

# The provision of services in the UK for UK armed forces veterans with PTSD: a rapid evidence synthesis

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## Scientific summary

### Provision of services for UK armed forces veterans with PTSD

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# Scientific summary

## Background

Mental health care for armed forces personnel in the UK while they are still in service is provided by the Defence Medical Services (DMS). In the case of ex-service personnel (or veterans, the terms being variably defined), responsibility for payment and provision of services normally transfers to the NHS (however, there is provision for early transfer to the NHS and retention by DMS for up to 6 months after discharge). The transition of the individual from one service to another can add to poor mental health and there appears to be an inherent reticence to present for help. In 2011, it was reported that only 23% of UK veterans suffering symptoms of post-traumatic stress disorder (PTSD) went on to access support services. More recently, reports suggest that half of armed forces veterans with PTSD now seek help from NHS services, but referral to the correct specialist care is rare.

The background to our research arises from current thinking about anticipated rises in demand for psychological trauma services in the UK, with particular reference to armed forces veterans with PTSD. In 2014, there were 2.8 million ex-service personnel in the UK, and it was envisaged that requirements for specialist support would grow following armed forces restructuring and more complex needs arising from recent conflicts.

The recent NHS England strategic review of commissioning intentions for armed forces and their families, the concurrent publication of stakeholder views on the 12 specialist mental health services provided for veterans in England, and the assessment of needs in veterans and their families in England, Scotland and Wales offer further background to our research.

Given the transitional arrangement, and the anticipated rise in demand for services, there is a need to explore the adequacy and suitability of current and planned mental health services to treat PTSD (and complex presentations of PTSD) to meet the specific requirements of armed forces veterans. Our research maps out key services currently being provided in the UK and evaluates the empirical evidence on the effectiveness of models of care and the effectiveness of available treatments.

## Objectives

To explore what is known about current UK service provision and establish potentially effective models of care and potentially effective treatments for armed forces veterans with PTSD.

We addressed the following four research questions:

1. What services are currently provided in the UK for UK armed forces veterans with PTSD?
2. What is the evidence of effectiveness of models of care for UK armed forces veterans with PTSD, including the impact on access, retention, clinical outcomes, patient satisfaction and cost-effectiveness?
3. What treatments show promise for UK armed forces veterans with PTSD?
4. What are the high-priority areas for further research?

## Methods

Using an information-gathering exercise about current UK practice as our guiding framework, we conducted rapid evidence reviews on models of care and on treatments for armed forces veterans with PTSD after repeated exposure to traumatic events. Any relevant outcome was included. Studies had to be applicable to the NHS in the UK.

We conducted the research in four stages:

- Stage 1: a brief information-gathering exercise about current practice in the UK for the treatment of PTSD in armed forces veterans.
- Stage 2: a rapid evidence review on models of care for armed forces veterans with PTSD.
- Stage 3: a rapid metareview evaluating the effectiveness of treatments for PTSD in armed forces veterans.
- Stage 4: a narrative synthesis of the evidence on potentially effective models of care (stage 2) and potentially effective treatments (stage 3), using the overview of current practice (stage 1) as a guiding framework, highlighting priority areas for further research.

### Stage 1

We contacted the 12 service providers of veterans' specialist mental health care listed in the NHS England strategic review. Drawing on contacts provided by our advisory group, we also approached service providers in Scotland, Wales and Northern Ireland, and third-sector organisations. We recorded responses to a list of questions and developed a coding framework for models of care to help organise the evidence in later stages of our review.

### Search strategy for stages 2 and 3

For stage 2, we searched for relevant systematic reviews, primary research, guidelines or grey literature on models of care for PTSDs in veterans. A search strategy was developed in MEDLINE (via Ovid). No geographical, language, date or study design limits were applied. The MEDLINE strategy was adapted for use in the other resources searched. Searches were carried out in November 2016. The following databases were searched: MEDLINE (including Epub Ahead of Print, In-Process & Other Non-Indexed Citations), PsycINFO and PILOTS (Published International Literature On Traumatic Stress database). In addition, a search for relevant guidelines was undertaken via NHS Evidence, the National Guideline Clearinghouse and the US Department of Veterans Affairs. The research report sections of selected websites were searched to identify additional relevant reports or grey literature.

For stage 3, we searched for relevant systematic reviews of treatments for PTSDs in veterans. A search strategy was developed in MEDLINE (via Ovid). No geographical, language or date limits were applied. Study design search filters were used in the strategy (when appropriate) to limit retrieval to systematic reviews. The searches were carried out in November 2016. The following resources were searched: Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects (DARE) and the Health Technology Assessment database. PROSPERO was also searched to identify any ongoing reviews. In addition, searches of MEDLINE, EMBASE, PsycINFO and CINAHL (Cumulative Index to Nursing and Allied Health Literature) were carried out to identify any relevant systematic reviews published since the closure of DARE in 2015.

### Review methods

#### Study selection

For stage 2, we included any study design relevant to models of care for armed forces veterans with PTSD, but only when it was possible to extract findings separately for this population. We assessed international studies when they were relevant to UK armed forces veterans. We prioritised evaluations (when available), followed by descriptive/observational research. We anticipated that not all reviews would be systematic reviews (i.e. using objective and transparent methods to identify, evaluate and summarise relevant research evidence). Therefore, reviews were included only if they met the minimum quality criteria for DARE. We implemented a post-protocol decision to focus on broader 'systems-based' models of care.

For stage 3, we included systematic reviews on treatments for armed forces veterans with PTSD. We assessed reviews from the international literature when this appeared to be relevant to UK armed forces veterans. Systematic reviews were included only if they met the minimum quality criteria for DARE (see stage 2).

### Quality assessment

For stage 2 we assessed systematic reviews using the DARE critical appraisal process. Based on the quality criteria used to select studies (see *Study selection*, above), we judged the reliability of the review and its findings. For evaluative primary research, we used the EPOC (Effective Practice and Organisation of Care) risk-of-bias tool for controlled studies (EPOC. *Suggested Risk of Bias Criteria for EPOC Reviews*. EPOC Resources for Review Authors. Oslo: Norwegian Knowledge Centre for the Health Services; 2016) and the CASP (Critical Appraisal Skills Programme) critical appraisal tool for qualitative research (CASP. *Qualitative Research Checklist. 10 Questions to Help You Make Sense of Qualitative Research*. Oxford: CASP; 2013). We implemented a post-protocol decision to summarise the remaining study designs without undertaking formal quality assessment.

For stage 3, we assessed systematic reviews using the DARE critical appraisal process.

### Data extraction

Data were extracted on participants, models of care, treatments, outcomes (when applicable) and other characteristics we considered helpful to our work.

### Synthesis

We synthesised the evidence narratively on potentially effective models of care (stage 2) and potentially effective treatments (stage 3), using the overview of current practice (stage 1) as a guiding framework. We adopted a 'best evidence approach' (i.e. highlighting the best-quality and most-promising evidence) to inform future research and practice.

### Public and patient involvement

We used findings from a recently published NHS England stakeholder engagement survey. We also contacted a veteran service user.

## Results

The results of our rapid evidence review answered our four research questions as follows.

### **Research question 1: what services are currently provided in the UK for UK armed forces veterans with post-traumatic stress disorder?**

We examined information on current UK service activity from 17 out of the 21 organisations we approached (an 81% response rate to our information request). These included 8 out of the 12 specialist mental health service providers in England, one organisation each in Scotland, Wales and Northern Ireland, four from the third sector, and two other providers. The responses showed a range of services being delivered to veterans, often via partnerships between the NHS and third sector, and facilitated by various models of care. The findings revealed that collaborative arrangements are commonplace, as are partnerships and networks. Pockets of integrated care are evident (e.g. general mental health services with embedded specialist care, or alongside a behavioural intervention), and community outreach and peer support also featured. Not all models of care in UK practice appeared in the literature that we subsequently included to address research question 2, indicating a poor fit between research and practice.

### **Research question 2: what is the evidence of effectiveness of models of care for UK armed forces veterans with post-traumatic stress disorder, including impact on access, retention, clinical outcomes, patient satisfaction and cost-effectiveness?**

The evidence base was larger than anticipated. We included 61 articles (56 studies); 32 studies reported on care delivery types that were not 'systems-based', so we listed these as bibliographic records. We focused our analysis on 24 studies (29 articles) looking at 'systems-based' models of care. Research was largely from the USA and on male veterans in the Veterans Affairs setting. Therefore, the generalisability of these

models of care to the UK setting and to female veterans is uncertain. The most promising evidence supports the potential effectiveness of collaborative care arrangements (education and support for primary care clinicians and staff across multiple sites) and community outreach (a proactive mailed intervention to patients with telephone follow-up) for improving intervention access and uptake; integrated care (including smoking cessation treatment for veterans within general mental health services) for increased smoking abstinence, but with no effect on PTSD symptoms; and peer support as an acceptable complement to other PTSD treatments. All of these broad types of delivery were seen in our overview of current UK practice. The remaining studies meeting our inclusion criteria employed designs that are considered methodologically weak by traditional standards. In these studies, multicomponent programmes and settings-based delivery (e.g. primary care, residential care) featured prominently and clinical outcomes were measured more frequently than in the more robust designs. Good-quality research is needed to substantiate tentative associations arising in these studies.

### **Research question 3: what treatments show promise for UK armed forces veterans with post-traumatic stress disorder?**

We included seven systematic reviews. The conclusions from our metareview of treatments are restricted by methodological limitations in the included systematic reviews, the poor or uncertain quality of the underlying primary research and a lack of clinically meaningful data from which to extrapolate for practice. This means that further robust research is needed to substantiate any tentative conclusions. Although this result is disappointing, ongoing research on treatments for PTSD and complex trauma more generally (e.g. update of the existing National Institute for Health and Care Excellence guideline, Health Technology Assessment research) should extend and enlighten our findings. In the meantime, our metareview suggests that the potentially effective types of treatment currently delivered in practice for reducing clinical symptoms in veterans with PTSD are psychosocial interventions [e.g. eye movement desensitisation and reprocessing (EMDR), cognitive processing therapy (CPT), trauma-focused cognitive-behavioural therapy and exposure-based therapies] and pharmacotherapy [e.g. selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, anticonvulsants and antipsychotics]. Other treatments currently delivered in practice, such as counselling and art therapy, were not examined in the systematic reviews included in our metareview.

There was no clear evidence in stages 2 or 3 on the cost-effectiveness of models of care or of treatments.

### **Research question 4: what are the high-priority areas for further research?**

Research implications were gathered from stages 1, 2 and 3 of our research. These are presented in *Implications for research*.

## **Discussion and conclusions**

Commissioning and service provider activity to improve veterans' health in the UK continues to gather pace. November 2016 saw the launch of a new Veterans Trauma Network to deliver comprehensive medical care in England, which will also look at the mental health of those suffering physical injury. Following the recent NHS England strategic review and stakeholder engagement findings, new contracts for specialist veterans' mental health services in England are due to commence in April 2017. All of this points to encouraging developments to help meet the complex health needs of veterans. Given the anticipated increased demand for services, detailed information available on veterans' needs and refreshed commissioning activity in 2017, our research is timely.

In conclusion, our rapid evidence review shows tentative support for some models of care and some treatments currently being delivered in UK practice. These are shown in *Box a*.

**BOX a** Best evidence for promising models of care and promising treatments

- Promising models of care are:
  - collaborative arrangements for improving intervention access and uptake
  - community outreach for improving intervention access and uptake
  - integrated mental health services and behavioural intervention for increasing smoking abstinence
  - peer support as an acceptable complement to PTSD treatments.
- Promising treatments are:
  - psychosocial interventions – EMDR, CPT and trauma-focused and exposure-based interventions, individually delivered for improving PTSD and mental health symptoms, and reducing dropout
  - pharmacotherapy – SSRIs, antidepressants, anticonvulsants and antipsychotics for improving PTSD and mental health symptoms.

**Implications for health-care practice**

We draw specifically on our summary of public and patient involvement and from factors affecting implementation reported to us by service providers in the UK. Together, these suggest that future practical arrangements to improve veterans' mental health might helpfully focus on:

- early intervention to improve transition from military to civilian life
- improving knowledge and awareness of specialist services available to veterans across primary care (especially general practitioners) and general mental health services
- understanding more clearly the complex needs of veterans and accounting for these in future service design
- addressing challenges for veterans presented by the wider system of care
- the provision of adequate funding and resources to deliver future services.

**Implications for research***General*

- More research relevant to the UK setting.
- Routine and continuous evaluation of how interventions work in practice.

*For models of care*

- More robust research on models of care, with longer follow-up.
- Explore a wider range of outcomes, including process outcomes (intervention uptake), clinical outcomes, patient satisfaction, social functioning, quality of life, disparities in age-related treatment effectiveness; improving access to services by minority populations; and cost-effectiveness.
- More research on the format and structure of group peer support.
- More research on peer support using telephone outreach.

### **For treatments**

- Use of direct treatment comparisons.
- Investigate the effectiveness of combined therapies (e.g. pharmacological and psychosocial).
- Explore outcomes such as tolerability (including reasons for dropout) and adverse events, quality of life and cost-effectiveness.
- More evaluation of treatments in veterans from a wide range of conflicts and settings.
- Improve the methodological rigour of systematic reviews (including primary study quality assessment).

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