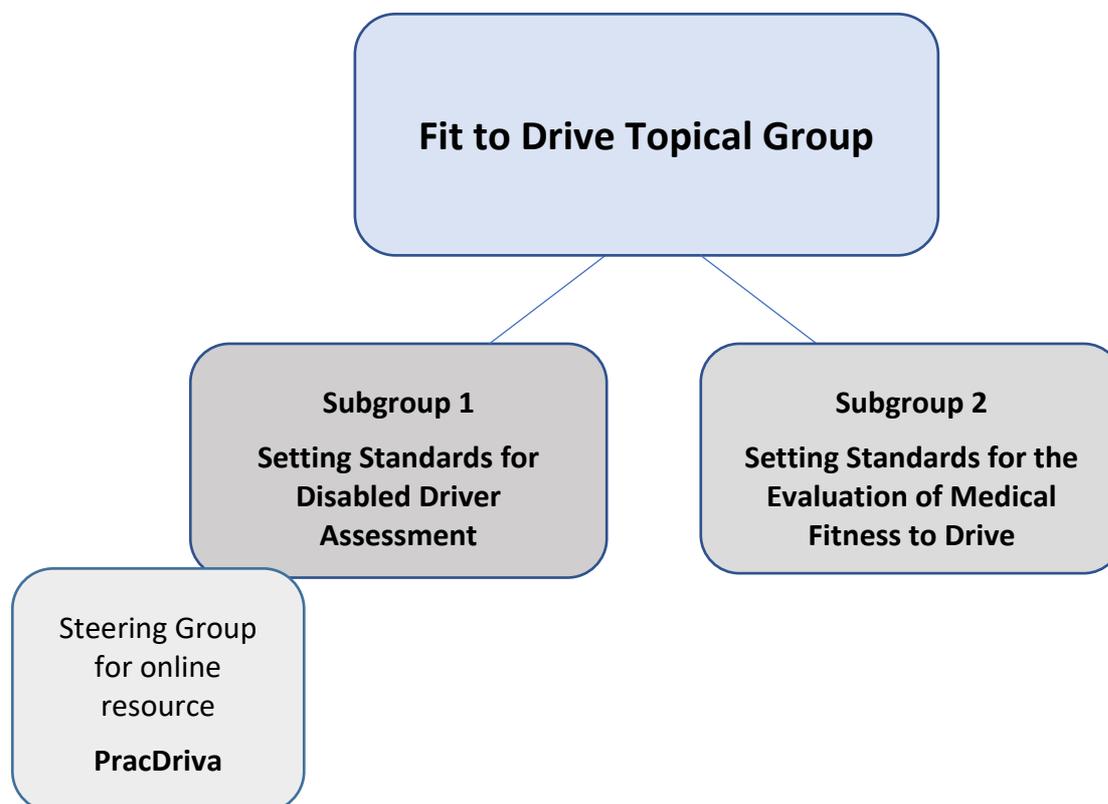
In April 2016, Driving Mobility (formerly the Forum of Mobility Centres) submitted a business plan to CIECA outlining a partnership approach with CIECA, with the strategic goals for a working group to address:

- the development of best practice guidelines for the process of disabled driver assessment including defining the qualifications and skill-sets necessary for assessment staff and identifying training models for those staff;
- the creation of a structure to share information and best practice developments, to ensure that this is available for experts in the field and that their questions are addressed;
- maintaining and updating the content of the PORTARE Handbook of Disabled Driver Assessment.

The first meeting of the Fit to Drive Topical Group took place in London in May 2017 to start work on the project.

CIECA members were circulated with information about the formation of the new Fit to Drive (FTD) Topical Group, inviting people with an interest in developing this work to participate. Members from a wide variety of countries and organisations joined the FTD Topical Group.

7. STRUCTURE OF THE FTD TOPICAL GROUP



Discussions progressed on building a structure for the Fit to Drive Topical Group, with work streams focussing on specific topics. The above is an illustration of the structure and inter-relationship between the subgroups.

Meetings of both Subgroups 1 and 2 took place in parallel, both having clear objectives, and with an inter-relationship between them. Meetings were arranged on a quarterly basis at locations in different countries, appreciatively hosted by FTD Subgroup members.

The Chair and Deputy Chairs for Subgroup 1 and the PracDriva Steering Group were elected. The CIECA Secretariat supported the meeting arrangements, minutes and co-ordination of the subgroup's contributions.

8. EXPERTISE / KNOWLEDGE AND SKILLS OF MEMBERS

Members represented their national institutions and included therapists, driving assessors, driving instructors, general practitioners, medical consultants, representatives from fitness to drive authorities, driving standard agencies, road traffic medicine, traffic psychologists, traffic consultants and managerial staff involved in driver assessment and driver testing.

Conversely, this diverse membership also presented challenges for the Subgroup 1. Whilst there was agreement on the need to develop a framework that presented consistency, the group acknowledged there would be differences in practice within countries and organisations. The potential outcomes of the work may therefore have an impact on their own country's framework. It was important for members of Subgroup 1 to be well informed and aware of the differences and issues faced by individual member organisations.

9. DEFINING THE TERMINOLOGY USED BY THE FIT TO DRIVE TOPICAL GROUP

Defining the terminology for specific terms used by the FTD Subgroups during their work became very important. Members needed to be sure definitions of specific terms used were consistent and understood by all. The FTD Topical Group produced a document defining terminology used by both subgroups. This is included in as Annex 2 to this report.

10. FITNESS TO DRIVE ISSUES AND CHALLENGES IDENTIFIED AT INITIAL MEETINGS

Initial discussions revealed the position of driver assessment across countries and organisations varied significantly. There was inconsistency in several areas related to driver assessment in the context of fitness to drive. Some countries had well developed and sophisticated systems for driver assessment, where others have less developed and a more fragmented approach. It was clear there was already a great deal of knowledge, skills and developed protocols in the area for driver assessment for some CIECA member organisations and countries. However, this was not the case for all members.

Several issues and challenges were raised:

- Operational aspects of driver assessment: some countries provided assessment vehicles with specialist adaptations and private off-road facilities; some centres used static driving assessment rigs.
- Funding: some countries received statutory funding, for example National Health Service provision, or government funding.
- Consistency of assessment protocols: some organisations had written standards, handbooks and others were in the process of developing these.
- The range of professionals involved in driver assessment: this included specialist traffic medicine professionals, doctors, therapists, psychologists, optometrists, driving instructors / teachers and driving test examiners.

- The issue of the medical-psychological assessment in relation to risk behaviour and how this could be included within the medical fitness to drive process was raised. Some countries, for example Germany and Spain had well developed systems and programmes in place. However, the same level of processes did not exist for other countries. The importance of this topic and whether it was within the working remit of Subgroup 1 was a source of debate.
- The variation of level of involvement of professionals: for example, some organisations conducted the visual, physical, cognitive and on-road elements of the assessment on the same day. For others, the process was more extended and performed by different professionals at different stages, with a more delayed outcome.
- The knowledge and skills of the assessors varied significantly both from country to country, and also internally within each country and organisation.
- Some countries required a referral by a medical professional for driver assessment, where others required referral by the Driver Licencing Authority, and others accepted self-referral from the driver.

However, there was a consensus view that the final decision on medical fitness to drive rests with a medical practitioner. Where a driver assessment is required, it forms a critical part of the integrated evaluation within the medical fitness to drive process.

11. INITIATIVES FROM SUBGROUP 1 TO ADDRESS THE ISSUES AND CHALLENGES

The debate within Subgroup 1 demonstrated the challenges members faced in constructing a process that would align with the overall medical fitness to drive process in their own countries. Conversely, it also provided strength to the group's work by enabling members to take a fresh look at what a reliable and consistent driver assessment process could be. By sharing elements of good practice from each other's experience, and highlighting elements of inconsistent practice, Subgroup 1 had a very real opportunity to harmonise the components they considered to form the 'ideal' driver assessment.

The variety of professional backgrounds and skills of the membership indicated there was an appetite for this work, with a commitment to be involved in the opportunity to construct practical guidelines that would be beneficial to their organisations. Importantly members recognised that the resultant impact of this work could be of benefit to people within their communities with disabilities or health conditions affecting their driving and mobility.

The work also provided an opportunity to disseminate best practice and practical guidelines on driver assessment, developed by CIECA members, to other countries and organisations who may be developing their procedures.

Subgroup 1 debated the following presenting issues, which led to the construction of an agreed set of guidelines forming the core requirements of the 'ideal' driver assessment. The group considered the guidelines provided the infrastructure for ongoing debate and development of driver assessment, and support the progression of the PracDriva website resource.

12. DEFINING DRIVER ASSESSMENT / WHAT ARE THE DIFFERENCES BETWEEN THE DRIVING TEST AND DRIVER ASSESSMENT?

Subgroup 1 members needed to address and agree their definition of the term ‘driver assessment’ and what makes this a different process to the standard driving test.

There were three key steps within this activity:

- 1) subgroup members needed to understand, discuss and agree, the differences between the standard driving test and a driver assessment;
- 2) subgroup members needed to define the elements and processes involved within a driver assessment;
- 3) subgroup members needed to agree the definition of the term ‘driver assessment’.

12.1. Understanding the differences between the driving test and a driver assessment

At the initial meeting in London in May 2017, Mark Tant, Vias institute, Belgium, led the discussion on the differences between a standard driving test and driver assessment. Mark identified the components of each, illustrating the areas that define the differences between the two processes:

DRIVER ASSESSMENT	Compared to:	STANDARD DRIVING TEST
in ‘medical’ procedure	↔	in ‘administrative’ procedure
Driving licence not always required	↔	provisional driving licence required
not legally governed	↔	legally governed
relevant for vehicles not requiring driving licence	↔	in framework of Driving licence
a tool in fitness to drive evaluation	↔	the ‘final test’
expert carries out	↔	examiner performs
looking at fitness	↔	looking at competence, skill
considering why something happens	↔	observes that something happens
interprets behaviour	↔	observes behaviour
evaluation is starting point	↔	evaluation is end point
evaluation is informed	↔	evaluation is ‘blind’
If negative: events are allowed	↔	if negative: mistakes are not allowed
not always choice of vehicle	↔	‘free choice’ of vehicle
‘guided tour’	↔	‘on your own’
reasonable performance	↔	pre-determined criteria
tailored protocol	↔	standard protocol
decision in terms of solution	↔	decision as pass / fail

(Content provided by Mark Tant, Vias institute.)

The group went on to discuss whether driver assessment is used across Europe; in the main this is unknown, as currently there is not a full overview of practice across EU states. If driver assessment is used, questions arise as to whether it is used correctly and consistently. Also,

there is the question as to whether the outcome / findings of the driver assessment are taken into account in relation to the driver's medical fitness, and if the assessment is used in the right perspective.

Factors that influence if driver assessment is used, and in what context, depend on:

- the national policy framework of individual countries (extent of implementation of the EU Driving Licence Directive);
- history of the country (for example involvement in EU projects in the past);
- social security system;
- rehabilitation system and driving licence procedures;
- pressure groups;
- national authority of the country (internal affairs, driving licence, health programmes);
- availability of resources (financial and human);
- current and past national political affiliations of competent authority (medical-socially oriented);
- national geography (unified, regionalised, provinces, privatised);
- availability of alternatives, for example driving simulators, closed-road tracks, driving schools.

12.2. Defining driver assessment

Dr Lynne Hutton, Consultant in Rehabilitation Medicine, led the discussion at the initial meeting in May 2017 to promote debate, further defining the key features of driver assessment:

- driver assessment is a clinical process;
- the person conducting the driver assessment (driving assessor) must understand the driver's clinical condition in the context of the on-road assessment and have the appropriate competencies to be able to provide recommendations on driving ability;
- the assessment should offer tailored support to the individual and prolong their driving career wherever this is possible, for example should include vehicle adaptation solutions if required;
- the assessment should raise the question of driving cessation at the appropriate time;
- the driver assessment process should offer advice on transport alternatives, if advised against driving;
- the driver assessment process should be consistent and underpinned by agreed clinical protocols.

12.3. Subgroup 1's definition of the term 'driver assessment'

The first meeting in London in May 2017 started the debate on Subgroup 1's position statement on the definition of a driver assessment. The final iteration of the definition was agreed as:

“Driver assessment is a multi-disciplinary clinical process to create an opinion on fitness to drive (FTD) referring to the EU Driving Licence Directive. A clinical process determines functional consequences of medical challenges in terms of physical, (neuro)-psychological, behavioural and attitudinal aspects.

The clinical process focuses on the person, namely the driver. It does not pre-define the methodology.”

13.AGREEING WHAT SHOULD BE INCLUDED IN A DRIVER ASSESSMENT

The subgroup recognised that driver assessment is a different process from the standard driving test, and started work on forming a consensus view on the components they considered should be involved in a driver assessment.

To do this, and to strengthen the inclusion of driver assessment within the medical fitness to drive framework, it was important to refer to the health conditions which fall within the medical areas of the European Directive on driving licences (2006/126/EC and amendments 2009/113/EC, 2014/85/EU, 2016/1106) Annex III Minimum Standards of Physical and Mental Fitness for Driving a Power-Driven Vehicle. These are listed as:

- Eyesight
- Hearing
- Locomotor disability
- Cardiovascular diseases
- Diabetes mellitus
- Neurological diseases
- Obstructive sleep apnoea syndrome
- Epilepsy
- Mental disorders
- Alcohol
- Drugs and medicinal products
- Renal disorders
- Miscellaneous provisions.

The group acknowledged that other features, such as the effects of the ageing process, the impact of a learning disability and complex co-morbidities, which are not as explicit within Annex III of the EU Directive on driving licences should also be taken into consideration.

14.RELEVANCE OF THE PRACTICAL ON-ROAD ASSESSMENT TO MEDICAL CONDITIONS WITHIN THE EU DRIVING LICENCE DIRECTIVE

The individual characteristics of any medical condition and its severity may not rule out the requirement for a practical driver assessment. However, the Subgroups 1 and 2 agreed that a practical driver assessment would be more relevant in some medical conditions than others.

For some medical conditions, the medical fitness to drive decision may be reliably established by medical reports. Conversely, due to the variability, severity and range of impact on the individual of some conditions, making a fitness to drive decision based on medical reports only, was less reliable and could be open to question.

Subgroups 1 and 2 considered the medical conditions within the EU Directive on driving licences and the relevance of the practical driver assessment to these medical conditions. The table below provides a broad indicator of relevance; however, factors such as the severity and progression of the medical condition, as well as the impact of co-existing medical conditions should be taken into account. It is acknowledged that some medical conditions, such as low visual acuity, will not meet the Medical FTD legal requirements, and a practical driver assessment would not be undertaken, hence the low-level rating illustrated.

Medical conditions within the EU Directive on driving licences	Relevance of practical driver assessment
Eyesight: Visual Field Deficit Acuity Double Vision	+ indicates lower level of relevance ++ indicates moderate level of relevance +++ indicates high level of relevance + + + +
Hearing	+
Locomotor disability	+ + +
Cardiovascular diseases	+
Diabetes mellitus	+
Neurological Diseases	+ + +
Obstructive Sleep Apnoea Syndrome	+
Epilepsy	+
Mental Disorders	+ +
Cognitive disturbances, including Dementia and Mild Cognitive Impairment	+ + +
Neuro-developmental conditions (autism spectrum disorders / ADHD Attention Deficit Hyperactivity Disorder / intellectual disability	+ +
Alcohol Dependency	+
Drugs and Medicinal Products	+
Renal Disorders	+
Miscellaneous Provisions: Co-morbidity	+ +

Assessing the impact of a health condition on the function of driving is complex. For example, the approach to the assessment of a driver with a cognitive condition, as in the case of dementia, would have a different focus to that of a driver with a locomotor disability where specialist vehicle adaptations are required. The subgroup concluded the need to establish an agreed protocol that contained the core elements required when undertaking any driver assessment, which can be tailored to the individual clinical needs of the driver.

All drivers must meet the minimum standards of the European Directive on driving licences (EU Directive 2006/126/EC and amendments 2009/113/EC, 2014/85/EU, 2016/1106) Annex

II. The required competences of a new driver, outlined within the CIECA Road User Education Project (2015) indicate that the driver:

- Should possess the necessary competence to drive a vehicle in a safe and responsible manner, and possesses the knowledge and skills, self-knowledge and understanding of risk required to drive in a manner which he or she:
 - is safe on the road;
 - enters proper interaction, thinks proactively and reacts responsibly in traffic
 - promotes traffic flow;
 - shows consideration for the environment and the health and needs of others;
 - is compliant with the regulations in force, and
 - improves skills in a life-long process.

For drivers who have a medical condition, disability or other health related issue, the driver assessment process should seek to identify if this is affecting the above driving processes. This is a complex area, with the potential outcome of the driver assessment leading to withdrawal of the driver's licence entitlement with the resulting loss of independent mobility.

The consequences of a driver assessment being carried out without appropriate knowledge and skills, and due care, could lead to drivers stopping driving unnecessarily, or a resultant road safety risk of continuing to drive when they should stop.

15. THE OLDER DRIVER

Whilst age in itself is not a bar to driving the factors associated with the ageing process may impact on the task of driving. Factors such as deterioration in vision, slowness of reactions, reduced mobility, effects of pain and medication should be taken into account. It is often a combination of factors that may lead to the driving of an older person coming into question. The driver assessment process can assist in prolonging driving, where this is safe, and suggest technological solutions, such as power assisted steering, cruise control, automatic gear selection. Vehicle design, in terms of ease of gaining access into and out of the car is an important factor that can also be supported during a practical driver assessment.

In some cases, where the driver assessment has indicated that the ageing process is starting to impact on driving, the question of driver retirement may need to be addressed. This is a difficult area: if raised at an appropriate stage, the driver could be supported by strategies relating to alternative forms of transport to enable them to remain independently mobile.

16. MEDICAL-PSYCHOLOGICAL ASSESSMENT IN RELATION TO RISK BEHAVIOUR

Driver assessment in relation to risk behaviour, including alcohol (not addiction) and drug use is a complex issue and some countries, for example Germany and Austria, have developed in depth assessment programmes. However, many countries represented within Subgroup 1 do not address these issues at a similar level.

The importance of the topic within countries with developed systems was demonstrated by subgroup members' presentations from Austria, Germany and Spain:

- Traffic psychological measures in Austria
KFV (October 2018 Brussels)
- A close look at the German traffic safety system
Verband der TÜV e.V. (October 2018 Brussels)
- The Spanish medical-psychological assessment for drivers
Traffic General Directorate (October 2018 Brussels).

Copies of presentations can be found at Appendix 2.

Subgroup 1 acknowledged this to be an important subject and the scientific ground should be considered. Within the scope of the work of Subgroup 1, it would not be possible to devote the level of investigation this topic needed. As the issue of risky drivers presented an EU-wide safety issue, consistency in assessment of these aspects is a subject that needed to be addressed.

It was agreed that the topic of medical-psychological assessment and its place within the fitness to drive evaluation process warranted a new group of experts to consider this in an arena which could support this development. It was suggested that further consideration be given to approaching CIECA with the possibility of a new CIECA group to address this, or a potential approach to Traffic Psychology International⁷.

As the new PracDriva website resource develops in the future, it was further suggested that reference be made to best practices of countries who had developed programmes regarding medical-psychological assessment in regard to risk behaviour.

17.ROLE OF SUBGROUP 1 AS A FORUM FOR MEMBERS RELATED TO DRIVER ASSESSMENT RELATED TOPICS

A goal of Subgroup 1 was to become a supportive network of individuals to share information and best practice developments.

An active forum was established where individuals could bring issues for debate and advice, and disseminate the practice from their own working situation.

Subgroup members may continue to access this supporting peer network beyond the duration of the FTD Topical Group as it provides a valuable resource for professionals involved in the specialty. The dissemination of Subgroup 1's work at future events will also encourage CIECA members and practitioners involved in driver assessment to engage with members of the Subgroup to generate knowledge in this field.

⁷ *Traffic Psychology International: a forum of traffic experts who co-operate with the goal to support road users in their individual traffic behaviour* <http://traffic-psychology-international.eu/> (Accessed 29 December 2020)

18.THE DEVELOPMENT OF THE SIX GUIDELINES FORMING THE ‘IDEAL’ DRIVER ASSESSMENT

Subgroup 1 established two main work streams at its meeting in Brussels in February 2018:

- 1) The Knowledge and Skills Assessors required in order to reach a valid ‘opinion’ from the evidence of a driver assessment;
- 2) What would the ‘ideal’ driver assessment look like, for example what clinical and practical elements should be involved, such as vision, physical and cognitive assessment, and the in car on-road assessment.

As the work of Subgroup 1 progressed, the core elements of the ‘ideal’ driver assessment were defined and guidelines for the assessor surrounding the elements formed. A brief summary of the content of each guideline is given below. The complete guidelines are presented in full as Annex 1 to this report.

The six guidelines set out below should be considered as a collective document, as the guidelines relate to each other.

The guidelines do not instruct the driving assessor on how to carry out a driver assessment; they form Subgroup 1’s views on the main components the driving assessor needs to consider in order to form a professional opinion on the impact of a person’s health condition or disability on the task of driving. The guidelines provide the context for a professional opinion, based on a consistent, fair and consensus approach.

Advice and information for the assessor related to specific health conditions and how these may impact on driving is addressed within the emergent PracDriva website resource. Information on the development of the PracDriva website is contained within Chapter 19 of this report.

The following is an outline of the content of each guideline.

18.1. Guideline 1: Knowledge and skills of professionals undertaking driver assessment

This guideline acknowledges that the specific knowledge and skills required of the professional depends on which part of the driver assessment process he or she is involved. The following knowledge and skills need to be available within the team / professionals undertaking the complete driver assessment, and all professionals involved must display the appropriate attitudes.

Knowledge of:

- legal /driver licence issues
- the ethical framework surrounding driver assessment
- ergonomics and enabling technology
- disabling medical conditions and their impact on the task of driving
- ways of compensating for absent limb function

- the impact of higher cortical impairments and behaviour
- intellectual / learning disability
- standards for “safe” driving
- the task of driving
- funding opportunities for individuals
- alternative mobility solutions.

Skills required:

- risk assessment and management skills
- communication skills
- the ability to deal with uncertainty
- assessment of an individual’s impairments, their impact on safe driving and potential to compensate for them
- the ability to observe and interpret driver actions, behaviour and performance
- decision making.

Attitudes of the assessor:

- empathy
- independence
- engagement
- awareness of the importance of Continuous Professional Development (CPD).

18.2. Guideline 2: Competencies of professionals undertaking driver assessment

This guideline relates to the level of competence required in line with a professional’s background, specific to the specialty of driver assessment. The specialist training which is currently available in various countries and organisations is included.

The professional and clinical backgrounds of assessment personnel involved in driver assessment vary. Different levels of training exist to supplement core professional training. The guideline includes, for countries and organisations represented on Subgroup 1, the minimum standard / basic level professional qualification of the assessor. Any additional training undertaken specifically related to driver assessment is also provided.

18.3. Guideline 3: The physical and cognitive assessment (prior to in car, on-road assessment)

Before progressing to the on-road element of the driver assessment, a physical and cognitive assessment of the driver should be carried out, to provide insight into the potential impact the clinical condition may have on the task of driving. The guideline outlines the following:

- assessment of vision
- physical assessment in the context of car control
- examples of cognitive testing tools considered as having relevancy to the task of driving

- assessment of the driver’s cognitive skills in the context of functional aspects of driving. The guideline provides information on some of the assessment tools to consider cognitive domains used for the task of driving:
 - attention, including divided attention
 - visuo-perceptual skills
 - decision making, including speed of processing
 - memory
 - executive function
 - insight / risk awareness.

18.4. Guideline 4: The in-car, on-road driver assessment

This guideline describes, at a high level, best practice requirements of an in car, on-road assessment in the context of a medical fitness to drive assessment. The Subgroup accept that countries will be working within their own regulatory legal framework. The guideline provides direction on the length of time the on-road drive should take, the variety of different road and traffic situations, and guidance on a period of independent driving. Information on the use of a standardised and set driving route to offer objectivity and a clear audit trail is provided.

Elements addressed during the on-road drive include:

- physical ability to operate the standard, or adapted controls of the car
- driving skills
- executive function, relating to:
 - attentional skills
 - memory
 - planning
 - speed of processing
 - behaviour in traffic.

Methods of evaluating the on-road drive, in the context of the driver’s clinical condition are addressed.

18.5. Guideline 5: How to reach a recommendation

Information is provided to support the assessor when considering all of the factors evidenced from the driver assessment, to inform their professional judgement and recommendation.

The guideline refers to the importance of matching the findings of the on-road assessment with the physical and cognitive assessment. Other factors which may influence the overall driver’s performance are referred to, including:

- the individual’s driving style
- the presence of co-existing health / medical conditions
- anxiety
- the impact of social factors.

18.6. Guideline 6: Legal aspects following the driver assessment outcome

The professional(s) involved in delivering the driver assessment outcome should be aware this may have legal implications for the client. This is especially relevant if the client is advised to cease driving.

The guideline provides a reminder to the assessor to advise the driver of their legal obligation (as the licence holder) to inform the relevant driving licence authority of the assessment outcome. A reminder is provided for the assessor regarding their professional obligations. Legal issues surrounding driver licence coding in respect of the EU Driving Licence Directive is referred to, as well as the possible impact on vehicle insurance.

19. THE PRACDRIVA WEBSITE RESOURCE

19.1. PracDriva website

PracDriva

Practical Clinical Driver Assessment

(Guidelines and recommendations for the clinical process of fitness to drive)

Website registered domain name: www.pracdriva.com

The PracDriva Steering Group worked in parallel to Subgroup 1 throughout the duration of the FTD Topical Group. Initially, the steering group was established to address the updating of the Portare Handbook of Disabled Assessment, published in 2009.

The Portare Handbook of Disabled Driver Assessment contains detailed content from a range of academic and medical authors. The steering group identified there were significant complications relating to the task of updating the original publication. These included areas such as defining the content ownership and establishing the costs involved in a review of the overall structure and detailed material. It became clear to the steering group that the ambition to update and transfer the detailed information from the Portare Handbook to a website, based on the original content of the Handbook was not going to be achievable within the remit of the intended programme of work.

CIECA and Driving Mobility recognise that the Portare Handbook of Disabled Driver Assessment is an acknowledged resource in its original format. However, the direction of the steering group's work needed to be modified in the light of changed circumstances.

The steering group was enthusiastic to continue its remit to construct an accessible, website resource of practical information related to medical conditions and their impact on driving. To enable wide accessibility, the website resource should be freely available to all practitioners in the developing field of driver assessment.

The development work within Subgroup 1 on the guidelines for the 'ideal' driver assessment provided an opportunity for the steering group to adopt a different approach in the design of

the website content. This would also be more manageable within the financial budget of the project.

The new online resource would clearly relate to the content of the guidelines forming the 'ideal' driver assessment. The guidelines would provide the context of the PracDriva website. The guidelines would be underpinned by detailed content, written by experts in the field, to advise and support the driving assessor on specific medical conditions and technological solutions.

The steering group decided that stroke should be the first medical condition to be addressed. Content would be developed that would offer the assessor advice on a neurological condition which may include cognitive, visual and functional factors affecting the driver. Stroke provides a broad example of a medical condition which may require the assessor to advise on the range of vehicle adaptations to compensate for functional disability, acknowledging the potential for the driver's condition to improve over time with rehabilitation.

The website content on other medical conditions would be populated as PracDriva develops. The steering group advised that dementia and mild cognitive impairment should be the second group of medical conditions to address.

The question arose as to whether PracDriva would be available in other languages. This is a longer-term aim. As the resource would be an electronic online format, the potential for this was more achievable.

The transition to the proposed PracDriva website resource was presented to members of the Fit to Drive Topical Group in Berlin in March 2019 and to CIECA members at the Congress in Tbilisi in June 2019. The website specification was presented to CIECA and Driving Mobility Boards in December 2019.

The intention is that www.pracdriva.com will be a new website, under the partnership and ownership of CIECA and Driving Mobility. It will have a defined purpose of developing the practice of driver assessment in an accessible format for all practitioners, at whatever stage in their development of driver assessment.

The website will have its own domain name, with high profile links to the CIECA and Driving Mobility websites. The identity of PracDriva (www.pracdriva.com) as an individual website platform will enable direct access from a variety of international organisations and individuals involved in driver assessment.

Both CIECA and Driving Mobility are keen for the ongoing development of PracDriva to be managed by an editorial group with membership from a variety of countries. A call for expressions of interest to be involved in the editorial group was made at the FTD Topical Group in The Netherlands in October 2019 and renewed at the meeting in Sweden in January 2020.

19.2. Contributing authors

The PracDriva Steering Group was challenged with sourcing content authors for each medical condition as the site develops. To engage with contributing authors, the steering group agreed the design and format of the website should be consistent, so that guidance is provided to prospective authors on the format, level and content required.

The PracDriva Steering Group set about defining an initial framework for the content of information and how the website might look in practice. Dr Lynne Hutton was instrumental in providing the draft information for the initial section on stroke, with Mark Tant to be involved in the section related to vehicle adaptations.

A unique element of the website is that it is being constructed by practitioners and experts involved in, or with an interest in, the specialty of driver assessment. It is also considered that having a variety of international contributors will strengthen and add rigour to PracDriva.

Driving Mobility remains committed to funding the design and set up costs of the online resource, with the intention of CIECA providing an enabling international platform for the project.

The steering group worked on a format for the proposed content of the website, which formed the basis of a preliminary outline for the website specification. The website specification was presented to the CIECA and Driving Mobility Boards in December 2019 and an outline was presented at the FTD Topical Group meeting in Stockholm in January 2020.

Members of the steering group are acknowledged and thanked for their commitment and contribution to leading the development on PracDriva.

19.3. PracDriva website project brief

To facilitate communication with the proposed new Editorial Board it was suggested the website designers be based within the UK, working closely with the Chair and members of the new PracDriva Editorial Group.

A selection process took place with website design companies interested in undertaking the work, a preferred web designer based in the UK was chosen in February 2020. Appendix 2 of this report contains a copy of the website brief.

The intention was to have an initial draft framework by the web designers planned for viewing at the FTD Topical Group meeting in April 2020, and for a test version to be available for the CIECA Members Forum in Porto in June 2020. Unfortunately, due to the Covid-19 pandemic, progression on the website design was halted in March 2020. The final meeting of the FTD Topical Group in April 2020 in Newcastle upon Tyne was also cancelled due to the Covid-19 pandemic as well as the CIECA Annual Congress in Porto planned for June 2020.

Work on progressing the PracDriva website, establishing the Editorial Board and engagement with potential contributing authors, are the next stages of development. It is important to the recommendations of the Subgroup that work on PracDriva continues. PracDriva will form an ongoing resource in the field of driver assessment, underpinning the objectives and work of the FTD Topical Group, Subgroup 1.

20. CONCLUSION

Driver assessment is fundamentally different from the standard driving test and requires a different approach. It is a complex process, including a range of professionals, with different operational facilities. Countries are at different stages of development, and there are varying levels of involvement of legislative bodies.

Establishing a process that recognises the importance of driver assessment and adopting a harmonised approach within Europe and beyond presented challenges. By contrast, it also provided opportunities to explore various systems and adopt a creative approach to the objectives the group had been set.

In response to the objective to create a guide of best practice, Subgroup 1 constructed a set of guidelines to enable professionals involved in driver assessment to understand the components of the 'ideal' driver assessment.

Subgroup 1 members agreed that to be useful, the guidelines should be in an accessible format to provide a framework for all professionals and organisations who are at different stages of driver assessment development. For some countries who already have well developed systems, the guidelines could provide the basis of an audit tool for assessing quality of current practice. For others, the guidelines present a practical opportunity to form a structure to develop the necessary skill set required by professionals and for operational processes.

There are a number of professionals involved in the driver assessment process; Subgroup 1 members have concluded that whatever part of the driver assessment they are involved in, they should have the necessary knowledge, skills and expertise. The guidelines further present a picture of the developing specialist education and training programmes within Europe.

The guidelines identify and describe the key components of the ideal driver assessment and the necessary skill set of the professionals involved. However, to be of real practical benefit, the driving assessor must be able to transfer the generic knowledge and content of the guidelines into practice.

The Fit to Drive Group was originally set an objective of updating the Portare Handbook of Disabled Driver assessment, published in 2009. The PracDriva Steering Group and Subgroup members faced some difficulties, within their remit of work, to address the processes which would be required to update the current content and format of the original Portare Handbook. In light of the Subgroup's developing insight into what formed the 'ideal' driver assessment,

this presented the opportunity to take a fresh approach in creating a website resource (PracDriva) which clearly links to the guidelines.

The work of Subgroup 1 has provided a robust basis for a harmonised driver assessment process, which is fair to the driver, achieves a balance between enabling mobility with road safety and is recognised as an integral part of the medical fitness to drive process. In view of its complex nature, Subgroup 1 acknowledge the need to continually adapt the process in the light of developing assessment techniques, emerging technology, changes in legislation, education programmes and demographic changes in the driving population.

Subgroup 1 has provided a worthwhile and rigorous framework, which has importance and value for practitioners involved in the field of driver assessment. However further action is needed to continue to progress this work internationally, so that driver assessment is recognised as an integral element of the medical fitness to drive process.

21.RECOMMENDATIONS OF SUBGROUP 1

- CIECA and Driving Mobility should provide direction on a partnership approach to take forward the PracDriva website development.
- The PracDriva Editorial Group should be established, with members from a variety of countries to oversee website content and development.
- A renewed call should be made for expert contributors to PracDriva online resource.
- Dissemination of Subgroup 1's work should take place at the Members Forum within the CIECA Congress (originally set for Porto 2020 in the form of an interactive event but postponed due to the Covid-19 Pandemic).
- A test version of the PracDriva website should be launched (originally planned for the CIECA Congress Porto 2020 but postponed due to the Covid-19 Pandemic).
- Wider dissemination of the work, linking with the overall Fit to Drive Topical Group Subgroups 1 and 2 work, takes place at a future event organised by CIECA in Brussels in 2021 potentially involving representatives of the Driving Licence Committee of the European Commission.
- The guidelines are published within the PracDriva website to set the context of the detailed information on specific medical conditions.
- The guidelines are also published as a 'stand-alone' document on both CIECA and Driving Mobility websites, with an overview of their context, pending development of the PracDriva website.
- Ultimately, the guidelines should be considered by representatives of the Driving Licence Committee of the European Commission to advise on possible reference

within the EU Driving Licence Directive as a recognised resource of advice relating to the practical assessment of drivers with medical conditions or disabilities.

- Medical-psychological assessment and its place within the fitness to drive evaluation process should be considered in an arena that could support its development. There is potential for this to be considered as a new CIECA group, or an approach to Traffic Psychology International.
- There should be a forum for continued involvement of members of Subgroup 1 to provide support and advice in the specialty of driver assessment. This may be in an informal setting as an online group to share developments.
- This new online forum should be opened out to include all CIECA members and interested individuals and organisations. There is the potential for exchange visits of CIECA members to gain experience of other organisations' operation of driver assessment, leading to sharing of practical protocols and training programmes.

Contact details

To support CIECA members and others interested in this area, enquiries relating to individual countries' and organisations' driver assessment training programmes and assessment protocols mentioned in the report are welcomed. Please address enquiries to: info@cieca.eu

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ANNEX 1: GUIDELINES FORMING THE 'IDEAL' DRIVER ASSESSMENT

Introduction

This annex includes the guidelines written by members of Subgroup 1 which are considered to form the 'ideal' driver assessment, in the context of medical fitness to drive.

It is recommended the six guidelines should be regarded as a collective document, as they inter-relate with each other.

The guidelines are not intended to instruct the Driving Assessor on 'how to carry out a driver assessment'; they form Subgroup 1's views on the main components the Driving Assessor should consider in order to form a professional opinion on the impact of a person's health condition or disability on the task of driving.

The guidelines support professionals involved in, or developing driver assessment, to reach a recommendation which is based on a consistent and fair approach.

Advice and information for the Driving Assessor related to specific health conditions and how these may impact on driving, is addressed within the emergent PracDriva online resource.

The guidelines have been written to reflect the generic nature of the 'ideal' driver assessment. It is recognised there may be different referral pathways for driver assessment within countries, for example as part of monitoring the progress of the driver's rehabilitation, or as part of the legal decision-making process for the particular country.

This demonstrates the challenges when compiling the guidelines in recognising the legal framework, processes and differences in EU countries. In cases where a specific country's framework would make it impossible to reflect a specific element of a guideline, this has been identified as a footnote to the individual guideline.

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Guideline 1: Knowledge and skills of professionals undertaking driver assessment

Minimum standards for professionals involved in driver assessment

Introduction

The specific knowledge and skills of an individual professional depend on which part of the process he / she is involved. However, the following knowledge and skills need to be available within the team / professionals undertaking the complete driver assessment, and all professionals involved must display the appropriate attitudes.

This guideline has been written to reflect the nature of the generic 'ideal driver assessment' and relates to the knowledge, skills and experience expected from a professional involved in the process. There may be different referral pathways for driver assessment, for example as part of monitoring the progress of the driver's rehabilitation, or as part of the legal decision-making process. However, the skill sets required for practitioners involved would not differ.

See position in Germany ⁸.

1. Knowledge

1.1 Legal / licensing

The professional must have knowledge of, or knowledge of where to find, their host countries' regulations regarding driving licences.

1.2 Ethical framework

Each professional complies with their own profession's standards, for example, HCPC – The Health and Care Professions Council in the UK noting the importance of issues such as confidentiality, governance, consent.

1.3 Ergonomics and enabling technology

The professional should be aware that constant developments in technology exist to overcome physical impairments, if cognitive /psychological/behavioural abilities allow. The professional should be able to refer the client to an appropriate adaptations assessor if they cannot offer specialist advice within their own service.

⁸ From the German perspective, a distinction should be drawn according to the purpose of the driver assessment. At least four types of in-car on-road assessment must be differentiated.

1. in-car on-road assessment with legal consequences within the framework of driver assessment for persons with movement disabilities (e.g. by a driving licence examiner/assessor in Germany)
2. practical driving check in a clinical context (e.g. in the context of rehabilitation caused by an accident); The focus here is on doctor's obligations to provide clarification and information on fitness-to-drive status without legal consequences
3. driving behaviour assessment with legal consequences within the scope of the medical-psychological assessment (MPU) or a pure medical assessment
4. voluntary on-road test with individual feedback (e.g. of older road users)

1.4 Disabling medical conditions and impact on driving

The professional should have knowledge of likely impairments that arise as a result of common medical conditions. The professional should also be able to access and understand information about less common conditions. The professional must understand the potential for progression, or otherwise, of impairments for any client and how that may impact on driving.

1.5 Ways of compensating for absent limb function

The professional must be aware of current solutions to compensate for absent limb function and be able to determine if an individual could benefit from them in relation to their physical/cognitive/ /psychological/behavioural abilities.

1.6 Impact of higher cortical impairments and behaviour

The professional must understand how impairments (whether these are identified by this professional or another clinician) in the higher cognitive functions and behaviour, most important for driving, for example, judgement, visuospatial skills, attention, memory, praxis, executive function, can impact on their ability to execute the driving task effectively and safely.

1.7 Intellectual / learning disability

The professional should start from a positive perspective and appreciate some individuals as having specific, complex (multi) and hidden (undiagnosed) needs and these do not necessarily need to be a barrier to driving. The professional should understand the potential psychological / behavioural issues of someone with an intellectual / learning disability and how these may impact on the learning process and ability to execute the the driving task effectively and safely. The professional should understand that the individual's driving performance may reflect his/her interpretation of sensory information, rather than an intellectual problem.

The professional should be able to adopt a flexible approach to problem solving, unique to the individual, rather than expecting conformity to 'a norm'. It is important that the professional remain sensitive, tactful and honest, having the knowledge and understanding of the client's potential for progression, but also knowing when to discontinue driving.

The professional should be able to refer the individual to an experienced specialist if they cannot offer specialist advice within their own service.

1.8 Standards for "safe" driving

The professional must appreciate that a driver assessment is not a driving "test". They must determine if potentially unsafe driving behaviour is as a result of the individual's underlying medical condition and outside of the normal range of performance expected in drivers with equivalent experience (that is, without the medical condition).

1.9 Task of driving

The professional must understand how the psychomotor task of driving is controlled by visual, psychological and higher cognitive functions, and how impairments in one or more domains may impact on overall driving choices and performance.

1.10 Knowledge of funding opportunities for individuals

The professional must be aware of potential sources of funding for individuals to assist, for example, with vehicle adaptation costs and driving lessons. The professional should be able to direct clients to services that can provide relevant information. This may include, in some countries, financial state disability benefits or financial support from charitable organisations.

1.11 Alternative mobility solutions

The professional must know about relevant alternative mobility solutions, should the client be advised to cease driving. They should be able to advise the client on ways these solutions can be accessed physically and in a cost-effective way.

2. Skills

2.1 Risk assessment and management

The professional should be skilled in assessing risk in relation to the assessment process, which often occurs in an interdisciplinary context. It is important that due liaison, feedback and audit is undertaken of driver assessments. This includes assessing risk (or additional clinical assessment of risk) in relation to underlying medical condition, for example, measuring blood sugar before driving for patients with type 1 diabetes. To consider the safety of assessors, for example, should additional professional support be required if the individual has behavioural issues post head injury etc. Risk reduction should be employed, for example, use of dual controls in assessment vehicle, appropriate insurance cover, facility/procedure for summoning help in an accident situation.

2.2 Communication skills

The professional should have good communication skills, being able to communicate openly and clearly about the reason for and the content of the assessment, including the possible consequences of the outcome. They must be able to communicate unwelcome news compassionately and manage communication with anxious or angry/aggressive individuals.

2.3 Ability to deal with uncertainty

The professional should have the skills and confidence to manage the driver assessment appreciating that all individuals are different and countless combinations of physical and mental limitations exist. The professional should have a flexible approach to the individual being assessed, and the assessment process should reflect this: in addition, liaison with the treating clinician(s) may assist in the final decision.

2.4 Assessment of individual's impairments, their impact on safe driving, and potential to compensate for them

The professional, in conjunction with the treating clinician(s) as appropriate, should use their knowledge of a particular medical diagnosis to consider how the condition might develop, the possible impairments (physical, cognitive or behavioural) to consider the potential consequences for the individual's fitness and / or ability to drive. The questions during the pre-drive assessment should be based upon the medical conditions of the individual, and the in-car assessment must be conducted to identify the presence or absence of the type of driving problem usually found in the condition(s). If technical adaptations are necessary to facilitate safe driving, the professional must consider the anticipated natural history of the condition when making recommendations to the client.

2.5 Observe and interpret driver actions, behaviour and performance

The assessor should have skills to analyse and evaluate a driver's observed actions and behaviours, given the medical diagnosis and anticipated impairments of the driver.

The professional must be able to recognise when problems are potentially remediable and the individual has potential to change their actions, with or without the use of technology, so that an appropriate conclusion may be drawn and recommendations explained to the individual and the referrer.

2.6 Decision making

The professional should work in a precise and targeted manner, utilising their knowledge, skills and experience, as well as due liaison with treating clinician(s) to reach the correct recommendation for each individual regarding ability and fitness to drive.

This recommendation may include advice regarding vehicle adaptations, periods of driving tuition or alternative mobility solutions, should driving cessation be advised. The professional must communicate clearly how the recommendation was reached, both verbally and in writing, including the provision of professional reports.

3. Attitudes

3.1 Empathy

The professional will be required to show empathy and understanding to the individual being assessed, and where relevant, to their family/friends whilst also considering the wider population of other road users.

3.2 Professionalism

The professional will understand the importance of driving to the individual being assessed, and that the outcome of the assessment is critical in terms of their future mobility and the impact it can have in relation to their physical and mental health. The professional must be able to provide an independent recommendation, acknowledging the needs of the client, which is based on evidence, taking all relevant factors into account. If the client disputes the

professional's recommendation, there should be clear procedures in place for the assessment outcome to be reviewed. The professional must also be mindful of potential conflict of interest when the assessments are funded directly by the driver as a private transaction.

3.3 Cultural sensitivity and diversity

The professional must assess cultural factors (make sure that the level of written and oral understanding is ok) and assure the communication with a reasonable language option.

3.3 Engagement

The professional should have good social skills, being flexible in their approach to individuals being assessed to facilitate engagement in the driver assessment process. A respectful and confident approach is important to gain the confidence of the individual to maximise their participation in the process, and their potential to demonstrate their skills and abilities.

3.4 Continuous Professional Development (CPD)

The professional should engage in ongoing CPD with due educational accreditation. Consideration should be given to the development of mechanisms of audit of driver assessment practice.

Guideline 2: Competencies of professionals undertaking driver assessment

Introduction

The generic knowledge and skills of all professionals undertaking driver assessment is outlined in the Guideline 1: Knowledge and skills of professionals in driver assessment⁹.

This guideline relates to the level of competence required in line with the individual professional's background, specific to the task of driver assessment (both off- and on-road). The guideline includes the training Subgroup 1 is aware of, which is currently available in various countries and organisations. It is acknowledged there are many different professional backgrounds involved in driver assessment, and different levels of training exist to supplement the core training of professionals involved in driver assessment.

It is asserted that there should be an aspiration for a consensus on developing international generic training courses in the specialty of driver assessment, aimed at different levels, depending on the professional's background and skill set. Similar generic training and/or quality assurance is undertaken in other professional sectors. This would add rigour and assurance to the specialty of driver assessment.

This guideline provides information from members of the Fit to Drive Subgroup 1, on what is available currently, or in development, in their country or organisation. The detail of the training programmes / qualification is not included within the scope of this project; please see contact details if further information is required.

⁹ The document "Guidelines knowledge and skills of professionals in driver assessment" forms part of the annex to final summarizing report of the CIECA Fit to Drive Subgroup 1: Setting Standards for Disabled Driver Assessment (2020).

Country / Organisation	Professional background	Minimum standard / basic level professional qualification	Additional training related to driver assessment currently available	Contact details
Belgium	CARA driving and car adaptations expert Medical doctor Psychologist	Occupational therapist Physical therapist Professional medical qualification Professional qualification (registration)	In house training In house training In house training	mark.tant@vias.be
France	Driving test examiner In rehabilitation centres: driving teacher + occupational therapist	Professional qualification Driving teacher qualification Professional qualification	INSERR vocational training	sania.bousouka@interieur.gouv.fr
Germany	Driving test examiner (only in cases of movement disabilities) Traffic psychologist	Professional qualification Professional psychology qualification and additional qualification in traffic psychology and “fit-to-drive-assessments”	Formal education programme Formal education programme and in-house qualification and training	marc-philipp.waschke@vdtuev.de
Ireland	Doctor On-road driving assessor	Professional medical qualification 3 rd level qualification being developed currently	RCPI training programme in traffic medicine RCPI training programme in road safety, mobility and health	directortrafficmedicine@rcpi.ie directortrafficmedicine@rcpi.ie
Netherlands	CBR driver tester/driving examiner	CBR approved expert of fitness to drive qualification In house training re driver assessment	In house training re driver assessment 5-6 months duration CBR	helmut.van.der.smitte@cbr.nl marcel.strik@cbr.nl
Norway	Medical doctor/ ophthalmologist or optician Psychologist/ neurologist Driving examiner	Professional medical qualification/optician education Professional psychology/ neurologist qualification Examiner education	University different places in Norway 6 months education course with final exam. 2-week specialist training NU – State road authority	terje.hafell@vegvesen.no (additional training)

Scotland	<p>Doctor</p> <p>Occupational therapist</p> <p>Physiotherapist</p>	<p>Professional medical qualification</p> <p>BSc (Hons) in occupational therapy</p>	<p>Driving Mobility undergraduate or postgraduate specialist training in driver assessment and outdoor mobility</p> <p>In house training programme Scottish Driving Assessment Service</p>	<p>lothian.scottishdrivingassessmentservice@nhs.net</p>
Spain	<p>Doctor</p> <p>Psychologist</p> <p>Driving examiner</p>	<p>General practitioner</p> <p>Clinical health psychologist</p>	<p>University of Valencia/DGT, assessment course drivers with motor disabilities for doctor.</p>	<p>evaldes@dgt.es</p>
Sweden	<p>Doctor</p> <p>Occupational therapist</p> <p>Psychologist</p> <p>Driving teacher</p>	<p>Professional medical qualification</p> <p>Professional medical qualification</p> <p>Professional psychology qualification</p> <p>Driving teacher qualification</p>	<p>½ -2 days course</p>	<p>Karolinska University Hospital Huddinge, Traffic Medicine Center cecilia.brakenhielm@sll.se</p>
United Kingdom	<p>Approved driving instructor (ADI)</p> <p>For all ADIs - DVSA standards check test routinely (max 4 years) to ensure standards are maintained through a quality assurance process</p> <p>Occupational therapist</p> <p>Physiotherapist</p> <p>Driving test examiner: For DVSA medical appraisals (different from Driving Mobility driver assessment):</p>	<p>Approved driving instructor (ADI)</p> <p>BSc (Hons) in occupational therapy</p> <p>Physiotherapist</p> <p>DVSA internal training programme</p>	<p>For ADIs involved in Driving Mobility driver assessments – in-house induction and training / CPD programmes within accredited Mobility Centres.</p> <p>Undergraduate or postgraduate specialist training in driver assessment and outdoor mobility</p> <p>For occupational therapists /physiotherapists/ doctors involved in Driving Mobility driver assessments - academic training: undergraduate or postgraduate specialist training in driver assessment and outdoor mobility.</p> <p>Network of working groups to develop and share best practice amongst UK Centres.</p> <p>DVSA enhanced medical appraisal training for examiners involved in medical appraisal</p>	<p>For Driving Mobility assessments: info@drivingmobility.org.uk</p> <p>gordon.witherspoon@dvsa.gov.uk</p>

Guideline 3: The physical and cognitive assessment (prior to in car on-road assessment)

1. Introduction

Before commencing an in-car on-road assessment of safe driving ability, a physical and cognitive assessment is conducted. This assessment includes vision, physical, neurological and cognitive abilities. However, the scope and combination of these elements depend on legal regulations, the type of disease, co-morbidities and the contextual conditions (e.g. voluntary or regulatory review).

2. Vision

Recent assessment of visual function by a qualified professional is required before an attendee undertakes an on-road assessment. The timescale between undertaking the visual function test and the client attending for an on-road assessment should reflect the current clinical condition of the driver and include the following elements:

- acuity
- contrast Sensitivity
- a test of full visual field
- diplopia (double vision)
- visual inattention (may not be indicted by most ophthalmologists, but may be assessed as part of cognitive function)

If the assessor considers that there is a hitherto undetected vision problem, the assessor should seek clarification as to whether the client meets the visual requirements of the medical fitness to drive regulations of their country. This would mean the on-road driving assessment may need to be postponed and the client advised against driving until the visual element of the medical fitness to drive position is confirmed.

3. Physical assessment

The physical assessment is in the context of ability to operate the vehicle controls. Factors include:

- neck rotation (left and right)
- trunk rotation (left and right)
- trunk stability
- upper limb movements
- upper limb strength, including grip
- lower limb strength, including plantar flexion strength, control and accuracy of movement
- altered sensation (especially in feet and hands)
- movement co-ordination - upper and lower limbs
- proprioception – upper limbs and lower limbs
- fatigue in relation to the driving task, when a movement takes effort or exerts pain (lasting only for a short period due to repetitive movements) and also the impact of

fatigue and exhaustion on the driver's function over a longer period of time, potentially resulting in poor driving performance

- awareness of current medications relevant to driving regulation and driving safety, for example, insulin, cannabis¹⁰ derivatives anti-depressants, anti-psychotics, anxiolytics (Benzodiazepines).

4. Cognitive and psychological assessment

An assessment of cognitive skills in the context of functional aspects of driving should be undertaken. The purpose of undertaking a cognitive assessment is not to diagnose a cognitive issue or to predict the outcome of the on-road assessment. The cognitive assessment helps assessors to interpret observations and findings during the on-road assessment. It provides additional context. On-road assessors need to have knowledge of the main cognitive domains used for the task of driving. These are:

- attention, including alertness, selective, divided and sustained attention (also vigilance)
- visuo-perceptual skills
- decision making, including speed of processing
- working memory
- executive Function
- insight / risk awareness.

Alternative to the more 'cognitive approach', some countries focus more on 'personality related factors'. These types of psychological assessments concentrate on insight and risk awareness. The tools for psychological assessment are more likely to include a completed questionnaire to assess personality, impulsivity and/or an interview, if appropriate.

An appropriate cognitive and/or psychological assessment, communicated to the driver assessment team, with appropriate interpretation, should be made either by the referring clinical team or by the clinical team involved in the driver assessment with the appropriate skills.

There is a mixed picture in Europe with respect to cognitive and psychological assessment; some driver assessment centres or jurisdictions undertake all elements of a cognitive and psychological assessment, whilst some work in conjunction with the relevant clinical team, and communicate findings to the on-road assessment team. Please see further information on the position within Germany, Austria and Spain as Appendix 2 to this guideline.

Various cognitive testing tools and psychological approaches have been used as potential indicators of relevant cognitive issues which may present a problem with driving. Examples of these are provided in Appendix 1 to this guideline.

In general, there is agreement that specific cognitive tests are useful tools in a clinical process, however the cognitive functions or psychological concepts are far more important, which might be measured by different tests and approaches. In formulating a conclusion, the professional will not only report on the different cognitive functions or concepts, but also the

¹⁰ It is acknowledged that in most countries cannabis is an illegal drug

interactions between them. Ideally, the client’s psychological profile takes into account the client’s full picture of strengths and weaknesses. This is valuable information for example to have an indication of the driver’s compensation potential.

5. Guidance for the assessor related to observations / potential ‘red flags’ during the assessment

During the physical and cognitive assessment, the assessor should be alert to concerns or issues reported by the client that may forewarn the assessor of an underlying issue which may potentially impact on the driving task, and possibly require further investigation. This is also the case when assessors make observations related to the client’s responses or behaviours. These are often referred to as ‘red flags’.

Red flag issues can be difficult to define, however some examples which may lead the assessor to consider whether there may be underlying issues relating to the client’s vision, locomotor function or cognition, are included in the table below. The level of dysfunction is relevant, independent of its origin. The assessor may consider these ‘red flags’ require further investigation by a suitably qualified professional. It is also sometimes the case that the issues are identified by an accompanying person / carer during the assessment.

Red flag issues reported or observed

Reported or observed issues which may be red flags related to Vision		
Red flag	May be reported by Client	Likely to be observed by Assessor
Double vision	✓	✓? Will have to be reported
Headache	✓	
Blurred Vision	✓	✓
Reports seeing flashes of light	✓	
Difficulty with peripheral vision	✓	✓
Objects ‘jump in and out of field of view’	✓	Check? Non systematic of observation?
Tunnel vision	✓	✓
Eye ache /pain	✓	
Eyes twitch	✓	✓
Watery eyes	✓	✓
Itchy eyes	✓	
Troubled by bright light	✓	✓

Reported or observed issues which may be red flags related to Cognition		
Red flag	May be reported by client if they have insight into the issue	Likely to be observed by Assessor
Space and time disorientation	Check?	✓
Occasional 'absences'	✓	✓
Frequently forgetful	✓	✓
Poor organisation	Check?	✓
Avoids tasks requiring sustained mental effort	Check?	✓
Frequently loses / misplaces things	✓	✓
Frequent distraction and inattentiveness	Check?	✓
Frequently gets lost (when driving)	✓	
Signs of sleepiness	✓	✓
Listlessness		✓
Complains of fatigue	✓	
Dizziness	✓	✓
Reports sleep disturbances	✓	
Reports low mood	✓	✓
Short attention span for reading or writing	✓	✓
Difficulty remembering names of objects	✓	✓
Difficulty remembering people's names	✓	✓
Difficulty remembering formerly familiar people and objects	✓	✓
Difficulty with time management	✓	✓
Difficulty counting money	✓	

Reported or observed issues which may be red flags related to locomotor concerns		
Red flag	May be reported by Client	Likely to be observed by Assessor
Posture and movement - for example, the client 'bumps or knocks' into the door frame on the left when entering and exiting the assessment room		✓
Problems with balance	✓	✓
Vertigo	✓	✓
Difficulty dressing (fine motor skills)	✓	Check? Seatbelt?
Frequently drops objects	✓	✓
Frequent falls	✓	✓
Bradykinesia (slowness of movement)		✓
Tremor	Check?	✓
Rigidity		✓
Difficulties reaching, crouching, kneeling, climbing stairs, bending	✓	✓
Sensitive to touch	✓	✓

Examples of cognitive tests that may be considered for use as relevant to the task of driving

The order in which these are presented does not suggest recommendation or prioritisation of one test over another, and it is accepted that other cognitive testing tools exist.

Please also note that some of these tests are merely screening tools, and that assessment as well as interpretation is to be completed only by qualified personnel.

MoCA Montreal cognitive assessment

<https://www.mocatest.org/>

Trail making B test

<https://www.sciencedirect.com/topics/psychology/trail-making-test>

Frontal assessment battery

Dubois, B., Slachevsky, A., Litvan, I. and Pillon, B. 2000. The FAB: a frontal assessment battery at bedside. *Neurology*. 55(11):1621-1626. DOI: 10.1212/wnl.55.11.1621.

<https://www.semanticscholar.org/paper/The-FAB%3A-A-frontal-assessment-battery-at-bedside-Dubois-Slachevsky/8e38a3fd905002db884b84aa11137eaa8e56bdf0>

Rookwood driving battery

<https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Cognition-%26-Neuro/Rookwood-Driving-Battery/p/100000347.html>

Useful field of view test

<https://www.ncbi.nlm.nih.gov/pubmed/24642933>

Cognitive / psychological assessment in Austria, Germany and Spain

There is a mixed picture in Europe with respect to cognitive and psychological assessment; some driver assessment centres or jurisdictions undertake all elements of a cognitive and psychological assessment, whilst some work in conjunction with the relevant clinical team, and communicate findings to the on-road assessment team. Austria, Germany and Spain have specific requirements as illustrated below.

(i) Requirements related to medical-psychological assessment in Austria

In Austria, a psychological assessment is mandatory or can be required (based on the decision of the physician coordinating the fitness to drive assessment) for certain types of disorders, such as alcohol and drug abuse, dementia, intellectual impairments and hearing impairments. The psychological assessment includes an assessment of performance dimensions and personality dimensions. Performance dimensions include observation capacity and ability to gain an overview of a traffic situation, reactive behaviour, concentration capacity, sensory-motor coordination, intelligence and memory capacities. Personality dimensions include social responsibility, self-control, emotional stability, willingness to take risks, tendency towards aggressive interaction in road traffic and emotional relation to cars. The dimensions are assessed by means of performance tests, personality tests and a personal interview. Test systems must comply with the current state of scientific research and have to be approved by the Austrian Ministry of Transport. The Vienna Test System (www.schuhfried.com) is used by all institutions carrying out psychological tests in Austria.

(ii) Requirements related to cognitive test systems and medical-psychological assessment in Germany

It is important to note that in Germany a formal medical-psychological assessment, from a qualified traffic psychologist and traffic medicine specialist must be undertaken before the person attends for a practical on-road driving assessment. This includes a common understanding from the psychological and medical aspects, and self-evaluation of the driving-related risks arising from the symptoms. It is a specific interview depending on the nature of the condition and the severity of the symptoms.

Cognitive Assessment affects two legal rights: the protection of the general public from unsafe drivers, and the right of the individual to mobility. Therefore, the more test procedures are involved in a decision with legal consequences (issuing, withdrawing or extending a driving licence), the higher their quality standards should be. Consumer protection also requires transparent and fair test application. Accordingly, the recommendations of international expert commissions on quality criteria of tests, quality assurance, test application and qualification of users should be minded, too. Those keynotes are summarized among EFPA Review Model for the description and evaluation of psychological and educational tests, APA-Conventions (American Psychology Association), ITC (International Test Commission) or in local standards like COTAN (Committee on Test Affairs Netherlands) or DIN 33430. The

requirements for cognitive test systems must all be scientifically based, have proven themselves in Fitness-to-drive-contexts and have to be valid regarding to the performance behaviour to be assessed. In addition, the test must measure reliably, and it has to be objective with regard to test performance, evaluation and interpretation. The norm sample used is sufficiently large and sufficiently similar in age and gender distribution to the reference population of licence holders to allow a differentiated statement on the significance of a test value. Comprehensible documentation on these quality criteria can be found in the test manual.

Test systems that meet these standards are:

Vienna Test System (VTS)

<https://www.schuhfried.com>

Corporal Plus – Vistec AG

<https://vistec-support.de>

(iii) Protocol to Assess Perceptual and Motor Skills at Drivers Check Centres in Spain

The assessment of perceptual motor skills with the tests indicated in the table below are useful suggested protocols for professionals with experience in driver assessment.

The presence of alterations in the examination orients towards a diagnosis and generally requires the consultation of a Psychologist or Psychiatrist outside the driving evaluation centre who will carry out the diagnosis.

In relation to the psychological examination carried out in Spain, it is important to bear in mind that the aforementioned examination is carried out, at the driver assessment centre, on the entire driving population and is not specifically for drivers with pathology.

Perceptual and motor skills tests used in Spain	
Variable	Test
Space-Time perception and anticipation (Anticipation speed)	TKK- 1028, classic computer-based testing: Standard test LN.Deter/Asde
Hand-Eye Coordination (at the pace indicated)	Bonnardel's B-19, classic computer-based testing: Standard test LN.Deter/Asde
Attention and visual and hearing Perception, Discrimination and response times (Discriminative Multiple Reactions)	Polyreactigraph, classic computer-based testing: Standard test LN.Deter/Asde
Visuospatial intelligence	Bonnardel's B-101 and EOS's Spanish adaptation of this test

Guideline 4: The in-car, on-road driver assessment

1. Introduction

The intention of this document is to offer a best practice guide to the high-level requirements in the context of a fitness to drive assessment. However, it is accepted that different countries will be working within their own legal framework and regulations.

Where possible and if considered appropriate, the driver would initially undertake a pre-drive assessment in an off-road environment prior to progressing onto the in-car on-road element of the driver assessment. This is because not all behaviours required for coping with driving tasks can be recorded during a driving behaviour observation, e.g. self-regulatory decisions before the start of a trip (planning and the route) or situational compensation strategies (no subsequent journeys at night).

The on-road drive would ideally take between 45 – 60 minutes and would include a large variety of different road and traffic situations as well as a section of the route, which would facilitate a period of independent driving (e.g. following signs).

The use of standardised and set driving routes offer objectivity and a clear audit trail. Instructions given throughout the drive are likely to be tailored to the approach required by the individual. However, observed driving behaviours related to the performance criteria should be explained in such a specific manner that the objectivity of data collection is ensured by a standardised recording, independent of any variability amongst observers.

Whilst consideration should be given if the driver is undertaking the assessment in an unfamiliar vehicle and potentially driving in a very different environment to those in which they habitually drive, performance must ultimately meet a safe driving standard. From a safety perspective, where possible the vehicle used for the on-road assessment should have dual controls and additional mirrors for use by the assessor. However, recognition should be given to any national / local practice or regulation regarding the use of a single or dual controlled vehicle, use of the driver's own vehicle, and the potential for more than one assessor in the car.

Where assistive technologies exist on a vehicle as standard (e.g. 360 degree reversing camera, collision mitigation brake system, road departure mitigation systems, lane keeping assist) the driver should be able to demonstrate a safe drive without reliance on such systems due to the possibility of a technical error or break-down.

If dependence on assistive technology or adaptations to the controls of a vehicle are required, the physical and/or cognitive appropriateness of the controls for the driver must be considered, as well as the legal context and licencing laws of that country. It is accepted that as technology and legislation within the context of driving continues to move forwards, this document will need future reviewing. This is a generic document and therefore cannot cover all possible scenarios or examples.

General advisory notes for the clinician / assessor to consider have been included in some sections of this document (see 'Points to consider' in grey italic text).

2. Physical ability to adjust the driver's seat to a functional position and operate the standard or adapted controls of the vehicle

Physical ability to adjust the driver's seat or position a wheelchair (if driving a suitably adapted vehicle from a wheelchair) into a functional and comfortable position to access all of the vehicle controls (also see Section 4 'Executive functioning' / 4:1 'Attentional skills').

2.1. Steering

- Suitable range of movement and strength in the limb(s) used for steering;
- Adequate grip strength in the hand(s) or the ability to grasp/steady the steering if using another limb, orthosis, or steering method;
- Ability to coordinate the limbs used for steering;
- Presence of altered sensation (e.g. extreme, or reduced sensitivity to touch);
- Speed and accuracy of steering input for the required course;
- Stability of steering control when undertaking other tasks (e.g. operating the secondary controls, changing gears, carrying out required observations);
- Ability to maintain a steady course for the duration of the drive;
- Ability to steer without operating secondary / other controls in error (e.g. trigger finger operating indicator or hand accidentally leaning on an over-ring accelerator adaptation).

Points to consider: Is postural instability impacting on control, and if so, can it be improved? Is changing the method of car control, transmission type or the limbs used for driving an option? If so, would a restriction code be required on the driving licence?

2.2. Foot pedals (accelerator / brake / clutch)

- Suitable range of independent movement and strength in the limb(s) used (e.g. unassisted by other limbs or visual control);
- Coordination, speed and accuracy when moving between the primary controls;
- Awareness / perception as to the position of the body (proprioception);
- Fine control over the foot pedals or adapted primary controls (ability to apply the correct pressure required for the presenting road / traffic conditions) to demonstrate and sustain a smooth drive;
- Ability to operate the brake in the assessment vehicle with appropriate force in order to carry out an emergency stop. There may be some organisations who have the technology to be able to measure the actual force required to stop a vehicle of a specific load, for example using a static assessment rig; however, this would not be a common occurrence;
- Ability to fully dis-engage the clutch (this includes use of a hand operated clutch on a gear lever) in a manual transmission vehicle;
- Ability to operate the standard or adapted pedals without visual checking when driving.

Points to consider: Is the driver assisting or initiating required movement of the lower limbs with the upper limbs? Does the vehicle or seating arrangement allow the driver to achieve a functional and comfortable position to operate the foot pedals? Does the assessment vehicle have an unusually light accelerator/brake or a heavy clutch? Is the driver wearing

appropriate footwear? If limitations, would a restriction code required on the driving licence?

Regarding an emergency stop, where possible and considered safe to do so, the assessor may consider this could be carried out in a dynamic situation during the drive, at relatively slow speed, in an area with no other traffic or road users. However, the assessor should assess the risk before this manoeuvre.

2.3. Gears

- Adequate range of movement, strength, and grip in the hand;
- Controlled movement to select the intended gear;
- Position sense of the upper limb when required to carry out gear changes;
- Ability to coordinate the limbs required for operation of the clutch and gears;
- Ability to operate the gearbox without visual checking (if using a manual).

Points to consider: Has the driver been given a fair period of familiarisation with the gearbox if undertaking the assessment in an unfamiliar vehicle? Are manual gear changes improving as the drive progresses or becoming more problematic? If limitations, is a restriction code required on the driving licence?

2.4. Parking brake

- Adequate range of movement and strength in the hand or the foot to physically operate the parking brake.

Points to consider: If issues are shown, would a change of transmission (manual to automatic), the type of parking brake (mechanical to electric), or another adaptation to the vehicle be required? If so, is a restriction code required on the driving licence?

2.5. Secondary safety critical controls (e.g. indicators, horn)

- Adequate range of movement, dexterity, fine coordination and proprioception in the limb(s) operating the secondary controls wherever they are located in the vehicle (this includes modified controls such as an infra-red secondary control system (IRC) or a bleeper system);
- Ability to operate the controls when driving without negatively impacting on other required tasks for safe driving (e.g. steering control).

Points to consider: Is the driver reliant on automation of some secondary control functions in a standard vehicle (e.g. automatic lights, wipers, etc.) due to a physical impairment? If so, would a restriction code be required on the driving licence?

2.6. Physical ability to carry out required observations including use of mirrors (not related to visual impairment)

- Adequate lateral rotation of the neck and the trunk to the left and the right;
- Sufficient flexion / extension in the neck to maintain adequate head position;
- Ability to compensate for any uncontrolled involuntary movement;
- Capability to compensate for neck fixed in lateral flexion (e.g. torticollis);

- Ability to rotate neck and/or trunk to the left and right at required speed for any presenting road / traffic conditions;
- Does rapid head movement trigger dizziness or vertigo?

Points to consider: Is pain present or exacerbated when carrying out required observations for driving, as this may influence the quality and frequency of the observations. If reduced neck rotation is present, can this be compensated for by use of the trunk? If so, would this impact on other tasks of safe driving (e.g. steering)? Would additional aids assist, such as mirrors or cameras, assisted technologies? If so, is the driver's cognition sufficient to allow transference of skills to these aids? What does the law say regarding use of these aids, are restriction codes required? If seating adaptation is required to overcome a physical issue, is it still possible to see the dashboard information (speedo etc.) and to reach the pedals; is the distance to the steering wheel still adequate?

3. Driving skills¹¹

Points to consider: The driver's experience (for example, novice, experienced, professional). The clarity and timing of the verbal instruction / directions given. Be aware of the difference between an assessment situation and an instruction or tuition. An assessment does not mean that there can be no coaching, but it does not start with coaching. Feedback could be given when inadequate behaviour is observed to see whether the driver can compensate. The assessment then has a 'remediating' component and further coaching might be part of the recommendation.

3.1. Road position

The ability to position the vehicle safely and correctly in relation to the road layout and the road markings:

- Holding a straight course and when negotiating bends at variable speeds;
- Demonstrating correct position on the roadway when no road markings are present;
- Negotiating intersections / junctions (e.g. stopping correctly behind Give Way or Stop road signs and markings);
- Preparing to turn left and right;
- Maintaining correct position throughout the junction (e.g. roundabouts, which may require combined use of steering and secondary controls);
- Allowing safe clearance (is appropriate space given to the front, rear or either side of the vehicle when negotiating stationary or moving hazards?);
- Maintaining correct position within traffic lanes.

3.2. Driving strategy and attitude

- Adapting speed and/or driving position for the presenting weather and road traffic conditions;
- Demonstrating appropriate social interaction;

¹¹ EU Driving Licence Directive 2006/126/EC. Annex II. II Knowledge, skills & behaviour for driving a power-driven vehicle. L403/46. [<http://eur-lex.europa.eu/>]. Accessed 14 January 2021.

- Dealing with vulnerable road users such as pedestrians, cyclists, etc.;
- Approach to changing the driving lane and merging with traffic;
- Showing awareness of limits: personal, physical, behavioural, psychological, the vehicle (e.g. choosing not to drive on the motorway, in the dark, in bad weather, busy times, unfamiliar vehicle, inappropriate transmission type, taking regular breaks to manage fatigue, etc.);
- Defensive driving techniques that allow the driver to anticipate hazardous situations and take avoiding action;
- Adapting driving style to the personal situation (Is there a discrepancy between the drivers' behaviour and style, and the driver's possibilities?);
- To have an overview, understanding, anticipation of the traffic situation;
- Appreciating the driving situation (e.g. when a certain speed is allowed, it might not be safe to attain that speed).

3.3. Visuo-perceptual skills

- Estimating the dimensions of the vehicle (considering that the driver is perhaps not driving the habitual vehicle);
- Estimating dimensions of the roadway;
- Recognising and reacting appropriately to road signs and road markings;
- Comprehending the road layout and presenting traffic situation (for example, giving priority where appropriate);
- Ability to search for hazards systematically and continuously (visual scanning);
- Ability to focus on a moving hazard without a negative influence on traffic participation (visual tracking);
- Judging speed and distance (own and other road users, particularly when negotiating junctions);
- Correctly evaluating the safety margin;
- Correctly interpreting visual information from the mirrors;
- Sensing vibration of the vehicle (haptic feedback);
- Compensate for any visual disturbances on head and/or eye movement (e.g. blurred vision when undertaking left and right checks).

4. Executive function

The umbrella term 'executive function' is used to describe a number of top-down control processes that allow us to regulate our thoughts and behaviour by managing incoming sensory information, directing attention allocation, and selecting behavioural responses¹².

4.1. Attentional skills

- Attending to achieving a functional position for driving (e.g. adjusting the seat and the driving mirrors);
- Ability to maintain attention to the task for the duration of the assessment;

¹² Walshe, E.A., Ward McIntosh, C., Romer, D. and Winston F.K. 2017. Executive Function Capacities, Negative Driving Behaviour and Crashes in Young Drivers. *International Journal of Environmental Research & Public Health*. 14(11):1314. DOI: 10.3390/ijerph14111314.

- Ability to divide and prioritise attention to multiple hazards / stimuli presented;
- Managing distraction whilst driving from in-car systems such as satellite navigation (Sat Nav), radio, warning lights, audible alarms, taking part in conversation, etc. by making strategic choices (e.g. stopping conversation in case of difficulty);
- Coping in poor visibility conditions such as driving at night and possibly in poor weather conditions whereby visibility is affected outside the vehicle and may be worsened by headlight dazzle;
- Ability to operate the vehicle controls (including secondary controls) when driving at night or other suboptimal conditions (stress, weather, etc.).

4.2. Memory aspects

- Ability to follow and recall new information (e.g. is there is potential for the driver to use an alternative method of control, if required);
- Ability to retain instruction when driving (e.g. visual instructions from road signs and road markings);
- Recall previous experience in relation to problem solving untypical road and traffic situations (e.g. how to cope if traffic lights are not working).

Points to consider: If the driver becomes disorientated regarding the required route, is safety maintained? Can the driver return safely to route, either independently or by asking the assessor to repeat the instructions?

4.3. Planning

- Ability to respond proactively to potential hazards;
- Ability to execute actions in the correct sequence in order to maintain driving fluidity and road safety;
- Ability to act in an appropriate way, responding to factors in unknown and unforeseen situations;
- Ability to plan and execute the drive during part of the assessment route; this could be assessed by including an element of independent driving, where the driver is asked to follow directions to a named place and drive independently to the destination. This would be for a short period of time – in the region of 5 - 10 minutes.

4.4. Speed of processing

- Ability to process information from surroundings, analyse, anticipate and respond appropriately when driving, particularly when driving at faster speeds or under difficult situations (double tasks);
- Appropriate speed of decision making.

4.5. Behaviour in traffic

- Ability to be flexible and adapt to unexpected events;
- Behaviour / attitude towards other road users (e.g. aggressive driving);
- Following instructions and driving in accordance with the law or local traffic situation;
- Managing / stabilising emotion when driving (e.g. scared, confused, angry, elated);
- Maintaining reasonable progress;

- Facilitating other road users where appropriate (e.g. merge in-turn when two lanes become one) to aid congested traffic situations;
- Communication with other road users: ability to understand verbal communication (aphasia), ability to understand non-verbal communication (road signs), ability to 'read' the traffic situation (e.g. when the presenting situation does not permit the legal driving speed);
- Appreciating the evaluation situation. For example, if the driver is not able to adapt their driving behaviour which is unlawful (e.g. continuing to exceed legal speed limits) this could be interpreted as being inadequate.

5. Methods of evaluating the on-road drive and reaching an outcome

Observed driving behaviour is evaluated against comprehensive guidelines which highlight the number of, and severity of the errors shown during the drive. Positive and negative thresholds are set within the guidelines, which also includes termination criteria. For example:

- A significant traffic violation which clearly shows a complete misinterpretation of the presenting road / traffic situation (e.g. a red traffic light violation in good visibility conditions);
- Signs of acute dysfunction (e.g. under the influence of drugs or alcohol);
- Intervention by the driving assessor to maintain safety;
- There is danger to other road users.

The results of the on-road-drive are summarized in a report which includes the extent of preparation (e.g. relevant medical history, presentation and driving history), a description of the conditions on the day of assessment (e.g. vehicle used, weather conditions, assessment team, route, etc.), the frequency and the nature of any anomalies (lapses, violations, errors, other traffic conflicts) and the final result of either positive, negative or restrictions. If the assessment drive needed to be terminated before the end of its defined duration, the reasons for this must be described qualitatively.

The findings of the on-road drive should be considered in relation to the impact of the clinical features of the driver's medical condition or disability (described in document 3 Guidelines relating to the pre- on-road physical and cognitive assessment) to effectively carry out required driving functions (as detailed in Section 4). It is also important to consider document 5 Guidelines on reaching a recommendation.

The FTD Subgroup acknowledges there are some countries / organisations who have well developed on-road driver assessment protocols; good examples of these include CBR in the Netherlands¹³, Vias institute in Belgium¹⁴, and Driving Mobility in the UK¹⁵. Further information on these protocols may be obtained by contacting the relevant organisations. The FTD Subgroup recognises that there are other on road assessment protocols in existence and members are encouraged to share this information to add to the ongoing wider development of the speciality.

¹³ CBR, *The Netherlands*. 2020. *The on-road assessment for practical driver fitness in the Netherlands*.

¹⁴ Vias institute, *Belgium*. 2019. *Practical fitness to drive assessment*.

¹⁵ *Driving Mobility, UK*. 2017. *Operational manual standardisation on in-car assessment recording*.

Guideline 5: How to reach a recommendation

Guidelines for the assessor when matching the findings of the on-road assessment with the physical and cognitive assessment in order to reach a recommendation / opinion

Introduction

Before attending for an on-road driver assessment, the driver should be considered as having no medical contraindication to drive, that is, have had relevant conditions excluded, for example, low vision, seizures, by the appropriate physician.

The evidence from the “off-road”¹⁶ assessment (the non-driving part of the assessment, carried out in clinics), and the on-road assessment, will inform the assessor’s opinion as to whether the person’s medical condition or disability is impacting on their ability to drive.

This guideline provides further guidance to support assessors when reaching an opinion / recommendation and closely links with the guidelines on high-level knowledge and skills of assessors, the off-road drive and the on-road drive.

The following are examples of common recommendations following an on-road assessment.

- The driver is recommended as being fit to drive with, or without vehicle adaptations.
- In the case of learner drivers (provisional licence holders¹⁷) the driver is recommended as being fit to undertake a course of tuition leading to the standard driving test. This may be with, or without vehicle adaptations.
- The driver is recommended to return for review on-road assessment following a period of driving familiarisation¹⁸, either with, or without vehicle adaptations. A final recommendation is made following review.
- In the interests of road safety, the driver is recommended not to drive and surrender their driving licence entitlement under medical fitness to drive legislation.

The following factors are indicators to guide the assessor(s) when reaching a recommendation / opinion:

1. Prognosis

Is there potential for the driver’s condition to improve, for example, in the case of functional recovery following stroke, or is the condition one which is likely to fluctuate or even deteriorate, for example, in the case of multiple sclerosis or degenerative conditions such as dementia and motor neurone disease?

¹⁶ Off-road assessment is an agreed term for pre-on road assessment and it can be carried out in a clinical set up and does not have to be in a real traffic situations.

¹⁷ Applies to countries where the concept of provision driving licence exists.

¹⁸ In some countries the term “driving tuition” is also used.

2. Problems identified during the on-road assessment

Are the difficulties exhibited during the on-road assessment reflective of the person's medical condition or disability? If so, is there potential for adaptation or restriction of the driving situation¹⁹ to the driver's disability? Where applicable, does the driver have the insight, ability and potential to adapt to a new method of control? Can the issues be overcome by vehicle adaptations, a different method of vehicle control, avoiding some driving situations¹⁹, or by driver tuition? In this case, does the driver need to return for follow up assessment to inform a final recommendation? If vehicle adaptations are recommended as essential for the driver's safe control of the vehicle, or when the driving situations allowed are limited¹⁹ (e.g. no driving on highway or within a limited radius), the appropriate driver licence code should be advised. This is required by legislation, for a driving licensing authority to allocate an appropriate restriction code in the driver's driving licence.

Consider if there is a pattern (repetition) of driving errors, as opposed to an isolated occurrence, which may be due to nervousness. This may warrant further review assessments – subject to driver meeting medical standards for fitness to drive standards.

3. Driving style

If the problems identified on the drive are not reflective of the driver's medical condition or disability, consider whether they are due to inappropriate driving habits acquired over time. If this is the case, the assessor may suggest that the driver has some driver tuition to remediate inappropriate driving habits and returns for follow up on-road assessment. This is important to emphasise that such problems identified by the assessors may not, or not only, be related to medical fitness to drive standards and very likely to be related to "driver competence". However, an unsatisfactory competence level, or maladaptive driving style could interfere with compensational possibilities. Consider an 'offensive' driving style. Although less appropriate for any driver, it is very contra-indicated for a driver suffering from slowed speed of information processing. In this case, there is a clear mismatch between driving style and the medical possibilities of the potential driver. Changing of driving habit could be a prerequisite of a positive FTD opinion.

The driver's insight into their driving style and whether they are able to adapt / change their driving habits is important.

4. The presence of co-existing conditions

Consider the presenting diagnosis, and also any co-existing conditions, for example, the reason for assessment may be due to a diagnosis of an arthritic condition, however the driver may present with a precipitation of a dementia, or general frailty due to the ageing process.

5. Impact of social factors which may affect the driver

Consider whether the medical condition and driver performance may be affected by current social issues, such as bereavement, carer responsibilities, which could potentially impact on the driver's cognition and performance.

¹⁹ Driver licence legislation allows for this type of driving licence restriction in some countries, but not in all.

Further, close social contacts and support, for example, support and monitoring from family and friends, as compared to someone who lives on his own, might be a factor when considering a fitness to drive opinion: A driver with support may be more inclined to accept fitness to drive advice.

6. Anxiety

Consider if driver's behaviour during the assessment is anxiety due to the assessment situation. Alternatively, establish if the anxiety itself is actually a medical condition which may impact on the task of driving more generally. Consider that current 'normal' driving situations might also be stressful and that adequate coping strategies are necessary.

7. Previous driving history

Consider the length and the driving experience of the driver, for example to be able to drive in all types of roads and driving situations including night-time driving. Is the driver very experienced, for example, drove most days before he/she sustained their medical condition, or is he/she a novice driver, who, for example, may have only recently passed his/her driving test, or has no driving experience at all? The level of driver performance expected in each case would differ.

Consider if there has been a break in driving, for example, the client may not have driven since their illness, in which case they may benefit from some familiarisation lessons to regain confidence in their driving.

8. Background information from family members and other relevant individuals

Acknowledge, and be sensitive to the concerns from family members, taking into account if the same issues are evident during the on-road drive. This could also include information provided by other health professionals as part of the referral documentation. Although this type of information might well be very useful, it still needs to be handled with caution in order to maintain independent unbiased assessment from a driving assessor as a professional.

Examples of this may include:

- relatives reporting that they feel the need to alert the driver to situations and hazards on the road, as in acting as a co-pilot (directing the driver and alerting to potential hazards);
- reports on the driver becoming confused, or lost in familiar road situations;
- recent accident history, has there been an increase in accidents/bumps, which may be attributed to the driver's medical condition?

The assessor should also be aware that the passenger / family member may consider their relative's driving is good, and they may be unaware that it has become routine behaviour for the passenger to provide direction and support. This may be due to:

- the passenger/family member being a poor judge of their relative's driving ability;
- the passenger/family member providing excessive direction and support unwittingly;
- there is also the possibility that the relatives' views and opinions may be biased.

9. Driver assessment for the learner driver who has not yet undertaken tuition

The assessor should consider whether the presenting medical condition or disability of the client relates to a physical, cognitive, intellectual or learning disability, or a combination of factors. It may be necessary for the learner driver to apply for a provisional driving licence²⁰ before undertaking a driver assessment. When applying for a provisional licence, the driver should declare their medical condition or disability.

The assessment criteria in the clinical pre-drive assessment will be the same as those for an experienced driver, and it should be confirmed that the driver is medically fit to drive.

The on-road element of the drive will be very limited, and in some cases will be similar to that of a first-time driver lesson; however the assessor will be assessing whether the potential driver has the physical ability to drive a standard vehicle, or whether an automatic or suitably adapted vehicle is necessary. Following an initial assessment, it may be appropriate for the learner driver to have a period of tuition and then return for review of on-road assessment.²¹

In the case of clients with a learning or intellectual disability, it may be difficult to reach an opinion during the driver assessment as to the driver's potential to achieve driving test standard. In these cases, the assessor may consider recommending that the driver has a course of driving lessons with an Approved Driving Instructor / Teacher and then return for follow up to review progress. The communication between the clinical assessor and the Approved Driving Instructor / Teacher and the client is very important. A flexible approach is necessary, as described in the High-Level Knowledge and Skills Document (Ref 1.7 Intellectual / Learning Disability).

NB:

In Germany and Austria, a medical-psychological assessment is performed regarding drivers who are considered to have a risk profile.

²⁰ Applies to countries where the system of provision driving licence exists.

²¹ Germany: no provisional driving licence.

Guideline 6: Legal aspects following the driver assessment outcome

Guidelines for the assessor when considering the legal implications of their assessment outcome recommendation

1. Introduction

When the assessor reaches a recommendation following their client's driver assessment, it is accepted that the information should be delivered in a sensitive way, with the understanding of the impact on the individual's lifestyle.

The authorization to communicate findings and results must be secured by the legal situation. For EU countries, data protection in accordance with the EU Basic Data Protection Regulation has been binding. This regulation strengthens the rights of so-called "data subjects" by extending information obligations, more rights of access, deletion obligations for companies and the notification process in the event of data breaches. The requirements on data protection (storage, disclosure, use of content) must be complied with legal obligations.

However, the assessor should be aware that the assessment outcome may have legal implications for the client. Assessors who directly represent the driving licence authority have a special responsibility here.

The driving assessor should be aware of the importance of recording and documenting the evidence for their assessment opinion and recommendation. This is important should the medical fitness to drive decision of the driving licence authority be legally challenged.

2. If the client is advised to stop driving

The assessor should advise the client of their obligation as a licence holder to inform the relevant driving licence authority that they have been advised to cease driving and surrender their driving licence.

The assessor should consider their own professional position, as a duty of care, to notify the most effective and permissible authorities, which may include the driving licence authority, if there is evidence that the driver will not, or is unable to, inform the relevant driving licence authority. If the assessor is an agent of, or arranged by, the driving licence authority, this assessor should report appropriately.

If there is potential for the driver's medical condition or health to change, the assessor should be aware of the procedure the driver may follow to re-apply for licence re-instatement at a future time. The assessor should advise the client to discuss any future driving licence re-application with their medical practitioner or health care providers.

3. Driver licensing coding

With the Commission Directive (EU) 2015/653 of 24 April 2015 amending Directive 2006/126/EC of the European Parliament and of the Council on driving licences the codes and subcodes of Annex I were updated.

The following reasons were given by the Commission, for example:

“(1) The codes and sub-codes set out in Annex I to Directive 2006/126/EC should be updated in the light of technical and scientific progress, especially in the field of vehicle adaptations and technical support for drivers with disabilities.”²²

“(2) To take into account new technological developments, the codes and sub-codes should be function-oriented. For reasons of administrative simplification some codes should also be deleted, merged with other code or shortened.”²³

With Article 2 of the Commission Directive (EU) 2015/653 of 24 April 2015 the Commission formulated that *“Member state shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 1 January 2017 at the latest. They shall forthwith communicate to the Commission the text of those provisions.”²³*

However, there is little guidance on the interpretation of the codes, and the application varies between organisations involved in driver assessment. Further work regarding consistency of interpretation and application of codes may be a recommendation within relevant driver licencing authorities, driver assessment organisations and driver testing authorities.

Depending on the existing situation the assessor should advise the client about the requirement for specific adaptation codes to be added to their driving licence, if this is necessary following their assessment. Clients are likely to require guidance on the appropriate coding, and also the process to enable this to happen. In some cases, it may be helpful to advise the client to return their driving licence, with a copy of the driver assessment report, to the relevant licencing authority, with the recommended adaptation codes.

4. Vehicle insurance

The assessor should advise the client of the importance of keeping their insurance policy up to date regarding existing medical conditions, or the development of new medical conditions. This also applies to modifications to the vehicle.

²² Directive (EU) 2015/653 of 24 April 2015, page 1.

²³ Directive (EU) 2015/653 of 24 April 2015, page 2.

ANNEX 2: DEFINITION OF TERMINOLOGY USED BY FTD TOPICAL GROUP

Definitions related to the discussions held during the FTD Topical Group meetings or references in the subgroup documents

Cognitive function

Cognitive functioning refers to multiple mental abilities including learning, thinking, reasoning, remembering, problem solving, decision making and attention.

Fisher, G.G, Chacon, M. and Chaffee D. S. 2019. Theories of Cognitive Aging and Work. In: Baltes, B.B., Rudolph C.W. and Zacher, H. 2019. Work Across the Lifespan. [<https://www.sciencedirect.com/topics/psychology/cognitive-functioning>]. Accessed 3 May 2020.

Comorbidity

There is no agreement on the meaning of the term. Related constructs are multimorbidity, morbidity burden, and patient complexity.

Comorbidity was then defined as the presence of one or more additional mental, neurodevelopmental, medical, or physical condition, disease or disorder co-occurring with (that is, concomitant or concurrent with) a primary condition, disease or disorder relevant to medical fitness to drive.

It here is interpreted as the notion of burden of illness or disease, defined by the total burden of dysfunction and is therefore linked to the concept of total impact on patient-reported outcomes, including functioning. Hence, the comorbidity concept, as referred to here, reflects not only the multiplicity of conditions, but also the interactions between them, influencing the total burden of dysfunction. This total burden is influenced not only by health-related characteristics, but also by socioeconomic, cultural, environmental, and patient behaviour characteristics.

Comorbidity in the clinical setting is associated with worse health outcomes, more complex clinical management, and increased health care costs but its impact on medical fitness to drive is unknown, and in one study was not associated with reduced driving performance.*

*Carr, D.B., Barco, P.P., Babulal, G.M., Stout, S.H., Johnson, A.M., Xiong, C., Morris, J.C. and Roe, C.M. 2016. Association of functional impairments and co-morbid conditions with driving performance among cognitively normal older adults. PLoS One. 11(12): e0167751. DOI 10.1371/journal.pone.0167751.

Driver assessment

Driver assessment is a multi-disciplinary clinical process to create an opinion on fitness to drive (FTD) referring to the EU Driving Licence Directive. A clinical process determines functional consequences of medical challenges in terms of physical, (neuro)-psychological, behavioural and attitudinal aspects.

The clinical process focuses on the person, namely the driver. It does not pre-define the methodology.

Driver assessor

The person carrying out the driver assessment. The specific knowledge and skills of an individual professional depends on which part of the process he / she is involved. However, the specific knowledge and skills need to be available within the team / professionals undertaking the complete driver assessment, and all professionals involved must display the appropriate attitudes.

Driving test

A provisional driving licence is required, the driver test is legally governed, in the framework of driver licencing; the decision is a pass / fail.

In many countries, the driving test consists of a theory and a practical test. Tests are used to decide whether the learner has achieved the defined training objectives, so they need to be of high quality. Some countries have a separate hazard perception test.

European Commission. 2020. The Driver Test.
[https://ec.europa.eu/transport/road_safety/specialist/knowledge/young/countermeasures/the_driver_test_en]. Accessed 6 May 2020.

A licence acquisition test for provisional licence holders to demonstrate the necessary competence to drive independently. The driving test is legally governed, in the framework of Driver Licencing and will conclude with a pass or fail result.

Depending on the jurisdiction, the term driving examiner is equivalent to driving tester in other jurisdictions in the EU.

Executive function

The umbrella term “executive function” is used to describe a number of top-down control processes that allow us to regulate our thoughts and behaviour by managing incoming sensory information, directing attention allocation and selecting behavioural responses.

Executive function is to be classed as a sub-set of cognitive function.

Walshe, E.A., Ward McIntosh, C., Romer, D. and Winston F.K. 2017. Executive Function Capacities, Negative Driving Behaviour and Crashes in Young Drivers. *International Journal of Environmental Research & Public Health*. 14(11):1314. DOI: 10.3390/ijerph14111314.

Fitness to drive²⁴

Fitness to drive is the state of having adequate physical, visual, and cognitive function, and no medical or behavioural contraindication to driving.

(medical includes psychological and neuro psychological)

²⁴ At the CIECA Fit to Drive Topical Group meeting on 18 October 2018 the group agreed that the fitness to drive definition is the working definition of the Fitness to Drive Topical Group and that it does not explain the wording fitness to drive in the EU directive.

This is further defined by the absence of any functional (sensory–perceptual, cognitive, or psychomotor) deficit or medical condition that significantly impairs an individual’s ability to fully control the vehicle while conforming to the rules of the road and obeying traffic laws, or that significantly increases crash risk.

Transportation Research Board. 2016. Taxonomy and Terms for Stakeholders in Senior Mobility. Transportation Research Circular No. E-C211. DOI: 10.17226/23666. [<http://onlinepubs.trb.org/Onlinepubs/circulars/ec211.pdf>]. Accessed 6 May 2020.

Functional state

Functional status is an individual's ability to perform normal daily activities required to meet basic needs, fulfil usual roles, and maintain health and well-being. Functional status subsumes related concepts of interest: functional capacity and functional performance. While functional capacity represents an individual's maximum capacity to perform daily activities in the physical, psychological, social, and spiritual domains of life, functional performance refers to the activities people actually do during the course of their daily lives. A maximal exercise test measures functional capacity, while a self-report of activities of daily living measures functional performance.

Functional status can be influenced by biological or physiological impairment, symptoms, mood, and other factors. It is also likely to be influenced by health perceptions. For example, a person whom most would judge to be well but who views himself as ill may have a low level of functional performance in relation to his capacity.

American Thoracic Society. 2007. Functional Status. [<https://qol.thoracic.org/sections/key-concepts/functional-status.html>]. Accessed 6 May 2020.

High level (as in the term ‘High Level Document’)

For the purposes of documents within the Fit to Drive Subgroups, the term ‘high level’ refers to a summary of the main / important features related to a topic / subject, as opposed to the detailed breakdown or description of the factors involved.

Learner driver

The term ‘learner driver’ or ‘driving school student’ is used in some countries to identify drivers who are learning to drive and have not yet reached the standards required and need to pass the standard driving test of their country.

Provisional licence

The term ‘provisional licence’ is used in some countries to identify the driving licence held by people who are learning to drive and have not yet passed the driving test of their country (for example in the UK) to allow them to drive independently. A provisional licence is issued by the driving licence authority, which is replaced by a full driving licence when the driver has passed the standard driving test.

APPENDICES

Appendix 1: PracDriva website project brief

(This information was prepared for the potential website designers/providers.)

1. Background

This is a new website initiative, to be run in partnership with Driving Mobility and CIECA.

Driving Mobility www.drivingmobility.org.uk

Driving Mobility is the National Voice in the UK for assisted driving and independence. Driving Mobility accredits a network of 20 driving assessment centres covering the UK. These centres include independent charities and NHS centres which offer professional information and assessment to enable disabled and elderly people to gain or retain independence. The main focus of Driving Mobility is **driver assessment**.

CIECA www.cieca.eu

CIECA is the International Commission for **Driver Testing**, active in the fields of road safety and driver testing. CIECA 's aim is to improve driving standards, to contribute to road traffic education, to improve road safety, to protect the environment and to facilitate the mobility of road freight and passenger transport, both private and commercial. In 2018 CIECA had 72 members in 38 countries worldwide.

Since 2017, Driving Mobility and CIECA members have been working together to raise awareness and develop standards and guidelines for practitioners involved in driver assessment. In some countries, such as the UK, driver assessment is well developed, however in other countries and organisations it may be less developed and fragmented, or indeed not undertaken.

A driver assessment focusses on the impact a person's medical condition or disability may have on the task of driving. People who attend for driver assessment are, in the main, experienced drivers. It is different from, and should not be confused with, the standard driving test.

A driver assessment aims to provide solutions where possible to enable people to continue to drive safely for as long as possible, this can be with vehicle adaptations or different driving solutions. In some cases, the result of a driver assessment may be that a person's medical condition or disability is impacting so much on driving, that they are recommended to cease driving, in the interests of road safety.

Both Driving Mobility and CIECA are non-profit organisations, and there is no aim to raise income from the website.

2. Objectives of the website

The objectives of the website:

2.1 Support practitioners with their practice, who currently undertake driver assessment. This is done by reference to the Guidelines on driver assessment, produced by the members of the CIECA/Driving Mobility Fit to Drive Topical Group. The information on specific medical conditions and disabilities will support practitioners to understand the important elements to take into account when undertaking driver assessment. Legal implications regarding the requirement to ensure the individual driver has medical fitness to drive is also included in the website.

2.2 Support organisations and individuals who have less developed, or no driver assessment systems to improve or cultivate their practice.

2.3 Be the recognised international reference point for advice on undertaking driver assessment.

3. Website identity

Thought has been given to the website identity, and the name of PracDriva has been agreed:

PracDriva

Practical Clinical Driver Assessment

(Guidelines and recommendations for the clinical process of fitness to drive)

The domain name of www.pracdriva.com has been purchased.

Both Driving Mobility and CIECA have their individual organisational websites: www.drivingmobility.org.uk; www.cieca.eu. However, PracDriva www.pracdriva.com will be a separate website, with the defined purpose of developing the practice of driver assessment. There will be a high-profile link to the PracDriva website on both the Driving Mobility and CIECA websites.

4. Target audience / website users

The website users will be varied, but will include an international audience of practitioners involved in the field of driver assessment, which could include:

- occupational therapists
- physiotherapists
- approved driving instructors
- nursing staff
- general practitioners
- consultants
- opticians
- student health care professionals
- health care agencies in various countries

- voluntary agencies
- professional organisations
- driver licensing authorities.

5. Design / technical requirements

- The website should be simple and easy to use.
- It should follow standard, well understood, and consistent features found on most websites, so that the user will find a familiar format.
- The website should follow web accessibility principles.
- The look of the website should be designed to provide the user with an assurance that it is an officially recognised, credible site of information, which has integrity (but conversely, it should look welcoming and fresh!).
- There will be some images, and photographs, but it is anticipated this will be a small proportion of the overall content.
- The website should have a search facility, for example a driving instructor may be presented with someone who uses hand controls to operate the accelerator and brake. The website should enable the driving instructor to type 'hand controls' into the search box and be diverted to the 'back page' on the description of hand controls, what they are, when should be recommended, etc. There should also be a 'hover' facility on selected fields, e.g. hand controls in the text of the content, opening out into the 'back page' of the description.
- The framework of the site will be designed in close co-operation between the web design company and the point of contact / project lead.
- This will be added to, as the content of the site develops. For example, the first medical condition (chapter) and its impact on driving will be Stroke. Other medical conditions will be added as the site content develops.
- The text will be in English.
- Size: estimated total project disc space 500 – 1,000 pages = 2GB. Bandwidth estimated at 6GB (please note, this is general guide only, and advice on this estimate as the site develops will be discussed with the web designer).
- PracDriva will be a website only, accessible via computers, tablets, mobile phones. An APP is not being developed within the scope of this project.
- There should be the option to upgrade disc and bandwidth space if required. Unlimited bandwidth space is not requested.
- Details of the process if either party wishes to withdraw from the project to be agreed, e.g. what happens re transferring content.
- A service level agreement will be drawn up with the website company.

6. Content management

- The content will be written and provided for the web design company to upload in the most appropriate font, design, etc. Advice on the formatting of the content to be provided by and discussed with the web design company.

- To ensure consistency in format, editing, etc. the content will be managed with permissions by a small number of people (one – three) within Driving Mobility/CIECA. There will be a named point of contact representing the project.
- The best process on how uploading / managing / updating of content to be discussed and agreed with the web design company.

7. Hosting

- To ensure continuity, the web design company should also manage the hosting of the website.
- Information / assurance to be provided by the web design company regarding:
 - website hosting security, where stored, etc.
 - type of server, eg shared, dedicated, or cloud
 - back up
 - reliability
 - reputational risk of host server organisation
 - data protection
 - antivirus
 - disaster recovery.

8. Contact / communication with web design company

A working partnership will be developed, where both the web design company and the project lead can communicate with ease, share ideas, work together on suitable formats, etc. This should be through telephone, e mail and in person. To facilitate this, the preferred geographical location for the website design company should ideally be within the north of England.

It is important for a named contact for design / management of the project to be identified. Communication with the named person(s) should be straightforward and the method of contact / availability established at the beginning of the project design. If the named person is not available, information on who to contact in their absence should be made clear at the beginning of the project.

9. Budget

The estimated budget for design and build of the website is in the region of £7,000 - £9,000 (€7,850 – €10,644).

The website company was requested to provide a breakdown of costs re initial design / build and regular ongoing monthly charges, to include:

- web design / build
- hosting
- general site maintenance
- additional costs, e.g. assistance with regular content update, search engine optimization.

10. Timescale / dissemination

The following schedule for the PracDriva website development was provided in the specification document for potential suppliers. However, in view of the Covid-19 Pandemic, further work on the PracDriva website has been put on hold.

- Website project brief to be sent to website design companies on 20.12.2019
- Website specification plans, cost breakdown, to be submitted by 17.01.2020
- Successful provider to be informed by 27.01.2020
- Website design / build / user testing 01.02.2020 – 14.04.2020
- Initial version to be available for viewing at event on 21.4.2020
- Website launch events June 2020 and autumn 2020

- Ongoing development of website / regular updates throughout the life of the website.

Driving Mobility and CIECA already have a sophisticated network of organisational contacts; the launch and dissemination will be supported by both organisations.

11. Contact details

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Web: www.drivingmobility.org.uk

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T +32 2 732 72 30
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Web: www.cieca.eu

Appendix 2: Presentations on medical psychological assessment

- 1. Traffic psychological measures in Austria**
KFV (October 2018 Brussels)
- 2. A close look at the German traffic safety system**
Verband der TÜV e.V. (October 2018 Brussels)
- 3. The Spanish medical-psychological assessment for drivers**
Traffic General Directorate (October 2018 Brussels)

Traffic Psychological Measures in Austria

Mag. Susanne Kaiser
18th October 2018, Brussels



1

Overview



- Driver Improvement
- Traffic Coaching
- 2nd Phase Driver Training
- Traffic Psychological Examination

Driver Improvement

3

Obligatory driver rehabilitation for alcohol and drug offenders

1st time offenders

- BAC 0,8 - 1,19 ‰: „Traffic coaching“
- BAC \geq 1,2 ‰: Driver rehabilitation course
- Novice drivers BAC \geq 0,1 ‰: Driver rehabilitation course
- Drug impaired drivers: „Traffic coaching“

Recidivists

- BAC \geq 0,8 ‰: Driver rehabilitation course
- BAC 0,5 ‰ + 0,5 ‰: Driver rehabilitation course (Penalty point system)
- Drug impaired drivers: Driver rehabilitation course

Measures for alcohol offenders

Test				Psychological test
Prevention		license withdrawal	license withdrawal	license withdrawal
Special prevention	Penalty point	„Traffic coaching“	Driver rehabilitation	Driver rehabilitation
Penalty	Fine	Fine	Fine	Fine
	0,5 - 0,79 ‰	0,8 - 1,19 ‰	1,2 - 1,59 ‰	> 1,6 ‰ or refuse to test

Obligatory driver rehabilitation for other severe offences

Driver rehabilitation course

- Novice drivers for certain offences (speeding, wrong way driving, right of way violations, NEW: mobile phone use...)
- Speeding (recidivists)
- Penalty point system
- Other offences based on decision of authority (e.g. very dangerous circumstances, recklessness)

Types of driver rehabilitation programmes



1. Courses for alcohol offenders
2. Courses for severe traffic offenders
 - Exceeding the speed limit
 - Novice drivers
3. Courses for drug and medicine offenders
 - Drug abuse (THC, cocaine, acetomorphine, speed, ecstasy etc.)
 - Medicine abuse
4. Courses for penalty point offenders
 - Especially alcohol, tailgating

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Types of driver rehabilitation programmes



<p>Courses for severe traffic offenders</p> <ul style="list-style-type: none">▪ 4 sessions▪ 12 units* <p>+ driving observation (3 units)</p> 	<p>Courses for alcohol offenders</p> <ul style="list-style-type: none">▪ 4 sessions▪ 15 units* 	<p>Courses for drug/medicine offenders</p> <ul style="list-style-type: none">▪ 4 sessions▪ 15 units* 
--	--	--

- usually group courses with 6 -11 participants
- 1 session per day with 3 - 5 units per session
- minimum of 2 days between 2 sessions
- course to be completed within 22 - 40 days

* 1 unit lasts 50 min

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Driver rehabilitation programmes



	Group sessions	One-on-one sessions
Participants	6 – 11	1
Duration	4 sessions (12/15 units)	5 sessions (50 min each)
Recidivists	1 additional session (50 min)	1 additional session (50 min)
Fees (first time offenders)	€ 495 - € 555	€ 515 - € 575
Fees (recidivists within 5y)	€ 598 - € 610	€ 618 - € 690
Circumstances for an exclusion of the course	<ul style="list-style-type: none">▪ lack of participation in the course▪ intoxication (≥ 0.1 ‰), addiction▪ severe behavioural problems	

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Aims of the courses



- Analysis of the causes for undesirable behaviour
- Influence on the individual attitudes and behaviour
- Initiation of realistic self-perception and self-reflection
- Development of suitable safety-orientated alternatives

What has to happen in order to avoid another offence?

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Methods and course contents



- no fixed schedule
- traffic psychological training programm for the different course types
- selection of moduls (= exercises)
- elements of psychotherapy, behavioural therapy, client orientated therapy, psychodrama and group dynamic processes

Effectiveness of the measure



- effectiveness proved by 2 Austrian evaluation studies (*Michalke et al., 1987; Schützenhöfer & Krainz, 1999*)
- various evaluation studies in other European countries confirmed the effectiveness.

Major Findings:

- recidivism rate cut by (around) 50% for people attending the course
- courses are highly accepted by the participants
- courses increase knowledge and change attitudes

Traffic Coaching

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Traffic coaching

- short course for offenders with a BAC of 0.8 – 1.19‰
- psychological intervention (2 units) combined with first aid training (2 units)
- 1 session with 4 units
- 4 - 12 participants
- fee: € 100
- trainer requirement: university degree in psychology

Effectiveness of the traffic coaching measure (1/2)



- Evaluation study 3 years after introduction of the measure
- Method:
 - evaluation of basic data (number of alcohol screening tests, offences, traffic coachings and alcohol accidents)
 - recidivism rate of course participants
 - survey of participants and instructors

Effectiveness of the traffic coaching measure (2/2)

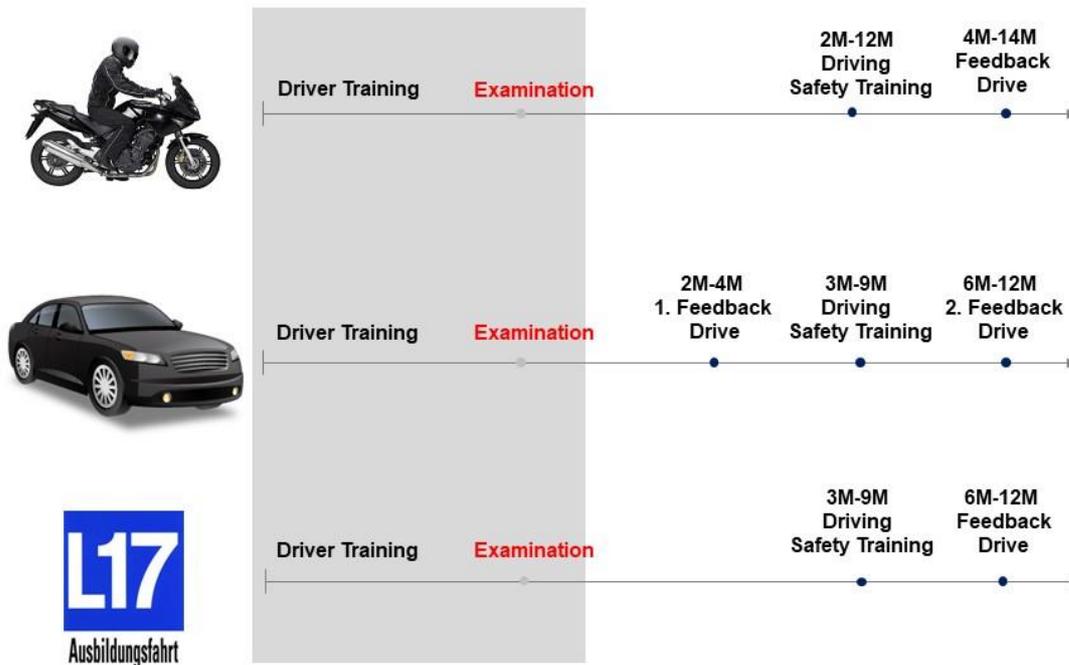


Major findings:

- The content of the traffic coaching measure is being communicated well.
- The measure is accepted by participants.
- The majority of participants assess the measure positively.
- The legally defined goals are being reached.
- The relapse rate is significantly lower than for the comparison group.
- decrease of around 43% (if the massive increase in the number of alcohol screening tests is included)

2nd Phase Driver Training

Background



Partners in 2nd Phase Driver Training



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What if not? (consequences of delay)



4 months



further
4 months



Until completion
of all modules

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Module: Psychological Group Discussion



Duration:

- Cat. A: 1½ hours
- Cat. B: 2 hours
- 6-12 participants

- Typical accident risks
- Individual accident risks
- Single vehicle accidents
- Self over-confidence
- Avoidance of self-overconfidence

- **What is my typical accident?**
- **What are my weaknesses/strengths?**

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Module: Hazard Perception Training



- Only cat. A
- Duration: 1 ½ hours
- 6-12 participants

- Visual perception
- Appropriate observation
- Concentration and alertness
- Assessment of hazard sequences

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Traffic Psychological Examination

23

Traffic Psychological Examination

- Alcohol offenders: Mandatory > 1,6‰
- Drug offenders: For recidivists
- Other offenders and suspicious drivers: At the behalf of the traffic authority (if necessary and helpful)
- Professional drivers: short examination (screening) mandatory for Cat D drivers



THANK YOU!

KFV (Kuratorium für Verkehrssicherheit)

Schleiergasse 18 | A-1100 Wien

Tel: +43-(0)5 77 0 77-0 | Fax: +43-(0)5 77 0 77-1186

E-Mail: kfv@kfv.at | www.kfv.at

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CIECA Fit to Drive

A close look at the German Traffic Safety System

18.10.2018

CIECA Fit to Drive Defintion of Fitness to Drive



- „Fitness to Drive“ - a common definition
 - *Fitness to drive a motor vehicle can be defined as a relatively stable characteristic which is independent of current situational factors and transient mental/emotional states. Along with health requirements, fitness to drive also includes personality aspects, values and attitudes, and psycho-physical skills. These aspects are essential requirements for (re)establishing and maintaining a person's fitness to drive.*

**This definition is shared by both: legislation and
the two professional associations
German Society of Traffic Psychology (DGVP)
German Society of Traffic Medicine (DGVM)**

CIECA Fit to Drive Traffic medicine and psychology within german legislation



Assessment

- Bus and taxi drivers (Medical-Psychological Screening)
- Drivers under the influence of alcohol and/or drugs (MPA)
- Drivers with multiple traffic offenses (MPA)
- Handicapped drivers (MA)



Training and rehabilitation programs

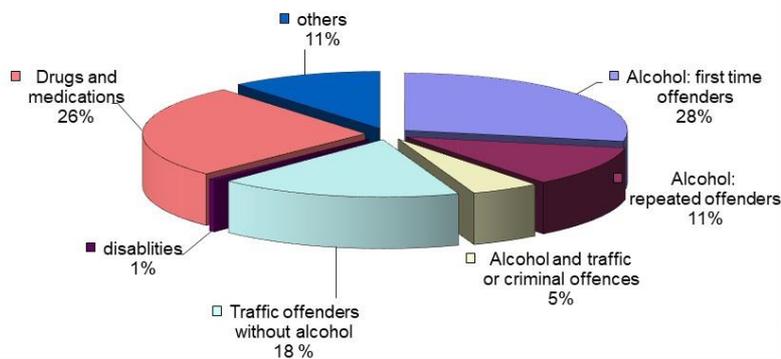
- Novice drivers with one severe traffic offense
- Drivers with multiple traffic offenses within the demerit point system
- Drivers under the influence of alcohol and/or drugs

Verband der TÜV e.V.
3

CIECA Fit to Drive The Medical Psychological Assessment: Reasons for the assessment

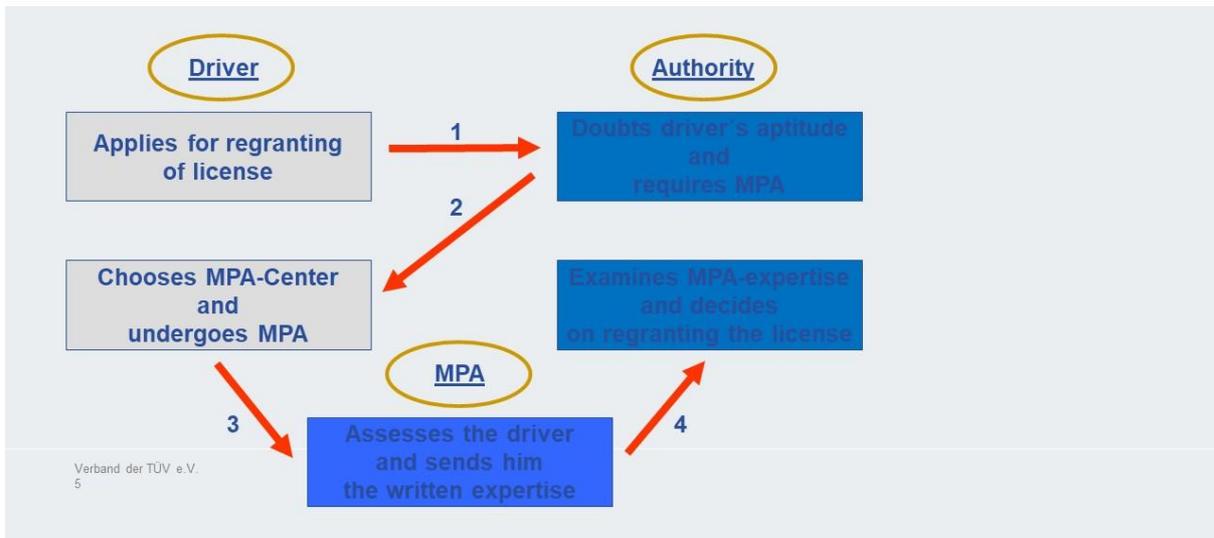


Medical Psychological Assessments in 2017

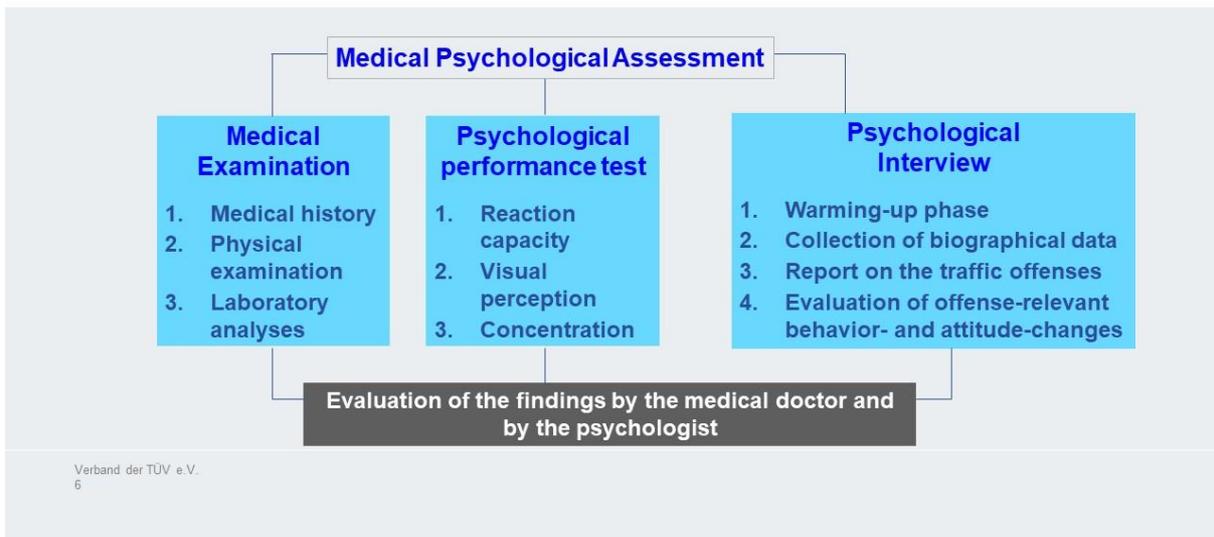


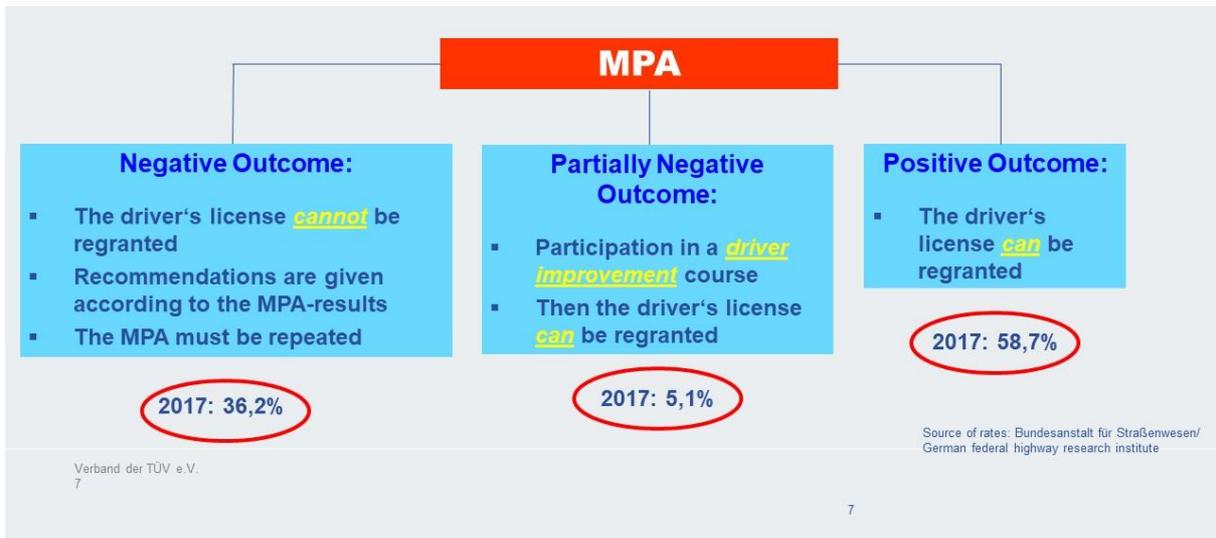
Source: Bundesanstalt für Straßenwesen/
German federal highway research institute

CIECA Fit to Drive
The Medical Psychological Assessment



CIECA Fit to Drive
The Medical Psychological Assessment: Three parts of successful assessing





CIECA Fit to Drive
 Conclusion

- Elaborated system:
 - Assessment for
 - Traffic offenders (e.g. alcohol, drugs and severe traffic offences)
 - rehabilitation programs for those offenders and within the demerit point system
 - interdisciplinary process between psychological and medical experts
 - Decision always made by the authority based on the assessment report
 - Medical and psychological assessment and the rehabilitation courses are evaluated and highly reliable
- Verband der TÜV e.V.
8



Thanks for your attention

The Spanish medical-psychophysical assessment for drivers

Brussels, 18.10.2018

Dr. Elena Valdés Rodríguez

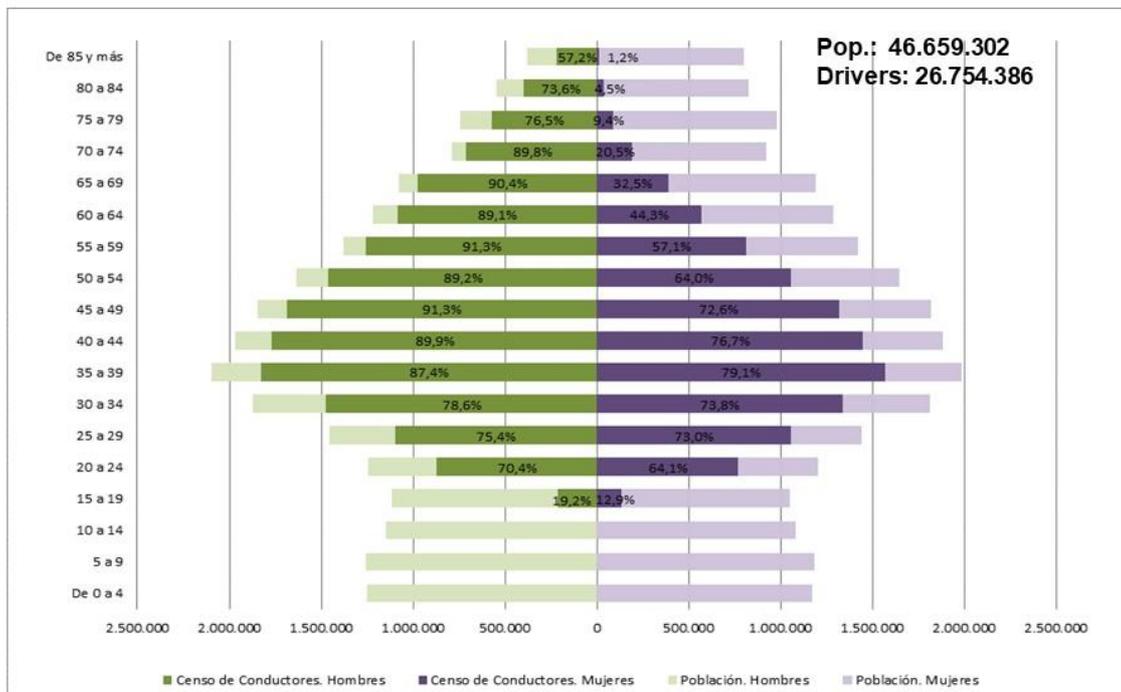
José Miguel Padilla Sánchez

TRAFFIC GENERAL DIRECTORATE

Subdirectorato General of Training and Road Education



SPAIN 2018



Source: Dirección General de Tráfico (DGT) and Instituto Nacional de Estadística (INE)

Spanish legislation to obtain or renew the driving license

- General drivers regulation (Decree 818/2009)
(transposition of Directive 2006/126/CE)

- Regulation of medical assessment centers
(Decree 170/2010)

Historical background

- **1982: psycho-technical assessment is established, only for professional drivers (based on medical centers - CRCs)**
- **1985: the assessment of perceptive and motor skills is extended to all drivers**
- **1986: requirements to authorize the CRCs (unification and normalization of instruments and exploration materials)**
- **2010: Regulation of telematic notification of psychophysical reports**

Conceptual framework

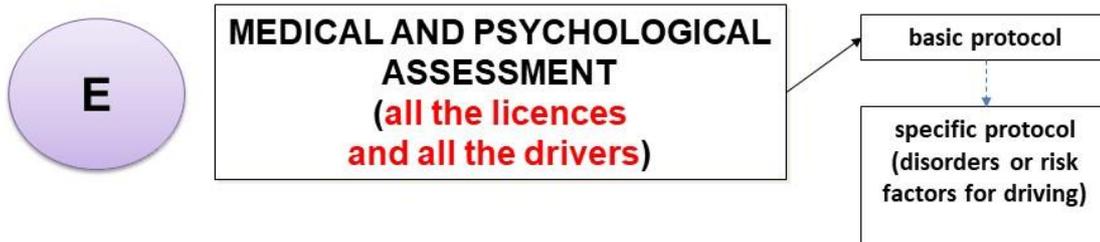
The Spanish model is a preventive or primary system based on the human factor.

Haddon's matrix

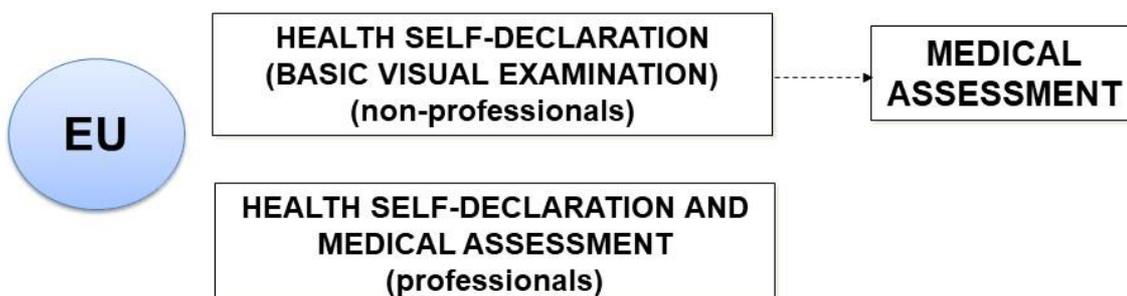
	<i>Human</i>	<i>Technical (vehicle,subject)</i>	<i>Environment</i>
<i>Pre-collision</i>	Medical and psychological fitness		
<i>Collision</i>			
<i>Post-collision</i>			



Spanish model



Most EU countries have other models



The psychophysical assessment system

- Private medical centers authorized by the Administration. Only these medical centers can issue reports on drivers.
- Spain has a highly decentralized system to assess the psychophysical conditions of drivers. There is no medical center more than 50 km away from any driver.
- There are currently 2485 medical centers where all drivers can perform their medical and psychological assessment to obtain or renew the driving license.

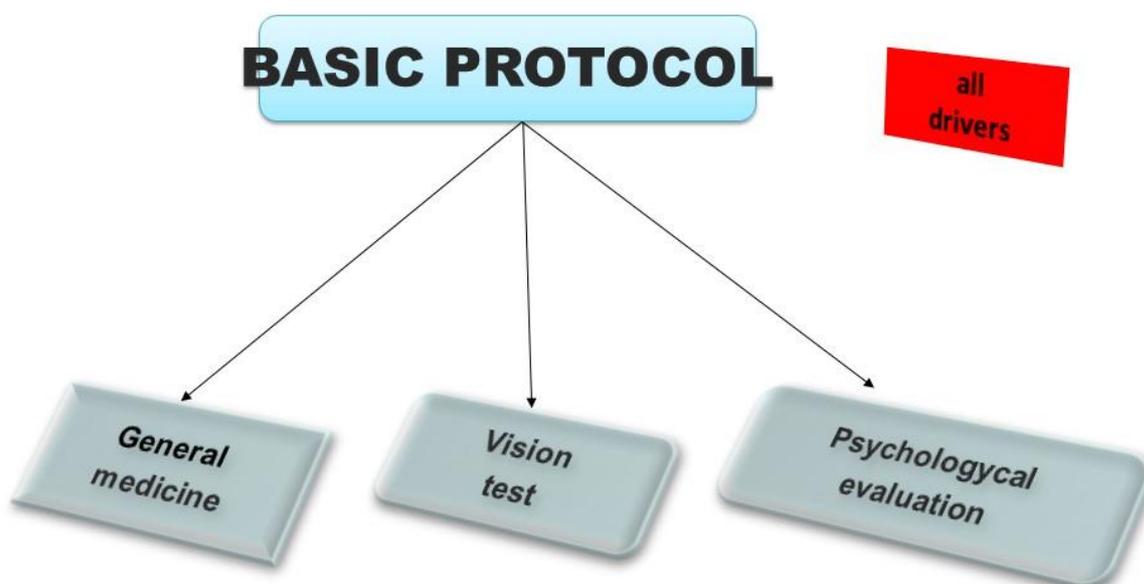
- Each medical center must have a doctor, a psychologist and an ophthalmologist (or contract with ophthalmological clinic), who will assess the psychophysical conditions of the drivers. These medical centers must also have a minimum examination equipment (regulated and controlled by the Health Authority).
- The National Department of Traffic (DGT in Spanish), together with the Ministry of Health and other experts, revised in 2007 the protocol of medical-psychological exploration (published in 2002). The medical centers for drivers must apply this protocol.

It should be updated due to various changes in Annex III of Directive 2006/126/CE

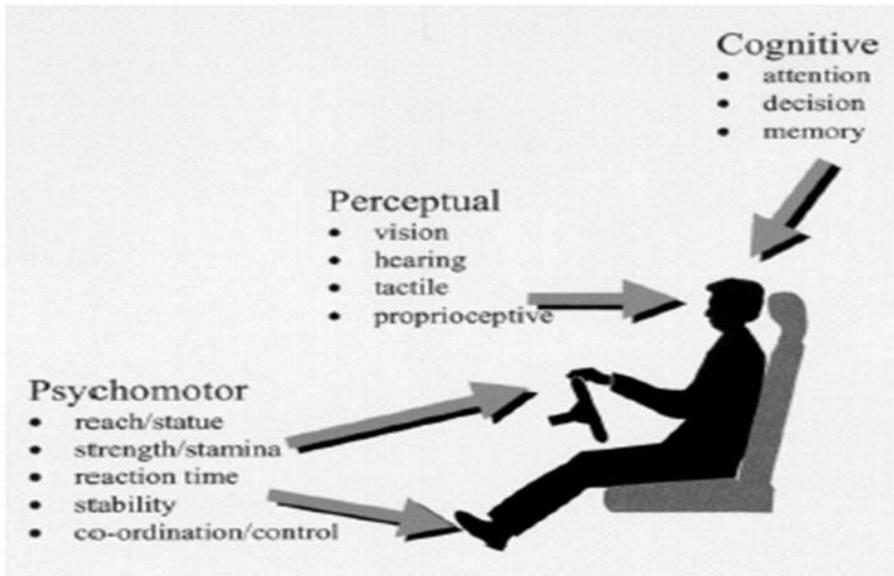


Guide of the evaluation procedure

- background and current situation (driver medical and traffic record)
- general medicine anamnesis and exploration (partial report)
- ophthalmologic anamnesis and examination (partial report)
- psychological anamnesis and evaluation (partial report)
- final report (signed by doctor/psychologist director of the medical center)



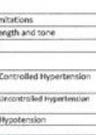
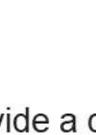
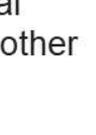
What is checked?



SPECIFIC PROTOCOL



Each physician is responsible for his part of the report and signs it.

1)10- GENERAL MEDICINE EXAMINATION: (* only if indicated) Age: <input type="text"/> Sex: <input type="text"/> BMI: <input type="text"/>		1)0- OPHTHALMIC ANAMNESIS YES YES 1 Have you seen an ophthalmologist in the last FIVE years? <input type="checkbox"/> Have you ever had eye surgery? <input type="checkbox"/> 2 Do you or have you ever, suffered from any eye disease? <input type="checkbox"/> Do you wear glasses or contact lenses? <input type="checkbox"/> 3 Are you being treated for any eye conditions? <input type="checkbox"/>		1)0- PSYCHOLOGICAL ANAMNESIS YES YES 1 Has the patient ever taken or is taking any tablets for anxiety, depression or sleeping pills? <input type="checkbox"/> 3 Job, social or family instability <input type="checkbox"/> 2 Has the patient ever been on psychotherapy or psychiatric treatment? <input type="checkbox"/> 4 Has the patient been on a long-term sick leave? <input type="checkbox"/>	
GENERAL EXAMINATION: P87 P87 2 General examination <input type="checkbox"/> 4 Height <input type="checkbox"/> ** 3 Skin and mucosae <input type="checkbox"/> 5 Weight <input type="checkbox"/> **		1)0 EYE EXAMINATION (* only if indicated) RE Unchecked Checked P87 1 Visual acuity RE LI 2 Dioptres RE LI 3 Aphakias/pseudophakia RE LI 4 Refractive eye surgery RE LI 5 Central field RE LI 6 Glaucoma RE LI 7 Mesopic vision RE LI 8 Ocular motility <input type="checkbox"/> strabismus <input type="checkbox"/> nystagmus <input type="checkbox"/> diplopia 9 Colour vision* RE LI 10 Perimetry: other meridians* RE LI		1)0- GENERAL alt. alt. alt. alt. 1 Personal deafness <input type="checkbox"/> 2 Language <input type="checkbox"/> 3 Gestures <input type="checkbox"/> 4 Behaviour (external signs) <input type="checkbox"/>	
LOCOMOTION/NEUROLOGICAL: P87 P87 5 Anatomical limitations <input type="checkbox"/> 7 Functional limitations <input type="checkbox"/> 6.1 Anxieties <input type="checkbox"/> 7.1 Muscle strength and tone <input type="checkbox"/> 6.2 Deformities/stiffness <input type="checkbox"/> 7.2 Trembling <input type="checkbox"/>		1)00 PARTIAL MEDICAL OPINION YES 1 UNFIT <input type="checkbox"/> 2 INTERRUPTED <input type="checkbox"/> 3 FIT WITH RESTRICTIONS <input type="checkbox"/> 4 FIT <input type="checkbox"/>		PERCEPTUAL-MOTOR SKILLS alt. 1.1 Quality of performance, 1.2 Understanding instructions, 1.3 Attention, 1.4 Concentration, 1.5 Nervousness-calmness 2.1 Speed Anticipation PC TM* <input type="checkbox"/> pre <input type="checkbox"/> ret <input type="checkbox"/> 2.2 Speed Anticipation PC TT* <input type="checkbox"/> PONT* <input type="checkbox"/> 3.1 Coordination (both hands) PC M8* <input type="checkbox"/> 3.2 Multiple reaction time PC M8* <input type="checkbox"/> *Crawle scores for the variables assessed in each of these tests.	
CARDIORESPIRATORY: P87 P87 P87 8 Examination <input type="checkbox"/> 10.1 Controlled Hypertension <input type="checkbox"/> 9.1 Heart rate <input type="checkbox"/> 10.2 Uncontrolled hypertension <input type="checkbox"/> 9.2 Auscultation <input type="checkbox"/> 11 Pulse rate <input type="checkbox"/> 11.3 Hypertension <input type="checkbox"/> 11.1 Diastolic <input type="checkbox"/> 11.2 Systolic <input type="checkbox"/> 12 B.P. (mmHg) Pulse rate: beats/minute Heart rate: regular/irregular		1)000 PARTIAL MEDICAL OPINION YES 1 UNFIT <input type="checkbox"/> 2 INTERRUPTED <input type="checkbox"/> 3 FIT WITH RESTRICTIONS <input type="checkbox"/> 4 FIT <input type="checkbox"/>		1)000 PARTIAL MEDICAL OPINION YES YES 1 UNFIT <input type="checkbox"/> 2 Cognitive impairment <input type="checkbox"/> 2 INTERRUPTED <input type="checkbox"/> 3 Depression/Anxiety <input type="checkbox"/> 3 FIT WITH RESTRICTIONS <input type="checkbox"/> 4 Impairment of intelligence <input type="checkbox"/> 4 FIT <input type="checkbox"/>	
SIGNATURE OF MEDICAL PRACTITIONER 		SIGNATURE OF MEDICAL PRACTITIONER 		SIGNATURE OF MEDICAL PRACTITIONER 	
doctor		ophthalmologist		psychologist	

- The driver can be requested to provide a complementary report from a specialist doctor and the result of the assess will be on hold until it is provided.
- The final result may be fit, fit with restrictions or unfit. This final report will be sent electronically to the Drivers Registry (DGT).
- The medical center makes a clinical record of each examination which must be saved for five years (it may be checked by the Health Authority at any time).
- If the driver does not agree with the result of the psychomedical examination, he/she can go to the public Health Service for another definitive assess.

Example of clinical record

AP: PSYCHOLOGICAL ANAMNESIS YES

1 Has the patient ever taken or is taking any tablets for anxiety, depression or sleeping pills

3 Job, social or family instability

2 Has the patient ever been on psychotherapy or psychiatric treatment

4 Has the patient been on a long-term sick leave

EP: GENERAL alt.

1 Personal cleanliness alt.

2 Language alt.

3 Gestures alt.

4 Behaviour (external signs) alt.

PP: PERCEPTUAL-MOTOR SKILLS alt.

5 Perceptual-motor skills

5.1 Quality of performance, 5.2 Understanding instructions, 5.3 Attention, 5.4 Concentration, 5.5 Nervousness/calmness

5.6 Speed Anticipation PC TM* pre | ret

5.7 Coordination (both hands) PC TT* PCNT*

5.8 Multiple reaction time PC MR* PC ER*

*Centile scores for the variables assessed in each of these tests.

MENTAL AND BEHAVIOUR DISORDERS YES

6 Psychosis

8 Cognitive impairment

7 Depression /anxiety

9 Impairment of intelligence

DP: PARTIAL MEDICAL OPINION: YES

1 UNFIT

2 INTERRUPTED

3 FIT WITH RESTRICTIONS

4 FIT

SIGNATURE OF MEDICAL PRACTITIONER

DF: FINAL MEDICAL OPINION:

1 Comments

2 Medical and psychological ADVICE:

Reason code 2.1 2.2 2.3 2.4 2.5

3 INTERRUPTED:

Reason code 3.1 3.2 3.3 3.4 3.5

4 REQUEST FOR A REPORT:

Date of receipt of the report and/or issuing of the final medical opinion

5 Medical conditions or impairment included in the report (annex IV)

Code: 5.1 5.2 5.3 5.4 5.5

6 Observations included in the report (adaptations and/or restrictions)

Code: 6.1 INT/4151/2004 6.2 6.3 6.4 6.5

7 UNFIT

8 FIT WITH RESTRICTIONS

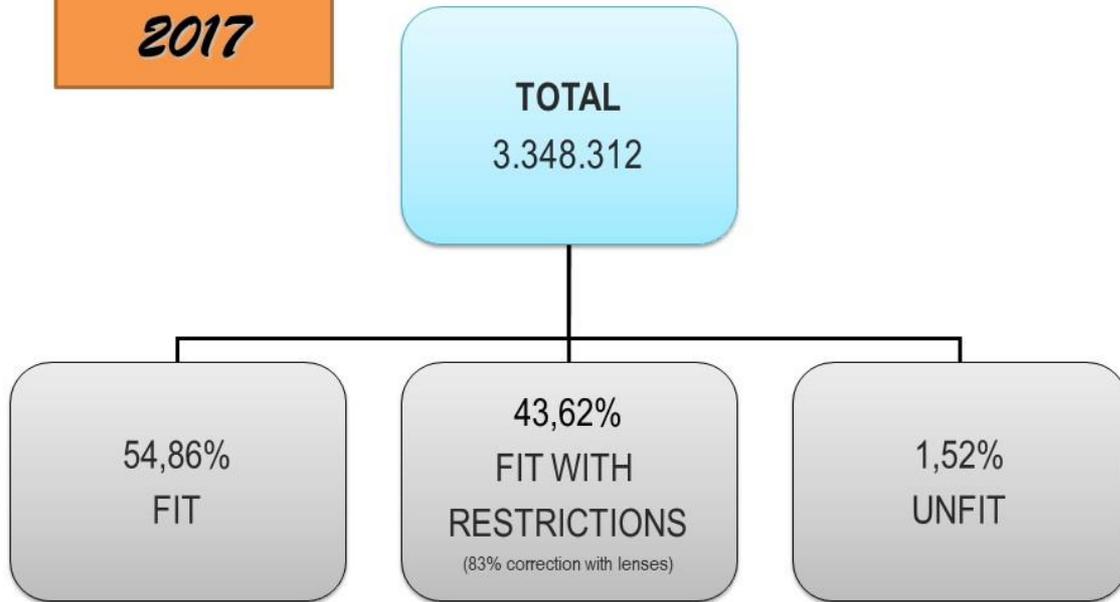
9 FIT

SIGNATURE OF DIRECTOR

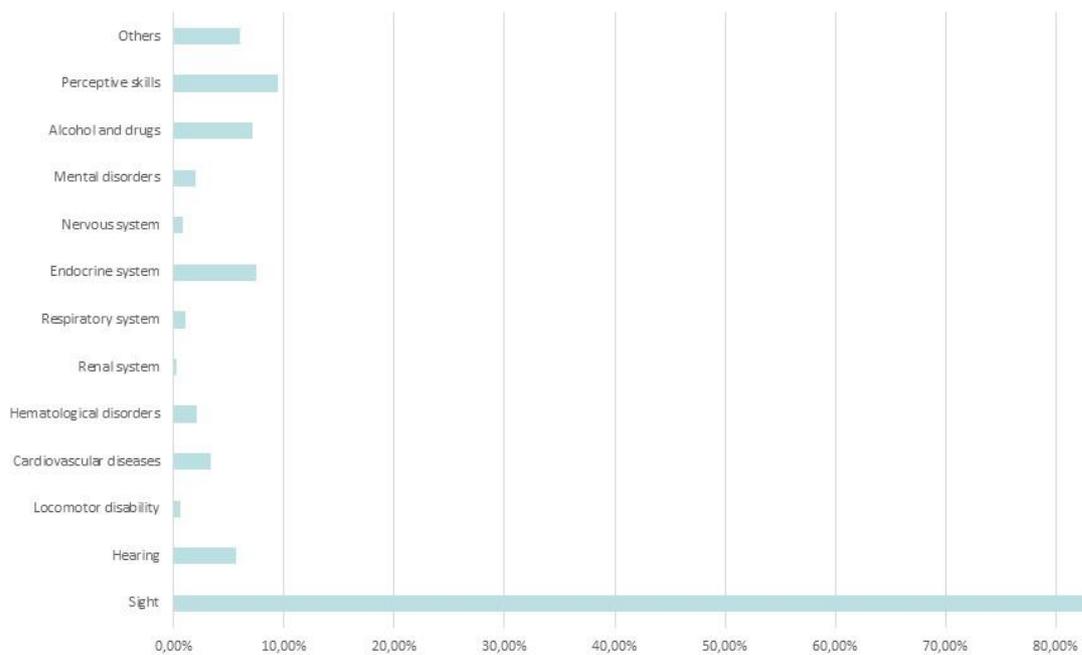
EXAMINATIONS 2017



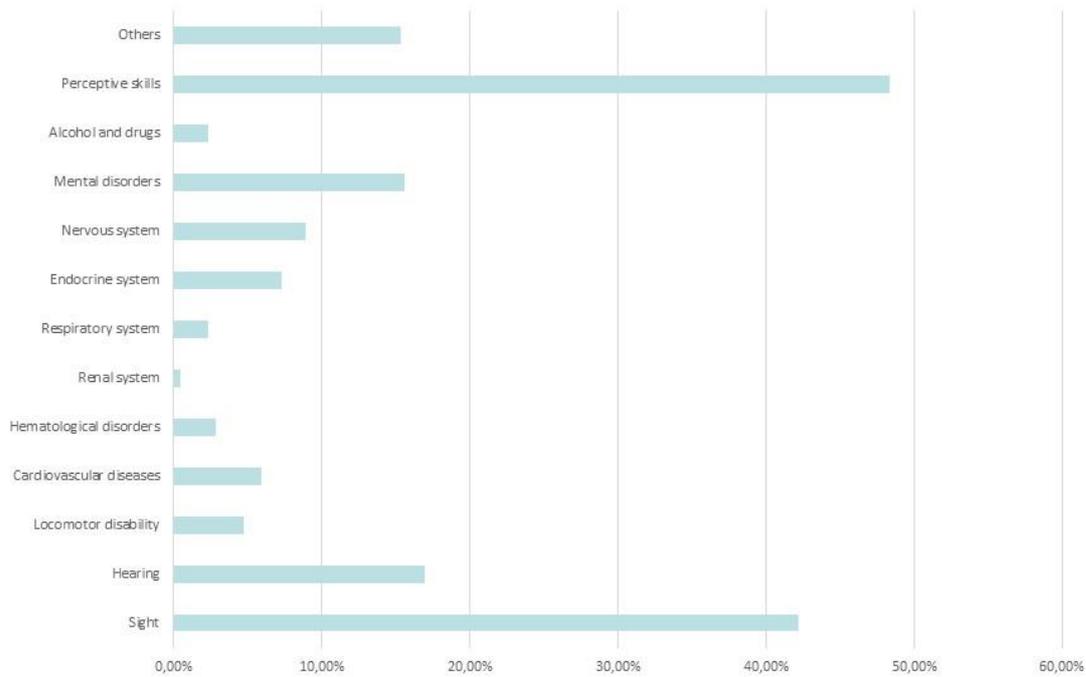
**RESULTS
2017**



RESULT: FIT WITH RESTRICTION



RESULT: UNFIT



Is the Spanish system good to identify risk drivers?



Advantages of the system

Easy accessibility to psychophysical assessment centers (2485 centers)

Identity frauds are difficult (medical centers take photo and digital signature)

We have information from ALL drivers (statistical data that allow specific road policies)

Weaknesses of the system.

Non-specialized doctors and psychologists (a traffic specific training is not required)

Some drivers hide information (undetectable in the exploration)

The centers don't have access to the drivers' clinical record. In addition, doctors (public or private system) who detect risk factors in drivers can't send this information to the Traffic Administration (Data Protection Act)

Difficulties to control de centers (double authorization: DGT-Health Service)

There are no cut-off points in some pathologies (subjectivity of doctor and psychologist)

Many doctors in the public or private health system don't know the traffic regulations

SOME SPECIFIC PROTOCOLS

Locomotor system

We have developed a protocol with code tables with connect disabilities and their adaptations

Alcohol and other drugs

We are working on a rehabilitation program for repeat offenders (currently under development)



Thank you very much
for your attention