The ubiquity of the risk of psychological injury following combat exposure is now accepted as an integral part of the costs of going to war [1]. Scientific observation and knowledge derived from epidemiological studies of combat-exposed populations in combination with studies of the underlying neurobiology, particularly of longitudinal cohorts prior to and following deployment, have been invaluable in countering many of the prejudices that plagued military psychiatry in the first seven decades of the twentieth century. The optimal way of maintaining the mental health of service personnel is a constantly evolving challenge because of the changing nature of conflict and operational tempo, particularly with multiple deployments to the conflicts in the Middle East [1]. Integrating this emerging body of knowledge into clinical practice represents a substantial challenge.

Post-traumatic stress disorder (PTSD) has been the primary focus of the documented psychological injuries from combat [2]. However, the range of traumatic stressors that occur in the combat environment represents significant risk factors for the other psychiatric disorders such as depression and obsessive compulsive [3] disorder as well as adverse physical health outcomes, including premature death [4]. PTSD also has increased comorbidity with many physical disorders, ranging from metabolic syndrome and related cardiovascular morbidity through to autoimmune disease such as rheumatoid arthritis [5, 6]. The comorbidity of PTSD and mTBI is a further example of how there can be both physical and psychological consequences from the same trauma event. In some regards, the focus on the differentiation of their symptoms and aetiology fails to integrate the aspects of their causation and neurobiology that are shared. An example of this is the commonality of the role of sleep plays in driving other symptoms of attentional difficulties and executive dysfunction [7]. In my opinion, the challenge for all clinicians is to ensure that a comprehensive psychological and physical assessment has been made when providing healthcare to veterans, rather than being confined to the perspective of siloed specialties.

These multiple intertwined physical and psychological health consequences of war argue for the role of shared mechanisms that underpinned the aetiology of these disorders which is further reinforced by the fact that PTSD is the sole diagnosis in a minority of cases [3]. The allostatic load model has been used to refocus the stress disease literature, emphasising that their multiple biological systems are vulnerable to a temporal cascade of dysregulation [9].
Progressive dysregulation leads to the emergence of a range of disease trajectories and disorders that arise from these common pathways. Allostasis recognises that physiological states change over time and that both physical and psychological stressors elicit various physiological reactions in an attempt to return to what is the steady state at that particular time [10]. Allostatic load refers to the wear and tear on the body that is incurred during the process of returning to a steady state [10]. My clinical experience has proven the value of the further dimension that the allostatic model provides in capturing a longitudinal perspective of the risk of disorder that interacts with the morbidity of age as well as stresses following return from deployment [11, 12].

A core component of self-regulation is the ability to sustain good quality sleep. As Adler et al. and Sipos [2] summarise, sleep disorder in the pre-deployment and the post-deployment period represents a significant risk for the development of PTSD. In general community populations, sleep has similarly been a significant marker of later risk of developing a psychiatric disorder [14]. This evidence highlights how subclinical distress and symptoms are markers of significant risk of later disorder and are critical for clinicians to document.

Recent literature has highlighted the importance of subsyndromal PTSD symptoms [15], including sleep disorder as a marker of the future probability of disorder. Various longitudinal studies have shown that general psychological distress is less ubiquitous than often claimed and therefore not normal phenomena in acutely traumatised populations, such as those who are combat exposed [16] or who have experienced accidents [17]. This would support the utility of taking a dimensional perspective of psychological symptoms following combat exposure with less emphasis on whether an individual has crossed the threshold to attract the full diagnostic criteria for PTSD. While there is a range of findings about the exact rates of PTSD in the aftermath of combat exposure [2], when a dimensional perspective is taken, these differences become of less relevance, as those who fall just below the cut-offs represent populations at significant risk.

In terms of early intervention, focusing on those with lower levels of distress may have benefits because of the fluidity of symptoms at this time. The demonstration of benefit of interventions for insomnia highlights how sleep disturbance has the potential to be an ideal target to decrease the risk of future disorder [18]. In my opinion, developing demonstrably effective clinical interventions for subsyndromal disorder is a priority area. Documenting the gender differences in the patterns of early psychological distress is important to ascertain whether differential strategies are required for optimal outcomes from early intervention [8].

A further extension of the dimensional approach to combat-related psychopathology is to adopt a staging approach to PTSD [19]. This approach [21] is built on the substantial body of research on the longitudinal course of PTSD and the sequential shifts in its neurobiology following traumatic stress exposure [20] and the progressive recruitment of symptoms with time [17]. Staging moves away from a reliance on cross-sectional descriptions and highlights the importance of studying a disorder longitudinally and, for example, the role of specific phenomenon such as sleep in the risk and progression of the disorder. The aim of the staging approach is to identify biomarkers that have an adequate degree of specificity for PTSD and to differentiate those that act as disease markers from indicators of risk and vulnerability across the different stages, markers of disease progression and epiphenomena [21]. My view is that the use of a staging approach in PTSD will allow the development of a more sophisticated approach to developing prevention strategies and treatment that will lead to the differentiation of the optimal strategies for recent-onset disorder from those for the chronic and relatively unremitting cases [13]. The one size fits all approach that has tended to be reflected in treatment guidelines has hampered the development of more effective treatments so needed by the field.

References