

CONCLUSION

One in five of the ADF population had experienced a mental disorder in the previous 12 months, which is similar to the rate in the Australian community. Over half of the ADF had experienced an anxiety, affective or alcohol disorder at some stage in their lifetime, which was significantly higher than the Australian community rate. The incidence and prevalence of mental disorders suggest that any healthy worker effects in the ADF appear to be counterbalanced by the impact of occupational stressors.

In terms of affective, anxiety and alcohol disorders, the ADF and the Australian community faced similar challenges. The most common disorders in the ADF were anxiety disorders; as in the general community, post-traumatic stress disorder was the most prevalent of these. Affective disorders were associated with the largest deviation from the Australian community, with the prevalence of affective disorders in males in the ADF significantly higher than in the community. Although the rates of anxiety disorders are similar in the ADF to those in the community, the incidence of alcohol disorders is significantly lower across both sexes.

The study's data indicated specific cultural differences between the Services that need to be explored further. Army personnel were significantly more likely to have had either an affective, anxiety or alcohol disorder in comparison to Air Force and were also significantly more likely to endorse stigma and barriers to care items. Navy members were more likely than Air Force to have an alcohol disorder and more likely to report concerns about getting time off work, their career or deployability than about barriers to care. Overall, there was very little difference in the mental health prevalence between personnel who had been on operational deployment and those who had never been deployed.

These summary data provide a comprehensive baseline for future monitoring of mental health trends and have important implications for the further development of the ADF mental health and wellbeing strategy and service delivery model.

Comparisons with major allies

The literature that most resembles the current findings is a study conducted of the Canadian Forces, where a stratified sample was interviewed using an earlier version of the same diagnostic interview used in this study. The study revealed that 14.9% of the Canadian Forces had a mental disorder. Although the prevalence of mental disorders in the Canadian Forces is apparently lower than in the ADF, the two studies used different diagnostic criteria to analyse the data, with the Canadians using the Diagnostic and Statistical Manual of Mental Disorders – 4th edition (DSM-IV) diagnostic criteria. For the present study, ICD-10 criteria were used to allow comparison with national rates. The ICD-10 criteria appear to use slightly lower thresholds; this may explain at least some of the higher apparent prevalence of mental disorders in the ADF.

Neither the United Kingdom nor the United States has yet conducted an interview-based study of the prevalence of mental disorders in their defence forces. Studies of the UK forces using self-reports (for example, the General Health Questionnaire) estimate that 19.7% of that population has a mental disorder, which is similar to ADF rates. In the US forces, disorder rates are higher in deployed samples, but the overall rate of disorder is estimated at 18.3% of the forces' population, which is again similar to that in the ADF.

Target groups for intervention

The data in this report indicated a significant burden of mental illness that needs to be addressed because of its impact on the ADF's operational capability and on the wellbeing of Service personnel and their families. Within the data, a number of at-risk demographic subgroups within the population were identified; these warrant more detailed investigation as they are targets for both preventive and treatment interventions.

Females in the ADF generally had lower rates of mental disorders compared to their civilian counterparts. While they had higher rates of affective disorders, they had lower rates of both anxiety and alcohol disorders. Male ADF personnel, in comparison, had consistently higher rates of affective and anxiety disorders than those in the general community and a similar rate of alcohol disorders. Comparison of data from this study with data from the Longitudinal ADF Study Evaluating Retention and Resilience (LASER), which tracks an individual's mental health status from point of enlistment, should allow the ADF to determine whether females who join the ADF are more resilient and what the protective and risk factors are for both sexes.

The youngest cohort of ADF members is particularly at risk of having a mental disorder. Many of these individuals leave after five years, as this is the end of their initial contract, without having the disorder diagnosed or treated. LASER should also assist in identifying the risk and resilience factors during this period of service. Young members who leave the ADF with a mental disorder are at particular risk in the community of not receiving adequate care. In addition, the link to military service often goes unrecognised. The Department of Veterans' Affairs system has no visibility of this group, which increases the problems its members are likely to have in getting appropriate clinical care.

The study found very little difference between ranks on affective disorders, except that other ranks had a higher level of bipolar affective disorder. Both non-commissioned officers and other ranks were more likely to be diagnosed with an anxiety disorder when compared to officers. The prevalence of mental disorders in the other ranks is noteworthy as they were significantly less likely to report that they knew where to get help or that they had the ability to get time off work, suggesting that they would benefit from mental health literacy campaigns—such as 'Keep Your Mates Safe'—which focus on where, when and how to get care.

While mental disorders were less prevalent in officers, an estimated 828 had had an affective disorder and 1,242 had had an anxiety disorder in the previous 12 months. Officers were also just as likely as other ranks or non-commissioned officers to have had an alcohol disorder. Officers, however, were less likely to seek help for a mental health disorder. Of the rank groups, they were the most likely to indicate that negative stigma kept them from seeking help, including that help seeking would harm their career or that others would treat them differently. These findings suggest that any communications strategy to encourage help seeking must target its messages to specific populations.

The study data found cultural differences among the Services that need to be explored further. Army personnel were significantly more likely to have had either an affective, anxiety or alcohol disorder in comparison to Air Force personnel, and they were significantly more likely to report stigma and barriers to care items. Navy personnel were more likely than Air Force personnel to have had an alcohol disorder and were more likely to rate getting time off work and concerns about career and deployment as barriers to care.

Overall, there was very little difference between personnel who had been on deployment and those who had never been deployed. The only significant difference was that personnel who had been deployed were four times more likely to have obsessive-compulsive disorder. Because this was an unexpected finding, a further analysis was conducted in which the type of deployment was categorised as warlike or non-warlike. That analysis did not reveal any difference. This finding suggests that the significant resources invested by the ADF into a comprehensive operational mental health support system may be effective in prevention and early intervention for mental disorders resulting from exposure to occupational stressors on operations. This conclusion is further supported by the fact that personnel who had been deployed were more likely to seek care than personnel who had not been deployed.

Implications for prevention and treatment of affective disorders

The significant prevalence of affective disorders in the ADF is in keeping with the concern about the prevalence of these conditions in the broader Australian community. The beyondblue initiative emerged because of the recognition of the burden of disease associated with depression and the broader costs in terms of impairment and disability. Of all the disorders assessed, individuals with a depressive episode were most likely to have had professional treatment in the previous 12 months. This may be because the national campaigns have led to a greater acceptance of seeking help for this disorder or because the symptoms of this disorder have a severe impact on functioning, which leads individuals to be more inclined to seek care. Further investigation to confirm these hypotheses would allow the ADF to develop effective intervention initiatives.

The data estimated that some 3,182 individuals in the ADF had had a depressive episode in the previous 12 months. Despite the fact that 65.2% of personnel with a depressive episode in the previous 12 months had had treatment with a professional, the workload and health services required to meet the remaining need are substantial.

To maximise detection, the first line of support must be general duties medical officers because, of all the mental health professionals, they have the most contact with ADF personnel. In addition, as 65% of personnel with a depressive disorder also had at least one other mental disorder, any depression initiative must be fully integrated into a comprehensive mental health service delivery model.

It is worth noting that, of personnel with a depressive disorder who were asked about interference with work, 41% reported a severe or very severe impact. The costs of affective disorders to employers have led groups such as Wang and colleagues (2006) to model the impact of each type of affective disorder. Their evidence provides substantial support for enhanced treatment in employment settings. In general, they concluded that the introduction of such programs had a significant cost benefit for employers. For the ADF this means that enhanced treatment of the identified individuals with an affective disorder would be beneficial because it would lead to greater productivity.

A recent study in a civilian setting examined the impact of mood disorders on work performance in a nationally representative sample (Kessler et al., 2006). This study found that those with bipolar affective disorder reported 65 lost work days a year and those with major depression reported 27 lost work days. It appears that the depressive episodes in those with bipolar affective disorder are more severe and persistent than in

those with major depressive episodes alone. This suggests that, while bipolar affective disorder is not the most prevalent mental disorder, it has a considerable impact on capability that must be addressed. Consideration should be given to ensuring that both general practitioners and mental health professionals can carry out effective differential diagnosis of depressive disorders to ensure that treatment services are targeted most effectively.

Implications for prevention and treatment of anxiety disorders

In 2010, Chief of Army launched a DVD, *Dents in the soul*, to demystify post-traumatic stress disorder and to encourage personnel to seek care. This initiative was in response to concerns about the impact of the loss of personnel and the increasing number of severely injured in Army as a result of land-based operations. The data in this study support the priority given to post-traumatic stress disorder by the Army, where it is the most common mental disorder, reported in 9.7% of Army personnel. An estimated 2,462 personnel would have benefited from care in the previous 12 months. The continued rollout of this resource in commander's hours or unit training should be encouraged and consideration given to similar initiatives for the other two Services. Panic attacks, closely followed by post-traumatic stress disorder and depressive disorders, are the most common mental disorder in the Navy, and specific phobias, followed by post-traumatic stress disorder, the most common disorder in the Air Force.

Of those asked the question about seeking care, the proportion of personnel who had received treatment in the previous 12 months was lower for post-traumatic stress disorder than depression. The fact that many of these disorders may not be known to command has important implications. Anxiety disorders affect the functional capacity and decision making of personnel, which can lead to decision errors in such personnel, as anxiety disorders often produce memory and concentration difficulties.

An important issue that requires further investigation, however, is that many individuals may not be aware of the extent to which anxiety disorders disrupt memory, concentration, and decision-making capacity. Therefore, the cognitive impacts of these conditions in the workplace are matters that require further exploration if individuals with a mild version of these disorders are allowed to continue in important roles within the ADF.

Implications for prevention and treatment of alcohol disorders

While rates of alcohol disorder are not higher than those in the general community, they reinforce the investment Defence has made in the ADF Alcohol, Tobacco and Other Drugs Strategy and the recent ADF Alcohol Management Strategy.

Analysis of the self-reported alcohol consumption data collected from the AUDIT highlighted the complexity of drinking behaviour in the ADF and suggested optimal interventions. In particular, alcohol consumption is not simply a measure of psychological disturbance. Rather, moderate consumption has been identified to have potential beneficial health effects. For example, there is some evidence that alcohol, when consumed in moderation, may have a protective effect in those who have been exposed to traumatic stressors (McFarlane et al., 2009). The challenge for an organisation such as the ADF is to develop a message that addresses the specific question of problem and at-risk drinking, which has a clearly identified impact on a

number of ADF members. Episodic consumption of large quantities is also associated with particular risks of disorderly behaviour and violence. Therefore, to be effective in the ADF environment, an intervention strategy that addresses a spectrum of behaviours and drinking patterns is required.

There are a number of issues relating to treatment seeking in this population. The significant majority had received no care in the previous 12 months. Many individuals who abuse alcohol do not identify themselves as having a problem. Often they only come to attention if they have a co-morbid disorder that leads them to seek assistance. This highlights the importance of population screening with an instrument such as the AUDIT or the GGT test, which helps to detect liver disease and bile duct injury. (Conigrave, Davies, Haber, & Whitfield, 2003). The US Preventive Services Task Force found good evidence that screening in primary care settings can accurately identify patients whose alcohol consumption places them at increased risk of mortality and morbidity (Ikin et al., 2004). They also found good evidence that brief counselling resulted in more moderate alcohol consumption, which was sustained over a 6- to 12-month period. There was some evidence that these effects lasted for four or more years. Hence, there is sufficient evidence to suggest that a screening program in ADF health care facilities of all those who present for any medical condition in a 12-month period could yield a significant population benefit. Such an approach could be considered as the ADF selects an alcohol strategy.

Finally, given the impact of alcohol on behaviour and its relation to violence and inappropriate conduct, these findings have significant relevance to the ADF. Interventions should be targeted at ADF members who are charged with unruly behaviour or unbecoming conduct. A careful psychological assessment of those who are charged should be implemented as part of the military justice system.

In conclusion, the prevalence of alcohol disorders in the ADF is broadly in keeping with that in the general community. However, the reputational issues and scrutiny of ADF members' health and behaviour demand active strategies to treat and manage alcohol disorders, which go beyond those available to the civilian community.

Implications for treatment of co-morbid disorders

The prevalence of mental disorders is an important issue in terms of problems with discipline and other behaviours that potentially bring the ADF into disrepute. Alcohol abuse, acts of aggression and disinhibition are associated with mental disorders. Hence, any strategy to deal with these matters in the ADF must focus on these patterns of co-morbidity. For example, an individual with co-morbidity – an affective disorder and alcohol disorder, say – is particularly prone at times of excessive consumption to be involved in disorganised or disinhibited behaviour, especially if their affective disorder symptoms cluster in the manic or hypomanic end of the spectrum. This relationship not only needs to be recognised and addressed through the ADF mental health strategy but is also relevant to the military justice system and the broader issues of command.

Implications for the ADF Suicide Prevention Program

The significance of suicidal ideation in the ADF rests in the future risk of these individuals acting on their suicidal thoughts. The importance of suicide attempts for the future mortality of military veterans has recently been examined (Weiner, Richmond,

Conigliaro, & Wiebe, 2011). This study indicated that the 10-year cumulative mortality risk for veterans who had attended a United States Veterans Affairs medical centre after a suicide attempt was 22.0%, or three times greater than expected. The cumulative survival probability after 10 years was 78.0%. The three leading causes of death were heart disease (22.2%), suicide (13.1%) and unintentional injury (12.7%). The extent to which suicide accounted for the mortality of this group was significantly greater than in the general US population, in which suicide was the ninth leading cause. Among women in the study group, suicide was the leading cause of death (25%) and among men the second leading cause (12.7%). This highlights the necessity for significant long-term follow-up of suicide attempts.

In the general community, approximately 90% of people who attempt suicide have a psychiatric disorder, particularly depression (Beautrais et al., 1996; King et al., 2001) and post-traumatic stress disorder (Krysinska & Lester, 2010; Marshall et al., 2001; Oquendo et al., 2005). Mood disorders (Kang & Bullman, 2008) are an antecedent to 30% to 90% of suicide mortalities (Arsenault-Lapierre, Kim, & Turecki, 2004; Isometsä, 2001; Rihmer, 2007). Substance-related disorders are present in 26% to 55% of those who die by suicide and are the second highest group of mental disorders associated with suicide (Rihmer, 2007). Post-traumatic stress disorder is also related to suicide: 20% of community samples attempted suicide at least once (McFarlane, 2004; Sareen, Houlahan, Cox, & Asmundson, 2005).

Given that attempted suicide is significantly more common than completed suicide, investigation of the associated risk factors of suicidal ideation, particularly when it is accompanied by co-morbid psychiatric disorder, is an important task for the ADF. Prolonged feelings of worthlessness and fleeting suicidal thoughts often precede suicide and are potential indicators of risk. Therefore, such warning signs should be investigated, particularly in those with depressive disorder. The symptoms of emotional numbing of post-traumatic stress disorder are also important predictors (Guerra & Calhoun, 2011). This study of the ADF estimated the prevalence of individuals with psychiatric disorders with associated suicidal ideation, such as major depressive disorder and post-traumatic stress disorder. The findings will be used to develop more effective prevention strategies that focus on this pattern of morbidity. The levels of suicidal thoughts and attempts found in this study were not anticipated by the ADF. However, these rates were not dissimilar to those found in a study of the US Air Force, where 3% of males and 5.5% of females had suicidal ideation in the previous year (Snarr, Heyman, & Slep, 2010). While strategies have been put in place to manage suicidal behaviour in the ADF, particularly through the Applied Suicide Intervention Skills Training (ASIST) package, the data presented in this report provide important insights. First, a number of individuals who attempt suicide may not be known to command. This suggests that barriers to care are an important issue if these at-risk individuals are to be better cared for. Second, the known association between suicidal ideation and behaviour and psychiatric disorders needs to be explored further. In particular, interventions that solely focus on suicide prevention at times miss the important opportunity of ensuring that people receive the appropriate treatments. In the ADF, the number of people who are at risk of suicide shows that there is a significant unmet need, as the current rates exist despite the presence of mental health services.

The 2007 National Mental Health and Wellbeing Survey (Slade, Johnston, Oakley Browne, Andrews, & Whiteford, 2009) indicated that 10% of people with mental illness die by suicide within the first 10 years of diagnosis. The fact that the study estimated that 3.9% of ADF personnel had contemplated suicide within the previous year and 1.1% had

made a plan is indicative of the significance of this issue to the ADF. In the Australian population, of those who had serious thoughts of committing suicide in the previous 12 months, 72% had had a disorder in the previous 12 months. A similar pattern has been identified in ADF personnel. Therefore, any process or plan to deal with suicidal ideation must actively assess individuals for the presence or absence of a psychiatric disorder.

This study was limited to examining the link between suicidal ideation and mental disorder. The relationship between sub-threshold disorders and suicidality was not examined. Jakupcak and colleagues (2011) found that suicidal risk was three times greater in individuals with sub-threshold post-traumatic stress disorder than in veterans without it. Importantly, they found no difference in the likelihood of experiencing hopelessness and suicidal ideation between individuals with sub-threshold and those with threshold post-traumatic stress disorder symptoms. This highlights the importance of hidden sub-threshold symptoms of post-traumatic stress disorder as predictors of suicide risk and the fact that, even in those without mental disorders who have suicidal ideation, significant levels of psychological symptoms in the absence of full disorder may convey a substantial risk.

In summary, the rates of suicidal ideation in the ADF highlight the importance of having active intervention strategies such as the Suicide Prevention Program. In reviewing the alternative approaches, Zamorski (2011) has highlighted potential strategies for decreasing the suicide risk in the Canadian Forces that have relevance to the ADF. The value of screening for suicidal ideation, depression and post-traumatic stress disorder was advocated. The aggregated data from this study about the rates of suicide in the ADF suggest that despite the prevalence of suicidal ideation and attempted suicide, the rates of suicide are lower than in the general population (Bounty, Condon, & Winslade, 2004). This research provides some evidence about the possible benefit of the ASIST program and other interventions in the ADF. However, it remains the case that the substantial rates of under-diagnosed and untreated mental disorders in the ADF are a major cause of suicidal ideation, which is a risk to the organisation.

It is clear that while the rate of suicide attempts is similar to the community rate, the actual completion rate of suicide in the ADF is lower. However, the level of ideation and planning is higher. This suggests that the comprehensive literacy and suicide prevention initiatives in the ADF may be having a positive impact.

The ADF Suicide Prevention Program was launched in 2000 as part of the ADF Mental Health Strategy. It has three complementary components: prevention, intervention and postvention. The prevention component has focused on teaching members where, when and how to seek care.

This study also examined suicidal ideation in the context of an individual's mental health status. Importantly, it ascertained the strong relationship between suicidal ideation and mental disorders, finding that 2.8% of individuals with any disorder attempted suicide, while 0.1% of those with no disorder did so. Of those who attempted suicide in a year, 90% had a mental disorder. Those with an affective disorder were particularly at risk of suicidal ideation, but 21.2% of those with an anxiety disorder also felt that life was not worth living. This highlights that suicidal ideation and risk are not confined to those with depressive disorders.

The strong association with mental disorders means that targeted public health campaigns about managing suicide need to emphasise the importance of having effective evidence-based treatment for mental disorders. For example, inappropriate

concerns are often expressed about the prescription of antidepressants and increased risk of suicide. A significant examination of the relationship between suicide and antidepressant usage in the United States found that higher antidepressant use per capita predicted lower suicide rates. In other words, the lowest suicide rates were in the geographic regions with the highest rates of prescription (Gibbons, Hur, Bhaumik, & Mann, 2005). This finding highlights the demonstrable benefits (in terms of rates of suicide in the relevant communities) that the implementation of effective treatment for mental disorders can have at a population level.

The ADF is currently developing policy that will ensure that anti-depressant medication can be more effectively used in the treatment of individuals with mental disorders. Previously, personnel who were stable on medication and free of symptoms were not able to be deployed. Following a two-year trial in a deployed environment and a significant change in policy, Defence has determined that some individuals will be able to be deployed while on medication, provided that they are stable and have recovered from their illness. This should start to break down a significant barrier to care caused by anxiety about deployability.

Joint Health Command is conducting two major suicide prevention projects in 2011. First, an external evaluation of Defence's suicide prevention initiatives is reviewing the programs for effectiveness, best practice compliance and consistency with the national suicide prevention framework. Second, formal training in suicide risk assessment guidelines is being delivered in the second half of 2011 to Defence mental health professionals and providers. This training will ensure that all members of the Defence mental health workforce are skilled in the identification and management of members at risk of suicide.

Significance of mild symptoms

Analysis of self-reported psychological distress in the Kessler-10 (K10) and the post-traumatic symptomatology in the Posttraumatic Stress Disorder Checklist highlights the spectrum of severity of symptoms in the ADF. There is a general debate about considering psychopathology as a dimensional construct as well as using strict diagnostic categories. An important question is whether the ADF mental health policy should address the issue of individuals who have moderate symptom levels without a clearly diagnosed disorder.

The data in this study have been presented in bands of severity, which provide an indication of the prevalence of less severe symptoms in the ADF. It is important to understand that, as with any disorder, there is a range of severity in physical health. In systems of classification, a recent study emphasised the importance of including mild disorders when considering a revision of diagnostic systems (Kessler et al., 2003). The study followed up a group of individuals interviewed originally between 1990 and 1992, and interviewed again between 2000 and 2002, and identified the significant risk of progression from a mild to a more severe disorder. The finding shows the potential benefit and value of early intervention for members of the ADF who are experiencing only moderate symptoms, particularly because of the association with significant work impairment even at a moderate level of distress.

An important symptom that highlights the risk of morbidity in military populations is insomnia (McLay, Klam, & Volkert, 2010). Insomnia was the most commonly reported symptom and predicted greater rates of post-traumatic stress disorder at follow-up.

The relationship between sleep problems and general poor psychological and physical health in the community has been well documented and demonstrates the benefits of early intervention based on symptoms alone (Stein, Belik, Jacobi, & Sareen, 2008).

The prevalence of sub-syndromal post-traumatic stress disorder symptoms in veterans from the Middle East Area of Operations is similar to the prevalence of full-blown syndrome (Pietrzak, Goldstein, Malley, Johnson, & Southwick, 2009). Sub-syndromal post-traumatic stress disorder has significant degrees of impairment in relation to work and relationship problems. For those veterans, the level of impairment was intermediate – between those without any mental disorder and those that met full criteria for post-traumatic stress disorder (Stein, Walker, Hazen, & Forde, 1997). The apparent dose response relationship noted between post-traumatic stress disorder status and function impairment showed that those with sub-syndromal post-traumatic stress disorder could benefit from intervention.

The issue of mild symptomatology is probably of particular relevance in those returning from deployment because of the risk of delayed onset disorders, particularly post-traumatic stress disorder. During the early post-deployment phases, individuals are probably significantly more malleable and responsive to treatment. However, given the barriers to care and stigma, implementing such treatment programs will be challenging.

Addressing stigma and barriers to care

The study found potential stigma to be a substantial issue, limiting the probability that members of the ADF would seek treatment for their condition. In particular, 27% of members believed that getting treatment would harm their career or career prospects, and 27.6% believed that their colleagues would treat them differently. However, the strongest disincentive to seeking treatment was the fear that taking action would stop them from being deployed, reported by 37% of individuals.

However, personnel did indicate that they knew where they could get help and that they would be given time off work to seek treatment. This suggests that the extensive psycho-education and screening programs delivered to those who have been deployed appear to have increased mental health literacy but have not addressed internal negative belief about how others may view those seeking help.

On the basis of these findings, it is important to consider what administrative steps and procedures could uncouple a discussion of mental health matters from negative consequences, not only in terms of social and personal status, but also career opportunities.

Many similar barriers exist in the broader community. Therefore, existing ADF programs should build on and modify successful interventions used in the general community. The evidence supports the provision of treatment for mental disorders in general medical settings rather than in separate and designated clinics for mental disorders. While those who had high levels of symptoms were significantly more likely to have sought care, a significant percentage of ADF personnel, varying by diagnosis, had substantial disability and were not receiving treatment. This untreated pool of mental disorders that impair function at work represents a major organisational risk to the ADF.

One strategy that has been proposed to improve the rates of people coming into treatment is the use of a primary care screen. It is well known that psychiatric disorders tend to be under-diagnosed in primary care settings. However, primary care settings

are generally more readily accessed than mental health services. Many patients present with a range of physical symptoms rather than primarily psychological complaints. The inclination and training of the clinician are also important factors that affect diagnostic accuracy. The importance of using screens has been extensively researched and screens have been found to be effective, particularly for depression and alcohol abuse. Calhoun et al. (2010) found that even brief instruments such as the Primary Care Posttraumatic Stress Disorder screening questionnaire are effective in improving diagnostic rates. There is now wide acceptance of the importance of screening. Instituting screening was recommended in the National Health and Medical Research Council's clinical guidelines for the treatment for post-traumatic stress disorder as well as in the United States (VA/DoD Clinical Practice Guideline Working Group, Veterans Health Administration, Department of Veterans Affairs and Health Affairs and Department of Defense, 2004).

A number of strategies could reduce stigma and break down barriers to care for military people who are experiencing mental health problems. These include:

- the use of primary care providers to provide a method of care that is more acceptable and less vulnerable to stigmatisation (Visco, 2009)
- outreach and education programs to make mental health issues more visible and less surrounded by a culture of secrecy and denial
- reduction in documentation and greater confidentiality to reduce the fear of repercussions for career and reputation among peers and leaders (Britt et al., 2008).

Importantly for the ADF, stigma and barriers to care remain despite a range of initiatives and psycho-education programs aimed at addressing these issues. Mental health literacy has increased but changing attitudes and behaviour remains a major challenge. Additional steps may be required, including a further review of the current medical employment classification system, which is perceived by many to be a major barrier to seeking treatment. The ADF needs a system that supports early intervention as well as treatment and management when required.

Trauma and deployment as risk factors

Understandably, much effort concerning the mental health of ADF members has focused on the individuals who are deployed. Among all ADF members, an estimated 43% reported having been deployed multiple times, 19% reported having been deployed only once, and the remaining 39% of personnel had never been deployed. Army had the highest incidence of multiple deployments at 46%, followed by Navy with 41%. Air Force had the lowest frequency of multiple deployments, at 36%. Navy, at 11%, had the highest proportion of personnel reporting six or more deployments.

Particular concern has been expressed about the effects of multiple deployments on mental health. Significantly, the analyses in this study did not show that multiple deployments resulted in individuals experiencing more symptoms of psychological distress. However, there was a trend for each subsequent deployment to incur higher levels of traumatic symptomatology.

The data further suggest that it should not be assumed that personnel are necessarily exposed to traumatic events through deployment. Exposures were confined to an important subgroup who may be at greater risk due to the nature of their role or

who had had direct experience of combat. Furthermore, high rates of trauma in the non-deployed sample predicted a spectrum of symptoms, which indicates the need for a broader occupational health model that takes into account a range of traumas that non-deployed individuals in Australia may be subjected to as a consequence of their military service. This matter requires further exploration.

The finding that deployment did not affect self-reported measures of mental health status (K10 and AUDIT) was not anticipated from the findings of significant correlations in US studies. However, studies by the Kings College Group tended to find little relationship with deployment. In contrast, post-traumatic stress disorder symptoms in the ADF sample were found to increase with the number of deployments. In the non-deployed sample, this study found a progressive recruitment of symptoms as trauma exposure increased. These seemingly contradictory findings require careful further interpretation.

The relative lack of recruitment of symptoms with progressive deployment may, in part, be due to the series of processes aimed at detecting individuals with substantial levels of symptomatology prior to and after deployment, such as the RtAPS and POPS. The possibility that the RtAPS and POPS are identifying at-risk individuals should be examined by linking with this dataset.

Also, many people who are deployed are not exposed to combat because they have other roles that are important to the activity of the ADF but do not involve a direct risk of trauma. The available literature suggests that deployment for longer than six months may have adverse effects on people's health (Buckman et al., 2011). For example, a UK study (Rona et al., 2007) found that individuals who had been deployed for 13 months or more in the previous three years had a significantly greater risk of post-traumatic stress disorder (OR=1.5). Logically, there is likely to be an interaction between the duration of deployment and the secondary dose response relationship between the degrees of trauma experienced on deployment. For example, the adverse outcomes of deployment are noted in those with high combat exposure (Engelhard et al., 2007; Smith et al., 2008). Therefore, in the ADF there needs to be further analysis of the interaction between the number of deployments, the duration of deployment and the number of trauma exposures.

The ADF Mental Health Reform Program

In July 2009, Defence introduced a comprehensive four-year Mental Health Reform Program to implement the Military Occupational Mental Health and Wellbeing Model in Defence. The program addresses the recommendations of the Dunt Review (*Mental Health in the ADF and Transition to Discharge*, February 2009). The 52 recommendations of the review are being implemented through the achievement of 10 goals.

Goal 1 – Enhancing the mental health workforce. Over the four years of the reform process, \$84 million has been allocated to enhance the mental health workforce at the local, regional, national and strategic levels. The reform process has increased the mental health workforce by 25% and aims for an increase of more than 50% by mid-2013. Priorities for expansion include:

- **local/regional service delivery:** the creation of multidisciplinary teams to deliver mental health and occupational psychology services, as well as implement prevention initiatives
- **national:** an ADF Centre for Mental Health staff to provide a mentoring, supervision and training resource with national coverage

- **strategic:** the Mental Health, Psychology and Rehabilitation Branch, created in December 2010 in order to develop policy to support all elements of the reform process.

Goal 2 – Improving mental health governance and service delivery. The 2011 ADF Mental Health and Wellbeing Strategy has been developed and will act as a blueprint to guide the development of the 2012–2015 ADF Mental Health and Wellbeing Action Plan. This plan will provide a framework for future mental health initiatives and the ongoing evaluation of programs and services. Fundamental to this strategy is a new service delivery model that has been developed to improve the integration of mental health into the primary health care environment.

Goal 3 – Improving mental health policy. Improved mental health policy is providing guidance on clinical pathways, evidence-based practice approaches for treatment and contributing to the broader health policy. Improved mental health policy is focusing on both resilience and recovery.

Goal 4 – Improving mental health training. The outcome of this goal has been the development of a comprehensive program of continuing professional development for the mental health workforce and a contemporary mental health literacy program for ADF members.

In response to the 2009 force protection measures initiative, Joint Health Command has developed a comprehensive mental health peer program – ‘Keep Your Mates Safe’ (KYMS – Mental Health Peer Support). The recently piloted program teaches personnel in the first two years of service not only how to assist each other, but when, where and how to get support for themselves or their mates. It integrates and expands a range of training that had been occurring in an ad hoc manner.

Goal 5 – Prevention strategies. A number of targeted prevention strategies are being evaluated or developed, including strategies on alcohol, tobacco and other drugs, suicide, resilience and the operational mental health support continuum. These strategies will provide a governance and evaluation framework to guide future initiatives:

- ongoing roll-out of BattleSMART (Self-Management and Resilience Training), which enhances cognitive, behavioural and emotional coping skills in serving members across the career continuum. It is currently being delivered to ADF recruits in all three Service recruit training establishments, and has been trialled pre- and post-deployment
- ongoing review and enhancement of the operational mental health support continuum, with more structured decompression and readjustment programs
- data collection for the five-year Longitudinal ADF Study Examining Retention and Resilience (LASER), which is tracking a cohort of serving personnel from all three Services from their point of enlistment
- an ADF Alcohol Management Strategy, developed by Joint Health Command in partnership with the Australian Drug Foundation.

Goal 6 – Enhanced research and surveillance. An enhanced research and surveillance program will provide an improved system of research and surveillance, and be responsible for analysing and reporting on mental health trends, and maintaining data quality and management procedures. The program will also assist with conducting and disseminating collaborative research from and through national and international partnerships.

Goal 7 – Address mental health rehabilitation. The mental health reform process is providing an enhanced framework and governance structure to clinically assess and case manage members undergoing rehabilitation for mental disorders.

Goal 8 – Improve transition services. Barriers to seeking care throughout the transition of ADF members to civilian life have been identified and targeted programs or remediation strategies are being developed. LifeSMART for transition seminars are in place and a comprehensive interactive SMART website will be developed and linked to the Department of Veterans' Affairs transition website *Touchbase*.

Goal 9 – Support family engagement in the mental health care of ADF members. It is recognised that families play a crucial role in the overall health and wellbeing of ADF members. Wherever possible Defence will ensure that families are engaged and have the opportunity to be involved in mental health support programs.

Goal 10 – Improve facilities. Selected facilities will be refurbished or constructed to enhance the delivery of mental health care.

The results of the Mental Health Prevalence and Wellbeing Study will assist senior leaders in the departments of Defence, Veterans' Affairs and Health and Ageing to target further work, especially in the areas of surveillance, detection, prevention, early intervention and treatment.

Implications for prevention in the ADF

Strong leadership behaviours are essential to destigmatise mental health problems and reduce barriers to care. The current mental health peer program, which is being developed within the ADF, needs to be expanded into a **comprehensive peer support network** including a leaders' version for the promotional training continuum. This would ensure that leaders at all levels are able to identify and manage occupational stressors that affect mental health and wellbeing and be advocates for members with disorders.

The fact that 3.9% of the ADF had contemplated **suicide** within the previous year, with 1.1% having made a plan, is indicative of the significance of this issue to the ADF. However, the finding that this did not translate into significantly higher rates of suicide needs to be explored and supports the investment Defence is making by evaluating the current **ADF Suicide Prevention Program**.

The finding that rates of alcohol disorder in the ADF were no higher than in the general community reinforces the investment Defence has made in the ADF Alcohol, Tobacco and Other Drug Program, as well as the recent development of the **ADF Alcohol Management Strategy**.

The BattleSMART and **resilience-building programs** need to be further refined to meet the type of occupation stress identified, especially trauma exposure, and to better address the more prevalent mental health outcomes. Cognitive and behavioural strategies to address depressive and post-traumatic symptoms should be a priority.

Analysis of the data did not reveal a significant relationship between the number of deployments and mental health symptoms. There is, however, a trend indicating greater levels of traumatic symptomatology with each deployment. The data show a strong direct relationship between lifetime trauma exposure and mental health symptoms. While more detailed analysis will be needed, these initial findings suggest that, while the risk of post-trauma symptomatology increases with the number of deployments,

the most significant risk factor is the level of actual combat or trauma exposure, which supports the requirement for additional **interventions for high-risk groups**.

Post-traumatic stress disorder is the most prevalent of the anxiety disorders observed in the ADF and is an issue for all three Services. The rollout of Army's *Dents in the Soul* DVD on the disorder, which aims to demystify it and encourage help seeking to ensure early intervention, should continue and consideration should be given to **mental health literacy initiatives** for the other two Services and for other disorders.

Implications for early intervention

It is estimated that one in five ADF members has a mental disorder. As in the general community, the workload and health services required to meet this need are substantial. One strategy for early intervention would be to **upskill general duties medical officers** in detection and brief intervention, as they are likely to have routine contact with ADF personnel.

Analysis of the data has allowed psychometric determination of the optimal clinical cut-offs for **ADF mental screening instruments**. Work now needs to be done to determine the most ethical and cost-efficient cut-offs for the ADF environment so that policy and processes can be updated.

The current **ADF screening programs** designed to detect personnel for early intervention could be further strengthened by ensuring that they provide an opportunity for early and single-session brief interventions. The ADF conducts mental health screening for all personnel in the deployment cycle. However, to ensure that personnel who are not deploying are regularly assessed, it is proposed that an annual mental health screen be considered.

The majority of personnel indicated that they knew where to seek care and that they would be able to get time off work. This provides support for the range of current **mental health literacy programs**. The data indicated, however, that further work could be done in targeting specific messages to the different ranks in the ADF in relation to both stigma and barriers to care.

Junior ranks would benefit from greater reinforcement of the fact that they will be supported to seek care while messages to officers need to address stigma. Officers were less likely to seek help for a mental health condition. Of the rank groups they were the most likely to report negative stigma associated with seeking care – they felt that help seeking would harm their career or that others would treat them differently. These findings suggest that any **communications strategy** to encourage help seeking among officers needs to target this population through specific messages.

Defence should continue to develop and implement **options for e-mental health training** as a strategy to address concerns about stigma and barriers to care that is targeted to the ADF population. Such approaches have been demonstrated to be effective in delivering mental health information and improving access to care.

Co-morbidity outcomes, especially in relation to alcohol, suggest that commanders need more training to understand the relationship between mental disorders and antisocial behaviours – such as acts of aggression, disinhibition and drink driving – that may indicate underlying problems. **Revised policy** should therefore ensure that personnel in the disciplinary system are considered for a mental assessment.

Analysis of self-reported psychological distress and post-traumatic symptomatology highlight the spectrum of severity of symptoms in the ADF, including high levels of mild and moderate symptomatology. Research indicates the significant risk of progression from a mild to a more severe disorder. So there is potential benefit in the development of **early intervention treatment programs** for ADF members who are only experiencing moderate symptoms. The study also found that there is significant work impairment even at a moderate level of distress in the ADF population. This issue is of particular relevance in those returning from deployment, where there is a risk of delayed onset disorders, particularly post-traumatic stress disorder.

Implications for service delivery and treatment

The estimate that one in five ADF members has a mental disorder indicates the requirement for Defence to prioritise **enhancement of the ADF mental health service** delivery model within the mental health reform process. As in the general community, the workload and health services required to meet this need are substantial.

Forty-one per cent of those with an affective disorder reported severe or very severe impact associated with their symptoms. For the ADF, this means that **enhanced treatment within the employment setting** would be beneficial in terms of the productivity gained.

One strategy to improve services is investment in **e-mental health approaches to treatment**, especially to address the needs amongst the young adult ADF population and those with affective disorders. These approaches are very cost effective and have the potential to provide far more flexible access to care at times that would better suit ADF personnel.

The patterns of prevalence across sex, rank and Service for alcohol disorder are different to the patterns observed for affective and anxiety disorders (that is, alcohol is a particular issue for younger personnel, whereas depression and anxiety occur in a number of age ranges). This indicates that alcohol consumption is not simply a measure of psychological disturbance and that intervention strategies for alcohol problems need to target binge drinking as well as long-term alcohol disorder. It gives support to the investment Defence has made to **regionally based outpatient treatment programs**.

There is a requirement for further **health provider mental health upskilling** as all Defence health personnel need to have the skills to deal with mental health problems and illness. For example, there is a significant rate of suicidal ideation in the ADF, which has the potential to lead to more serious suicidal behaviour. The ADF needs to continue to develop programs to ensure comprehensive suicide risk assessment protocols and upskilling of health personnel.

Additionally, **co-morbidity** of mental disorder is common in the ADF. It needs to be accounted for in any individual or group treatment program, and clinicians need to be trained to routinely assess for management of more complex presentations.

Implications for surveillance and detection

The levels of mental disorder in the ADF population indicate the importance of monitoring of mental health trends through responsive and comprehensive **electronic health surveillance systems**.

The youngest cohort of ADF members is particularly at risk of having a mental disorder. Many of these individuals will leave after five years of service without their disorder being diagnosed or treated. The **Longitudinal ADF Study Evaluating Retention and Resilience** should assist in identifying risk and resilience factors during this period of service. These young members are at particular risk in the community of not receiving adequate care and the link to military service may go unrecognised. Systems are required to ensure that the Department of Veterans' Affairs has visibility of this group, especially those with veteran entitlements.

This study found that a number of typically rare disorders, such as bipolar affective disorder, exist in the ADF. It is therefore important that **clinicians are trained** to recognise and conduct effective differential diagnoses to ensure that treatment services are targeted effectively.

Analysis of the data has allowed psychometric determination of the **optimal epidemiological cut-offs** for ADF mental screening instruments. Consideration needs to be given to their effective use in an ADF environment.

A **significant number of personnel with mental disorders had received no care** in the previous 12 months. This may have been due to stigma, or barriers to care, or because they did not recognise that they had a problem. Despite the fact that 5.2% met diagnostic criteria for an alcohol disorder in the previous 12 months, only 2.1% indicated that they had a problem with drinking. This supports the inclusion of validated mental health screening in periodic health assessments.

ADF females were not significantly different from females in the community other than having a **lower prevalence of alcohol disorder**. Comparison of data in this study with the LASER study should allow the ADF to determine whether females who join the ADF are more resilient than those in the community and what the protective and risk factors are for both sexes.

Future work

The dataset this study has produced for the future monitoring of the health of ADF members is invaluable. There are still a range of occupational issues that have not been examined, including the impact of social support, family relationships, quality of life, recognition of service, bullying, health risk behaviours, physical issues and mild traumatic brain injury. The study provides a baseline for further monitoring of the quality and effectiveness of mental health services offered to both ADF members and veterans. Joint Health Command, in consultation with key stakeholders, will determine the priorities for the next level of analysis.

The end of each section in this report provides a summary of proposed further analyses that could be conducted utilising the study's dataset. As the ADF is currently involved in deployments involving conflict, exploration of the data that would enhance the mental health and wellbeing of currently deployed personnel should be a priority. However, as the greatest need appears to be in those who have not been deployed, this needs to be balanced with exploration of the factors that will enhance service delivery for the entire ADF population. Table C.1 summarises three domains in which analysis could be conducted: operational mental health issues, strategic policy and improvement of service delivery.

The data from this study will provide an important benchmark for current research into the ADF population. In particular, they will provide comparison points for deployment health studies and for the detailed investigation of personnel who have been deployed to the Middle East Area of Operations.

The data also provide ADF-specific normative data that will provide a context for understanding the LASER findings and for other initiatives like the ADF Alcohol Management Strategy and the third-country decompression trial.

The two-phase design, which included the CIDI, means that Defence has a cohort of personnel identified as having a mental disorder in 2010. Those ADF members in the cohort who have consented to be contacted could be followed up to determine if they have care, or need it, with a focus in the research on determining the pathways to care that better address the barriers to care and stigma.

The findings that suggest the preventive systems in the operational mental health support system are having a positive impact on the mental health status of the ADF need to be further evaluated to determine which of their components are important. Data from this study could be utilised as a benchmark in this evaluation process. Furthermore, the data provide a baseline against which key components of the ADF mental health reform process can be evaluated.

Now that comprehensive mental health prevalence rates have been established for the ADF, consideration needs to be given to the most effective mechanism to monitor mental health trends over time. This report has established cut-offs that will allow more effective monitoring of mental health trends using self-report data and the new Joint electronic Health Data Information system, or JeHDI. Work has also begun in Australia on the next national mental health prevalence study by the ABS. Consideration needs to be given to the most effective method for Defence, in collaboration with the Department of Veterans' Affairs, to leverage off this national program.

Table C.1: Recommended priorities for detailed analysis of the 2010 ADF Mental Health Prevalence and Wellbeing Study dataset

<p>Domain 1 – Analysis in support of understanding operational mental health issues</p>	<ul style="list-style-type: none"> • While no direct relationship was found between mental health outcomes and the number of operational deployments, there is a clear relationship to the level of traumatic exposure. Detailed investigation is needed to identify high-risk subpopulations in the context of deployment, including the impact of their deployment cycle. • Further analysis needs to be conducted on the impact of frequency and length of time away from home, not only on mental health prevalence but on families and social support networks. Items have been included in the study that would allow exploration of such impact on marriages and children. • There is significant international interest in the impact of exposure to blast that may result in mild traumatic brain injury. In order to understand the relevance of this issue to the ADF, an analysis of the head injury items in the survey is needed.
<p>Domain 2 – Analysis in support of strategic policy and command</p>	<ul style="list-style-type: none"> • Further analysis of the Services should examine cultural differences that may offer opportunities for targeting prevention and treatment interventions. In particular, a detailed analysis of the demographic subgroups and occupational stressors is needed. • The exposures and organisational risks for the onset of a specific disorder should be established in separate analyses. The information derived could inform strategies for structural and administrative reforms in the ADF to improve the mental health of members during their Service life and once they return to the civilian community. • Seven major reviews are currently under way in Defence to determine if there are any systemic issues that need to be addressed within ADF culture. Items that relate to the prevalence and source of bullying in the ADF from these data and its impact on mental health could provide information in support of these reviews. • Elucidation of the risk factors for suicidal ideation will assist in better defining protocols for identifying members of the ADF who are at risk of attempting suicide. • Identifying how those with mental disorders are dealt with by the military justice system is an important priority, as this setting offers substantial opportunities for creating diversionary systems into care. Minor acts of violence and other crimes represent an organisational risk to the ADF and are often preventable if the underlying disorder is treated.

**Domain 3 –
Analysis in
support of
improvement
in the mental
health support
network and
service delivery**

- Lifetime prevalence should be examined to provide critical information about the patterns of progression of mental disorders in the course of an ADF career. Given that recruits should have no active disorder at the time they join the Services, a strategy that identifies the major risks in a career path will create opportunities for preventive interventions. This approach, for example, would demonstrate the extent to which alcohol abuse in the ADF represents self-medication for a mental disorder.
- Comparison of the emergence of mental disorders should focus on exploring whether exposure to occupational stressors results in a maturation process that leads to earlier onset of depressive disorder in the ADF population.
- The data should also be further analysed to provide the rates of DSM-IV disorder. This report has provided the prevalence using ICD-10 criteria to allow comparison with the 2007 ABS National Mental Health and Wellbeing Survey. However, the rates in most other military studies use DSM-IV rates. More accurate comparisons with Australia's major allies will be assisted by examining the DSM-IV disorder prevalence rates.
- The effectiveness of the Return to Australia Psychological Screening and Post-operational Psychological Screening programs and subsequent referrals for treatment can be assessed by cross-linkage of these datasets. An important issue to identify in a screening program is whether the individuals who screen positive receive effective treatment. Another important quality control issue is to identify those who screened positive and were not referred for treatment to ascertain whether they continued on the predicted path to recovery.
- The relationship between the mental and physical health of ADF members requires further analysis. Many mental disorders primarily present with physical symptoms and the extent to which the overlap exists in the ADF is important to determine. The identification of the physical disorders that are linked with mental disorders will assist in defining the groups that require psychiatric screening in medical and rehabilitation settings.
- The estimation of the financial cost to the organisation of untreated disorders will provide valuable information about the potential costs and benefits of instituting interventions that improve the uptake of treatment services.
- Mental disorders have different outcomes within diagnostic categories. An important aim of treatment is to improve the prognosis and limit the course of a disorder. It should therefore be a priority to identify the factors that predict the prognosis and course of the different disorders characterised in this study.
- Of all the disorders assessed, individuals with a depressive episode were the most likely to have had professional treatment in the previous 12 months. Further investigation into why this subgroup seeks treatment more readily (that is, into the relationship between psychological distress and impact on functioning) would allow the ADF to target and develop effective intervention initiatives for both this and other disorder types.
- A more detailed understanding of co-morbidity, in particular the prevalence of co-morbidity for specific disorders and its relationship to risk factors, would allow Defence to develop targeted interventions.

A strong foundation

The 2010 Mental Health Prevalence and Wellbeing Study is a major deliverable of the ADF Mental Health Reform Program, as it has provided the foundation for the 2011 ADF Mental Health and Wellbeing Strategy and the future evaluation of mental health interventions and services.

It is an important overview of the status of mental health and wellbeing in the ADF which demonstrates that, as in the Australian community, the identification and treatment of mental disorders must be a priority. However, due to the unique demands of military service, the ADF has a different mental disorder profile to that of the community and there are subgroups within it that warrant further detailed investigation and targeted prevention and treatment programs.

The findings summarised in this report suggest that the comprehensive ADF operational mental health support program is assisting to reduce the levels of disorder in deployed populations. Despite this, there are still significant barriers to seeking care and untreated mental disorders are affecting capability. Dealing with the burden of mental disorder in personnel who have never been deployed and therefore are not involved in the operational mental health support continuum will be a particular challenge to be addressed through the mental health reform process. The ADF has robust tools to detect mental disorders and there is a wealth of data yet to be analysed that will provide significant insight into the range of occupational issues and potential interventions.

The initial summary of the data in this report provides a strong foundation for the prioritisation of programs in the development of the 2012–2015 ADF Mental Health and Wellbeing Action Plan. In particular, it highlights the need for continued programs to address stigma and break down barriers to care. These include a command-led communications strategy, consolidating and enhancing current ADF mental health treatment services, comprehensive upskilling of health providers, and establishing an informed ADF peer network. Most importantly, the data provide a baseline to benchmark the ADF Mental Health Reform Program and inform the development of its initiatives, policies and performance indicators.

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