Trauma-related stress in Australia

Essays by leading Australian thinkers and researchers

Editors Bob Douglas and Jo Wodak

Australia21 SHAPING THE FUTURE

FEARLESS RESTORING CONTROL TO VICTIMS OF TRAUMATIC STRESS

Stress arising from trauma is affecting millions of Australians. A national conversation is required to consider how we can better manage this problem.

Australia21 Ltd

ABN: 25096242410

ACN: 096242410

PO Box 3244 Weston ACT 2611

Phone: +61(0)2 62880823

Email: office@australia21.org.au

Design: Lester Bunnell, Paper Monkey

Print: CanPrint

ISBN: 978-0-9953842-0-0

Published: September 2016

Trauma-related stress in Australia

Essays by leading Australian thinkers and researchers

Editors Bob Douglas and Jo Wodak

The spectrum of responses to trauma is complex and not widely understood in the Australian community.

Contents

Foreword 4
Foreword 6
Editors' Preface 8
Section 1: Nature and extent of the problem 10
The impact of stress and trauma on mental health… more than PTSD? 12
Is there something special about traumatic events? 15
What we know so far 18
Pathways to post traumatic stress disorder 22
Neuroimaging of post traumatic stress disorder 27
Section 2: Hazards in specific groups 31
Bringing the war home: the rising disability claims of Afghanistan war vets 33
One family's story 36
A first responder perspective 38
Trauma and grief in Aboriginal and Torres Strait Islander people 43
Section 3: Social and economic costs 47
Post-traumatic stress: a community concern 49
Traumatic stress: the uncounted cost 52
Cost-benefit analyses of treatments recommended in Australian clinical practice guidelines 55
Trauma-related stress among Australia's youth 58
Section 4: What is being and needs to be done 61
Navigating a path to more effective treatments 65
Veteran services 69
Investment in a range of treatments 73
Some Aboriginal and Torres Strait Islander solutions 75
Recovery needs more than treatment 79
Digital technology in veteran and military mental health 83
Anger management programs 86
Building on the strengths of the victim 89
Do sufferers get access to effective treatments? 91
The role of workplace support in trauma prevention and recovery 94
Returning the service: the healing use of creative arts 97
Community supports 100
Creating trauma-informed correctional care in the US 105
Editors' concluding comments 108
Acknowledgements 111

Foreword

Paul Barratt
Chair Australia21

Paul Barratt AO is a former Secretary of the Federal Departments of Primary Industries and Energy and Defence, and a former Executive Director of the Business Council of Australia.

Australia21 is an independent public policy think tank. Inspired by the Canadian Institute of Advance Research (CIAR), it was founded in 2001 to develop new frameworks for understanding complex problems that are important to Australia's future. For fifteen years we have been bringing together multidisciplinary groups of leading thinkers, researchers and policymakers to consider issues about our future, ranging from climate and landscape, our society and our economy, to Australia's place in the world.

Typically the issues we deal with are those which social scientists call 'wicked problems'. They are difficult to define clearly: different stakeholders have different versions of what the problem is, and there is usually an element of truth in each of those versions. The problems have many interdependencies and are often multi-causal. They hardly ever sit conveniently within the responsibilities of one organisation, and the organisations that need to be parties to the solution often have conflicting responsibilities and goals, which necessitates trade-offs between conflicting goals.

Our *modus operandi* is to work in collaboration rather than competition with those who have insights into the issues we tackle. It is rarely the case that any of the stakeholders lack state of the art awareness, or access to it, of the parts of the issue that fall within their responsibilities. Australia21 finds that its best value-add comes from bringing together in the one room as broad a range of stakeholders and relevant subject-matter experts as possible, in order to compare notes, in a systematic way, on what we think we know about the issue, and even more importantly, what we do not know, but need to know, in order manage the issue more effectively.

In the case of Post-Traumatic Stress Disorder (PTSD), or as I would prefer to call it Post-Traumatic Stress Injury (PTSI), we have an issue which affects the current wellbeing of an enormous number of Australians and permanent residents, and through that, their capacity to realise their full potential over the course of their lives. Often identified in the public mind as a problem arising from traumatic experiences in the course of military service, we find that PTSI in fact arises in a variety of segments of society. Sometimes it is the result of situations that people will inevitably encounter in certain occupations: for example among first responder organisations (police, fire-fighters, ambulance and other paramedics), trauma surgeons and nurses. For others, it is the consequence of sexual assault including sexual abuse of children, or other forms of social dysfunction: domestic violence, or drug or alcohol-fuelled violence in the community within which a person is trapped, or the circumstances which have forced people to flee their countries of origin and seek refuge in Australia.

Estimates put the number of Australians who live with PTSI (those directly affected plus their immediate families) as high as 3–4 million. This is an enormous proportion of our population living lives that range from tragic and/or dangerous, to 'lives of quiet despair', to lives that are simply not as productive and enjoyable as they could and should be. Clearly this comes at a very large cost: the economic and social costs of people being unable to rise to their full potential, and the costs in terms of overall societal wellbeing.

It also entails societal risk, as when PTSI sufferers reach the point where they cannot perform their duties safely and effectively and become a risk to themselves and to members of the wider society.

The aims in dealing with such a major and important problem must be to find ways to manage the risks that are inherent in certain occupations, to identify individuals' emerging problems in sufficient time to allow a full recovery, and to address the cultural issues in organisations that make people reluctant to acknowledge that they are struggling. In order to achieve this, we need to put solid flesh on the bones of these aspirations.

Our aim in this report is to gather together a set of short readable essays by some of the most expert people in the country, covering every aspect of the problem: the nature and extent of the problem of trauma-associated stress in Australia; hazards in specific groups; societal and economic costs; and what is done and needs to be done. This collection will become the basis for a roundtable in which we will ask as many of the contributors as is practicable to contribute their ideas on where we go from here. If this proves useful to identifying gaps in our knowledge and procedures, and pointing to a way forward, we will consider that as time well spent.

Estimates put the number of Australians who live with PTSI (those directly affected plus their immediate families) as high as 3–4 million.

Foreword

Chris Barrie

Chair, Post-Traumatic Stress Australia New Zealand, and FearLess®

Adm. Chris Barrie AC, RAN R'td is former Chief of the Australian Defence Force, and now an Adjunct Professor at the Strategic and Defence Studies Centre of the Australian National University.

The work of Australia21 in compiling the views of diverse experts on many issues related to post-traumatic stress is welcome. For too long the narrative about post-traumatic stress in this country has focused almost exclusively on sufferers from Post Traumatic Stress Disorder who are members of our armed forces, and veterans. While this is understandable in our present security situation, at FearLess®, we are well aware that post-traumatic stress has significant implications that reach deeply into our community, not just for sufferers but also the people who live with and support them.

Since setting up Fearless® in mid-2013, we have spoken to many people from all walks of life about our initiative to restore control to victims of traumatic stress. Surprisingly, we are yet to speak to anyone who does not have a post-traumatic stress story. Stories are often about family members, other relatives, and friends in their local communities. Occasionally stories refer to work colleagues, or people who have lost their jobs. Members of first responder organisations and survivors of natural and man-made disasters figure prominently in the narratives. Sometimes the stories are simply about themselves!

By inference, we assess that over 1 million Australians are sufferers from post-traumatic stress. This number is well in excess of those of the military service able to access treatment provided by the Department of Veterans Affairs. If we add family members who live with sufferers, the number may exceed 5 million. Consider the data for 2013 extracted from health system records by the Australian Health Sciences Research Institute, which showed 25,000 patients admitted to hospital on the basis of a first diagnosis of post-traumatic stress, for an average stay of 18 days at a daily cost averaging $850 — and an aggregate annual cost to the national health system of $385 million. Of course, these figures merely scratch the surface of the problem we confront.

Post-traumatic stress is a pervasive and pernicious problem. It knows no bounds, yet no one is born with it; it is acquired like any other injury from life's experience. Many sufferers tell us that they deal with the onset of their anxiety, following a trigger event, by merely taking themselves away for a few days in order to deal with their 'demons'. Many speak of a 'red haze' in reference to their experience. We also know that many sufferers in our uniformed first-response and military organisations do not offer themselves up to the employers' support system when they suspect they have issues of post-traumatic stress because their medical records will be marked appropriately and the respective organisations will feel compelled to either restrict the member's ability to serve, or urge the member to seek alternative employment. As a result a number of people do not openly admit to suffering from a mental health problem like post-traumatic stress, or else seek help outside the management regime that has purportedly been set up to help them.

This Australia21 report into the economic and social costs of post-traumatic stress in the wider Australian community makes an important contribution to the case for improving help to all people living with post-traumatic stress issues. We at FearLess® are sure the Report will show there are significant opportunities for making the lives of people at home, at work and at play better and more productive by tackling these issues head on.

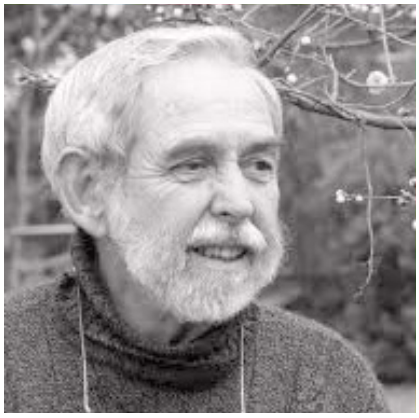
Stories are often about family members, other relatives, and friends in their local communities.

Editors' Preface

Bob Douglas and Jo Wodak

Emeritus Professor Bob Douglas AO is a retired public health academic, who was a Founding Director of Australia21 and its first Chair.

Jo Wodak has degrees in English literature and history and philosophy of science. She has worked extensively in education including secondary, tertiary and most recently adult education in prisons. She has been the state manager for adult basic education for Corrective Services NSW.



Individuals who have experienced a traumatic event often suffer psychological stress related to the incident. In most instances these are normal reactions to abnormal situations. For others, the traumatic event may be followed by one or more mental difficulties and be associated with an episode of anxiety or depression.

For still others, the traumatic event may be such that it triggers a serious disorder of psychological functioning that can be long-lasting and disruptive not only for the individual but also the family, employers and colleagues. In these circumstances the individual may be diagnosed with Post Traumatic Stress Disorder (PTSD). There are well-established criteria for labelling the condition PTSD and large numbers of Australians suffer the condition as a consequence of their exposure to trauma either through their profession or in their daily lives.

This spectrum of response to trauma is complex and not widely understood in the Australian community. It seems that over their lifetime about 10 per cent of all Australians will experience significant disability from the stress of a traumatic event for some time. Trauma is a part of everyday life. Acute life-threatening trauma, while less common for most of us, is an integral part of going to war for soldiers on the front line, and commonly confronted by police, ambulance and other 'first responder' helping professions who deal with acute threats to life in the people they are helping.

It is also experienced by people exposed to rape and child abuse, and there is evidence in Indigenous and other disadvantaged communities that post traumatic stress arising from childhood experiences contributes significantly to disorderly behaviour, substance abuse and criminal activity.

Since the recognition of PTSD as a syndrome in the 1980s, considerable research and treatment has been undertaken and there are now excellent guideline documents for clinicians and sufferers from the syndrome. Nevertheless, a significant number of affected patients remain disabled and dysfunctional for long periods. Trauma-related stress is a major contributor to mental ill health and carries with it both the stigma often associated with mental illness and the pitiful inadequacy of resources for the treatment and prevention of these conditions. The enormous cost of this condition to modern society is now recognised.

Australia21 has undertaken to engage with this issue through the perspectives of preventability and productivity by bringing together multiple disciplines to explore new frameworks for understanding. The volume is divided into four sections, each preceded by a brief introduction. The sections are: 1) What do we know about the link between trauma and stress, 2) Occupational hazards, 3) Social and economic costs, and 4) What is being done and what needs to be done.

We have been fortunate in securing contributions from many who have led the national thinking on this topic and who are pioneering research and preparing treatment and prevention guidelines for the many thousands of health workers who deal with the problem day-to-day. Our essayists include professional psychiatrists and psychologists, people who have lived with the effects of trauma-related stress in their families, administrators of frontline organisations including police and defence, and people who have observed the havoc that it produces in some disadvantaged communities. Some of the contributors have focused exclusively on the full-blown syndrome of PTSD while others have dealt with the less serious consequences of trauma.

Our purpose in bringing this volume together has been to provide lay-people, administrators and policymakers with an account of a problem we believe can be better prevented and better managed in Australian society. We hope that by bringing these views together we can stimulate broad community understanding of the relationship between trauma and mental health and the need to better structure our mental health system and improve our preventive approaches for groups at risk of developing far-reaching mental health disabilities through exposure to trauma.

Our purpose in bringing this volume together has been to provide laypeople, administrators and policymakers with an account of a problem we believe can be better prevented and better managed in Australian society.

Section 1: Nature and extent of the problem

We can clearly infer that trauma related stress plays a substantial role in mental illness prevalence.

The National Survey of Mental Health and Well-Being In Australia 2007 provides information on the prevalence of selected lifetime and 12 month mental disorders in three main groups: Anxiety Disorders, Affective Disorders and Substance Abuse Disorders. It contains additional information on the use of health services and medication for mental health problems, physical conditions, functioning and disability, social networks and caregiving, and a range of demographic and socio-economic characteristics.

The most recent survey was conducted from August to December 2007 with a representative sample of 8800 people aged 16 to 85 years who lived in private dwellings across Australia. The survey used this sample to estimate that, of the then 16 million Australians aged 16 to 85 years, 45 per cent had experienced a mental disorder at some stage in their lifetime, and 20 per cent had experienced symptoms of one or more mental disorders in the previous 12 months.

Anxiety Disorders were reported by 14.4 per cent of the sample. Included in these were: Panic disorders (2.6 per cent), Agoraphobia (2.8 per cent), Social Phobia (4.7 per cent), Generalised Anxiety Disorder (2.7 per cent), Obsessive Compulsive Disorder (1.9 per cent) and PTSD (6.4 per cent). Affective Disorders were reported by 6.2 per cent of the sample. Included in these were: Depressive Episode(s) (4.1 per cent), Dysthymia (1.3 per cent), and Bipolar Affective Disorder (1.8 per cent). Substance Abuse was reported by 5.1 per cent of the sample, including Alcohol Harmful Use (2.9 per cent), Alcohol Dependence (1.4 per cent), and Drug Use Disorders (1.4 per cent).

These figures suggest that as many as 6.4 per cent, or 1,024,0000, of the Australian population report experiencing PTSD, with rates for females (at 8.2 per cent) being significantly higher than for men (at 4.9 per cent).

When asked about their social circumstances, about 38 per cent of those with anxiety disorders reported having been homeless at some stage in their lives and about 28 per cent reported a history of incarceration. Of those who had experienced an anxiety disorder in the previous 12 months, about 33 per cent, or about 337,920 individuals, were profoundly or severely disabled by it, and 286,700 reported a history of incarceration.

While the survey provides solid estimates of the prevalence of PTSD it does not enable us to estimate what proportion of other mental illness prevalence can be ascribed to trauma-induced stress. We can clearly infer, however, that trauma-related stress played a substantial role.

Overview of papers in this section

In this section, ten experts discuss the links between trauma and stress, identify the dimensions of the problem, and point to a number of the uncertainties and inadequacies in the way trauma-related stress is currently managed.

The first two essays by **Mark Creamer**, one of Australia's leaders and pioneers in this field, highlight the way different kinds of trauma can be followed by different types of mental difficulties and outline the diagnostic criteria for Post Traumatic Stress Disorder (PTSD). He points out that while experience of trauma is common, progression to PTSD tends to follow episodes that generate high levels of powerful emotions such as fear, sadness and anger and those that shatter assumptions about the world, other people and ourselves.

The third essay by **Mitchell Byrne**, **Emma Barkus** and **Alison Jones** draws attention to the way neuroscience is revealing the changes in neural function that follow traumatic experiences. In PTSD, something goes wrong with the fear stop-go process that normally operates to help us recover from fear-inducing trauma. It seems that something happens in the part of the brain called the hippocampus, which plays a part in the stop-go process. For many people with PTSD, there is a return to normal function when they engage in a fear-conditioning model of psychotherapy. But about 40 per cent of people with this condition need further and perhaps different approaches. The authors also point to the difficulty of engaging victims and their families to commit to the time and effort needed to counter this maladaptive brain function.

In the fourth essay, **Jim Lagopoulos**, **Daniel O'Doherty** and **Maxwell Bennett** describe the changed activity in the brains of many sufferers from PTSD demonstrated by neuroimaging. They further elaborate on our understanding of the neuroscience of this condition by describing the volumetric changes that result in the parts of the brain that contribute to the way we process fear and other emotions.

In the fifth essay **Dominick Hilbrink**, **David Berle** and **Zachary Steel** argue the importance of the horror-shock-injustice-guilt pathway as an additional element in the causation of post-traumatic stress disorder. They suggest that for some victims this is more important than the fear-threat-terror pathway for which specific psychological treatments have been devised. The insight may contribute to improved psychological treatments.

For many people with PTSD, there is a return to normal function when they engage in a fear-conditioning model of psychotherapy.

The impact of stress and trauma on mental health… more than PTSD?

Mark Creamer

Professor Mark Creamer is a clinical psychologist, internationally recognised for his work in post traumatic mental health, and a Professorial Fellow in the Department of Psychiatry at the University of Melbourne. Over the last 25 years, he has worked in both clinical and research capacities with individuals, communities, and organizations following distressing incidents of natural and human origin. Mark served for six years on the Board of Directors of the International Society for Traumatic Stress Studies and, in 2011, was awarded their highest honour, the Lifetime Achievement Award.

Although humans have known about the psychological impact of stressful life events for thousands of years, it was not until 1980 that a specific condition was formally identified and accepted by the psychiatric community. It was given a name — Post Traumatic Stress Disorder (PTSD) — and the core features were defined, providing the impetus for an explosion of research in the area. Although this recognition has done much to improve our understanding, it is important that the effects of stressful life events on mental and physical health more broadly are not ignored by over-focussing on PTSD. This essay discusses the role played by adverse life events on mental health before going on to describe the nature of PTSD and associated impairments in social and occupational functioning.

The causes (or etiology) of mental health problems are many and varied, with explanatory models requiring a complex mix of biological, psychological, social and environmental factors. We know, for example, that individuals may inherit a vulnerability to developing mental health conditions, with certain combinations of genes increasing the risk for specific disorders. We know that psychological factors — for example, the way in which we interpret or appraise our life experiences and the coping strategies we use — are crucial determinants of mental health. We know that social and cultural factors, particularly social support, also play an important role in promoting or impairing our psychological wellbeing. The most important determinants of mental health, however, are often environmental. Our life experiences, and particularly our exposure to trauma and adverse life events, are usually the catalyst from which the biological, psychological and social factors exert their influence. A subsequent chapter in this volume discusses the nature of stressful and potentially traumatic life events. This essay focuses on the impact of those experiences, with particular reference to Post Traumatic Stress Disorder, or PTSD.

Interest in the roles of stress and trauma as determinants of mental health has received increasing attention since the diagnosis of PTSD first appeared in the psychiatric diagnostic nomenclature in 1980. Humans have known about the effects of stress on psychological wellbeing, however, for thousands of years and literature throughout the ages has provided many excellent descriptions of what we understand today as a psychological reaction to intolerable stress. More recently, in the first half of the twentieth century, pioneer researchers such as Hans Selye began to identify physiological reactions to both acute and chronic stress, and to chart their impact on both physical and psychological health. At the more severe end of the spectrum, the impact of experiences such as military combat, life threatening accidents and serious assaults were documented and given names such as shell shock, combat stress, and rape trauma syndrome. More pejorative terms such as compensation neurosis and even 'lack of moral fibre' were also used.

Most contemporary explanations of the relationship between stressful life events and mental health are essentially variations of the 'diathesis-stress' model. The term diathesis comes from the Greek and refers to disposition or vulnerability. As noted above, this vulnerability may arise from genetic and other biological factors, psychological factors, social and cultural factors, and prior life experiences (especially during critical developmental years). This diathesis then interacts with current adverse life experiences (stressors) to generate a stress response. The stronger the vulnerability, and the more adverse the precipitating life experiences, the more likely the response will develop into a disorder such as depression, anxiety, substance misuse, or schizophrenia.

The recent interest in PTSD, while doing much to further our understanding of these complex disorders, has had the disadvantage of narrowing the focus in terms of mental health outcomes. If we only look for PTSD, we will only find PTSD. The reality is that experience of stress and trauma may result in a variety of adverse mental and physical health outcomes. One of the strongest and most consistent findings has been the association between adverse life experiences and the onset of depression. This is true for both civilian [1] and military [2] populations. Other disorders are also common in the aftermath of stressful life events. In a recent Australian study of motor vehicle crash survivors, for example, Bryant and colleagues [3] found that the most common disorder to develop following the experience was depression, followed by generalised anxiety disorder, substance abuse, PTSD, and other anxiety disorders.

Since the focus of this essay is particularly on PTSD, we will now go on to examine that disorder in more detail. In doing so, however, we would reiterate the importance of remembering that PTSD is by no means the only, and often not the most common, mental health response to stress and trauma.

Like any psychiatric diagnosis, PTSD requires the presence of a specific and defined constellation of symptoms. PTSD is unusual, however, in that the precipitating event is actually part of the diagnostic criteria. For the purposes of this discussion, we will use the DSM5 criteria [4]. Criterion A requires that the person *'was exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence'*. Specific examples and restrictions are provided in the DSM5. Thus, the event must involve threat to life or physical integrity, providing an important distinction from other types of stressful life events. This certainly does not mean that those events are less 'serious' or less likely to be associated with adverse mental health outcomes, simply that PTSD would not be an appropriate diagnosis.

We know that psychological factors — for example, the way in which we interpret or appraise our life experiences and the coping strategies we use — are crucial determinants of mental health.

PTSD is routinely associated with high levels of social and occupational impairment.

The next group of symptoms (B Criteria) are the hallmark of a traumatic stress reaction — the person is haunted by memories of the past horror. These may take the form of intrusive memories and images invading consciousness, nightmares, flashbacks, or extreme distress when reminded of the experience. In order to prevent these memories returning, the person attempts to avoid any reminders of the trauma (C Criteria). Negative thoughts about the self or the world, guilt, negative emotions such as fear and anger, emotional numbing, and social withdrawal are all common (D Criteria). The final symptom group is characterised by persistently increased arousal such as being jumpy, constantly on the lookout for signs of danger, sleep disturbance and irritability (E Criteria). When this constellation of symptoms occurs together — re-experiencing the trauma, avoidance, emotional numbing and distress, and hyperarousal — we are likely to make a diagnosis of PTSD. Other conditions such as depression, anxiety and substance misuse often occur alongside PTSD, making for a complex clinical picture.

PTSD is routinely associated with high levels of social and occupational impairment. It has a profound effect on relationships, with the person's ability to relate to loved ones and friends adversely affected. It interferes with the person's ability to carry out their normal role (for example at work, as a parent, or studying). Although many people with PTSD recover over the first 12 months, even with the best treatment we currently have the remainder (around 40 per cent) often go on to show a chronic course over many years.

In summary, the experience of stressful life events can have a profound effect on mental health. PTSD, perhaps the best known stress-related disorder, is a serious, debilitating and often chronic condition, associated with high levels of distress and impairment. Ensuring access to the best possible evidence-based care should be a high priority.

References

1. Monroe, S.M., G.M. Slavich and I.H. Gotlib (2014). 'Life stress and family history for depression: The moderating role of past depressive episodes.' *J Psychiatric Research* 49: 90–95.
2. Ikin, J.F. et al. (2004). 'War-related psychological stressors and risk of psychological disorders in Australian veterans of the 1991 Gulf War.' *British J Psychiatry* 185: 116–26.
3. Bryant, R.A. et al. (2010). 'The psychiatric sequelae of traumatic injury.' *American J Psychiatry* 167(3): 312–20.
4. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM5) Washington DC: American Psychiatric Association.

Is there something special about traumatic events?

Mark Creamer

The term 'trauma' comes from the Greek word meaning wound. In the context of Post Traumatic Stress Disorder (PTSD), the term refers to a 'psychic' wound or psychological injury. In common usage, however, the word also refers to the event or experience that precipitated the injury. This essay will focus on the latter of those meanings, outlining the nature of potentially traumatic events. What kinds of experiences may contribute to the development of PTSD? What is it about those events that renders them traumatic? What is the difference between single, unexpected traumatic events and repeated, chronic exposures?

The term 'trauma' literally means wound or injury. In general hospitals, the trauma wards are those that deal with the treatment of serious physical injuries. In mental health, we use the term to describe the psychological injuries that may develop following exposure to extremely frightening or distressing incidents. Although the word trauma is often used to describe the event itself, it would be more accurate to use the term 'potentially traumatic event' or PTE. The event itself is not traumatic: the same event may result in little or no adverse reactions in some people, yet precipitate debilitating post traumatic mental health issues in others.

There is much debate about what kinds of events should be considered PTEs. If the definition is too broad, we run the risk of creating expectations of mental ill health following minor stressful experiences and, in doing so, potentially devalue the experiences of those who have suffered severe trauma. If the definition is too narrow, we risk ignoring the fact that some people do, undoubtedly, develop significant mental health problems following what appear to be objectively relatively minor events. For most discussions about psychological trauma, and certainly for a diagnosis of Post Traumatic Stress Disorder (PTSD), there is broad agreement that the event must involve an actual threat to the life or physical integrity of the self or others. Thus, the person may be in physical danger, or the person may witness the death or suffering of others. As noted elsewhere in this volume, the diagnostic manual in which the criteria for PTSD are defined (DSM5) requires that the person be 'exposed to one or more of the following event(s): death or threatened death, actual or threatened serious injury, or actual or threatened sexual violation' [1]. The DSM5 goes on to specify that this may be: a) direct exposure; b) witnessing in person; c) indirect exposure by learning that a close relative or friend was exposed to trauma (although that event must have been violent or accidental — physical illnesses like cancer, no matter how rapid the onset, do not qualify); or d) repeated or extreme indirect exposure to aversive details of events in the course of professional duties (e.g., professionals being repeatedly exposed to vivid details of child abuse) — the DSM5 specifically excludes indirect non-professional exposure through electronic media, television, movies, or pictures.

For an extended period of time, the person is constantly alert and hypervigilant, and may feel helpless, vulnerable, frightened and unable to prevent a recurrence.

Typical events that may result in PTSD include serious transport or industrial accidents, sexual and other violent assaults, military deployments (combat, peacekeeping, or humanitarian) and devastating natural disasters. There is no doubt that many other adverse life events (such as sudden and unexpected relationship breakdown, job loss, repeated verbal harassment, or life threatening illness) can contribute to the development of mental health problems like depression, anxiety and substance abuse, but they do not qualify as traumatic events for a diagnosis of PTSD. A useful distinction is often made between 'one off' events and more chronic exposure to PTEs. 'Type 1 Trauma' describes the single events. These are usually of sudden and unpredictable onset, and often of brief duration — for example an unexpected assault, accident, or natural disaster. People who experience such events are less likely to develop significant mental health issues and, if they do, the problems tend to be characterised by vivid, complete memories and a typical PTSD symptom profile. 'Type 2 Trauma' describes prolonged and repeated trauma such as ongoing domestic violence, war, and severe political repression. For an extended period of time, the person is constantly alert and hypervigilant, and may feel helpless, vulnerable, frightened and unable to prevent a recurrence. These types of experiences often result in confused memories and complex clinical presentations.

The evidence is clear that experience of potentially traumatic events is not unusual. A recent study, for example, revealed that around 75 per cent of Australians experience at least one of these events in their life [2]. Thankfully, 80–90 per cent of those who experience trauma and suffer a 'post traumatic stress injury' (in that they develop a range of 'symptoms' or problems as a result) do recover from that 'injury' over the subsequent weeks and months with the help of family and friends, and by using their existing coping strategies. Only a relatively small minority go on to develop significant mental health problems such as PTSD. It is clear that traumatic event itself while necessary is an insufficient condition that generally explains only about 20 per cent of the 'reasons' why someone develops PTSD. We need to find a way of differentiating those (albeit very unpleasant) reactions/injuries from those that are more serious, chronic, and associated with significant impairment.

So what is it about these events that make them potentially traumatic and likely to cause a psychological injury? There are several possible explanations. These events tend to generate high levels of powerful emotions such as fear, sadness and anger that are hard to control and extremely distressing. These powerful emotions become associated with a wide range of reminders or 'triggers' through a process of conditioning. Further, these events often shatter (or challenge) basic assumptions we hold about the world, other people, and ourselves. The old 'rules' that governed our lives (e.g., 'it won't happen to me' or 'I'm strong, competent, and confident') no longer apply and we struggle to rebuild an alternative view of ourselves and the world that incorporates the experience. Events with which the person identifies in some way (e.g., seeing a child's death when the person has a child of that age themselves, or 'it could have been me instead') are more difficult to recover from, presumably because it is harder to incorporate that experience into a healthy and adaptive view of the world. Another contributing factor is that such events are often followed by a range of subsequent stressors (e.g., legal proceedings, occupational problems, health concerns, financial problems, fears of a possible recurrence). We know that the experience of other stressful life events occurring after the initial incident is a powerful predictor of post traumatic stress.

In summary, all stressful life events have the potential to contribute to the subsequent development of mental health problems. Experiences that involve serious physical threat to the self or others are particularly 'pathogenic' and are more likely to result in severe adjustment difficulties such as PTSD. It is essential that adequate screening and support services are offered in a timely manner to people exposed to these events.

...it is essential that adequate screening and support services are offered in a timely manner to people exposed to serious traumatic events.

References

1. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM5). Washington DC: American Psychiatric Association.
2. Mills, K.L. et al. (2011). 'Assessing the prevalence of trauma exposure in epidemiological surveys.' *Australian and New Zealand J Psychiatry*. 45(5): 407–15.

What we know so far

Mitchell K. Byrne, Emma Barkus and Alison Jones

Associate Professor Byrne is an endorsed Clinical and Forensic Psychologist with over 30 years active clinical experience. He is also Director of Clinical Training at the University of Wollongong, overseeing the postgraduate training of psychology. Together with Dr Barkus, A/Prof Byrne is currently researching aspects of help seeking, stigma and PTSD mental health knowledge in the community with the view to enhancing outcomes for people experiencing PTSD.

Dr Emma Barkus is a Senior Lecturer in Psychology at the University of Wollongong. She has over ten years of experience considering the individual factors which lead the vulnerable to serious mental health disorders. Her work encompasses emotional, psychological and biological vulnerability factors including cognition, stress, personality and substance use.

Professor Alison Jones is Executive Dean of Science Medicine and Health, and PVC (Health), University of Wollongong. She has 18 years' experience of senior leadership roles in health and medicine. She is a key founder of the UOW Mind the Gap initiative to support those with PTSD.

Post Traumatic Stress Disorder (PTSD) is a response to situations, which challenge an individual's emotional resources, beliefs and values. Likely triggering experiences for PTSD include situations where an individual is placed in a life and death situation either themselves or vicariously in a personal or occupational context. Certain factors, such as the processing of the event when it occurs, or repeated exposures to threatening situations, appear to increase the likelihood that PTSD will occur. There are treatments which lead to recovery for approximately 60 per cent of help-seeking individuals, but we know PTSD is largely both unrecognised and untreated.

The symptoms of Post Traumatic Stress Disorder have been observed for centuries. William Shakespeare included such symptoms in his tragedy Macbeth, where he wrote: *Out, damn spot! Out I say! One: two: why then 'tis time to do't. Hell is murky. Fie, my lord, fie! A soldier, a feared? What need we fear who knows it, when none can call our pow'r to accompt? Yet who would have thought the old man to have had so much blood in him?* (Macbeth: Act V, Scene I). The scene exemplifies Lady Macbeth's guilt after assisting Macbeth in murdering King Duncan. She later descends into insanity, getting up every night and washing perceived blood off her hands, a symbolic representation of the guilt she must live with for the rest of her life. Ultimately, Lady Macbeth commits suicide because she cannot bear to live with the heavy burden of guilt, indicating the distress her symptoms have caused her.

The term PTSD is a relatively new classification in mental health, having been first added to the diagnostic framework provided by the Diagnostic and Statistical Manual of Mental Disorders (DSM) in 1980 (DSM III). Previously it had been variously referred to as 'Nostalgia', 'Homesickness', 'Irritable Heart', 'Neurasthenia' and 'Compensation Sickness', in response to industrial accidents during the Industrial Revolution. However, it was the advent of modern warfare that radically increased the number of reports of psychological reactions to traumatic events, with terms like 'Shell Shock' (World War 1), 'Combat Exhaustion' (World War 2) and 'Stress Response Syndrome' (Vietnam War) used to describe soldiers' experiences. However, these conditions were thought to be short-term problems and the idea of both a chronic disorder, and a disorder originating from trauma beyond the battlefield, were not formally entertained by mental health professionals until the DSM III.

Since the advent of the DSM III, successive versions of the Diagnostic Manual (DSM III R, DSM IV, DSM IV R and DSM V), together with an extensive body of research, have resulted in a greater clarity of our understanding of the neurobiological and personal vulnerabilities that precipitate a PTSD reaction, and consequently the most efficacious treatment strategies to resolve the disorder.

In understanding PTSD, it is important to note that not everyone develops PTSD after exposure to a significantly traumatic event. In the initial weeks after trauma most people meet criteria for PTSD, including nearly 100 per cent of rape victims. However, over the first 3 months, 50 per cent of people recover and this recovery continues over time with about 10 per cent to 15 per cent developing PTSD over the longer term. This means that there is both something about those that recover, and something about those that don't, that identifies risk and treatment.

While anyone can develop PTSD, there are certain aspects of both the trauma and the person that (cumulatively) elevate risk. A history of trauma is one such predictor, indicating that repeated exposure to traumatic events increases the likelihood of developing PTSD. This helps to explain the relatively high incidence of PTSD among combat personnel and first responders, such as Police, Paramedics and Fire Fighters. However, intra-personal factors also play a part, with the existence of psychological problems prior to exposure to the trauma and psychopathology in the family of origin also increasing the likelihood of developing PTSD. Finally, there are aspects of both the traumatic event, such as trauma severity, proximity and perceived threat to life, as well as issues associated with circumstances after the event, such as availability of support, individual coping styles and post-trauma dissociation, each contributing to the likelihood, or not, of developing PTSD.

There are treatments which lead to recovery for approximately 60 per cent of help-seeking individuals, but we know PTSD is largely both unrecognised and untreated.

The limbic system responds to the extreme of traumatic threat by releasing hormones that tell the body to prepare for defensive action.

About 80 per cent of recent research in PTSD is on the brain (neuroscience). The prevailing model in PTSD is the 'Fear Conditioning Model' derived from the well-established and empirically supported behavioural theory of classical conditioning. The Fear Conditioning Model draws upon known brain functions and the evolutionary survival value of those functions. Arousal, and therefore traumatic hyper-arousal, is mediated by the limbic system, which is located in the centre of the brain between the brain stem and the cerebral cortex. The limbic system can be thought of as the 'emotion centre' of the brain and many of its actions are sub-conscious, meaning that the thinking and reflection processes of the frontal lobes are not engaged or are by-passed. The limbic system also plays a role in memory processing. The limbic system has an intimate relationship with the Autonomic Nervous System (ANS), which controls physiological arousal. The limbic system responds to the extreme of traumatic threat by releasing hormones that tell the body to prepare for defensive action. Normally a cascade of hormones prepares the body for action, and another process is enacted to calm the body down after the threat is dealt with. This 'go/stop' process is common to us all and part of the human condition. In PTSD, something goes wrong with the 'stop' process: a failure in 'extinction learning'.

Extinction learning is new learning that occurs after the fear experience that leads to an inhibition of the fear response. In PTSD the period after the trauma where the person is exposed to stimuli and nothing happens is the period of natural extinction learning. Therefore PTSD is *failed extinction learning*. Why does this happen? Within the limbic system are two related areas that are central to memory storage: the hippocampus and the amygdala. The amygdala is known to aid in the processing of highly charged emotional memories, such as terror and horror, becoming highly active both during and while remembering a traumatic incident. The hippocampus gives time and space context to an event, putting our memories into their proper perspectives and place in our life's time line: hippocampal processing gives events a beginning, a middle and an end. One of the features of PTSD is the sense that the trauma has not ended. The activity of the hippocampus often becomes suppressed during a traumatic threat; its usual assisting and processing and storing of an event are not available. When this occurs the traumatic event is prevented from occupying its proper position in the individual's history and continues to invade the present. The perception of the event as being over and the victim as having survived is missing, and is likely to be the mechanism at the core of flashbacks.

The most effective managements for PTSD have been derived from the Fear Conditioning Model. Essentially, these treatments aim to re-expose the person to the feared memory and prevent avoidance of recollections so that deconditioning of the fear response can occur. Broadly speaking, these treatments can be referred to as 'exposure-based treatments'. Exposure treatments are commonly used across anxiety disorders and have been proven to be the most effective treatments for anxiety. About 60 per cent of people with PTSD recover when they engage in fear deconditioning. However, 40 per cent of people fail to achieve a full recovery (continue to experience distressing or disruptive symptoms) and this has been the subject of most of the recent research. A broad range of ancillary treatments is under investigation as potential enhancements to exposure-based treatments. These include the use of various drugs to facilitate the deconditioning process, additional psychological therapies, such as emotion regulation strategies and therapies to challenge beliefs that hinder treatment, and the enhancement of an individual's capacity to monitor and reduce ANS arousal.

However, two important barriers remain in the effective management of PTSD. First, many people find exposure-based treatment distressing and drop out of therapy before the completion of fear extinction. Therapists and researchers are working on ways of modifying treatment approaches to counteract patient dropout and alternative 'less invasive' therapies are being researched. The second and perhaps more profound problem is reluctance by those experiencing PTSD to seek help, or to recognise the need for help. Commonly this relates to either perceived stigma of having the disorder, especially an issue for combat personnel and first responders, or lack of community knowledge about mental health issues and the normalcy of experiencing emotional reactions to traumatic events. This has been termed 'mental health literacy' and research is underway to determine the need for community education on a range of mental health problems, including PTSD.

Our knowledge of PTSD has come a long way since 1980 and the science behind why it occurs and how it may be treated is well developed. The problems that remain in effectively dealing with this disorder are solvable and there is reason to believe that in the foreseeable future fewer people will live their lives with this distressing and disabling disorder. As a disorder that affects people in communities, PTSD is a community concern and thus strategies to engage communities and families, including those that enhance the general community's resilience to trauma, are prime avenues of future research.

Strategies to engage communities and families, including those that enhance the general communities' resilience to trauma, are prime avenues of future research.

Pathways to post traumatic stress disorder

Dominic Hilbrink, David Berle, Zachary Steel

Dominic Hilbrink is a senior clinician at St John of God Richmond Hospital. A social worker by training, he has worked as a specialist in the area of service-related trauma since 2001, treating veterans from a range of conflicts, emergency services personnel and civilians with complex trauma histories.

David Berle is a Senior Postdoctoral Research Fellow and Clinical Psychologist who works with the St John of God Trauma and Mental Health Initiative Richmond Hospital, the School of Psychiatry UNSW. He is currently an Associate Editor of International Journal of Mental Health and Addiction and Australian Clinical Psychologist and has previously served as an editorial consultant for the American College of Physicians.

Professor Zachary Steel holds the St John of God Chair of Trauma and Mental Health a partnership between Richmond Hospital, the School of Psychiatry UNSW and the Black Dog Institute. In his role at St John of God and UNSW he works to promote better mental health outcomes for Veterans and Emergency Service Workers who have been injured during or as a result of their service to our community.

Many descriptions and formulations of Post Traumatic Stress Disorder have presented trauma as an experience of intense threat-fear-terror that can (for some) cause lasting psychological injury. This does not capture the full range of traumatising experience that we see clinically and some people do not respond to treatments designed to address fear-threat-terror. We are therefore incorporating the growing literature on moral injury and the valuable model of psychosocial pillars into a more inclusive pathways model that highlights the significance of experiences of horror-shock-injustice-guilt in traumatic injury and the need for this to be accounted for in treatment. We believe that broadening our conceptualisation of PTSD in these ways will serve to better inform the provision of services for people with PTSD as well as help to articulate what clinicians have always implicitly understood.

Psychological impairment following exposure to severe trauma has been described from at least the mid-19th Century. Terms have included 'soldier's heart', 'gross stress reaction', 'shellshock' and 'combat exhaustion'. The inclusion of Post Traumatic Stress Disorder (PTSD) in the American psychiatric classification system in 1980 was a watershed moment that has led to sustained research and clinical focus on traumatic stress injuries. For example, a solid body of evidence has now established consistent differences in the activation of neural fear-threat circuitry in those experiencing PTSD symptoms when processing environmental cues compared to trauma-exposed people who do not develop PTSD. There is also robust evidence of disturbances in the processing of traumatic memories associated with PTSD leading to ongoing impairment. Building on this research the dominant theoretical model for PTSD highlights the central role of exaggerated threat appraisal following exposure to one or more traumatic incidents as the central factor prolonging PTSD.

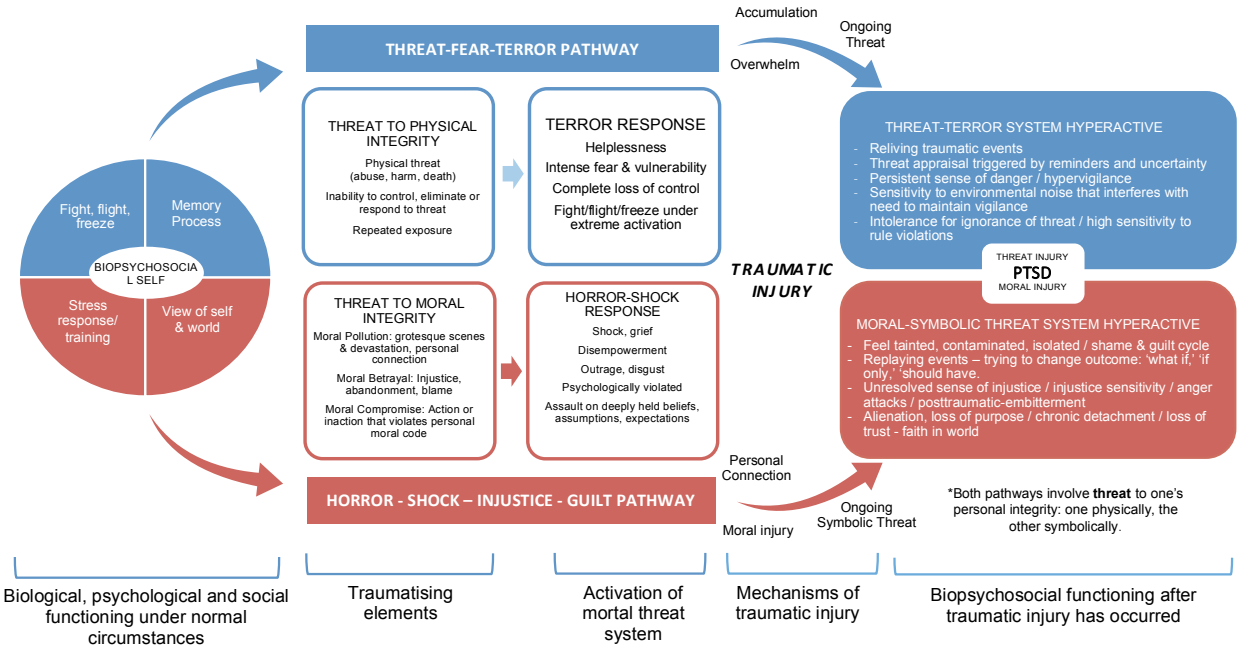
Despite these important advances in the science of PTSD there has been increasing dissonance in the field of traumatic stress. Clinical accounts and descriptions present a picture that is broader than standard representations of PTSD as a threat- and fear-response disorder, invoking instead notions of shock, exhaustion, fatigue and survivor guilt [1] [2]. This is especially so for populations in which trauma exposure is cumulative, such as military and emergency services personnel as well as civilians in situations of ongoing abuse, conflict or political violence. Therefore, while it is important to acknowledge the role of threat, fear and terror as a pathway to PTSD, we think it is important to consider a more inclusive model. Figure 1 presents a pathways model of PTSD that acknowledges the role of threat, fear and terror as one pathway to PTSD (see the upper section of Figure 1), but also highlights the important role of horror, shock, injustice, guilt and shame as another important pathway into PTSD responses. The latter pathway (see the lower section of Figure 1) appears to be particularly relevant for military personnel and first responders who were often resilient and prepared for exposure to threat and terror but were not prepared for the morally injurious nature of their work.

Threat, fear and terror are one acknowledged pathway to PTSD. So also are horror, shock, injustice, guilt and shame.

Within the context of combat-related PTSD, clinicians and researchers have increasingly returned to a notion of moral injury as a way to capture the broader impact of trauma [1]. Traumatic injury in this respect may not involve threat to life but occurs following events where soldiers find themselves 'perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations' [2]. Although descriptions of moral injury have done much to raise awareness about a broader range of experiences that can cause psychological injury, we feel that this taxonomy may not completely capture the full range of experience within this domain of traumatic events and places too much emphasis on acts that compromise the soldier, which is only one manifestation of the broader response. We therefore refer to reactions to all types of events that threaten one's moral integrity broadly under the notion of a horror and shock response.

To elaborate on the notion of moral injury, we have distinguished between three broad classes of morally injurious experiences [3]. **Moral pollution** refers to witnessing grotesque or catastrophic scenes but may also involve exposure to another person's intense pain or grief, especially when one is able to make an empathic or personal connection with the other. **Moral betrayal** refers to experiences of systemic failure, injustice or blame, particularly when this occurs in the context of high stress and physical danger. **Moral betrayal** is most injurious when it occurs at a time when one is most vulnerable and in need of 'backup'. **Moral compromise** involves one's own or another's action or inaction that violates deeply held values. Sometimes this comes as a result of loss of control, having to make a split second decision in a crisis or being forced into a situation where no morally acceptable action is available. These three categories of events can be experienced as psychologically violating, giving rise to feelings of shock, disgust, disempowerment, and anger. A person may also experience this 'lost goodness' as a violent incursion on key beliefs and expectations about the world, or indeed themselves and others who inhabit it [4].

Figure 1: Pathways model of PTSD



The threat-fear-terror pathway may run in parallel with the horror, shock, betrayal, injustice, guilt and shame pathway.

The cumulative context of traumatic exposure or the pre-existing trauma load that often forms a "background" to this horror and shock response means that in practice it is not uncommon for the threat-fear-terror pathway to run in parallel with intrusive and distressing emotions of horror, shock, betrayal, injustice, guilt and shame. It is, however, the less visible or objectively understandable forms of horror and shock, such as deep demoralisation derived from moral betrayal and compromise — both during and even many years after overtly traumatic events — that appear to be most corrosive and have the biggest impact on a person's ability to live with their traumatic experiences [1].

A further important development has been the articulation of the ADAPT model by Derrick Silove that highlights the importance of psychosocial structures that provide adaptive 'pillars' in life that can be variously threatened by situations of extreme danger and violence (and indeed moral injury) [5]. This is particularly relevant for populations exposed to periods of prolonged threat, displacement and social upheaval. These pillars are *safety and felt security, bonds and social networks, stable roles and identities, justice,* and *world views and belief systems*. In situations involving stress, adversity and exposure to potentially traumatic events they can be seen to form a 'container of meaning' that promotes resilience and serves as a protective buffer from sustained psychological harm.

One implication of this understanding is that, considering the important role of the psychosocial environment, interventions for PTSD may need to move beyond a focus on individual responses to also look at sources of ongoing threat in the recovery environment. Research in the area of post traumatic growth supports the importance of an individual's ability to survive, adapt and even thrive after trauma when they have a psychosocial context that can bring meaning to the trauma [6]. For many, it is when this container itself gets damaged through moral injury that the individual gets flooded with overwhelming memories of trauma and a lasting traumatic injury occurs. In this way, like a physical wound, the post traumatic recovery environment — with its social, organisational and systemic elements — can have as much bearing on a person's ability to recover as individual factors.

The damaging intrapsychic effects of trauma can not only cause, but are often caused by, an erosion of the pillars of psychosocial wellbeing. Posttraumatic stress responses arising from threats to safety and felt security may reflect a normative survival response maintained by ongoing sources of threat and insecurity. Cumulative trauma will impact other psychosocial domains such as bonds and social networks that are essential to human wellbeing and functioning. The loss of peers, friends and family can lead to prolonged and traumatic grief reactions. Betrayal of trust in the face of potentially traumatic events can lead to ongoing loss of interpersonal faith and trust in other relationships. Traumatic incidents and injury will also simultaneously impact on what had been previously stable roles and identities. Exposure to trauma and violence can also lead to prolonged feelings and preoccupation with issues of injustice that may be associated with anger and hypersensitivity to further perceived instances of injustice and feelings of embitterment. Fundamental world views and belief systems can be challenged by conflict and exposure to the capacity of humans to perpetrate atrocity and extreme violence. Once the usual capacity to cope is overwhelmed or the container of meaning has been compromised, an individual's stress and survival response gets thrown into disarray. Intrusive memories of physically or morally threatening events fuel a chronic over-triggering of the instinctual mortal threat system. Beset from within by neurobiological processes gone awry and bereft of the much needed social structures that help "hold a person together," those affected by traumatic stress injuries can become locked in a cycle of "surviving rather than living".

This expanded framework for understanding traumatic responses calls for both increased awareness among clinicians and institutions that work with individuals who have experienced trauma, as well as a progression of treatment approaches. By better understanding the nature of the horror and shock response, clinicians and institutions can respond more compassionately to the experiences of traumatised individuals and help to prevent the very feelings of betrayal and dismissal that we believe can compound clinical care and recovery. In this respect, clinical services and institutions (including workplaces and insurance agencies) will do well to implement appropriate training and education packages that incorporate these concepts. The movement to advance models of trauma-informed care (http://traumainformedcareproject.org/) represents an important initiative in this respect.

The loss of peers, friends and family can lead to prolonged and traumatic grief reactions.

New treatment modalities are being developed to assist people to address injuries associated with moral damage and shock.

Importantly our experience at St John of God and a growing international evidence base shows that PTSD including the complex array of associated emotions described herein do respond to evidence-based treatments. Many of the existing therapies such as Cognitive Processing Therapy have modules that aim to address the types of injuries we have described in the second pathway. There are also new treatment modalities being developed such as Adaptive Disclosure to assist people to address injuries associated with moral damage and shock. The understanding of these different pathways into PTSD is still in early development and there is ongoing need to improve and evaluate models of PTSD and to look further at ways of improving the effectiveness of treatment approaches. The focus on the role of the psychosocial context also poses an important challenge to the field to develop post traumatic recovery environments that maximise recovery outcomes for the diverse range of trauma survivors and do not further invalidate those with traumatic stress injuries.

References

1. Shay, J. (1994). *Achilles in Vietnam: Combat trauma and the undoing of character.* New York, NY: Scribner.
2. Litz, B. T., N. Stein, E. Delaney, L. Lebowitz, W.P. Nash, C.Silva, & S. Maguen (2009). 'Moral injury and moral repair in war veterans: A preliminary model and intervention strategy.' *Clinical Psychology Review*, 29(8), 695–706.
3. Steel, Z., & D. Hilbrink (2015). 'Dealing with horror' in T. Frame (ed.), *Moral Injury: Unseen Wounds in an Age of Barbarism* (pp. 167–87). Sydney, AU.: UNSW Press.
4. Sherman, N. (2014). 'Recovering lost goodness: Shame, guilt, and self-empathy.' *Psychoanalytic Psychology*, 31(2), 217–35.
5. Silove, D. (2013.'The ADAPT model: a conceptual framework for mental health and psychosocial programming in post-conflict settings.' *Interventions: International Journal of Mental Health, Psychosocial Work and Counselling in Areas of Armed Conflict, Intervention*, 11(3), 237–48.
6. Shakespeare-Finch, J. (2011). How emergency service workers cope with, and growfrom, work-related stress and trauma *Wayfinding Through Life's Challenges: Coping and Survival* (pp. 281–96).

Neuroimaging of post traumatic stress disorder

Jim Lagopoulos, Daniel C. O'Doherty and Maxwell R Bennett

Professor Jim Lagopoulos is the director of the Sunshine Coast Mind and Neuroscience — Thompson Institute. Jim's research is focused on the translation of discoveries made using animal models into real-world treatment options for humans. In the past five years he has established an independent neuroimaging research program with a focus on traumatic brain injury and Post Traumatic Stress Disorder (PTSD).

Daniel O'Doherty is a PhD candidate at the University of Sydney Brain and Mind Centre. His research utilises multi-modal MRI techniques to understand why certain trauma-afflicted individuals develop PSTD while others do not, with the aim of contributing to a body of knowledge that may assist in the treatment and diagnosis of PTSD

Professor Maxwell Bennett AO at The University of Sydney is neuroscientist and expert on the history and philosophy of brain and mind research. He has had a long-standing interest in studying the functioning of synapses and a wider philosophical interest in the relationship between the brain and our psychological attributes such as thinking, remembering and perceiving.

Studies during the past decade have explored the link between PTSD and volumetric changes in the amygdala, the hippocampus and the anterior cingulate cortex of the human brain. MRI studies have revealed increased activities of these during stress in subjects with PTSD. These three areas are posited to play important roles in normal fear extinction and the regulation of memories. It remains inconclusive whether hippocampal volume loss occurs or whether premorbid hippocampal volume loss merely places an individual at higher risk of developing PTSD. As with the hippocampus volumetric studies as an indicator of PTSD are equivocal for the amygdyla. And the same is also true with neuroimaging studies of the anterior cingulate cortex. Despite significant research into the pathophysiology of this disorder, the mechanisms that underpin PTSD remain elusive. There is hope however that the measures of brain volume and activity may provide a better understanding of the mechanisms at play and offer the potential to develop predictors of clinical response that may better inform treatment strategies.

As indicated in other essays in this volume, Post Traumatic Stress Disorder (PTSD) is a debilitating condition characterised by flashbacks, hyperarousal, hypervigilance, emotional numbing, mood lability, insomnia and avoidance of potentially triggering situations. PTSD has also been associated with mild to moderate cognitive impairment, most notably, reduced concentration and difficulties associated with learning and memory. In the general population, lifetime prevalence of PTSD across the western world ranges from 1.9 per cent to 6.8 per cent [1]. War veterans are typically more susceptible to PTSD, with rates as high as 19 to 22 per cent reported among Vietnam, Iraq and Afghanistan war veterans [2,3]. Among people who are not former combatants, PTSD may develop following exposure to severe trauma such as abuse during childhood and/or threat to life.

Many studies have sought to test the association between morphological characteristics of the brain and the presence of PTSD.

Elucidating the neurobiology and neurocircuitry of PTSD is an essential step in informing the detection and treatment of the disorder. To this end, significant efforts have been focussed on determining why only a proportion of trauma-affected individuals go on to develop PTSD symptoms. Early studies have hypothesised an association between PTSD and atrophy of three key brain regions: the hippocampus, amygdala, and tanterior cingulate cortex (ACC). The link between PTSD and stress responses has underscored the role of the amygdala and hippocampus in particular, although all three regions of interest (ROI) are critical for normal fear extinction and the regulation of emotions. Studies conducted into amygdala and hippocampal atrophy in association with other psychiatric disorders such as depression and anxiety have demonstrated decreased volume. In relation to PTSD, attenuated recruitment of these structures and reduced volume has been reported, however findings from extant research have not been conclusive.

Numerous studies undertaken within the past decade have attempted to identify associations between specific brain regions linked to PTSD, with the aim of discovering if volumetric differences are present in people with PTSD. fMRI studies have identified increased activity of the hippocampus, amygdala and ACC during stress carried out on subjects with PTSD. All three ROI are posited to play important roles in normal fear extinction and the regulation of memories. As such, many studies have sought to test the association between the morphological characteristics of these ROI and the presence of PTSD. Some researchers speculate that hyper-response in the amygdala, in relation to stimulus perceived to be threatening, is either exacerbated or the result of attenuated top-down inhibition by the pregenual ACC and/or the hippocampus.

The role played by the hippocampus in memory processing and the regulation of the hypothalamic-pituitary-adrenocortical (HPA) axis makes this a key region in examining possible structural abnormalities associated with PTSD, given that memory impairment is a core feature of PTSD.

Animal studies on rodents and primates have suggested an association between stress and structural changes observed in the hippocampus. Damage to the hippocampus is postulated to occur as the result of prolonged, stress-related glucocorticoid and glutamate neurotoxicity, or due to brain-derived neurotrophic factor (BDNF), that eventually causes atrophy, cell death and inhibits neurogenesis, with higher levels of stress hormone leading to greater levels of neurotoxicity.

In human studies, it remains inconclusive whether hippocampal volume loss occurs as a result of PTSD or whether premorbid hippocampal volume loss merely places an individual at a higher risk of developing PTSD.

While the hippocampus has been a major focus in determining if structural characteristics of brain anatomy are associated with PTSD, fewer studies have examined the role of the amygdala and its relation to the disorder. Findings from fMRI studies into amygdala activation in PTSD have provided theoretical support for further investigation into amygdala volumetric changes. The amygdala has been postulated to play a role in the pathophysiology of PTSD since it is integral in the regulation of memory of stressful and traumatic events, behaviour and emotion, and in fear conditioning and generalisation. Successful learned fear extinction is dependent upon N-methyl-d-aspartate (NMDA) receptors in the amygdala. Lower levels of NMDA thus impair the function of the amygdala in extinguishing fear.

The outcome of animal stress models and human studies into neuronal architecture in the amygdala has provided further support for the amygdala's association with PTSD. Animal models involving fear conditioning have demonstrated volumetric changes in the basolateral complex of the amygdala (BLA), increased arborisation, and the growth of dendritic spines in the extended amygdala. Altered fear learning and stress behaviours have also been observed in the BLA of rats following lesions induced to this area. Finally, human studies have demonstrated heightened fear response and fear conditioning in PTSD patients as well as increased glucocorticoid response to stress. These findings support both heightened activation and morphological changes of the amygdala being associated with PTSD. However, as in the case in volumetric studies examining the role of the hippocampus in PTSD, findings across studies concerning amygdala volume are equivocal.

The third brain region implicated in the neurocircuitry and pathophysiology of PTSD is the ACC. Investigation into the role the ACC assumes in the anatomy of fear conditioning and PTSD is especially interesting given the numerous neuroimaging studies that have demonstrated associations between ACC activation and volume in PTSD subjects.

Positron Emission Tomography (PET) and fMRI studies have indicated that the ACC is involved in the regulation of negative feedback of HPA during emotional distress, behavioural inhibition and the regulation of emotion. The prevailing theory with regards to the role of the ACC in PTSD is that PTSD symptoms occur as the result of amygdala hyperactivity (in response to stimuli perceived to be threatening) and a corresponding failure of the ACC to inhibit this response. Animal stress studies have provided further support to this putative role, demonstrating changes to ACC dendritic architecture and the implication of impaired or altered ACC functioning in rodents and in primates.

Studies during the past decade have explored the link between PTSD and volumetric changes in the amygdala, the hippocampus and the anterior cingulate cortex of the human brain.

There is hope that the measures of brain volume and activity may provide a better understanding that may better inform treatment strategies.

As with the hippocampus and amygdala, previous studies of the ACC in PTSD (utilising PET, fMRI and MRS) have reported anomalous ACC engagement in PTSD subjects compared to subjects without PTSD. Typically, the ACC demonstrates hypo-activity when compared to subjects without PTSD. Similar to findings from neuroimaging studies examining ACC activation and function, different volumetric measurement techniques (i.e. manual tracing, voxel-based analysis and automated segmentation) have been utilised to investigate ACC morphometry in PTSD, and have yielded similar reduced grey matter findings. Lending support for the ACC's function and effect in emotional regulation and fear conditioning, smaller ACC volume was detected even in the absence of a PTSD diagnosis.

While volumetric studies of the ACC in association with PTSD have more conclusively demonstrated grey matter atrophy than similar studies conducted on the hippocampus and amygdala, some studies have reported hyperactivation of the ACC, rather than hypoactivation.

Given its prevalence and the wide-ranging negative effects on behaviour, mood and cognition, PTSD represents a significant public health concern for the wider population, as well as highly susceptible groups such as returning combatants. Despite significant research into the pathophysiology of the disorder, the mechanisms that underpin PTSD remain elusive. The development of neuroimaging biomarkers such as measures of brain volume and activity may provide a better understanding of the mechanisms at play and offer the potential to develop predictors of clinical response that may better inform treatment strategies.

References

1. Australian Bureau of Statistics (2007). 'National Survey of Mental Health and Wellbeing: Summary of Results' cat. no. 4326.0, Canberra. ABS. Canberra, Australian Bureau of Statistics.
2. Dohrenwend, B. P., J. B. Turner, N. A. Turse, B. G. Adams, K. C. Koenen and R. Marshall (2006). 'The psychological risks of Vietnam for U.S. veterans: a revisit with new data and methods.' *Science* 313 (5789): 979–82.
3. Seal, K. H., T. J. Metzler, K. S. Gima, D. Bertenthal, S. Maguen and C. R. Marmar (2009). 'Trends and risk factors for mental health diagnoses among Iraq and Afghanistan veterans using Department of Veterans Affairs health care, 2002–2008.' *Am J Public Health* 99 (9): 1651–58.

Section 2: Hazards in specific groups

The two most prevalent disorders among prisoners are substance abuse disorders and PTSD.

Trauma-related stress is a particular hazard for those involved in war and 'first responders', such as police and ambulance officers, whose work involves early contact with victims of violence, disaster, accidents and people with serious illness. It is also often a consequence of domestic violence, child sex abuse, rape and acute family dislocation. Many living in Indigenous communities are also exposed to trauma of multiple kinds.

The long-term effects of trauma-related stress often include substance use disorders and criminal behaviour, so it is no surprise that many of the people in our jails are suffering from Post Traumatic Stress Disorder or other trauma-related stress conditions.

Furthermore, the circumstances that operate in prisons can seriously exacerbate stress and its attendant behaviours. In fact, the two most prevalent disorders among prisoners are substance abuse disorders and PTSD. Both disorders are about 10 times more prevalent among prisoners than in the general population and frequently co-occur. A destructive continuing cycle of crime may result from early childhood exposure to trauma, development of PTSD leading to drug abuse and crime to support the drug habit, incarceration, and the exacerbation of PTSD by experiences in prison.

In the opening essay of this section, economist **Philip Clarke** draws attention to the fact that PTSD is the most common form of disability among veterans from recent Australian wars. Clarke points to the progressive increase over time in the percentage of those who served in the East Timor, Afghanistan and Iraq wars claiming disability following demobilisation. He says that, on the basis of the experience of Vietnam veterans, the burden of disability is likely to continue to grow for some years and that a significant proportion of the costs of going to war relates to the costs of veterans' post-war disability. An ongoing commitment of government funds will be required to cover pensions and health care costs.

Allan Behm recounts the story of three members of his own family who were seriously affected by PTSD as a result of wartime service, two of whom died as a consequence. He describes the last 20 years of his brother's life as a 'living hell not only for himself but also for his loved ones'.

The forcible removal of children has profoundly affected many Indigenous Australians.

Mick Palmer and **Bruce Wyett** describe the operational environment for police as characterised by unpredictability, uncertainty, danger, legal constraint, review and criticism, and points out that the task of first response is often given to relatively junior police officers who may witness cumulative stressful events over time. Officers are not expected to admit weakness or fear, the common belief being that to be diagnosed with a stress-related illness is to spell the end of your career. This makes getting those affected by their trauma experiences into treatment a problem. Palmer also has concerns about the patchy quality of counselling when available and accepted.

In the first of two articles about trauma and stress in Aboriginal and Torres Strait Island people, **Kelleigh Ryan**, **Pat Dudgeon** and **Tanja Hirvonen** point out that many Indigenous people carry a burden of loss and bereavement from an early age, as a consequence of their high rates of mortality, illness, incarceration, deaths in custody and involuntary hospitalisation. They also receive proportionately less specialist care for mental illnesses. The authors refer to the historical trauma over many generations that has led to present-day feelings of extreme powerlessness, loss of control and disconnection. The forcible removal of children has profoundly affected many Indigenous Australians. Their suicide death rates and incarceration rates are much higher, and they have significantly lower rates of employment, education and housing. All of these factors help to contribute to the very high mental health morbidity and the health gap between Indigenous and non-Indigenous Australians.

Bringing the war home: the rising disability claims of Afghanistan war vets

Philip Clarke

Professor Philip Clarke joined the Melbourne School of Population and Global Health, University of Melbourne in 2012. Previously, he held appointments at Sydney and Oxford Universities. His health economic research interests include developing methods to value the benefits of improving access to health care, health inequalities and the use of simulation models in health economic evaluation. He has also undertaken policy relevant research for the World Bank, OECD, and AusAID.

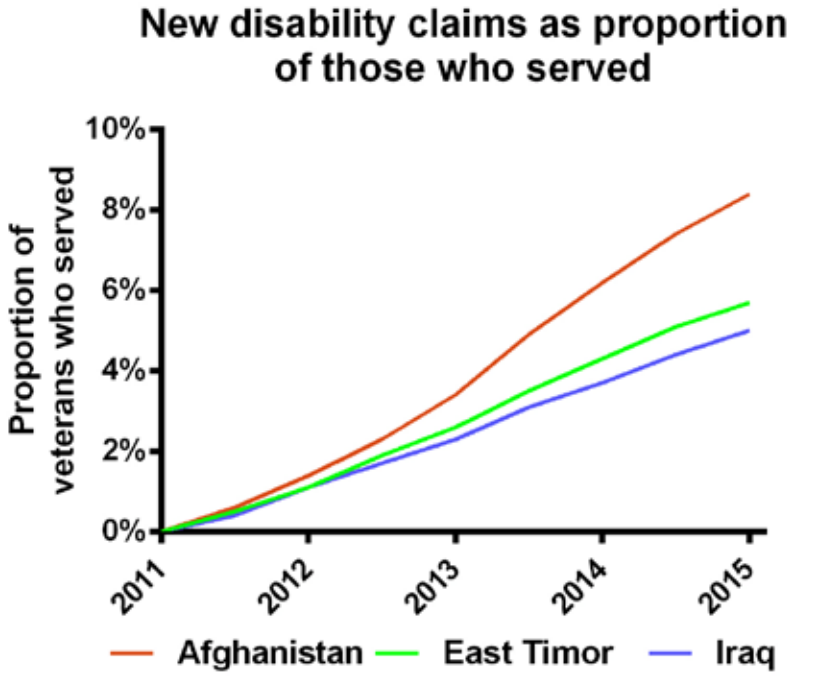
Post Traumatic Stress Disorder (PTSD) is the most common form of disability among veterans from the Afghanistan war, currently accounting for around one-third of disabilities. Just over 10 per cent of those who served in Afghanistan now have an accepted war-related disability. Claimants are also more likely to claim for multiple conditions (currently around 2.85 conditions per veteran) than other recent conflicts. The toll of disability from this and other wars in which Australia has been engaged can be expected to continue to rise over time. Research into better treatment options for PTSD is needed and could produce major benefits to the wellbeing of veterans and the Australian budget.

The recent ABC TV series on the Afghanistan war recounts the deaths of 41 Australian soldiers on active service. Unfortunately, the impacts of wars do not end when soldiers return home. Almost 100 times that number have now claimed war-related disabilities, including for Post Traumatic Stress Disorder (PTSD), hearing loss and musculoskeletal diseases. If past wars are a guide, the toll of disability will continue to rise for many decades to come.

Every few months, the Department of Veterans' Affairs releases updated information about accepted claims of veterans for war-related disability. Claims among Afghanistan veterans are rising rapidly. Just over 10 per cent of those who served in Afghanistan now have an accepted war-related disability. Claimants are also more likely to claim for multiple conditions (currently around 2.85 conditions per veteran) than other recent conflicts.

Veterans with a war-related disability receive a pension proportional to their level of disability, as well as health-care benefits to pay for their treatment. Those on higher rates of disability (which often occurs when they have multiple conditions) gain access to a pension at a special rate, which is currently A$1330 a fortnight, and access to a Department of Veterans' Affairs (DVA) Gold Card to cover their health-care needs. The pension cost for each of these veterans is likely to amount to more than A$1.5 million over their remaining lifetimes.

When we send soldiers off to war, there will be an enduring legacy of disability for many.



Notes: Authors estimates based on DVA statistics and Australian Defence force estimates of total deployments by conflict, which are as follows:
East Timor (25,000); Iraq (17,800); Afghanistan (33,140).

What does the future hold?

The pattern of disability of Vietnam veterans, as well as more recent deployments such as in Timor, suggests claims will continue to rise. A recent analysis of the disability claims of all Australian Vietnam veterans shows the most rapid period of rising claims was not in the immediate aftermath of war, but during the mid-1990s. This was more than 20 years after Australia's involvement in the conflict ended. Now more than three-quarters of those who served in Vietnam have a war-related disability, with more than 21,000 deemed totally and permanently incapacitated. This means their disability prevents them working more than eight hours a week. These veterans are entitled to a pension at the special rate and a Gold Card.

Modern wars have a costly legacy. In 2008, Nobel laureate Joseph Stiglitz and Harvard Professor Linda Bilmes wrote *The Three Trillion Dollar War*, which tried to quantify the total cost of the United States' involvement in wars in Iraq and Afghanistan. Bilmes has now revised her estimates upward to between US$4 and US$6 trillion. A significant proportion of these costs is due to war-related disability support. Surprisingly, there are no comparable estimates of the long-term cost of Australia's involvement in these wars. Even the nominal rolls, which record the names of veterans who served, are yet to be compiled.

The Australian Defence Force estimates around 33,000 Australian military personnel served in Afghanistan, which is just over half of the number who served in Vietnam. When we send soldiers off to war, there will be an enduring legacy of disability for many. Not only will this impact on the lives of the veterans, it will also require an ongoing commitment of government funds to cover pensions and health-care costs.

Can these long-term disabilities be prevented?

PTSD is the most common form of disability among veterans from the Afghanistan war, currently accounting for around one-third of disabilities. A recent report from the Institute of Medicine in Washington on the treatment of PTSD concluded that:

> *There are numerous psychosocial treatments for PTSD... On the whole, the efficacy of these treatments has been limited to pre-treatment and post-treatment self-reported assessments, which makes interpretation of the outcomes difficult. The frequent lack of control groups in efficacy studies means that reductions in PTSD symptoms may be due to factors unrelated to the treatment under investigation...*

Clearly, we need targeted, high-quality research, particularly using randomised trial methodologies, to find effective strategies for the prevention and treatment of PTSD. In the United States, research on treatments for PTSD is a national research priority. Translating research findings into effective interventions for PTSD will pay dividends, if it can reduce the rate at which veterans need to make future disability claims.

The story of a veteran's life after returning home is unlikely to produce the drama to captivate a TV audience. It is, however, important for Australians to understand the long-term financial and human costs of our recent military deployments and to find ways to prevent future war-related disability.

Reprinted with permission *The Conversation* March 16 2016

Clearly, we need targeted, high-quality research, particularly using randomised trial methodologies, to find effective strategies for the prevention and treatment of PTSD.

One family's story

Allan Behm

Allan Behm was Greg Combet's chief of staff in the Defence Material, Climate Change and Industry portfolios. In 2001 he established Knowledge Pond, an international consultancy advising on political and sovereign risk, strategy and security. He continues to publish and comment on international security matters. Allan Behm is currently the CEO of PTSD-ANZ, a not-for-profit supporting people with Post Traumatic Stress Disorder and their families.

Three members of the author's family were seriously affected by PTSD as a result of wartime service and two of them died from it. PTSD continues to reverberate across generations for the families of the hundred thousand who died in the wars of the 20th century and the almost half a million who were injured. He is CEO of FearLess, a not-for-profit Association established in 2013 which is beginning to uncover just how pervasive PTSD is across the nation affecting victims of assault, physical (domestic violence) and sexual (rape) as well as the perpetrators in many cases, first response organisation members, the medical profession, transport industry workers, journalists and the children who witness violence. It extends well beyond the veteran community and it is insidious and pervasive. It is a tragedy on a global scale.

Post Traumatic Stress Injury persists across generations. From 1918 onwards, each generation of my family has had to deal with the brain injury caused by war, beginning with my grand aunt. The 1 October 1927 edition of Queensland's *The Western Star and Roma Advertiser* carried the following sad story on page 5.

The dead body of Mrs. Hoch, wife of Mr. C. Hoch owner of Wyalla station, Springsure, was found in a car near the homestead. She leaves a husband and four children, aged seven years, six years, three years, and six months. The body was sent by train to Clermont for interment. The late Mrs. Hoch was 38 years of age. She was well known as a nurse in the Central district, and before her marriage was matron of several hospitals, including Emerald. She served at the war.

Elsie Hoch, née Grant, apparently died of asphyxiation. What the report did not say was that between 1915 and 1918 she saw some of the most horrible injuries and wounds of WW1 as she tended wounded Australian and British soldiers so close to the lines that her hospitals and first aid stations were often under direct German shellfire. She saw her brother, Lt Allan Grant of the 40th Bn, just over a week before he was killed at Passchendaele on 12 October 1917. His body was never recovered. Her mother died of Spanish 'Flu just before Elsie returned to Australia. These things weighed on her heavily.

The psychological trauma that affected VC winner Hugo Throssell and Brigadier (later Major General) Henry 'Pompey' Elliott ultimately led to their suicide, and many of the soldiers who returned from WW1 with 'shell shock' also took their own lives. So, too, did a number of the members of the 'Gray Battalion' as May Tilton called them, the nurses who looked after the wounded and the dying on Lemnos and in Egypt and France.

Elsie's nephew, Pte Allan Grant, who was named after her brother, was with the 2/1 Tank Attack Regiment on Crete, where he witnessed some of the fiercest hand-to-hand fighting of WW2. His mates were blown away in front of him. After his return to Australia, he went on to fight the Japanese in New Guinea. I remember my uncle Allan, after whom I was named, very well. In the post-WW2 years he was mercurial, often moody, always up for a fight if one was on offer, beset by a range of anxieties. A near-fatal motor accident in the mid-fifties constrained his truculence, but it was not until his later years that PTSD was diagnosed as he was being treated for other wartime injuries at the Greenslopes Repatriation Hospital in Brisbane.

My brother, Major Lloyd Behm (Bravo 9 Sierra 24) was a patrol leader in the 1st Squadron SAS in Vietnam. He experienced a number of terrifying encounters, including being winched out of the battleground by helicopter under gunfire. While on a joint exercise with the US Marines in Hawaii in 1985, he contracted leptospirosis, which in his words 'released the demons'. He was medivaced to the Army hospital at Duntroon where he suffered a number of psychotic episodes that eventually led to treatment at the St John of God hospital at Richmond, NSW. He was discharged from the Army and never worked again, so debilitating physically, psychologically and socially was his PTSD. He died on 15 April 2004, possibly as a result of the treatment he was undergoing for his PTSD. The last twenty years of his life were a living hell — his words — not only for himself but also for his loved ones.

Lloyd was not only constantly anxious, as many PTSD sufferers are, but also wracked with guilt for the Vietnamese soldiers who died at his hands. He wrote a poignant prose poem called 'Certain Reflections' that expresses the confronting nature of the mental and moral issues attaching to ambush and death:

The peace of the jungle is suddenly shattered.

Five ' enemy' lie dead in the river — their river — and the smell of gunfire hangs in the air.

The monkeys are gone. The cicadas are silent.

Body search completed, we leave as silently as we came.

A water resupply was no longer a problem.

The jungle is different now. Five soldiers fighting for their cause in their country are dead.

I know not where they lie, nor if their loved ones know what happened.

We were young then, but now in the autumn of my life, I contemplate and reflect.

This is a story about just one family, and as such not important, but PTSD continues to reverberate across generations for the families of the hundred thousand who died in the wars of the 20th century and the almost half million who were injured.

Lloyd was not only constantly anxious, as many PTSD sufferers are, but also wracked with guilt for the Vietnamese soldiers who died at his hands.

A first responder perspective

Mick Palmer and Bruce Wyatt

Mick Palmer AO is a 33 year career police officer with extensive experience in police leadership and reform in community, national and international policing. He served as Commissioner of the Northern Territory Police, Fire and Emergency Service agency from 1988–1994 and as Commissioner of the Australian Federal Police (AFP) from 1994 until March 2001. From 2004 until 2012, he was the Australian Federal Government's Inspector of Transport Security with responsibility to inquire into serious transport security and offshore security matters. He is a former member of the Alcohol and other Drugs Council of Australia and is currently an adjunct professor with the School of Criminology and Criminal Justice at Griffith University. For five years he served as a Director and recently as Deputy Chair of Australia21.

Bruce Wyatt QPM is a 32 year veteran of the Northern Territory Police Force, having served throughout the NT between 1964 and his retirement in 1996 after seven years as an Assistant Commissioner. He is widely experienced in policy development, project management and administrative innovation. He had a significant role as NT delegate on two national common police services. During his 32 year service he was contracted for two years (1985–87) to the Northern Territory Housing Commission as Deputy to the CEO. After his retirement he spent two years as a member of the Northern Territory Liquor Commission (a "Board of Control" role).

The operational environment for first responders such as the police is one of unpredictability, uncertainty, danger, legal constraint, review and criticism. The tasks of first responders are often given to people in the early stages of their careers and the decisions they make must be based on their individual and personal judgement. The tragic consequences they may witness have a potentially cumulative stressful impact over time. The high degree of camaraderie and team spirit in the workforce is both a strength and a weakness. People are not expected to admit weakness or fear. There is a tendency to believe that to be diagnosed with a stress-related illness is to spell the end of your career and the operational culture makes it unlikely that many will seek assistance. A crucial issue is the quality and extent of both preventive and early identification as well as post-incident treatment. The better that managers understand the warning symptoms and the more transparent the reporting and treatment options, the more effective the workplace response is likely to be and the more resilient the workforce.

To understand and effectively treat and deal with trauma-related stress requires an accurate appreciation of the environment in which the stress is occurring, the type of people being subjected to it, and the prevailing or dominant culture existing in the organisation or community in which it arises.

When most people consider trauma-related stress they think of Post Traumatic Stress Disorder (PTSD), and usually only in terms of military personnel who have been subjected to conflict situations or police and other first responders dealing with crises and emergencies. While this is the context that will be explored in what follows, it is important to acknowledge that trauma-induced stress also and more broadly occurs amongst the disadvantaged and the homeless, in Indigenous communities, in families which experience domestic violence, and in many other situations. And that people in these situations often lack the safeguards provided by the structure and discipline of military and first responder organisations. It also needs to be recognised that military and first responder organisations, can also create barriers to the identification and treatment of trauma-related illness running counter to the protective and preventive strategies formally adopted.

The operational environment of first responders such as the police is one of unpredictability and uncertainty, danger and legal constraint, review and criticism, individual discretion and decision-making, often in situations of duress or urgency. Many of these factors also apply to fire fighters, para-medics, emergency department doctors and nurses, and emergency service workers.

The most difficult street policing duties such as foot patrol or community patrol duties are frequently assigned to some of the youngest, least experienced members in the early stages of their careers. Fresh from training, they may be facing street or domestic violence, the aftermath of a fatal road accident, or a group of angry protestors, for the first time in their lives. Their actions and the decisions they make have to be based on their individual and personal judgment of the situation and may be exposed publicly, often contemporaneously, and subject to court or organisational review and assessment. Instances such as these are likely to occur on a daily or more frequent basis. Whilst confidence and expertise will improve with experience, the repetitive nature of the situation, the frequently unpredictable danger, and the tragic consequences that may occur have a potentially cumulative stressful impact over time. PTSD is a common consequence.

Contemporary police recruit training is sophisticated and extensive but the main focus is on law and practice. Recruits are trained in their powers of arrest; the circumstances in which they may stop, search and detain persons; enter and search premises and seize property; the skills and legal requirements of interviewing and interrogation; the proofs required to establish that an offence has been committed; the use of firearms; self-defence; first aid; cultural awareness; conflict resolution skilling and a myriad of other aspects of the operational landscape. It is a broad field, there is much for a police officer to know and apply, and a fairly unforgiving public and legal system waiting to sit in judgment of performance.

The operational environment of first responders such as the police is one of unpredictability and uncertainty, danger and legal constraint, review and criticism, individual discretion and decision-making, often in situations of duress and urgency.

The nature of police and other first responder work develops a high degree of camaraderie and team spirit, of joint reliance and loyalty, of never letting your mate down.

The recruitment process recognises the operational reality of the police environment and actively seeks to identify and select people not only with clear and demonstrable integrity and good character but also with intelligence, compassion, initiative, good judgment, strength of character and resilience. This mix may provide a solid base for dealing with the challenges of operational police work but may not be conducive to encouraging people to call for professional help or admit to a problem if and when they find themselves experiencing stress in dealing with the challenges. The strengths of the police workplace profile are also its weakness. This must be recognised.

The nature of police and other first responder work develops a high degree of camaraderie and team spirit, of joint reliance and loyalty, of never letting your mate down. This again is both a strength and a weakness. The culture of this environment is one in which there is significant pressure — even if indirect, unspoken or not even expected — to not admit weakness, to never admit fear or that a situation is too tough to handle, to take it on the chin and bounce back: 'To have a beer and get on with it'. This situation is further aggravated by the belief, or reality, that to admit to traumatic stress or to be diagnosed with a stress-related illness is to spell the end of your operational career. The potential stigma of diagnosis is a serious disincentive to honest self-assessment and open acknowledgement. This definitely needs to be understood and recognised.

So, in this structured, disciplined, environment, how well do we handle post-traumatic stress? The most accurate answer is variably, with post incident treatment and therapy being more effective than processes for early detection and warning, or prevention and mitigation.

Within policing and most first responder organisations, post incident counselling is mandatory following any serious and potentially traumatic incident. Part of the reason for this is that the operational culture makes it unlikely that many workers suffering the effects of traumatic stress will voluntarily self-report or admit their symptoms to an in-house medical practitioner.

Counselling in these circumstances varies significantly in quality and credibility, particularly when a substantial number of people require counselling and the number of adequately experienced counsellors is limited. In these situations counselling may have counter-productive consequences as police and other first responder officers discount the advice provided or have no confidence in the counsellor or the options being suggested. In part this is due to the lack of required qualifications and clear standards for PTSD and trauma counselling. While guidelines exist, the quality and experience level of counsellors may vary substantially, even within the same organisation or small community.

However, most, if not all, first responder organisations take the issue of trauma related stress seriously and the quality of counselling continues to improve. As part of a mandatory post incident treatment regime, persons subjected to traumatic incidents are likely to be referred to a psychotherapist specialising in post trauma treatment and provided with one or more of a range of possible therapies aimed at assisting them to understand their thought patterns, to redirect thinking into a more positive mindset, and to regain control. These therapies may include cognitive behavioural therapy (CBD) which uses scenario-type word pictures and imaginary exposure to remove the guilt association between the incident and the person's emotional response to it, eye movement desensitisation and reprocessing (EMDR) which aims to reduce symptoms through the use of side to side eye movement techniques, or more general talking therapies to better understand and deal with personal thought patterns.

Reviews indicate CBD to be the most effective form of treatment for first responder personnel, but in all situations the quality and credibility of the psychotherapist is likely to be relevant, even critical, to the outcomes achieved.

The crucial issue in the first responder workplace, however, is not the quality of responsive post incident treatment, but the quality and extent of preventive and early identification arrangements and practices. Fire fighters and police are identified as having a high risk of suffering post incident distress as a direct consequence of the nature of their operational roles. At the same time fire and police chiefs — and governments — have a strong vested interest in minimising the numbers of their people who suffer work related trauma and in maximising the numbers who, having suffered from the illness, fully recover and return to operational work.

The stigma to admitting or being identified as suffering trauma related stress that exists in many of these agencies militates against open and voluntary self-reporting and therefore early identification of the illness. A specific challenge is to create a work environment that improves the level of understanding and acceptance of PTSD as an illness, improves workforce resilience, and increases the effectiveness of early identification and rates of recovery.

A critical element of this challenge is for police and other first responder agencies to introduce and embrace a recruit and in-service training program which explains post-traumatic stress, in all its likely dimensions, that explains that, on the evidence, one in three or four employees are likely to suffer from the illness during their careers, but that the illness is treatable, avoidable and not career ending.

Fire fighters and police are identified as having a high risk of suffering post incident distress as a direct consequence of the nature of their operational roles.

Symptoms may include flashbacks, inability to concentrate, sudden and unusual panic attacks, unusual mood swings or aggression, irrationality, extreme anxiety, changes to drinking patterns, and physical effects such as diarrhoea and chest pains.

A critical element of this challenge is for police and other first responder agencies to introduce and embrace a recruit and in-service training program which explains post-traumatic stress in all its likely dimensions; that explains that, on the evidence, one in three or four employees are likely to suffer from the illness during their careers, but that the illness is treatable, avoidable and not career ending.

The training should also provide advice about the symptoms that may indicate a workmate is suffering post incident impacts that may require intervention and early treatment. Symptoms may include flashbacks, inability to concentrate, sudden and unusual panic attacks, unusual mood swings or aggression, irrationality, extreme anxiety, changes to drinking patterns, and physical effects such as diarrhoea and chest pains. The better that coal-face operatives and managers understand these warning signs and the clearer and more transparent the reporting and treatment options are in such circumstances, the more effective the workplace response is likely to be and the more resilient the workforce.

Trauma-related stress is unavoidable in first responder industries but the level of knowledge and understanding of the illness and its likely frequency, and the quality of preventive strategies, early detection and treatment, remain as urgent works in progress. The lessons learned will have equal relevance to trauma-related stress in the broader community.

Trauma and grief in Aboriginal and Torres Strait Islander people

Kelleigh Ryan, Patricia Dudgeon and Tanja Hirvonen

Professor Patricia Dudgeon is from the Bardi people of the Kimberly area in Western Australia. She is a psychologist and researcher at the School of Indigenous Studies at the University of Western Australia. Her area of research includes Indigenous social and emotional wellbeing and suicide prevention. She is a Commissioner of the Australian National Mental Health Commission, deputy chair of the Australian Indigenous Psychologist's Association, chair of the National Aboriginal Torres Strait Islander Leaders Mental Health and co-chair of the ministerial Aboriginal Torres Strait Islander Mental Health and Suicide Prevention Advisory Group.

Kelleigh Ryan is a descendent of the Kabi Kabi people of South East Queensland and the Australian South Sea Islanders with connections to the people of the Loyalty Islands on her mother's side. She has worked in Indigenous communities throughout the last 25 years during her career as a registered psychologist. She currently co-chairs the Australian Psychologist Society's interest group of Aboriginal and Torres Strait Islander Peoples and Psychology.

Tanja Hirvonen is a registered Psychologist currently based in Darwin, Northern Territory and a clinical psychology registrar. She serves on the Australian Indigenous Psychology Steering Committee and Rural Remote and Regional Advisory Board that provides information to the Australian Psychological Society. She works in the areas of trauma and trauma-informed ways of working.

Trauma and grief have been identified as significant issues for Aboriginal and Torres Strait Islander communities and for individuals. Many Aboriginal and Torres Strait Islander people carry a significant burden of loss and bereavement from an early age, due in part to the high rates of mortality, illness, incarceration, deaths in custody and involuntary hospitalisation. Aboriginal and Torres Strait Islander persons receive proportionately less specialised care for mental disorders. This paper contextualises trauma from an Aboriginal and Torres Strait Islander perspective, with a focus on the effects of the Stolen Generations.

Trauma and grief have been identified as significant issues for Aboriginal and Torres Strait Islander individuals, families and communities. It is well documented that many Aboriginal and Torres Strait Islander people carry a significant burden of loss and bereavement from an early age, due in part to the high rates of mortality, illness, incarceration, deaths in custody and involuntary hospitalisation amongst people in their communities. Furthermore, Aboriginal and Torres Strait Islander people receive proportionately less specialised care for mental health concerns due to many reasons, which include access to services [1].

There are high levels of chronic ongoing stress that Indigenous people experience in their everyday lives that are severe, multiple and ongoing.

This paper provides an overview of trauma and contextualises trauma through an Aboriginal and Torres Strait Islander lens, with a focus on the effects of the Stolen Generations, which led to separation from parents and carers and set in motion a chain of events that included trauma, abuse, powerlessness, loss, and cultural dislocation. This in turn resulted in widespread and cumulative grief, despair, illness, death, and maladaptive behaviour and coping. In addition, the specific history of colonisation has resulted in unresolved trauma and grief trauma in communities. Further, there are high levels of chronic ongoing stress that Indigenous people experience in their everyday lives that are severe, multiple and ongoing.

Aboriginal and Torres Strait Islander Australia

The Australian Bureau of Statistics (ABS) estimated there would be 713,600 Indigenous people living in Australia in 2014, comprising 3 per cent of the total population. The population is relatively young with more than one third younger than 15 years compared to one fifth of the non-Indigenous. Only 4 per cent of Aboriginal and Torres Strait Islander people are older than 65 years compared to 14 per cent of non-Indigenous people [2].

Aboriginal people have been in Australia between 50,000 and 120,000 years. Aboriginal Australians were hunter-gatherer peoples who lived in small groups. Membership within each family or language group was based on birthright, shared language, and cultural obligations and responsibilities. The emphasis was on relationships to family, group and country and on social, religious and spiritual activities. Indigenous people lived according to a clear set of values and beliefs, in balance with each other, and with the environment, the land and the sea, the fauna and flora. Values and beliefs were contained in an understanding of the world of the ancestors and creation beings and spirits. This cultural background is important in understanding contemporary values.

The Aboriginal lens on trauma

The Aboriginal and Torres Strait Healing Foundation defines trauma as an emotional response to a deeply distressing or disturbing event or series of events: it can occur at a personal level and at a collective level. Trauma affects a person's physical or emotional safety. It is often accompanied by feelings of intense fear, helplessness and horror, and can affect a person for many decades and in many different ways. If people have not had the opportunity to heal, then they may act out their pain in negative ways including psychical or emotional violence, abuse or addiction [3].

Western frameworks of understanding trauma have recently been updated with the release of the DSM V. A diagnosis of post-traumatic stress disorder (PTSD) may be given if the individual experiences intrusive symptoms such as flashbacks, avoidance of possible memory triggers, negative changes in thought or mood, and arousal for a period of three months or more [4]. Whilst the DSM V has recognised the importance of culture within mental health diagnosis, and this has been an important inclusion for the DSM V, it can be argued that further understandings and discussions are needed to ensure that the diagnoses do not rest solely within western frameworks of understandings.

For instance, mainstream diagnoses such as PTSD are unable to conceptually capture the levels of chronic ongoing stress that Indigenous people experience in their everyday lives. The sources of this stress are argued to be multiple, repeated, and of great severity; and the levels of this stress are argued to be unacceptably high and compounded by (1) the inability to identify and overcome a single source of stress, (2) the presence of cumulative stressors, and (3) the realisation that many of these stressors are inflicted by people well known to the victims. Not only is there the problem of inadequacy at diagnosis but also there are more substantial problems at the levels of treatment and control [5].

Professor Helen Milroy proposes that Aboriginal and Torres Strait Islander people need to undergo healing from historical trauma. When considering the range of historical trauma experienced, three main themes emerge that cover the nature of the trauma that occurred over many generations and continues to be felt in the present. These are extreme sense of powerlessness, loss of control, and profound sense of loss, grief and disconnection. Each of these needs to be addressed, individually and collectively, to repair the social fabric, re-establish community and cultural norms and support the safe development of children and young people.

Historical trauma has led to an extreme sense of powerlessness and loss of control, and a profound sense of grief, loss and disconnection.

Colonisation and trauma

It is essential that the historical context be articulated when discussing this topic. Aboriginal groups were decimated during European settlement or invasion. During colonisation British settlers took control of Aboriginal lands and control of every aspect of their lives as they tried to fight back. What followed were massacres, genocide by warfare and introduced diseases. It was quite common that Aboriginal peoples became the fringe dwellers of white settlements. However, in some areas Aboriginal peoples learned to adapt. This was in a sense the first wave of trauma, but the people coped with this at this time in their way, and were in recovery.

At the turn of the last century legislation was enacted across all states and territories that deprived Aboriginal people of their rights. People were shifted into reserves and missions, which were basically impoverished camps. State control of and intervention in the lives of Aboriginal people was extreme. Not one Aboriginal person was untouched by the legislation that was implemented across the nation. Such legislation reflected the dominant society's perceptions of Aboriginal people and how they ought to be treated, that is, as less than human. This period of colonisation profoundly affected the lives and self-perceptions of Aboriginal people. The trauma they suffered through colonisation, past policies and ongoing social disadvantage and racism are seen in contemporary situations.

As many as one in ten Indigenous children were forcibly removed from their families and communities in the first half of the 20th century.

One of the most profound negative consequences of the process of colonisation was the removal of Aboriginal children from their families. As many as one in ten Indigenous children were forcibly removed from their families and communities in the first half of the 20th century. Various reports have shown that in certain regions, at different times, the figure may have been much more [6]. In that time, not one Indigenous family escaped the effects of forcible removal. Only in recent times was this practice officially recognised, in Prime Minister Rudd's momentous National Apology to the Stolen Generations on the 13th February 2008. The legacy of the practice remains today, in terms of nationhood and Indigenous alienation.

The Aboriginal and Torres Strait Islander children who were forcibly removed from their families as a result of past Australian government policies, from 1800 to the 1970s, are known as the Stolen Generations. The removed children were sent to institutions or fostered or adopted to non-Indigenous families. The intention was to break parental links and sever cultural attachments to kin and country (adapted from [3]). Forcible removals of children and their subsequent effects have been and still have profoundly affected Indigenous Australia.

There is a mental health gap between Aboriginal and Torres Strait islander peoples and non-Indigenous people in Australia that needs to be addressed. For example, Aboriginal and Torres Strait Islander life expectancy is at least 10 years lower and psychological distress levels are higher than that of other Australians. Suicide death rates are higher, incarceration rates are much higher, and other indicators of difference such as employment, education and housing are likewise appalling.

References

1. Dudgeon, P., H. Milroy and R. Walker (2014). *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice* (2nd ed.) Canberra: Commonwealth of Australia.
2. Australian Bureau of Statistics (2014). *Estimates and projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026*, Canberra: Australian Bureau of Statistics.
3. Healing Foundation. Glossary of Terms. Retrieved July 2016, http://healingfoundation.org.au/our-publications/
4. American Psychiatric Association (2013) *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM5) Washington DC: American Psychiatric Association.
5. Atkinson, J., J. Nelson and C. Atkinson (2010). 'Trauma, transgenerational transfer and effects on community wellbeing.' in N. Purdie, P. Dudgeon and R. Walker (eds) *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*, pp. 135–44, Canberra: Commonwealth of Australia.
6. Human Rights and Equal Opportunity Commission (1997). *Bringing Them Home: Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families*, Sydney: Human Rights Commission.

Section 3: Social and economic costs

A broad range of social policies that recognise the cumulative costs of traumatic stress to Australian society is urgently needed.

Estimates vary and it is difficult to be precise about how many Australians are affected by trauma-associated stress, however it seems that well over 1 million people are suffering from PTSD in any one year, to say nothing of other trauma-induced mental disorders. Much morbidity is hidden, unreported and untreated, as the perceived stigma and threat to employment of admitting to a mental health problem discourages many from seeking diagnosis or treatment. For those who do seek treatment, the results are less than satisfactory for up to 40 per cent of those with full-blown PTSD.

In their second essay, **Emma Barkus**, **Mitchell Byrne** and **Alison Jones** write that the diagnosis of PTSD has very substantial social and financial implications for individuals, families, communities and society as a whole. Not only are individuals disabled and often depressed and anxious, they not infrequently engage in substance abuse and can become perpetrators of crime including domestic violence. It is difficult for someone with PTSD to live comfortably from day-to-day and maintain good relationships with friends and family.

Sandy McFarlane maintains a broad range of social policies that recognise the cumulative costs of traumatic stress to Australian society is urgently needed. The concentration of mental health services on severe established mental illness distracts from developing co-ordinated design services and interventions including opportunities for prevention for those at risk after exposure to traumatic events. The fragmentation between different state departments has conspired against such initiatives, despite the potential benefits and savings through decreased disability and impairment. He thinks it is time that Australians who have contributed significantly to our understanding of this domain worked together to inform social policy for the benefit of the broader community and the victims themselves.

Based on their economic analysis, **Anne Magnus** and **Cathrine Mihalopoulos** argue that adoption of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) in adults, children and adolescents and use of selective serotonin reuptake inhibitors (SSRIs) as a pharmacological intervention can have considerable impact on the efficiency of mental health care sector treatment of PTSD. While they recognise that TF-CBT is an expensive and time-consuming process by no means universally accessible or acceptable to those who need it most, they believe that wider adoption of evidence-based treatments in this field will lead to better Quality Adjusted Life Years in the Australian population.

Children's traumatic experiences during their childhood may affect them later in life, though their subsequent problems are often attributed to other things.

Mark Ferry says that trauma is quite often a hidden factor in young people's health related issues. Children's traumatic experiences during their childhood may affect them later in life, though their subsequent problems are often attributed to other things. A survey he conducted of a group of 1300 residential clients from disadvantaged backgrounds found that 37 per cent had experienced a serious accident, 55 per cent had been assaulted, 16 per cent had been sexually assaulted and 36 per cent had attempted to end their lives; 71 per cent had been arrested for a crime with 65 per cent of these crimes relating to drug and alcohol use; 80 per cent had been expelled or suspended from school, and 88 per cent had experienced a mental health concern. He sees the task of the Ted Noffs foundation where he works as helping young people to release their demons, befriend their inner self and step out of the prison that trauma has confined them to.

Post-traumatic stress: a community concern

Emma Barkus, Mitchell Byrne and Alison Jones

Post Traumatic Stress Disorder (PTSD) occurs following exposure to trauma in someone's professional or personal life. Approximately 6 per cent of Australians have PTSD, although this figure is likely an underestimate. PTSD has social and financial implications for individuals, communities and societies as a whole. It is disabling and associated with depression, anxiety and substance abuse. Individuals with untreated PTSD may become perpetrators of crime such as domestic violence, with their PTSD remaining unrecognised and labelled negatively within the forensic system. On a community level, increased recognition of the problem is required to encourage help seeking and reduce the 'harden up' attitude towards PTSD.

The Australian Psychological Society Stress and Wellbeing Survey in 2015 found that the top five causes of stress over the last five years were: personal finances; family concerns; personal health; attempting to maintain a healthy lifestyle; and the health of others close to the respondents. This indicates that Australians are juggling stresses across many different aspects of their lives.

There are times, however, where the weight of stress becomes too much for any one person to contain. An event can take place which is distressing, and outside the individual's control, leading to them feeling threatened. When the event, witnessed or experienced, is a life threatening accident, assault, or exposure to combat situations, an immediate acute stress response occurs. For some, this can resolve over time. However, for others, an acute stress response evolves into post-traumatic stress. Some people do not seek help to handle the difficult emotions and thoughts that arise immediately or in 40 per cent of cases some time after the initiating event. For some people, the weight of experience they are carrying changes the way they view themselves and the world around them. Other complicating factors such as heightened anxiety, depression, and substance dependence or abuse may develop, often as a result of the strategies the individual puts in place to counteract the weight of the memories they are holding on to.

Additional costs can occur if individuals who do not seek help go on to become the perpetrators of crime, victims of their own experiences who become instruments of harm towards others.

Approximately 1.4 million Australians have Post Traumatic Stress Disorder (PTSD) at any point in time. Their symptoms can include flashbacks which return them to the distressing event, poor sleep and disturbing dreams, memories which intrude on what they are doing at that time, low mood, excessive anger, highly stressed feelings, and a state of 'readiness' for future events. The reliving of the distressing event can be triggered by sounds, sights, smells or simple phrases or words in a conversation. This can lead people with PTSD to avoid circumstances and situations where flashbacks or memories may be triggered. They may engage in substance use to manage and keep at bay some of these symptoms; however, any relief will be short-lived given that substance use and subsequent withdrawal often exacerbate the PTSD condition.

These symptoms and experiences make it difficult for someone with PTSD to live day-to-day, including maintaining good relationships with friends and family, thereby becoming isolated from the very people who might be able to support them and assist them to receive the help they need. These personal costs cannot be underestimated. Nor can treatment costs. PTSD treatment is estimated to account for 40 per cent of the total treatment costs for anxiety disorders in a year, a cost estimated to have been $158.2 million in 1997/78 [1]. Additional costs can occur if individuals who do not seek help go on to become the perpetrators of crime, victims of their own experiences who become instruments of harm towards others. And once labelled perpetrators in a legal setting, it is increasingly unlikely they will reach out for help or be asked the questions that would elicit the support they need. The headlines say it all: 'Combat veteran kills two strangers', 'Victim of childhood abuse, abuses'.

Such headlines mask the complexities of these people and their situations, stigmatising the diagnosis of PTSD. Stigmatisation is reinforced in the media and film industry, which tend to portray as two extremes a few incredibly resilient individuals who 'appear' unaffected by the trauma they have experienced and use the trauma as an inspiration to others, and by contrast, the dishevelled, homeless, 'crazy person' with PTSD who is a violent risk. These headlines and media images do not present the true face of PTSD and do little to encourage help-seeking behaviours.

Individuals who have PTSD are particularly vulnerable to daily hassles and minor stressors. Potential workplace hassles include environmental noise, relationships with colleagues, superiors and junior staff, and information dealt with in the workplace. Returning to work, and managing daily routines with competing demands, can be difficult for someone with PTSD and maintenance of interpersonal relationships can be problematic. In addition, anxiety and sleep disturbance can heighten the stress of potentially competing work expectations. However, when communication is clear and unambiguous and expectations well-defined, work can be managed by those who have PTSD, and many individuals are successful at 'hiding' their PTSD in their professional lives — though this may not be the case in their personal relationships.

However, the workplace may itself contribute to developing PTSD if the environment involves trauma-related information and situations. Exposure to graphic and emotionally loaded information in the work settings of emergencies services, or family and child services, can directly lead to PTSD. And there are associated workplace costs. Medicare has estimated that work-related stress and increased days off work related to stress cost the Australian economy $14.8 billion per year, with a direct cost to employers of $10.11 billion per year.

Stress of any type can make individuals feel separate and alone, and people who have PTSD can struggle to maintain interpersonal relationships. Ex-military personnel are twice as likely as others to be divorced or separated. Children of a person with PTSD (regardless of the causing event) are more likely to report anxiety or depression or to display PTSD symptoms themselves. These symptoms are likely to be a product of behaviour changes associated with PTSD since most parents do not discuss the events that caused their difficulties in detail. Indeed, the term 'a cone of silence' has been used to describe the approach taken when a parent returns from a combat situation.

Feeling isolated and unsupported can lead to feelings of loneliness that are one of the biggest contributors to mental health problems, and this can heighten the symptoms of PTSD. The 2015 Australian Psychological Society Stress and Well Being Survey found that 81 per cent of people handled their stress by spending time with friends and loved ones, and Australia's 'R U OK?' day was established to encourage this. However, for those with PTDS, this does not go far enough.

There is a need to raise awareness of PTSD at the family and community level. Many of the factors which prevent clear in-family communication around the issues related to PTSD are reflective of attitudes, beliefs and concerns held by the wider community. The distressing and traumatic events leading to PTSD are often kept secret or discussed in hushed tones. For these to be discussed openly requires community education to change how such experiences, and the individual who had those experiences, are perceived. Whilst a lot has been done to improve community perceptions of depression and anxiety, the illness of PTSD is still feared. We need to highlight that post traumatic stress is a natural response to traumatic situations and a thoroughly human condition, and to increase community compassion and connectedness for this condition.

Children of a person with PTSD (regardless of the causing event) are more likely to report anxiety or depression or to display PTSD symptoms themselves.

References

1. Issakidis, C., K. Sanderson, J. Corry, G. Andrews & H. Lapsley (2004). 'Modelling the population cost-effectiveness of current and evidence-based optimal treatment for anxiety disorders.' *Psychological Medicine* 34(1): 19–35.
2. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM5) Washington DC: American Psychiatric Association.
3. Mills, K.L. et al. (2011). 'Assessing the prevalence of trauma exposure in epidemiological surveys.' *Australian and New Zealand J Psychiatry*, 45(5): 407–15.

Traumatic stress: the uncounted cost

Alexander McFarlane

Professor Alexander McFarlane AO is the Director of the University of Adelaide Centre for Traumatic Stress Studies. He is a recipient of a number of awards, including Lifetime Achievement Award of the ISTSS for outstanding and fundamental contributions to the field of traumatic stress studies. He has published over 350 articles and chapters and has co-edited three books. In 2011 he received the Officer of the Order of Australia award for an 'outstanding contribution to medical research in the field of psychiatry, particularly posttraumatic stress disorders, to veterans' mental health management, and as an author'.

Post Traumatic Stress Disorder has a substantial impact on the productivity and welfare of the Australian community. There is an urgent need for a broad range of social policies that recognise the cumulative costs of traumatic stress to our society, and for an over-arching policy that recognises the interlinked costs of child abuse, interpersonal violence, the consequences of accidents as well as their impact on emergency services personnel.

An intriguing aspect of traumatic stress and its consequences for health has been a general community reluctance to accept its enduring impact, despite generations of evidence. Not withstanding the carnage experienced by Australians in the First World War and its impact on the service personnel who survived that conflict, most of the lessons were forgotten by the time the Second World War broke out. The substantial cause of the suffering of those who returned with shell shock or war neurosis was generally believed to be an inherited vulnerability to developing a psychiatric disorder rather than a consequence of the horrific exposures to war.

In the Second World War, those who broke down in battle were labelled at the time as lacking moral fibre. Whilst there was increasing acceptance of combat exhaustion caused by prolonged and severe combat exposure towards the end of the conflict, again there was no enduring understanding of the longer-term costs to those who served. This was despite an emerging body of evidence about the effect of traumatic stress exposure on psychological health and its contribution to the premature onset of physical illness and mortality.

The consequences of childhood sexual abuse in institutions were similarly ignored, with minimal assistance provided to those whose physical and psychological health was affected. The social denial and lack of systematic study that persisted until 1980 were a major impediment to the development of effective social and health interventions. The aftermath of the Vietnam War and the rise of the women's movement led to an advocacy movement that challenged the prevailing thinking in the medical establishment. The inclusion of Post Traumatic Stress Disorder in the third edition of the Diagnostic and Statistical Manual of the American Psychiatric Association in 1980 was the springboard for a burgeoning body of scientific research. There is now an integrated and substantial foundation of knowledge that documents the breadth and impact of traumatic stress exposure.

In contrast to day-to-day life stresses such as divorce, unemployment and financial difficulties, the evidence demonstrates that traumatic stressors have an enduring and lifelong effect not only as the cause of PTSD but as a significant contributor to the gamut of psychiatric illness, particularly depression, substance abuse and anxiety. People with psychotic disorders demonstrate substantially greater levels of traumatic stress exposure than the broader community. However, psychiatry and psychology have been slow to adopt interventions that accept this broad relevance of traumatic stressors to the aetiology of mental illness.

At a societal level, the long-term impact of traumatic stress on mental health has been identified by the World Mental Health Survey as one of the major determinants of impairment and disability across the globe [1]. A further body of research has identified that PTSD mediates the effect of traumatic stress exposure as a substantial risk factor for disorders such as hypertension, cardio vascular disease, rheumatoid arthritis, and dementia. The physical health effect is driven by the complex psychobiology associated with exposures to traumatic stress, which includes the activation of a variety of inflammatory mediators and modifications of hypothalamic pituitary adrenal axis function. However, the consequences of premature aging and physical disease are seldom considered among the benefits of introducing active prevention and treatment programs for the victims' traumatic stressors.

Documenting the breadth of trauma effects within the community is critical to the development of effective social policy in this domain, yet various factors conspire against the development of appropriate public health interventions — despite the prevalence of PTSD in the general community. The focus of mental health services on severe mental illness distracts from developing a coordinated design of services and interventions including opportunities for prevention for those at risk after exposure to traumatic events — such as motor vehicle accidents, interpersonal violence, sexual assault, natural disasters, and child abuse and neglect — and little service integration exists.

One of the difficulties in organising effective interventions is that responsibilities for those at risk are spread between government departments, such as Family and Community Services, Health, and the criminal justice system. Equally, the focus on minimising compensation costs means that opportunities for prevention amongst the emergency services are subordinated to the tendency not to identify those who are unwell as this may lead to compensation claims. Prevention and treatment services across emergency services are seldom coordinated across organisations within a state, let alone nationally, so there is no national strategy for developing consistent high-quality evidence-based systems of prevention and treatment. In the emergency services, an important step is to recognise the risk and consequences of cumulative stress exposure and to create opportunities for transition to alternative roles for individuals away from the front line without substantial financial penalty.

One of the difficulties in organising effective interventions is that responsibilities for those at risk are spread between government departments, such as family and community services, health and the criminal justice system.

It remains the case that training within psychology and psychiatry programs is insufficient to ensure the necessary standards of care within the broader community.

Expertise and knowledge about the management of traumatic stress are embedded in the Australian Defence Force and the Department of Veterans' Affairs. Having learned from the mistakes of the past and as a consequence of ongoing public scrutiny, many service developments and major research programs have occurred with currently serving personnel and veterans. Transfer and collaboration between military and the civilian communities has been an important driver of innovation and improved models of care, however this leadership role is at risk with the decline of Second World War veterans' numbers.

A national policy for a coordinated response to the impact of traumatic stress across at risk populations is needed. The fragmentation between different state departments conspires against such initiatives, despite the potential benefits and savings through decreased disability and impairment. It remains the case that training within psychology and psychiatry programs is insufficient to ensure the necessary standards of care within the broader community. A coordinated response to develop a national program for training and service design and development is required. Such an initiative is relevant to a broad range of funders including third-party vehicle insurers, workers compensation insurers, the Department of Veterans' Affairs, and state and federal departments of health. Presentations to the Royal Commission into Institutional Responses to Child Sexual Abuse demonstrate how often organisations subvert awareness and undermine effective interventions for those who have been affected. Disclosures to the Commission have highlighted the importance of legal scrutiny of institutions that are responsible for vulnerable populations or employ individuals exposed in the course of their employment to significant trauma exposures.

Australia has made substantial contributions to the body of knowledge in this domain. It is time that this collective body of research is used to inform social policy for the benefit of the broader community. The way in which the disadvantaged and those who have been affected by unpredicted adversity are assisted is a measure of the humanity of a society and the effectiveness of the instruments of government.

References

1. Alonso J., M. Petukhov, G. Vilagut et al. (2011). 'Days out of role due to common physical and mental conditions: Results of the WHO World Mental Health Surveys.' *Molecular Psychiatry* 16:1234–46.

2. McFarlane A.C. (2010). 'The long-term costs of traumatic stress: Intertwined physical and psychological consequences.' World Psychiatry 9:3–10.

Cost-benefit analyses of treatments recommended in Australian clinical practice guidelines

Anne Magnus and Cathrine Mihalopoulos

Anne Magnus is a health economist, within the Centre for Population Health Research at Deakin University. She is currently conducting economic evaluations alongside clinical trials and other studies across a broad range of areas within public health. Anne has published internationally on the modelled health and economic benefits of reducing multiple behavioural risk factors in the Australian population, as well as the cost-effectiveness of pharmacological and non-pharmacological interventions in the treatment of mental disorders (schizophrenia and posttraumatic stress disorder).

Cathrine Mihalopoulos is Associate Professor of Mental Health Economics at Deakin University and leads Australia's first research group dedicated to the economics of mental health, which specialises in the use of economic evaluation methods in the mental health care context. She is a member of the Economics Sub-Committee of the Pharmaceutical Benefits Advisory Committee and Associate Head of Research in the School of Health and Social Development at Deakin.

It is important to consider costs when discussing possible treatments for Post Traumatic Stress Disorder. The development of new Australian clinical guidelines in 2013 was an opportunity to do this, providing economic support for the adoption of evidence-based recommended treatments.

Post Traumatic Stress Disorder (PTSD) is a challenging mental health condition found in adults and children, which is treated in many different ways with varying degrees of success. New guidelines are generated from time to time to guide clinicians towards the treatments for which there is the best evidence of success or effectiveness. Because health care resources are scarce and in Australia most of our health services are provided through Medicare (a taxation-funded universal health care scheme), the cost implications, of new guidelines for treatment need to be examined for their potential impact on the mental health care system. This includes an assessment of the economic credentials, that is, the cost-effectiveness, affordability and acceptability of the recommendations.

We conducted a full cost-effectiveness analysis of three treatments recommended in the 2013 guidelines for PTSD treatment [1], and included a complete description of our methods with our results [2]. In brief we examined all the trial-based evidence of the most strongly evidence-based recommendations in the new guidelines, and conducted a desk-top modelling study to determine the impacts (i.e. benefits) on the quality of life of the Australians affected and the cost to the Australian mental health care sector (i.e. the government and patients as payers for health care). We did this at the request of the Australian Centre for Posttraumatic Mental Health and were guided in the making of any assumptions by an advisory committee of expert clinicians and policy makers who work in the field of mental health. The three interventions we evaluated included:

Trauma-focused cognitive behavioural therapy (TF-CBT) for both adults and children was found to improve the quality of life of people with PTSD.

- Trauma-focused cognitive behavioural therapy (TF-CBT) in adults (10–12 sessions with a psychologist);
- Trauma-focused cognitive behavioural therapy (TF-CBT) in children and adolescents (8–10 sessions with a psychologist);
- Selective serotonin reuptake inhibitors (SSRIs) as the pharmacological intervention of choice in adults with PTSD who are currently prescribed medication.

We determined the cost of changing all the Australian adults currently seeking care from a qualified mental health practitioner, who had PTSD during the last 12 months but were not getting the treatments for which there is good evidence, to treatments based on evidence. This amounted to about one third of all the adults and children with PTSD in Australia, as determined from the 2007 National Survey of Mental Health and Wellbeing [3] and previous studies of mental health of Australian children [4].

We switched these people from their current treatment therapies to the recommended treatments in an Excel-based model. This was found to lead to a change in quality of life which we measured with Quality Adjusted Life Years (QALYs) and Disability Adjusted Life Years (DALYs), outcome measures of health benefit frequently used by economists to capture changes in mortality and morbidity related to health conditions. The switch was also found to make a difference to the total cost of mental health care in Australia.

If an intervention or recommendation costs less than $50,000 per unit of health gain (QALY or DALY) it is considered good value for money in Australia and can be recommended for adoption unless there are other non-economic reasons not to fully adopt it [5]. Trauma-focused cognitive behavioural therapy (TF-CBT) for both adults and children was found to improve the quality of life of people with PTSD and do so at an acceptable cost (i.e. would be very cost-effective at $19,000 per QALY or $16,000 per DALY in adults and $9,000 per QALY or $8,000 per DALY in children).

Giving SSRIs to adults with PTSD who are not currently receiving antidepressants or the recommended SSRIs was found to be very cost-effective at $200 per QALY, but there is a lot of uncertainty surrounding that figure since the evidence of effectiveness in trials is quite mixed and not clear cut: some people improve while some do not with this therapy. We found there was an 87 per cent chance of health gain, but a 13 per cent chance of not improving health. There was also a 69 per cent chance of the intervention costing the health sector more money, but a 31 per cent chance of saving money. There was a 27 per cent chance of the intervention saving dollars and improving health in adults concurrently, which is the best possible economic outcome, and a good chance of this recommendation improving health at an acceptable cost.

When we looked at some of the other considerations that are likely to influence uptake of the recommendations in full, we identified several factors that may be important. Both therapists and patients are reluctant to engage in TF-CBT since it is a difficult therapy to give and receive. Parents are also difficult to engage in respect of their child's mental health, for many reasons. The workforce would need sensitive up-skilling by appropriate supervision and training for some of these barriers to be broken down, while complex family attitudes, behaviours and dynamics in respect of mental illness and treatment for children are unlikely to alter in the short term.

In conclusion, the three guideline-recommended interventions evaluated in this study are likely to have a positive impact on the economic efficiency of the treatment of PTSD if adopted in full. While there are gaps in the evidence base on which this study depended, mental health policy-makers can have considerable confidence that the recommendations assessed in the current study are very likely to improve the efficiency of the mental health care sector. The next step will be ensuring that the Australian population who is likely to benefit from such treatments actually receive it.

Parents are also difficult to engage in respect of their child's mental health, for many reasons.

References

1. Australian Centre for Posttraumatic Mental Health (2013) 'Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder' ACPMH: Melbourne.

2. Mihalopoulos C., A. Magnus, A. Lal et al. (2014) 'Is implementation of the 2013 Australian treatment guidelines for post traumatic stress disorder cost-effective compared to current practice? A cost-utility analysis using QALYs and DALYs.' *Australia and New Zealand Journal of Psychiatry.* 1–17. DOI: 10.1177/0004867414553948

3. Australian Bureau of Statistics (2009) National Survey of Mental Health and Wellbeing: Users' Guide, 2007. ABS Catalogue No. 4327.0. Canberra: ABS.

4. Haby M.M., B. Tonge, L. Littlefield et al. (2004) 'Cost-effectiveness of cognitive behavioural therapy and selective serotonin reuptake inhibitors for major depression in children and adolescents.' *Australian and New Zealand Journal of Psychiatry* 38: 579–91.

5. Carter R, T. Vos, M. Moodie et al. (2008) 'Priority setting in health: Origins, description and application of the assessing cost effectiveness (ACE) initiative.' *Expert Review of Pharmacoeconomics and Outcomes* 8: 593–617.

Trauma-related stress among Australia's youth

Mark Ferry

Mark Ferry has worked in the Youth Work/Drug and Alcohol field for the past twenty-five years. He first started working for the National Campaign Against Drug Abuse doing street work and progressed onto working as HELP Coordinator for Manly Council. This involved working with young people excluded from mainstream schooling. Mark moved into working for several crisis-housing organisations including Taldumande Youth Services. Mark has worked for the Ted Noffs Foundation since 2001 commencing as Assistant Manager, and has had various roles including managing a number of residential units. He is currently the Chief Operating Officer and is responsible for operational oversight of all the Foundation's programs.

Trauma is quite often the hidden factor in many people's health-related issues. Yet the health system as a whole is only just starting to better understand and deal with trauma. Children in particular often have traumatic experiences during their childhood that affect them later in life, though their subsequent problems are often attributed to other things by parents and health practitioners. This trauma can manifest in the form of behavioural issues, mental and physical health issues and/or drug and alcohol issues, to name but a few.

In our experience young people are exposed to trauma more than they or indeed the health system recognises or properly understands. Young people quite often discount events in their life that have a significant impact on them and their health. The reality is that for many of them trauma and its associated effects are regularly seen as a part of normal life. This can lead to an intergenerational dimension whereby young people discount significant events as 'part of growing up' or 'just what happens in families' and repeat the cycle.

The Noffs Foundation operates two residential rehabilitation centres for young people with significant drug and alcohol problems. These centres are for young people aged 13–18 years of age and work from a holistic point of view. Apart from the alcohol and other drug issues, we deal with any and all of the associated problems that are present for the young person. This can include co-morbid mental health issues, educational/vocational issues, family issues and the myriad of other problems that young people can present with. Pervading and lurking underneath the surface of many of these is trauma. The link to trauma, though, is often hidden or not explained.

The behaviours of the young people we work with and their ways of interacting with people and with society in general can often be seen as quite disturbing or simply 'bad'. Families and society are good at coming up with hypotheses and explanations like 'they started hanging out with the wrong crowd', 'it was the drugs! They never behaved like this before they started taking drugs' or my personal favourite, 'They have ADHD or ADD it's not their fault'. No one ever says 'they had a significant traumatic event in their past that may be contributing to this behaviour'.

However, if we look at the statistics of this particular group, the picture starts to become a bit clearer. For the last 6 years we have been recording our young clients' experiences of traumatic events. The record for experience of significant trauma and also for self-harm among the nearly 1300 residential clients to date is as follows:

Serious Accident	474 (37 per cent)
Assault by a known person	700 (55 per cent)
Assault by a stranger	551 (43 per cent)
Verbal Abuse (sustained)	494 (39 per cent)
Sexual assault by known person	197 (16 per cent)
Sexual assault by a stranger	94 (8 per cent)
Life threatening Illness	301 (24 per cent)
Ever had thoughts of ending their life	482 (38 per cent)
Ever attempted to end their life	460 (36 per cent)
Ever self-harmed	506 (40 per cent)

In addition, 71 per cent had been arrested for a crime; 64.5 per cent related their crime to drug and alcohol use; 40 per cent had lived in three or more places in the last 6 months; 70 per cent left school before finishing year 10; 80 per cent had been expelled or suspended from school; and 88 per cent had experienced a mental health concern.

Now let us consider whether trauma has contributed to or is a part of the reason why young people have taken drugs to the extent they need to enter residential rehabilitation. The answer is surely obvious.

While these figures are confronting, the reality may be even more frightening. Given the nature of trauma, this picture may very well be a cover story. Trauma survivors often have difficulty remembering, recounting and especially trusting when it comes to their past. Early life exposure to trauma has profound effects on the individual. We know these effects can persist in the form of troubling memories, however the effects run far deeper than this. Early life trauma lives within our entire organism. Trauma actually becomes coded in our DNA. Past trauma lives in our thoughts, emotions and bodies, including our nervous system. Past trauma can take up residence in our visceral system, our cardiac and respiratory system, as well as in our muscles. The idea that disturbing memories tighten our chest and lodge in the pit of our stomach actually has scientific credence.

Trauma survivors often have difficulty remembering, recounting and especially trusting when it comes to their past.

Children who are exposed to abuse, violence, or worst of all, neglect have to develop incredible coping strategies to survive such experiences.

Children who are exposed to abuse, violence or, worst of all, neglect have to develop incredible coping strategies to survive such experiences. The difficulty is that while these strategies help keep the person alive at the time, they can have detrimental effects years later. Children can learn to dissociate, literally separating their consciousness from the reality of the moment. They hone their fight/flight response so sharply that they are always on a state of hyper-vigilance, and they can develop alternative realities, which can momentarily transport them away from the fear and stress they are facing in their lives. If these strategies are being developed during a time when the child should be safely experiencing the world and learning how to be 'in the here and now', this becomes the baseline for the person into their teenage and adult years.

We experience the world around us through our senses, and our senses live in our bodies. If our senses become overloaded, our conscious system simply goes into survival mode. This may involve any of those essential, learnt strategies from childhood. Survivors of early life trauma can develop a hyperactive, ever-alert fear response, an autopilot that is always ready to spring into action. This is where the most damaging problems begin. Life gives us a plethora of sensations each and every moment: happiness, anticipation, fear, trepidation, sadness and longing. We absorb these sensations through our bodies, feeling butterflies in the stomach, flutters in the chest, perspiration in the palms. Only then are these sensations coded in our brains and translated into emotions. If our autopilot has been trained to spring into action and 'sabotage' our conscious thought as soon as our body begins to feel anything, then our very existence becomes about avoidance rather than experience. We are able to avoid the negative at the cost of missing out on the positive. The bodily sensations we experience when we finally build up the courage to go over and talk to that person we've had a crush on for ages are actually very similar to the physical symptoms of anxiety. Our heart speeds up, our palms get sweaty, we get butterflies in our stomach, and our legs begin to tremble. For traumatised people, the sensory world is terrifying. For traumatised people, life is robbed of its beauty.

Only recently have we begun to fully understand and appreciate the role the body plays in the traumatised individual. We have now begun to train our professional staff in understanding the true nature of trauma and how to support people to recover from its effects, both emotionally and physically. Gone are the days where exposure therapy was the standard. Our task now falls to supporting people to release their demons, befriend their inner 'self', and finally step out of the prison that trauma has confined them to.

We have a long way to go, but we are heading in the right direction.

Section 4: What is being and needs to be done

About one third of people with PTSD recover, one third gain significant benefit but are still symptomatic and the final third gain little benefit.

A number of treatments are known to have a demonstrable probability of success for people with the full-blown syndrome of Post Traumatic Stress Disorder. David Forbes and colleagues report that about one third of people recover with treatment, one third gain significant benefit but are still symptomatic, and the final third gain little benefit. They say that trauma-focused cognitive behavioural therapy (TGF-CBT) involving the individual confronting their memories in a gradual, safe and supportive manner is the accepted first-line treatment. However there is no panacea for all cases of PTSD and different pathways may operate in some cases. There is need for ongoing research into the effectiveness of current interventions, to reduce the barriers to treatment uptake and to explore alternative psychological approaches both to PTSD prevention and early intervention and treatment.

Simon Lewis provides valuable insight into the importance of trauma-associated stress in veterans. He points out that in April 2016 about 50,500 veterans were known to have one or more mental health conditions including PTSD or other stress disorders, depression and anxiety. The Department of Veterans' Affairs spends around $182 million a year on services for these veterans including online mental health information and support, general practitioner services, psychologist and social work services, specialist psychiatric services, pharmaceuticals, trauma recovery programs, inpatient and outpatient hospital treatment, and counselling services for veterans and their families. An important lesson from their experience is early intervention and use of digital technology to engage veterans, giving them an understanding of their problems and the need to seek professional help.

Alex Wodak argues the need to invest more extensively in prevention and early intervention and also explore further the role of ecstasy and cannabis as potential treatments for PTSD when conventional treatments fail. Wodak points out that a sizeable proportion of men and women who inject drugs were sexually or physically abused, often by a close family member, when they were children. He says that outcomes from PTSD will only start improving when there is greater investment in research into all aspects of the condition including the nature of PTSD, trends in the number and types of new cases, the effectiveness of current and new treatments and research into the deployment of treatment.

All of these circumstances must be addressed if rehabilitation is to be successful.

In their second essay, **Patricia Dudgeon** and her colleagues describe the extreme sense of powerlessness, loss, grief and disconnection resulting from a history of trauma evident in many Indigenous communities. They acknowledge the complexity of Indigenous disadvantage which includes the historical legacy of colonisation, combined with poor economic development and lack of resources to support families in appropriate ways, and they argue that for people in these circumstances, the pathway to recovery and community resilience requires self-determination and community governance. The authors draw attention to a 'Marumali journey of healing program' developed by an Aboriginal survivor for Aboriginal survivors that offers a clear path forward that is self-directed and holistic and training to equip people with counselling skills

Lynda Matthews draws attention to the fact that recovery requires more than treatment. For many with PTSD, the lived experience includes substance use issues, unemployment or underemployment, insecure housing or homelessness, and social isolation and poverty. All of these circumstances must be addressed if rehabilitation is to be successful. She points to a suite of evidence-based psychosocial rehabilitation practices that are recovery oriented and work towards community integration and the achievement of personal goals. The suite includes intensive case management, supported education, employment and housing services, illness management and recovery and family psychoeducation services, that are person-directed, individualised to meet specific needs and integrated with treatment and rehabilitation services so that treatment becomes a support to rehabilitation, not a barrier to accessing it. She urges a dedicated program of Australian research to evaluate the effectiveness of these practices and advance the existing evidence base for PTSD management.

Richard Cash points out that among the barriers to care for veterans and military personnel experiencing post-traumatic mental health problems is access to quality information. Digital technologies support a stepped care approach to mental health care by acting as an accessible first port of call for information and self-help strategies, and as a way of helping those with more serious problems to find the right treatments. He says that websites and apps that provide mental health information can de-stigmatise mental health symptoms and conditions. His paper refers to a number of the digital resources that are now available to assist people. Currently, digital resources primarily act as preventative, early intervention tools and as support for traditional mental health treatments. In the future digital technologies may take on more prominent roles and drive new treatments as an important adjunct to human administered therapy.

Andrew Day focuses on the importance of anger management in people suffering from trauma-associated stress. Although fear has been identified as the defining emotion in PTSD it is often the personal, familial and social consequences of problematic anger that cause people most distress. It seems that anger often increases for the first few months after a traumatic event and anger can be particularly problematic where there has been early traumatic experiences that are protracted and repeated such as childhood abuse, domestic violence or chronic combat exposure. The good news is that anger management programs produce reliable clinical improvement in both psychological and behavioural measures of anger and help to reduce aggression.

Beverley Raphael who has watched our understanding of the link between trauma and mental health develop for over 50 years and been actively engaged in assisting victims of community disasters such as cyclones, bushfires, floods and train disasters, draws attention to the need to not only address changes in neurological function but also build on the strengths and spirit of those who experience the effects of trauma.

Peter Cotton writes that although we know a great deal about PTSD and what treatments are effective, we know very little about the extent to which sufferers gain access to the first-line recommended treatments widely agreed by the experts. In a survey of eight clinical panel psychologists who review about 1360 cases of PTSD each year, less than 50 per cent of treatments where a PTSD diagnosis was confirmed were consistent with recommended clinical guidelines. The modal service delivery approach seems to involve excessive deferral to client personal preferences to determine the session frequency and focus, and relatively late referral for expert psychological care. Cotton points out that the clinical skill required to implement exposure-based interventions is time-consuming and requires specialist training, and this is not always available. He argues that sufferers should be able to access first-line treatment, competently delivered, and that it is unethical for psychologists to treat PTSD unless they have appropriate training in TF-CBT.

In a second essay, **Peter Cotton** discusses the role of workplace support in preventing and recovering from work-related trauma. He laments the negligible focus on organisational factors that reduce psychological health and safety risk and improve mental health outcomes. Mental health literacy in most workplaces is significantly deficient; the stigma associated with mental health problems inhibits reporting and discourages seeking help. The important influence of social support on mental health outcomes, especially by workplace supervisors, is by no means always understood. He says that the perception of strong organisational support increases self-efficacy and resilience, and provides a mental health protection. Despite an increasing focus on the psychological dimension of workplace health and safety, we are still a long way off from holding workplaces appropriately accountable for supportive leadership.

Mental health literacy in most workplaces is significantly deficient; the stigma associated with mental health problems inhibits reporting and discourages seeking help.

In the United States, trauma-informed care has been shown to increase offender responsivity to psychological treatments thereby reducing criminal risk factors.

Ian Drayton, himself a returned serviceman, suggests that the creative arts can have a significant role in the healing of returned service personnel with trauma-related stress. Pointing out that one of the major impediments to effective treatment is reluctance to seek assistance, Drayton describes a four-week intensive residential program with participants self-nominating to undertake writing, visual arts, music and performance activities which culminate in a showcase event to which families are invited. Creative arts therapy has helped to reduce symptoms of intrusive thoughts and hyper arousal and avoid emotional numbing, resulting in improved self-esteem and enhanced emotional self efficacy and positive emotions which may be used as a foundation for more traditional treatment plans.

Dominic Upton emphasises the importance of support in community and family settings for people suffering trauma-associated stress. He suggests as many as one in four Australians have been personally touched by PTSD, while in Indigenous communities the figure may be as high as one in two. He argues for the need to develop compassionate communities to support attitudes and behaviours around death and bereavement and assist in recovery from PTSD, and proposes a course of action for activists in this area.

The last essay is an extraction from a paper on trauma-informed correctional care by agreement with the authors, **Nicky Miller** and **Lisa Najavits**. The authors point out that rates of PTSD and exposure to violence among incarcerated males and females in the United States are exponentially higher than rates among the general population. They give an account of the unique challenges and promises of trauma-informed correctional care and suggests strategies for administrative support, staff development, programming and relevant clinical approaches. Trauma-informed care has been shown to increase offender responsivity to evidence-based cognitive behavioural programming, thereby reducing criminal risk factors. However incorporating trauma recovery principles into correctional environments requires an understanding of criminal justice priorities, workforce development, and specific approaches to screening, assessment and programming that unify the goals of clinical and security staff.

Navigating a path to more effective treatments

David Forbes, Andrea Phelps, Jane Nursey and John Cooper

Professor David Forbes is the Director of Phoenix Australia Centre for Posttraumatic Mental Health, and Deputy Head, Department of Psychiatry, the University of Melbourne.

Dr Andrea Phelps is the Deputy Director of Phoenix Australia. She has over 20 years of clinical experience in treating posttraumatic mental health problems.

Ms Jane Nursey is a clinical neuropsychologist at Phoenix Australia and has 20 years experience in the public hospital and not for profit sectors as a clinician, manager and director of programs, working with groups and individuals across the lifespan in both acute and mental health services.

Dr John Cooper is a consulting and academic psychiatrist at Phoenix Australia with over 20 years' experience in the treatment of PTSD.

Evidence-based treatments are available for Post Traumatic Stress Disorder but they do not work for everyone. Outcomes are better for women, non-veterans, and people with single rather than multiple/complex traumatic exposures [1]. In general terms about one-third of people recover with treatment, one-third gain significant benefit but are still symptomatic, and the final third gain little benefit. As a result, the personal, social and economic burden of PTSD remains high and there is an urgent need to develop more effective treatments. In this essay we outline current evidence-based treatments, barriers to access and effectiveness, and four pathways to more effective treatments in the future.

With over 60 high quality randomised controlled trials (RCTs) between them, the trauma focused psychological therapies of Trauma-Focused Cognitive-Behavioural Therapy (TF-CBT) and Eye Movement Desensitisation and Reprocessing (EMDR) are recommended as the first-line treatments for Posttraumatic Stress Disorder (PTSD). Treatments included in the TF-CBT group of therapies primarily include Prolonged Exposure and Cognitive Processing Therapy. The core elements of TF-CBT involve the person confronting their memories in a gradual, safe and supported manner (imaginal exposure); gradually confronting the places and activities they are avoiding in order to reclaim their lives (in vivo exposure); and addressing any thoughts and interpretations of the event and what it means about themselves, others or the world, that are blocking recovery (cognitive therapy/cognitive processing therapy). EMDR, while using a different technical protocol, also shares many of these same elements of engagement with the traumatic memory, addressing trauma related cognitions and confronting avoided activities.

In addition to these first-line treatments there are a number of emerging therapies for secondary symptoms of PTSD and co-morbid issues. These include: Interpersonal therapy (IPT) [2]; Mindfulness [3]; Present Centered Therapy [4]; Anxiety management; and Acupuncture. However there is not yet sufficient evidence for the effectiveness of these treatments for them to be recommended as first-line treatments.

Four key questions are: Can we make existing treatments more effective? Can we tailor interventions to different individuals? Can we make treatment more accessible and acceptable? Can we develop alternative interventions?

Medication is commonly used in the treatment of more severe and complex cases of PTSD and has also been found to be effective in RCTs. The group of medications with the strongest evidence are antidepressants, in particular selective serotonin reuptake inhibitors (SSRIs). The evidence for the effectiveness of medication is not as strong as that for TF-CBT. Consequently, treatment guidelines suggest that medication not be used in preference to psychological treatments. Antidepressants should be used when the psychological treatments are unavailable, not effective, or when it is a person's preferred treatment. When an antidepressant produces a partial effect, there is some evidence to support the strategy of augmenting the antidepressant with prazosin or an atypical antipsychotic.

There are number of barriers to people accessing and/or deriving benefit from evidence-based treatments. First, individuals suffering with PTSD often delay seeking help for months or years. This may be due to persisting stigma about mental disorders in the community, normalising of problems, denial, not trusting others or lack of available qualified and trained mental health practitioners. Secondly, even after presenting for help, PTSD can be missed due to a practitioner's lack of training or experience. Thirdly, avoidance of traumatic memories is a central symptom of PTSD. This may cause a person to reject the most effective psychological treatments, which involve confronting traumatic memories, for fear of not coping with the associated distress. Fourthly, some people prefer not to take psychotropic medications and of those who do, some find the side effects intolerable. Finally, comorbid problems including significant anger, pain, physical health disabilities and neurocognitive deficits in attention and working memory can interfere with the effectiveness of treatment. Reducing the impact of all of these barriers is an important consideration in navigating the path to more effective treatments.

Pathways to improved treatments for PTSD are being shaped by four key questions: Can existing treatments be augmented to make them more effective? Can we improve the tailoring of interventions to different individuals? Can we increase treatment delivery options to make them more accessible and acceptable? Can we develop new alternative treatments? One or two illustrative examples in each of these domains are described below.

Treatment augmentation. Advances in neuroscience and genetics show promise for potential adjunctive interventions. Innovative treatments such as repetitive transcranial magnetic stimulation (rTMS) that have demonstrated effectiveness in treating depression have begun to be studied in PTSD. An exciting pilot study is about to commence in Australia looking at the effectiveness of a more recent form of TMS called Theta Burst Stimulation in veterans with PTSD. Can rTMS or TBS be used to increase executive functioning during TF-CBT, increasing cognitive flexibility and affect regulation, to maximise outcomes of the therapy. Alternatively, given the role of Brain Derived Neurotrophic Factor (BDNF) in promoting habituation and new learning, the use of exercise (which stimulates BDNF) following each session of exposure therapy may enhance consolidation of the new learning generated from the TF-CBT [5][6][7].

Treatment tailoring. There is growing awareness that PTSD may not be a single, homogenous entity, but rather a heterogeneous disorder with sub-types such as a fear/avoidance sub-type and a depression/misery sub-type. It follows that different sub-types may respond to different treatments and that improved matching of treatment to each individual's presentation will likely improve treatment effectiveness. In similar vein, the concept of moral Injury is increasingly recognised as an important issue for sufferers of PTSD, particularly Veterans. Treatment protocols that tailor trauma-focused interventions to fear-based versus morally injury-based PTSD are being explored. Similarly, treatment protocols that provide a stronger focus on treatment of anger are increasingly being incorporated into TF-CBT. Of course, the potential for improved matching of pharmacological agents to clinical presentation and subtypes should also be examined alongside psychological treatment matching.

Treatment accessibility and acceptability. Research efforts are underway in Australia and North America to improve the accessibility and acceptability of prolonged exposure, by delivering it in an intensive format over a two-week period, rather than the traditional weekly-session approach that may take three to four months to complete. In addition, digital and e-health options are being explored as alternatives to or adjuncts to traditional office based psychotherapy. This includes, for example, the use of mobile and web-based apps such as PTSD Coach and Hi-Res and virtual reality exposure technology.

New treatments. In addition to new psychological, pharmacological and physical treatments, alternative and complementary therapies to treat PTSD and address broader quality of life, social connectedness, self-efficacy and meaningful engagement should be explored. Trials using complementary medicines, art therapy, adventure activities, yoga and exercise, companion dogs and peer support have been reported in the literature both in Australia and overseas. While as yet little evidence has been published demonstrating these alternative therapies lead to effective and sustained reduction in symptoms of PTSD, they nevertheless may be an important adjunct to reducing disability and improving quality of life and need to be further investigated.

High quality research into effective psychotropic medications has slowed in recent years across the full diagnostic spectrum. In the PTSD field there are various medications, both new and old, that have been considered as possible effective treatments. The evidence base is still weak and relies on theoretical conjecture, clinical anecdote, small case studies and limited RCT evidence. Examples of some of the agents under consideration include: anticonvulsant medications; glucocorticoids; neuropeptides; D-cycloserine; medications such as rivastigmine, used to treat dementia; and ketamine.

Digital and e-health options, including the use of mobile and web based apps such as PTSD Coach and Hi-Res, are being used as alternatives to or adjuncts to traditional office based psychotherapy.

Unfortunately there is little evidence to date for the effectiveness of prevention approaches.

Finally, there is a lot of interest in psychological interventions to promote resilience and prevent the development of PTSD in high-risk occupations such as law enforcement and the military as well as in communities that are susceptible to disaster. These include resilience training programs such as Battlesmart, post-exposure interventions for all such as psychological first aid, and indicated interventions for those who fail to bounce back after the first few weeks, such as Skills for Psychological Recovery. Unfortunately there is little evidence to date for the effectiveness of prevention approaches. Further research is needed.

In conclusion, while effective treatments for PTSD are available, none is a panacea for all. There is an ongoing need to enhance the effectiveness of current interventions, reduce barriers to treatment uptake, and explore alternative psychological and pharmacological approaches to PTSD prevention, early intervention and treatment.

References

1. Steenkamp, M.M. et al. (2015). 'Psychotherapy for military-related PTSD: a review of randomized clinical trials.' *JAMA* 314(5): 489–500.
2. Markowitz, J.C. et al. (2015). 'Is exposure necessary? A randomized clinical trial of interpersonal psychotherapy for PTSD.' *American J Psychiatry* 172(5): 430–40.
3. Polusny, M.A. et al. (2015). 'Mindfulness-based stress reduction for posttraumatic stress disorder among veterans.' *JAMA* 314(5): 456–65.
4. Frost, N.D., K.M. Laska, and B.E. Wampold (2014). 'The evidence for present-centered therapy as a treatment for posttraumatic stress disorder.' *J Traumatic Stress* 27: 1–8.
5. de Kleine, R.A. et al. (2012). 'A randomized placebo-controlled trial of D-cycloserine to enhance exposure therapy for posttraumatic stress disorder.' *Biological Psychiatry* 71(11): 962–68.
6. Litz, B.T. et al. (2012). 'A randomized placebo-controlled trial of D-cycloserine and exposure therapy for posttraumatic stress disorder.' *J Psychiatric Research* 46(9): 1184–90.
7. Yehuda, R. et al. (2015). 'Cortisol augmentation of a psycholgoical treatment for warfighters with posttraumatic stress disorder: Randomized trial showing improved treatment retention and outcome.' *Psychoneuroendocrinology* 51: 589–97.

Veteran services

Simon Lewis

Simon Lewis is the Secretary of the Department of Veterans' Affairs in the Australian Government.

This essay discusses the impact of Post Traumatic Stress Disorder for veterans, outlines the role of the Department of Veterans' Affairs (DVA) and considers how DVA is responding to the needs of contemporary veterans [1] particularly through the use of technology.

Military service is a unique experience, bringing with it camaraderie, identity and purpose. It is also physically and mentally demanding and can involve stress and risk. For almost 100 years, the Department of Veterans' Affairs (DVA) has provided programs of rehabilitation and care, compensation, income support and commemoration for the veteran community.

If people are worried about how they are feeling or coping, DVA encourages them to seek help early because this facilitates earlier and more successful recovery. This early intervention approach is supported through technology (such as mobile applications, websites and social media) well suited for contemporary veterans. Contemporary veterans include those with service from 1999 onwards such as in East Timor, Iraq, Afghanistan, and the Solomon Islands.

Veterans and trauma

Military personnel are highly trained, skilled and resilient. By the nature of the work, personnel may be exposed to significant or multiple traumatic events such as: threat of death, serious injury, seeing or handling of dead bodies, and/or witnessing human misery or degradation on a large scale.

After a traumatic event, a person may experience a range of stress reactions. For many, the stress reactions go away on their own. For others however, symptoms may get worse over time and develop into a disorder. For PTSD, symptoms might include feelings of numbness, depression, anxiety, anger and sometimes nightmares, flashbacks and intrusive memories.

The evidence shows that mental health conditions can be treated effectively with many patients able to make a full recovery. Approximately one third of those with chronic PTSD may recover with a single course of treatment, usually after 3 to 6 months. Another third of patients gain significant benefit although they may have residual symptoms of illness. For the remaining third, the focus is on maintenance and how to manage symptoms rather than 'recovery'. The challenge for DVA is to improve the odds, with early intervention being an important strategy because this improves the rate of successful response to treatment.

DVA and the Department of Defence have commissioned major research to investigate the impact of contemporary military service on the mental, physical and social health of veterans and families including the impact of PTSD.

The role of DVA

There are two pathways for veterans to receive mental health support from DVA. First, veterans may claim compensation and treatment for mental health conditions related to service in the Australian Defence Force (ADF). Second, DVA can also pay for treatment of certain mental health conditions whatever the cause, and eligibility for these arrangements now includes anyone who has had permanent service in the ADF, whatever the length or type of service [2].

As of April 2016 there were around 145,500 veterans with one or more disabilities accepted by DVA, whether service-related or not. Of these, around 50,500 veterans were known to have one or more mental health conditions, including PTSD or other stress disorders, depression and anxiety.

DVA is a national purchaser of health services for over 200,000 clients. DVA purchases health services in each state and territory from the public and private sectors and in all settings from primary care in the community through to acute care in hospital. These services are also used to treat PTSD in our clients.

Latest available figures show that the Department spends around $182 million a year on online mental health information and support, general practitioner services, psychologist and social work services, specialist psychiatric services, pharmaceuticals, trauma recovery programs for PTSD, and inpatient and outpatient hospital treatment. This includes funding for the Veterans and Veterans Families Counselling Service, which provides free and confidential, 24/7 nationwide counselling and support for current and former veterans, eligible ADF members and their families. Funding for mental health treatment is demand driven and is not capped.

DVA and the Department of Defence have commissioned major research to investigate the impact of contemporary military service on the mental, physical and social health of veterans and families, including the impact of PTSD. DVA is also focusing on improving the capabilities of mental health practitioners to use evidence-based treatment to ensure our clients receive high-quality treatment.

Other initiatives include the *Support For Wounded, Injured or Ill Programme* to provide a whole-of-life framework for the care of wounded, injured or ill current and former ADF members, the *On Base Advisory Service* to establish a DVA presence on Defence Force bases nationally so that military personnel can connect with DVA while they serve, and the *Co-ordinated Client Support* service to improve the level of DVA support for clients with complex and multiple needs.

Contemporary veterans

The case study below is fictional, but is drawn from real experiences. It is one example of how trauma might emerge for a contemporary veteran and how he or she might seek help, noting that contemporary veterans are typically technology savvy, sourcing information online, primarily using mobile devices.

Julie's story

I served in the army for seven years. In 2002, I was deployed to Afghanistan

I got a lot out of my time in the Army — the camaraderie and mateship, working together to complete a mission. But I also saw some pretty bad things. All part of the job. At the time, I coped by blocking it all out. But when I got home, I couldn't get the images out of my mind. One image in particular came back to me over and over again.

After leaving the ADF I found a good job but sometimes I would have flashbacks to those memories. At home I was constantly on edge, withdrawing from my husband and two kids.

I then realised that something was wrong. I went online and saw the At Ease website [3] for veterans, which helped me understand what I was feeling and where to get help. I went to the Veterans and Veterans Families Counselling Service [4]. Hearing about other veterans' experiences and realising I wasn't alone encouraged me to seek help.

I was also able to attend a GP to get a health assessment. By seeking professional help early, I was able to better manage my symptoms.

DVA [5] has invested significantly in its online presence in order to reach out to the contemporary cohort to promote early intervention. The *At Ease* portal brings together all DVA mental health online resources including mobile apps, videos of real veterans talking about their mental health recovery, and information about professional support and treatment. Resources particularly designed for clients with PTSD include the *PTSD Coach Australia* to help manage symptoms that commonly occur after trauma and the *High Res* website and mobile app which offer a range of interactive tools and self-help resources to help manage stress and build resilience.

"By seeking professional help early, I was able to better manage my symptoms."

Our early intervention approach for the contemporary cohort is supported through the use of technology and improved access to mental health treatment and support.

Conclusion

The main lesson DVA has learnt in supporting recovery from trauma is to intervene early. If people are worried about how they are feeling or coping, they should not wait until the symptoms become overwhelming. Our early intervention approach for the contemporary cohort is supported through the use of technology and improved access to mental health treatment and support. DVA's self-help resources can be used to help promote good mental health and complement mental health treatment, and they are increasingly becoming an important part of DVA's mental health strategies.

References and further information:

1. For the purposes of this essay, the term 'veteran' refers to all former members of the Australian Defence Force.
2. See the DVA budget statement, p. 20 http://www.dva.gov.au/sites/default/files/files/aboutper cent20dva/budgets/2016-17_dva_pbs.pdf
3. At Ease portal www.at-ease.dva.gov.au
4. Veterans and Veterans Families Counselling Service website www.vvcs.gov.au
5. DVA website www.dva.gov.au

Investment in a range of treatments

Alex Wodak

Dr Alex Wodak AM was the Director of the Alcohol and Drug Service, St Vincent's Hospital in the years 1982–2012. Working with colleagues, Dr Wodak helped to establish the National Drug and Alcohol Research Centre (1987), the NSW Users AIDS Association (NUAA) (1989), the Australian Society of HIV Medicine (ASHM) (1989) and, when both required civil disobedience, Australia's first needle syringe program (1986) and first medically supervised injecting centre (1999). Dr Wodak is President of the Australian Drug Law Reform Foundation and was President of the International Harm Reduction Association in 1996–2004. He often works in developing countries on HIV control among injecting drug users. Dr Wodak is a Director of Australia21.

Often the more important a mental health condition is for a community, the harder the condition is to define. The search for a perfect definition and attempts to identify with certainty the causes of the condition seem irresistibly attractive but distract from what should be the paramount tasks of providing effective prevention and treatment. While PTSD is usually associated with the military, police and first responders, it is important that our considerations of prevention and treatment include the many members of our general community who have also had unbearably traumatic and deeply unpleasant experiences. We need to invest in the prevention and early interventions and also exploring further the role of ecstasy and cannabis as potential treatments for PTSD when conventional treatments fail. We need research on all aspects of the condition, including its nature, trends in numbers and types, the effectiveness of current and new treatments and research into deployment of treatment.

Post Traumatic Stress Disorder (PTSD) means somewhat different things to different people. For lay people, PTSD refers to some of the people who have experienced exceptionally horrific events developing long lasting and unpleasant symptoms that interfere with their proper daily functioning with an increased risk of suicide. For most medical and health people, PTSD has a narrower meaning.

The term PTSD has been defined like other health terms a number of times in publications by two major and influential health organisations, the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association and the International Classification of Diseases (ICD) published by the he World Health Organisation. The most recent version of the DSM (5th Revision) was released in 2013 while the most recent version of the ICD (10th) was published in 1993. The DSM and ICD definitions aim to increase consistency of meaning and thereby improve research, clinical work and policy.

Inevitably, these official definitions will tend to apply more to people who represent severe cases than people with only mild or moderately severe PTSD. With most physical and mental health conditions, severe cases are much less common than mild or moderate cases. Also, when the harm experienced by the community is added up, the harm associated with mild and moderate cases often exceeds the harm associated with more severe cases because the mild and moderate cases are so much more common.

Most discussions of PTSD concentrate on the treatment of people with established PTSD.

Most discussions of PTSD concentrate on the treatment of people with established PTSD. But surely the community should be at least as focused on effective early interventions to reduce the number of people who have been exposed to severely traumatic events who then go on to develop the debilitating symptoms of PTSD. In the same vein, surely the community should also be trying to make sure that what ever can be done to prepare people likely to be exposed to horrific events is being done so as to reduce the proportion who then go on to develop PTSD. It might be easier to do this with certain occupations such as the so-called 'first responders' (including police, ambulance, fire brigade, the military) than the general population. Clearly the community has a duty of care for its first responders both to minimise their exposure to severe trauma, if possible, and then to minimise the harm done to them as a result of exposure to severe trauma including the development of PTSD. Early interventions for this group are becoming more common. How effective are these early interventions? Could the effectiveness of these interventions be improved? Are the people who might need these interventions getting them?

In recent decades there has been a growing concern that PTSD might also occur in significant numbers in groups that are not first responders. Many such groups have been discussed including people who had been abused as children. The community has come to realise in recent decades that a sizeable proportion of men and women who inject drugs have been sexually or physically abused, often by a close family member, when they were children. Should the subsequent extensive drug use of these young men and women be understood as a manifestation of PTSD? What could be done to reduce the number of children who are sexually or physically abused? Is it appropriate to refer to such people who were abused as children as having PTSD?

Recently researchers in the United States and United Kingdom have begun evaluating some illicit drugs as potential treatments for PTSD in cases where the results of conventional treatments have been disappointing. These drugs include 3,4-methylenedioxymethamphetamine, better known as ecstasy or MDMA, and cannabis. These treatments look quite promising but it is still early days. Treatments are usually not accepted as effective until they have been shown to be effective and safe in at least several peer-reviewed publications of well-designed and conducted trials.

Health and research budgets are finite even though there are many conditions and treatments researchers would like to study. Research is more likely to be funded if a well-defined condition appears to be increasingly common and causes substantial misery or costs in the community. Competition for the research, prevention or treatment dollar is fierce. Substantial investment in health research over recent decades has achieved the goal of 'adding years to life and life to years'. The outcomes from PTSD will only start improving if sustained investments are made in research on all aspects of the condition including the nature of PTSD, trends in the number and types of new cases, the effectiveness of current and new treatments and research into the deployment of treatment.

Some Aboriginal and Torres Strait Islander solutions

Patricia Dudgeon, Tanja Hirvonen and Kelleigh Ryan

Aboriginal experts such as Professor Helen Milroy have stated that when considering the range of historical experiences of trauma, there are three major themes that continue to be felt in the present. These are the extreme sense of powerlessness and loss of control; the profound sense of loss, grief and disconnection; and the overwhelming sense of trauma and helplessness. In order to address these fundamental wounds, each element needs to be dealt with in its own right as well as collectively in order to repair the social fabric, re-establish community and cultural norms and support the safe development of children and young people. Current community-based programs and the work of influential Indigenous mental health professionals will be overviewed.

There are many reasons to acknowledge the enduring strength and resilience that motivates Aboriginal and Torres Strait Islander peoples to address the important and complex issues of trauma.

Cultural strengths in governance and healing demonstrate strong trauma-informed practices and deliver strong healing outcomes. The accumulation of knowledge passed from generation to generation has led us to an understanding of the need to bring back into balance all aspects of wellbeing. These include spiritual and physical healing, connection to land, language, values and beliefs, cultural law and customs that build resilience in community. Safe cultural healing practices understand the importance of working with collective and individual trauma, using collective practices grounded in holistic recovery, and provided by or with the support of the local community [1].

There is a range of challenges for Aboriginal and Torres Strait Islander people in their everyday lives. Disadvantage along with the consequences of colonisation and the lack of support for families and communities show the complexity of the issues facing people in contemporary times.

Aboriginal experts such as Professor Helen Milroy has stated that when considering the range of trauma experienced historically, there are three major themes that emerge covering the nature of the trauma that occurred over many generations and continues to be felt in the present. These are the extreme sense of powerlessness and loss of control; the profound sense of loss, grief and disconnection; and the overwhelming sense of trauma and helplessness. This section draws upon the work of Milroy et al. [2] in determining what needs to be undertaken to address the many forms of trauma in communities. The solutions are not simple as Indigenous disadvantage is complex and includes the historical legacy of colonisation, the need for land rights, the need for self-determination at all levels, and the need for Aboriginal and Torres Strait Islander people to reclaim culture and identity. This coupled with contemporary experiences of trauma and loss, poor economic development and the lack of resources to support families in appropriate ways means that no one single solution or program can be adequate — a range of programs and services needs to be in place.

Educational, economic and career programs also need to be in place to provide opportunities for growth.

Milroy et al. describe three themes that emerge in the pathways to recovery: self-determination and community governance, reconnection and community life, and restoration and community resilience.

Self-determination and community governance are pathways that promote self-determination and empowerment. Given the colonial history of most Aboriginal and Torres Strait Islander peoples and the loss of control over their lives, the ability to make decisions, to be responsible for self, family and community, to have choices, and to participate effectively in society are important. In addressing governance and leadership, programs that deal with community structures, governance, representation and participation are needed. Educational, economic and career programs also need to be in place to provide opportunities for growth.

Reclaiming and strengthening connections to culture, community, family and spirituality are important elements in addressing both generational grief and current levels of loss and grief. Along with these, reclamation of history develops a sense of cultural continuity. Knowing cultural stories and stories of loss and resilience generates a community story that people become part of and are placed within. It is important that people know where they come from and to whom they belong. Pride in identity and belonging, being accepted and part of family and community structure, can be developed.

Restoration and community resilience provide people with a sense of mastery — to feel safe and protected, to be independent, confident and responsible, to cope with life's disappointments and to be self-regulating. This is restoration of self, family community and culture within a cultural framework.

Many important and effective Aboriginal and Torres Strait Islander programs and services address trauma and specifically healing and the Stolen Generations, at both local and national contexts. We complete this essay by describing one that has been successful and nationally supported, the Marumali Journey of Healing Program by Aunty Lorraine Peeters. Aunty Peeters describes her lived experience as a survivor who was forcibly removed from her family. This experience, and the lack of appropriate services and programs at the time, motivated her to develop her program:

> *What happened to us as Aboriginal people was unprecedented. Our identity as Aboriginal people, our culture, our land, our mothers, families and communities, were forcibly and often brutally removed from us as little children. We were systematically punished for being ourselves, until we learned to act like non-Aboriginal people. Often the process of removal was designed to prevent us from ever finding our way home and also to prevent our families from being able to find us. Then, as a nation we went on to pretend that this never happened, right up until last year when Prime Minister Rudd made the Apology to the Stolen Generations. The truth about what happened to us can no longer be denied. [3, p. 291]*

'Marumali' is a Kamilaroi word, meaning 'to heal' or 'put back together'. The aim of the Marumali program is to put in place support for survivors of removal policies in undertaking their healing journey. The program has a framework, structure and process that support the healing of all survivors, whether removed to institutional care, foster care or adoptive families. The program recognises that reconnecting with Aboriginal spirituality is a core healing tool to address the grief and loss experienced by survivors of the Stolen Generations. A holistic perspective is adopted that involves mind, body and spirit and works to strengthen culture and identity and re-connection with family, community and country. These are central to the healing journey. The Marumali program is the first and best known healing programs for Stolen Generations. Its workshops have been consistently rated highly by participants.

These are the strengths of the Program:

- It was developed by an Aboriginal survivor for Aboriginal survivors;
- It is a healing program, rather than a 'therapy' or a 'treatment';
- It is culturally appropriate for those who were removed;
- It is culturally appropriate for the families and communities they were removed from;
- It respects the autonomy and strength of survivors;
- It offers a clear path forward for survivors, regardless of how they were removed or what has happened since;
- It allows survivors to set the pace, rate and direction of their healing journey;
- It is holistic, and includes the spiritual dimensions of healing;
- It addresses the trans-generational effects of removal. [3, p. 288]

Importantly, the program offers training to equip people with the skills to become counsellors who can assist Aboriginal and Torres Strait Islanders suffering from grief and loss.

> *No-one warned us what we might go through as adults, that something might trigger our trauma and set off a volcano of feelings and memories. We thought we were going mad. We have had to work all of this out for ourselves. We feel we know what we are doing now and invite Aboriginal counsellors to learn from us, since we have much to share. We also invite non-Aboriginal mental health practitioners to work with us and to support us to do this work, but in a way that allows us to determine how much is done and in what way. We, the first generation removed, are elders now, and we ask that you listen quietly to us, to learn from what we have to say. We do not want to raise our voices or strain to get your attention. The silence has been broken now and we will talk if you will listen. [3, p. 291]*

The program has a framework, structure and process that support the healing of all survivors, whether removed to institutional care, foster care or adoptive families.

"The silence has been broken now and we will talk if you will listen."

References

1. Milroy, H., P. Dudgeon and R. Walker (2014). 'Community Life and Development Programs: Pathways to Healing' in P. Dudgeon, H. Milroy and R. Walker (eds) *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice* (2nd ed), Canberra: Commonwealth of Australia, pp. 419–36.
2. Healing Foundation. Glossary of Terms. Retrieved July 2016, http://healingfoundation.org.au/our-publications/
3. Peeters, L. (2010). 'The Marumali Program: An Aboriginal Model of Healing' in N. Purdie, P. Dudgeon and R. Walker (eds) *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*, Canberra: Commonwealth of Australia, pp. 285–92.

Recovery needs more than treatment

Lynda Matthews

Dr Lynda Matthews is a qualified rehabilitation counsellor and an Associate Professor in the Ageing Work and Health Research Unit at the University of Sydney. She has been a member of the Department of Veterans' Affairs Rehabilitation Advisory Committee since 2004 and the joint Veterans' Affairs and Defence Rehabilitation Advisory Committee since 2013. Lynda was a member of the Working Group for the inaugural NHMRC endorsed Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder in 2007 and the revised Guidelines in 2013. Lynda is a Past President of the Australasian Society for Traumatic Stress Studies.

All people with Post Traumatic Stress Disorder, by definition, experience disruption in functioning. For many, the lived experience is one of substance use issues, underemployment or unemployment, insecure housing or homelessness, and social isolation and poverty. Treatment alone tends not to improve these situations. An approach that integrates treatment, rehabilitation, and recovery practices is needed. This collaboration is necessary not only for people who are experiencing the disability associated with PTSD but as a service for all who seek help.

It would be good to know that all people who experienced the impact of trauma had access to the support and resources needed for their recovery. We are not quite there yet. Some people with Post Traumatic Stress Disorder continue to have high levels of need. They may have coexisting substance use issues, be experiencing long-term unemployment, or be homeless or living in insecure housing. People with this lived experience tend to have difficulties accessing healthcare and other services they may need, particularly when sobriety and being ready to accept treatment are criteria for eligibility. Many have had unsatisfactory experiences with mental health services, do not trust the system or its providers, and are reluctant to engage in services. Treatment alone tends not to improve this situation.

As reported in many of the essays in this collection, the situations and experiences that lead to these issues are complex and multifaceted. However, there are ways that people can be supported to live in their own accommodation, regain and maintain meaningful work, and develop social relationships. These ways can be found in a suite of evidence-based psychosocial rehabilitation practices that have a recovery-orientation and work towards community integration, wellness and the achievement of personal goals [1]. These practices are specifically designed to help people experiencing significant disability to regain or gain valued roles by working with a person's strengths, improving their skills, and providing the support they need to succeed. The suite includes services such as intensive case management, supported education, employment and housing services, illness management and recovery, and family psychoeducation.

When people receive services from an interdisciplinary team, they are better prepared to regain or develop the skills and supports they need for their recovery.

Many of these services, or various localised adaptations of them, are currently available in Australia, however few identify as being services specifically for people with PTSD. This is because they focus on improving function and reducing disability not on treatment for a particular diagnosis. Although people with trauma histories are known to use some services, for example supported housing, the lack of overall visibility of people with a diagnosis of PTSD in services currently provided in Australia means that little research has investigated the benefits of such services for Australians with PTSD. Internationally, the United States Department of Veterans Affairs has included psychosocial rehabilitation in its treatment programs for several years [2, for example] and research arising from these interventions has identified beneficial outcomes for veterans with PTSD.

In particular, the provision of supported employment and supported housing services has positive outcomes for people experiencing disability associated with PTSD. These services differ in several ways from standard transitional housing support and vocational rehabilitation services that many people with PTSD access. Supported housing (for example, Housing First) and supported employment (for example, Individual Placement and Support) have no eligibility criteria of treatment or sobriety. They move people into permanent housing and real jobs and then provide the intensive support needed for people to maintain their tenancy and employment. Unlike standard services, the support provided is person-directed, individualised to meet specific needs, and is not time-limited. Importantly, treatment and rehabilitation services work closely together so that a person receives consistent and coordinated support. Integrated support allows treatment to be accessed when it is needed and for a person to have their treatment and rehabilitation needs met in a holistic manner. Used this way, treatment becomes a clinical support to a person's rehabilitation, not a barrier to accessing it.

Integrated support provides an environment that can deliver good functional outcomes for all people with PTSD because of the opportunity it provides for early intervention into psychosocial issues. But it is particularly valuable for people who have complex needs. People who are initially reluctant to engage in services are less likely to fall through the gaps and be lost to follow-up if they are receiving comprehensive support by people who believe in them, communicate positive expectations, and promote hope and optimism. When people receive services from an interdisciplinary team they are better placed to regain or develop the skills and supports they need for their recovery: skills to live a healthy life, to have a safe and stable place to live, to participate in meaningful daily activities, and to connect to their community through supportive relationships and networks [3].

Are we there yet? The move towards recovery-oriented integrated services for people with PTSD is happening but it requires significant change to the way services are organised and funded in order to progress. It requires funding for services that more correctly reflect its health burden in Australia. Considerable work is needed to change the service delivery culture to one that aligns its service practices and workforce attitudes with recovery orientation principles. Determined efforts by leaders in the community and in the mental health and human services sectors are needed to eliminate stigma and the discrimination felt by users of some services. Such changes do not happen quickly.

Fortunately, several recent national frameworks and strategies have helped progress the structures that will deliver better care for people with PTSD. The National Framework for Recovery-Oriented Mental Health Services has set expectations that recovery-oriented practice and service delivery will be delivered in Australia [4]. This includes the use of evidence-informed treatment and rehabilitation services. There has been a call for Trauma Informed Care and Practice to be implemented across mental health and human service settings to improve the sensitivity and responsiveness of service delivery to people who have experienced trauma [5]. The National Health Reform Agreement and various jurisdictional strategies have set in place moves towards integrated health care. And the Australian Guidelines for the Treatment of Posttraumatic Stress and Acute Stress Disorder [6] identifies the need for a collaborative focus on recovery and rehabilitation from the beginning of treatment.

If these changes in mental health care service delivery are supported by strong administrative and policy leadership and adequate funding then yes, we are moving in the right direction. If we view our mandate as providing services that promote recovery in all people with PTSD then we also need to look more closely at psychosocial rehabilitation services for people who are experiencing significant disability associated with their PTSD. We need to make supported employment, supported housing and other evidence-based rehabilitation practices available as part of the PTSD care continuum. We need a dedicated program of Australian research that evaluates the effectiveness of these practices and advances the existing evidence base in people with PTSD.

When you consider the frequency of potentially traumatic events, the prevalence of PTSD, and the personal, societal, and economic impact of the disability associated with PTSD, the reasons to take this direction are convincing. I believe this is the way forward.

Considerable work is needed to change the service delivery culture to one that aligns its service practices and workforce attitudes with recovery orientation principles.

We need a dedicated program of Australian research that evaluates the effectiveness of these practices and advances the existing evidence base in people with PTSD.

References

1. Substance Abuse and Mental Health Services Administration (n.d.). *Evidence based practices*. Rockville, USA: Author. Retrieved from: http://store.samhsa.gov/list/series?name=Evidence-Based-Practices-KITs
2. U.S. Department of Veterans Affairs (2009). *Psychosocial Rehabilitation and Recovery Centre*. Washington, D.C: Author. Retrieved from: http://www.washingtondc.va.gov/departments/psychology-prrc.asp
3. Substance Abuse and Mental Health Services Administration (2015). *Recovery and Recovery Support*. Rockville, USA: Author. Retrieved from: http://www.samhsa.gov/recovery
4. Australian Health Ministers' Advisory Council (2013). *A national framework for recovery-oriented mental health services: guide for practitioners and providers*. Canberra, Australia: Author. Retrieved from: http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-pubs-n-recovgde
5. Mental Health Coordinating Council (2016). *Trauma-Informed Care and Practice*. Lilyfield, Australia: Author. Retrieved from: http://www.mhcc.org.au/sector-development/recovery-and-practice-approaches/trauma-informed-care-and-practice.aspx
6. Phoenix Australia (2015) *PTSD treatment guidelines*. Melbourne, Australia: Author. Retrieved from: http://phoenixaustralia.org/resources/ptsd-guidelines

Digital technology in veteran and military mental health

Richard Cash

Dr Richard Cash is a psychologist with extensive experience in the treatment of post traumatic mental health problems. He has worked extensively in forensic, alcohol and drug, military and veteran mental health treatment settings. He is a senior clinical specialist at Phoenix Australia, and was previously the Deputy Director of the Veterans and Veterans Families Counselling Service in Victoria. Richard is also involved in developing digital mental health resources and was the content lead on DVA's PTSD Coach App, and High Res website.

Can a smartphone stand in for a psychologist? What is the current state of play with digital delivery of mental health supports and services? This essay will provide an overview of the types of digital mental health resources currently available, their benefits and potential drawbacks, as well as what the future might hold.

In 1980, science fiction author and futurist Arthur C. Clarke wrote 'any teacher that can be replaced by a machine should be'. Whilst we are not yet at the stage where we can replace psychologists and other health providers with software, it is fair to say that technology is greatly increasing the potential reach and impact of mental health supports and treatments.

Improving the availability of quality information, support and treatment resources is critical to reduce barriers to care for veterans and military personnel experiencing post traumatic mental health problems. Currently, there is a range of digital devices and platforms which veterans and military personnel can access to gain information, use self-help and symptom management tools, and engage with evidence-based treatment when and where they need them.

Why go digital?

It's only been nine years since the release of the first iPhone, but as of 2015, 80 per cent of Australians have at least one smartphone (or other digital device, such as tablets), and as a nation we interact with digital devices an estimated 440 million times a day. The 'always on' availability of digital devices underlies their potential in improving access to mental health resources. Digital delivery has benefits in scalability (the ability to easily respond to demand) and cost effectiveness (many services such as information provision are cheaper to provide digitally than face-to-face). Digital devices can also collect data in real time (for example, tracking symptoms, allowing health providers and users to easily monitor progress), and allow users to rapidly access the right type of assistance in emergencies.

How does it work?

Smartphones and other digital devices can support access to mental health services in a number of ways — via Internet platforms (websites), via native applications (smartphone and tablet apps), and by enabling communication (text, voice and video communication). Mental health service providers are increasingly drawing on advancements in technology, as well as increased technological literacy to improve the delivery of services and resources.

Websites and apps that provide mental health information can destigmatise mental health symptoms and conditions.

What's out there?

Mental health resources currently being delivered via digital technologies represent a spectrum from providing psychoeducational information to facilitating access to formal mental health treatment. Digital technologies support a 'stepped care' approach to mental health care by acting as an accessible first port of call for information and self-help strategies for those with mild to moderate problems, and as a way of helping those with more serious problems to find the right treatments.

Digital devices and platforms greatly democratise the ability to access information about mental health conditions. Websites and apps that provide mental health information can destigmatise mental health symptoms and conditions. They can engage people in recognising mental health symptoms and disorders earlier, and prompt them to take action by connecting them to supports and treatment services. Good examples of information provision resources are the Department of Veterans' Affairs (DVA) At Ease portal which provides information about a range of mental health conditions, symptoms and their treatment and management. Similarly, DVA's Operation Life website provides information about suicide prevention. Phoenix Australia's website provides detailed information about the impacts of trauma exposure, and types of evidence-based treatment for conditions like Post Traumatic Stress Disorder (PTSD).

Self-management

Digital technologies can provide access to effective self-help, supporting people to actively manage symptoms and conditions. These self-help resources can act as early intervention options for people to manage sub-clinical problems, or to manage the risk of relapse after successful treatment. Notable local examples include DVA's Right Mix website (and companion app On Track), which assist with managing alcohol use. DVA and the Department of Defence collaborated to produce the High Res website and companion app, which provide cognitive behavioural techniques for coping with stress and developing greater psychological flexibility and resilience. These types of resources aim to destigmatise help seeking behaviour and encourage people to take an active approach to maintaining good mental health.

Supporting mental health treatments

For people involved in formal mental health treatments, digital technologies can assist with treatment engagement and compliance. In this 'adjunctive' role, digital resources can provide tools to: assess and track symptoms; allow for patient data to be shared amongst health providers in real time; help keep people engaged in treatment; provide additional symptom management strategies; reinforce components of treatment; and facilitate communication between client and providers. Notable examples here include DVA's PTSD Coach app, which acts as an information and symptom assessment and management tool for people with PTSD. DVA's Operation Life website is also designed to be used with the support of a mental health clinician to manage suicide risks. The United States' Veterans Affairs (VA) has a strong commitment to developing smartphone apps as adjunctive resources to treatment — and these are available to Australian users, supporting engagement with several PTSD treatments. PE Coach supports the delivery of prolonged exposure treatment and CPT Coach supports the delivery of Cognitive Processing Therapy. The US VA has developed a range of treatment adjunctive apps including mindfulness skills, sleep hygiene, smoking cessation and mood management. There are also evidenced-based internet-delivered counselling platforms available for managing mild to moderate anxiety and depression symptoms, available as alternatives to face-to-face therapy, or for those waiting to access face-to-face therapy (for example, MoodGYM).

Overcoming barriers to care

Digital platforms can also facilitate the delivery of formal mental health treatment where geographical isolation acts as a barrier to access. In Australia, the Veterans and Veterans Families Counselling Service provides access to counselling and psychiatric services via video conferencing where distance is a barrier to care. The US VA has led the way with provision of evidence-based treatments for mental health conditions provided via video-counselling (that is, Cognitive Processing Therapy via Skype).

So are psychologists in any danger of being replaced by smartphones and even smarter software? Probably not. At this stage, digital resources primarily act as preventative, early intervention tools and as supports for traditional mental health treatments. It is likely that digital technologies will take on more prominent roles in future, and drive delivery of new treatments (for example, using virtual reality to simulate trauma experiences, thereby assisting patients to manage traumatic memories). What is certain is that veterans and military personnel will continue to benefit from improved access to information and treatment resources as digital technologies improve their capabilities and reach.

Digital platforms can also facilitate the delivery of formal mental health treatment where geographical isolation acts as a barrier to access.

Anger management programs

Andrew Day

Andrew Day is Professor in the School of Psychology at Deakin University. Before joining academia he was employed as a clinical psychologist in South Australia and the UK, having gained his Doctorate in Clinical Psychology from the University of Birmingham and his Masters in Applied Criminological Psychology from the University of London.

Although research into Post Traumatic Stress Disorder has historically identified fear as its defining emotion, recent years have seen a growing awareness of how many people with PTSD have difficulties managing anger. Anger can be particularly problematic for those who experience what has been called 'complex PTSD', a term used to account for the types of problems that arise for those who experience early onset, protracted, and repeated trauma. This might include experiences of torture, childhood abuse, domestic violence, chronic combat exposure, and severe social deprivation. Feelings of shame, ineffectiveness, guilt, responsibility, isolation, and being permanently damaged seem to be particularly important contributors to a diminished ability to regulate angry emotion in people who have had these experiences. There is now a large and robust evidence base to suggest that anger management programs produce reliable clinical improvement in both psychological and behavioural measures of anger, including helping to reduce aggression. This suggests that these programs can have a useful role to play in the treatment of PTSD, especially in the months following the traumatic event. Anger management can help to reduce both the frequency and severity of daily 'hassles', and in doing so help to promote recovery from PTSD. It offers a useful way of improving how we handle trauma-related stress in Australia.

Post-traumatic stress disorder (PTSD) is a formal psychiatric diagnosis that identifies psychological impairment, triggered by exposure to a traumatic event, in which the individual perceives a threat to their own safety or physical integrity (or that of others), and during which they experience fear, helplessness or horror. For those who are diagnosed with PTSD, life can be very distressing. They may regularly re-live the traumatic event ('flashbacks' or nightmares), feel compelled to avoid situations or stimuli that might trigger memories, and experience emotional numbing and/or hyper-arousal (such as impulsivity, insomnia, or anxiety).

Although research into PTSD has historically identified fear as its defining emotion, recent years have seen a growing awareness of how many people with PTSD have difficulties managing anger. We now know, for example, that anger tends to increase for the first few months after a traumatic event, whereas fear tends to decrease. This is important because it is often the personal, familial and social consequences of problematic anger that cause most distress. The Australian Psychological Society argues that anger becomes a problem when it creates trouble with other people, with work, with health, with day-to-day living, or with the law. It is also a problem when other people feel frightened by, hurt or that they cannot talk to or disagree with the person with PTDS in case they become angry. Signs that anger has become a problem include when:

- Anger leads to verbal, emotional, physical or psychological abuse.
- Friends and family are worried.
- Anger leads to problems with personal relationships and work.
- Anger seems to get bigger than the event that set it off.
- Anger lasts for a long time, and well after the triggering event has passed.
- Alcohol or other drugs are used to try to manage anger.

Anger can be particularly problematic for those who experience what has been called 'complex PTSD', a term used to account for the types of problems that arise for those who experience early onset, protracted, and repeated trauma. This might include experiences of torture, childhood abuse, domestic violence, or chronic combat exposure. Feelings of shame, ineffectiveness, guilt, responsibility, isolation, and being permanently damaged seem to be particularly important contributors to a diminished ability to regulate angry emotion in people who have had these experiences.

A number of possible explanations have been put forward to explain the association between traumatic experience and anger. *Anger regulation theory*, for example, suggests that during exposure to stress, anger activates attack or survival behaviours, suppresses feelings of helplessness, and thereby allows the individual to gain a sense of control over events. It may also, however, also be associated with a loss of self-monitoring and diminished ability to inhibit aggression in the longer term. To put this another way, traumatised individuals may develop a propensity to perceive new situations as threatening, and this activates a biologically predisposed survival mode that involves anger and fight reactions. Alternatively, *fear avoidance theory* suggests that anger following trauma is essentially a psychological defence that provides a welcome focus for those who are motivated to avoid trauma-related fear. Of course, these ideas are not altogether incompatible — whilst fear is essentially an emotion that concerns the potential for future harm, anger often arises from post-hoc appraisals of the event and its consequences. In fact, for some psychologists the core theme underpinning trauma-related anger is 'other-blame', suggesting that problematic anger is most likely to occur when another person is held responsible for the traumatic event.

Traumatised individuals may develop a propensity to perceive new situations as threatening, and this activates a biologically predisposed survival mode that involves anger and fight reactions.

Anger management

There is now a large and robust evidence base to suggest that anger management programs produce reliable clinical improvement in both psychological and behavioural measures of anger, including helping to reduce aggression. This suggests that these programs can have a useful role in the treatment of PTSD, especially in the months following the traumatic event.

Expressing angry feelings in a controlled way is the best way to start addressing the issues that triggered the anger in the first place.

Anger management programs are based on the idea that anger is not usually a good solution to problems (even if it seems helpful in the short term!), and typically involve a number of component modules. For example, they nearly always begin by seeking to identify the person's understanding of the nature of the problem, then to identifying and modifying triggering events and contextual stressors, and onto changing the way in which the person thinks about the triggers. Treatment then proceeds to more skills-based interventions, such as learning to cope with stress, improving control over physiological arousal, and strengthening the commitment to change.

A major focus is on examining the way in which each participant responds to perceived provocations and injustices, both at the time of the event (e.g., judgements of who was responsible or who was to blame), and subsequently (e.g., ruminating about grievances). It is important, therefore, to review those events that trigger specific anger episodes, with the aim of establishing that the perceptions of threat or malevolence may not always be accurate. It then becomes possible to arrive at the conclusion that anger is either unnecessary or counter-productive and this can help people to practise controlling any impulse to act aggressively. Expressing angry feelings in a controlled way is the best way to start addressing the issues that triggered the anger in the first place. Although people sometimes argue that venting anger ('letting it out') is the best way to deal with strong feelings of anger, we now know that this actually escalates anger and aggression and does little to resolve the situation.

Anger management and trauma

There are clear parallels between this type of treatment and aspects of the psychological treatment of PTSD that focus on changing the way that the traumatic event is perceived. However, current trauma programs don't always directly address problematic anger. Anger management can, therefore, play an important role in helping individuals to reframe anger as a natural response to trauma, equip them with the skills to not act aggressively or violently, and address low levels of anger in everyday life. This last goal may be particularly useful, given that trauma-exposed people often continue to experience relatively minor stressors after the event has passed and this contributes to the maintenance of PTSD. Anger management can help to reduce both the frequency and severity of daily 'hassles', and in doing so help to promote recovery from PTSD. It offers a useful way of improving how we handle trauma-related stress in Australia.

Building on the strengths of the victim

Beverley Raphael

Emeritus Professor Beverley Raphael AM is Professor of Psychological and Addiction Medicine, Australian National University, Professor of Population Mental Health and Disasters, University of Western Sydney and Emeritus Professor of Psychiatry, University of Queensland. She was Foundation Professor of Psychiatry at the University of Newcastle, Professor and Chair at the University of Queensland and Director of Mental Health for New South Wales (1996–2005) before returning to academic posts at ANU and UWS.

Traumatic experiences occur frequently and some people are severely affected by these devastating and life threatening occurrences. The author worked through the period when the syndrome of Post Traumatic Stress Disorder was defined and has observed improvements in management as a consequence. She has also worked extensively with victims of climate, train and fire disasters and argues that the human spirit is a vital force for recovery from trauma. She proposes a renewed focus on the skills that patients themselves can bring to the recovery process as an important way to improve health outcomes.

As a young General Practitioner I worked in a practice filled with severely affected veterans of the Second World War. Despite positive attempts to assist their recovery, and in an environment of kindness and support, many of these cases were labelled 'inadequate personality'. In similar fashion, veterans of the First World War were seen as having 'shell shock'.

Community disasters also bring acute and unexpected traumatic experiences. The Queensland floods in 2010–11, the Victorian bushfires on Black Saturday in 2009, the Granville train disaster in 1977 and Cyclone Tracy in 1974, were all catastrophes causing death, loss and grief which highlighted the need for system-wide responses. The Sydney Siege also had an outcome of violence and trauma, leading to a national sense of insecurity. The loss, grief and distress caused by these events can affect people acutely both immediately and in the long term, over months, years and decades. The effects are diverse, different for children and adults, men and women.

While there are many forms and consequences of traumatic experience and associated stress, the concept of Post Traumatic Stress Disorder (PTSD) was a landmark development for clinicians working in this area. The concept gave name to a program and a diagnosis, and was helpful both for those affected and for the doctors who cared for them. I remember vividly the meeting and the day this diagnosis became live, in 1980.

Since then the name PTSD has been challenged by some who have commented that the term 'disorder' has negative implications for those affected, and does not adequately cover the nature of these psychologically painful traumatic experiences, nor their specific meanings to many of those affected. People so 'labelled' frequently see the term as reflecting their own inadequacy and inability to overcome the persistent 'damage' they experience, and live with, despite their treatment and care. A change of name for the syndrome could be helpful.

People who have been impacted by trauma also have strengths, ideas, and capacity for hope.

It is now more than 35 years since the naming of PTSD, and time to think about how to move forward, not just by the experts, but by those involved directly, those who experience PTSD, and those developing new ideas for the future.

One organisation that has recently begun to make a difference for returned and wounded soldiers in Australia is the NGO Soldieron [1] that supports those who have served by focusing on their physical and mental health, their family, their community, and their future. The group, which states on its website that even the strongest, even the bravest, even the toughest, can carry scars through life that need to be understood and accepted, is developing centres across Australia.

It is important that people be given an explanation of how their diagnosis of 'disorder' is made, and the steps they themselves can take to lessen the distress and pain they feel. It is also useful to help people recognise that there can be a link between their pain and the feelings they may have of anger, violence or malevolence, that the power to harm others can exert a pull when there seems to be nothing but helplessness and no other way to understand their distress.

People who have been impacted by trauma also have strengths, ideas, and capacity for hope. There is no stronger force for change and hope than the human spirit. Patients themselves can play vital roles, bring fresh ideas, and contribute new initiatives to promote their own recovery. For those who are wounded, ill or otherwise traumatised, it is critical to take stock of all the strengths we, and they, can call on, as well as how we can help one another. Courage is a key element that can be called upon to help get through 'tough times'. And care, security and a loving family life may have stronger effects for young and old, men and women, than interventions.

Looking back to earlier years it is clear that the concept of PTSD did not engage the human spirit, as it should have done. Those who have carried the illness have owned the suffering, but their voices have not been seen as central to clinicians' attempts to help and heal. Research, studies, names, definitions and 'useful' diagnoses should always be linked to and informed by the human spirit of those affected, whose strengths as well as suffering should be acknowledged.

There are many clinical models including PTSD to help people deal with traumatic experiences. It is critical to keep building on these, keeping skills and resources shown to be effective, but also supporting and trying new initiatives that may improve outcomes in the future.

References

1. Soldieron www.soldieron.org.au

Do sufferers get access to effective treatments?

Peter Cotton

Peter Cotton is a Clinical & Organisational Psychologist specialising in how work environments influence employee mental health, wellbeing and behaviours. He works as an advisor to government and the corporate sector. Peter served three terms as a Director on the Board of Directors of the Australian Psychological Society. He has an ongoing part-time role with WorkSafe and Transport Accident Commission Victoria, as a Senior Mental Health Clinician. He also conducts a private clinical practice.

We know a lot about Post Traumatic Stress Disorder and what treatments are effective, but we really don't know anything at all about the extent to which sufferers gain access to first-line recommended treatments, as delineated in Phoenix Australia (2013) and Black Dog Institute (2015) clinical guidelines. This essay provides one response to this issue drawing on insights gained from workers compensation Clinical Panels which conduct extensive peer to peer reviews of treatments provided to injured workers.

The treatment of Post Traumatic Stress Disorder (PTSD) is one of the most strongly evidence-based and well delineated of all mental health treatments. Indeed, we now have available NH&MRC endorsed Guidelines [1] and the recently released Treatment of PTSD in emergency services workers [2]. The latter reinforces the well-established priority of accessing trauma-focused cognitive behaviour therapy (TF-CBT) built around use of exposure-based interventions as the first-line PTSD treatment, with psychotropic medication definitively indicated as a second-line treatment. A question this essay considers is the extent to which PTSD sufferers actually gain access to this first-line treatment.

An indication as to the answer to this question comes from workers compensation Clinical Panels. Initially established in Victoria in 2005, Clinical Panels comprise discipline-specific expert medical professionals who conduct secondary treatment reviews. They undertake peer to peer treater contacts and review the type and quality of treatment being provided to injured workers, with the goal of encouraging alignment with best clinical practice and concurrently focusing on re-engagement with employment as early as possible. This approach has been endorsed by most jurisdictions and professional associations [3].

Mental health-related clinical reviews, commenced initially in Victoria in 2006, are undertaken by WorkSafe and Transport Accident Commission clinical psychologists and psychiatrists. Over 1200 mental health-related clinical reviews are conducted annually in Victoria alone. This type of clinical review process has also been adopted in other jurisdictions, including Comcare. Clinical Panels are thus a repository of valuable insights into what occurs in treater rooms and the treatments actually delivered to injured workers.

The author recently conducted a survey of eight Clinical Panel specialist psychologists across several jurisdictions, in an attempt to better understand the extent to which PTSD sufferers gain access to treatments consistent with key PTSD clinical guidelines. Each clinician surveyed undertakes between 50 and 180 reviews each year. Collectively, the clinicians sampled undertake more than 1,360 clinical reviews each year.

The most commonly reported approach is probably best described as 'client-centred supportive counselling' and frequent concurrent prescription of antidepressant medication from a GP.

The unanimous view of surveyed Panelists was that, where the diagnosis of PTSD had been confirmed (PTSD is often over-diagnosed by general medical practitioners and psychologists), less than 50 per cent of treatments reviewed were consistent with PTSD clinical guidelines. Wide variation among psychologists in terms of type and quality of treatments delivered was consistently reported, and this was predominantly in metropolitan areas — before issues of cultural attunement of services and regional access to quality mental health care were even considered.

So what treatment do the remaining more than 50 per cent receive? The most commonly reported approach is probably best described as 'client-centred supportive counselling' and frequent concurrent prescription of antidepressant medication from a GP. In relation to the latter, it was reported that medication is frequently over-prescribed; although it was also noted that some individuals do present to a GP strongly expecting to be prescribed 'tablets' irrespective of what the most appropriate treatment might be.

Of note, seven of the eight Clinical Panelists spontaneously reported that referrals to psychologists often seemed to occur well after there had been negligible or no functional improvement in response to antidepressant medication (rather than the other way around). Panelists speculated as to whether more appropriate early referral for TF-CBT might have obviated the need for medication in the first instance (consistent with the guideline that, as a second-line treatment, medication is mainly indicated where high levels of distress prevent engagement with TF-CBT or re-engagement with valued roles).

Surveyed Clinical Panelists reported regularly finding that psychologist treaters are unable to articulate any clinical formulation and do not utilise any structured treatment plan. Rather, the modal service delivery approach appears to involve excessive deferral to client personal preferences to determine session frequency and focus (i.e., 'pseudo-empowerment' rather than genuine collaboratively developed treatment goals where clinical opinion and psycho-education have informed the negotiation of goals), provision of lots of empathic support and opportunity for ventilation, and occasional encouragement to increase activity involvements or practice mindfulness.

This clinical approach can doubtless be very engaging, but it is likely to be less than optimal because each successive session structure repeats the previous session, without any progression according to a structured treatment plan. Over time, there seems to be more and more supportive counselling provided and less and less prescribed between session tasks. This phenomenon has been described elsewhere as "therapist drift": the frequent slide that occurs from 'doing therapies' towards 'talking therapies'. [4] The availability of Medicare benefits for all psychologists (with highly variable levels of mental health-specific treatment related training) appears to have encouraged this approach. Hence, moving from a capped 10 session limit jurisdiction (and basic lack of accountability for the quality of service provision) to a jurisdiction with no capped sessions seems to have exacerbated this trend.

The key reasons reported for not providing TF-CBT included: (a) lack of specific training in exposure-based interventions, and most commonly (b) an alleged 'risk of re-traumatisation' or 'fear of secondary traumatistion'. It was noted that where exposure-based interventions were trialled, they were often abruptly discontinued in response to any sign whatsoever of client distress. It was widely reported that providers commonly seemed to lack understanding of the key treatment imperative of not reinforcing avoidance behaviours (thereby unwittingly increasing the risk of further entrenching traumatic-stress related symptoms and maladaptive coping behaviours).

The clinical skill of implementing exposure-based interventions involves building a strong therapeutic alliance, motivating fulsome engagement, and carefully calibrating the exposure regime to enable constantly pushing the edge of what the client can tolerate. Overall, the results from surveyed Clinical Panel psychologists suggested that at least 50 per cent of current treating psychologists probably lack the requisite skills, or are overly timid in appropriately responding to client distress. This situation could also be influenced by how the Medicare dynamic has fuelled the massive expansion of private practice psychology in Australia; most psychologists now have treatment waiting lists and these factors may well encourage the professionally undemanding and overly client-centred supportive approach described above.

A reconfiguration of publicly funded health services is currently underway, via the recently established Primary Health Network structure. These Networks have more purchasing power and will likely exercise more discernment over which specific psychology services may be engaged to meet identified clinical need. This reform will hopefully lead to PTSD sufferers gaining earlier access to more appropriate treatment consistent with relevant guidelines. There is also TF-CBT training that is readily accessible and should be a mandatory pre-requisite for any psychologist or clinician treating PTSD.

We are now moving towards a time when the Australian Health Professionals Regulation Authority will regard it as being unethical for a Psychologist to treat PTSD unless they have appropriate training in TF-CBT. There are some nuances in the treatment of more complex PTSD clinical profiles and not everyone responds to TF-CBT, but PTSD sufferers should in the first instance be able to access this first-line treatment competently delivered.

A reconfiguration of publicly funded health services is currently underway, via the recently established Primary Health Network structure.

References

1. Phoenix Australia (2013). 'The Australian guidelines for the treatment of Acute Stress Disorder and Posttraumatic Stress Disorder.'
2. Black Dog Institute (2015). 'Expert guidelines: The diagnosis and treatment of Post-traumatic Stress Disorder in emergency service workers.'
3. For example, 'Clinical framework for the delivery of health services' (2012). WorkSafe Victoria.
4. Waller, G. (2009). 'Evidence-based treatment and therapist drift,' *Behaviour Research and Therapy*, February 47 (2): 119–27.

The role of workplace support in trauma prevention and recovery

Peter Cotton

Work-related trauma responses and Post Traumatic Stress Disorder are major contributors to workers compensation premiums and long-term disability burden across emergency services organisations, and are also significant across many other industry sectors. Key tertiary (treatment) interventions have been well defined and workplace early intervention programs (e.g., targeting sub-syndromal symptoms) are starting to be trialled. In the prevention space, attention is being given to individual-level resilience building programs. But thus far there has been negligible focus on organisational factors that reduce psychological health and safety risk and improve mental health outcomes. Linking organisational research with the PTSD literature helps to address this gap. This essay explores workplace protective factors that likely contribute to prevention and improved treatment and return to work outcomes.

A still common refrain from individuals who have developed traumatic stress responses or other mental health problems following exposure to work-related incidents is that they are poorly supported from their workplace: 'I have been off work for five weeks now, and no one from work has rung to see how I am — they don't care' is a typical comment. Or as one police officer told a recent workplace mental health review, 'I've been back on a return to work program after suffering PTSD for some eight months now, and no one — not anyone I work with or any manager — has asked me, how are you going? how are you travelling?' These perceptions seem to cut deeply and endure, irrespective of how much clinical professional support may have actually been provided.

To be fair, for most managers, avoidance in engaging is not callous disregard for the employee but discomfort and uncertainty: 'because it's mental health we didn't know what to say and didn't want to aggravate the situation'. At this level we are dealing with basic mental health literacy issues that can in part be addressed by the type of workplace mental health education/awareness programs that Beyondblue and Mental Health First Aid have championed in Australia over the past 15 years. In some workplaces (still too many), there is a further layer of mental health stigma where reporting is inhibited and help-seeking delayed or avoided altogether, due to a fear of being marginalised and labelled as 'damaged goods'. Addressing this deeper layer often requires more than a training solution; it requires a fundamental organisational culture change, or 'leadership uplift', that typically has takes a minimum three years to achieve — as the Australian Defence Force has recognised and to date led the way.

But beyond the impact of attitudes towards mental health issues, the workplace exerts a more substantive role in prevention and recovery from mental health issues and traumatic stress responses that has hitherto been under-recognised.

The traumatic stress research literature consistently highlights the important role of social support in influencing mental health outcomes, but has not particularly focused on the role of workplace support. The return to work literature has begun to more directly address this issue by recognising that perceptions of workplace support significantly facilitate or hinder and even derail successful return to work for individuals with work-related mental health problems, over and above any clinical treatment and rehabilitation provider support.

The crucial role of workplace support can be further illustrated by considering the example of operational policing (or indeed, any other first responder roles). Police are regularly exposed to potentially traumatic incidents. From a workplace health and safety perspective, there are severe limits on mitigating risk: we can consider the adequacy of training, incident management protocols, protective equipment and front-end individual-level resilience building — but beyond this we cannot 'eliminate risk' (that is, prevent exposure) because this is what the job involves.

Hence, from a prevention perspective, we need to consider the role of building protective workplace factors and clarify what this entails. Some identified key protective factors include work team level leadership support, well-defined work priorities, having a say in implementing those priorities a collegial learning-oriented environment which encourages debate and feedback around how the work gets done, and a climate that validates wellbeing as part of the way business is done and encourages early help seeking behaviour [1]. This applies not only to police and other first responder organisations, but to all workplaces; it is just that issues of risk and protective factors present themselves more starkly in the emergency services sector, given the relatively higher levels of exposure to potentially traumatic incidents.

As a contrast, high levels of either laissez-faire leadership (where leaders are focused on providing technical job content advice and neglect people issues and building engaging team environments) or overly directive leadership (excessive command and control, 'my way or the highway' styles) are correlated with increased conflict, wide tolerance margins for poor behaviours, disengagement and low morale (with directive styles in particular creating fertile ground for bullying and harassment).

Overall, these two leadership styles, which are still very common and even dominant in some industry sectors, are associated with poorer psychosocial team environments and increased psychological health and safety risk (which can be read as entailing poorer responses to operational incident exposures). Indeed, Michelle Tuckey and colleagues [2] introduced the notion of the 'erosive stress pathway' to describe the impact of such negative organisational experiences in emergency service organisations: they contribute to increasingly adverse personal evaluations of operational incident exposure and declining morale, which in turn tends to generate a downward interactive spiral ultimately resulting in PTSD psychological injury claims.

The impact of workplace support on employee wellbeing has been extensively investigated in organisational psychology research. For example, over 30 years of research in the *Perceived Organisational Support* (POS) tradition has demonstrated how high levels of POS directly contribute to reduced stress levels and stress reactivity, as well as increased positive mood states and job satisfaction. Strong POS increases self-efficacy and resilience and enhances the emotional tone of day-to-day work experiences, and thus constitutes a mental health protective factor [3]. It follows that high levels of POS could also reasonably be expected to mitigate the impact of exposure to potentially traumatic operational incidents.

High levels of "Perceived Organisational Support" (POS) have been shown to directly contribute to reduced stress levels and stress reactivity as well as increased positive mood states and job satisfaction.

Currently in Australia, there is an increasing focus on the psychological dimension of workplace health and safety.

An allied perspective comes from the organisational climate research literature. Organisational climate constitutes employee shared day-to-day perceptions of the impact of workplace policies, practices and procedures, leadership style, and behaviours that are observed to be rewarded or discouraged. Longitudinal research with large cohorts of Australian police and teachers has demonstrated that organisational experiences (i.e., organisational climate) explain much more of the variability in levels of employee wellbeing compared with operational experiences (including exposure to stressful incidents). Individual and team morale (essentially individual and team levels of positive emotion), driven by high-quality work team environments climates and high levels of 'people-focused' leadership, are mental health protective factors. Moreover, improving general organisational climate reduces psychological health and safety risk [4] [5].

Currently, managers are still inclined to rely on a tacit division between their primary role in managing performance and achieving organisationally expected workgroup outputs, and employee mental health issues; the latter tending to be handballed to clinical professionals and employee assistance counsellors. There are a few 'mentally healthy workplaces' here and there with strong people-focused leadership capability that straddles this division, and thus where this is less likely to occur. But what is not understood in many workplaces is how leader support (not as a quasi counsellor but as a people leader) does substantively influence mental health outcomes following exposure to potentially traumatic events.

It is worth noting here an analogue in the disaster literature which recognises the notion of 'grief leadership' over and above the role of any clinical professional support. This is where local leaders are able to step up and articulate what the affected community is experiencing and provide support and direction that serves a vital role in community healing.

Currently in Australia, there is an increasing focus on the psychological dimension of workplace health and safety. However, we are still a long way off from holding workplaces appropriately accountable for the provision of a minimum level of supportive leadership and high quality psychosocial work environments — that would directly contribute to reducing risk and improving outcomes for work-related trauma responses.

References

1. Victoria Police Mental Health Review (2016). *An Independent Review into the Mental Health and Wellbeing of Victoria Police Employees*. The State of Victoria: Victoria Police.
2. Tuckey M.R., P.C. Winwood and M.F. Dollard (2012). 'Psychosocial culture and pathways to psychological injury within policing.' *Police Practice and Research* 13(3).
3. Eisenberger R. and F. Stinglhamber (2011). *Perceived Organisational Support*. American Psychological Association, Washington DC.
4. Cotton P., and P.M. Hart (2003). 'Occupational wellbeing and performance: A review of organisational heath research.' *Australian Psychologist* 38(2): 118–27.
5. Hart P.M., P. Cotton and C.E. Scollay (2015). 'Flourishing at work: Improving wellbeing and engagement' in R.J. Burke, K.M. Page and C.L. Cooper (eds) *Flourishing in Life, Work and Careers*. Cheltenham UK: Edgar Elgar.

Returning the service: the healing use of creative arts

Ian Drayton

Ian Drayton is an ex-serving member of the Royal Australian Army and remains deeply interested in military history and culture. He holds a Bachelor of Business and a Master of Tertiary Education Management and through his position as a Faculty General Manager at the University of Canberra and has been able to implement what has become a formal five-year creative arts project with the Department of Defence.

As many as 30 per cent of veterans returning from active service develop Post Traumatic Stress Disorder and mental health disorders are the leading medical condition correlated with disengagement from military service after deployment. One of the major impediments to effective treatment is reluctance of those with symptoms to seek assistance. The use of creative arts therapy shows significant promise in reducing immediate symptoms of intrusive thoughts and hyper arousal and helping to overcome avoidance and emotional numbing. This essay describes a four-week intensive residential program with participants self nominating to undertake activities based around creative streams of creative writing, visual art, music and performance which are conducted concurrently and culminate in a final showcase event to which the participants' families are invited.

Call it shell shock, traumatic war neurosis or combat exhaustion, our military communities have long dealt with what is now known as Post Traumatic Stress Disorder (PTSD). These war-related anxiety syndromes continue to affect those returning from modern theatres of war and disaster recovery operations in significant numbers. Evidence suggests that as many as 30 per cent of veterans returning from active service develop PTSD. United States estimates from Afghanistan and Iraq indicate between 11 per cent and 18 per cent respectively develop symptoms of PTSD within six months of returning from a war zone. It is assumed that PTSD has been under-reported for veterans from both conflicts to avoid stigmatisation. According to an American study, mental health disorders are the leading medical condition correlated with disengagement from military service post deployment.

Lt General James 'Ken' Gillespie AC, former Chief of the Australian Army, noted in his opening address to the 2010 Chief of Army Exercise that adaptive responses to complex environments provide a platform to deliver greater responsiveness and flexibility 'centred upon our people, who will remain our enduring number one priority'. He said that the single most important challenge to developing a world-class adaptive army is not new platforms, weapons and sensors, but the 'challenge of realising the full potential of our people'. Developing pragmatic and comprehensive programs that support the 'emotional contract' that Defence has with its soldiers and their families is key to maximising the health, engagement and retention of defence personnel.

The use of creative arts therapy shows significant promise in reducing immediate symptoms of intrusive thoughts and hyperarousal and helping to overcome avoidance and emotional numbing.

Making specific reference to PTSD, LTGEN Gillespie commented that the army's culture 'did not make allowance for a soldier's combat injuries unless they were the kind that bled'. It is only very recently that the causal links to military operations of what is effectively an invisible injury, one that affects not only soldier, sailor or air service personnel but also their spouses and families, have received sufficient attention.

One of the major impediments to effective treatment of PTSD is the reluctance of those with symptoms to seek assistance. Evidence is emerging that delayed treatment may be an important contributor to chronicity. I'm sure that it is in the DNA of many of our service personnel to delay presentation of symptoms as a defensive barrier to confronting traumatic memories. Whilst primary health care providers play a central role in initial diagnosis and ongoing treatment, there would appear to be a basis for further exploration of promising alternative treatments. The use of creative arts therapy shows significant promise in reducing immediate symptoms of intrusive thoughts and hyperarousal and helping to overcome avoidance and emotional numbing. Developing improved self-esteem, enhancing emotional self-efficacy and reactivating positive emotions may be used as a foundation for further, more traditional treatment plans.

Finding ways to mitigate stigma and barriers to accessing mental health care for our military personnel led to the development of the Arts for Recovery, Resilience, Teamwork and Skills (ARRTS) project, an initial collaboration between the Australian Defence Force and the Faculty of Arts & Design at the University of Canberra. The concept was established following the 2013 Australian Defence Force Theatre Project, the *Long Way Home*, a Defence/Sydney Theatre Company co-production that toured the country and proved highly beneficial to participants. Providing an empathetic, safe, cohesive and trusting environment for participants has been key to developing group experiences that have yielded such promising results.

The ARRTS program is a four-week intensive residential with participants self-nominating to undertake activities based around four creative streams (creative writing, visual art, music and performance) conducted concurrently that culminate in a final showcase event. This event provides an opportunity for participants to contribute personally through exhibiting their written or visual art works, sculptures, or through music or drama, coordinated under the direction of the Creative Producer. A key component is the involvement of participant's families who are invited to the final two-and-a-half hour event.

To personally witness the physical and emotional transition of participants during the two pilot programs conducted in 2015 was a transformative experience not only for participants but also for Defence and University of Canberra personnel. Several participants who had not responded positively to conventional outpatient treatment spoke about how beneficial they felt the ARRTS program had been in aiding their recovery.

The program is designed to offer skills training which is incremental and tailored to the interests and ability of the individual, allowing each participant to set their own achievable goals and succeed in a non-competitive environment. The training environment is supportive, and participants gain a sense of accomplishment and grow in confidence as they achieve, and sometimes exceed, both personal and group goals.

Though all endeavours entail story telling in some way, workshop participants are not compelled to tell any particular story. Some participants may tell a story based in fiction, others may wish to tell the story of their life in the ADF, on deployment, or of injury/illness and recovery. The four-week program provides enough time for participants to engage personally and in small groups with their workshop mentors, to explore different paths, artistic styles and expressions without feeling threatened or rushed.

Whilst my motivation for involvement in the ARRTS project was to facilitate the program as an enabler for soldiers' recovery, I can see a significantly larger impact, both psychologically and economically, in the broader context of national mental health. There is a mounting case to introduce a coordinated, holistic and interdisciplinary care model incorporating the creative arts more broadly in communities across Australia. Emergency service personnel, victims of domestic violence and others who have experienced a significant, traumatic experience may benefit greatly from such an approach.

Emergency service personnel, victims of domestic violence and others who have experienced a significant, traumatic experience may benefit greatly from such an approach.

Community supports

Dominic Upton

Professor Upton, originally from the UK, joined the Faculty of Health at The University of Canberra as Associate Dean (Education) in 2014. A Health Psychologist by background, Professor Upton has had an extensive career in clinical practice, teaching and research. Previously Director of Research in the Institute of Health at the University of Worcester, he has held a number of significant positions on national bodies for psychology and learning and teaching prior to moving to Canberra.

Post Traumatic Stress Disorder affects large numbers of people in many communities in Australia. There are a broad range of treatment options but what is missing in many instances is the wider picture of families caught up in the cycle of despair associated with PTSD. This paper argues for the intentional development of Compassionate PTS Communities (CPC's) to promote greater understanding of the role the community can play in supporting those with PTSD. In view of the impact this problem has in the community, there is a need for activists, champions and supporters, and greater awareness of the issue in schools, in the voluntary sector and amongst those who are at particular risk of developing the problem. This is a public health issue and its solution is in the community.

As has been articulated elsewhere in this volume, the level of Post Traumatic Stress Disorder (PTSD) is high, with the 12-month prevalence in an Australian population estimated to be close to 7 per cent — over 1 and a half million people. However, this may be an under-estimate in certain populations, with some evidence suggesting that as many as 30 per cent of veterans returning from active service develop PTSD. It is also interesting to note that, although there are no reliable estimates for Aboriginal and Torres Strait Islander people, some have suggested elevated levels. For example, research in three communities in Western Australia found a lifetime prevalence of PTSD of 55 per cent whereas others report a 12-month prevalence of PTSD of 12.1 per cent for males and 32.3 per cent for females [1].). But, of course, this is not the end of the impact as these individuals each have families and friends, and the impact becomes a significant issue for communities and the population at large. The vicarious impact may be significant. Assuming that the person with PTSD knows at a minimum half a dozen people, this means that more than 1 in every 4 people living in Australia has been touched by PTSD, and in Indigenous communities it may be as many as 1 in 2.

The limits of individual treatment

There are treatment options available, of course, whether these be medical, psychological or social in conceptualisation and hospital- or community-based. Some options may be innovative or experimental, some are more expensive than others, some are more or less successful, and some offer short-term relief which evaporates in the longer term. However, what is missing from many options is the wider picture — what about others caught up in the cycle of despair associated with PTSD? Can individual treatment work? Is group therapy the solution or do we need a bigger picture? It is impossible for all who are impacted by PTSD to be treated by a psychiatrist, psychologist, counsellor or social worker. It is similarly impossible for all to attend a group session, attend a hospital or be prescribed medication. What is required is a holistic and community-based approach, whereby all are involved and all are both supported and supportive.

The definition of community differs between groups and the experience of community can be different for those from different backgrounds. Definitions may differ according to age group, religious persuasion, Indigenous or non-indigenous background, or even between different indigenous people. However, a common definition of community is 'a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings', including online as well as geographical locations.

A compassionate community

In many communities there are specific taboos specifically relating to death — and the concept of *Compassionate Communities* has been developed which aims to support attitudes and behaviours towards death and bereavement [2]. As there is also a stigma associated with PTSD, even though this has reduced since the inflexible and insensitive times following the First World War, is there a need and drive for *Compassionate PTSD Communities*, or CPC if you will?

The aim of the CPC would be to develop greater understanding of the role the community plays in supporting those with PTSD. This would mean greater understanding of the unaddressed issues around PTSD within a social and demographic context — its origins, its explanations, and its treatment. Given the impact that PTSD has in the community, which is mostly hidden at the moment, champions and supporters would need to be engaged and activated. Community participation is of paramount importance to the design and success of such programs, as it provides ways for people to create networks and support systems for each other. But in order to achieve community participation, partnerships with communities would need to be formed, so that work is done with the community rather than for the community.

The aim of Compassionate PTSD Communities would be to develop greater understanding of the role the community plays in supporting those with PTSD.

PTSD can impact on many and we need to engage with all.

The activists

Potential partners in this activity are numerous and far reaching. They include those with PTSD and their family members, appreciating that PTSD can come from a number of sources — returning veterans, their spouses, the first responders (including those from the fire, ambulance and police service, State Emergency Services), those in abusive relationships, those incarcerated, survivors of sexual and physical abuse, and survivors of accidents or other traumatic events. These individuals can be joined by professionals including:

- General Practitioners;
- Mental Health practitioners;
- Public Health specialists;
- Legal and financial services;
- Hospitals;
- Spiritual and faith groups;
- Community services;
- Children and young people services;
- The Military; and
- Returned and Services League.

But we also need to include:

- People who are well and who are not;
- Charities and supportive organisations;
- Carers, families and friends;
- Schools, colleges and Universities;
- Workplace; and
- Trade Unions and political parties.

As can be seen from the list, PTSD can impact on many and we need to engage with all.

The action

So what would this action look like? What is required? The plan of action would need to understand the extent of the problem — easier said than done when the condition it so pervasive but so overlooked. There needs to be a 'big conversation' with local stakeholders to facilitate discussions and to plan and energise. These should allow for the development of a local strategy and a local Charter of best practice. The focus needs to be on public engagement to ensure the issues come to the forefront of the community. This could involve:

- awareness raising using local media;
- themed conferences and public events;
- collaborations with the local voluntary sector;
- promoting and supporting PTSD Champions or Activists;
- a school and young peoples' program;
- working with charities and faith organisations;
- working with the military, first responders, and other relevant stakeholders.

The future

The inexorable rise of psychological disorders within the community should serve as a warning that action needs to occur. It is no longer acceptable to hide PTSD away, no longer reasonable to assume that just a few 'weak-willed' individuals are affected, or to focus on the individual and ignore the wider community. We need to adopt a public health view which emphasises the person as a member within a whole community to ensure that the provision of services, support and treatment goes beyond the simple provision of health and counselling services. In line with the concept of Compassionate Communities [3] we need local health and social policies that:

- recognise compassion as an ethical imperative;
- meet the special needs of those living with PTSD;
- recognise the impact that it has on the wider community;
- have a strong commitment to social and cultural difference;
- offer their inhabitants access to a wide variety of supportive experiences, interactions and communication.
- promote and celebrate reconciliation with indigenous peoples;
- provide easy access supportive services; and
- recognise and plan to accommodate those disadvantaged by the economy, including rural and remote populations, indigenous people and the homeless.

It is no longer acceptable to hide PTSD away, no longer reasonable to assume that just a few 'weak-willed' individuals are affected, or to focus on the individual and ignore the wider community.

It is time to appreciate that not only is PTSD a problem for the community but its solution is the community.

Trauma has a wider meaning beyond disorder, and the experiences and consequences of PTSD need to be recognised, understood and treated within inclusive policies that mean the most to most people. It is time to move from the individualistic to the community, to appreciate that not only is PTSD a problem for the community but its solution is the community.

References

1. Heffernan, E., K. Andersen, F. Davidson and S.A. Kinner (2015). 'PTSD among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates.' *J Traumatic Stress* 28(6): 523–30.
2. See: www.dyingmatters.org
3. Kellehear, A. (2005). *Compassionate cities: Public health and end-of-life care*. London: Routledge.

Creating trauma-informed correctional care in the US

Niki Miller and Lisa Najavits

Niki Miller works with the New Hampshire Department of Corrections in Concord, New Hampshire USA. She is dedicated to the change process and to systems and individual transformation in the areas of gender equity, recovery and justice.

Lisa Najavits is Professor of Psychiatry at the Boston University School of Medicine in Boston, Massachusetts USA. She is a research psychologist at Veterans Affairs (VA) Boston Healthcare System and the director of Treatment Innovations. Her major clinical and research interests are substance abuse, trauma, co-morbidity, behavioral addictions, veterans' mental health, community-based care, development of new psychotherapies, and outcome research.

Rates of Post Traumatic Stress Disorder and exposure to violence among incarcerated males and females in United States are exponentially higher than rates among the general population, yet detoxification from substances, the pervasive authoritative presence, and sensory and environmental trauma triggers can pose a threat to individuals and institutional stability during incarceration. The authors have explored the unique challenges and promises of Trauma Informed Correctional Care and suggest strategies for administrative support, staff development, programming and relevant clinical approaches. Trauma informed care demonstrates promise in increasing offender responsivity to evidence-based cognitive behavioural programming that reduces criminal risk factors and in supporting integrated programming for offenders with substance abuse and co-occurring disorders. Incorporating trauma recovery principles into correctional environments requires an understanding of criminal justice priorities, workforce development and specific approaches to screening assessment and programming that unify the goals of clinical and security staff.

Trauma-informed care is a relatively recent development in the corrective services treatment plan. It has as primary goals accurate identification of trauma and related symptoms, training of all staff to be aware of the impact of trauma, minimising re-traumatisation, and a fundamental 'do no harm' approach that is sensitive to how institutions may inadvertently re-enact traumatic dynamics.

There is recognition that staff and inmate relationships are the day-to-day fabric for both trauma recovery and re-traumatisation.

Trauma Informed Correctional Care is the application of trauma-informed care for correctional settings in particular, which have their own unique challenges, strengths, culture and needs. Prisons are challenging settings for trauma informed care. Prisons are designed to house perpetrators not victims. Inmates arrive shackled and are crammed into overcrowded housing units; the lights are on, loud speakers blaze without warning, and privacy is severely limited. Security staff focus on maintaining order and must assume each inmate is potentially violent. The correctional environment is full of unavoidable triggers such as pat downs and strip searches, frequent discipline from authority figures and restricted movement. This is likely to increase trauma-related behaviours and symptoms that can be difficult for prison staff to manage.

Yet, if trauma-informed principles are introduced, all staff can play a major role in minimising triggers, stabilising offenders, reducing critical incidents, de-escalating situations, and avoiding restraint, seclusion or other measures that may repeat aspects of past abuse.

In addition to general trauma-informed principles, clinical staff can provide trauma-specific therapies, actual counselling models and curricula designed to promote trauma recovery. There is recognition that staff and inmate relationships are the day-to-day fabric for both trauma recovery and re-traumatisation. Clinical interventions for inmates need to be relevant to the environmental culture and relationships that incarcerated trauma survivors must navigate on a daily basis. The most successful interventions in prisons have goals that are congruent with the primary duties of correctional staff: public safety, safety of inmates in custody, rehabilitation, and staff and institutional security.

Correctional officers tend to respect experience rather than research. The most effective tool for developing in-service training is to ensure that seasoned correctional officers take the lead roles. Despite limited resources, fears for their own safety, vicarious trauma, and conflict between enforcement responsibilities and compassion, many officers have developed effective approaches. It is important to reinforce staff intuition and compassion and to recognise and build on strategies that have been successful, before introducing new information and skills. Shift commanders and chiefs of security should assist with training content and be visible in role-plays and demonstrations. Training that highlights stress management, self-care and remedies for burnout tends to engage more experienced staff.

It is important to recognise gender differences in how much attention is given to trauma. Trauma is far more likely to be addressed in female than in male inmates in corrections institutions. In male facilities, correctional officers must deal with large numbers of violent offenders.

For females, trauma is typically related to childhood sexual abuse, and they are more likely to develop PTSD when exposed to violence. There are often repeated exposures to sexual and violent victimisation beginning in childhood. This is often followed by internalising self-harm, eating disorders, addiction and avoidance. Trauma-affected females are more likely to receive mental health treatment than substance abuse treatment and treatment needs to emphasise empowerment, emotion regulation and safety.

For males, trauma typically involves witnessing violence. However, though more likely to be exposed to violence, they are less likely to develop PTSD as a result. They may be exposed to violence from strangers and sexual abuse from outside the family. As a consequence they are inclined to externalise violence, embark on substance abuse, and turn to crime. They are likely to be given substance abuse treatment rather than mental health treatment, and effective treatment needs to emphasise feelings, relationships and empathy.

As correctional policy shifts its focus to decreasing recidivism, the advantages of evidence-based counselling approaches are becoming more apparent to prison administrators. The use of present-focused cognitive-behavioural and coping skills treatments with strong educational components has helped stabilise inmates with PTSD and substance abuse problems. These approaches tend to be compatible with the correctional culture of responsibility, consistency, accountability and behavioural change, and are relevant to a range of trauma impacts.

There is sometimes great reluctance to open the trauma 'can of worms' in prison, given the prison environment and limited clinical resources available. Yet trauma-informed correctional care and staff training can go a long way toward creating an environment conducive to rehabilitation, and staff and institutional safety. Trauma-informed principles are helpful regardless of whether the institution makes trauma-specific clinical interventions available to inmates. However trauma-specific interventions have been found to be more powerful than trauma-informed intervention, and thus making both available is likely to result in greater success in prison settings. It is important to remember that prison staff have legal responsibility for the medical care of inmates and must provide appropriate treatment including mental health services. The use of Trauma Informed Correctional Care can provide a contextual foundation for providing effective in-prison help in increasing pro-social coping skills, creating a calm and safe prison environment, reducing adverse events, and aiding staff morale, all of which can lead to better offender rehabilitation outcomes.

This article includes the summary and key extracts from a longer paper published in the European Journal of Psychotraumatology. It is included here with the permission of the authors. The citation is Miller, N.A. & L.M. Najavits (2012),' *European Journal of Psychotraumatology* 3, 1–8. DOI: 10.3402/ejpt.v3i0.17246

As correctional policy shifts its focus to decreasing recidivism, the advantages of evidence-based counselling approaches are becoming more apparent to prison administrators.

Editors' concluding comments

Despite progress in treatment, trauma-related stress and its impact on capacity to work, expressions of violence and anger, self harm and death are still inadequately understood in the Australian community.

A recent ABC Four Corners program drew attention to the profound impact that trauma-related stress has had on the lives and families of members of the police force. The essays in this report point to the burden of suffering also being experienced by veterans of armed conflict and other first responders, women and children exposed to domestic violence, Indigenous communities and people in our prisons.

Substantial resources have been committed to the development of clinical guidelines for management of post-traumatic stress and to research to improve our understanding of the causes of the problem. But there is a long way to go, and issues relating to trauma-related stress and its impact on capacity to work, expressions of violence and anger, self-harm and death are still inadequately understood in the Australian community.

Developments in neuroscience are improving our understanding of the pathophysiology of trauma-associated stress, and pinpointing what happens in neural pathways is opening up new possibilities for the treatment of people with established PTSD. There is a parallel need for ongoing investment in trials of new psychological approaches for first-line treatments.

For members of the defence forces and employees in civilian emergency services, exposure to violence and trauma is part of the job, and their continued employability often depends on being able to manage their trauma-related stress. We should not be surprised therefore that many adopt a 'stiff upper lip' and fail to report symptoms of stress when these occur. Add to this the stigma attached to mental ill health, and it is easy to see that many victims of trauma-related stress will try to muddle through on their own.

While digital technology cannot replace well-trained professionals, this technology clearly helps sufferers find professional assistance. The advent of apps and Internet sites that can be accessed through mobile phones and tablets is an important step forward.

Several essayists mention the need for improved understanding of trauma-related stress by the wider community. Others stress the need for innovation, community support, and the role of creative arts in helping those affected.

What about prevention?

A number of the essay writers in this volume draw attention to the need for improved early counseling and intervention following traumatic events, for first responder and other vulnerable groups, and there is growing evidence that a more trauma-focused culture in prisons could substantially enhance the rehabilitation prospects of many who could otherwise be trapped in the loop of repeated incarceration.

For three years Australians have been exposed to devastating stories of lifetime stress following child abuse in homes, institutions and churches across Australia, presented at the Royal Commission into Institutional Responses to Child Sexual Abuse. In an address to the Association of Children's Welfare Agencies Conference in August 2016, the Chair of that commission, Hon Justice Peter McClellan, said:

> *A picture is emerging for us that although sexual abuse of children is not confined in time — it is happening today — there has been a time in Australian history when the conjunction of prevailing social attitudes to children and an unquestioning respect for authority of institutions by adults coalesced to create the high risk environment in which thousands of children were abused ... I am sure that we all hope that from the tragic personal stories and institutional failures revealed in our public hearings, the community will be reminded that both individual institutions and governments failed in their responsibility for children. Where once silence was demanded, a child's complaint, however tentative in its communication, must be heard and given an appropriate response. Whatever the nature of the institution and however its members are respected by the community, we must all accept that there may be members of trusted institutions who fail in their duty towards children. The power of the institution must never again be allowed to silence a child or diminish the preparedness or capacity of adults to act to protect children.*

That same month, the devastating trauma and abuse inflicted on both adults and children held by Australia in offshore detention in Nauru was laid bare in a large cache of leaked documents published in *The Guardian*. The 'Nauru files' set out the assaults, sexual abuse, self-harm attempts, child abuse and living conditions endured by asylum seekers in Nauru, painting a picture of routine dysfunction and cruelty. Although children made up only 18 per cent of those in detention, 51.3 per cent of the 2,116 reports of incidents between May 2013 and October 2015 involved children. According to doctor 'whistleblowers' who worked on Nauru at that time, nearly all child and large numbers of adult asylum seekers held on Nauru are showing signs of PTSD.

These revelations came just weeks after the brutal treatment of young people in juvenile detention in the Northern Territory was exposed — revelations which cast a new spotlight on the effects of its government's hardline approach to crime. In the Northern Territory, Indigenous youths make up 96 per cent juvenile prison population, and Indigenous people are imprisoned at hugely over-represented rates despite being only 30 per cent of the population. These incarceration rates are potent antecedents and reinforcers of post-traumatic stress, substance abuse and chronic mental illness.

We have recently been exposed to stories of lifetime stress following child abuse in homes, institutions and churches, reports of assault, self-harm and child abuse endured by asylum seekers on Nauru, and the brutal treatment of juvenile offenders in the Northern Territory.

It may be time to factor in the cost of post traumatic stress when deciding to go to war, which so often happens without national debate or consideration.

Each of these groups, children in care, asylum seekers, Indigenous prisoners and Indigenous communities, can be seen to bear the brunt of attitudes and policies that contribute significantly to the national burden of mental illness. A national tendency to put our defence forces in harm's way by following our allies into armed conflict is arguably another preventable contributor. It may be time to factor in the cost of post traumatic stress when deciding to go to war, which so often happens without national debate or consideration.

What next?

In compiling this collection of essays, we have sought to bring together a diversity of views on the extent, management and impact of trauma-related stress. What these essays make clear is that trauma-related stress is having a profound effect on our social and economic wellbeing and that a national conversation between experts, politicians and policy-makers to develop and implement improved ways of preventing and treating trauma-associated stress where it currently occurs is urgently required. A high-level Roundtable bringing together stakeholders from police and other first responder organisations, contributors to this volume, and representatives of people affected by PTSD and other trauma-related mental health problems, will be a first step in this direction.

The Roundtable will need to consider a number of additional questions beyond the scope of this volume. The first relates to the disposition of research dollars and how they can best be used. While great strides have been made in clinical management, and the rapid advance in neuroscience is pointing to new possibilities for therapeutic approaches, given the fact that about 40 per cent of cases of PTSD are refractory to current treatments, expanding our understanding of the way the brain responds to traumatic experiences must be a high priority.

A second question that bedevils administrators of first responder organisations is the late reporting, or failure to report, of work-induced stress relating to trauma because of the fear that reporting will endanger future employment prospects. It is in nobody's interest that such employees are pensioned off or end their working lives on lifetime compensation. Best interest would be served by early intervention and rehabilitation to full employment or, failing that, continued employment in some other productive way. The legal responsibility that employers have to their employees who experience traumatic stress in the course of their duties needs to be clarified.

And finally, in a world currently driven by economic considerations, further work is needed to better understand the productivity costs of trauma-associated stress and the burden it places upon inadequately funded mental health and hospital services. The accounts presented here suggest that trauma-related stress is costing industries and the taxpayer many billions of dollars. A more constructive approach to prevention, early intervention and effective treatment and rehabilitation is clearly essential.

Acknowledgements

The steering group for this essay project included Paul Barratt, Chris Barrie, Mick Palmer, Allan Behm and the co-editors Bob Douglas and Jo Wodak.

The co-editors are grateful for advice from Mark Creamer and David Forbes and to all the other authors for their thoughtful and timely contributions.

Funding to support the development of this project came from Fearless and Australia21

We also acknowledge the continuing creative contribution to the design by Lester Bunnell from Paper Monkey.

What these essays make clear is that trauma-related stress is having a profound effect on our social and economic well-being and that a national conversation between experts, politicians and policymakers to develop and implement improved ways of preventing and treating trauma associated with stress is urgently required. A high-level roundtable, bringing together stakeholders from police and other first responder organisations, contributors to this volume and representatives of people affected by trauma-related mental health problems, would be an important first step in this direction.

The accounts presented here suggest that trauma-related stress is costing industries and the taxpayer many billions of dollars. A more constructive approach to prevention, early intervention and effective treatment and rehabilitation is clearly essential. This will require not only increased research but increased cooperation and collaboration between government and other employing agencies.

This book contains 27 brief and readable essays by leading clinicians, researchers, administrators and observers of the stress that often follows exposure to, or involvement in violence and brutality.

The scope and scale of the problem are immense. It touches the lives of millions of Australians and results in massive costs in mental health, criminality, drug and alcohol use, family disruption and lost productivity.

Known to earlier generations of the military as "shell shock" this debilitating spectrum of mental changes continues to bedevil growing numbers of our veterans.

But it also affects significant numbers of people who work in police forces, ambulance services and other helping professions who, as "first responders" are often witnesses to horrific scenes.

Similar manifestations of stress also affect victims of rape, child abuse, domestic violence and incarceration .

The editors and the sponsors aim to engage large numbers of Australians in the exploration and discussion of improved ways of preventing and managing this pervasive problem.

Trauma-related stress in Australia

Essays by leading Australian thinkers and researchers