Australian guidelines for the treatment of adults with acute stress disorder and post-traumatic stress disorder

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Over the past 2–3 years, clinical practice guidelines (CPGs) for post-traumatic stress disorder (PTSD) and acute stress disorder (ASD) have been developed in the USA and UK. There remained a need, however, for the development of Australian CPGs for the treatment of ASD and PTSD tailored to the national health-care context. Therefore, the Australian Centre for Posttraumatic Mental Health in collaboration with national trauma experts, has recently developed Australian CPGs for adults with ASD and PTSD, which have been endorsed by the National Health and Medical Research Council (NHMRC). In consultation with a multidisciplinary reference panel (MDP), research questions were determined and a systematic review of the evidence was then conducted to answer these questions (consistent with NHMRC procedures). On the basis of the evidence reviewed and in consultation with the MDP, a series of practice recommendations were developed. The practice recommendations that have been developed address a broad range of clinical questions. Key recommendations indicate the use of trauma-focused psychological therapy (cognitive behavioural therapy or eye movement desensitization and reprocessing in addition to *in vivo* exposure) as the most effective treatment for ASD and PTSD. Where medication is required for the treatment of PTSD in adults, selective serotonin re-uptake inhibitor antidepressants should be the first choice. Medication should not be used in preference to trauma-focused psychological therapy. In the immediate aftermath of trauma, practitioners should adopt a position of watchful waiting and provide psychological first aid.

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Structured interventions such as psychological debriefing, with a focus on recounting the traumatic event and ventilation of feelings, should not be offered on a routine basis.
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Mental health policy and practice have moved increasingly toward greater accountability in terms of evidence-based treatment. Over the last decade, evidence-based clinical practice guidelines (CPGs) have been developed in Australia, the USA, the UK and other countries for a range of psychiatric conditions. These include CPGs published by the Royal Australian and New Zealand College of Psychiatrists (RANZCP) in 2003 for the treatment of panic and agoraphobia, depression, bipolar disorder, schizophrenia, and anorexia. The purpose of CPGs is to provide comprehensive but succinct recommendations for the treatment of these conditions, based upon a thorough review of the highest quality research evidence and expert clinical opinion. Importantly, guideline recommendations do not attempt to be a substitute for the knowledge and skill of competent individual practitioners, nor are they intended to limit treatment innovation where required.

High-quality treatment studies in the area of posttraumatic stress disorder (PTSD) and acute stress disorder (ASD) have accumulated over the last 15 years, providing a strong evidence base to inform clinical practice. Led by the evidence summaries and guidelines published by the International Society for Traumatic Stress Studies (ISTSS) [1], CPGs for PTSD have been published in the USA by the Departments of Veterans Affairs and Defense (VA/DoD) [2] and the American Psychiatric Association [3], as well as in the UK by the National Institute of Clinical Excellence (NICE) [4]. A need remained, however, to update and develop guidelines tailored to Australian needs and circumstances.

The following guidelines for PTSD and ASD were developed by the Australian Centre for Posttraumatic Mental Health (ACPMH) at University of Melbourne under the auspice of the National Health and Medical Research Council (NHMRC). The guidelines were developed by an expert working party of leading Australian traumatic stress specialists in consultation with a multidisciplinary panel consisting of representatives of key professional bodies, specialists in a variety of mtrauma populations, and patient representatives. The guidelines were endorsed by the NHMRC in February 2007.

Definitions and main features of ASD and PTSD

A degree of emotional disequilibria is common in the early aftermath of traumatic exposure and can be considered part of the normal response. When psychological distress persists, however, and is severe enough to interfere with important areas of psychosocial functioning, the possibility of a post-traumatic mental health condition such as ASD or PTSD, should be considered.

The DSM-IV [5] requires six criteria for a diagnosis of PTSD. Criterion A defines the stressor, including features relating to the event itself (criterion A1) and the response to the stressor (criterion A2). The B, C, and D criteria refer to symptoms of re-experiencing the trauma, avoidance of reminders and emotional numbing, and persistent hyperarousal. Criterion E requires that symptoms have been present for at least 1 month, while criterion F requires functional impairment or significant distress.

In its chronic form (beyond 3 months after trauma), PTSD rarely exists in isolation [6,7]. Associated features such as aggression, guilt, and physical health problems, as well as comorbid mental health conditions, such as depression and substance use disorders, are common.

ASD is a relatively new diagnosis, introduced for the first time in the DSM-IV [4]. The criteria are similar to those for PTSD, with the addition of marked dissociative symptoms during or after the event. Symptoms must last for a minimum of 2 days and a maximum of 4 weeks. If symptoms persist beyond 4 weeks a diagnosis of PTSD should be considered. Not surprisingly, a growing body of evidence indicates that individuals who experience ASD are at high-risk of developing PTSD [8].

It has been estimated that 65% of men and 50% of women in Australia are exposed to a traumatic event in their lifetime [6,7]. The same study reported a 12 month prevalence of PTSD in the Australian general population of 1.3%, representing around 200 000 cases in any 1 year. While that study did not assess lifetime prevalence of PTSD, other research [7] has found that lifetime prevalence is approximately double the 12 month prevalence rate. Prevalence

rates of ASD in the general population are not known, but the prevalence following road traffic accidents has been found to be between 16.1% [9] and 21% [10].

PTSD rates vary depending on the nature of the traumatic exposure. Creamer *et al*. found that the highest 12 month prevalence of PTSD in Australia was associated with a prior history of rape (men 8.4%; women 9.2%) and molestation (men 11.8%; women 5.5%) and that the lowest 12 month prevalence of PTSD in men was associated with natural disasters (0.3%) and for women witnessing someone being badly injured or killed (0.6%) [6].

While symptoms generally decrease substantially in the first 12 months following trauma exposure, and continue to decline over the following 6 years, approximately 40% of people who have developed initial PTSD have ongoing PTSD that does not remit even after many years [7]. Higher rates of unremitting PTSD have been found in more specific populations such as Vietnam veterans [11] and firefighters [12].

PTSD is less likely to follow a chronic course if effectively treated. Research evidence suggests that around one-third of people will make a good recovery following effective treatment, one-third will do moderately well and one-third are unlikely to benefit [13,14].

PTSD is a high-prevalence condition associated with significant functional impairment and reduced life course opportunities including poor educational attainment, teenage childbearing, marital instability and reduced earning capacity [15]. As such, it is considered a high-burden disorder.

Method

The Australian guidelines were developed in several stages. First, the ACPMH submitted a proposal to the NHMRC. This proposal was accepted and a guideline assessment registrar (GAR) consultant was appointed by the NHMRC to oversee the project. The terms of reference for the project were then drafted. After much consideration, it was decided that traumatic stress reactions in children constituted a separate body of literature beyond the scope of these guidelines and, therefore, the review was restricted to PTSD and related conditions in adults. (The current guidelines include recommendations around PTSD and related conditions in children from the UK guidelines as an appendix.) An organizational structure was developed consisting of a steering group to oversee the guideline development process, a working party (WP) of leading trauma experts to develop the guidelines, and a multidisciplinary panel (MDP) for consultation and reference. The MDP consisted of representatives of the broad range of individuals and groups who would ultimately use and/or benefit from the guidelines. These included mental health professional associations; generalist clinicians and trauma specialists from a range of professional disciplines; specialists in the treatment of specific populations (such as Aboriginal and Torres Strait Islander peoples, and refugees and asylum seekers), and trauma types (such as sexual assault), and patients.

In the second stage of the process, the ACPMH approached the developers of the UK (NICE) and VA/DoD PTSD guidelines to seek access to their systematic reviews. These were forwarded to the GAR consultant who approved their suitability as the foundation upon which to build the Australian guidelines. The working party, in consultation with the MDP, reviewed the NICE and VA/DoD guidelines to determine which areas of research were relevant for the Australian guidelines (and, therefore, would require updating), and to identify any gaps for which additional research questions would be required. Research questions for the Australian guidelines were then drafted according to NHMRC specifications.

In the third stage, the ACPMH contracted Adelaide Health Technology Assessment (AHTA), from the University of Adelaide, to undertake a systematic review of the literature according to the specified questions. To be consistent with the two evidence-based guidelines documents that were being updated (NICE and VA/DoD), the following databases were searched: Medline, Embase, CINAHL, PsychINFO, the Dartmouth College Published International Literature on Traumatic Stress (PILOTS) catalogue, and the Cochrane Library. To meet NHMRC requirements, Clinical Evidence and the Internet (GoogleScholar, and websites of specialty organizations), along with economic databases (ECONLIT, National Health Service Economic Evaluation database and Health Economic Evaluations Database), were also searched. The search period for literature addressing all research questions (including the updated questions) spanned 1966–August 2005.

Although the reviews performed by NICE [4] and VA/DoD [2] were both consistent with the NHMRC process, the method of reporting findings differed. The NICE evidence statements included number of studies (k), standardized mean difference effect size (SMD) and confidence intervals (CI), a method that facilitated easy integration of subsequent evidence. For this reason, and because the NICE guidelines provided the more recent literature review, the current review was designed to update the NICE review wherever possible. The SMD computed for this meta-analysis (Hedges' $\hat{g}$) involved subtracting mean scores between any two comparison groups involved and dividing by the weighted pooled standard deviation of these groups, and then adjusting the result for sample size. This is demonstrated in equation 1. Effect sizes for studies were then combined into a meta-analysis where each effect was weighted by the inverse of that study's variance.

Equation 1. Hedges' $\hat{g}$

$$\left(\frac{Mean\ 1 - Mean\ 2}{\sqrt{((N_1 - 1)SD_{i1}^2 + (N_2 - 1)SD_{i2}^2)/(N_{Tot} - 2)}}\right) * \left(1 - \frac{3}{4(N_1 + N_2) - 9}\right)$$

Where the current review asked questions not addressed by NICE but addressed by the VA/DoD review, the evidence base for that review was updated. Where the current review asked questions not addressed by either of the previous reviews, the systematic review was conducted from 1966 onwards.

To be consistent with the previous evidence-based guideline documents, the searches were restricted to the English-language literature and to the highest level of evidence available to answer the research question. That is, if a question could not be answered by an existing systematic review or meta-analysis of randomized controlled trials (level I evidence), then the search was extended to individual randomized controlled trials (level II evidence), then, if unsuccessful, to non-randomized controlled trials/cohort studies (level III evidence). Five separate searches were conducted relating to (i) psychological interventions, (ii) pharmacological interventions, (iii) psychosocial rehabilitation, (iv) physical therapies and exercise, and (v) comorbidities, from which relevant papers were identified for each research question.

In the fourth stage, the working party reviewed the findings of the systematic review and developed practice recommendations. Consistent with NHMRC process, the recommendations were graded according to the strength of the evidence upon which they were based. The grading ranged from A for the strongest evidence through to D for the weakest evidence. The designation 'good practice point' (GPP) was given to recommendations based on expert consensus opinion in the absence of an evidence base. These recommendations were then refined in consultation with the MDP and the draft guidelines were made available for public consultation. Minor modifications were made in response to this feedback.

The final stage was the submission of the guidelines to NHMRC for consideration in September 2006. NHMRC endorsed the guidelines in February 2007.

Evidence reviews and recommendations

The following sections summarize the existing research evidence in each area and outline the key recommendations. In the interest of space, details of the specific studies from which the evidence was drawn and the subsequent evidence statements are omitted from this paper, but are available in the full guideline (www.acpmh.unimelb.edu.au). The full guideline also includes advice on working with specific populations (Aboriginal and Torres Strait Islander peoples, and refugees and asylum seekers), and trauma types (military and emergency services, motor vehicle accidents, crime, sexual assault, natural disasters and terrorism), developed by trauma specialists in each field. The complete list of recommendations can also been seen in the full guideline and the brief practitioner version, both posted on the aforementioned website.

Screening, assessment and treatment planning

Although the evidence review focused specifically on treatment outcome, the guidelines included a series of GPPs focused on screening, assessment and treatment planning. These GPPs included the following: (i) for people presenting to primary care services with repeated non-specific physical health problems it is recommended that the primary care practitioner consider asking whether the person has experienced a traumatic event and describe some examples of such events; (ii) the development of a robust therapeutic alliance should be regarded as the necessary basis for undertaking specific psychological interventions and may require extra time for people who have experienced prolonged and/or repeated traumatic exposure; (iii) wherever possible and appropriate, family members should be included in assessment processes, education and treatment planning, and their own needs for care considered alongside the needs of the person with PTSD; (iv) mental health practitioners are advised to note the presence and severity of comorbidities in their assessments, with a view to considering their implications for treatment planning; and (v) mental health practitioners should provide a clear rationale for treatment and promote realistic and hopeful outcome expectancy.

Psychological treatment of adults with PTSD

Evidence review and summary

In the NICE review, 24 studies compared trauma-focused cognitive behavioural therapy (CBT) with waiting list or other psychological interventions; 11 studies compared eye movement desensitization and reprocessing (EMDR) with waiting list or other psychological interventions; seven studies compared stress management with waiting list or other psychological interventions; six studies compared other therapies (supportive therapy, psychodynamic therapies, hypnotherapy) with waiting list or other psychological interventions; and four studies compared group CBT with waiting list or other psychological interventions [4].

Four additional studies were identified in the current review (i.e. 2004–2005, since the NICE review) that compared trauma-focused CBT with waiting list [16–19]; one study that provided a follow up to a study identified in the NICE review that compared trauma-focused CBT with other psychological intervention [20]; two additional studies that compared EMDR with waiting list or other psychological interventions [19,21]; and one additional study that compared stress management with waiting list or other psychological interventions [18]. The findings of these additional

studies were largely consistent with the studies identified in the NICE review. As such, the recommendations outlined here are largely consistent with those outlined in the NICE guidelines.

Overall, the findings of more than 30 well controlled studies indicate that trauma-focused CBT, as well as EMDR in addition to *in vivo* exposure, are the treatments of choice for PTSD. These treatments were found to be effective, not only in the treatment of PTSD symptoms, but also of comorbid anxiety and depression, as well as achieving improvements in broader quality of life (SMDs ranging from 0.76 to −1.20). The effect sizes reported here reflect large clinically important improvements. Trauma-focused CBT and EMDR appear to share two key elements: exposure to the traumatic memory and cognitive processing of the meaning or interpretations of the trauma. The difference between the recommendation in this guideline and that of NICE is that it is recommended here that EMDR interventions also include *in vivo* exposure. A more detailed explanation of the rationale for this can be seen in the main guideline (www.acpmh.unimelb.edu.au). Briefly, however, there were a number of notable issues relating to *in vivo* exposure when examining studies comparing EMDR and trauma-focused CBT included in both this and the NICE review. The trauma-focused CBT studies all included *in vivo* exposure. One of the two studies favouring EMDR in terms of longer term outcomes explicitly added *in vivo* exposure to the EMDR condition [22]. Finally, a number of core CBT interventions have been added to EMDR and are reflected in its progressive protocols, including cognitive interweaving (cognitive therapy), then future templating (modelling and imaginal rehearsal of coping and mastery responses to anticipated future stressors) and most recently references to, although no explicit procedures for, *in vivo* exposure [23]. Therefore, the use of more recent elaborated EMDR protocols that incorporate these elements, including *in vivo* exposure (considered either as part of, or in addition to, EMDR), may be important for achieving longer term outcomes and explaining some of the divergence in existing studies. As such, *in vivo* exposure was included explicitly in the recommendation when using EMDR, with the assumption that it is already considered an integral part of trauma-focused CBT.

Studies examining the effectiveness of two non-trauma-focused interventions, anxiety management (AM) and stress inoculation training (SIT), suggest that these interventions were superior to no treatment in achieving large gains in PTSD symptoms, as well as moderate gains in comorbid anxiety and depression. However, AM and SIT were not as effective as trauma-focused CBT or EMDR (that included *in vivo* exposure) in reducing the likelihood of having the diagnosis at post-treatment assessment, or in achieving longer term reductions in PTSD symptoms and quality of life. Importantly, although not as effective as trauma-focused CBT or EMDR when used in isolation, elements of AM and SIT, such as controlled breathing and other coping and symptom management techniques, may be included as part of trauma-focused intervention protocols.

Similarly, psychoeducation, when delivered as a stand-alone treatment, was found to be inferior to trauma-focused exposure-based interventions. However, elements of psychoeducation, such as providing an explanatory model for the sufferer of their symptoms and a rationale for treatment, are regularly included as components of trauma-focused CBT interventions. Therefore, while psychoeducation, AM and SIT were not as effective as trauma focused CBT or EMDR as stand-alone interventions, elements of these interventions may well have a role as part of a broader trauma-focused treatment.

While models of brief trauma-focused psychodynamic therapy have been developed, they have not been sufficiently tested in controlled studies to derive practice recommendations. Supportive counselling and hypnotherapy have not been found to be effective as stand-alone interventions when compared to trauma-focused CBT or EMDR.

In addition to these evidence-based recommendations, the guidelines propose several GPPs. These include a recommendation that EMDR practitioners give consideration to the likely active ingredients of the process, typically engagement with the traumatic memory and cognitive processing (rather than the eye movements per se). It is also recommended that, where symptoms have not responded to one form of trauma-focused intervention, health practitioners consider an alternative form of trauma-focused intervention. It is noted that complex cases may require additional sessions, adopting specific treatments to address associated problems as required. Finally, it is noted that PTSD resulting from exposure to prolonged and/or repeated trauma may require more time to establish a trusting therapeutic alliance, more attention to teaching emotional regulation skills, and a more gradual approach to exposure therapy.

Key practice recommendations

The following recommendations are based on the accumulated research evidence:

- Adults with PTSD should be provided with trauma-focused interventions (trauma-focused CBT or EMDR in addition to *in vivo* exposure). (A)
- Non-trauma-focused interventions such as supportive counselling and relaxation should not be provided to adults with PTSD in preference to trauma-focused interventions. (B)
- Where symptoms have not responded to a range of trauma-focused interventions, evidence-based non-trauma-focused interventions (such as stress management) and/or pharmacotherapy should be considered. (C)
- Sessions that involve imaginal exposure generally require 90 min. (C)
- Following assessment, diagnosis and treatment planning, 8 to 12 sessions of trauma-focused treatment is usually sufficient. (D)

Pharmacological interventions for adults with PTSD

Evidence review and summary

In the NICE review 23 studies compared drug treatments against placebo and one study compared one pharmacological treatment against another pharmacological treatment [4]. The current review (2004–2005) identified a further five studies comparing drug treatments against placebo [24–28], and two studies comparing one drug treatment against another [29–30]. In general, effect sizes for pharmacological treatments are relatively small; standardized mean difference effect size (SMD) for the selective serotonin re-uptake inhibitors (SSRIs) compared with placebo, for example, are in the range of 0.3–0.5. As noted here, however, such findings should be interpreted cautiously in the context of relatively large placebo responses in many studies.

Because the current guidelines build upon the NICE guidelines, it is appropriate to commence with a review of their approach and recommendations in the area of pharmacotherapy for PTSD. Two cautionary notes are required at the outset. The NICE guidelines note the difficulty of comparing drug treatment trials with psychological treatment trials. While the latter compare an active treatment with an inert intervention or wait list control condition, pharmacological trials compare the active drug to placebo. Large placebo effects often render the effect size for the drug intervention small or insignificant, despite relatively large pre–post-treatment changes (in both groups). Currently, there is no adequate trial comparing drug and psychological treatments for PTSD. Indirect methods of comparison are hard to interpret because of the differences in the degree of improvement in the non-active/placebo arms of psychotherapy and pharmacology trials.

A second issue to note from the NICE guidelines is that they chose to include unpublished data in their review of pharmacological treatments, but not in their review of psychological treatments. Inclusion of unpublished pharmacological data reduced the overall effect sizes obtained, particularly for sertraline. While the logic of including unpublished data in this case is clear (notably where the reason for not publishing appeared to have been a failure to demonstrate an effect), it could be argued that pharmacological interventions were treated unduly harshly.

Although not specific to the NICE review, it is worth noting that recruitment of participants into pharmacological trials is harder than psychotherapy trials because there tends to be a preferential desire for psychological treatments among participants. As a consequence, the comparability of the people in pharmacology trials and psychotherapy trials needs to take account of the potential for pretreatment differences in the participants. Random allocation is critical to removing this potential source of difference.

The NICE guidelines concluded that pharmacotherapy should not be used as a first-line treatment for PTSD in preference to a trauma-focused psychological therapy. In clinical practice, the person's preference should also influence the choice of first-line psychological versus pharmacological treatment. Further, they found evidence only for paroxetine, mirtazapine, amitriptyline, and phenelzine, using the predetermined effect size of 0.5 (it needs to be recognized that potentially useful gains in a symptom subset, such as irritability, can exist despite small effect sizes on the main end-point measures).

Since completing our systematic review, the Cochrane Collaboration published their review of the evidence regarding pharmacological treatments in PTSD [14] (available at http://tinyurl.com/8tvda). They found 35 short-term randomized controlled trials of PTSD (4597 participants) to review, three

of which contained a maintenance component; five of those were unpublished. The authors concluded that, although no clear evidence exists to show that any particular class of medication is more effective or better tolerated than any other, the greatest number of trials showing efficacy to date, as well as the largest, have been with the SSRIs. On the basis of the data, the review recommends the SSRIs as first-line agents in the pharmacotherapy of PTSD, and supports their value in long-term treatment.

With regard to pharmacological treatments for PTSD, we found a small number of studies since the NICE review. Four studies examining SSRI antidepressants (one on citalopram, two on sertraline, one on fluoxetine) failed to provide evidence that these drugs were superior to placebo either in the treatment of PTSD symptoms or in the treatment of depression in the context of PTSD. Importantly, however, relatively large pre–post-treatment effects were noted in both groups (active and placebo). One trial of nefazadone showed more promising results, particularly in terms of hyperarousal, but is of limited relevance to these guidelines because it has been withdrawn in Australia due to adverse side-effects (liver damage). We found two new studies comparing different drug treatments for PTSD. In both cases, no differences were noted between sertraline and mirtazapine or between sertraline and nefazadone.

In interpreting the recommendations in this section, it is important to consider several caveats. First, it is important to note that all agents have the potential for negative effects. As such, adults with PTSD may be reluctant to accept pharmacological treatment and side-effects may lead to discontinuation. Side-effects associated with the SSRIs include headaches, nausea, loss of libido and agitation. The novel antipsychotics, particularly olanzapine, are associated with substantial weight gain and a risk of type II diabetes. Hence, the initiation and sustained involvement of PTSD sufferers in pharmacological treatment should not be considered as automatic.

Second, the inadequacy of data about the role of medication in conjunction with psychotherapy is a major deficiency. In clinical practice many people receive both CBT and medication, and participants in many psychotherapy trials have been stabilized on medication by the time of their participation. Third, a variety of other agents, including the mood stabilizers, novel antipsychotics, and antihypertensives, have been trialled in open-label studies, often with promising results. Finally, many people require a combination of medications but there is a paucity of clinical trial data to provide guidance about the effectiveness of different combinations of medication.

In summary, no new evidence has emerged in the last 2 years to warrant a substantial modification to the NICE recommendations. Notwithstanding the caveats here, we concur with their interpretation of the available evidence that larger clinical effects are likely to be obtained from trauma-focused psychological treatment than from pharmacological treatment in most sufferers of PTSD. We do not, however, believe that the available evidence warrants a selective recommendation of one SSRI over another in the treatment of PTSD. Rather, we have chosen to recommend the SSRIs generally as the first choice for medication, leaving the final decision regarding the specific drug to the clinician. We note the evidence summarized in the NICE findings regarding mirtazapine, amitriptyline, and phenelzine. With regard to the former, we are not convinced that the current research evidence is sufficient to recommend mirtazapine above other new generation antidepressants as a second-line pharmacological treatment. Although we recommend that clinicians note the research support for amitriptyline and phenelzine, we recognize that these medications have been used only rarely in routine clinical practice for some time and that they are more difficult to use. Thus, it makes little sense to recommend them as a first choice. The potential interaction of medications prescribed for any physical health issues with those prescribed for PTSD needs to be considered in treatment decisions.

In addition to the aforementioned evidence-based interventions, several GPPs are provided in relation to pharmacological interventions. On the question of when drug treatment is appropriate, it is suggested that antidepressant medication be considered for the treatment of PTSD in adults when the sufferer is unwilling or unable to engage in trauma-focused psychological treatment, is not sufficiently stable to commence trauma-focused psychological treatment, has not gained significant benefit from a trial of trauma-focused psychological treatment, or is experiencing severe dissociative symptoms that are likely to be exacerbated by trauma-focused therapy. Pharmacological interventions should be considered as an adjunct to psychological treatment where core PTSD or comorbid symptoms are of sufficient severity to significantly interfere with the sufferer's ability to benefit from psychological treatment. It is recommended that, where significant sleep disturbance or excessive distress does not settle in response to reassurance, simple psychological first aid, or other non-drug intervention, cautious use of hypnotic

Key recommendations for adults with PTSD

The following recommendations are based on the accumulated research evidence:

- Drug treatments for PTSD should not be used as a routine first- line treatment for adults, either by general medical practitioners or by specialist mental health professionals, in preference to trauma-focused psychological therapy. (A)
- Where medication is considered for the treatment of PTSD in adults, SSRI antidepressants should be the first choice for both general practitioners and mental health specialists. (B)
- Other new generation antidepressants (notably mirtazapine) and the older tricyclic antidepressants should be considered as a second-line option. Phenelzine should be considered for use by mental health specialists for people with treatment-resistant symptoms (B)
- When an adult sufferer with PTSD has responded to drug treatment, it should be continued for at least 12 months before gradual withdrawal (B)

medication may be appropriate in the short term. If sleep disturbance persists, a suitable antidepressant should be considered. The risk of tolerance and dependence are relative contraindications to the use of hypnotics for more than 1 month, except if their use is intermittent.

Where symptoms have not responded adequately to pharmacotherapy, it is recommended that consideration be given to increasing the dosage within approved limits, switching to an alternative antidepressant medication, adding risperidone or olanzapine as an adjunctive medication, or reconsidering the potential for psychological intervention. Best-practice prescribing procedures should be adopted when using drug treatments, including provision of information prior to commencement, regular monitoring, management of side-effects, assessment of suicide risk, and appropriate discontinuation and withdrawal practices.

Related recommendations

Although details will not be provided here for reasons of space, the guidelines explored the question of how best to sequence treatment when multiple conditions are present. The evidence base to inform this question was very limited, and no level A recommendations were made. However, in the context of comorbid PTSD and depression, the guidelines recommend that health practitioners consider treating the PTSD first, on the grounds that the depression will often improve as PTSD symptoms improve. Where the severity of comorbid depression precludes effective engagement in therapy, or is associated with high-risk suicidality, health practitioners are advised to manage the suicide risk and treat the depression prior to treating the PTSD. With regard to PTSD and substance use disorders, practitioners should consider treating both conditions simultaneously and the trauma-focused component of PTSD treatment should not commence until the person has demonstrated a capacity to manage distress without recourse to substance use and to attend sessions without being drug or alcohol affected. In the context of PTSD and substance use disorders where the decision is made to treat substance use disorders first, treatment should include information on PTSD and strategies to deal with PTSD symptoms as the person controls their substance abuse. (GPP)

Prevention: psychological and pharmacological interventions

These questions explored whether treatment for all persons exposed to a traumatic event is warranted, regardless of symptom development.

Evidence review and summary

The NICE review identified 10 studies that investigated non-drug treatments delivered to all survivors, normally within the first post-incident month [4]. Four different types of early intervention were identified: education, collaborative care, trauma-focused counselling, and psychological debriefing. One further study was identified by the current review (2004–2005), comparing the effectiveness of an early psychological intervention (single-session counselling) with no intervention [29]. That study reported improved postnatal depression scores at follow up when debriefing is delivered following traumatic childbirth. However, there was an additional intervention at 4–6 weeks that may have contributed to this outcome. The essential recommendations reported by NICE are therefore not altered by that additional study.

The data from these 11 adequately controlled studies suggest that there is unlikely to be a clinically important difference between psychological debriefing and control in the subsequent development of PTSD symptoms or developing a PTSD diagnosis. As such, it is recommended that structured debriefing interventions that include ventilation of emotions or narration of events should not be delivered on a routine basis. Instead, practitioners are advised to adopt a stance of 'watchful waiting' combined with the provision of general psychological first aid where required. Psychological first aid includes provision of information, as well as emotional and instrumental support. Additional assistance should be progressively provided according to individual need. The ventilation of emotions and narration of events on a routine basis is not supported by the evidence. However, individuals who wish to discuss the experience, and who demonstrate a capacity to tolerate associated distress, should be supported in doing so. Where adults exposed to trauma develop an extreme level of distress or are at risk of harm to self or others, immediate crisis intervention and possible psychiatric intervention should be provided.

Two studies of early intervention drug treatments were identified in the NICE review. Both studies compared intervention against no intervention. No studies were identified that compared one type of pharmacological intervention against another. No further studies were identified in the current review. Of the two studies examining preventative pharmacological interventions, one found no difference and one found results in favour of the placebo condition.

In addition to the aforementioned evidence-based recommendation, GPPs in the guidelines suggest that psychological first aid should be provided in a stepwise fashion tailored to the person's needs. Adults who wish to discuss the experience should be supported in doing so, but practitioners should keep in mind the potential adverse effects of excessive ventilation in those who are very distressed. Adults experiencing extreme distress or at risk of harm to self or others should be provided with immediate psychiatric intervention. In line with the NICE recommendations, we do not recommend the non-selective use of drug treatments as a preventive intervention with traumatized populations.

Key recommendations

Only one recommendation was possible on the basis of the accumulated research evidence:

- For adults exposed to trauma, structured psychological interventions such as psychological debriefing should not be offered on a routine basis (C).

Treatment for ASD: psychological and pharmacological interventions

Evidence review and summary

Nine studies were identified in the NICE review as falling within the category of early interventions for acute PTSD and acute stress disorder [4]. The studies explored five different types of intervention: trauma-focused CBT alone, with hypnosis, or with anxiety management; relaxation techniques; and a self-help booklet. No further studies were identified in the current review.

CBT was consistently identified as superior in its effect on outcomes to the alternate treatment and control conditions. The current guidelines are, therefore, consistent with those of NICE in recommending that practitioners consider trauma-focused CBT treatment for problems consistent with ASD and acute PTSD. While length and number of sessions have not been empirically tested as independent variables in their own right, the recommendations here are made with reference to the length and number of sessions reported in the cited controlled studies, expert consensus, and recommendations in the NICE guidelines. Note that recommended treatment is the same for ASD and acute PTSD.

No studies reporting on pharmacological treatments for ASD were identified in the NICE review and no further studies were identified in the current review. Thus, in view of the effectiveness of psychological interventions and in line with the NICE recommendations, we do not recommend drug treatments for use as an early intervention for ASD or related conditions. However, we do recognize the benefits of pharmacological interventions in terms of managing current acute (and chronic) symptoms in certain cases.

Although research evidence was not available to directly inform this question, the guidelines include a GPP recommending that trauma-focused interventions should not commence within 2 weeks of trauma exposure.

The recommendations with regard to pharmacological interventions in this section of the guidelines are

Key Recommendations

The following recommendations are based on the accumulated research evidence:

- Adults displaying ASD or PTSD reactions at least 2 weeks after the traumatic event should be offered trauma-focused CBT including exposure and/or cognitive therapy once a clinical assessment has been undertaken (A).
- For adults with ASD, treatment should be provided on an individual basis (B).
- For adults with ASD, trauma-focused CBT should, under normal circumstances, be provided in 5–10 sessions (C).
- For adults with ASD, 90 min should be allowed for sessions that involve imaginal exposure (C).
- Combination psychological interventions for ASD should not be used routinely (C).

limited to GPPs suggesting that drug treatments should not be used to treat ASD or related conditions (i.e., within 4 weeks of symptom onset) unless the severity of the person's distress cannot be managed by psychological means alone. It is suggested that antidepressants be considered for individuals who have a prior history of depression that has responded well to medication, particularly if a progressive pattern of clinically significant symptoms emerges. Short-term, cautious use of hypnotic medication or other drug treatment may be appropriate for adults with significant sleep disturbance.

Psychosocial rehabilitation

Evidence review and summary

A new search (1966–2005) was conducted on the question of psychosocial rehabilitation interventions for ASD and PTSD because it was not addressed in either the NICE [4] or VA/DoD [2] reviews. No studies comparing psychosocial rehabilitation to wait-list or to psychological or pharmacological treatment were identified. Similarly, no studies of combined psychosocial interventions or the effectiveness of adjunctive psychosocial interventions were identified.

Key recommendations

In the absence of any evidence-based outcome research, GPP recommendations were derived from a summary of the existing literature and expert consensus opinion. The guidelines recommend that practitioners focus on vocational, family and social rehabilitation interventions from the beginning of treatment. Where symptoms of PTSD have persisted for more than 3 months, psychosocial rehabilitation should be considered as an intervention to prevent or reduce disability associated with the disorder. It is suggested that psychosocial rehabilitation interventions may serve to reduce disability and improve functioning even when PTSD symptoms have not responded to evidence-based-treatment.

Economic considerations

Evidence review and summary

A new search (1966–2005) was conducted on the economic aspects of treatment for ASD and PTSD because this question was not addressed in either the NICE [4] or VA/DoD [2] reviews. Twelve papers were retrieved, five of which were considered potentially useful. Given the scarcity of available data, the breadth of social, personal and health costs associated with PTSD, and the large number of interventions assessed for the purpose of developing these guidelines, it was not possible to conduct a full evaluation of the cost-effectiveness of recommended interventions. Instead, key economic considerations and recommendations for further research are outlined in the guidelines.

Key recommendations

The guidelines recommend that a comprehensive assessment of the economic burden associated with PTSD be conducted and that economic evaluation studies should be conducted routinely alongside clinical evaluations of various treatment options. The guidelines also recommend a review of financing arrangements for the treatment of PTSD in Australia.

Table 1. Guideline websites

United Kingdom National Institute of Clinical Excellence	www.nice.org.uk/page.aspx?o=248114
United States American Psychiatric Association	www.psych.org/psych_pract/treatg/pg/prac_guide.cfm
United States Department of Veterans Affairs and Department of Defence	www.oqp.med.va.gov/cpg/PTSD/PTSD_Base.htm

Conclusion

The clinical practice guidelines outlined in the present paper not only provide Australia with its own NHMRC-endorsed guideline for the treatment of ASD and PTSD in adults, but add to the existing literature through the review of an additional 23 studies across psychological and pharmacological treatment for PTSD and preventative interventions for adults exposed to trauma. In addition, these guidelines integrate different foci of research questions and recommendations addressed across the range of international guidelines, and as such, assist in moving the field further forward.

While findings from the current review largely mirror comparable documents from other countries (notably the NICE recommendations), key differences between the Australian and overseas contexts highlight the need for local clinical practice guidelines. In particular, improved access to psychological treatment arising from the recent provision of public (Medicare) funding for psychology services has generated a requirement for nationally agreed standards of psychological treatment for these conditions. Importantly also, the guidelines contain advice on the application of recommendations to particular populations (such as indigenous people) that are specifically tailored to the needs of the Australian community.

Development of clinical practice recommendations is only the first step. While these ASD and PTSD guidelines are being released into a public environment increasingly receptive to mental health issues, dissemination to practitioners, service planners, and the public is the next challenge for the guideline development group. A broad range of strategies will be implemented to reach the diverse audiences for whom the guidelines are important; indeed, adaptations of this paper will appear in several other professional journals within Australia. Brief (1–2 page) summaries to guide busy practitioners through the decision-making process will be developed for primary and secondary care providers. Some practitioner concerns that guidelines may undermine the value of clinical judgement and may be interpreted by service planners in an overly proscriptive manner are expected. As such, dissemination messages intend to reinforce that the guidelines are one component of good decision making and that they recommend, not mandate, specific approaches.

It is anticipated that these guidelines will be reviewed in 5 years. The focus of these guidelines on adults with ASD and PTSD also highlights the need for the development of guidelines for children and young people experiencing problems consistent with ASD and PTSD specifically, and emotional problems following exposure to trauma more generally. The websites for these guidelines can be seen in Table 1.

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