NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Centre for Clinical Practice – Surveillance Programme

Recommendation for Guidance Executive

Clinical guideline
CG26: Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care

Publication date
March 2005

Previous review dates
March 2007
November 2011

Surveillance report for GE
June 2015

Surveillance recommendation
GE is asked to consider the proposal to update the following clinical questions in the guideline:

- For people exposed to trauma, do early psychological interventions improve patient outcomes compared with no intervention? For people exposed to trauma, does any early psychological intervention confer any advantage compared with other psychological intervention?
- For people exposed to trauma, do early pharmacological interventions improve patient outcomes compared with placebo? For people exposed to trauma, do any early pharmacological interventions confer any advantage over any other pharmacological interventions?
- For people with PTSD, do psychological treatments improve patient outcomes compared with no treatment? For people with PTSD, does any psychological treatment confer any advantage over any other psychological treatment?
- For people with PTSD, do pharmacological interventions improve patient outcomes compared with placebo? For people with PTSD, do any pharmacological interventions confer any advantage over any other pharmacological interventions?

GE is asked to note that this 'yes to update' proposal will not be consulted on.

Key findings

	Potential impact on guidance	
	Yes	**No**
Evidence identified from Evidence Update	✓	
Evidence identified from literature search	✓	

Feedback from Guideline Development Group			✓	
Anti-discrimination and equalities considerations				✓
Feedback from Triage Panel meeting			✓	
No update	Partial update	**Standard update**	Transfer to static list	Change review cycle
		✓		

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Surveillance review of CG26: Post-traumatic stress disorder (PTSD): The management of PTSD in adults and children in primary and secondary care

Recommendation for Guidance Executive

Background information

Guideline issue date: March 2005
2 year review: 2007 (no update)
6 year review: 2011 (no update)
10 year review: 2015
NCC: Mental Health

Outcome of the previous surveillance reviews

1. CG26 previously underwent a surveillance review in 2007 and 2011. At both the previous surveillance time points the review recommendation was that the guideline should not be considered for an update. Through the 2011 review, evidence was identified relating to: predictors of PTSD and identification of the disorder; early interventions for PTSD in adults; psychological treatment of PTSD in adults; pharmacological and physical interventions for PTSD in adults; and children and young people with PTSD. No new evidence was identified in these areas that was considered to change the direction of current guideline recommendations.

Outcome of ten year surveillance review

2. The Evidence Update on CG26: PTSD (published December 2013) was used as a source of evidence for this surveillance review. The Evidence Update found limited evidence that some medications not currently recommended (e.g. venlafaxine and fluoxetine) might also have value for the treatment of PTSD, and therefore may have a potential impact on the current guideline recommendations. A literature search was conducted for systematic reviews published from 12th July 2013 (the end of the search period for the Evidence Update) to 29th December 2014 and relevant abstracts were assessed.

3. Clinical feedback was obtained from members of the guideline development group (GDG) and the Evidence Update Advisory Group for PTSD through a questionnaire. All studies highlighted through the questionnaire that were relevant to the scope of the guideline and met the study type inclusion criteria have been summarised in the GDG/clinical perspective section of the decision matrix (table). In addition, one of the topic experts highlighted that the PTSD population inclusion criteria (at least 70% of participants needed to have a diagnosis of PTSD, other participants must have PTSD symptoms following a traumatic event) that was used in the original guideline may no longer be justified due to changes in the diagnostic criteria for PTSD since the guideline was developed (Diagnostic and Statistical Manual of Mental Disorders (DSM)). Any changes to this inclusion criteria could have implications for the whole guideline.

4. New evidence that may impact on recommendations was identified relating to the following areas within the guideline:

Clinical area 1: Recognition of PTSD – *recommendations* 1.3.3.1-1.3.3.2		
Q: Are there routine screening methods that may be valuable in predicting who will develop PTSD? Are there routine methods that may be valuable in confirming a clinical diagnosis of PTSD?		
Evidence summary	**GDG/clinical perspective**	**Impact**
Evidence identified from 6-year surveillance review (2011) ***Adults*** The results of one study indicated that the Clinician Administered PTSD Scale (CAPS) was an accurate and reliable instrument for identifying PTSD among victims of urban violence[1]. One study found that both the Davidson Trauma Scale (DTS) and the Startle, Physiological Arousal, Anger and Numbness (SPAN) scale were accurate screening tools for detecting people at risk of PTSD within 2 weeks of a traumatic event[2]. Two studies assessing the diagnostic accuracy of the Primary Care-PTSD Screen (PC-PTSD) were identified. The results of one of the studies supported the utility of the PC-PTSD although analysis showed that it was outperformed by the Davidson	Clinical feedback highlighted that a new DSM criteria (DSM-V) had been introduced since the guideline was developed. Feedback suggested that revisions of the DSM have enforced different criteria for PTSD. It was also highlighted that with the introduction of DSM-V, new assessment tools had been developed, such as the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) and PTSD Checklist for DSM-5 (PCL-5).	**Potential impact on recommendations** The studies identified at the 6-year review evaluated the utility and validity of different diagnostic tools for PTSD. However, studies compared different checklists in different populations making comparisons between studies difficult. As such, it was considered that there was insufficient consistent new evidence to update the current guideline recommendations relating to recognition of PTSD in adults and children. GDG feedback highlighted the changes in relation to the diagnostic criteria for PTSD in the new DSM-V. As a result of the diagnostic criteria, new diagnostic tools have been

Trauma Scale and SPAN screening tools[3]. The results of a second study indicated that the PC-PTSD could be a useful screening instrument for PTSD in patients with substance use disorder[4]. The diagnostic accuracy of the Personality Assessment Inventory (PAI PTSD LOGIT function) for the assessment of PTSD in a community-based sample of women was evaluated in one study. The results of the study indicated that the PTSD LOGIT function performed well with results consistent with more commonly used self-report PTSD scales such as the Davidson Trauma Scale[5]. One study was identified which compared 7 self-report measures of PTSD in trauma-exposed adults (n=239). The results showed that the Posttraumatic Stress Diagnostic Scale and PTSD Checklist performed best across the outcome measures tested[6]. Four studies were identified which indicated that the PTSD Checklist was an effective diagnostic tool for identifying PTSD in different sub-populations[7-10]. Another study was identified which compared 4 brief PTSD screening tests (PTSD Symptom Checklist-Civilian Version, SPAN, Breslau's Scale and Primary Care PTSD Screen). The results indicated that all 4 tests were diagnostically adequate although the Primary Care PTSD Screen appeared to be the best single screening test[11]. One study was identified which found that the Impact of Event Scale (IES) had a lower sensitivity and specificity for diagnosing PTSD in war-related trauma victims (n=74) than the Self-rating Inventory for Posttraumatic Stress Disorder[12]. Two studies evaluating the Posttraumatic Diagnostic Scale (PDS)	The GDG also stated that the International Classification of Diseases-11 (ICD-11) is in development (expected publication date of 2017) with proposed new diagnostic criteria for complex trauma and a system to differentiate between simple and complex PTSD.	developed. These changes to the diagnostic criteria and the diagnostic factors that may trigger the use of the guideline have the potential to impact on the current guideline recommendations relating to recognition and identification of PTSD.

were identified. One study evaluated a range of symptom combination scoring rules applied to the PDS in 4 groups of trauma survivors (n=522). The results indicated that the most stable results were achieved for the PDS total scale and a new subset of 8 items[13]. The results of the second study showed that the PDS had a sensitivity and specificity of 68% and 65% respectively, for detecting HIV-related PTSD[14]. Two studies assessing the accuracy of the Trauma Screening Questionnaire (TSQ) were identified. One study compared the TSQ to the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) for diagnosis of PTSD. The results showed that specificity of the tool was lowest immediately after the disaster but increased in the following 18 months[15]. However, a second study reported that the TSQ had high sensitivity and specificity for predicting the development of PTSD following assault[16]. One study was identified which compared the Traumatic Life Events Questionnaire (TLEQ) to the single-question traumatic event assessment in the Structured Clinical Interview for DSM-IV. PTSD diagnoses were higher when the TLEQ measure was used compared with the SCID[17]. One study was identified which found that the Screen for Posttraumatic Stress Disorder (SPTSS) had high sensitivity and specificity for diagnosing PTSD[18]. A study evaluating a 4-item screen for PTSD in patients with substance use disorders (n=97) indicated that the tool showed good diagnostic accuracy for detecting PTSD[19]. The results of one study showed that Breslau's 7-item screen is a		

reliable screening tool for PTSD for use in primary care[20]. One study was identified which indicated that the Screening Questionnaire for Disaster Mental Health (SQD) showed good validity as a screening tool for PTSD[21]. The results of one study found that a 4-item primary care PTSD (PC-PTSD) screener was a more effective screening tool than a single-item PTSD screener (SIPS) for primary care[22]. The results of a study of the UK-Post-Traumatic Stress Syndrome 14-Questions Inventory (UK-PTSS-14) screening tool assessing PTSD symptoms in intensive care unit (ICU) patients indicated that the tool was most reliable at two months post-discharge from the ICU[23]. One study was identified which evaluated a 4-item screen for PTSD in patients with depression compared with the PTSD checklist (PCL-17) as a reference standard. The study found that the 4-item screen had useful likelihood ratios for scores of 0 and 3[24]. Four studies were identified which evaluated diagnostic test accuracy of different screening tools for PTSD in adults in flood districts, following assault, following injury and in injured adolescents. The studies reported that the tools were effective in predicting the development of PTSD[25-28]. ***Children*** One study was identified which concluded that the DSM-IV model for PTSD symptom categories was a reasonable fit for child data. However, alternative models suggest that potential improvements		

are needed to the diagnostic criteria for PTSD in children[29]. Another study was identified which investigated diagnostic algorithms for PTSD. The study found that the DSM-V algorithm was the most sensitive and valid measure of PTSD in pre-school children[30]. A study was identified which evaluated the Child Stress Disorders Checklist (CSDC) to measure traumatic stress symptoms in injured children (n=147). The results indicated that the short form of the CSDC was a reliable test for traumatic stress reactions, comparable with that of the full scale CSDC[31]. Two studies were identified relating to the Child Behaviour Checklist-Posttraumatic Stress Disorder (CBCL-PTSD) scale. One of the studies found that a modified version of the CBCL-PTSD was an effective tool for screening traumatised, preschool-age children (n=62) for PTSD[32]. However, the results of another study indicated that the CBCL-PTSD did not reach significant sensitivity or specificity to be a valuable screening tool for PTSD in preschool-age children[33]. The Children's Revised Impact of Event Scale (CRIES) was evaluated in children and adolescents (n=63) in one study identified. The results of the study indicated that both the CRIES-8 and the CRIES-13 were effective screening tools for identifying children with PTSD[34]. One study was identified which demonstrated the validity of the Post-Traumatic Stress Disorder Scale – Child Form (PTSDS-CF) for screening for PTSD in children who have experienced trauma[35].		

The development of a brief screening instrument for PTSD among young victims of natural disasters was discussed in one study. The study concluded that the brief screening instrument being tested was valid, reliable and predictable[36]. A follow-up of this study described the construction of a short screening scale for PTSD also concluding that the scale was valid and reliable[37]. Evidence identified from Evidence Update (2013) No relevant studies identified. Evidence identified from 10-year surveillance review (2015) No relevant studies identified.		
Clinical area 2: Early interventions (psychological) – *recommendations* 1.9.1.2-1.9.1.6, 1.9.1.8, 1.9.5.1		
Q: For people exposed to trauma, do early psychological interventions improve patient outcomes compared with no intervention? For people exposed to trauma, does any early psychological intervention confer any advantage compared with other psychological intervention?		
Evidence summary	**GDG/clinical perspective**	**Impact**
Evidence identified from 6-year surveillance review (2011) A Cochrane review was identified which evaluated the efficacy of multiple session early psychological interventions introduced within 3 months of a traumatic event in preventing PTSD. The results of the review indicated that no psychological intervention could be recommended for routine use following traumatic events and that multiple session interventions may have an adverse effect on some individuals[38]. *Trauma-focused CBT* Three systematic reviews were identified which concluded that trauma-focused CBT within 3 months of a traumatic event was more effective than waiting list or supportive counselling conditions in reducing symptoms and preventing chronic PTSD[39-]	Clinical feedback was received suggesting that there may be new evidence available relating to the use of debriefing and Psychological First Aid immediately after disasters or traumas affecting different occupational groups (e.g. aid workers). There was also concern about the potential negative impact of the guideline's 'Do not do' recommendation for psychological debriefing.	**Potential impact on recommendations** The evidence identified at both the 6-year surveillance review and in the Evidence Update adds to the evidence base for early psychological interventions. It supports the current guideline recommendations which state: trauma-focused CBT should be offered to those with severe post-traumatic symptoms or with severe PTSD in the first month after the traumatic event; and to people who present with PTSD within 3 months of a traumatic event. A small study was identified through the

[41]. *Writing and self-help* The effect of writing and self-help information on severity of psychological symptoms in traumatic injury patients at risk of developing PTSD was assessed in a RCT. The results of the study did not support the use of writing as a targeted early intervention technique for traumatic injury patients at risk of developing PTSD[42]. A RCT was identified which examined whether the provision of a diary of a patient's intensive care unit stay had an effect on the development of PTSD symptoms. The results of the study indicated that the incidence of new cases in the intervention group was lower compared with control patients[43]. The efficacy of providing self-help information to patients attending Accident and Emergency who may be at high-risk of developing PTSD was assessed in a RCT. The study found that PTSD symptoms decreased over time but no differences were observed between the two groups[44]. *Caregiver-child interventions* A RCT was identified which evaluated the effectiveness of the Child and Family Traumatic Stress Intervention (CFTSI), a caregiver-child intervention, provided within 30 days of a traumatic event. The results indicated that CFTSI was more effective in preventing the development of PTSD than control[45]. <u>Evidence identified from Evidence Update (2013)</u> *CBT approaches*	The GDG also highlighted that there is new evidence available on improving prevention and early detection of PTSD in high risk hospital groups, such as mothers giving birth and people in high dependency/intensive care settings who are heavily sedated. It was also stated that there is emerging evidence for prophylactic psychological treatments. No further details were provided.	Evidence Update relating to critical incident stress debriefing (CISD) which suggested a beneficial impact on outcomes with no adverse effects on post-traumatic stress or psychological distress. In addition, GDG feedback indicated that there may be new evidence available relating to debriefing. The guideline found a lack of evidence for CISD as a group intervention for teams of emergency workers, military personnel or others who are used to working together. As a result, no recommendations were made for CISD. However, the guideline does state that brief, single-session interventions (often referred to as debriefing) that focus on the traumatic incident should not be routine practice when delivering services. GDG feedback was received raising concern about the negative impact of this recommendation. No new evidence was identified at the 10-year surveillance review relating to debriefing, however, the search was limited to systematic reviews. In light of the evidence identified in the Evidence Update and GDG feedback received, it may be appropriate to reconsider the recommendation which states that debriefing should not be routine practice.

A RCT was identified comparing modified prolonged exposure therapy with assessment only in people attending an emergency department (n=137) following a trauma. At 4 and 12 week follow up, the results showed a reduction in PTSD symptoms in the exposure therapy group compared with assessment only[46]. A systematic review (including 19 studies) of interventions delivered to adults within 3 months of exposure to a traumatic event was identified. For most interventions evidence was either lacking or insufficient to draw conclusions. However, there was some indication that brief trauma-focused CBT might be the preferred choice for reducing PTSD symptom severity in adults with acute stress disorder[47]. A RCT of a cognitive processing therapy (CPT) intervention for PTSD in adults (n=100) with chronic PTSD following trauma was identified. Patients received immediate CPT or initial symptom-monitoring delayed treatment, with an option to crossover to CPT after 10 weeks. Compared with the symptom monitoring group, there was a significantly greater additional reduction in PTSD outcomes with CPT. The study also found that patients recovered at a variable rate with the treatment[48]. A systematic review and meta-analysis (including 7 studies) evaluating the characteristics and efficacy of early psychological interventions in children and young people after a single trauma was identified. Most of the interventions examined were based on elements of behavioural and cognitive therapy. The review found no significant impact of the interventions on PTSD symptoms either at follow-up within 3 months or after 3–8 months[49]. *Debriefing*		

A RCT of critical incident stress debriefing (CISD) with volunteer fire-fighters (n=67) following a shared traumatic event was identified. The results indicated that CISD was more effective than screening and stress management education in terms of reduced alcohol consumption and increased quality of life. There was also no significant effect on post-traumatic stress or psychological distress from CISD[50]. <u>Evidence identified from 10-year surveillance review (2015)</u> No relevant studies identified.		
Clinical area 3: Early interventions (pharmacological) – *recommendations* 1.9.1.7		
Q: For people exposed to trauma, do early pharmacological interventions improve patient outcomes compared with placebo? For people exposed to trauma, do any early pharmacological interventions confer any advantage over any other pharmacological interventions?		
Evidence summary	**GDG/clinical perspective**	**Impact**
<u>Evidence identified from 6-year surveillance review (2011)</u> No relevant studies identified. <u>Evidence identified from Evidence Update (2013)</u> No relevant studies identified. <u>Evidence identified from 10-year surveillance review (2015)</u> A systematic review (including 9 RCTs, n=345) was identified which assessed the effects of pharmacological interventions for the prevention of PTSD in adults following exposure to a traumatic event. In 4 of the studies (n=165), hydrocortisone was found to be effective in preventing the onset of PTSD[51].	GDG feedback suggested that there is emerging evidence for prophylactic treatments for PTSD, for example, hydrocortisone injections. The results of a systematic review and meta-analysis highlighted by the GDG indicated that hydrocortisone given within the first month after a traumatic event reduced the risk of developing PTSD (5 studies, n=164)[52].	**Potential impact on recommendations** The guideline found limited evidence suggesting a difference favouring hydrocortisone over placebo on preventing the development of PTSD. As such, no recommendations were made for the use of hydrocortisone injections as an early intervention for PTSD. Hydrocortisone injections are licensed for use in the UK, however, not specifically for PTSD. However, the new evidence together with GDG feedback suggest that there is now more evidence in this area which may enable a recommendation to be made for use of hydrocortisone outside the terms of its marketing authorisation.

Clinical area 4: Psychological interventions – *recommendations* 1.9.2.1-1.9.2.8, 1.9.5.2-1.9.5.3, 1.9.5.5-1.9.5.6		
Q: For people with PTSD, do psychological treatments improve patient outcomes compared with no treatment? For people with PTSD, does any psychological treatment confer any advantage over any other psychological treatment?		
Evidence summary	**GDG/clinical perspective**	**Impact**
Evidence identified from 6-year surveillance review (2011) ***Adults*** Four systematic reviews were identified which evaluated the use of psychological interventions for treatment of PTSD. The reviews concluded that there is evidence that individual and group trauma-focused CBT, eye movement desensitisation and reprocessing (EMDR) and stress management are effective in the treatment of PTSD[53-56]. A systematic review was identified which found inconclusive evidence that debriefing and counselling are effective while CBT and EMDR may improve PTSD status in women with PTSD after childbirth[57]. *Eye movement desensitisation and reprocessing (EMDR)* A systematic review and RCT evaluating the use of EMDR in alleviating the symptoms of PTSD in combat veterans[58] and occupation-based PTSD[59] respectively, concluded that the evidence for this intervention in these populations is limited. A RCT was identified which compared the efficacy of EMDR to fluoxetine or placebo in adult-onset trauma survivors. The results of the study indicated that EMDR was more successful than fluoxetine in achieving a sustained reduction in PTSD symptoms[60].	Clinical feedback indicated that there is now more evidence for psychological interventions in different sub-populations e.g. ambulance, military, victims of childhood abuse, refugees and victims of torture, victims of domestic violence, patients with comorbid alcohol and substance abuse problems. The following additional studies were highlighted by the GDG: • A meta-analysis of RCTs demonstrated that psychological interventions were effective treatments for PTSD in adult survivors of childhood abuse. Of the different interventions evaluated, individual trauma-focused treatments were the most effective intervention[123]. • A RCT of patients with chronic PTSD (n=121) found that 7-day intensive	**Potential impact on recommendations** The new evidence identified at both the 6 and 10-year surveillance reviews and in the Evidence Update highlights the beneficial effect of trauma-focused CBT as interventions for PTSD in adults and children. It therefore supports the current guideline recommendations which state: • All PTSD sufferers should be offered a course of trauma-focused psychological treatment • Children and young people with PTSD, including those who have been sexually abused, should be offered a course of trauma-focused cognitive–behavioural therapy adapted appropriately to suit their age, circumstances and level of development. While the evidence supports current recommendations for trauma-focused treatment for all populations, clinical feedback indicated that there is now more evidence for psychological interventions in different sub-populations as well as different formats and methods of delivery. This is reflected in both

Cognitive Behavioural Therapy (CBT) approaches 13 RCTs, including differing patient populations, generally indicated a beneficial effect of CBT on PTSD symptoms[61-73]. Three RCTs on narrative exposure in people with PTSD indicated that this intervention improved PTSD symptoms compared with the control groups[74-76]. Two RCTs were identified which reported a greater reduction in PTSD symptoms in those receiving prolonged exposure (PE) therapy compared to control[77,78]. A RCT comparing imaginal exposure (IE) therapy combined with imagery rescripting (IR) with IE alone in patients with PTSD was identified. The results indicated that a reduction in PTSD severity did not differ significantly between groups although IE+IR was more acceptable for patients and therapists[79]. Another RCT found that combined IE, in vivo exposure (IVE) and cognitive restructuring (CR) was more effective than IE alone, IVE alone and combined IE/IVE in reducing PTSD symptoms[80]. Three small RCTs were identified which concluded that internet-based CBT was effective in improving PTSD symptoms compared with control[81-83]. A RCT assessing the effectiveness of a single session of behavioural treatment compared with repeated assessments on PTSD symptoms among earthquake survivors was identified. At 8 weeks post-treatment, an improvement in PTSD symptoms was observed in the treatment group[84]. One RCT was identified which evaluated the efficacy of CBT plus	cognitive therapy was as effective as 3 months of standard weekly cognitive therapy at reducing symptoms of PTSD[124]. • A RCT of adults with PTSD, Major Depressive Disorder (MDD) or both (n=49) examined the effectiveness of Interpersonal Psychotherapy (IPT) and treatment as usual (TAU) compared to TAU alone. At 3 months follow-up, there was a greater reduction in PTSD and MDD diagnoses in the IPT+TAU group compared to those receiving TAU alone[125]. • A RCT comparing IPT, prolonged exposure (an exposure-based exemplar), and relaxation therapy in 110 unmedicated patients who had chronic PTSD demonstrated noninferiority of individual IPT for PTSD compared with the other interventions[126]. • A RCT was identified which compared supportive counselling followed by CBT	the studies identified through the literature search and in the studies highlighted by the GDG. As such, it may be appropriate to reconsider the evidence base for psychological treatments in relation to the effectiveness of different types of treatment for different groups. In addition, there is new evidence that indicates a benefit of delivering trauma-focused cognitive-behavioural intervention alongside a substance use disorder intervention. The guideline currently recommends that for PTSD sufferers with drug or alcohol dependence, or in whom alcohol or drug use may significantly interfere with effective treatment, healthcare professionals should treat the drug or alcohol problem first. The evidence could therefore impact on this recommendation.

acupoint stimulation compared with CBT alone for treatment of PTSD. The study found that PTSD symptoms reduced in both groups after treatment[85]. *Imagery rehearsal therapy* A RCT was identified which indicated that imagery rehearsal therapy did not lead to a substantial improvement in PTSD symptoms in war veterans compared with a control group[86]. *Interpersonal psychotherapy* The efficacy of group interpersonal psychotherapy in women with PTSD was assessed in a RCT. The results of the study indicated that interpersonal psychotherapy was more effective than waitlist control in reducing PTSD symptoms[87]. *Psychoeducation* A RCT was identified which assessed the efficacy of psychoeducation in treating PTSD symptoms. Patients were randomised to conditions with and without PTSD psychoeducation or to waitlist control. The results of the study indicated that both interventions reduced PTSD symptoms compared with waitlist, although a greater reduction in symptoms was observed in the condition without psychoeducation group[88]. *Biofeedback* The effectiveness of biofeedback compared with treatment as usual for PTSD was assessed in a controlled trial. The results of the study indicated that biofeedback did not produce an improvement in PTSD symptoms[89]. *Writing* The effectiveness of an expressive writing intervention for people	(Support/CBT) or emotion regulation training followed by CBT (Skills/CBT) in people with PTSD (n=70). The results indicated that response to CBT may be enhanced in people with PTSD by preparing them with emotion regulation skills[127]. • A systematic review reported that an individual trauma-focused cognitive-behavioural intervention, delivered alongside substance use disorder intervention, was more effective than treatment as usual/minimal intervention for PTSD severity post-treatment, and at subsequent follow-up[128]. It was suggested by the GDG that new evidence was available relating to the effect of stress management and group therapy, however, no further details were provided. In relation to service delivery, feedback indicated that 22 Major	

with PTSD was assessed in a RCT. No changes in PTSD symptoms were observed although improvements in mood were observed in the expressive writing group[90]. *Video-teleconferencing* A RCT was identified comparing the effectiveness of video-teleconferencing with in-person service delivery of a group psychotherapy intervention for PTSD-related anger problems. The study found an improvement in symptoms in both groups[91]. *Virtual reality based therapy* A RCT was identified which compared virtual reality-graded exposure therapy (VR-GET) with treatment as usual for combat-related PTSD. The results of this study indicated some benefit of VR-GET on PTSD symptoms[92]. Another RCT comparing virtual reality exposure therapy within a computer generated environment with present-centred therapy in war veterans with PTSD was identified. The results of the study indicated no significant differences between the two treatments[93]. *Skills training* A RCT was identified which evaluated the effectiveness of skills training in affect and interpersonal regulation (STAIR) followed by exposure for treatment of PTSD symptoms. The STAIR/Exposure intervention demonstrated a greater beneficial effect compared with supportive counselling followed by exposure and skills training followed by supportive counselling[94]. *Body oriented therapy* A small RCT was identified which assessed the feasibility of mindful awareness in body-oriented therapy for female veterans with PTSD and chronic pain. The study concluded that a longer	Trauma Centres have been developed in the UK with physical and mental health services being delivered to people who have experienced major physical trauma. In addition, since the guideline was published, Improving Access to Psychological Therapies (IAPT) services have been developed which offer psychological based interventions to people who are suffering from PTSD. GDG feedback highlighted developments in terms of different delivery formats for treatments, such as group and intensive treatment formats, virtual reality (e.g. Virtual IRAQ) and self-help. There are also different methods of delivery such as intensive TF-CBT and guided self-help. Feedback was received from the GDG regarding inequalities in access to services. In particular, access to IAPT services by older people, non-English speakers and asylum seekers.	

intervention period is required to determine the effectiveness of the intervention on this population[95]. *Spiritual programmes* A small RCT was identified which found some beneficial effect of a spiritual programme in managing symptoms of PTSD[96]. ***Children and young people*** *EMDR* A small RCT was identified which found that EMDR reduced symptoms of PTSD in children compared with waiting list control[97]. *CBT approaches* Three RCTs were identified which, although including differing patient populations and comparing CBT with different comparator groups, generally indicated a beneficial effect of CBT on PTSD symptoms[98-100]. Three RCTs evaluating the efficacy of narrative exposure therapy in children with PTSD were identified. The studies reported variable results with a beneficial effect of the intervention observed in two studies [101,102] but not in another[103]. A RCT was identified which examined the efficacy and maintenance of developmentally adapted prolonged exposure (PE) therapy versus active control time-limited dynamic therapy for adolescents with PTSD. A beneficial effect of PE therapy on PTSD symptoms was observed at six and 17 month follow-up[104]. *Mind-body group programme*	Finally, GDG feedback indicated that there have been changes in relation to the costs of delivering psychological interventions compared to the initial costings in the guideline. These are mainly due to increases in the costs of staffing.	

A RCT was identified which found that a mind-body skills group programme reduced PTSD symptoms in adolescents[105]. *Psychoeducation* A RCT evaluating the effectiveness of early single-session psychoeducation in children following a road traffic accident was identified. No significant differences in posttraumatic symptoms between the intervention or control group were observed at two or six months follow-up[106]. *School-based interventions* A study evaluating the efficacy of a 12-session school-based structured intervention on PTSD in children found that it was more effective than a religious class control in reducing PTSD symptoms[107]. *Alternative therapies* The effectiveness of a spiritual-hypnosis assisted therapy (SHAT) for treatment of PTSD in children (n=226) was evaluated in a RCT. At 2-year follow-up there was an improvement in PTSD symptoms in the SHAT group compared to control[108]. <u>Evidence identified from Evidence Update (2013)</u> The results of a systematic review and meta-analysis (including 112 RCTs) indicated that all psychotherapies (including cognitive therapy, exposure therapy, and EMDR) grouped together were more effective than control for the treatment of adults with PTSD[109]. A second systematic review (including 92 RCTs) also found that different trauma-based psychological interventions were more effective than an inactive comparator for the treatment of adults with PTSD[110].		

A Cochrane review (including 14 studies) assessing psychological treatments for children and young people with PTSD was identified. The review found that psychological therapies significantly reduced PTSD and symptoms of PTSD in the short and medium term but not in the long term[111]. *CBT approaches* A RCT was identified which evaluated cognitive behavioural conjoint therapy for patients with PTSD and their partners (n=40). The study found that patients receiving therapy showed greater improvement in PTSD symptom score compared with the waiting list group[112]. A RCT (n=103) comparing concurrent treatment of PTSD and substance abuse using prolonged exposure or usual treatment was identified. The results showed that PTSD symptoms were significantly reduced after 9 months with both prolonged exposure and usual treatment, although the impact of prolonged exposure was significantly greater[113]. A RCT was identified which evaluated community-implemented trauma therapy for PTSD in former child soldiers (n=85) in Northern Uganda. Participants were randomised to narrative exposure therapy, an academic catch-up programme with elements of supportive counselling or waiting list. The results showed that PTSD symptom severity improved significantly more with narrative exposure therapy than academic catch-up and waiting list[114]. A systematic review (including 22 studies) on interventions to treat children exposed to traumatic events was identified. The review found limited evidence of benefit of psychological interventions,		

including TF-CBT, CBT, other cognitive-behavioural approaches with trauma or grief components, or EMDR[115]. A RCT which examined psychotherapy for survivors of sexual violence (n=405) in the Democratic Republic of Congo was identified. Participants were randomised to CPT or individual support. The results showed that PTSD symptoms improved with both interventions but to a greater extent with CPT at the end of treatment and at 6 month follow up[116]. *Other treatments* A RCT investigating the impact of attentional bias modification treatment for outpatients (n=102) with chronic PTSD was identified. At the end of treatment, PTSD symptoms improved in both the intervention and control group, with no significant difference between the two groups[117]. A RCT comparing treatment with a psychological intervention (Trauma Affect Regulation: Guide for Education and Therapy, TARGET) with relational supportive therapy (enhanced treatment as usual) in girls with self-reported delinquency and full or partial PTSD (n=59) was identified. The study found that both treatments resulted in improvements in the PTSD criteria of intrusion, avoidance, hyperarousal and total symptoms but there was no consistent significant difference between interventions[118]. <u>Evidence identified from 10-year surveillance review (2015)</u> An update of a Cochrane review which assessed the effects of psychological therapies for the treatment of adults with chronic PTSD was identified. The results indicated that individual trauma-focused cognitive behavioural therapy (28 studies, n=1256) and EMDR (6 studies, n=183) were more effective than waitlist/usual		

care in reducing the severity of PTSD symptoms[119]. A systematic review and meta-analysis (including 26 RCTs) investigating the effects of EMDR on the symptoms of PTSD was identified. The study revealed that EMDR reduced symptoms of PTSD, depression, anxiety and subjective distress in PTSD patients[120]. A systematic review (including 9 RCTs) of psychological interventions for torture survivors found that at 6-month follow-up, narrative exposure therapy and CBT were effective in reducing distress and PTSD symptoms compared with control (4 studies, n=86)[121]. A systematic review of psychoanalytic/psychodynamic psychotherapy for children and adolescents who have been sexually abused was identified. The review found no studies comparing psychoanalytic / psychodynamic psychotherapy with treatment as usual, no treatment or waiting list control[122].		
Clinical area 5: Pharmacological and physical interventions – *recommendations* 1.9.1.7, 1.9.3.1-1.9.3.15, 1.9.5.4		
Q. For people with PTSD, do pharmacological interventions improve patient outcomes compared with placebo? For people with PTSD, do any pharmacological interventions confer any advantage over any other pharmacological interventions?		
Evidence summary	**GDG/clinical perspective**	**Impact**
Evidence identified from 6-year surveillance review (2011) ***Adults*** *Paroxetine* A RCT was identified which indicated that paroxetine was superior to placebo in improving symptoms of chronic PTSD[129]. A second RCT was identified which compared paroxetine to mirtazapine in	GDG feedback highlighted a systematic review and meta-analysis (including 51 studies) which found that SSRIs were more effective at reducing symptoms of PTSD compared to placebo[159].	**Potential impact on guideline recommendations** The guideline currently recommends that drug treatments for PTSD should not be used as a routine first-line treatment for adults. Where drug treatment is considered appropriate, the guideline recommends paroxetine or

patients with PTSD. The results demonstrated that there were no differences in PTSD symptoms between the two treatment groups[130]. *Sertraline* Two RCTs were identified relating to the treatment of PTSD with sertraline. One of the studies found that sertraline was more effective than placebo for the treatment of PTSD[131]. However, the second RCT demonstrated no differences in effectiveness between sertraline and placebo[132]. *Ziprasidone* A small RCT evaluating the effect of ziprasidone as an adjunct to sertraline during the first 4 weeks of treatment for PTSD was identified. No results were reported in the abstract, however, several participants dropped out of the ziprasidone group due to adverse side effects[133]. Another RCT was identified which found that risperidone was more effective than placebo in the treatment of PTSD in women[134]. *Atypical antipsychotics* Two systematic reviews were identified which found that atypical antipsychotic medications have a modest beneficial effect in the treatment of PTSD[135,136]. *SSRIs* The results of a Cochrane review indicated that medication for PTSD reduced symptom severity compared with placebo, with greatest evidence of effectiveness for selective serotonin reuptake inhibitors (SSRIs)[137,138].	Feedback also suggested that there is emerging evidence for novel pharmacological treatments such as MDMA, Synthetic cannabinoids, Oxytocin, Propanolol and Stellate Ganglion Blockades. No further details were provided.	mirtazapine for general use, and amitriptyline or phenelzine for initiation only by mental health specialists. Currently only paroxetine and sertraline have a UK license for use in PTSD. New evidence has been identified at the 6 year surveillance review, in the Evidence Update and from GDG feedback relating to pharmacological treatment for PTSD in adults. At the 6 year surveillance review it was noted that there was heterogeneity across the studies in terms of the comparators used and reported results. However, the Evidence Update and evidence identified by the GDG provide additional evidence relating to the effectiveness of pharmacological treatments for PTSD, including those not currently recommended by the guideline, such as venlafaxine and fluoxetine. As such, the evidence may now indicate a possible need to update the guidance in this area. The guideline does not currently recommend any pharmacological treatments for children with PTSD. No evidence was identified which would impact on this recommendation.

Fluoxetine The findings of a systematic review indicated that fluoxetine was an effective treatment for PTSD with mild adverse effects[139]. One RCT was identified which compared fluoxetine with moclobemide and tianeptine in people with PTSD. All 3 treatments led to improvement in PTSD symptoms with no significant differences observed between groups[140]. *Fluvoxamine* A RCT comparing the efficacy of fluvoxamine with reboxetine in patients with motor vehicle accident related PTSD was identified. Both treatments led to improvements in the clinical scales measured with no significant differences observed between the two groups[141]. *Venlafaxine* Two RCTs were identified which indicated that venlafaxine was effective for the treatment of PTSD[142,143]. *Valproate* The results of a systematic review indicated that valproate was generally effective for the treatment of symptoms of PTSD[144]. *Glucocorticoids* A RCT assessing the effectiveness of glucocorticoids for PTSD was identified. After 1 week, glucocorticoids reduced PTSD symptoms compared to placebo. However, reduction of symptoms degraded at 1-month follow-up[145]. *Bupropion*		

A small RCT was identified which found no difference between bupropion sustained release and placebo, with both groups reporting a reduction in PTSD symptoms[146]. *Tiagabine* A RCT evaluating the effectiveness of tiagabine in adults with PTSD (n=232) was identified. The study found no differences between tiagabine and placebo in the treatment of symptoms of PTSD[147]. The effect of tiagabine was also assessed in a small RCT of adult outpatients with PTSD (n=29). The study found that continued treatment with tiagabine was associated with increased likelihood of remission from PTSD[148]. *Topiramate* The results of a RCT of male veterans with PTSD (n=40) found that topiramate was no more effective than placebo in the reduction of PTSD symptom severity[149]. Another small RCT of adults with PTSD (n=38) also found no differences between topiramate and placebo in the severity of PTSD symptoms. However, topiramate did reduce reexperiencing symptoms compared to placebo[150]. *Divalproex* Two RCTs (n=29, 82) were identified which indicated that divalproex was not effective in the treatment of PTSD[151,152]. *Prazosin* Two systematic reviews and 2 RCTs were identified which found that prazosin had some beneficial effect on symptoms of insomnia and nightmares in PTSD[153-156]. ***Children and Young People***		

One RCT was identified which showed no difference in effectiveness between sertraline and placebo for the treatment of PTSD in children and adolescents[157]. <u>Evidence identified from Evidence Update (2013)</u> A systematic review was identified which assessed the effect of a number of pharmacological treatments for adults with PTSD. The review found moderate evidence that fluoxetine, paroxetine, sertraline, topiramate and venlafaxine improved PTSD symptoms. However, little direct evidence was found comparing efficacy between different pharmacological treatments[110]. Another systematic review and meta-analysis also reported that paroxetine, sertraline, fluoxetine, risperidone, topiramate, and venlafaxine were all effective treatments for PTSD[109]. A RCT was identified which evaluated the effect of administering D-cycloserine 50mg, an hour before exposure therapy in patients with a diagnosis of PTSD (n=67). The results demonstrated that PTSD symptoms decreased following treatment in both the treatment and placebo group, with no significant difference between the two groups[158]. <u>Evidence identified from 10-year surveillance review (2015)</u> No relevant studies identified.		

Ongoing research

5. The following ongoing research was highlighted by the GDG:
    - RCT of guided self help for PTSD due to be published in 2015.
    - RCTs looking at the interface between PTSD and bi-polar disorder to inform the ICD 11 decision about a complex PTSD diagnosis.
    - Ongoing research into the use of EMDR in patients with psychosis and PTSD.
    - Ongoing RCTs into the use of modularised/self-study treatments for PTSD.

- Ongoing research into Human Givens rewind treatment for trauma.

Anti-discrimination and equalities considerations

6. None identified.

Implications for other NICE programmes

7. This guideline relates to Quality statement 2: Psychological interventions and Quality statement 3: Pharmacological treatment of the Quality Standard on Anxiety disorders (QS53 published February 2014).

8. The proposed area for update on psychological interventions is unlikely to affect the wording of quality statement 2, however, it may impact on the definitions of terms used in the quality statement.

9. The proposed area for update on pharmacological interventions may impact on quality statement 3.

Triage panel recommendation

10. The new evidence that may potentially impact on guideline recommendations was considered by the Triage Panel.

i. Are there routine screening methods that may be valuable in predicting who will develop PTSD? Are there routine methods that may be valuable in confirming a clinical diagnosis of PTSD?

The Triage Panel discussed the introduction of DSM-V and the impending release of ICD-11 and considered whether they would be likely to affect the guideline recommendations. It was decided that DSM-V for adults is unlikely to have a substantial effect. There is also currently a lack of data on validated screening tools. ICD-11 will be significant, however, it is not due to be published until 2017.

a. Decision: NICE to defer an update of this clinical question.

ii. For people exposed to trauma, do early psychological interventions improve patient outcomes compared with no intervention? For people exposed to trauma, does any early psychological intervention confer any advantage compared with other psychological intervention?

The Triage Panel discussed the guideline “do not do” recommendation for psychological debriefing and it was agreed that the guideline could be made clearer about what is intended by the recommendation. The Panel also identified other areas that they believe need to be considered including issues emerging after a crisis or disaster, co-morbidities and other interventions such as Trauma Risk Management (TRiM), the London screen and treat programme and the Child and Family Traumatic Stress Intervention. It was felt that this question should be updated with more urgency than the other questions under consideration.

b. Decision: NICE to update this clinical question.

iii. For people exposed to trauma, do early pharmacological interventions improve patient outcomes compared with placebo? For people exposed to trauma, do any early pharmacological interventions confer any advantage over any other pharmacological interventions?

The Triage Panel agreed that this question should be updated in light of the new evidence for hydrocortisone. The Panel confirmed that there is no new evidence for other drugs. Updating this question was not considered to be as urgent as the other questions under consideration.

c. Decision: NICE to update this clinical question.

iv. For people with PTSD, do psychological treatments improve patient outcomes compared with no treatment? For people with PTSD, does any psychological treatment confer any advantage over any other psychological treatment?

The Triage Panel discussed emerging evidence for non-trauma focused interventions, such as Interpersonal Psychotherapy (IPT), as well as more evidence relating to interventions for different sub-populations. In particular, evidence was highlighted relating to trauma-focused interventions delivered alongside treatments for substance use. The Panel also considered the recommendation for the number of sessions of treatment and felt that most people receive a sub-optimal level. It was agreed that an update should therefore consider treatment dosage as well as trauma-focused and non-trauma focused interventions, including interventions for different sub-populations, and recognition that the service model has changed. It was felt that this question should be updated with more urgency than the other questions under consideration.

d. Decision: NICE to update this clinical question.

v. For people with PTSD, do pharmacological interventions improve patient outcomes compared with placebo? For people with PTSD, do any pharmacological interventions confer any advantage over any other pharmacological interventions?

The Triage Panel discussed the new evidence on pharmacological interventions including anti-depressants, other new pharmacological interventions, and combined pharmacological and psychological treatments. It was agreed that the guideline needed to be updated in this area but that updating this question was not considered to be as urgent as the other questions under consideration.

e. Decision: NICE to update this clinical question.

Conclusion

11. Through the review of CG26 new evidence that may potentially impact guideline recommendations was identified in the following areas:
    a. Recognition of PTSD
    b. Early interventions (Psychological)
    c. Early interventions (Pharmacological)
    d. Psychological interventions
    e. Pharmacological and physical interventions

12. All these areas were considered by the Triage Panel where it was decided that all the areas, with the exception of Recognition of PTSD, require an update at this time.

13. The questions relating to early psychological interventions and broader psychological interventions were considered by the Triage Panel to need to be updated with more urgency than the other questions under consideration.

14. For all other areas of the guideline no evidence was identified that would impact on recommendations.

Mark Baker – Centre Director
Sarah Willett – Associate Director
Philip Alderson – Consultant Clinical Adviser
Emma McFarlane – Technical Advisor
Diana O'Rourke – Technical Analyst

Appendix 1 Decision matrix

Surveillance and identification of triggers for updating CG26. The table below provides summaries of the evidence for key questions for which studies were identified.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Clinical area 1: Recognition of PTSD			
26-01: Are there routine screening methods that may be valuable in predicting who will develop PTSD? 26-02: Are there routine methods that may be valuable in confirming a clinical diagnosis of PTSD?			
6-year surveillance review ***Adults*** The results of one study indicated that the Clinician Administered PTSD Scale (CAPS) was an accurate and reliable instrument for identifying PTSD among victims of urban violence[1]. One study found that both the Davidson Trauma Scale (DTS) and the Startle, Physiological Arousal, Anger and Numbness (SPAN) scale were accurate screening tools for detecting people at risk of PTSD within 2 weeks of a traumatic event[2]. Two studies assessing the diagnostic accuracy of the Primary Care-PTSD Screen (PC-PTSD) were identified. The results of one of the studies supported the utility of the PC-PTSD although analysis showed that it was outperformed by the Davidson Trauma	No evidence identified.	Clinical feedback highlighted that a new DSM criteria (DSM-V) had been introduced since the guideline was developed. Feedback suggested that revisions of the DSM have enforced different criteria for PTSD. It was also highlighted that with the introduction of DSM-V, new assessment tools had been developed, such as the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) and PTSD Checklist for DSM-5 (PCL-5). The GDG also stated that the International Classification of Diseases-11 (ICD-11) is in development with proposed new diagnostic criteria for complex trauma and a system to differentiate between simple and complex PTSD.	**Potential impact on recommendations** The studies identified at the 6-year review evaluated the utility and validity of different diagnostic tools for PTSD. However, studies compared different checklists in different populations making comparisons between studies difficult. As such, it was considered that there was insufficient consistent new evidence to update the current guideline recommendations relating to recognition of PTSD in adults and children. GDG feedback highlighted the changes in relation to the diagnostic criteria for PTSD in the new DSM-V. As a result of the diagnostic criteria, new diagnostic tools have been developed. These changes to the diagnostic criteria and the diagnostic factors that may trigger the use of the guideline have the potential to impact on the current guideline recommendations relating to recognition and identification of PTSD.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Scale and SPAN screening tools[3]. The results of a second study indicated that the PC-PTSD could be a useful screening instrument for PTSD in patients with substance use disorder[4]. The diagnostic accuracy of the Personality Assessment Inventory (PAI PTSD LOGIT function) for the assessment of PTSD in a community-based sample of women was evaluated in one study. The results of the study indicated that the PTSD LOGIT function performed well with results consistent with more commonly used self-report PTSD scales such as the Davidson Trauma Scale[5]. One study was identified which compared 7 self-report measures of PTSD in trauma-exposed adults (n=239). The results showed that the Posttraumatic Stress Diagnostic Scale and PTSD Checklist performed best across the outcome measures tested[6]. Four studies were identified which indicated that the PTSD Checklist was an effective diagnostic tool for identifying PTSD in different sub-populations[7-10]. Another study was identified which compared 4 brief PTSD screening tests (PTSD			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Symptom Checklist-Civilian Version, SPAN, Breslau's Scale and Primary Care PTSD Screen). The results indicated that all 4 tests were diagnostically adequate although the Primary Care PTSD Screen appeared to be the best single screening test[11]. One study was identified which found that the Impact of Event Scale (IES) had a lower sensitivity and specificity for diagnosing PTSD in war-related trauma victims (n=74) than the Self-rating Inventory for Posttraumatic Stress Disorder[12]. Two studies evaluating the Posttraumatic Diagnostic Scale (PDS) were identified. One study evaluated a range of symptom combination scoring rules applied to the PDS in 4 groups of trauma survivors (n=522). The results indicated that the most stable results were achieved for the PDS total scale and a new subset of 8 items[13]. The results of the second study showed that the PDS had a sensitivity and specificity of 68% and 65% respectively, for detecting HIV-related PTSD[14]. Two studies assessing the accuracy of the Trauma Screening Questionnaire			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
(TSQ) were identified. One study compared the TSQ to the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) for diagnosis of PTSD. The results showed that specificity of the tool was lowest immediately after the disaster but increased in the following 18 months[15]. However, a second study reported that the TSQ had high sensitivity and specificity for predicting the development of PTSD following assault[16]. One study was identified which compared the Traumatic Life Events Questionnaire (TLEQ) to the single-question traumatic event assessment in the Structured Clinical Interview for DSM-IV. PTSD diagnoses were higher when the TLEQ measure was used compared with the SCID[17]. One study was identified which found that the Screen for Posttraumatic Stress Disorder (SPTSS) had high sensitivity and specificity for diagnosing PTSD[18]. A study evaluating a 4-item screen for PTSD in patients with substance use disorders (n=97) indicated that the tool showed good diagnostic accuracy for			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
detecting PTSD[19]. The results of one study showed that Breslau's 7-item screen is a reliable screening tool for PTSD for use in primary care[20]. One study was identified which indicated that the Screening Questionnaire for Disaster Mental Health (SQD) showed good validity as a screening tool for PTSD[21]. The results of one study found that a 4-item primary care PTSD (PC-PTSD) screener was a more effective screening tool than a single-item PTSD screener (SIPS) for primary care[22]. The results of a study of the UK-Post-Traumatic Stress Syndrome 14-Questions Inventory (UK-PTSS-14) screening tool assessing PTSD symptoms in intensive care unit (ICU) patients indicated that the tool was most reliable at two months post-discharge from the ICU[23]. One study was identified which evaluated a 4-item screen for PTSD in patients with depression compared with the PTSD checklist (PCL-17) as a			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
reference standard. The study found that the 4-item screen had useful likelihood ratios for scores of 0 and 3[24]. Four studies were identified which evaluated diagnostic test accuracy of different screening tools for PTSD in adults in flood districts, following assault, following injury and in injured adolescents. The studies reported that the tools were effective in predicting the development of PTSD[25-28]. ***Children*** One study was identified which concluded that the DSM-IV model for PTSD symptom categories was a reasonable fit for child data. However, alternative models suggest that potential improvements are needed to the diagnostic criteria for PTSD in children[29]. Another study was identified which investigated diagnostic algorithms for PTSD. The study found that the DSM-V algorithm was the most sensitive and valid measure of PTSD in pre-school children[30]. A study was identified which evaluated the Child Stress Disorders Checklist (CSDC) to measure traumatic stress symptoms in injured children (n=147). The results indicated that the short			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
form of the CSDC was a reliable test for traumatic stress reactions, comparable with that of the full scale CSDC[31]. Two studies were identified relating to the Child Behaviour Checklist-Posttraumatic Stress Disorder (CBCL-PTSD) scale. One of the studies found that a modified version of the CBCL-PTSD was an effective tool for screening traumatised, preschool-age children (n=62) for PTSD[32]. However, the results of another study indicated that the CBCL-PTSD did not reach significant sensitivity or specificity to be a valuable screening tool for PTSD in preschool-age children[33]. The Children's Revised Impact of Event Scale (CRIES) was evaluated in children and adolescents (n=63) in one study identified. The results of the study indicated that both the CRIES-8 and the CRIES-13 were effective screening tools for identifying children with PTSD[34]. One study was identified which demonstrated the validity of the Post-Traumatic Stress Disorder Scale – Child Form (PTSDS-CF) for screening for PTSD in children who have			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
experienced trauma[35]. The development of a brief screening instrument for PTSD among young victims of natural disasters was discussed in one study. The study concluded that the brief screening instrument being tested was valid, reliable and predictable[36]. A follow-up of this study described the construction of a short screening scale for PTSD also concluding that the scale was valid and reliable[37].			
Clinical area 2: Risk factors			
26-03: Do any factors or variables predict the development of PTSD?			
6-year surveillance review (2011) A systematic review was identified which evaluated the utility of diagnosis of acute stress disorder in predicting subsequent PTSD. The review concluded that acute stress disorder diagnosis does not adequately identify the majority of people who will develop PTSD[160]. A systematic review and meta-analysis was identified which estimated the prevalence of PTSD in parents of children with chronic illnesses. The results of the meta-analysis indicated that pooled PTSD prevalence was 19.6% in mothers and 11.6% in fathers[161].	The results of a systematic review and meta-analysis (including 12 studies) indicated that being a carrier of the SS genotype is a potential risk factor for PTSD in high trauma-exposure[162].	Clinical feedback indicated that there was now more literature available looking at risk factors for PTSD. No further details were provided.	**No impact on recommendations** At the 6-year surveillance review it was considered that there was insufficient new evidence to update the current guideline recommendations relating to risk factors for PTSD. While the new evidence identified at the 10-year surveillance review indicates a potential link between a particular genotype and the development of PTSD, further consistent evidence is needed before this area can be considered for inclusion in the guideline.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
26-04: Do any factors or variables predict the chronicity of PTSD?			
Evidence Update 2013 A meta-analysis (including 59 studies) was identified which examined the association between PTSD diagnosis and suicidality, and any impact of comorbid depression on this association. The analysis found a positive association between a PTSD diagnosis and suicidality. In studies that provided information on comorbid depression, higher levels of depression in PTSD participants were associated with higher level of suicidality[163].	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	**No impact on recommendations** The new evidence contributes to an overall understanding of the clinical needs of patients with PTSD, and is consistent with the recommendations of NICE CG26 that these patients require comprehensive risk assessment.
Clinical area 3: Early interventions (Psychological)			
26-05: For people exposed to trauma, do early psychological interventions improve patient outcomes compared with no intervention? 26-06: For people exposed to trauma, does any early psychological intervention confer any advantage compared with other psychological intervention?			
6-year surveillance review (2011) A Cochrane review was identified which evaluated the efficacy of multiple session early psychological interventions introduced within 3 months of a traumatic event in preventing PTSD. The results of the review indicated that no psychological intervention could be recommended for routine use following traumatic events and that multiple session interventions may have an adverse effect on some individuals[38]. *Trauma-focused CBT*	No evidence identified.	Clinical feedback was received suggesting that there may be new evidence available relating to the use of debriefing and Psychological First Aid immediately after disasters or traumas affecting different occupational groups (e.g. aid workers). There was also concern about the potential negative impact of the guideline's 'Do not do' recommendation for psychological debriefing.	The evidence identified at both the 6-year surveillance review and in the Evidence Update adds to the evidence base for early psychological interventions. It supports the current guideline recommendations which state: trauma-focused CBT should be offered to those with severe post-traumatic symptoms or with severe PTSD in the first month after the traumatic event; and to people who present with PTSD within 3 months of a traumatic event. A small study was identified through the Evidence Update relating to critical

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Three systematic reviews were identified which concluded that trauma-focused CBT within 3 months of a traumatic event was more effective than waiting list or supportive counselling conditions in reducing symptoms and preventing chronic PTSD[39-41]. *Writing and self-help* The effect of writing and self-help information on severity of psychological symptoms in traumatic injury patients at risk of developing PTSD was assessed in a RCT. The results of the study did not support the use of writing as a targeted early intervention technique for traumatic injury patients at risk of developing PTSD[42]. A RCT was identified which examined whether the provision of a diary of a patient's intensive care unit stay had an effect on the development of PTSD symptoms. The results of the study indicated that the incidence of new cases in the intervention group was lower compared with control patients[43]. The efficacy of providing self-help information to patients attending Accident and Emergency who may be		The GDG also highlighted that there is new evidence available on improving prevention and early detection of PTSD in high risk hospital groups, such as mothers giving birth and people in high dependency/intensive care settings who are heavily sedated. It was also stated that there is emerging evidence for prophylactic psychological treatments. No further details were provided.	incident stress debriefing (CISD) which suggested a beneficial impact on outcomes with no adverse effects on post-traumatic stress or psychological distress. In addition, GDG feedback indicated that there may be new evidence available relating to debriefing. The guideline found a lack of evidence for CISD as a group intervention for teams of emergency workers, military personnel or others who are used to working together. As a result, no recommendations were made for CISD. However, the guideline does state that brief, single-session interventions (often referred to as debriefing) that focus on the traumatic incident should not be routine practice when delivering services. GDG feedback was received raising concern about the negative impact of this recommendation. No new evidence was identified at the 10-year surveillance review relating to debriefing, however, the search was limited to systematic reviews. In light of the evidence identified in the Evidence Update and GDG feedback received, it may be appropriate to reconsider the recommendation which states that debriefing should not be routine practice.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
at high-risk of developing PTSD was assessed in a RCT. The study found that PTSD symptoms decreased over time but no differences were observed between the two groups[44]. *Caregiver-child interventions* A RCT was identified which evaluated the effectiveness of the Child and Family Traumatic Stress Intervention (CFTSI), a caregiver-child intervention, provided within 30 days of a traumatic event. The results indicated that CFTSI was more effective in preventing the development of PTSD than control[45]. <u>Evidence Update (2013)</u> *CBT approaches* A RCT was identified comparing modified prolonged exposure therapy with assessment only in people attending an emergency department (n=137) following a trauma. At 4 and 12 week follow up, the results showed a reduction in PTSD symptoms in the exposure therapy group compared with assessment-only[46]. A systematic review (including 19 studies) of interventions delivered to adults within 3 months of exposure to			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
a traumatic event was identified. For most interventions evidence was either lacking or insufficient to draw conclusions. However, there was some indication that brief trauma-focused CBT might be the preferred choice for reducing PTSD symptom severity in adults with acute stress disorder[47]. A RCT of a CPT intervention for PTSD in adults (n=100) with chronic PTSD following trauma was identified. Patients received immediate CPT or initial symptom-monitoring delayed treatment, with an option to crossover to CPT after 10 weeks. Compared with the symptom monitoring group, there was a significantly greater additional reduction in PTSD outcomes with CPT. The study also found that patients recovered at a variable rate with the treatment[48]. A systematic review and meta-analysis (including 7 studies) evaluating the characteristics and efficacy of early psychological interventions in children and young people after a single trauma was identified. Most of the interventions examined were based on elements of behavioural and cognitive therapy. The review found no			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
significant impact of the interventions on PTSD symptoms either at follow-up within 3 months or after 3–8 months[49]. *Debriefing* A RCT of critical incident stress debriefing (CISD) with volunteer fire-fighters (n=67) following a shared traumatic event was identified. The results indicated that CISD was more effective than screening and stress management education in terms of reduced alcohol consumption and increased quality of life. There was also no significant effect on post-traumatic stress or psychological distress from CISD[50].			
Clinical area 4: Early interventions (Pharmacological)			
26-07: For people exposed to trauma, do early pharmacological interventions improve patient outcomes compared with placebo? 26-08: For people exposed to trauma, do any early pharmacological interventions confer any advantage over any other pharmacological interventions?			
No evidence identified.	A systematic review (including 9 RCTs, n=345) was identified which assessed the effects of pharmacological interventions for the prevention of PTSD in adults following exposure to a traumatic event. In 4 of the studies (n=165), hydrocortisone was found to be effective in preventing the onset of PTSD[51].	GDG feedback suggested that there is emerging evidence for prophylactic treatments for PTSD, for example, hydrocortisone injections. The results of a systematic review and meta-analysis highlighted by the GDG indicated that hydrocortisone given within the first month after a traumatic event reduced the risk of developing PTSD (5	**Potential impact on recommendations** The guideline found limited evidence suggesting a difference favouring hydrocortisone over placebo on preventing the development of PTSD. As such, no recommendations were made for the use of hydrocortisone injections as an early intervention for PTSD. Hydrocortisone injections are licensed for use in the UK, however, not specifically for PTSD. However, the new evidence together with GDG feedback suggest that there is now more evidence in this area which may

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
		studies, n=164)[52].	enable a recommendation to be made for use of hydrocortisone outside the terms of its marketing authorisation.
Clinical area 5: Psychological interventions			
26-09: For people with PTSD, do psychological treatments improve patient outcomes compared with no treatment? 26-10: For people with PTSD, does any psychological treatment confer any advantage over any other psychological treatment?			
6-year surveillance review (2011) ***Adults*** Four systematic reviews were identified which evaluated the use of psychological interventions for treatment of PTSD. The reviews concluded that there is evidence that individual and group trauma-focused CBT, eye movement desensitisation and reprocessing (EMDR) and stress management are effective in the treatment of PTSD[53-56]. A systematic review was identified which found inconclusive evidence that debriefing and counselling are effective while CBT and EMDR may improve PTSD status in women with PTSD after childbirth[57]. *Eye movement desensitisation and reprocessing (EMDR)* A systematic review and RCT evaluating the use of EMDR in alleviating the symptoms of PTSD in combat veterans[58] and occupation-	An update of a Cochrane review which assessed the effects of psychological therapies for the treatment of adults with chronic PTSD was identified. The results indicated that individual trauma-focused cognitive behavioural therapy (28 studies, n=1256) and EMDR (6 studies, n=183) were more effective than waitlist/usual care in reducing the severity of PTSD symptoms[119]. A systematic review and meta-analysis (including 26 RCTs) investigating the effects of EMDR on the symptoms of PTSD was identified. The study revealed that EMDR reduced symptoms of PTSD, depression, anxiety and subjective distress in PTSD patients[120]. A systematic review (including 9 RCTs) of psychological interventions for torture survivors found that at 6-month follow-up,	Clinical feedback indicated that there is now more evidence for psychological interventions in different sub-populations e.g. ambulance, military, victims of childhood abuse, refugees and victims of torture, victims of domestic violence, patients with comorbid alcohol and substance abuse problems. The following additional studies were highlighted by the GDG: • A meta-analysis of RCTs demonstrated that psychological interventions were effective treatments for PTSD in adult survivors of childhood abuse. Of the different interventions evaluated, individual trauma-focused treatments were the most effective intervention[123]. • A RCT of patients with chronic PTSD (n=121) found that 7-day intensive	**Potential impact on recommendations** The new evidence identified at both the 6 and 10-year surveillance reviews and in the Evidence Update highlights the beneficial effect of trauma-focused CBT as interventions for PTSD in adults and children. It therefore supports the current guideline recommendations which state: • All PTSD sufferers should be offered a course of trauma-focused psychological treatment • Children and young people with PTSD, including those who have been sexually abused, should be offered a course of trauma-focused cognitive–behavioural therapy adapted appropriately to suit their age, circumstances and level of development. While the evidence supports current recommendations for trauma-focused treatment for all populations, clinical feedback indicated that there is now more evidence for psychological interventions in different sub-populations as well as

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
based PTSD[59] respectively, concluded that the evidence for this intervention in these populations is limited. A RCT was identified which compared the efficacy of EMDR to fluoxetine or placebo in adult-onset trauma survivors. The results of the study indicated that EMDR was more successful than fluoxetine in achieving a sustained reduction in PTSD symptoms[60]. *Cognitive Behavioural Therapy (CBT) approaches* 13 RCTs, including differing patient populations, generally indicated a beneficial effect of CBT on PTSD symptoms[61-73]. Three RCTs on narrative exposure in people with PTSD indicated that this intervention improved PTSD symptoms compared with the control groups[74-76]. Two RCTs were identified which reported a greater reduction in PTSD symptoms in those receiving prolonged exposure (PE) therapy compared to control[77,78]. A RCT comparing imaginal exposure	narrative exposure therapy and CBT were effective in reducing distress and PTSD symptoms compared with control (4 studies, n=86)[121]. A systematic review of psychoanalytic/psychodynamic psychotherapy for children and adolescents who have been sexually abused was identified. The review found no studies comparing psychoanalytic / psychodynamic psychotherapy with treatment as usual, no treatment or waiting list control[122].	cognitive therapy was as effective as 3 months of standard weekly cognitive therapy at reducing symptoms of PTSD[124]. • A RCT of adults with PTSD, Major Depressive Disorder (MDD) or both (n=49) examined the effectiveness of Interpersonal Psychotherapy (IPT) and treatment as usual (TAU) compared to TAU alone. At 3 months follow-up, there was a greater reduction in PTSD and MDD diagnoses in the IPT+TAU group compared to those receiving TAU alone[125]. • A RCT comparing IPT, prolonged exposure (an exposure-based exemplar), and relaxation therapy in 110 unmedicated patients who had chronic PTSD demonstrated noninferiority of individual IPT for PTSD compared with the other interventions[126]. • A RCT was identified which compared supportive counselling followed by CBT (Support/CBT) or emotion	different formats and methods of delivery. This is reflected in both the studies identified through the literature search and in the studies highlighted by the GDG. As such, it may be appropriate to reconsider the evidence base for psychological treatments in relation to the effectiveness of different types of treatment for different groups. In addition, there is new evidence that indicates a benefit of delivering trauma-focused cognitive-behavioural intervention alongside a substance use disorder intervention. The guideline currently recommends that for PTSD sufferers with drug or alcohol dependence, or in whom alcohol or drug use may significantly interfere with effective treatment, healthcare professionals should treat the drug or alcohol problem first. The evidence could therefore impact on this recommendation.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
(IE) therapy combined with imagery rescripting (IR) with IE alone in patients with PTSD was identified. The results indicated that a reduction in PTSD severity did not differ significantly between groups although IE+IR was more acceptable for patients and therapists[79]. Another RCT found that combined IE, in vivo exposure (IVE) and cognitive restructuring (CR) was more effective than IE alone, IVE alone and combined IE/IVE in reducing PTSD symptoms[80]. Three small RCTs were identified which concluded that internet-based CBT was effective in improving PTSD symptoms compared with control[81-83]. A RCT assessing the effectiveness of a single session of behavioural treatment compared with repeated assessments on PTSD symptoms among earthquake survivors was identified. At 8 weeks post-treatment, an improvement in PTSD symptoms was observed in the treatment group[84]. One RCT was identified which evaluated the efficacy of CBT plus acupoint stimulation compared with CBT alone for treatment of PTSD. The		regulation training followed by CBT (Skills/CBT) in people with PTSD (n=70). The results indicated that response to CBT may be enhanced in people with PTSD by preparing them with emotion regulation skills[127]. • A systematic review reported that an individual trauma-focused cognitive-behavioural intervention, delivered alongside substance use disorder intervention, was more effective than treatment as usual/minimal intervention for PTSD severity post-treatment, and at subsequent follow-up[128]. It was suggested by the GDG that new evidence was available relating to the effect of stress management and group therapy, however, no further details were provided. In relation to service delivery, feedback indicated that 22 Major Trauma Centres have been developed in the UK with	

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
study found that PTSD symptoms reduced in both groups after treatment[85]. *Imagery rehearsal therapy* A RCT was identified which indicated that imagery rehearsal therapy did not lead to a substantial improvement in PTSD symptoms in war veterans compared with a control group[86]. *Interpersonal psychotherapy* The efficacy of group interpersonal psychotherapy in women with PTSD was assessed in a RCT. The results of the study indicated that interpersonal psychotherapy was more effective than waitlist control in reducing PTSD symptoms[87]. *Psychoeducation* A RCT was identified which assessed the efficacy of psychoeducation in treating PTSD symptoms. Patients were randomised to conditions with and without PTSD psychoeducation or to waitlist control. The results of the study indicated that both interventions reduced PTSD symptoms compared with waitlist, although a greater reduction in symptoms was observed in the condition without psychoeducation group[88].		physical and mental health services being delivered to people who have experienced major physical trauma. In addition, since the guideline was published, Improving Access to Psychological Therapies (IAPT) services have been developed which offer psychological based interventions people who are suffering from PTSD. GDG feedback highlighted developments in terms of different delivery formats for treatments, such as group and intensive treatment formats, virtual reality (e.g. Virtual IRAQ) and self-help. There are also different methods of delivery such as intensive TF-CBT and guided self-help. Feedback was received from the GDG regarding inequalities in access to services. In particular, access to IAPT services by older people, non-English speakers and asylum seekers. Finally, GDG feedback indicated that there have been changes in relation to the costs of delivering	

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Biofeedback The effectiveness of biofeedback compared with treatment as usual for PTSD was assessed in a controlled trial. The results of the study indicated that biofeedback did not produce an improvement in PTSD symptoms[89]. *Writing* The effectiveness of an expressive writing intervention for people with PTSD was assessed in a RCT. No changes in PTSD symptoms were observed although improvements in mood were observed in the expressive writing group[90]. *Video-teleconferencing* A RCT was identified comparing the effectiveness of video-teleconferencing with in-person service delivery of a group psychotherapy intervention for PTSD-related anger problems. The study found an improvement in symptoms in both groups[91]. *Virtual reality based therapy* A RCT was identified which compared virtual reality-graded exposure therapy (VR-GET) with treatment as usual for combat-related PTSD. The results of this study indicated some benefit of		psychological interventions compared to the initial costings in the guideline. These are mainly due to increases in the costs of staffing.	

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
VR-GET on PTSD symptoms[92]. Another RCT comparing virtual reality exposure therapy within a computer generated environment with present-centred therapy in war veterans with PTSD was identified. The results of the study indicated no significant differences between the two treatments[93]. *Skills training* A RCT was identified which evaluated the effectiveness of skills training in affect and interpersonal regulation (STAIR) followed by exposure for treatment of PTSD symptoms. The STAIR/Exposure intervention demonstrated a greater beneficial effect compared with supportive counselling followed by exposure and skills training followed by supportive counselling[94]. *Body oriented therapy* A small RCT was identified which assessed the feasibility of mindful awareness in body-oriented therapy for female veterans with PTSD and chronic pain. The study concluded that a longer intervention period is required to determine the effectiveness of the intervention on this population[95].			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Spiritual programmes A small RCT was identified which found some beneficial effect of a spiritual programme in managing symptoms of PTSD[96]. ***Children and young people*** *EMDR* A small RCT was identified which found that EMDR reduced symptoms of PTSD in children compared with waiting list control[97]. *CBT approaches* Three RCTs were identified which, although including differing patient populations and comparing CBT with different comparator groups, generally indicated a beneficial effect of CBT on PTSD symptoms[98-100]. Three RCTs evaluating the efficacy of narrative exposure therapy in children with PTSD were identified. The studies reported variable results with a beneficial effect of the intervention observed in two studies [101,102] but not in another[103]. A RCT was identified which examined the efficacy and maintenance of developmentally adapted prolonged			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
exposure (PE) therapy versus active control time-limited dynamic therapy for adolescents with PTSD. A beneficial effect of PE therapy on PTSD symptoms was observed at six and 17 month follow-up[104]. *Mind-body group programme* A RCT was identified which found that a mind-body skills group programme reduced PTSD symptoms in adolescents[105]. *Psychoeducation* A RCT evaluating the effectiveness of early single-session psychoeducation in children following a road traffic accident was identified. No significant differences in posttraumatic symptoms between the intervention or control group were observed at two or six months follow-up[106]. *School-based interventions* A study evaluating the efficacy of a 12-session school-based structured intervention on PTSD in children found that it was more effective than a religious class control in reducing PTSD symptoms[107]. *Alternative therapies* The effectiveness of a spiritual-			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
hypnosis assisted therapy (SHAT) for treatment of PTSD in children (n=226) was evaluated in a RCT. At 2-year follow-up there was an improvement in PTSD symptoms in the SHAT group compared to control[108]. <u>Evidence Update (2013)</u> The results of a systematic review and meta-analysis (including 112 RCTs) indicated that all psychotherapies (including cognitive therapy, exposure therapy, and EMDR) grouped together were more effective than control for the treatment of adults with PTSD[109]. A second systematic review (including 92 RCTs) also found that different trauma-based psychological interventions were more effective than an inactive comparator for the treatment of adults with PTSD[110]. A Cochrane review (including 14 studies) assessing psychological treatments for children and young people with PTSD was identified. The review found that psychological therapies significantly reduced PTSD and symptoms of PTSD in the short and medium term but not in the long term[111]. *CBT approaches*			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
A RCT was identified which evaluated cognitive behavioural conjoint therapy for patients with PTSD and their partners (n=40). The study found that patients receiving therapy showed greater improvement in PTSD symptom score compared with the waiting list group[112]. A RCT (n=103) comparing concurrent treatment of PTSD and substance abuse using prolonged exposure or usual treatment was identified. The results showed that PTSD symptoms were significantly reduced after 9 months with both prolonged exposure and usual treatment, although the impact of prolonged exposure was significantly greater[113]. A RCT was identified which evaluated community-implemented trauma therapy for PTSD in former child soldiers (n=85) in Northern Uganda. Participants were randomised to narrative exposure therapy, an academic catch-up programme with elements of supportive counselling or waiting list. The results showed that PTSD symptom severity improved significantly more with narrative exposure therapy than academic catch-up and waiting list[114].			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
A systematic review (including 22 studies) on interventions to treat children exposed to traumatic events was identified. The review found limited evidence of benefit of psychological interventions, including TF-CBT, CBT, other cognitive-behavioural approaches with trauma or grief components, or EMDR[115]. A RCT which examined psychotherapy for survivors of sexual violence (n=405) in the Democratic Republic of Congo was identified. Participants were randomised to cognitive processing therapy (CPT) or individual support. The results showed that PTSD symptoms improved with both interventions but to a greater extent with CPT at the end of treatment and at 6 month follow up[116]. *Other treatments* A RCT investigating the impact of attentional bias modification treatment for outpatients (n=102) with chronic PTSD was identified. At the end of treatment, PTSD symptoms improved in both the intervention and control group, with no significant difference between the two groups[117].			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
A RCT comparing treatment with a psychological intervention (Trauma Affect Regulation: Guide for Education and Therapy, TARGET) with relational supportive therapy (enhanced treatment as usual) in girls with self-reported delinquency and full or partial PTSD (n=59) was identified. The study found that both treatments resulted in improvements in the PTSD criteria of intrusion, avoidance, hyperarousal and total symptoms but there was no consistent significant difference between interventions[118].			
Clinical area 6: Pharmacological and physical interventions			
26-11: For people with PTSD, do pharmacological interventions improve patient outcomes compared with placebo? 26-12: For people with PTSD, do any pharmacological interventions confer any advantage over any other pharmacological interventions?			
<u>6-year surveillance review (2011)</u> ***Adults*** *Paroxetine* A RCT was identified which indicated that paroxetine was superior to placebo in improving symptoms of chronic PTSD[129]. A second RCT was identified which compared paroxetine to mirtazapine in patients with PTSD. The results demonstrated that there were no differences in PTSD symptoms between the two treatment groups[130]. *Sertraline*	No evidence identified.	GDG feedback highlighted a systematic review and meta-analysis (including 51 studies) which found that SSRIs were more effective at reducing symptoms of PTSD compared to placebo[159]. Feedback also suggested that there is emerging evidence for novel pharmacological treatments such as MDMA, Synthetic cannabinoids, Oxytocin, Propanolol and Stellate Ganglion Blockades. No further details were provided.	**Potential impact on guideline recommendations** The guideline currently recommends that drug treatments for PTSD should not be used as a routine first-line treatment for adults. Where drug treatment is considered appropriate, the guideline recommends paroxetine or mirtazapine for general use, and amitriptyline or phenelzine for initiation only by mental health specialists. Currently only paroxetine and sertraline have a UK license for use in PTSD. New evidence has been identified at the 6 year surveillance review, in the Evidence

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Two RCTs were identified relating to the treatment of PTSD with sertraline. One of the studies found that sertraline was more effective than placebo for the treatment of PTSD[131]. However, the second RCT demonstrated no differences in effectiveness between sertraline and placebo[132]. *Ziprasidone* A small RCT evaluating the effect of ziprasidone as an adjunct to sertraline during the first 4 weeks of treatment for PTSD was identified. No results were reported in the abstract, however, several participants dropped out of the ziprasidone group due to adverse side effects[133]. Another RCT was identified which found that risperidone was more effective than placebo in the treatment of PTSD in women[134]. *Atypical antipsychotics* Two systematic reviews were identified which found that atypical antipsychotic medications have a modest beneficial effect in the treatment of PTSD[135,136]. *SSRIs* The results of a Cochrane review indicated that medication for PTSD			Update and from GDG feedback relating to pharmacological treatment for PTSD in adults. At the 6 year surveillance review it was noted that there was heterogeneity across the studies in terms of the comparators used and reported results. However, the Evidence Update and evidence identified by the GDG provide additional evidence relating to the effectiveness of pharmacological treatments for PTSD, including those not currently recommended by the guideline, such as venlafaxine and fluoxetine. As such, the evidence may now indicate a possible need to update the guidance in this area. The guideline does not currently recommend any pharmacological treatments for children with PTSD. No evidence was identified which would impact on this recommendation.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
reduced symptom severity compared with placebo, with greatest evidence of effectiveness for selective serotonin reuptake inhibitors (SSRIs)[137,138]. *Fluoxetine* The findings of a systematic review indicated that fluoxetine was an effective treatment for PTSD with mild adverse effects[139]. One RCT was identified which compared fluoxetine with moclobemide and tianeptine in people with PTSD. All 3 treatments led to improvement in PTSD symptoms with no significant differences observed between groups[140]. *Fluvoxamine* A RCT comparing the efficacy of fluvoxamine with reboxetine in patients with motor vehicle accident related PTSD was identified. Both treatments led to improvements in the clinical scales measured with no significant differences observed between the two groups[141]. *Venlafaxine* Two RCTs were identified which indicated that venlafaxine was effective for the treatment of			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
PTSD[142,143]. *Valproate* The results of a systematic review indicated that valproate was generally effective for the treatment of symptoms of PTSD[144]. *Glucocorticoids* A RCT assessing the effectiveness of glucocorticoids for PTSD was identified. After 1 week, glucocorticoids reduced PTSD symptoms compared to placebo. However, reduction of symptoms degraded at 1-month follow-up[145]. *Bupropion* A small RCT was identified which found no difference between bupropion sustained release and placebo, with both groups reporting a reduction in PTSD symptoms[146]. *Tiagabine* A RCT evaluating the effectiveness of tiagabine in adults with PTSD (n=232) was identified. The study found no differences between tiagabine and placebo in the treatment of symptoms of PTSD[147]. The effect of tiagabine was also assessed in a small RCT of adult outpatients with PTSD (n=29).			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
The study found that continued treatment with tiagabine was associated with increased likelihood of remission from PTSD[148]. *Topiramate* The results of a RCT of male veterans with PTSD (n=40) found that topiramate was no more effective than placebo in the reduction of PTSD symptom severity[149]. Another small RCT of adults with PTSD (n=38) also found no differences between topiramate and placebo in the severity of PTSD symptoms. However, topiramate did reduce reexperiencing symptoms compared to placebo[150]. *Divalproex* Two RCTs (n=29, 82) were identified which indicated that divalproex was not effective in the treatment of PTSD[151,152]. *Prazosin* Two systematic reviews and 2 RCTs were identified which found that prazosin had some beneficial effect on symptoms of insomnia and nightmares in PTSD[153-156]. ***Children and Young People*** One RCT was identified which showed			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
no difference in effectiveness between sertraline and placebo for the treatment of PTSD in children and adolescents[157]. <u>Evidence Update (2013)</u> A systematic review was identified which assessed the effect of a number of pharmacological treatments for adults with PTSD. The review found moderate evidence that fluoxetine, paroxetine, sertraline, topiramate and venlafaxine improved PTSD symptoms. However, little direct evidence was found comparing efficacy between different pharmacological treatments[110]. Another systematic review and meta-analysis also reported that paroxetine, sertraline, fluoxetine, risperidone, topiramate, and venlafaxine were all effective treatments for PTSD[109]. A RCT was identified which evaluated the effect of administering D-cycloserine 50mg, an hour before exposure therapy in patients with a diagnosis of PTSD (n=67). The results demonstrated that PTSD symptoms decreased following treatment in both the treatment and placebo group, with no significant difference between the two groups[158].			

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
26-13: For people with PTSD, do any physical interventions improve patient outcomes compared with placebo?			
6-year surveillance review (2011) One systematic review was identified on the effectiveness of sports and games in reducing PTSD symptoms. However, no evidence was identified for inclusion in the review[164]. One RCT was identified which assessed the efficacy of acupuncture compared with group CBT or a waitlist control for PTSD. The study found that both acupuncture and CBT led to improvements in PTSD symptoms[165] Evidence Update 2013 A systematic review (including 6 studies) of acupuncture as a treatment for PTSD was identified. Acupuncture showed significant improvement in self-reported post-traumatic stress symptoms compared with a waitlist control group but not compared with CBT[166].	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	**No impact on recommendations** Evidence was identified at the 6-year surveillance review relating to acupuncture treatment for PTSD, however, it was considered to be insufficient to impact on the current guideline recommendations. New evidence relating to acupuncture was identified in the Evidence Update. Both the evidence at the 6-year review and the Evidence Update found that acupuncture was not more effective than CBT. Taken together, the evidence is unlikely to impact on the current guideline which recommends trauma-focused psychological treatment (including trauma-focused CBT) for the treatment of CBT.
Clinical area 7: Psychology and pharmacology			
26-14: For people with PTSD, do combinations of pharmacological and psychological interventions improve outcomes over no treatment/placebo? 26-15: For people with PTSD, do combinations of pharmacological and psychological interventions improve outcomes over psychological or pharmacological treatment alone?			
6-year surveillance review (2011) One study was identified which described the development and implementation of an intervention incorporating CBT and	No evidence identified.	Clinical feedback from the GDG indicated that there was new evidence on combined psychological and pharmacological treatments for	**No impact on recommendations** It was considered that the evidence identified at the 6-year surveillance review relating to combined pharmacological/psychological treatment

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
pharmacotherapy in targeting early PTSD and related comorbidities. The study concluded that the intervention may enhance the population impact of early interventions developed for survivors of trauma[167]. A Cochrane review (including 4 studies) was identified which concluded that there was insufficient evidence to support the effectiveness of combined pharmacological and psychological therapy compared to either pharmacological or psychological therapy alone[168]. A study was identified which assessed the effect of combined treatment for PTSD with sertraline and prolonged exposure therapy following 10 weeks initial treatment with sertraline alone. The study found some beneficial effect of combined therapy on PTSD severity but only in participants who showed a partial response to medication[169]. A RCT comparing prolonged exposure therapy plus paroxetine with prolonged exposure therapy plus placebo in patients with PTSD was identified. No differences between the two groups were observed[170].		PTSD. No further details were provided.	of PTSD in adults was heterogeneous in terms of comparators and reported results. As such, it was thought to be unlikely to impact on the current guideline recommendations. New evidence was identified in the Evidence Update comparing combinations of treatments in people with PTSD and alcohol dependence. It was considered that the study provided no evidence to address the challenge of whether to treat PTSD or substance abuse first, or to treat together. Consequently, it is unlikely to impact on the current guideline recommendations.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
A RCT was identified which assessed the benefits of add-on hypnotherapy in PTSD patients (n=32) treated with SSRI antidepressants and supportive psychotherapy. The results showed a significant effect of hypnotherapy treatment on PTSD symptoms[171]. Evidence Update 2013 A RCT comparing combinations of treatments in people with PTSD and alcohol dependence (n=165) was identified. Participants were randomised to: naltrexone and supportive counselling; prolonged exposure therapy, placebo medication and supportive counselling; naltrexone, prolonged exposure therapy and supportive counselling; or placebo medication with supportive counselling. The results showed that PTSD symptoms improved in all treatment groups, however, the effect of prolonged exposure therapy was not significantly different from other interventions[172].			
Clinical area 8: Response to treatment			
26-16: For adults with PTSD, do factors such as traumatic grief, depression, personality disorders, pain and drug and alcohol misuse predict response to treatment?			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013)	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
No evidence identified.			
26-17: For children with PTSD, do factors such as parental involvement in the traumatic event predict response to treatment?			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.
Clinical area 9: Health economics			
26-18: Initiation of treatment: are there significant additional costs associated with intervening early or later in the course of PTSD?			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.
Research recommendations			
Guided self-help RR26-01: A randomised controlled trial, using newly developed guided self-help materials based on trauma-focused psychological interventions, should be conducted to assess the efficacy and cost-effectiveness of guided self-help compared with trauma-focused psychological interventions for mild and moderate PTSD.			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.
Trauma-focused psychological interventions in adults RR26-02: Adequately powered effectiveness trials of trauma-focused psychological interventions for the treatment of PTSD (TF-CBT and EMDR) should be conducted. They should provide evidence on the comparative effectiveness and cost effectiveness of these interventions and consider the format of treatment (type and duration) and the specific populations who may benefit.			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.

Conclusions from previous surveillance	Summary of new evidence/intelligence	Clinical feedback from the GDG	Impact
Trauma-focused psychological treatment versus pharmacological treatment RR26-03: Adequately powered, appropriately designed trials should be conducted to determine if trauma-focused psychological treatments are superior in terms of efficacy and cost effectiveness to pharmacological treatments in the treatment of PTSD and whether they are efficacious and cost effective in combination.			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.
Screening programme RR26-04: An appropriately designed longitudinal study should be conducted to determine if a simple screening instrument, which is acceptable to those receiving it, can identify individuals who develop PTSD after traumatic events and can be used as part of a screening programme to ensure individuals with PTSD receive effective interventions.			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.
Children and young people RR26-05: Randomised controlled trials for children of all ages should be conducted to assess the efficacy and cost effectiveness of trauma-focused psychological treatments (specifically CBT and EMDR). These trials should identify the relative efficacy of different trauma-focused psychological interventions and provide information on the differential effects, if any, arising from the age of the children or the nature of the trauma experienced.			
6-year surveillance review (2011) No evidence identified. Evidence Update (2013) No evidence identified.	No evidence identified.	No GDG feedback was provided through the GDG questionnaire.	No evidence identified.

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