



MEDRIL

*MEDical testing for the DRiving Licence
EU project 2003-2006*

MEDRIL Workshop Report:

Practical fitness-to-drive assessments:

On-road testing

20 May 2005
Brussels, Belgium

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1. Objective of workshop

This workshop's objective was to present and discuss designs and methods for the on-road testing of drivers with borderline medical problems, as part of the overall fitness-to-drive assessment.

The workshop was designed to provide a forum to discuss the rationale, benefits and difficulties of on-road testing of borderline medical cases (with a special emphasis on cognitive, psycho-motor and visual deficiencies).

There were two types of presentations:

- presentations from organisations in different countries with hands-on experience of working with such on-road tests and these medical problems (Germany= TÜV MPI, Netherlands= CBR, Sweden= SNRA and Great Britain= MAVIS);
- presentations from researchers who have developed an on-road testing form and system in the context of a European Research project (AGILE).

2. List of participants

Name	Organisation	country
Maximilian Angerer	Amt der oberösterreichischen Landesregierung	Austria
Patricia Arno	BIVV	Belgium
Ilse Baert	Katholieke Universiteit Leuven	Belgium
Guido Baten	EU Medical Working Group	Belgium
Alain Bohler	Ministère de Transports	Luxembourg
Ruud Bredewoud	CBR	Netherlands
Wiebo Brouwer	Dep.of Psychology, Univ. of Groningen, Neuropsychology	The Netherlands
Judith Charlton	Monash University	Australia
Juñio Cornejo Nuñez	ASECEMP	Spain
Jos De Vries	CBR	The Netherlands
Willy De Weerd	Katholieke Universiteit Leuven - Dept. Revalidatie	Belgium
Jamie Dow	Société de l'assurance automobile du Québec	Canada
Brian Ellison	MAVIS	United Kingdom
Jean-Pierre Fougère	Ministère de l'Équipement, des Transports et du Logement, Direction de la Sécurité et de la Circulation routière	France
Jean-Paul Gillen	Ministère des Transports	Luxembourg
Prem Heera	CBR	Netherlands
Aleid Hekstra	EDPC	Netherlands
Martina Hendrix	CIECA	
Manuel Hernandez Estupiñan	ASECEMP	Spain
Clare Jenkins	DVLA	United Kingdom
Gary Jones	Forum of Mobility Centres, UK	United Kingdom
Sylvie Joris Lambert	Institut Universitaire de Médecine Légale	Switzerland
Marita Koivukoski	AKE	Finland
Gerhard Laub	TÜV Medizinisch - Psychologisches Institut GmbH	Germany
Amanda Leodolter	Land Oberösterreich, Bezirkshauptmannschaft Ried i. I	Austria
Claude Marin-Lamellet	INRETS	France
Karine Micalizzi	Institut de Médecine Légale de Lausanne	Switzerland
Willy Michiels	Institut Universitaire de Médecine Légale	Switzerland
Helen Mary Middleton	Institute for Automotive and Manufacturing Advanced Practice, University of Sunderland	United Kingdom
Mikael Ojala	Insuramed	Finland
Klaus Christian Ottersen	Norwegian Public Roads Administration	Norway
Erlend Richardson	Karolinska University Hospital, Traffic Medicine Centre	Sweden
Sandrine Rochard	HUG - Département Neuchâtel	Switzerland
Luisa Gonzalez Sanchez	ASECEMP	Spain
Nick Sanders	CIECA	
Sonja Sporstøl	CIECA	
Stina Stenback	SNRA	Sweden
Mark Tant	EU Medical Working Group	Belgium
Joël Valmain	European Commission	
Paul Van Crombrugge	EU Medical Working Group	Belgium
Koen Verkammen	BIVV/ CARA	Belgium
Jo Wright	Derby Regional Mobility Centre	United Kingdom
Hugo Ziegler	TÜV Medizinisch - Psychologisches Institut GmbH	Germany

3. Agenda

Agenda MEDRIL Workshop, 20 May 2005 (9:00 – 16:30)

9:00 **Welcome and introduction MEDRIL project**

Ms. Sonja Sporstøl, CIECA
Mr. Nick Sanders CIECA
Joël Valmain, European Commission

Presentations of on road testing in 4 European countries

9:30 Netherlands
Mr. Jos de Vries, CBR (Dutch Driver Testing Authority)

10:30 Great Britain
Mr. Brian Ellison, MAVIS

11:30 Coffee

12:00 Sweden:
Dr. Stina Stenback, Swedish National Road Administration

13:00 Lunch

14:00 Germany
Mr. Gerhard Laub, TÜV MPI GmbH

15:00 Coffee

Presentation AGILE project and development on-road testing form

15:30 Patricia Arno, BIVV

Questions and Discussion

16:30 End workshop

4. Introduction to MEDRIL

The primary objective of the MEDRIL project is to estimate the prevalence of a range of medical impairments in the category B driving population. This objective is being met by carrying out 10,000 medical screening tests on drivers in Spain, Netherlands, Luxembourg and Finland, using a standardised medical form (see annex 1).

The secondary objective of the MEDRIL project is to examine the application of practical (on-road) fitness-to-drive assessments in specific EU member states, as a supplement to the medical assessment. This was the subject of this workshop.

MEDRIL is managed by CIECA, the international commission of driver testing authorities, and involves the following partners:

- AKE and INSURAMED, Finland
- CBR, Netherlands
- Ministry of Transport, Luxembourg,
- ASECEMP, Spain

As the CIECA website is currently being restructured, further information on the MEDRIL project can be obtained from martina.hendrix@cbr.nl.

5. View of CIECA with regard to fitness to drive rules

Sonja Sporstøl, CIECA Secretary General.

Recently, a lot of work has been done, in Australia, North America and Europe, to develop an evidence-based approach to fitness to drive rules. The recent fitness to drive conference in Brussels, organised by the European Commission, played an important role in this process. Governments and national driver licensing regimes are under increasing pressure to adopt a case-by-case approach to fitness to drive, rather than imposing blanket driving bans on persons with specific medical conditions. This process is likely to intensify as Western societies grow older and the likelihood of increased medical problems related to age grows.

According to this case-by-case, evidence-based argument, certain medical conditions may differ from person to person in terms of their severity, progressivity, the effect of medication and the ability of the driver to compensate for the condition, or combination of conditions. In certain situations, therefore, drivers should be given the right to individually prove their ability to drive safely. Moreover, there is evidence to suggest that doctors are often unable or reluctant to unilaterally determine a person's ability/right to drive. Such a decision is a major one and can bear heavily on the minds of doctors, especially general practitioners who are often not sufficiently trained in these matters.

On-road testing for these persons fits into this context. However, it is important to note that there is opposition to on-road testing, whether on principle or simply because not enough scientific research has been done to validate these methods. Opponents of practical on-road testing would state that only medical experts have the knowledge and skills to determine fitness to drive. According to this view, on-road tests cannot be relied upon fully, at least not in their current form.

This workshop strikes at the very essence of the fitness-to-drive debate: on the one hand, each individual's right to mobility must be upheld wherever possible. On the other hand, in order to ensure their own well-being and the well-being of others, all drivers must be able to drive safely.

Today, we shall hear from some of the few countries in Europe where the possibility for practical on-road testing does exist for drivers with borderline medical problems. We will also have a presentation from a recently completed EU project called AGILE, which has designed and evaluated various types of such on-road tests. We will hear about the different philosophies and approaches used, and their experiences so far.

In the meantime, the general approach to fitness-to-drive differs enormously from country to country. Whereas in one EU country frequent medical checks for drivers are required by law from an early age, in another member state there are no requirements at all, even for elderly drivers. In other countries, individual citizens may voluntarily - or on a mandatory basis - declare a medical problem, and elsewhere general practitioners are obliged to report to the authorities any of their patients who may be unfit to drive. These differences underline fundamentally contrasting philosophies.

I sincerely hope that this workshop can contribute to the ongoing debate on fitness-to-drive led by the European Commission, in its effort to revise the current EU requirements in this area. We also look forward to hearing the views of our guests from outside of Europe. I wish you all an interesting day.

6. View of the European Commission: Current fitness-to-drive policy development in Europe

Joel Valmain, DG TREN.

Mr Valmain explained the current EU rules on fitness to drive (Annex III of the Driving Licence Directive) and the changes likely to occur as a result of the forthcoming 3rd Driving Licence Directive (concerning administrative validity). He then presented an overview of the wide range of EU research projects that are currently underway / recently completed in this field. 3 expert working groups have been set up under the EU Driving Licence Committee to look specifically at 3 major medical conditions: diabetes, vision-related problems and epilepsy.

Mr Valmain stressed that the vision of the European Commission was not to promote practical (on-road) fitness to drive testing for all persons with medical conditions, but rather to permit this option for persons with borderline medical impairments where a medical expert is unable to determine their fitness-to-drive alone.

The presentation also contained references to a number of relevant websites on fitness to drive in Europe.

7. Presentations 1-4: Presentations of on-road testing in 4 European countries

Observation of driving behaviour in Germany: Gerhard Laub, TÜV MPI GmbH

Mr Laub presented the entire programme of fitness-to-drive assessment in Germany, before explaining the:

- Observation of driving behaviour (for drivers with cognitive impairments)
- The driving test (for persons with physical handicaps)
- Voluntary advice service offered by TÜV MPI for drivers with medical conditions

The fitness to drive assessment in Germany is normally by the authorities (e.g. traffic offenders). No regulations exist which oblige drivers of a certain age to undergo medical testing).

The assessment can involve 3 stages:

1. An expert medical assessment
2. An expert psychological assessment
3. A practical fitness-to-drive assessment (including on-road observation)

The third stage is a relatively new one. The majority of drivers going through the system have been referred as a result of traffic offences relating to alcohol, drugs and general offences.

The 3 assessments are combined into an overall expert report which is presented to the authorities.

In terms of the practical fitness-to-drive component (observation of driving behaviour), this assessment phase can be applied if prior test results are just under the necessary threshold for fitness-to-drive (provided there is no major medical impairment), but there are otherwise favourable findings in the medical examination and psychological exploration.

This phase is based on the principle of the ability of the driver to compensate for his/her medical or cognitive conditions, through:

- (medical-) **technical measures** (e.g. modified car, prosthesis)
- Treatment of condition with **medicine**
- **psychological qualities** (e.g. special prudence, attention and conscientiousness)

It focuses on the operational and tactical driving ability of the driver. It does not, however, focus on the strategic level (decisions before driving, route selection, time of driving, etc).

There is only one type of practical fitness-to-drive assessment, not specific types according to specific medical conditions. This assessment differs from a normal driving test in that there is more interest in cognitive skills. The driver is expected to have more experience than a learner driver and not to have problems with basic skills.

The observation of driving behaviour respects the following parameters:

- It is carried out in the car of a driving school
- with a driving instructor sitting next to the driver

- observation of driving behaviour by a psychological expert (sitting in the back)
- the driving instructions, behaviour of observer and of driving instructor, the route, and recording of notes and evaluation are standardised
- the psychologist evaluates the driving behaviour in a general manner
- duration 60 minutes (5 minutes pre-conversation, 45 minutes driving, 10 minutes post-conversation)

The observation is based on the following variables:

1. speed behaviour
2. distance behaviour
3. tracking behaviour
4. protecting behaviour
5. endangering behaviour
6. communication behaviour

Within each variable are sub-variables. Each sub-variable can be marked with a 1 (= uncertainty) or 2 (=error). In addition, a general observation is made. The final report from the psychologist will record whether the driver has committed no – single – numerous – significant or severe driving errors.

This report will be combined with the reports from the expert medical assessment and the medico-psychological assessment and presented to the authorities.

For drivers with physical handicaps, vehicle adaptations will be required. The practical driving assessment aims to determine if the driver can drive with the adapted vehicle safely. It is carried out by a driving examiner, in the presence of the driving instructor (in the same way as the normal driving test in Germany).

The procedure is as follows:

1. there is an operating test before the driving test
2. course and duration: similar to the practical part of the official driving test
3. identical to official driving examination when the handicapped person is applicant for driving licence
4. expert report contains the results of driving test together with the results of the operating test
5. expert report contains necessary limitations and conditions

TÜV MPI also offers a voluntary service to the elderly and to those with medical conditions. The service includes:

1. An introductory conversation
2. Psychological tests of traffic-related abilities and/or an observation of driving behaviour
3. Medical / psychological consulting
4. Report and recommendations

These recommendations may include the following:

- continuous active participation in traffic in order to maintain traffic-related functions
- using possibilities of compensation like route selection, choice of time, driving only in familiar region
- some practical driving lessons for refreshing
- informing about decrease of performance (leading to a more realistic evaluation of one's own capabilities)
- renunciation of driving licence or of driving

The outcome of this service is not submitted to the authorities.

Practical fitness-to-drive assessment in the Netherlands: Mr. Jos de Vries, CBR (Dutch Driver Testing Authority)

Jos de Vries introduced the role of the CBR and medical and aptitude requirements for obtaining a driving licence.

The role of the practical fitness to drive assessment is a major one in the Netherlands. This is because the National Health Council (the medical advisory body to the government) states that:

“Because there are no scales of disabilities or other measurement instruments specific for fitness to drive, the report of the medical specialist has not the purpose to determine the fitness to drive.”

Medical specialist reports therefore aim to provide information so the CBR can determine the fitness to drive OR advise a driving test; the outcome of this driving test is decisive for determining fitness to drive (although the final decision is taken by the chief medical officer at the CBR). A practical driving assessment takes place as long as the basic national minimum requirements for fitness to drive, based on Annex III of the driving licence directive, are met.

The chief medical officer can request a practical assessment in order to assess:

- ability to use adaptations safely
 - judgement during traffic participation
 - perception
 - compensation
 - reaction
- (for cognitive or visual field limitations).

The practical driving assessment in the Netherlands is different from the normal driving test. This is because most clients have already passed their driving test, and they have developed driving skills and experience.

The driving assessors in the Netherlands are driving examiners with 5 months supplementary training (6 weeks theoretical training and on the job training with a mentor). There are only 13 such persons in the Netherlands (16 by the end of 2005).

The assessment is 60 minutes long and is a free service for clients. In principle, it takes place in the client's car, unless the driver is still a learner. Different protocols (observation forms) are used, according to the medical condition in question, as follows:

1. locomotor limitation
 - amputation, paralyses
2. cognitive limitation
 - traumatic brain injury
3. visual field limitation
4. combination of limitations
 - stroke, MS

For cognitive / visual field limitations, for instance, there is a focus on both the operational and tactical components of driving. For locomotor problems, the emphasis is more on operational issues (vehicle control: brakes, steering, gears, accelerator, use of indicators, etc). This includes emergency braking.

For persons with locomotor problems, computerised equipment is used to show braking force and steering force and speed, for instance.

Mr de Vries provided statistical information on the numbers of drivers undergoing such tests, and for what reasons, in addition to the pass rates of these individuals. He also stressed the importance of training for such drivers, to enable them to acclimatise to vehicle adaptations or to develop compensatory strategies for driving safely.

In summary, the fitness-to-drive process in the Netherlands is as follows:

- Specialist report provides information to the CBR
- On road test *individual* assessment is requested if minimum requirements are met but there are doubts about the person's ability to drive safely
- Medical doctor CBR determines fitness to drive (although the outcome of the on-road test is decisive).

Functional driving ability assessment in Great Britain: Brian Ellison, MAVIS

Brian Ellison, from the UK Department for Transport's Mobility and Inclusion Unit, presented an example of a driving ability assessment in Great Britain. He stressed the fact that there were different standards and means of assessment around the country, according to the rehabilitation centre in question.

The test is based on the principle that driving behaviour is a System Property: that is that behaviour depends upon the properties of the components but is something that is not evident in the individual components. Its aim is to explain behaviour in terms of directly observable action, without seeking to understand underlying mechanisms.

What process has occurred prior to the individuals taking the functional driving test differs from person to person. If someone has a disability, they are legally obliged to inform the licensing agency (DVLA). Not all need to undergo practical assessment. If required, they will be examined by their GP or appointed doctor who then refers the information to the DVLA, who may then refer the individual for a functional driving assessment. Others may come from rehabilitation centres (as part of rehabilitation) so they may not have been medically screened. Those referred by family or friends come directly, and again no medical screening has taken place. MAVIS has a 'duty of care' → if MAVIS decides someone is likely to be a risk, it passes this information on to the DVLA for the medical procedure to be initiated.

Considering only around 5000 driving assessments take place per year in Great Britain, only a small fraction of people with medical impairments are being seen. This is particularly apparent when comparing this figure with the 30,000 people per year who suffer strokes...

The practical test aims to assess the cognitive, sensory and physical functions of the driver and is composed of two parts:

1. 60 minutes out of traffic (on a private area), including a slalom cone test and other manoeuvring exercises
2. 45 minutes in traffic

The first section is designed to assess the operational skills of the driver and the relationship between reaction time, thinking time and driving performance. It involves a battery of functional exercises. Each exercise has standardised instructions and scoring – based on driver norms. Instructions can be given in different ways (verbal, auditory, visual) to ensure that they are understood. The purpose is to observe trends in driver performance and to determine if the trend is safe or unsafe.

The part of the test in traffic looks at more tactical level behaviour, including:

- Placing the car correctly in time and space at speed
- Making appropriate decisions
- Interacting with other road users
- Performing all of the above in high work load situations.

The benefits of such a functional assessment are:

- **PERFORMANCE V A LABEL:** an individual is judged on their driving performance rather than labelled by a medical diagnosis alone
- **DEMONSTRATE ABILITY:** an individual is able to demonstrate their ability to drive safely, rather than having their licence removed by a doctor
- **CONFRONTS WITH REALITY:** the individual can be encouraged to accept his/her impairments and their influence on safe driving.
- **ALLOWS ADVICE TO BE GIVEN:** the process allows advice to be given, not only a formal result.

Practical fitness-to-drive in Sweden: Dr. Stina Stenback, Swedish National Road Administration

In general, fitness-to-drive in Sweden is determined by medical experts; only in a small number of cases is there an on-road test. This test is requested by a county council. The prior medical element is often missing. Current regulations state that general practitioners (and indeed all medical doctors) in Sweden are obliged to notify the authorities if they have any doubts regarding fitness-to-drive of their patients. In practice, this does not happen very often. There are plans to change this system; one idea is to make drivers complete a declaration of health each time the licence is to be renewed (every 10 years).

How does the country council decide that someone must undergo a medical test?

→ first time applications on the basis of declarations of health

→ report from the police following an offence

→ when the GP has determined there is a problem (this does not happen much in practice)

A small number of on-road tests are carried out to look at the operational and tactical behaviour of the driver. Dr Stenback stated that evaluations should be multidimensional and multidisciplinary; the examiner needs prior medical information about what he is supposed to be looking for. In the current system, there seems to be a stage missing between establishing that there is a medical problem and the practical driving test. The multidimensional approach (including medical assessments by specialists) currently only exists in Stockholm and one or two other specialised organisations.

As for the use of the practical component of fitness to drive, Dr Stenback stated that mild cognitive impairments should not only be evaluated through neuropsychological tests (which are expensive and time consuming) and which do not provide information about road safety. Both a practical and a medical evaluation are needed. Each time a medical expert relies on the result of his own expertise alone, he may not be providing an objective result.

Dr Stenback referred to a range of medical conditions and the feasibility of a practical on-road test for each specific condition. On-road tests are not useful for conditions where isolated crises can occur, such as diabetes and epilepsy. Dr Stenback said practical tests may be useful in case of vision problems, locomotor conditions and cognitive disorders. For cases of mild

dementia, you might need both an on-road test and a neuropsychological test, as the condition of the patient can differ greatly from one day to the next.

In the ensuing discussion, it was stated that it is important not to consider the disease itself, but to consider the impact the disease has on the person and whether there are additional complications or diseases that make the condition worse. Variables such as co-morbidity, severity and the progressivity of the problem need to be taken into account. Furthermore, it is not completely clear which diseases we should be looking at when considering driving safety. This is opinion-based medicine and only some figures are available. Perhaps other diseases are much more relevant.

Ultimately, divided attention and judgement are the main factors influencing the safety to drive. In situations of cumulative effect of medicine and illness(es), you need to put the person on the road to see the effects. In summary, functional impairment can only be measured by a functional performance.

The AGILE project and on-road testing: Patricia Arno, BIVV Belgium

The AGILE project focused on the fitness-to-drive of elderly drivers. The project designed a multi-tiered assessment programme including pre-screening and cognitive screening, an in-depth assessment composed of a detailed neuropsychological (NP) examination and a practical on-road test, and sometimes of a driving simulator test. The pre- and screening stages can be performed by health care providers, like GP's while the in depth assessment should be performed in assessment centres specialised in the area of fitness to drive. Originally the intention was to test all those referred to the second assessment step on the road, as the practical test is generally considered as the "Golden Standard". After discussions within the consortium, the proposal was formulated to perform an on-road test only with those people who had failed at least one of the 3 modules of the Neuropsychological Battery (previous tier). If everyone had to be tested using all 3 tiers, there would simply be too many people to handle and too much time would be spent on examinations for people who are fit anyway.

The outcome of the multi-tiered assessment would lead to one of the following decisions:

- fit to drive : no adaptation, condition, nor restriction
- fit to drive with conditions (related to the driver)
- fit to drive with restrictions (related to the driving licence use)
- fit to drive with adaptations (related to the car)
- unfit to drive - definitively
- temporarily (later assessment needed)

The third and final assessment tier involves an on-road test and when available a simulator test. The simulator is a complementary step designed to look at performance in critical situations (e.g. reaction times). The idea of the practical on-road test is for that they cater for the specific cognitive impairments shown during the NP tests performed in the previous stage. Impairments can be observed in one out of the three NP modules, leading to the corresponding module of the on-road test. This way, it can be observed whether impairments can be compensated for during real conditions. The Three clusters are the following:

- 3 clusters:
- | | |
|------------|---|
| I | Non-Spatial Attentional Performance (e.g. Alert , 'Go-NoGo') |
| II | Visuo-Spatial Attention (e.g. visual scanning, visual field quality, distractibility) |
| III | Executive Attentional Functioning (e.g. Divided attention, Flexibility) |

In addition to one basic skills cluster performed before (failure -> no continuation).

Testing all the modules on the road lasts about 30 minutes on-road. Performance is scored at specific locations, leading to a total score at the end of the test. There are a total of 3 performance levels:

- satisfactory;
- dubious (*restrictions?*);
- unsatisfactory.

These tests were carried out blind (so the assessor was not aware of the medical disorder of the driver).

A comparison of the outcome of the AGILE protocols to those of the TRIP protocol (used by the CARA occupational therapists during the AGILE pilots in Belgium) shows high validity for the AGILE tests.

The reason why the AGILE consortium decided to design a standardised on-road test and protocol was to fill in the gap existing in the field, as shown in a preliminary literature review performed at the beginning of the project.

8. Discussion Points

Although the fitness to drive assessment remains a largely voluntary process in the EU member states, there is recognition of the need for a multi-disciplinary approach (medical, psychological and practical) to the process as a whole. There is also recognition that in some cases, doctors should refer their patients for a practical assessment. This practical assessment can be the only way to determine if a person is able to drive safely. Medical examinations can diagnose the presence of impairments but often a practical assessment is necessary to see what effect the impairment has on driving performance. The effects will depend on the severity of the condition, effect of medication, combination of medicine and disorder or combination of disorders, the progressivity of the problem and the ability of the driver to compensate for impairments while driving.

The mind-set is that persons with borderline medical conditions should be given every opportunity to prove their ability to drive safely, within certain parameters, and that functional problems can only be measured through functional performance. This not only includes the right to undergo a practical assessment, but also to advisory services and to training, for instance for learning to drive with a vehicle adaptation.

In order for such on-road assessments to be fair, there needs to be an element of standardisation: the same rules should apply to everyone undergoing such assessments. The training of the assessor, route selection, and the ability to repeat certain situations are also of paramount importance for the test to be valid. Prior information regarding the medical disorder is also helpful.

There was a general recognition that the practical on-road test can only look at operational and tactical driving behaviour. Strategic behaviour is also important for drivers with medical problems who can compensate for their condition by determining when to drive, for instance. This strategic level can and should be dealt with at another stage in the fitness-to-drive process.

In addition to the 4 European countries examined during the workshop, Belgium, Switzerland and Luxembourg also have such practical assessments. Differences between the systems in Netherlands, Germany, Sweden and Great Britain were seen in:

- Whether or not the test is customised specifically for the disorder in question
- Where the test 'sits' as part of the overall fitness-to-drive assessment
- The relative importance of the on-road test compared to the medical component
- The background of the assessor
- The location of the test (on-road, private areas)

There was recognition that little is known regarding the impact of certain disorders on the ability to drive. Results of previous studies are often not nuanced enough, because they fail to specify the severity level of the illness for each individual. Dr Dow from Canada informed the workshop delegates that a study will be conducted in Canada by an insurance company in which groups of drivers with differing severity of diseases will be made (with separations according to the severity of disease, different combinations of disease) and these will be combined with accident reports.

9. Next steps

A more detailed analysis of the different practical fitness-to-drive assessments will be made in the MEDRIL final report (expected January 2006).

Results of the MEDRIL tests to assess the prevalence of a range of medical disorders in the driving population will be presented in a workshop on November 25.

Annex 1: Standardised MEDRIL medical screening test

I. PATIENT INFORMATION

Sex: Male Female

Age:

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Length of education (school-leaving age): 16 or lower 17-19 higher education

Location of residence (population):

<2000	<input type="checkbox"/>	40001-100000	<input type="checkbox"/>
2001-10000	<input type="checkbox"/>	100001-500000	<input type="checkbox"/>
10001-40000	<input type="checkbox"/>	500001+	<input type="checkbox"/>

Living status:

Living alone Living with a partner

II. DOCTOR'S ANAMNESIS

	YES	NO
1. Eyes: Are you being treated (or have you ever been treated) by an ophthalmologist?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have problems with night vision? (If "no"): do you ever drive at night?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
2. Cardiovascular: have you ever been treated for cardiovascular diseases?	<input type="checkbox"/>	<input type="checkbox"/>
3. Renal: have you ever been treated for kidney problems?	<input type="checkbox"/>	<input type="checkbox"/>
4. Diabetes: have you ever been treated for diabetes?	<input type="checkbox"/>	<input type="checkbox"/>
5. Neurological: have you ever suffered from any disorder of the brain or nervous system (Parkinson's, stroke, vertigo...)?	<input type="checkbox"/>	<input type="checkbox"/>
6. Surgery: have you ever had surgery on your eyes or brain, or have you ever had an organ transplant?	<input type="checkbox"/>	<input type="checkbox"/>
7. Epilepsy or similar: have you ever suffered from epilepsy or a similar disorder?	<input type="checkbox"/>	<input type="checkbox"/>
8. Psychiatric conditions: have you ever received treatment for your mental health?	<input type="checkbox"/>	<input type="checkbox"/>
9. Medication affecting driving: Do you take any medicine that may influence your ability to drive, such as hypnotics, tranquillisers, antidepressants, anti-psychotics, stimulants or other similar drugs? Hypnotics <input type="checkbox"/> Sedatives <input type="checkbox"/> Narcoleptics <input type="checkbox"/> Analgesics <input type="checkbox"/> Anti-depressants <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Sleeping disorders: do you have problems with abnormal sleepiness, getting to sleep or waking up suddenly during sleep?	<input type="checkbox"/>	<input type="checkbox"/>

11. Alcohol consumption

a) How often do you drink 3 portions of more of beer, wine, or other alcoholic beverages?

- Never 2-3 times a week
 About once a month 4 times a week or more
 2-4 times a month

b) How many portions of alcohol do you generally consume each time you drink alcohol?

- 1-2 portions 7-9 portions
 3-4 portions 10 or more
 5-6 portions

c) How often do you consume six or more portions?

- Never Once a week
 Once a month Daily or almost daily

12. Other (please specify):

III. MEDICAL EXAMINATION

	PASS	FAIL
1. Eyesight (minimum 0.5)	<input type="checkbox"/>	<input type="checkbox"/>
2. Visual field (normal / abnormal)	<input type="checkbox"/>	<input type="checkbox"/>
3. Strength (normal / abnormal)	<input type="checkbox"/>	<input type="checkbox"/>
4. Reflexes (normal / abnormal)	<input type="checkbox"/>	<input type="checkbox"/>
5. Balance (normal / abnormal)	<input type="checkbox"/>	<input type="checkbox"/>
6. General physical condition: blood pressure (>200 systolic, or > 120 diastolic)	<input type="checkbox"/>	<input type="checkbox"/>
7. General physical condition: stethoscope (normal / abnormal)	<input type="checkbox"/>	<input type="checkbox"/>
8. Cognitive impairment: mini-mental test SCORE (max. 30):	
9. Alcohol abuse test (CAGE) if appropriate	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever felt you ought to cut down on your drinking? Y <input type="checkbox"/> N <input type="checkbox"/>		
Have people annoyed you by criticizing your drinking? Y <input type="checkbox"/> N <input type="checkbox"/>		
Have you ever felt bad or guilty about your drinking ? Y <input type="checkbox"/> N <input type="checkbox"/>		
Have you ever taken a morning eye opener to steady your nerves? Y <input type="checkbox"/> N <input type="checkbox"/>		

10. Other (please specify):
