



# The Independent Medical Expert Group (IMEG) 5th Report

Report and recommendations on medical and scientific  
aspects of the Armed Forces Compensation Scheme

**February 2020**

# Topic 5 - Review of 2013 IMEG Second Report on Mental Health

## Key Points

1. Since the 2013 report, adverse comment re AFCS has continued on the IMEG recommended need for diagnosis of disorders by a consultant psychiatrist or clinical psychologist, the use of interim awards, the definition of “permanent” and the general view that awards for mental health disorders compare unfavourably with awards for physical disorders and civil general damages.
2. Revised mental health disorders classifications DSM 5 (2013) and ICD 11 and a new edition of National Institute of Health and Care Excellence (NICE) PTSD guideline have been introduced and from April 2019 a new descriptor and level 4 AFCS award for mental health disorders came into the legislation.
3. This report updates on treatment and support services since 2013 and includes sections on suicide, mild Traumatic Brain Injury (mTBI), diagnosis, differentiation from PTSD and the relevance of emerging functional neuro-imaging techniques.
4. As in the Fourth (2017) IMEG report, we conclude that, at present, mTBI and PTSD can be best differentiated by clinical history and examination, rather than any specific investigation. While accepting that research on MEG shows promise in mTBI investigation, and its possible differentiation from PTSD, we find at this date that it is premature to consider MEG a specific diagnostic test for either mTBI or PTSD.
5. As part of the ongoing ministerial tasking to maintain an overview of mTBI, it is recommended that IMEG undertakes a comprehensive review of MEG as part of the 2020/21 Forward Work Plan for publication by the end of 2020.
6. The present review of the 2013 report broadly upheld its conclusions on “permanency”, interim awards, parity of esteem between physical and mental disorders, horizontal and vertical equity across the range and level of awards and the need for diagnoses to be made by a consultant level clinician as specified in AFCS legislation.
7. We may have been too optimistic about functional recovery from PTSD and revisited the evidence on its chronicity. We conclude that while in most cases there is functional improvement over time or best practice treatment, there are rare cases with persistent symptoms and disabling effects. Literature search provides inconsistent findings on early predictors of chronicity and we identify no reliable early predictors.
8. From April 2005 until 31 March 2019 there were 4395 awards for mental health disorders with 19% including a guaranteed income payment (GIP). This compares with 67930 awards for physical disorders with 6% having a GIP. At 31 March 2019, 55 full and final mental health awards were at level 6 and 75 at level 8, attracting a GIP of 50 and 75% respectively.

9. We consulted the latest 14th edition of the Judicial College Guidelines on general damages awards (2017) and found no evidence that AFCS lump sum awards for mental health disorders are too small.

## Introduction and Background

1. The 2013 IMEG report on mental health followed a recommendation by the Lord Boyce in his 2009 Review of the AFCS. Core issues considered were: -
  - a) the differences between mental and physical disorders and whether a wholly separate approach was appropriate
  - b) the need for a tailored interim award for mental health disorders recognising the difficulty of prognosis soon after diagnosis
  - c) the challenges of causation and attribution in mental health disorders
  - d) diagnosis
  - e) assessment of mental disorders in terms of functional capacity and duration and in relation to all other types of disorder in the scheme

Following literature scrutiny and expert discussion in 2013, IMEG concluded that there was no need for separate compensation approaches to physical and mental disorders. The major focus of the scheme is functional compromise for civilian employment, paid as a guaranteed income payment and applicable to both physical and mental disorders. Similarly, the general interim award provision was considered sufficient for mental health disorders. In addition, although the epidemiological evidence does not support it, there is a risk that mental health symptoms in serving personnel and veterans will be mis-labelled as PTSD, as a less stigmatised condition than others (1). As a result, the 2013 report concluded that diagnosis should be by consultant level psychiatrist or clinical psychologist. Assessment should focus on loss of functional capacity and include information on clinical management and treatment received.

2. Following interviews with stakeholders, the 2016 AFCS Quinquennial review team referred topics for further comment or action by IMEG. These included review of the 2013 report conclusions, mental health disorder awards, parity of esteem with physical disorders and equity across the Tariff tables. Other issues were the AFCS concept of “permanence” and again the role of clinicians. The IMEG response which upheld the 2013 conclusions was published in the 2017 Fourth IMEG report. In this Fifth IMEG report we have again reviewed the 2013 findings and recommendations and their ongoing applicability in the light of further recent stakeholder comment, experience of the Scheme since 2016 and wider developments in mental health.
3. The media and parliamentary focus on mental health and well-being has continued since 2013 with increased investment in NHS mental health care and other support services for the wider community and for veterans and their families. In service there has been expansion of mental health care and welfare provision including at transition for those medically discharged. Both in service and in the civilian community these are based on a collaborative multidisciplinary approach with healthcare and other support services delivered by multiple agencies and increasingly aligned in the service and civilian communities.

4. Published UK and international mental health research on serving personnel, partner and family aspects of service, has expanded over the period. There remains less research on UK veterans, with most veteran studies from the USA and so not always applicable to UK. Since 2013 revised National Institute of Health and Care Excellence (NICE) Guidelines on PTSD have been published (December 2018) as well as new DSM and ICD mental health disorder classifications. DSM 5 was published in 2013 and ICD 11 was introduced by the World Health Organisation (WHO) in May 2019 for implementation by January 2022. Over the period since 2013, the incidence of suicide and self-harm in civilian and armed forces communities have become increasing concerns in the UK and particularly in North America, leading to review of prevention policies. This paper begins by highlighting some of these developments.

## NHS and Wider Community Advances

5. Since 1953, GB based veterans have had priority access to secondary NHS health care for attributable disorders, physical and mental, based on clinical need and at the discretion of the senior treating clinician. Many veterans are “doctor averse” and reluctant to access NHS services, particularly for mental health problems, feeling that civilian health professionals, whether in primary care or specialists, have little knowledge or affinity with military life. Culturally sensitive NHS veterans’ services have now been established. Veterans’ mental health services have different care and support models in the four countries of the UK, but all are based on coherent collaborative best practice provision delivered by NHS, local authority (LA) social services, and charities. A recent NHS option to encourage early engagement has been for self-referral to veterans’ services rather than entry only via the GP. Campaigns promoting good mental health, reducing stigma, encouraging people to seek help early and, with the expectation of a good outcome, have been regularly run by the NHS nationwide.
6. Because of the demographics and different profile of common disorders compared with the armed forces context, NHS community mental health services focus on child and adolescent services, mental health in pregnancy and the first year after childbirth, depression in older people, and crisis care particularly for people with severe and prolonged mental health disorders. This latter group is also at risk of dying, on average, some 15 years earlier than their peers due to avoidable physical illnesses, (cardiovascular disease and cancer). A precise explanation for this is not yet available but factors such as lifestyle, diet and cigarette smoking and reduced access to normal healthcare are relevant. Most common civilian mental health problems are managed in primary care.
7. Work by MOD, the NHS, health departments, armed forces charities and local government has raised awareness and improved civilian GP understanding of military culture and mental health issues. The curriculum for GPs and qualifying examination for membership of the Royal College of General Practitioners (RCGP) across the UK now includes knowledge on military and veterans’ health. A new option for GP practices to become “veteran aware” accredited practices has begun and will be rolled out over the next few years. Similar initiatives involve the other Royal Colleges including Psychiatry, Nursing, and Emergency Medicine. Attention has been given to service leavers and their smooth transition back to the civilian community. The individually tailored single service led Defence Recovery Capability for wounded, injured and sick personnel and those with chronic significant illness, supports personnel in return to duty or preparation for a successful return to civilian life after medical discharge. This work is non-medical, is managed by the chain of command and backed by Personnel Recovery Units (PRU). It is closely aligned with clinical treatment and rehabilitation pathways provided by Defence and the NHS. A new Defence Transition Service has been set up. This will co-ordinate, under a single policy, a range of services covering employment, health and wellbeing, welfare, housing, financial information and pastoral care. As well as providing positive support the aim is to develop personal resilience and independence in the most vulnerable leavers.



8. Successful Implementation of new services, particularly if delivered by multiple agencies with different models and at risk of duplication, depends on effective communication. In the veterans' community there are very varied levels of digital awareness. The Veterans' Gateway, 24-hour seven days a week telephone line and interactive website, was set up in 2017, funded by the Armed Forces Covenant Fund and run by a consortium of armed forces' charities, led by the Royal British Legion. It provides a single point of contact for veterans and families unsure of where to access the services they need. Over 24800 contacts have been made from its launch to February 2019 and 73,000 self-referrals through the on-line self help guide hyperlinks. The Gateway is supplemented by the University of Northumbria Map of Need project, which has helped build a detailed picture of the needs of the armed forces community based on analysis of what services are being requested and where.

## In Service Changes

9. As expected in selected, fitter than average military populations, rates of severe and enduring mental health disorders, such as schizophrenia, are lower in the UK military and veterans' population than in the general community. Such conditions are unlikely to be caused by service. High alcohol consumption is commoner overall in the UK military community than in the general population, although the level of alcohol consumption has been reducing in the UK military in recent years. Otherwise rates of common mental health illnesses (i.e. anxiety and depressive disorders) are similar in the civilian and military communities and more common in the UK military population than PTSD. As with PTSD, rates in the general US community, and US military rates of PTSD are higher than in the UK (2)(3). In the early years of the Iraq and Afghanistan conflicts, UK rates of military PTSD were similar to that of the general UK population, at about 4%, but by the end of the British involvement in the Iraq and Afghanistan conflicts overall prevalence of "probable" PTSD in the military was 6.2% with an increase particularly notable in ex-serving personnel who had had a combat role (4). ("Probable" PTSD refers to PTSD diagnosed by psychometric screening test rather than expert clinician examination). This legacy pattern is reminiscent of the post-Vietnam US experience.
10. Military PTSD usually responds to the same best practice interventions as civilian trauma. A longer course of treatment may be required especially where there are multiple traumatic events, comprising both unexplored pre-service events, non- military in service events, as well as military events, which may be repeated on re-exposure and not all of which are combat-related. It is of note that while the updated (December 2018) NICE PTSD guideline continues to recommend trauma based cognitive behavioural therapy (TCBT) as first line treatment for PTSD, the guideline is now more reticent about Eye Movement Desensitisation Reprocessing (EMDR) for combat related trauma. This may be because of absence of sufficient evidence of efficacy in the military, rather than evidence of harmful or absent therapeutic effect (4). Stress, in particular work-related stress, with symptoms rather than a discrete diagnosis, attributed to workload, time pressure, management demands, bullying and harassment mainly by peers, is increasingly mentioned in AFCS claims.
11. The Defence People Mental Health and Well-being Strategy 2017-2022 aims to promote positive mental health and wellbeing, prevent and detect early onset of mental illnesses and treat such illnesses when diagnosed (6). Defence has close ties with the NHS and third sectors to share best practice and ensure a flexible integrated through life approach over a person's military career and beyond. Defence health care aligns with the NHS national mental wellbeing agenda. Target issues are stigma reduction, occupational stress reduction, prevention of suicide and self-harm and fostering of attitudes and behaviours to maintain mental fitness. Strong leadership and unit cohesion are key elements known to prevent mental health problems following deployment.
12. In any review of mental health symptoms and illness there is high risk of a problem orientated approach and loss of proportionality. The evidence is that most service and former service personnel, regardless of deployed or combat related service are, and remain, mentally fit at entry, through and

beyond service. To promote positive attitudes towards mental fitness and equip personnel to manage their own mental fitness, we are pleased to note that Defence is working with the Royal Foundation on training resources. The single services have their own mental fitness and resilience training, and this year (2019) has seen the introduction of senior leaders' mental fitness and resilience training for all Defence people, military and civilian.

13. Since the 2013 IMEG report, we understand that MOD has struggled with shortages of suitably qualified mental health staff. This has led in some cases to delay in assessment and access to treatment at Departments of Community Mental Health (DCMHs). This position is shared with the NHS nationwide, and with private providers, with the root cause being limited numbers of suitably experienced specialists and the long training time required to achieve that. In 2018/2019 there was some improvement in the overall military staffing picture relative to required strength and an increase in the numbers of consultant clinical psychologists. Because of their access to weapons, referral of serving personnel with mental health symptoms has traditionally been direct to Defence Community Mental Health services (DCMH). That policy has now been replaced by a unified care pathway with initial referral to Defence Primary Health Care (DPHC) as in the civilian community.

## Some Statistics:

14. For in service mental healthcare, Defence Statistics publish an annual bulletin of statistical information (7). The 2019 edition includes, from 1 April 2007 until 31 March 2019, all initial assessments for a new episode of outpatient care at the DCMHs as well as admission to the in-patient care contractor facilities. Rates of personnel being assessed at DCMHs increased from 1.8% of the whole force in 2007/8 to 3.2% in 2015/16 and remained at that level until 2017/18. In 2018/19 rates fell to 2.7%. This drop may relate to a higher percentage of people with low risk and uncomplicated problems being seen and managed in DPHC, where data are not collected. The increasing rates up to 2017/18 may represent a real increase in incidence of problems or may reflect more frequent presentation because of the reduction in stigma. For PTSD, the most common AFCS claim and award, the overall rate at 0.2%, i.e. 2 in 1,000 personnel, remains low.
15. Across the three services more presentations are seen in females, other ranks and those aged 20-44 years. The most prevalent disorders are adjustment disorder, depressive episode, Generalised Anxiety Disorder (GAD), Obsessive Compulsive Disorder (OCD) and phobias, not PTSD. Initial assessments for substance misuse, including alcohol have been declining since 2007/8 and remained low in 2018/19 at 4%. 70% of those treated at DCMH return to full fitness and a productive military career. Fewer than 4% are medically discharged. Inpatient care for the armed forces has been broadly stable over the last ten years with about 300 admissions annually.
16. Published annual medical discharge rates provide time trends for the last five years. Where a medical condition or fitness issue affects a member of the armed forces, following appropriate treatment, their capacity to perform their duties is assessed. If found unable to discharge their duties and alternative employment is not available, personnel can be medically discharged. Between April 2018 and 31 March 2019 there were 391 naval service medical discharges, 12 per 1,000 personnel; for the army 1,316 discharges representing 17 per 1,000 personnel; and for the RAF, 162 medical discharges, 5 per 1,000. Groups at higher risk of discharge included women and other ranks, for all three services, while for the army untrained personnel were at higher risk. The age groups most affected were army, 20-24 years and naval service, 25-34 years. The RAF average age for medical discharge was 45-49 years. In the three services the most common cause of discharge was musculoskeletal disorder (MSK), accounting for over 50% of total medical discharges. The next most common causes in 2018/19, and increasing over recent years, were mental and behavioural disorders responsible for 21% of naval, 29% army and 33% RAF medical discharges (8).

17. All AFCS awards for descriptors from any Table include an element for psychological symptoms such as worry, anxiety, low mood etc. Where a mental health disorder claim meets ICD or DSM criteria, and so is a discrete diagnosable disorder, an additional award from Table 3 (mental health disorders) may be appropriate. 4395 awards have been made from Table 3, mental health disorders, from April 2005 until 31 March 2019. Of the total mental health awards, 19% had a Guaranteed Income Payment (GIP). That represents 825 awards of which 680 were for PTSD. Over the same time period there were a total of 67,930 awards for physical disorders with 3,750 (6%) receiving a GIP (9). This suggests that claimants with mental health disorders are assessed appropriately, with consideration of likely civilian employability.

## Tariff Level 4 Awards for Mental Health

18. At the 2013 review of mental health, for reasons fully discussed in the report, the recommended highest level of award was level 6 and 75% GIP. In 2017 the evidence from literature scrutiny and discussion with senior clinical colleagues in military and civilian traumatic psychological injury supported inclusion in Table 3 of an award at level 4, attracting a 100% GIP. This was not simply a revalorisation of an existing descriptor, but a new disorder category which applies exceptionally to the very small number of cases where residual steady state functional impairment, following engagement and commitment to adequate courses of best practice treatment, including highly specialist tertiary interventions, is judged by the senior treating consultant psychiatrist to remain incompatible with any paid employment until state pension age. The legislative amendment to introduce this descriptor was enacted from April 2019. To date fewer than 5 such awards have been made.
19. The present review of the 2013 report has considered its discussion, conclusions and recommendations on the various topics and considered points raised by stakeholders since 2013, the 2016 Quinquennial AFCS Review (QQR) report and the 2017 IMEG report. We also considered the new literature, the 2018 NICE guidelines and the DSM V and proposed ICD 11 classifications.

## 2013 IMEG Mental Health Report Headings

### a) Difference between Mental and Physical Disorders and Separate Approaches

20. We remain content with the 2013 conclusions and recommendations that the AFCS should retain the present structure and direct relation between lump sum tariff awards and GIP for all injuries and disorders whether they are mental or physical, supporting parity of esteem between mental and physical conditions. This conclusion is well supported by the official statistics on AFCS final awards for physical and mental disorders from the start of the scheme to 31 March 2019. In particular “lump sum only” awards account for 94% of physical disorder awards made, with 6% receiving an additional Guaranteed Income Payment (GIP), while for mental health disorders there were 81% “lump sum only” awards and 19% with an additional GIP.
21. Just as civil damages comprise a one-off lump sum as general damages and, as appropriate, additional heads of damages for loss of employability, care, disabled living adaptations etc, the core element of the AFCS award is a tariff based lump sum. This addresses pain and suffering and for more serious injuries and disorders there is also a Guaranteed Income Payment (GIP), paid for the functional impact particularly on civilian employability. The inadequacy of the AFCS lump sum awards for mental health disorders compared with civil general damages has been raised. Apart from the different basis of

civil damages (the need to prove negligence) compared with the no fault AFCS, and the fact that the Judicial College Guidelines (JCG) for the assessment of general damages in personal injury cases express the value of general damages as a range, rather than a single tariff value, as in AFCS, we find no basis for the suggestion that mental health awards are too small, following careful scrutiny of the latest edition of the Guidelines (10). This conclusion applied even before the uprating of the AFCS lump sum values on 9 April 2018. The JCG include sections on “PTSD as a sole diagnostic category” and separately “Psychiatric disorders generally”. The latter may include several diagnoses, including PTSD assessed together. The language describing the functional effects to be taken into account in assessment is similar to that used in the AFCS.

## Conclusions:

- We remain content that the AFCS should retain the present structure and direct relation between lump sum tariff awards and GIP for all injuries, physical and mental disorders.
- We find that there is no basis for the suggestion that AFCS lump sum awards for mental health disorders are too low, following scrutiny of the latest (14th edition, 2017) edition of the Judicial College Guidelines for the Assessment of General Damages in Personal Injury cases.

## b) Specific Interim Award Provision for Mental Health Disorders

22. This issue and, more commonly, interim awards in general for all disorders, continues to be raised occasionally. For the reasons discussed in the 2013 report we continue to find there is no need for a tailored interim award provision for mental health disorders. For the general interim award provision, we understand some of the concerns, but are hopeful that discussion which has been held with the financial industry on the provision, as well as ongoing advice to claimants and supporters on timing of claims relative to treatment, may be helpful. The numbers of interim awards made since 2013/14 and in 2018/9 do not appear to be rising. When an interim award is finalised, the interim lump sum paid is not reduced even if the functionally disabling effects have improved.
23. As part of this review we have explored the literature on chronicity of disorders, notably PTSD, and conclude that while most cases of PTSD do achieve functional improvement, there are cases with long term chronic symptoms and disabling functional effects (11), (12). Literature search for possible robust early signs or predictors of potential chronicity and/or treatment resistance, which might lead to fewer interim awards has to date produced a range of papers with different types and context of stressor (13), (14), (15), (16), (17), (18). Some studies were cross-sectional or had short follow-up from initial diagnosis and some did not adjust for confounders. It is also of note that where persistent PTSD was diagnosed this was not always defined adequately. In most cases multiple possible predictors were suggested, related to the trauma itself, the presence of co-morbidities, social support in the aftermath of the trauma and previous trauma in childhood, but findings were inconsistent and there was also evidence of development of similar persistence following a single traumatic event. We have therefore concluded that to date no reliable predictor of chronicity has been identified.
24. We recognise that previous IMEG reports may have been too optimistic regarding progress and prognosis in PTSD. The aim is for full and final awards to be made as early as possible, reflecting the optimal functional state likely over the person’s lifetime and following an adequate course of best practice treatment. We note that at 31 March 2019, 55 full and final mental health awards had been



made at level 6 and a further 75 at level 8, all attracting a GIP at 50% or more, and payment of Armed Forces Independent Payment (AFIP) to address the extra costs of disabled living.

## Conclusion and Recommendations:

We make three findings:

- There is no need for a tailored interim award provision specifically for mental health disorders, but in general interim awards continue to have a place in the scheme as a payment on account where full steady state functional state has not been reached. Should the disorder improve by award finalisation, no reduction or repayment of the initial interim award will be made.
- We will continue to monitor the literature for early predictors of chronicity or other insights into the likely course and duration of disabling PTSD.
- We recommend, by 31 December 2020, a paper following scrutiny of the level 4 and 6 awards for PTSD made from the start of the scheme to 31 March 2020, noting whether there were common features such as stressor type and context, pre-service factors, social support in the aftermath, treatments undertaken, and co-morbidities. Other questions include whether awards were full and final from the outset and the supporting evidence for such decisions, whether they were made by a First Tier Tribunal decision (FTT) and reasons, and whether interim awards were paid ahead of finalisation, and, if so, for how long.

### c) Diagnosis - Should there be a Mandatory Diagnostic Classification and who should make the Diagnosis

25. The issue of a consultant level diagnosis for mental health disorders remains controversial and we have again considered the issue carefully. Both the American Psychiatric Association's Diagnostic and Statistical Manual and the World Health Organisation's International Classification of Disease classifications provide published criteria for diagnoses of discrete mental health disorders, including PTSD. Criteria in the two classifications for the same diagnosis are sometimes different and may also differ from one edition of the same classification to the next. Although in broad agreement on types of PTSD etc, the diagnostic criteria for PTSD have differed in the classifications since 1980, when PTSD first appeared in DSM III. It is however only now with DSM 5 and the proposed ICD 11 that the two classifications markedly differ. DSM 5 reclassified PTSD as a "trauma and stressor related disorder" rather than an anxiety disorder. The approach of DSM 5 is to lower the level of threat inherent in traumatic incidents and expand the symptom criteria to include symptoms of co-morbid disorders. The ICD 11 criteria, introduced by WHO in May 2019 for adoption by January 2022, continue to focus on catastrophic traumatic events and the central role of re-experiencing symptoms and behavioural avoidance. DSM 5 no longer recognises complex PTSD as a discrete disorder while ICD11 proposes to differentiate the two types of disorder. PTSD is therefore becoming an increasingly heterogeneous condition.
26. Because ICD11 is not yet in clinical use, the complexities and uncertainties noted above and the need for rigour and consistency in diagnosis, both in clinical and compensation terms, we continue to recommend clinical diagnosis at consultant level. The consultant should preferably have experience in trauma and if possible military cultural awareness. We also recommend that face to face interview with claimants follows scrutiny of all pertinent medical notes. Similarly, and as in 2013, we cannot currently recommend a mandatory diagnostic classification. Given UK specialist practice and the complexities

of DSM 5, diagnosis according to ICD10 would seem most appropriate at present. Consultant reports should record their preferred diagnosis with full reasons for the opinion. In some cases, consultant reports to inform claims come from treating clinicians. Factual evidence from treating clinicians is invaluable both for diagnosis and assessment. However, all causal factors should be documented rather than an opinion on attribution given without supporting evidence. Attribution is a matter for DBS administrative and medical staff based on the case specific medical and service evidence, the AFCS legislation and contemporary medical understanding of cause and course of the disorder.

27. As recommended in 2013, but not yet enacted, medical reports should also routinely include information on treatment received. This might be a simple form completed by the treating clinician with treatment dates, intervention type and duration and outcome. The experience and expertise of the clinician should also be documented. As indicated in the 2013 report, setting up a robust treatment protocol will require consultation and input from a range of experts and stakeholders, and piloting. To date the various challenges of both NHS and Defence health care have prevented implementation.

## Conclusion and Recommendations:

- Because of the classification complexities and uncertainties discussed above and the need for rigour and consistency in diagnosis, both in clinical and compensation terms, we continue to recommend clinical diagnosis at consultant level.
- As in 2013, we do not recommend a mandatory diagnostic classification at this date. Given UK specialist practice and the complexities of DSM 5, diagnosis according to ICD10 would seem most appropriate at present. Consultant reports should record their preferred diagnosis with full reasons for the opinion.
- The 2013 recommendation to develop an agreed treatment protocol as soon as resources permit, remains.
- For similar resource reasons, and because the scheme aim is full and final awards, made as early as possible after the claim, we do not, in this review, uphold the 2013 recommendation to develop a specific battery of standardized psychometric tests. Psychometric tests provide opportunity to monitor clinical progress and functional capacity over time and are likely to be most useful in compensation schemes where awards are made for finite periods followed by review.

## Mild Traumatic Brain Injury (mTBI) and PTSD

28. The 2013 review included a short section on mTBI. We continue to keep developments in mTBI research under routine scrutiny (19). We are aware of current concern and work on concurrent mTBI and PTSD, their definitive diagnosis and differentiation. This includes research on new imaging techniques particularly magnetoencephalography (MEG). There remains no internationally agreed definition of mTBI. It is clinically heterogeneous in both presentation and outcome, and the diagnosis remains clinical, by history and examination, with exclusion of severe and moderate traumatic brain injury. In the military context, mTBI occurs as result of sport (in the UK usually called concussion) and combat, particularly due to blast. In that context it has been much less frequently diagnosed in UK personnel compared with US personnel.
29. Most patients with mTBI recover completely within months to a year post-incident and achieve overall return to pre-injury function and employability. There remain a minority of patients with persistent symptoms and functional disability. Outcomes in published peer-reviewed mTBI studies, with different patient characteristics, definitions of mTBI and short follow-up times, vary widely. The

studies are unable to clarify whether outcomes relate to brain damage, psychosocial factors or both. Evidence does suggest that patient education and specific intervention (e.g. for headaches) can reduce symptoms and disabling effects.

30. No current imaging technique infallibly detects mTBI. Standard CT and MRI scans do not demonstrate the diffuse axonal injury and vascular structural changes sometimes present in mTBI. These can be demonstrated by a range of more advanced, but not yet clinically routine, imaging techniques. These include functional and metabolic imaging modalities such as positron emission tomography (PET), single photon emission computed tomography (SPECT), functional magnetic resonance imaging (fMRI), diffusion tensor imaging (DTI) and magnetoencephalography (MEG). These techniques detect cellular, metabolic and connectivity change but there is to date no simple robust method of identification of mTBI or PTSD beyond a proficient clinical assessment. For MEG there are both specificity and sensitivity issues. While providing insights into localisation and the pathophysiology of mTBI, there remains uncertainty concerning optimal data processing, reflected in the current MEG publications in the scientific literature. Similarly, for PTSD, MEG findings are not at present entirely consistent. We conclude that at this date and accepting that MEG shows promise in investigation of mTBI, further research is required before it finds a place as a potentially specific diagnostic test for either mTBI or PTSD (20).
31. For AFCS compensation, awards are based on functional effects and duration, and brain imaging studies are not required for diagnosis of either mTBI or PTSD. Differentiating co-existing mTBI and PTSD is not a new challenge. Ten percent of British casualties in the First World War were diagnosed with shell shock, accounting for about a third of medical discharges, if physical injury was excluded. In the period after the war there was much debate about whether shell shock was physiological or psychological. By 1939, the matter was unresolved, with most clinicians favouring a psychological explanation. In the recent conflicts and within the limits of current knowledge, where mTBI and a psychiatric diagnosis co-exist, a challenge for compensation (and clinical management) is separation of overlapping symptoms. Where there is a documented episode of mTBI and a preponderance of physical and neurological symptoms, such as headache, balance problems and cognitive impairment, the balance will favour mTBI as the primary diagnosis, while emotional and behavioural symptoms, including nightmares and hyperarousal avoidance will suggest PTSD as the main diagnosis.

## Conclusion:

- The 2013 report on mental health included a section on mTBI, a diagnosis which covers a wide range of neurological severity. Most individuals with mTBI are at the milder end, recovering rapidly and fully, but for others, symptoms can be persistent with increased rates of psychological problems, especially PTSD. New neuroimaging techniques, notably Magnetic Resonance Imaging (MRI) which detects axonal injury were emerging at the time of the 2013 IMEG report and IMEG concluded that in time these might provide early identification and differentiation of diagnoses, and guide treatment.
- At the request of Ministers, we have maintained an overview of mTBI. A section in the 2017 Fourth IMEG reported further mTBI neuro-imaging techniques, including positron emission tomography, PET, single photon emission computed tomography, SPECT and magnetoencephalography (MEG).
- As in the Fourth IMEG report, in this current review we conclude that, at present, mTBI and PTSD can be best differentiated by clinical history and examination, rather than any specific investigation. While accepting that research on MEG shows promise in mTBI investigation, and its possible differentiation from PTSD, we find at this date that it is premature to consider MEG a specific diagnostic test for either mTBI or PTSD.

- As part of the ongoing ministerial tasking, it is recommended that IMEG undertakes a comprehensive review of MEG as part of the 2020/21 Forward Work Plan for publication by the end of 2020.

## Suicide

32. UK National statistics define suicides as all deaths from intentional self-harm in people aged 10 and over and deaths from injury or poisoning where the intention was undetermined in those aged 5 or over. Open verdict is an option available to a coroner's jury at an inquest in England and Wales. In that case the jury concludes that death is suspicious but is unable to determine a cause or reach any other verdict open to them. Open verdict deaths are included under suicide statistics. In England and Wales and Northern Ireland when someone dies unexpectedly a coroner investigates the circumstances to establish the cause of death. The subsequent inquest can take months or even years. This leads to registration delay so that around half the suicides registered in a given year will have occurred the previous year. Until July 2018 all deaths by suicide in England and Wales were determined using the criminal standard of proof "beyond all reasonable doubt". From that date "balance of probabilities", the lower standard of proof became applicable.
33. In 2018 there were 6,507 suicides registered in the UK i.e. age standardised rate of 11.2 deaths per 100,000 population. This is higher than in 2017 and the first increase since 2013. Three quarters of deaths were in males with a rate of 17.2 deaths per 100,000 compared with female rates of 5.4 deaths per 100,000. In males the highest age specific death rate was in ages 45-49 years (27 deaths per 100,000) while rates in the under 25s in the general population have generally been increasing in recent years (21).
34. Since 1984 MOD has published annual statistics on coroner confirmed suicide, including open death verdicts (in line with Office of National Statistics (ONS) practice), in the regular armed forces (22). This includes numbers and rates for the latest 20-year period. From 1999-2018, 310 suicides occurred among regular personnel. Of these 292 were among males and 18 females. The UK regular armed forces have seen declining rates of suicide since the 1990s and suicide remains a rare event. Rates for the three services are 8 per 100,000 naval service, 10 per 100,000 army and 5 per 100,000 RAF. Until 2018 the rates were consistently lower than in the UK general population. The only age group with a statistically raised risk of suicide was males under 20 years.
35. Information on UK veterans is presently limited but two studies by the MOD on veterans of the 1982 Falklands campaign and 1990/91 Gulf conflict found suicide rates below that of the comparable general population (23), (24). A new study is planned to investigate all causes of death including suicide in those who served between 2001 and 2014 and deployed to Iraq and Afghanistan. This will include personnel remaining in service and those who have returned to civilian life. It will give a comprehensive picture of suicides amongst recent veterans, explore any relationship between deployment to Iraq and Afghanistan and allow comparison of suicide rates with rates in Falklands and Gulf 1990/91 conflict veterans as well as with the UK general population.
36. Research suggests the most significant risk factor in suicide is mental health disorder of almost any type, notably the severe and enduring disorders, schizophrenia and bipolar disorder. In a military context, PTSD is associated with suicide risk and with anger and aggression, themselves risk factors. Personality disorder, especially if co-morbid with another psychiatric disorder, is a specific significant risk factor both for self-harm and suicide. Common mental health problems, anxiety and depressive disorder, are also linked to heightened suicide risk. Childhood adversity predisposes to both mental health disorders and suicide. Interpersonal and sexual violence as well as transgender status, particularly if there is victimisation, are also risk factors (25), (26). Similarly, intimate partnership abuse can be a risk. In a military context because

of employment status, debt (a significant factor in civilian life), is less commonly a risk factor for suicide. Protective factors include a sense of purpose in life, personal growth, and general optimism. The evidence suggests cognitive behavioural therapy is effective in changing attitudes and thinking. In a military context, unit cohesion and strong leadership are shown to be protective especially after deployment.

37. Suicide is also an issue in North America. Suicide rates have increased by 25% in the US general population between 1999 and 2016 and the same period has seen suicide among veterans' double from 11 per 100,000 to 22 per 100,000. US veterans have a 21% higher suicide rates than age and sex matched civilian cohorts (27). In response, US DVA and DoD have recently issued new guidelines for the assessment and management of patients at risk of suicide (28). 66% of US veterans' suicide involved a firearm and in the civilian community of 35,658 deaths by firearm in 2017, 23,854 (67%) were registered as suicide.
38. The effects of suicide on family, friends, work colleagues as well as the economic and military operational costs are high. A Defence Safety Agency focused review of suicides in August 2018 acknowledged work already being done to prevent suicide and included recommendations on enhanced and further measures, promotion of mental fitness, prevention, detection and early treatment of mental symptoms and illness with additional funding for DCMHs, unified care pathways for mental health, the 24 hour crisis Helpline and work with the Samaritans to develop resources for those contemplating suicide (29). The Samaritans project, funded by Libor, is a handy pocket guide providing guidance and sources of help for anyone contemplating suicide. The review recommended a Suicide Prevention working group and development of a suicide prevention plan. That work is now under way

## Conclusion:

- Suicide is a major issue in UK society in general and in the armed forces. We will continue to maintain contact with the emerging literature, including international armed forces community studies, with suicide rates in the UK armed forces and veterans, and the Defence Safety Agency, August 2018 recommendations on an updated suicide prevention plan.

## Overall Conclusions on the 2013 and Subsequent IMEG Mental Health Reviews

- Overall on review of the IMEG conclusions on mental health in previous reports, we remain content that the evidence examined in the current review supports the 2011 and 2013 Report recommendations on Tariff values for Table 3 mental health disorders, the 2013 report conclusions on "permanency", interim awards, parity of esteem between physical and mental disorders, and horizontal and vertical equity across the range of awards and level of awards. We also confirm the 2017 report conclusions and recommendations on the 2016 AFCS Quinquennial Review (QQR) issues.
- As part of this Fifth report we explored the literature on chronicity of disorders, notably PTSD, and conclude that while most cases of PTSD do achieve functional improvement with treatment, there are cases with persistent symptoms and disabling functional effects. Literature search for possible robust early signs or predictors of potential chronicity and/or treatment resistance, which might lead to fewer interim awards has to date produced a range of studies but with inconsistent findings. We have therefore concluded that no reliable predictor of chronicity has yet been identified.



- We note that the new level 4 tariff and Band A GIP was introduced into legislation in April 2019.
- We will continue to:-
  - i) review the emerging literature on predictors of PTSD chronicity and
  - ii) investigate level 6 and 4 awards as described at para 21 above.

## References:

1. Mittal, D. et al. Stigma associated with PTSD: perceptions of treating seeking combat veterans. *Psychiatric Rehabilitation Journal*.2013. 36(2);86-92.
2. Hunt, E.J.F. et al. The mental health of the UK armed forces: where fact meets fiction. *Eur.J.Psychotraumatol*. 2014;5:23617.
3. Hoge, C.W.et al. Mental health problems, use of mental health services and attrition from military service after returning from deployment in Iraq or Afghanistan. *JAMA* 2006; 295:1023-32.
4. Stevelink, S.A.M. et al. Mental health outcomes at the end of the British involvement in the Iraq and Afghanistan conflicts: a cohort study. *Brit. J. Psych*.2018; 0,1-8. Available from doi:10.1192/bjp.2018.175
5. National Institute of Health and Care Excellence (NICE). Guidelines on PTSD(NG116) 2018. Available from: <https://nice.org.uk/guidance/ng116/resources/PTSD-978-1-473-1-3181-1>. (Accessed 15 Nov 2019).
6. MOD Defence Health and Well-being Strategy. Available from: <https://www.gov.uk/government/publications/defence-health-and-well-being-strategy-2017-2022>. (Accessed 1 Oct 2019).
7. MOD. UK Armed Forces mental health: annual survey and trends over time, 2007/8-2018/19. Available from <https://www.gov.uk/government/publications/uk-armed-forces-mental-health-annual-survey-and-trends-over-time-2007/8-2-18/19>. (Accessed 1 Nov 2019).
8. MOD. Annual medical discharges in the UK regular Armed Forces. Available from <https://www.gov.uk/government/publications/annual-medical-discharges-in-the-UK-armed-forces>. (Accessed 1 Nov 2019).
9. MOD. UK Armed Forces Compensation Scheme statistics 6 April 2005 to 31 March 2019. Available from <https://www.gov.uk/government/publications/UK-armed-forces-compensation-scheme-statistics-6April2005-31March2019>. (Accessed 1 Nov 2019).
10. Judicial College Guidelines for the assessment of general damages in personal injury cases. 14th edition. Oxford, OUP 2017.
11. Kessler, R.C.et al. Lifetime prevalence and age- of onset distribution of DSM 1V disorders in the National Co-morbidity Survey Replication. *Arch. Gen. Psychiatry*. 2005; 62: 593.
12. Hull, A. et al. Trauma response: why, when and how. A long-term follow-up study of the survivors of the Piper Alpha oil platform disaster. *Brit. J. Psych*. 2002; 181:433-438.

13. Morina, N. et al. Remission from post-traumatic stress disorder in adults: a systematic review and meta-analysis of long-term outcome studies. *Clin. Psych. Review.*2014; 34:249-255.
14. Santiago, P.N.et al. A systematic review of PTSD prevalence and trajectories in DSM 5 defined trauma exposed populations: intentional and non-intentional traumatic events. *PLoS One*, 2013; 8(4): e59236.
15. Steinert, C. et al. The course of PTSD in naturalistic long-term studies: high variability of outcomes. A systematic review. *Nordic J. of Psych.* 2015; 69:483-496.
16. Ehlers, A. et al. Psychological predictors of chronic PTSD after motor vehicle accidents. *J. Abnorm. Psychol.* 1998;107(3):508-519.
17. Kleim, B. et al. Early predictors of chronic post-traumatic stress disorder in assault survivors. *Psych. Med.* 2007;37:1457-1467.
18. Rona, R.et al. Predicting persistent post-traumatic stress disorder (PTSD) in UK military personnel who served in Iraq: a longitudinal study. *J. Psych. Research* 2012; doi: 10.1016/j.jpsychres.2012.05.009.
19. MOD Fourth Independent Medical Expert Report Dec 2017. Available from <https://www.gov.uk/government/publications/independent-medical-expert-report-2017>.
20. Rowland, J.A. et al. Contrasting effects of post-traumatic stress disorder and mild traumatic brain injury on the whole brain resting network: a magnetoencephalography study. *Brain Connectivity* 2017; 7:47-57.
21. Office of National Statistics. Suicides in the UK: 2018 registrations. Available from <https://www.gov.uk/government/publications/suicides-in-UK-2018-registrations>.(Accessed 15 Oct 2019).
22. MOD. Suicides in the UK regular armed forces: annual summary and trends over time 1 January 1984-31 December 2018. Available from <https://www.gov.uk/government/publications/suicides-in-the-UK-regular-armed-forces-annual-summary-and-trends-over-time-january-1984-31-december-2018>. (Accessed 15 Oct 2019).
23. MOD. Causes of death that occurred among UK veterans of the 1982 Falklands conflict. Available from <https://www.gov.uk/government/publications/causes-of-death-that-occurred-among-veterans-of-the-1982-falklands-conflict>. (Accessed 15 Oct 2019).
24. MOD. Causes of death that occurred among UK veterans of 1990/91 Gulf 1 conflict. Available from <https://www.gov.uk/government/publications/causes-of-death-that-occurred-among-UK-veterans-of-1990-1991-gulf-conflict>.(Accessed 15 Oct 2019).
25. Haas, A. et al. Suicide and suicide risk in lesbian, gay, bisexual and transgender populations: Review and recommendations. *J. Homosexuality.*2010; 58:10-51.
26. Tucker, R.P. Suicide in transgender veterans: prevalence, prevention and implications of current policy. *Perspect. Psychol. Sci.*2019;14(3): 452-461.
27. American Foundation for Suicide Prevention statistics. (2019). Available from <https://fsp.org/about-suicide/suicide-statistics>. (Accessed 1 Oct 2019).

28. D'Anci, K. E. et al. Treatments for the prevention and management of suicide: a systematic review. *Ann.Int.Med.*2019;171(5):334-342.

29. MOD Defence Safety Authority Focused review of suicides among armed forces personnel August 2018. Available from <https://www.gov.uk/government/publications/defence-safety-authority-focused-review-of-suicides-among-armed-forces-personnel>. (Accessed 15 Nov 2019).