MINUTES OF THE MEETING OF THE SECRETARY OF STATE FOR TRANSPORT'S HONORARY MEDICAL ADVISORY PANEL ON DRIVING AND DISORDERS OF THE CARDIOVASCULAR SYSTEM

THURSDAY, 16 MARCH 2017

Present:

Dr M Griffith	Chairman
Dr L J Freeman	
Professor C Garratt	
Mr A Goodwin	
Dr D Fraser	
Mr B Nimick	
Mr D Simpson	

Ex-officio:

Dr L Williams	Consultant Cardiologist, Papworth Hospital (Guest speaker)
Dr S Bell	Chief Medical Officer, Maritime and Coastguard Agency
Dr W Parry	Senior Medical Adviser, DVLA
Dr A Kumar	Panel Secretary, Medical Adviser, DVLA
Mr J Donovan	Medical Licensing Policy, DVLA
Mrs R Toft	Medical Licensing Policy, DVLA
Dr I Perez	Medical Adviser, DVLA
Dr J Morgan	Medical Adviser, DVLA
Mr T Ackroyd	Operations and Customer Services Director
Miss N Davies	Head of Drivers Medical, DVLA
Mrs S Charles-Phillips	Business Support, DVLA
Mrs K Bevan	PA to Miss N Davies

1. Apologies for absence

Apologies have been received from Mr M Gannon, Dr R Henderson, Dr D Northridge, Dr S Lim, Dr S Mitchell and the Northern Ireland representative.

2. Chairman's remarks

The Chairman advised that the syncope standards have been discussed at a meeting recently with Professor Cruickshank (Neurology Panel Chairman), Dr Parry (the Senior Medical Adviser) and himself. Relevant changes will be incorporated in the new edition of 'Assessing fitness to drive' The Chairman's view was that greater strictness/stringency is needed for Group 2 syncope standards, in particular, cases of recurrent syncope.

The Panel Secretary advised that the current Group 2 standards in the AFTD, for recurrent episodes of transient loss of consciousness, do not completely reflect previous advice from the Cardiology/Neurology Panels. Please see standards from the At a Glance guide (January 2016) and AFTD (February 2017) as below:

AAG

NEUROLOGICAL DISORDERS	**GROUP 1 ENTITLEMENT ODL – CAR, MOTORCYCLE**	**GROUP 2 ENTITLEMENT VOC – LGV/PCV (LORRY/BUS)**
Two or more episodes of loss of consciousness/loss of or altered awareness without reliable prodromal symptoms.	If the episodes have been within the last 5 years then licence revoked or refused for 12 months or until the risk has been reduced to $<20\%$ per annum.	If the episodes have been within the last 10 years then licence revoked or refused for 10 years or until the risk has been reduced to less that 2% per annum.

AFTD

Cardiovascular but excluding typical vasovagal syncope		
While standing or sitting	Must not drive and must notify the DVLA If there are factors that would lead to an increased risk of recurrence, then 1 year off driving would be required.	Must not drive must notify the DVLA. Driving may resume after 3 months only if the cause has been identified and treated. If no cause has been identified, the licence will be refused or revoked for 12 months.

The Chairman advised that the advice as in AAG needs to be reflected and updated in AFTD. He added that the syncope guidelines should be reviewed on a regular basis (preferably annually) at a joint Cardiology and Neurology Panel meeting with relevant experts from both panels being present.

The Chairman asked the DVLA Policy representative about the progress on the appointment of a new Panel member with expertise in cardiac imaging to replace the retired Panel member in this area. The chair advised that it is important to have this appointment before the next Panel meeting as currently there is no cardiac imaging expert on the Panel and hence this would not meet the minimum standards of expertise provided by the current Cardiovascular Panel. He also advised that the nominations for this replacement Panel member were submitted in November 2015. Policy advised that the DVLA review of Panels is ongoing, likely to reach the final stage very soon and once this review is complete, further recruitment plans will be shared with the Panel.

3. Minutes of the meeting of 22 September 2016:

The minutes were accepted as accurate and agreed once amendments made as discussed below in 'Matters arising'

4. Matters Arising

Item 5 – Congenital heart disease: Review of licensing standards
Dr Freeman advised a few amendments (the amended text sent by her in an e-mail to Panel Secretary will be incorporated in the September 2016 minutes to reflect the amendments):

Conclusion section, second paragraph, third line should be 'symptomatic' heart valve disease instead of 'asymptomatic';

Page 11 in this bundle, under the discussion heading, 'sub-pulmonary ventricle' needs to be replaced by sub-aortic ventricle at various places (as in the amended text).

The amended minutes should read as follows:

There was a discussion whether for 'single ventricle' or 'systemic right ventricle' ie. the subaortic ventricle (for example in congenitally corrected transposition of great arteries (ccTGA) or atrial repair of TGA (Mustard/Senning procedure, there should be requirement for systemic (subaortic) ventricular function to be greater than 40% rather than systemic (subaortic) ventricular function at least 40% as in the current Group 2 standards. It was also discussed that the ejection fraction in these above cases would be much more accurately measured by a cardiac MRI rather than a conventional 2-D echo as the systemic RV may be foreshortened on conventional echocardiography. Cases as above with a systemic (sub aortic) ventricle should also need to meet the current Group 2 exercise tolerance test standards (9 minutes of Bruce protocol) however it will be the functional capacity that needs to mainly looked at rather than ECG changes so cases of left or right bundle branch block could also have ETT in these cases. Individuals who will not be able to undertake exercise tolerance testing due to other reasons, for example, mobility issues would not be able to meet the Group 2 standards if they fail to demonstrate the required cardiac functional standards. There was discussion whether there should be a separate section for detailing the ETT criteria in these cases as they would be different from the ischaemic heart disease standards. There was also discussion about whether all case of systemic right (subaortic) ventricle would need ETT and whether medical advisers would need to assess these cases to make a decision for referral for ETT or not. The Chairman's view was the fact that the ejection fraction is a much better predictor of a sudden and disabling event, if these individuals have a systemic (subaortic) ventricular ejection fraction greater than 40% then they may not necessarily need to meet the exercise tolerance test requirement. It was agreed that these individuals would need a systemic (subaortic) ventricular ejection fraction greater than 40% and ideally be measured by cardiac MRI particularly in cases of systemic right ventricle (subaortic). It was recognised that assessment of a systemic left ventricle may be different from a systemic right (subaortic) ventricle and need to be addressed. It was felt that these would be a small group of patients being considered for Group 2 licensing, hence if systemic (subaortic) ventricular function is greater than 40% but they might still be considered at high risk then they would need individual specialist assessment to ascertain whether the annual risk for a sudden disabling event is less than 2% or not. Panel did not

feel that the details of requirement for a systemic (subaortic) right ventricle needs to be detailed in the fitness to drive Guidelines, however, these could be detailed in the Best Practice Guidelines for the use of medical advisors to guide them for specialist referral cases.

Item 6 – Marfan's syndrome: Review of licensing standards Group 1 and Group 2

Panel Secretary advised that at the last Panel meeting it was agreed that 'bicuspid aortopathy' should be specifically mentioned in the aortic aneurysm section of AFTD and the standards for 'bicuspid aortopathy' should be as follows:

Group 1 - Maximum aortic diameter should be less than 6.5 cm
Group 2 - Maximum aortic diameter should be less than 5.5 cm provided no associated coarctation of aorta, no systemic hypertension, no family history of dissection, growth not greater than 3 mm per year. If any of the above present, then for Group 2 the maximum aortic diameter allowed would be less than 5 cm.

The amendments to AFTD for the aortic aneurysm section were intended to incorporate 'bicuspid aortopathy', however, the February 2017 version has a separate section for 'thoracic aneurysm with bicuspid aorthopathy'. Panel agreed that 'bicuspid aortopathy' needs to move back into the aortic aneurysm section as agreed in September 2016 meeting, the wording to be as mentioned above (to reflect the minutes of September 2016, Item 6 under the discussion points).

Also, there is a discrepancy in standards as follows: whereas for Group 1 licence, all conditions under this heading are expected to notify DVLA, for Group 2 licence, individuals need to notify only in certain situations.

The issue of follow-up of aortic aneurysm cases for Group 2 licence purposes was discussed, especially in cases where the aortic diameter approaches the 5.5 cm cut-off. Currently, if the diameter is less than 5.5 cm and the individual has met the ETT criteria for Group 2 licensing standards, they are generally issued a 3-year review licence unless the clinical information available indicates that the diameter is approaching 5.5 cm, or there is a rapid rate of expansion of the aortic diameter. In such cases Medical Advisers would generally issue an annual review licence rather than the 3-year review licence. Panel agreed that in such borderline cases it may be reasonable to issue an annual licence, however, if the aortic diameter is well below 5.5 cm, and has remained stable for a number of years it would be reasonable to issue a 3-year review licence if ETT requirements met.

5. Hypertrophic cardiomyopathy: Review of Group 2 standards

Presentation by Dr Lynne Williams, Consultant Cardiologist, Papworth Hospital.

Dr Williams gave an interesting presentation on hypertrophic cardiomyopathy focusing on the evolution of the risk stratification for sudden cardiac death (SCD) in cases of hypertrophic cardiomyopathy. (Copy of presentation enclosed with the minutes).

A discussion ensued on this topic and Panel agreed that the Group 2 licence standards need to be amended to take into account the recent ESC publication https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines/Hypertrophic-Cardiomyopathy
and risk calculator (low, intermediate, high) for SCD.
http://www.doc2do.com/hcm/webHCM.html

Conclusion:
Hypertrophic cardiomyopathy: Group 2 standards
Symptomatic: Disqualified.

If associated with syncope, standards for syncope need to be met as well before relicensing considered.

Asymptomatic: if in the low and intermediate risk group – need to meet the current ETT requirement.

If in the high risk group – Group 2 licence to be revoked as most likely ICD would be indicated and/or implanted.

(The classification into risk groups as per ESC Risk calculator, mentioned in the presentation and discussed below).

AFTD will be amended to reflect these changes

Discussion points:

Asymptomatic hypertrophic cardiomyopathy poses a challenge from a licensing point of view as the symptomatic cases would be disqualified from Group 2 licensing and for Group1 licence would need to meet the standards for respective symptoms (for example angina , arrhythmia, syncope).

Symptoms of impaired consciousness and unexplained syncope are common with hypertrophic cardiomyopathy. Risk stratification has evolved since 2003 and most recently the ESC Guidelines on Diagnosis and Management of HCM were published in 2014. Abnormal blood pressure response (ABPR) during ETT is no longer considered to be a major risk factor for sudden cardiac death (SCD), especially for individuals more than 40 years old. The 2014 ESC Guidelines has formulated the HCM risk – SCD calculator taking into account various risk factors (as detailed in the presentation) and calculates the risk of SCD % at 5 years. These risk factors include – age, maximum left ventricular wall thickness (mm), left atrial size, maximum LVOT gradient (mmHg), family history of sudden cardiac death, non sustained ventricular tachycardia, unexplained syncope. Based on the presence or absence of these risk factors, the HCM risk categories for SCD have been defined as low risk (5 year risk of SCD $<4\%$), intermediate risk (5 year risk of SCD 4-6%) and high risk (5 year risk of SCD greater than or equal to 6%). Panel agreed that

this recent risk calculator needs to be taken into account and the Group 2 standards for HCM be amended. As for the high risk group ICD would be indicated clinically, individuals in this risk group would need to meet the ICD standards. This would apply to all cases where ICD would be indicated (including cases where individuals have refused ICD implantation). For low and intermediate risk categories the current Group 2 ETT requirements need to be met. As the ESC risk calculator is an accepted risk stratification model used in clinical practice, DVLA should be able to get this information from clinicians looking after the individual with HCM and then apply the standards as above. Panel appreciate that this risk calculator is for the risk of sudden cardiac death and not syncope, however, unexplained syncope is one of the factors included in the risk calculator. In addition, if individuals do have a relevant history of syncope associated with HCM the syncope standards would need to be met.

6. Annex III EC Directive: Discussion and Review of current UK cardiovascular standards in view of forthcoming implementation of the Annex III

The Panel reviewed the documents enclosed for this item in the agenda bundle, including the Annex III and 2 draft documents prepared by the Panel Secretary, highlighting and comparing the Annex III EC Directive with the current UK cardiovascular standards. As the Annex III lists the conditions which need to be taken into account before licensing and mentions that they should be adequately controlled as judged by competent medical authority, Panel's view was that this would allow the UK to retain its existing licensing standards for most of the conditions apart from a few which would need to be amended or new standards added.

The Chairman asked the DVLA Policy representative about the process of implementation of the EU standards to UK legislation, and the timescales involved in this process. Their advice was that the documents enclosed in the Panel meeting bundle has already been forwarded to DfT lawyers and Policy are awaiting their opinion. Following this panel meeting a document incorporating all the changes discussed will need to be prepared and forwarded to the lawyers for further consideration, with the aim of having Ministerial submission by the autumn of 2017, and legislation to be laid ideally in December 2017.

DVLA Policy representative did stress that this was an intensive and tight schedule and Panel input would be needed. The Chairman advised that it would be reasonable to have a meeting with the DfT lawyers once they had a chance to consider the document prepared by the Panel Secretary and the post Panel changes. It was agreed that an extraordinary meeting of the Cardiology Panel, solely to discuss the standards would take place prior to the Autumn panel Meeting.

7. Cases for discussion

There were no cases for discussion.

8. Any other business

i) Bicycle protocol for exercise tolerance testing

Correspondence from a cardiologist indicates that the current DVLA protocol for exercise tolerance testing has a clearly defined protocol for a treadmill test. However, an equivalent for bicycle testing is not clearly defined. The current protocol, which requires cycling for 10 minutes with 20 watt per minute increments to a total of 200 watt, is not a suitable protocol and hence a possible review of the protocol was raised. The Chairman suggested that this could be discussed at the autumn Panel meeting when all the relevant experts would be present, including Dr Northridge, Dr Fraser and Dr Henderson.

Dr Fraser mentioned that he would also like a review of the protocol with respect to the duration of the exercise tolerance test required for Group 2 licence assessment process. He kindly agreed to look through the relevant literature for discussion at the autumn Panel meeting.

ii) The SMA asked Panel's advice regarding the current Group 2 licence standards for hypertension, specifically the interpretation of 'consistently' as

in 'if resting blood pressure is *consistently* 180 mmHg or higher systolic and/or 100 mmHg or more diastolic'. The interpretation of 'consistently' was discussed and the Chairman's advice was that 'consistently' would generally imply most of the time or close to or at least 90% of the time. Panel agreed that the reasonable way forward would be to ask the doctor undertaking the D4 examination to examine 3 months' worth of blood pressure readings and then complete the question whether blood pressure has been consistently less than 180/100 mmHg or not. This could either be done from the clinical records or the applicant could take a copy of their blood pressure readings which they would normally record at home.

9. Date of next meeting

The proposed date is the 21 September 2017.

Draft Minutes prepared by: **Dr A Kumar MBBS MRCGP**
Panel Secretary

22 March 2017

Final Minutes signed off by: **Dr Wyn Parry**
Senior MedicalAdvisor

5th September 2017

Mr Jason Donovan
Medical Licensing Policy

5th September 2017

Dr Mike Griffith
Chairman

18th September 2017