Evidence Compass

Summary Report

What is the effectiveness of outreach services for improving mental health?

Summary of the Rapid Evidence Assessment

Disclaimer

The material in this report, including selection of articles, summaries, and interpretations is the responsibility of Phoenix Australia - Centre for Posttraumatic Mental Health, and does not necessarily reflect the views of the Australian Government. Phoenix Australia does not endorse any particular approach presented here. Readers are advised to consider new evidence arising post-publication of this review. It is recommended the reader source not only the papers described here, but other sources of information if they are interested in this area. Other sources of information, including non-peer reviewed literature or information on websites, were not included in this review.

This project utilised a rapid evidence assessment (REA) methodology. The REA methodology streamlines traditional systematic review methods in order to synthesise evidence within a shortened timeframe. The advantage of an REA is that rigorous methods for locating, appraising and synthesising evidence from previous studies can be upheld. Also, the studies reported can be at the same level of detail that characterise systematic reviews, and results can be produced in substantially less time than required for a full systematic review. Limitations of an REA mostly arise from the restricted time period, resulting in the omission of literature such as unpublished pilot studies, difficult-to-obtain material and/or non-English language studies. A major strength is that an REA can inform policy and decision makers more efficiently by synthesising the evidence in a particular area within a relatively short space of time and at less cost.

Phoenix Australia Centre for Posttraumatic Mental Health
Level 3, 161 Barry Street Carlton
Victoria, Australia 3053
Phone: (+61 3) 9035 5599
Fax: (+61 3) 9035 5455
Email: phoenix-info@unimelb.edu.au
Web: www.phoenixaustralia.org

Remembrance Foundation Ltd
Director: Talissa Papamau
Email: Talissa@remembrancefoundation.org

Executive Summary

- The aim of this rapid evidence assessment (REA) was to assess the evidence related to outreach services, entailing face-to-face contact with a trained professional or paraprofessional in a mobile or home environment, for increasing quality of life, promoting access to services, and increasing functioning and mental health among veterans or adult populations more broadly with PTSD, depression, anxiety, adjustment disorder, alcohol-use disorder, or substance-use disorder.

- Literature searches were conducted to identify studies published from 2007 onwards that investigated the efficacy of outreach services for one or more of the following outcomes: quality of life; functioning in employment; relationship functioning; attitudes towards, contact with, or use of mental health services; hospital admissions; or symptoms of any of the following disorders: PTSD, anxiety, depression, adjustment, alcohol use, substance-use. Studies were excluded if the full text was unavailable, if the paper was not peer-reviewed, if the primary outcome measures were not the focus of the review (as specified above), or if the article did not concern the population of interest (i.e., adults or veterans specifically).

- Studies were systematically assessed for quality of methodology, risk of bias, and quantity of evidence, and a high level narrative assessment of the direction, consistency, generalisability, and applicability of the findings to the population of interest was conducted.

- Fourteen studies met inclusion criteria. Ten originated from the US, and there was one study each from Australia, Iceland, The Netherlands, and Japan. Three outreach service models were reviewed, including case management (*n* = 1), comprehensive (*n* = 8), and targeted (*n* = 5). These were broadly defined as follows:

    - **Case management** outreach service models were defined as those that focused on screening, assessment, referral and linkage, monitoring, and encouraging treatment or medication compliance.
    - **Targeted therapeutic** outreach service models were defined as those that included some type of mental health treatment component.
    - **Comprehensive** outreach service models were defined as those that incorporated components of both case management and targeted therapeutic interventions.

- Targeted therapeutic and comprehensive outreach service models were further defined based on the theoretical approach that informed the treatment component. These included:
    - Interventions that incorporated one or more components of **cognitive behavioural therapy (CBT)** or were informed by CBT.
    - Interventions that incorporated **supportive or relational** types of therapy, such as those built upon supportive psychotherapy or attachment theory.
    - Interventions that focused upon **physical exercise** rather than psychological therapy.
- Overall, the quality of the studies was judged to be fair. Methodological limitations included clustered randomisation design (as opposed to true randomisation), small sample sizes, short-term or no follow-up periods, lack of clinician-rated outcomes, and failure to appropriately blind outcome assessors. Initial findings provide evidence suggestive of a beneficial effect for outreach models, especially those that offer a comprehensive outreach service that incorporates CBT-informed therapeutic approaches. Other outreach service models that were reviewed (case management; comprehensive supportive; comprehensive exercise; targeted supportive; and targeted CBT-informed) had unknown levels of evidence supporting their use. This does not mean that these models are ineffective. Rather, there is insufficient evidence at present to confidently conclude their impact.
- There has not been a systematic review evaluating the efficacy of professional outreach services entailing face-to-face contact for improving posttraumatic mental health symptoms or improving mental health among veteran populations specifically. Only one US study was identified that looked at the efficacy of outreach services for improving mental health among veterans. This study showed a significant decrease in number of psychiatric admissions among veterans in the treatment group, and significantly greater outpatient treatment attendance in the treatment group compared to the control group. Further research is required, especially in the area of the implementation and evaluation of outreach services to build an evidence base concerning the efficacy of outreach services for Australian veterans.The evidence overall suggests that the construction of an outreach model to support veterans that involves face-to-face home visitation is worthy of exploration as a novel means of

service delivery. In the event that an outreach model is piloted, it is essential that a comprehensive evaluation plan is incorporated to ensure its efficacy.

Background

Outreach services are broadly defined as support services that are provided in settings where individuals live, spend considerable time, or seek services from (Van Citters & Bartels, 2004). They offer a flexible modality for engagement and facilitation of mental health treatment. A significant strength of outreach services is that they emphasise a collaborative approach with the patient. Such services can either link clients with traditional medical treatment models or alternatively, provide treatment directly to the client.

There has been considerable interest in the use of outreach models in veteran mental health care within the veteran community. Despite demonstrated need for mental health support (Hodson, McFarlane, Van Hooff, & Davies, 2011), many veteran cohorts who stand to benefit from mental health care do not seek or receive treatment (Cohen et al., 2010; Sandweiss et al., 2011). Those that do often cease treatment prematurely (Elbogen et al., 2013), or delay accessing treatment for many years (Maguen, Madden, Cohen, Bertenthal, & Seal, 2012).

There are varied and complex reasons for the relatively low levels of treatment engagement observed among veteran cohorts. These include the increased likelihood of co-morbidity, which complicates the clinical presentation and subsequent treatment pathways, as well as barriers to care, such as perceived stigma towards mental health treatment and practical barriers, such as being rurally located or having physical impairments that limit ability to access conventional treatment (Bird, 2015; Boscarino, 2006; Brooks et al., 2012; Hoge et al., 2008; National Mental Health Commission, 2017).

The particular challenges in ensuring access to quality mental health for veteran populations have led researchers to conclude that facilitating mental health treatment engagement and retention should be among the highest priorities for veteran services (Spoont et al., 2014). Outreach models hold promise as an innovative service model capable of improving treatment engagement among veterans (Crawford et al., 2015). However, there has not yet been a systematic review of the efficacy of outreach services for improving mental health. Such a review is a necessary requisite for strengthening confidence in the potential utility of outreach services for this population.

The aim of this REA was to assess the evidence related to outreach services for increasing quality of life, promoting access to services, and increasing functioning and mental health among veterans or adult populations more broadly with PTSD, depression, anxiety, adjustment disorder, alcohol-use disorder, or substance-use disorder. The REA was undertaken with a view towards examining the utility of outreach services for veterans particularly. Given the lack of veteran-specific studies pertaining to the efficacy of outreach services, however, articles examining any adult population were considered in-scope for the review.

Outreach services

For the purpose of this review, outreach services were broadly defined as any type of support or intervention that incorporated face-to-face contact with a professional or paraprofessional in the client's home or home-like setting.

Outreach services can be distinguished according to their approach (Leis, Mendelson, Tandon, & Perry, 2009; Thompson, Lang, & Annells, 2007; Van Citters & Bartels, 2004). In this review, a distinction was made between the 'case management' outreach service model, 'targeted therapeutic' outreach service model, and 'comprehensive' outreach service model:

The **case management** outreach service model was defined as any service model including one or more of the following components: screening for mental health symptoms, assessment of client needs and goals, referral and linkage to treatment or support services, and monitoring or encouraging treatment or medication compliance. Inevitably, such models also entail some degree of supportive listening, incidental counselling, and rapport building.

The **targeted therapeutic** outreach service model was defined as any service model involving some type of mental health treatment component. Within this category, a further delineation was made between models that incorporated one or more components of CBT or CBT-informed treatment, and models that incorporated supportive or relational types of therapy, such as those built upon supportive psychotherapy or attachment theory. CBTinformed interventions often included techniques such as motivational interviewing, behavioural activation, structured problem solving, stress reduction skill training, or redressing thinking habits or styles, and were commonly manualised interventions. Interventions that incorporated supportive or relational types of therapy tended to focus upon the quality of the client-outreach provider relationship and used this relationship to explore other relationships in the client's life, or to provide support to the client in a non-directive and

unstructured manner. Common components of these interventions were supportive/reflective listening, validation, provision of encouragement and reassurance, collaborative problemsolving, and the provision of information.

The **comprehensive** outreach service model was defined as any service model incorporating components of both case management and targeted therapeutic interventions. Often, a single outreach provider delivered both case management and targeted therapeutic support, although in other cases, different providers were responsible for delivering the different elements of the intervention.

Evaluating the evidence

Fourteen original publications met the inclusion criteria for the review, as well as three secondary studies. The quality and risk of bias for each study was examined using a modified version of the Chalmers Checklist for appraising the quality of studies of interventions. Two independent raters rated each study according to these criteria and reached a consensus agreement for an overall rating of ‘Good’, ‘Fair’, or ‘Poor’.

The quality of the studies overall was judged to be fair. Seven of the 14 studies were RCTs, the highest level of study design methodology according to the standardised, universal hierarchy of evidence. No study received a rating of ‘good’. This was on account of methodological limitations such as clustered randomisation design (as opposed to true randomisation), small sample sizes, short-term or no follow-up periods, lack of clinician-rated outcomes, and failure to appropriately blind outcome assessors.

The diversity of approaches used across the studies, and the diversity of populations sampled and outcome variables investigated, prohibited systematic ranking of the evidence. Instead, a narrative approach was used to evaluate the evidence in relation to type of outreach model used, with consideration given to the follow five components (Varker et al., 2015):

- the strength of the evidence base, which incorporated the quality and risk of bias, quantity of the evidence (number of studies), and level of the evidence (study design)
- the direction of the evidence (whether positive or negative results have been found)
- the consistency across studies

- the generalisability of the studies to the target population the applicability to an Australian context.

Strength of evidence and consistency across studies

The model with the strongest evidence base was comprehensive outreach, in contrast to either case management or targeted therapeutic outreach models. More specifically, the strongest evidence supported comprehensive outreach models that incorporated one or more therapeutic components informed by CBT.

Four studies identified belonged to this category - two RCTs and two cohort studies. These studies examined the efficacy of case management strategies combined with delivery of a therapeutic intervention in a range of populations, including homeless veterans (Ammerman et al., 2013; Ammerman et al., 2011; Gitlin et al., 2013; Smelson et al., 2013). All four studies received fair ratings in regards to quality of the evidence. The findings were consistent across studies, in that significant reductions in mental health outcomes were seen across all studies post-treatment. The primary outcome for three of the studies was changes in depressive symptoms, while the primary outcomes for the forth study were outpatient session attendance, number of psychiatric hospitalisations, and problems associated with addiction. Significant improvements were demonstrated in the primary outcome in each study. In those studies primarily concerned with depression, improvements in mental health outcomes after receiving outreach services were significantly greater in the intervention group compared to the control group. In the fourth study, which examined outpatient session attendance, number of psychiatric hospitalisations, and problems associated with addiction, only outpatient session attendance differed significantly between groups, in favour of the intervention group. It should also be noted that only the intervention group showed significant reductions in psychiatric hospitalisations.

The other outreach service models reviewed (case management; comprehensive supportive; comprehensive exercise; targeted supportive; and targeted CBT-informed) had unknown levels of evidence supporting their use. This does not mean that these models are ineffective. Rather, there is insufficient evidence at present to confidently conclude their impact. Of these service models, comprehensive supportive and targeted therapeutic CBTinformed models had greater evidence than the other models identified. The level of evidence for these two models was comparable, involving in both cases one RCT of fair quality.

Direction of evidence

The vast majority of the studies showed either a positive direction or unclear direction of outreach services on a range of mental health and wellbeing outcomes. Where the direction was unclear, this might have been due to the low power of the sample or methodological issues, meaning that better designed studies with larger samples may find a positive effect.

Only one study found a significant worsening of mental health outcomes (Prick, de Lange, Twisk, & Pot, 2015). This study looked at the effect of a comprehensive model of outreach delivered to patients with dementia and their family caregivers. A home-visiting coach provided instruction on physical exercise suitable for dementia patients, education about dementia, and instructed caregivers in behavioural management strategies and pleasant activity scheduling suitable for dementia patients. The key element of the intervention that stood to benefit caregivers was the physical exercise component. In this study the depression symptoms of carers worsened post-treatment. This was likely due to the effect of changes in the carer-patient relationship attributable to the intervention, rather than the fact the treatment was delivered via outreach.

Generalisability of evidence

The identification of positive findings in RCTs of fair quality across a diversity of outcome variables suggests that outreach services have significant potential as a flexible, robust method of mental health care capable of meeting a wide range of needs. This applies to the general adult population as well as veterans specifically.

This being the case, it should be noted that none of the studies targeted posttraumatic stress disorder (PTSD) - a particularly common psychological condition among veterans. It should also be noted that the majority of the study samples were non-veteran and non-trauma exposed, and usually non-complex in terms of the mental health presentations. This limits confidence in the generalisability of the findings to the Australian veteran population. The populations sampled were highly generalisable to the female partners of veterans, in that many of the studies involved female populations and caregivers. It is therefore worth investigating the potential for any proposed outreach service to be extended to support the family unit, in addition to the veteran.

Applicability of the evidence

The majority of studies were conducted in the US, and only one Australian study met the inclusion criteria. This is unsurprising, given formal outreach support tailored to the mental health needs of veterans is not currently available in Australia (Bird, 2015). Geographically, Australia is well suited to outreach services on account of the significant distances separating major cities and the significant minority of individuals located rurally. While recognising that there are significant differences between the Australian and US medical system, it is reasonable to assume that successful findings identified in the studies would be replicated if the same models of outreach were delivered with Australian cohorts.

Implications for policy makers and service delivery

The interventions reviewed here under the label of 'outreach' varied considerably. However, initial findings provide evidence of a beneficial effect for outreach models, especially those that offer a comprehensive outreach service that incorporate CBT-informed therapeutic approaches. The evidence suggests that the construction of an outreach model to support veterans that involves face-to-face home visitation is worthy of exploration as a novel means of service delivery. Such models may be an efficacious adjunct to existing services, and stand to benefit veterans not presently engaged in treatment. Further evidence of the efficacy of outreach for PTSD specifically and for an Australia veteran cohort would strengthen confidence in suitability of outreach models for Australian veterans and assist in identifying the optimal number of sessions and specific content of sessions likely to have yield the greatest improvements. In the absence of such evidence, it is essential that a comprehensive evaluation plan is built around a veteran specific outreach model to ensure its efficacy.

The current evidence suggests an outreach model may also benefit the female partners of veterans. This claim in made in recognition that the majority of participants included in the studies that comprise this review were female and of young age. Furthermore, while telehealth was explicitly excluded in this review in order to necessarily constrain the scope, it has significant potential to link in with outreach services in order to maximise engagement and reach. Future research should explore the role for telehealth to extend outreach services and potentially increase engagement and utilisation.

Conclusion

The findings from this REA indicate that the evidence for outreach services for treatment of mental health conditions is emerging, and initial findings appear encouraging in so far as there is suggestive evidence of a beneficial effect for comprehensive outreach service models that incorporate CBT-informed therapeutic approaches. On the basis of the evidence, the development of an outreach model to support veterans that entails face-toface home visitation is deemed worthy of exploration as a novel means of service delivery.

Given the nature of the evidence available, which draws upon samples of limited generalisability to the Australian veteran population, any such model, if piloted, should incorporate a clear evaluation strategy to ensure it is effective with the targeted population.

References

Ammerman, R. T., Putnam, F. W., Altaye, M., Stevens, J., Teeters, A. R., & Van Ginkel, J. B. (2013). A clinical trial of in-home CBT for depressed mothers in home visitation. *Behavior Therapy, 44*(3), 359-372.

Ammerman, R. T., Putnam, F. W., Stevens, J., Bosse, N. R., Short, J. A., Bodley, A. L., & Van Ginkel, J. B. (2011). An open trial of in-home CBT for depressed mothers in home visitation. *Maternal & Child Health Journal, 15*(8), 1333-1341.

Bird, K. (2015). Research evaluation of an Australian peer outdoor support therapy program for contemporary veterans' wellbeing. *International Journal of Mental Health, 44*(1-2), 46-79.

Boscarino, J. A. (2006). Posttraumatic stress disorder and mortality among U.S. Army veterans 30 years after military service. *Annals of Epidemiology, 16*(4), 248-256. doi:http://dx.doi.org/10.1016/j.annepidem.2005.03.009

Brooks, E., Novins, D. K., Thomas, D., Jiang, L., Nagamoto, H. T., Dailey, N., . . . Shore, J. H. (2012). Personal characteristics affecting veterans' sse of services for posttraumatic stress disorder. *Psychiatric Services, 63*(9), 862-867. doi:10.1176/appi.ps.201100444

Cohen, B. E., Gima, K., Bertenthal, D., Kim, S., Marmar, C. R., & Seal, K. H. (2010). Mental health diagnoses and utilization of VA non-mental health medical services among returning Iraq and Afghanistan veterans. *Journal of General Internal Medicine, 25*, 18-24.

Crawford, E. F., Elbogen, E. B., Wagner, H. R., Kudler, H., Calhoun, P. S., Brancu, M., & StraitsTroster, K. A. (2015). Surveying treatment preferences in U.S. Iraq-Afghanistan Veterans with PTSD symptoms: a step toward veteran-centered care. *Journal of Traumatic Stress, 28*(2), 118-126.

Elbogen, E. B., Wagner, H. R., Johnson, S. C., Kinneer, P., Kang, H., Vasterling, J. J., & Beckham, J. C. (2013). Are Iraq and Afghanistan veterans using mental health services? New data from a national random-sample survey. *Psychiatric Services, 64*, 134-141.

Gitlin, L. N., Harris, L. F., McCoy, M. C., Chernett, N. L., Pizzi, L. T., Jutkowitz, E., . . . Hauck, W. W. (2013). A home-based intervention to reduce depressive symptoms and improve quality of life in older African Americans: A randomised trial. *Annals of Internal Medicine, 159*(4), 243-252. doi:10.7326/0003-4819-159-4-201308200-00005

Hodson, S., McFarlane, A., Van Hooff, M., & Davies, C. (2011). *Mental Health in the Australian Defence Force: 2010 ADF Mental Health and Wellbeing Study*. Retrieved from http://www.defence.gov.au/health/dmh/docs/2010%20ADF%20Mental%20Health%20&%20Wellbeing%20Study%20Executive%20Report.pdf

Hoge, C. W., McGurk, D., Thomas, J. L., Cox, A. L., Engel, C. C., & Castro, C. A. (2008). Mild traumatic brain injury in U.S. soldiers returning from Iraq. *New England Journal of Medicine*, 453–463.

Leis, J. A., Mendelson, T., Tandon, S. D., & Perry, D. F. (2009). A systematic review of home-based interventions to prevent and treat postpartum depression. *Archives of Women's Mental Health, 12*(1), 3-13. doi:http://dx.doi.org/10.1007/s00737-008-0039-0

Maguen, S., Madden, E., Cohen, B. E., Bertenthal, D., & Seal, K. H. (2012). Time to treatment among veterans of conflicts in Iraq and Afghanistan with psychiatric diagnoses. *Psychiatric Services, 63*, 1206-1212.

National Mental Health Commission. (2017). *Review into the Suicide and Self-Harm Prevention Services Available to current and former serving ADF members and their families*. Retrieved from http://www.mentalhealthcommission.gov.au/

Prick, A. E., de Lange, J., Twisk, J., & Pot, A. M. (2015). The effects of a multi-component dyadic intervention on the psychological distress of family caregivers providing care to people with dementia: A randomised controlled trial. *International Psychogeriatrics, 27*(12), 2031-2044. doi:https://doi.org/10.1017/S104161021500071X

Sandweiss, D. A., Slymen, D. J., LeardMann, C. A., Smith, B., White, M. R., Boyko, E. J., & Smith, T. C. (2011). Preinjury psychiatric status, injury severity, and postdeployment posttraumatic stress disorder. *Archives of General Psychiatry, 68*(496-504).

Smelson, D. A., Kline, A., Kuhn, J., Rodrigues, S., O'Connor, K., Fisher, W., . . . Kane, V. (2013). A wraparound treatment engagement intervention for homeless veterans with co-occurring disorders. *Psychological Services, 10*(2), 161-167.

Spoont, M. R., Nelson, D. B., Murdoch, M., Rector, T., Sayer, N. A., Nugent, S., & Westermeyer, J. (2014). Impact of treatment beliefs and social network encouragement on initiation of care by VA service users with PTSD. *Psychiatric Services, 65*(5), 654-662. doi:10.1176/appi.ps.201200324

Thompson, P., Lang, L., & Annells, M. (2007). A systematic review of the effectiveness of in-home community nurse led interventions for the mental health of older persons. *Journal of Clinical Nursing, 17*, 1419-1427.

Van Citters, A., & Bartels, S. J. (2004). A systematic review of the effectiveness of community-based mental health outreach services for older adults. *Psychiatric Services, 55*(11), 1237-1249.

Varker, T., Brand, R. M., Ward, J., Terhaag, S., & Phelps, A. (in press). Efficacy of synchronous telepsychology interventions for people with anxiety, depression, posttraumatic stress disorder and adjustment disorder: A rapid evidence assessment.

Varker, T., Forbes, D., Dell, L., Weston, A., Merlin, T., Hodson, S., & O'Donnell, M. (2015). Rapid evidence assessment: Increasing the transparency of an emerging methodology. *Journal of Evaluation in Clinical Practice, 21*, 1199-1204.