Driver & Vehicle Licensing Agency

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, 1 NOVEMBER 2018

Present:

Dr A Kelion	Chair
Dr L Freeman	
Dr R Henderson	
Mr A Goodwin	
Dr S Lim	
Dr K Rajappan	
Mr B Nimick	

Ex-officio:

Dr A Kumar	Panel Secretary, DVLA Doctor
Dr N Jenkins	Interim Senior DVLA Doctor
Mrs R Toft	Driver Licensing Policy, DVLA
Mrs S Charles-Phillips	Business Support, DVLA
Ms G Owen	Panel Co-ordinator, Driver Licensing Policy, DVLA

1. Introductions and apologies

Dr Kelion introduced himself as the new Chair of the Cardiovascular Panel and welcomed all present. Introductions were made by all attendees.

Apologies were received from Dr D Fraser, Professor C Garratt, Dr S Aziz, Dr S Bell, Dr C Graham, Professor E Keelan and Dr Hutchinson.

2. Chairman's remarks

The Chair mentioned that this is his first meeting and he also attended the Panel Chairs' meeting in July 2018. The Chair gave a brief feedback to the Panel members from the Annual Panel Chairs' meeting (July 2018). The following items were mentioned:

1. The new Terms and Conditions of Panel membership and the maximum duration of Panel membership and its impact on the function of Panels. Policy mentioned that the department is currently reviewing the Terms and Conditions and the maximum term period, to ensure that adequate Panel composition is maintained/achieved at all times for the benefit of the department. The Panel Chair welcomed this approach.

2. The Panel Chair requested an update on the replacement appointment of a vascular surgeon on the Panel and was advised by Policy that this will be addressed by the January 2019 recruitment exercise. It was agreed that in the interim, if there is any particular complex case in this area, advice could be sought from the individual's specialist. Panel members were keen to understand the reasons for the length of time taken in the appointment of a new Panel member. Policy briefly explained the recruitment process for panel members and that recommendations have to be submitted to the Minister for approval before an appointment can be made. Two recruitment exercises are now held each year and panel chairs are to be more actively involved in the recruitment process.

Panel emphasised the importance of having a replacement member for the vascular surgical expert, as there are agenda items and complex cases which need a vascular surgical input.

3. The importance of lay members and the contributions they make to the Panel; the need for a Panel membership induction programme for all Panel members including the lay members to facilitate their understanding of the role and functions of the Panels was

discussed. The Chair asked for an update on the dates for the induction programme and was advised that this was going to be held in early 2019 in Swansea.

4. The Chair mentioned that he has been asked by DVLA to make Panel members aware of the following issues:

(a) The need for updating the DVLA of their declaration of interests;
(b) All discussions at Panel meetings to remain confidential until the Panel minutes are published on the web;
(c) Need for Panel members to undertake regular horizon scanning for new tests, technological and clinical developments relevant to Panel work. The Chair emphasised that the Cardiovascular Panel has always been proactive in this area.
(d) The annual Panel review process to be undertaken involving the Panel Chairs and Panel Secretaries – this includes the Annual Reports reviewing the work done by Panels over the past year.

The Panel Chair mentioned that the administrative support to Panel has been centralised. Panel members mentioned the benefits of having the agenda bundle in the paper form as in the past. Panel agreed that if agenda bundles are going to be circulated in electronic form, they need to be conveniently organised and easily navigable, with high-quality reproduction of any scanned documents.

(e) Driving and health issues: Panel Chairs are due to meet with the GMC in early 2019 to discuss issues around awareness of clinicians on driving and health issues.

The Chair advised that there is going to be a session on driving and cardiovascular diseases, with panel member representation, at the forthcoming British Cardiovascular Society meeting.

3. Minutes from the previous meeting (15 March 2018) and matters arising

The minutes were agreed and accepted as accurate.

3.1 The Panel Chair thanked Dr R Henderson for chairing the March meeting.

3.2 (Item 4, 2.9) – It was agreed at the September 2017 meeting that a letter from DVLA should be sent to the individual Panel members for the purpose of time recognition at the Panel meetings which they could then forward to their respective NHS Trust as appropriate. This action is complete.

3.3 (Item 5) – Established diagnosis of pulmonary hypertension.

The new standards require individual specialist assessment to get an opinion on the annual risk of a sudden disabling event for Group 1 and Group 2 licensing purposes. Panel Secretary asked for Panel's advice on how to action cases where the specialist report does not give an estimate of the annual risk of a sudden disabling event. It was agreed that such cases would need to be referred to a Panel member for their opinion, as the presentation and risks of a sudden disabling event is variable in pulmonary hypertension cases, depending upon the underlying condition. Dr Freeman (with her expertise in pulmonary hypertension as a GUCH{Grown Up Congenital heart disease} specialist) agreed to provide advice on such exceptional cases. It may be necessary, in some cases, to refer to an external expert as appropriate.

3.4 (Item 7) – Pacemaker and functional cardiac assessment: Group 2 licence standards.

It was agreed at the previous meeting that the current DVLA Myocardial Perfusion Scan (MPS) and stress echo protocols need to be reviewed by a cardiac imaging expert in terms of a stressor agent and achieving target heart rate. The Panel Chair (imaging expert) advised that it is well recognised that if a vasodilator (such as Adenosine, Dipyridamole or Regadenoson) is used as a stressor agent, the heart rate response is irrelevant as these are primary coronary vasodilators. They provoke maximal coronary hyperaemia without needing to increase myocardial oxygen demand. Hence, for those tests where a vasodilator is used as a stressor agent, not reaching the target heart rate should not be the sole reason for refusal or revocation of

a licence. Vasodilator drugs are okay for perfusion imaging, whereas stress echo for wall motion does require an increase in heart rate and myocardial oxygen demand to provoke ischaemia (which is why exercise or dobutamine are used).

Hence it was agreed that there was no need to amend the current protocol or Assessing Fitness to Drive (AFTD), however, DVLA doctors must be made aware of the above issue for the interpretation of the MPS/stress echo reports.

4. Type 2 myocardial infarction: Group 2 licence standards

Panel members had reviewed the literature evidence enclosed with the agenda bundle. A brief introduction to the Universal definition of myocardial infarction was given. The distinction between type 1 and type 2 myocardial infarction (MI), and myocardial injury and the implications for licensing were discussed at length.

Conclusion: Panel members agreed that type 2 myocardial infarction was distinct from type 1 myocardial infarction, but if anything has worse prognosis than type 1 myocardial infarction. Therefore the two types should not be treated differently from the perspective of licensing functional standards. It was agreed that the heading of the acute coronary syndrome section in AFTD Guide needs to be amended as follows:

Acute coronary syndrome (to include type 1 and type 2 Myocardial Infarction).

Discussion:

Myocardial injury is defined by elevation of the serum cardiac troponin level, with at least one value above the 99th percentile upper reference limit. Myocardial injury associated with clinical or ECG evidence of ischaemia is categorised as myocardial infarction but non-ischaemic myocardial injury is also common in clinical practice.

Type 1 MI occurs when an atheromatous plaque becomes unstable due to rupture or erosion, with subsequent platelet aggregation and vessel obstruction. Type 2 MI occurs as a result of

imbalance between myocardial oxygen demand and supply, for example when oxygen demand increases (e.g. due to arrhythmia, respiratory failure) without a commensurate increase in oxygen supply (e.g. due to stable obstructive coronary disease). This can lead to myocardial ischaemia and symptoms of myocardial infarction, with associated ECG changes and biochemical/blood markers of myocardial injury. In some patients who present with an ischaemic episode in the context of an inter-current illness it may be difficult to distinguish between type 1 and type 2 MI, even when coronary angiography is carried out during the acute admission.

There is evidence that patients with type 2 MI may be at higher risk of both cardiovascular and non-cardiovascular death but lower risk of recurrent myocardial infarction than patients with type 1 MI. Although currently available information is limited the panel judged that the rate of a sudden disabling event in both type 1 and type 2 MI is likely to exceed 2% per annum in the months after the index event, and the current standards for acute coronary syndrome should therefore apply to both groups. If an individual with type 2 MI fails to meet the exercise test standard due to non-cardiac reasons, an alternative test such as stress echo or myocardial perfusion scan may also be appropriate to support the licencing decision. For the purpose of licensing, the heading 'Acute coronary syndrome' in AFTD needs to include both type 1 and type 2 MI.

The prognosis of patients with non-ischaemic myocardial injury is very variable depending upon the underlying cause although in one large study cardiovascular and non-cardiovascular mortality were both higher with non-ischaemic injury than with type 1 and type 2 MI. The panel considered that it is not appropriate to have generalised standards for non-ischaemic myocardial injury, and cases should be dealt with on an individual basis. For licensing purposes, if the distinction between type 2 MI and myocardial injury is not clear from the available information, the individual's clinician should be asked whether there was an episode of ischaemia at presentation (symptoms and/or ECG changes). If the diagnosis remains uncertain, for licensing purposes it is safer to refer for an ETT 6 weeks after the acute episode. If the individual passes the ETT and a diagnosis of myocardial injury has been

established by that stage (6 weeks post episode), then there is no need to repeat ETT every 3 years and a full Group 2 licence could be issued (provided there is no known coronary artery disease or any other condition requiring review licence). If the individual fails an exercise tolerance test, this is likely to indicate a worse prognosis; hence the Group 2 licence needs to be revoked/refused.

This item may need further discussion at a future meeting if required.

The Panel had reviewed the following journals which were enclosed in the Panel agenda bundle.

Enclosure 2 Circulation. 2018; 137:1236–1245. DOI: 10.1161/CIRCULATIONAHA.117.031806
Long-Term Outcomes in Patients with Type 2 Myocardial Infarction and Myocardial Injury

Enclosure 3
BMJ 2017; 359:j4788 | doi: 10.1136/bmj.j4788
Patient selection for high sensitivity cardiac troponin testing and diagnosis of myocardial infarction: prospective cohort study

Enclosure 4
The American Journal of Medicine, Vol 128, No 5, May 2015
Sensitive Troponin Assay and the Classification of Myocardial Infarction

Enclosure 5
Chapman AR, et al. Heart 2017; 103:10–18. Doi: 10.1136/heartjnl-2016-309530
Assessment and classification of patients with myocardial injury and infarction in clinical practice

5. **Coronary artery disease: categories not included in the current AFTD licensing standards.**

   It was agreed at the Spring 2018 Panel meeting that there is need for clarification whether Group 2 licence holders or applicants are required to undertake cardiac functional test only if they have had a clinical presentation of ischaemic heart disease, or additionally if evidence of coronary artery disease has been found on routine investigation in the absence of any previous symptoms.

A lengthy discussion ensued on this topic and Panel's advice was as follows.

The Assessing Fitness to Drive guide needs to be amended. After the sections on Angina, ACS, PCI, CABG, there needs to be an additional section with the following advice:

> *'Evidence of obstructive coronary artery disease on invasive or CT angiography, or myocardial ischaemia on functional testing, but not falling under any of the above categories – for Group 2 licensing, such individuals would need to meet the functional test requirements.*

It was recognised that before any changes to AFTD standards can be made, this issue might need wider consultation to assess any impact.

Discussion:

Panel members agreed that some individuals may not have been known to have a history of angina or Acute Coronary Syndrome (ACS) but may have incidental diagnosis of significant coronary artery disease on angiography undertaken as a part of investigation for other cardiac conditions, for example, valvular heart disease, congenital heart disease etc. Panel agreed that individuals with asymptomatic coronary artery disease should be subject to the same functional standard as those who have previously presented with symptoms. There is a need to clarify this in the AFTD standards for individuals who do not fall under the current categories of angina, ACS, PCI or CABG. As DVLA's advice was that there may be a need for wider consultation on this topic before any amendments to standards could be made, it was agreed that DVLA should collect data on cases with coronary artery disease ticked 'yes' on the DVLA forms but 'no' to angina, ACS, PCI or CABG. There is a need to confirm if there has ever been angiographic or functional evidence of coronary artery disease in these cases, or if the box has been ticked in error. DVLA advised that there may be difficulty in getting data on such cases.

Panel discussed scenarios where individuals may have been incidentally diagnosed with coronary artery disease on angiography undertaken for other reasons. As they will have been asymptomatic, they may not have undergone revascularisation as there would have been no definite indication. Some of these cases may have more than minor atheromatous disease, justifying the need for having a cardiac functional test for Group 2 licensing purposes. However, if they do not fall under the existing categories in AFTD, they may have been issued with an unrestricted Group 2 licence.

6. Fractional flow reserve (FFR) and other invasive cardiac functional measurements and the interpretation for Group 2 licence standards

Panel members have reviewed the relevant literature enclosed in the bundle and this will be discussed with a presentation from Dr Fraser in the Spring 2019 meeting.

7. Terms and Conditions of the Secretary of State's Medical Advisory Panels

This was discussed under Item 2 (Chair's Remarks).

8. Cases for discussion

Panel discussed 4 cases and appropriate advice was given on all 4 cases. There were 2 cases of type 2 myocardial infarction, one case on multiple cardiac diseases including aortic root dilatation, and one case of ALCAPA (aberrant left coronary artery from pulmonary artery). Post panel discussion (via email correspondence amongst chair, relevant panel members and panel secretary) on ALCAPA case concluded with agreement that MIBI scan needs to be undertaken.

9. Assessing fitness to drive review

It was agreed by all present that Panel members would review the sections of the AFTD. There were 2 issues that were discussed at the meeting:

(a) Dr Freeman advised that the term 'RVOT' needs to be removed from the section on aortic stenosis in the main text and also in the severe aortic stenosis text in the Appendix section.

(b) Dr Rajappan advised that there have been several queries among EP (electrophysiology) specialists regarding the use of the term 'symptomatic ATP' in the ICD section of the AFTD. There is a lack of clarification regarding the interpretation of "symptomatic" ATP, as symptoms could range from a minor awareness of palpitations to the level of severe pre-syncope or syncope. It was agreed that if symptomatic ATP implied 'incapacity' that would be dealt under the section of 'ICD therapy with incapacity'. However, if there were mild symptoms such as palpitations, clarification is needed as to whether this would require a period of 6 months off driving. Dr Rajappan advised that the current trend in device therapy is to treat increasing numbers of arrhythmic episodes with ATP rather than ICD shock therapy. Mild symptoms do not necessarily interfere with driving and hence these individuals may not need to be revoked/refused from driving for 6 months as compared to those who have significant symptoms including pre-syncope. It was agreed by all that Dr Rajappan should review this area and discuss with EP colleagues, and then bring back this topic for discussion as appropriate at the next meeting.

10 Appeals data

There were no appeals on cardiovascular cases within the last 6 months.

11 and 12. Research and literature and horizon scanning

DVLA asked Panel to advise of any items for future agenda with relevance to any recent scientific research/literature with implications for driving. Panel advised that most items on the agenda are discussed with relevance to available literature, and advancement in the area of pressure wire studies and Fractional Flow Reserve (FFR) is going to be discussed at the Spring 2019 meeting.

13. Declaration of members' interests

It was agreed by all, that Panel members will update DVLA of any new interests. DVLA will send the declaration list to Panel members.

14. AOB

The Chair mentioned that it would be interesting to review any data comparing the annual mortality rate in individuals who would have been issued with a driving licence or those who have had their driving licences revoked or refused.

Panel Secretary mentioned that there has been a few queries regarding Takotsubo cardiomyopathy, and it was agreed that this will be discussed at the Spring meeting. Dr Lim kindly agreed to prepare a brief presentation on this topic.

Panel were made aware of the proposal from the Neurology panel for new standards regarding provoked seizures. This issue will be discussed further at the next panel.

15. Date of next meeting

14th March 2019.

Driver & Vehicle Licensing Agency

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

15 November 2018

Final Minutes signed off by:

Important: These advisory notes represent the balanced judgement of the Secretary of State's Honorary Medical Advisory Panel as a whole. If they are quoted, they should be reproduced as such and not as the views of individual Panel members.