PBE Economics to improve lives

Evaluating the impact of mental health therapy on the wellbeing of veterans

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About PBE

We use economics to improve lives. Through analytical expertise and our close connection with the social sector, we help charities, funders, firms, and policymakers tackle the causes and consequences of low wellbeing. Our analysts, researchers, and economists work on a wide range of issues related to low wellbeing, including mental health, education, employment, financial security, poverty, disability, inequality, volunteering, and civil society. Working with over 600 volunteer economists, we have supported over 600 charities since 2009.

About PTSD Resolution

PTSD Resolution is a UK charity that provides free mental health support for veterans, reservists, and their families struggling with trauma from military service or other life challenges. Through their network of over 200 accredited Human Givens therapists, they deliver confidential, one-to-one sessions, helping clients rebuild work and family life. Their program complements other services, including work in prisons and with individuals facing alcohol or drug issues.

Acknowledgments

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Summary

There are around 2.4 million veterans in the UK and 1.7 million households in England and Wales include at least one veteran. While most veterans adjust to civilian life relatively smoothly, some face significant challenges. The sudden lack of purpose and structure and loss of identity can feel overwhelming. Some may struggle to integrate into their local communities and experience isolation. Veterans exposed to combat may also suffer psychological trauma or live with long-term physical injuries and chronic pain.

It is not surprising then that mental health issues are common among veterans. While rates of common mental disorders (CMDs), such as depression and anxiety, are similar to those observed in the general population, veterans who served in recent combat operations experience significantly higher rates of poor mental ill health than the general population.

These persistent mental health conditions carry serious consequences including emotional distress, substance misuse, financial strain, risk of homelessness, social isolation, relationship breakdown, and in rare cases, violent behaviour. Yet many veterans still face barriers to accessing the care they need, including long waiting times and strict referral criteria, as well as social and behavioural barriers like the stigma about seeking help rooted in a 'macho' military culture and the perception that civilian health services are not suited to the military experience.

PTSD Resolution is a charity that seeks to overcome these barriers by offering veterans suffering from CMDs tailored therapy through a network of over 200 accredited Human Givens (HG) therapists. The HG holistic, evidence-based approach to mental health is described in more detail in the report. The therapy can be accessed through self-referral and is designed specifically to support those affected by service-related conditions such as PTSD, depression, and anxiety. Unlike some conventional health services, it imposes no strict acceptance conditions for clients. This results in higher client retention rates (90% of initial referrals agree to begin treatment) compared with other similar services.

This study evaluates the outcomes and economic cost-effectiveness of PTSD Resolution's mental health therapy for UK veterans and assesses its economic viability. We find that veterans demonstrate reliable recovery from anxiety, depression, and psychological distress between the start and completion of the therapy with gains broadly sustained in the year after completion of treatment.[1]

1 To be considered 'reliably' recovered, scores must not only be below the standard clinical threshold for 'caseness', there must also have been a statistically significant improvement in their condition.

We conclude that even under the most cautious assumptions, the PTSD Resolution programme is likely to be a cost-effective one. The benefits of the programme measured after one year outweigh costs if at least 10%-19% of the observed improvement in mental health can be confidently attributed to the therapy. Broader evidence on typical recovery rates for those that do not receive treatment suggests that over 65% of the improvements in mental health could be down to the programme.

If we assume that natural recovery rates (i.e. without any support) for PTSD Resolution clients are in line with evidence from wider literature, then PTSD Resolution could be delivering between £0.5m and £1.1m of benefits each year. This is the equivalent of a potential per person benefit of between £1,200 and £2,800. This suggests that PTSD Resolution could be delivering between £1.50 and £3.40 of economic benefits for every £1 spent on the programme.

Even so, these estimates potentially undervalue the full benefit of the therapy. For example, improvements that do not meet the strict definition of recovery are excluded from the analysis. Also, the absence of long-term data means that the analysis cannot quantify potential lifelong benefits of sustained recovery from poor mental health. Evaluations based on short-term outcomes (i.e. only up to a year after completion) are therefore likely to underestimate the true lifetime benefits of tailored mental health programmes. A clear next step for the charity would be to build up its dataset with stronger follow-up data at the six and 12 months follow-up points post-completion and extend follow-ups past the one-year mark.

Despite some limitations, our analysis shows that veterans on the PTSD Resolution programme, on average, demonstrate reliable recovery from anxiety, depression and psychological distress between the start and completion of the therapy beyond what broader evidence on natural recovery rates would suggest. While some fade-out of these effects is observed in post-treatment follow-up scores, the gains are broadly sustained, particularly for anxiety and depression. This persistence of recovery under alternative scenarios for all three mental health disorders assessed strengthens our confidence in the validity of our findings.

Our findings support the provision of veteran-specific mental health services such as PTSD Resolution's therapy as an effective and efficient use of charitable funding that improves mental health outcomes, achieves high client retention rates, and delivers economic benefits well above its costs.

"At 52 years old, my experience with PTSD Resolution has demonstrated that it is never too late to seek help. Their support has been transformative, helping me address long-standing issues and navigate recent personal challenges with resilience."

Billy, UK Veteran, RAF

Key takeaways

1

Some veteran groups are more likely to have persistent mental health issues than the general population which can lead to high personal and social costs.

2

PTSD Resolution's veteran-specific and highly accessible mental health therapy achieves notably higher client retention rates than other similar services.

3

There is a clear improvement in mental health conditions (anxiety, depression and psychological distress) between the start and end of treatment.

4

The benefits of the therapy very likely exceed its costs. For each £1 spent, the benefits to society will be between £1.50 and £3.40 across the following year. While benefits are likely to continue beyond this, data limitations prevent assigning a longer-term value.

Introduction

Many veterans (i.e. individuals who have previously served in the regular or reserve armed forces) transition smoothly to civilian life but a substantial number faces persistent mental health challenges. According to the 2021 Census, there are approximately 2.4 million veterans in the UK with around 1.7 million households in England and Wales (7% of all households) including at least one veteran, highlighting the significant presence of this community across the country.[2]

Some veteran groups are more likely to have persistent mental health issues than the general population

While many veterans navigate the transition to civilian life successfully, others find this adjustment challenging[3]. Some veterans may find it difficult to cope with the sudden shift in identity and perceived loss of purpose. Others may struggle to re-enter the workforce, face financial instability and, in some cases, experience homelessness. Reintegrating into family life can also present challenges. Some veterans will be coping with service-related injuries that result in chronic pain or long-term disability. Veterans who have been exposed to combat situations often carry uniquely distressing experiences that may lead to lasting psychological trauma. These factors are discussed in more detail later in the report.

It is unsurprising, therefore, that common mental disorders (CMD) such as depression, anxiety, and post-traumatic stress disorder (PTSD) are on the rise within the veteran population.[4] A survey of 4,910 veterans, jointly commissioned by the Royal College of GPs and the Office for Veterans' Affairs, found that 55% experienced a mental or physical health issue potentially related to their service since returning to civilian life.[5] Another study by King's Centre for Military Health Research commissioned by the Office for Veterans' Affairs reports that 28% of veterans recorded symptoms of CMD in 2022/23, up from 22% in 2014/16.[6] While rates of CMDs are similar between the overall veteran population and the general population, certain subgroups within the veteran community are at greater risk of developing such conditions.[7] UK veterans who served during recent military operations report higher rates of CMDs (23% vs. 16%), PTSD (8% vs. 5%), and alcohol misuse (11% vs. 6%) compared to non-veterans. Male veterans show a higher prevalence of CMDs and alcohol misuse than their civilian counterparts.

2 UK armed forces veterans, England and Wales: Census 2021

3 Detailed references are provided later in the report.

4 Marie-Louise Sharp et al, Health and Wellbeing Study of Serving and Ex-Serving UK Armed Forces Personnel: Phase 4, Office for Veterans' Affairs, (September 2024)

5 More than half of England's army veterans have health problems, The Guardian, March (2024)

6 Sharp et al (September 2024)

7 Rebecca Rhead et al, Mental health disorders and alcohol misuse among UK military veterans and the general population: a comparison study, Psychological Medicine, (January 2022)

Access to appropriate support is often hindered by factors such as inadequate support services, a military culture in which seeking help when you need it can carry stigma rather than being a social norm, and the perception within the veteran community that civilian healthcare won't meet their needs because of a lack of understanding of military-specific experiences.[8] These barriers contribute to delays in seeking help and highlight the urgent need for veteran-specific pathways that can deliver mental health services to those affected by CMDs.

There are several distinctive factors of the military experience that contribute to mental health issues among veterans:

Traumatic experiences: Veterans who served in combat roles witnessing injury or destruction and loss of comrades during operations like Iraq and Afghanistan are significantly more likely to report mental health issues: the overall rate of probable PTSD for veterans was 9% (in 2022/23) but prevalence doubled to 18% for those deployed in a combat role to Iraq or Afghanistan.[9]

Difficult transition to civilian life: Veterans may experience a loss in identity and purpose when no longer contributing to a collective cause nor part of a close-knit military community.[10] Reintegration difficulties correlate with higher rates of anxiety, depression, alcohol misuse, and PTSD.[11]

Stigma: a military culture that promotes resilience and self-reliance can create lasting stigma around mental health making it difficult for veterans to seek help even after leaving the armed forces.[12] About half of UK veterans suffering symptoms of PTSD do not seek help.[13]

8 Rebecca Randles and A Finnigan, Veteran help-seeking behaviour for mental health issues: a systematic review, BMJ Military Health, (February 2022)

9 Sharp et al (September 2024)

10 Mary Keeling, Stories of transition: US Veterans' narratives of transition to civilian life and the important role of identity, Journal of Military, Veteran and Family Health, (September 2018)

11 Emily McGlinchey et al, The challenges of leaving: Reintegration difficulties and negative mental health outcomes in UK Armed Forces Veterans residing in Northern Ireland, Journal of Military, Veteran and Family Health, (June 2024)

12 Amy C Iversen et al, The stigma of mental health problems and other barriers to care in the UK Armed Forces. BMC Health Services Research, (February 2011)

13 Jane Dalton et al, The provision of services in the UK for UK armed forces veterans with PTSD: a rapid evidence synthesis, NIHR Journals Library, (February 2018)

Physical injuries: service-related injuries can cause long-term disability or pain which increases the risk of poor mental health and substance abuse. A Help for Heroes survey of veterans with long-term health conditions shows that 85% suffer from mental health issues, 82% report loneliness and 10% report alcohol or substance misuse.[14]

Lack of access or support: some veterans may find that civilian health services are unable to understand the unique military experience. 63% of veterans said they would be more likely to seek help if their GP practice was signed up to the Veteran Friendly Accreditation scheme.[15] Strict referral criteria for conventional therapy, e.g. requiring sobriety, excludes veterans with addiction issues.

Other: this can include moral injury, complex PTSD and complications and difficulties with family life.

"If you're suffering with any of these issues, get help as soon as you can... I should have done it years ago."

Simon, UK Veteran

14 Survey Reveals Decline in Veterans' Mental Health, Help for Heroes, (July 2025)

15 More than half of England's army veterans have health problems, The Guardian, March (2024)

Persistent CMDs can lead to high personal and social costs

Unresolved and persistent CMDs in the veteran community lead to poor outcomes for the individual with negative impacts on families and communities. Some of these impacts are listed below:

- Individual suffering: veterans with mental health problems endure psychological distress, ranging from low moods to suicidal thoughts, that can impair daily life and contribute to high suicide rates.[16]
- Financial distress: mental health challenges can hinder veterans' ability to maintain employment, often leading to financial instability and, in some cases, homelessness.[17]
- Substance abuse: veterans may turn to substance misuse to cope with mental health symptoms, exacerbating a cycle of addiction, social isolation, and declining physical and mental health.[18]
- Loneliness: difficulty reintegrating into civilian life may lead to feelings of alienation and long-term loneliness that hinders recovery and reinforces negative thought patterns.[19]
- Impact on relationships: Mental health and addiction issues in veterans may place an emotional burden on their families who are often unsupported in caring roles.[20]
- Violent offending: a very small minority of veterans commit violent offences after leaving service. Mental health, alcoholism and unstable living arrangements are associated with increased risk of post-service offending.[21]
- Loss of stability: there are those who may have come from troubled backgrounds and found stability in the armed forces and their difficulties may emerge once they leave that supportive background.[22]

Despite increasing awareness and significant adverse consequences, far too many veterans still struggle to access appropriate support, leading to rising rates of conditions such as depression, anxiety, and Post-Traumatic Stress Disorder (PTSD).[23] Understanding the unique experiences of veterans is essential to providing effective care and support for their mental wellbeing.

16 Jodie Westhead et al, Observational study of the pre-service vulnerabilities, in-service exposures and post-service antecedents of suicide in veterans of the UK Armed Forces. BMJ Public Health, (March 2025).

17 Finance and housing, UK armed forces veterans: Veterans' Survey 2022, ONS, (January 2025).

18 Ibid.

19 Charlotte Williamson, Loneliness among UK Veterans: Associations with quality of life, alcohol misuse, and perceptions of partner drinking, Journal of Military, Veteran and Family Health, (September 2023)

20 Charlie Lloyd et al, Fighting Their Own Battle: Families of Veterans with Substance Use Problems, Adfam, (October 2020)

21 Deirdre MacManus et al, Risk and protective factors for offending among UK Armed Forces personnel after they leave service: a data linkage study, Psychological Medicine, (November 2019)

22 Military Families and Transition, The Centre for Social Justice, (May 2016)

23 Sharp et al (Sep 2024)

PTSD Resolution is a charity that helps veterans and reservists resolve mental health conditions caused by service-related trauma or other life challenges. Its national outreach programme has a nationwide network of over 200 Human Givens therapists, accredited by the Professional Standards Authority, providing confidential Human Given Therapy that can be accessed locally or remotely. Clients may self-refer, or they may be signposted or formally referred by a variety of other referral sources (for example the NHS Op COURAGE service and SSAFA, the armed forces charity).

Human Givens Therapy (HGT) is a holistic approach to psychotherapy grounded in an understanding of the emotional needs of individuals and the application of their own resources to take an active role in their recovery. The therapy aims to tackle the causes of mental health issues rather than treat the symptoms. Key elements include identifying emotional needs, developing resilience and improving connections and communication skills. HG therapists are trained in the treatment of psychological trauma and commonly use an intervention known as 'Rewind', a therapeutic method used to help people process and overcome trauma, phobias, or anxiety.

After an initial screening, the client is referred to a therapist for a series of one-to-one, outpatient therapy sessions. These hour-long sessions are designed to help veterans overcome the disabling effects of PTSD, depression, anxiety, and related mental health issues. Though the number of sessions may vary, most clients complete around six. More than 80% of individuals finish the full course of recommended treatment.

At each session, the therapist works through mental health screening questionnaires to capture the mental health status of the client on the day. The screening is done for a range of indicators to assess a number of mental health conditions. Three indicators have been assessed in this report for the charity's Project-100 sample described below:

- GAD-7: To measure Generalised Anxiety Disorder (anxiety)
- PHQ-9: To measure Major Depressive Disorder (low mood)
- CORE-10: To measure broad symptoms of psychological distress[24]

Scores on all three measures are recorded at the assessment, before each therapy session, and in the three post-treatment follow-ups at three, six and 12 months.[25] These are used to track a client's progress and to determine whether they have reliably recovered at the end of the therapy. To be considered 'reliably' recovered, scores must not only be below the

24 Psychological distress covers a range of domains, including: anxiety, depression, trauma, physical problems, functioning and risk to self.

25 All clients are sent follow-up invitations at 3, 6 and 12 months after completion of therapy. Data is available for the 40% who responded at three months, and the 30% who responded at six and 12 months.

standard clinical threshold for 'caseness', there must also have been a statistically significant improvement in their condition.[26] In this report, recovery rates should be interpreted as rates of reliable recovery. Annex D details caseness thresholds and reliable recovery scores for the three measures above.

Project 100: Project 100 is an initiative by PTSD Resolution to collect comprehensive data in mental health indicators at all points of contact with the therapist as well as at three follow-up points for at least 100 veterans detailing their mental health on a range of indicators. The project has long exceeded that target with the database now holding information on 500+ veterans. Data from Project 100 represents the majority (around 75%) of clients seen by the charity over the period only excluding those unable to adhere to the protocol or in cases where data collection was impossible, e.g. if the client was homeless. This report uses all Project 100 closed cases between 1/5/2022 and 1/4/2024 to assess the efficacy and cost effectiveness of the therapy.

26 Caseness means a referral has severe enough symptoms to be regarded as a clinical case.

Approach

Step 1: Evaluate the impact of therapy on mental health outcomes

We evaluate the efficacy of the PTSD Resolution therapy by analysing the average change in clients' GAD-7, PHQ-9 and CORE-10 scores at the start of the therapy and after therapy concludes. This helps to determine whether clients demonstrate reliable recovery from the symptoms of anxiety, depression and psychological distress that were clinically diagnosed at assessment over the course of the treatment.

Step 2: Calculate Quality-Adjusted Life Years (QALYs) gained from each reliable recovery case

Next, the benefits of any reliable recovery observed in Step 1 are quantified using Quality-Adjusted Life Years (QUALYs), a standard metric used by the National Institute for Health and Care Excellence (NICE) to calculate the benefits associated with an improved quality of life over one full year due to mental and physical health interventions. We use reliable recovery data from Step 1 and health weights from the World Health Organisation (WHO) to calculate QALYs gained for each case of reliable recovery from anxiety, depression, and psychological distress respectively.

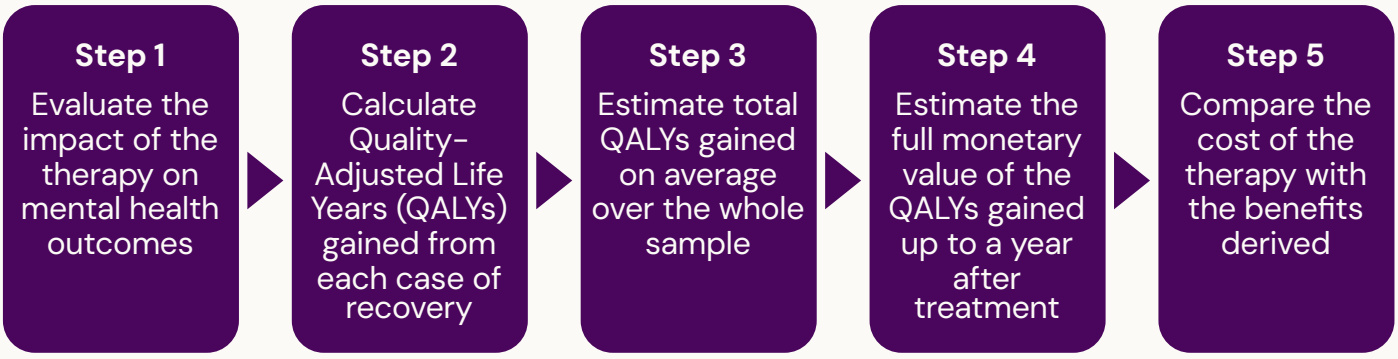
A detailed methodology is given in Annex A.

Step 3: Estimate total QALYs gained up to a year post-recovery for the full Project-100 sample

The average QALY impact for each case of reliable recovery from anxiety, depression and distress from Step 2 is then applied to all cases in the Project-100 database.

Total benefits (in QALY terms) are calculated from the first therapy session to up to one year after its completion. There are two parts to this calculation:

1. Recovery during treatment: over the typical six sessions for the average client, over and above what would have been observed naturally over time in the absence of any treatment.
2. Post-treatment recovery: the recovery maintained up to one year after the completion of the therapy over and above what would have been observed naturally over time in the absence of any treatment.



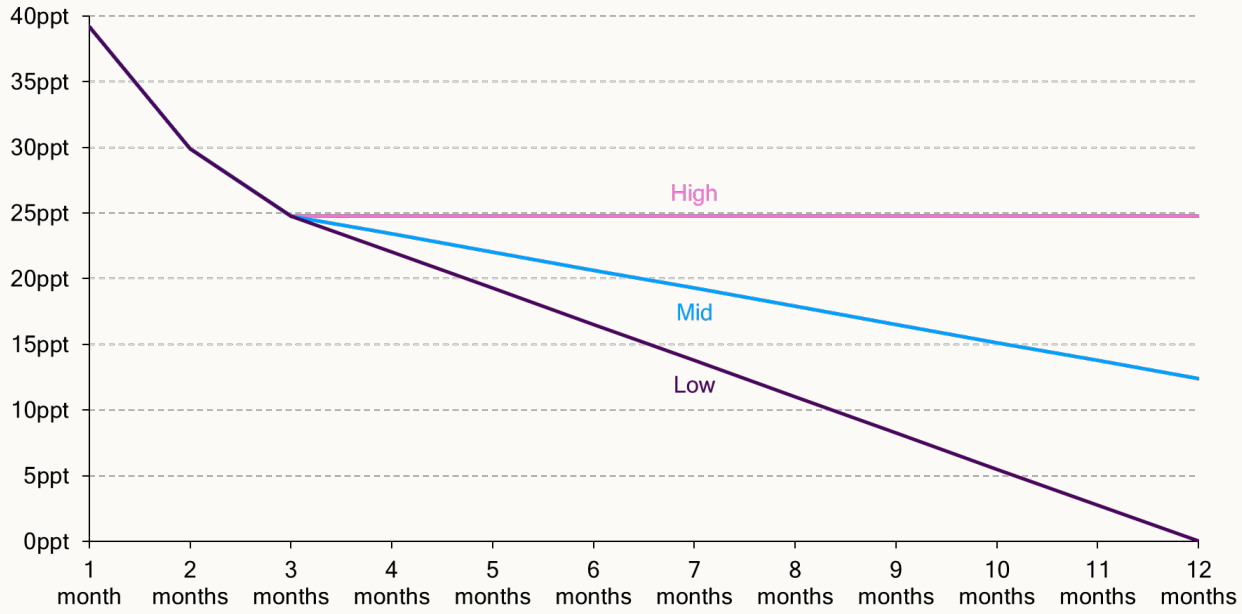
Follow-up data at the three-month point is fairly reliable with over 100 people providing responses for all three key measures. However, fewer than 50 people responded at the six-month and 20 people at 12-month follow-ups. Because of this drop in numbers, we outline some possible scenarios to reflect how people might continue to recover after the three-month mark:

- High (best-case) Scenario: The improvements seen from the therapy are maintained. In other words, the benefit of the treatment stays the same from three to 12 months after it ends.
- Low (worst-case) Scenario: The improvements from the therapy gradually disappear, and by 12 months, people are doing about as well as they would have without any treatment.
- Mid Scenario: The improvements from the therapy reduce somewhat (by 50%) between thre and 12 months, but 50% of the benefit still remains one year after completion.

The one-year trajectory for all three scenarios is shown in Figure 1.

Figure 1. Our three scenarios model different recovery levels that might be sustained after therapy ends

Percentage point (ppt) difference between recovery from therapy and natural recovery rate over three modelled scenarios



Note: The high scenario assumes any gap is maintained fully while the low scenario assumes full convergence to the natural recovery rate by the end of one year.

Source: PBE analysis of PTSD Resolution data; see Annex B for methodology.

We calculate the QALYs gained over the course of treatment as well as in three post-treatment scenarios. This is discussed in detail in Annex B.

Step 4: Estimate the monetary value of the QALYs gained in 2023/24 prices

The Treasury 'Green Book' provides a standard valuation of the economic benefit of one QALY that we use to calculate the total benefit of the therapy in today's (2023/24) prices as: [27] [28] [29]

Total monetary benefit of therapy = total QALYs gained over the course of the treatment and up to one year on × value of one QALY

27 "The Green Book (2022)," HM Treasury gives the value of one QALY in 2020/21 prices as £70,000.

28 This value measures the societal willingness to pay for factors such as life extension, improved quality of life, and reduced/avoided morbidity amongst others.

29 This is done using the GDP deflator, GDP per capital and the formula below in line with the latest guidance from HMT Wellbeing Guidance for Appraisal: Supplementary Green Book Guidance (2021), HM Treasury.

Step 5: Compare the cost of the therapy with the benefits derived in Step 3

PTSD Resolution financial statements from 2022/23 and 2023/24 were used to extract costs expressed in 2023/24 prices over the period 1st May 2022 to 30th April 2024 in line with the Project 100 sample period.[30] We estimate that the cost of the therapy for the period 1st May 2023 to 30th April 2024 is £342,491.

We have limited information on what would have happened to the veterans supported if they had not received PTSD Resolution's treatment. This means there is uncertainty about how much of the improvement in mental health can be directly attributed to PTSD Resolution's support, and how much might have occurred anyway. Given this, we explore two scenario-based approaches to comparing the costs of the programme to the benefits:

- Firstly, we calculate what proportion of the improvement in mental health that would need to be attributed to PTSD Resolution's therapy in order for the benefits to outweigh the costs.
- Secondly, we draw on wider literature around typical recovery rates for CMDs to estimate the potential Benefit Cost Ratios (value of benefits per £1 spent) for each indicator and scenario to determine cost effectiveness.

Caveats and limitations

There are some caveats and limitations to the analysis:

1. The methodology only captures benefits for those in the programme who move below the clinical threshold of an official diagnosis. Those who experience a reliable improvement but stay above clinical thresholds are excluded. For example, two individuals with GAD-7 scores of 9 and 18 at the start of treatment will both be above the clinical threshold of 8 for caseness. At the end of the treatment if they have scores of 7 and 11 respectively, the first will be included in the benefits calculation while the second will not despite a bigger improvement as their score is still above 8. The failure to capture the benefits of large reliable improvements that are marginally above the caseness threshold is a limitation of the methodology that necessarily means that the measured value of the therapy will be an underestimate.
2. The Project-100 database has information on follow-up rates at the threethree-month, six-month and 12-month points. By the six-month and 12-month points, the sample size is small enough to necessitate the use of scenarios. Beyond the 12-month point, there is no data to analyse hence any benefits that may continue in terms of improved mental health benefits over and above what would occur in the absence of treatment are not captured. This does not mean such benefits could not exist over the lifetime of the client which suggests that the value of the therapy is likely to be an underestimate.

30 The costs incurred by the charity for data collection were removed as this does not directly contribute to the therapy. As approximately 75% of all clients are included in the Project-100 database, an equivalent 75% of calculated costs was considered

One strength of the PTSD Resolution programme is higher retention of clients after initial assessment relative to other mental health initiatives.[31] A second is ease of access to this service. For example, the service is available to those who may have substance misuse issues as long as they maintain sobriety during therapy sessions which opens doors to many excluded veterans who may be battling addictions. Such non-quantified benefits in terms of a wider net of individuals treated and eligible for treatment are not reflected in the numbers calculated above.

3. There are other wider benefits too that are not easily quantified. For example: the value of finding purpose in life, reconnection or improved relations with family members, improved social connections or improved labour market outcomes are all outside the scope of our study. This is likely to lead to an underestimate of the full benefits of the programme.
4. We have limited information on what would have happened to the veterans supported if they had not received PTSD Resolution's treatment. Ideally, we would compare outcomes with those of a comparison group (i.e. similar veterans who did not receive any treatment). In the absence of this data, we have drawn on evidence from other similar studies of veterans who have undergone comparable mental health treatments.

This means that the results should be viewed as indicative findings with more evidence needed to improve our confidence in these.

31 90% of PTSD Resolution referrals begin treatment compared with 74% in NHS IAPT Talking Therapies (for veterans). Furthermore, 82% of the 90% go on to complete the treatment, compared with only 56% completing at least 2 sessions under NHS IAPT services. This also means that the reliable recovery rates PTSD Resolution reports are more meaningful as they cover a majority of the clients referred rather than on just a much smaller subset left over after significant attrition.

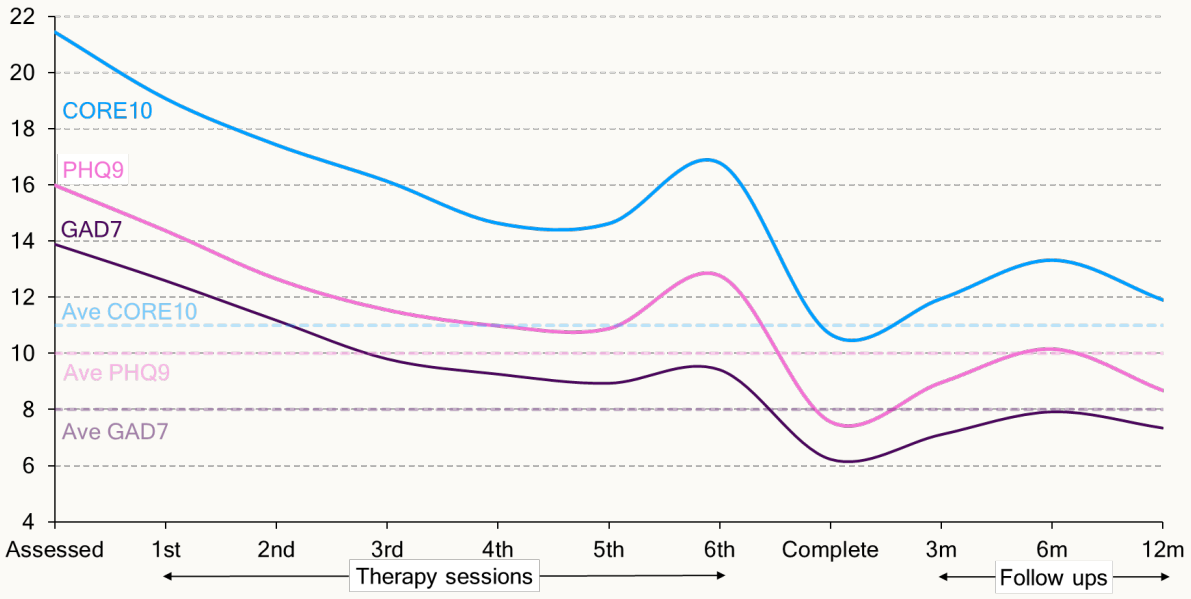
Results

Mental health of PTSD Resolution clients improved over the programme

A visual representation of the three indicators observed shows a clear improvement in mental health between the start and end of treatment. Figure 2 plots average GAD-7, PHQ-9 and CORE-10 scores for all veterans in the sample where data was available.

Figure 2: On average, veterans experience better mental health over the course of therapy.

Average GAD-7, PHQ-9 and CORE-10 scores from assessment up to 12 months after completion of the programme.



Note: The caseness (clinical) thresholds for GAD-7 (anxiety), PHQ-9 (depression) and CORE-10 (distress) are 8,10 and 11 on a scale of 0-21, 0-27 and 0-40 respectively. Also note that the sample size diminishes at each subsequent point falling to less than 50 at the six-month and 12-month follow-up with implications for data reliability at these points.

Source: PBE analysis of PTSD Resolution data.

The results show an unambiguous improvement in mental health over the course of the treatment between assessment and completion for all three indicators with the average score moving from caseness (i.e. a clinically diagnosed mental health disorder) to non-caseness (with reliable recovery). Once the treatment ends, there is a slight increase in scores indicating a slight worsening in mental health but this still remains in 'recovered' territory. The exception is CORE-10 which shows significant improvement over the course of the treatment but stays marginally above the caseness threshold in the follow-up data though vastly improved from the

starting score. It is important to note that this chart plots the average score at each assessment point for all clients in the sample where data was present. For each average score, there will be some clients who cross the threshold into 'non-caseness' while others may remain at clinically diagnosed levels. Table B1 gives a breakdown of the proportion of clients in each category at each assessment point for all three indicators analysed.

The data shows that the PTSD Resolution therapy is effective in treating clinically diagnosed anxiety and depression in veterans helping them reliably recover and stay recovered after the treatment is completed, for at least the period of study. For psychological distress, a clear improvement is seen over the course of the programme towards reliable recovery but, on average, post-treatment scores edge up marginally above clinically diagnosed caseness thresholds.

The programme is likely to represent good value for money

We estimate that for the benefits of the programme to outweigh its costs, PTSD Resolution would need to be responsible for between 11% of the observed improvement in mental health in the most optimistic scenario, and around 19% in the most conservative case, highlighting the cost-effectiveness of the therapy.[32]

To calculate the monetary benefits gained from every £1 of investment, we follow the methodology detailed above in Steps 1-4. The total economic value of the improvement in mental health is estimated to be between £0.5m and £1.2m for the clients in the sample analysed as shown in Table 1.[33] This is the equivalent of a potential per person benefit of between £1,200 and £2,800 for the clients in the sample analysed (see Annex C). Given that, on average, PTSD Resolution provides therapy to about 450 veterans a year, this means that the therapy potentially provides economic benefits of between £0.54m and £1.26m each year.

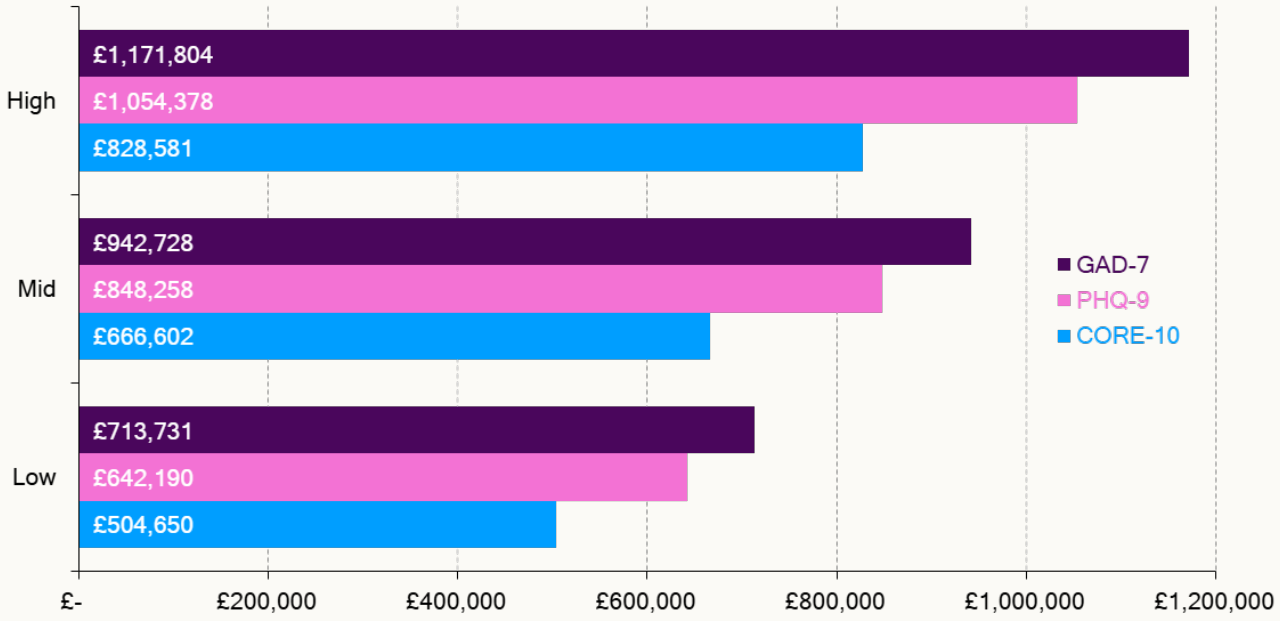
We estimate the programme costs for the period 1st May 2023 to 30th April 2024 for the Project-100 sample as £342,500. This means that PTSD Resolution is likely to be delivering between £1.50 and £3.40 of economic benefits for every £1 spent on the programme. Thus, the benefits of the therapy exceed its costs even under the most conservative assumptions on the persistence of the recovery one year after treatment is completed.

32 This is calculated in Table C2 in Annex C.

33 Detailed calculations are available in Annex A and B.

Figure 3: The benefits of the intervention likely lie between £0.5m and £1.2m.

Monetary benefits for GAD7, PHQ-9 and CORE-10 calculated under three possible recovery scenarios.



Notes: Monetary benefits are based on standard Treasury valuation of an improved quality of life.

Source: PBE analysis of PTSD Resolution and various data; see Annexes A, B and C for full methodology.

It is important to note two key points.

First, due to lack of a comparator sample group, the calculated benefits statistically cannot be attributed to the programme. However, comparing recovery rates in the PTSD Resolution programme to evidence from wider literature on typical recovery rates for those that do not receive treatment, suggests it is plausible that between 65% and 78% of the improvements are potentially attributed to the programme. On this basis, it is highly likely that the programme is delivering benefits that exceed its costs.

Second, due to lack of long-term data, the analysis does not quantify potential lifelong benefits of sustained recovery from mental health. While some veterans face the risk of relapse, particularly those facing ongoing difficult circumstances such as homelessness or addictions, many clients will experience long-term improvements in functioning and quality of life.[34] Evaluations based on short-term outcomes (i.e. only up to year after completion) are therefore likely to underestimate the true lifetime benefits of tailored mental health programmes.

34 Dominic Murphy et al, Long-term responses to treatment in UK veterans with military-related PTSD: an observational study, BMJ Open, (September 2016)

Concluding comments

Despite some methodological limitations and data constraints, our findings support the view that PTSD Resolution's programme is clinically effective in supporting veterans suffering from mental health issues. It also consistently shows a positive return on investment.

Previous research has highlighted several distinctive factors of the military experience that contribute to mental health issues among veterans. As such, it is essential to build evidence around how specialist treatment pathways can help to reach, engage and support this group. Our analysis adds to this evidence by demonstrating that PTSD Resolution's confidential and accessible therapy, with minimal barriers to participation, is effective in delivering successful outcomes and good value for money.

However, it is not just what support is delivered but who delivers it. The NHS 10-year plan places a significant focus on moving treatment from the hospital into the community, and partnerships with voluntary sector organisations will be integral to making this happen. The sheer scale of potential need, and the difficulties in reaching and engaging the people that need the support the most, means that organisations with a specialist knowledge of their community will have a key role to play.

The veterans sector is no exception. There are around 1,700 armed forces charities in the UK.[35] If the NHS is to meet the needs for support among ex-service personnel, they will need to build a network of organisations to collaborate with. Drawing on the deep understanding and knowledge of veterans' experiences, as well as their unique approach to engaging with the community, organisations such as PTSD Resolution can play a critical role in delivering positive outcomes for veterans. This is, of course, partly a question of funding but is also about building genuine partnerships working towards the same outcomes and focused on delivering a better quality of life for those that need support the most.

> **"I would recommend PTSD Resolution, a big yes. It's the fact you get seen straight away from the first phone call, compared to other services out there."**
> **K.D. UK Veteran**

35 Chester Howarth and Rhiannon Doherty, Sector Insight: Armed Forces Charities, an overview and analysis, Directory of Social Change, (2024)

Annex A

Calculating the average Quality-Adjusted Life Year (QALY) gained from recovery from Common Mental Disorders for the Project-100 sample

We use health weights published by the World Health Organisation (WHO) to calculate quality-adjusted life years (QALYs) associated with the Common Mental Disorders suffered by veterans in the sample. QALYS have a maximum value of 1 (perfect health) and minimum value of 0 (death). Health weights represent a change in quality of life as a result of a physical and mental illnesses and disorders. For example, a health weight of 0.5 for a year represents a reduction in the amount of time lived in perfect health by half i.e. six months.

PTSD Resolution collects data for GAD-7, PHQ-9 and CORE-10 which measure anxiety, depression and psychological distress respectively. We use data on these indicators from the Project-100 sample to calculate the share of veterans who start with mild, moderate, and severe cases of these three disorders at the start of the programme to estimate a weighted average QALY for each.

Measures of anxiety used the standard GAD-7 measure, which scores anxiety on a range from 0 to 21, and categorises severity into minimal (0-4), mild (5-9), moderate (10-14), and severe (15-21) anxiety. Measures of depression used the standard PHQ-9 measure, which scores depression on a range from 0 to 27, and categorises severity into minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19) and severe (20-27) anxiety. We have merged moderate and moderately severe to form the moderate category. Measures of distress used the standard CORE-10 measure, which scores distress on a range from 0 to 40, and categorises severity into minimal (0-10), mild (11-15), moderate (15-25), and severe (25-40) distress.

Table A1 in the data spreadsheet shows the health weight for anxiety, depression and psychological distress as well as the proportion of the Project-100 sample in each category.

*Note: WHO does not publish health weights for psychological distress. Instead, these have been taken from published utility values for psychological distress based on SF-6D scores derived in a separate study.[36] We calculate the weighted average QALY gained a year from recovery from each CMD in this sample as:

QUALYs gained = health weight for mild anxiety x % mild + health weight for moderate anxiety x % moderate + health weight for severe anxiety x % severe

Figure A1 in the data spreadsheet shows that the average QALY gained per recovery from anxiety, depression and psychological distress in the Project-100 sample is 0.308, 0.42 and 0.367 respectively.

36 Muhammad Iftikhar Ul Husnain et al, The Hidden Toll of Psychological Distress in Australian Adults and Its Impact on Health-Related Quality of Life Measured as Health State Utilities. Appl Health Econ Health Policy, (July 2024)

Annex B

Defining scenarios for persistence of recovery and estimating total QALYs gained from recovery from CMDs from the Project-100 sample

We apply the average QALYs per recovery calculated above to the full Project-100 sample. For this we need to calculate the recovery that happened during the course of the therapy as the recovery profile one year after the treatment ended.

QALYs gained over the course of the therapy

To calculate QALYs gained over the course of the therapy we need an estimate of the proportion of individuals who move from caseness to non-caseness after each session.

One confounding factor is the fact that not all clients had the same number of sessions. While on average most clients have 6 sessions, some have had fewer and a few even up to 17. To keep the analysis simple, we only considered clients who have completed 6 sessions and for whom data was available for all 6 sessions as well as the assessment and completion data. This amounted to 85 clients for GAD-7, 81 for PHQ-9 and 91 for CORE-10.

Figure B1 in the data spreadsheet shows the average proportion of clients who classified as either within 'caseness' or 'non-caseness' at each therapy session.

These average proportions for recovery by subsequent sessions were then multiplied by the number of individuals who were diagnosed with caseness for each indicator in the Project-100 sample: 333 for GAD-7, 289 for PHQ-9 and 355 for CORE-10. This allowed us to estimate the additional number of people who moved from caseness to non-caseness at each additional therapy session.[37]

We calculated the total QALYs gained at each additional therapy session by multiplying all new 'non-caseness' individuals (i.e. those who recovered at each point) by the QALYs gained from recovery estimated in Table A1 in the data spreadsheet after dividing these by 52 as QALY estimates are the health benefits realised over one year and our simplifying assumption is that of 6 weekly sessions. The QALYs calculated are summed up over all 6 sessions to derive total QALYs gained over the course of the treatment. These are shown in Table A4 in the data spreadsheet. It should be noted that this methodology only captures recovery and not improvements.

37 Mark Andrews, Analysis of Project-100 Closed Cases: 1st May 2022 to 30th April 2024, Nottingham Trent University, March 2025

QALYs gained over one year after the end of the therapy

In order to derive QALYs post-treatment, we need to take a view on the persistence of the recovery from CMDs and estimate how what proportion of this can be attributed to the therapy rather than simply natural improvement experienced over time in the absence of any treatment.

Ideally, the Natural Rate of Recovery (NRR) should come from a control group but in the absence of that we use natural rates of recovery from these CMDs from other studies of veterans.[38] We first subtract the reliable recovery rates from the natural rates of recovery to obtain an estimate of the rate of recovery attributed to the programme. The natural rates of recovery and rates of reliable recovery for Project-100 veterans are given in Figure B2 in the data spreadsheet.

The next question to be answered is what happens to recovery one year after the completion of the programme. While PTSD R data does include follow up data at the three-month, six-month and 12-month marks, the sample size falls markedly due to the difficulty of maintaining follow-up rates. It is really only three-month data that still has a large enough sample size to be considered robust information. The three-month data shows that while all indicators show a marginal deterioration, they still remain in 'non-caseness' territory.

Given the sample size of six-month and 12-month follow ups is inadequate, we define four possible scenarios of persistence that could emerge after the three-month point:

1. High Scenario: The recovery is broadly sustained i.e. the gap between the RRR and NRR is maintained between three and 12 months after the completion of the programme.
2. Low Scenario: The recovery fully converges to the NRR by the end of the treatment i.e. the gap between the RRR and NRR closes between three and 12 months after the completion of the programme.
3. Mid Scenario: The recovery partly converges to the NRR by the end of the treatment i.e. the gap between the RRR and NRR closes by 50% between three and 12 months after the completion of the programme.

Scaling factors were derived for each scenario and applied to the analysis as follows:

The total improvement (in QALYs) due to recovery from the PTSD R programme for Project-100 sample is calculated in Figure B3 as:

QALYs gained = veterans who had CMD and sought treatment × improved recovery rate due to therapy above NRR × (health weight for mild anxiety × % mild + health weight for moderate anxiety × % moderate + health weight for severe anxiety × % severe) × scaling for recovery persistence scenario

38 Paul Clarksonet al, Outcomes from a pilot psychological therapies service for UK military veterans, Nursing Open, (June 2016)

Annex C

Calculating the cost-effectiveness of the therapy

We calculate per person benefits by dividing the total benefits by the total number of people in the sample for each indicator in Figure C1 in the data spreadsheet.

Breakeven ratios (i.e. costs as a proportion of benefits are given in the table below) are calculated using gross benefits i.e. without removing the benefits of a natural rate of recovery. This is done by dividing costs by gross benefits calculated under all scenarios for the indicators assessed as shown in Figure C2 in the data spreadsheet.

The benefits per £1 of cost are calculated as total benefits of the therapy divided by the total cost of the therapy as shows in Figure C3 in the data spreadsheet.

Annex D

Outcome measure	Description	How the measure works
GAD 7 (Generalized Anxiety Disorder)	The GAD-7 tool is specific to GAD as reflecting DSM-IV. It is used as a tool in screening for severity of anxiety symptoms, and monitoring progress after diagnosis	Consists of seven items measuring worry and anxiety symptoms. Each item is scored on a four-point Likert scale (0–3) with total scores ranging from 0 to 21 with higher scores reflecting greater anxiety severity. - Scores above 10 are considered to be in the clinical range Reliable change index is change >=4
PHQ (Patient Health Questionnaire)	The PHQ is a screening assessment tool for depression defined by DSM-IV used frequently in hospital settings. Meta-analysis has demonstrated that the PHQ-9 can be used to diagnose major depressive disorder	Consists of nine items measuring depressive symptoms corresponding to the diagnostic criteria for major depressive disorder. Each item is scored on a four-point Likert scale (0–3) with scores ranging from 0 to 27, with higher scores reflecting greater depression severity. - Score 10 or above to distinguish clinical populations Reliable change index is change >=6
CORE-10 (Clinical Outcomes in Routine Evaluation – 10 Items)	The CORE-10 is a standardized 10-item self-report measure designed to assess global psychological distress, including symptoms of anxiety, depression, and functional impairment, commonly used to monitor treatment progress and evaluate therapeutic outcomes.	The CORE-10 is a self-report measure on individuals' psychological state. It has 10 statements relating to emotional wellbeing, functioning, and risk and each item is rated on a 5-point Likert scale (0-5) with scores ranging from 0 to 40 with higher scores indicating greater psychological distress. - Score 11 or above to distinguish clinical populations Reliable change index is change >=6

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