Where Are All the Veterans?
Increasing Veteran Registration in Primary Healthcare

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Abbreviations

AFC	Armed Forces Community
CTS	Complex Treatment Service
CQC	Care Quality Commission
FiMT	Forces in Mind Trust
GP	General Practitioner
HIS	High Intensity Service
MH	Mental Health
MOD	Ministry of Defence
NHSE	NHS England
NW	North-West
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
PCN	Primary Care Network
PHC	Primary Healthcare
PTSD	Post-Traumatic Stress Disorder
RCGP	Royal College of General Practitioners
SNOMED-CT	Systematized Nomenclature of Medicine - Clinical Terms
TILS	Transition, Intervention and Liaison Service

Foreword

Tom McBarnet
Director of Programmes, FiMT

Many social commentators contend that in today's modern world, society has never been better informed, nor more joined up in communications ability. Ever-burgeoning sources of public information compete daily with our desire to stay connected with people generally and on issues we feel are important to us, vying for primacy in the actions we are urged to take. Some would say that the Armed Forces Community, and veterans too, are just a subset of that wider society and no less able to identify and prioritise their needs in terms of support or assistance. But that might be a misplaced judgement that assumes a similar level of rational engagement on their health care requirements. The problem is of course that veterans, like many other humans, don't necessarily listen to or seek out tailored advice and support. Poor help seeking behaviours seem to be characteristic in those who remain still 'shaped' by the unique cultural backgrounds and influences they experienced during their service in the UK Armed Forces. And the barriers and obstacles to achieving the 'reach' needed by health care professionals also conspires to limit what we know of this group and to shape appropriate responses in their support.

When Alan Finnegan approached Forces in Mind Trust on this study, our Trustees needed some convincing of the likely impact of a campaign to improve veterans' registration with GPs. But the findings illustrate starkly that active communication strategies can dramatically increase 'first registration' figures and also reveals the consequent limitations in current demographic data collected on conditions normally associated with the veteran community (depression, anxiety, PTSD, alcohol misuse, substance misuse and the physical disorder of dementia). This is especially important: whilst normal primary healthcare code provides an element of consistency in recording characteristic, diagnostic and pharmacological treatments onto a patient's medical record, it is widely recognised that there is poor data on tracking the correlation of mental and physical health comorbidities both in primary care, and from primary to secondary care. Improving veterans' registration is a vital first step toward better data capture and this study should be seen as an important stepping-stone toward future measures that improve the identification and transparency of veterans and therapy pathways throughout the whole UK healthcare system.

How can this study have future impact? Firstly, by providing convincing evidence that by working in tandem with pre-existing NHS strategies such as the Veterans Friendly GP initiative, and by utilising parallel community-centric locations and messaging avenues such as supermarkets, public transport, social media, local police, local sports and information hubs it is possible to radically improve the reach of primary care out to local veterans. Secondly, that there is still a gulf in understanding of veterans' need *vis a vis* effective healthcare provision which can be improved by more training of primary care staff but also by greater recognition of veterans in a locality. Thirdly, that understanding of the prevalence of veteran mental and physical disorders is significantly limited by poor data, an issue that can be improved through better and more consistent use of primary healthcare records. Looking ahead, national Census and promised future veteran survey data will be useful, but there are real, practical and impactful measures that can engage the community and are available to be implemented now.

Forces in Mind Trust exists to support the successful and sustainable transition of ex-Service people to civilian life and our Health Programme has the goal of all members of that community being able to access good quality health and social care services when and where needed. I therefore commend this report's recommendations to all those interested in supporting this goal and would urge NHS and health professionals to consider carefully what role they can play in translating the findings to their localities for the greater benefit of their veteran community.

Westminster Centre for Research in Veterans | University of Chester

10 Steps to Veteran Registration

1. National Awareness — Reducing stigma and improving knowledge

2. Educational Model — E-learning modules are online and on the NHS learning hub

3. Dedicated Veterans Champion — The RCGP Veteran Friendly Accreditation has this as criterion

4. Consistent Coding — Using the code of "Military Veteran" on electronic records

5. Text Messaging — Using iPLATO messaging system to allow responses and coding

6. Visual Reminders — Utilise Zap Stands and Posters to inform and remind patients

7. Practice Events — Events such as Flu vaccinations can be utilised to ask about veteran status

8. Connecting PCN — Ensure that veterans are represented in Primary Care Networks

9. Creating Partnerships — Create partnerships with local organisations such as Armed Forces Breakfast clubs

10. Third Sector Collaboration — Collaborate with the such as third sector charities veterans charities

Executive Summary

Introduction

The Armed Forces Covenant was introduced to ensure that the Armed Forces Community (AFC) of serving personnel, veterans and their families faced no disadvantage as a result of their service to their Country. The Armed Forces Covenant states that veterans should receive priority treatment for conditions related to their service, with a veteran being classified as anyone who has served in the British Armed Forces for a minimum of one day including regulars, reservists and those who operated under National Service.

Within Primary Healthcare (PHC) practices, there are SNOMED CT or Read codes that are applied to all electronic medical records and are intended to be a consistent vocabulary for recording patient clinical information such as diagnoses, demographic characteristics, and medications. These codes extend to military veterans and a medical records search should reveal the healthcare status of the veteran population. However, there are multiple challenges that prevent this process working seamlessly. There has been a report indicating a lack of knowledge on the importance and benefits of recording veteran status within PHC. Evaluations had identified that between 8% and 9% of PHC practices were correctly coding their military veterans (Finnegan et al., 2018; Simpson & Leach, 2015), and it has become increasingly clear that this is a problem that needs resolving and it is vital to understand the factors behind why this is the case.

Aims and Objectives

The primary aim of this research project was to identify what encourages veterans to notify PHC staff of their Armed Forces status or register with a GP, and to understand the motivators or barriers leading to not notifying their veteran status. This aim informed the objectives to: identify the barriers that inhibit veterans in seeking help; identify what parts of an advertising campaign were effective in motivating veterans to notify PHC staff of their Armed Forces status or register with a GP; evaluate PHC staffs' assessment of the intervention, including the effectiveness, benefits, problems, and means for improvement; provide an expert's views of the challenges to understand why they exist and how they can be positively addressed, and distinguish the potential for transferability to a larger national initiative. This would provide a list of recommendations to help inform NHS England (NHSE), other UK lead health organisations, and the Royal College of General Practitioners (RCGP) to improve the PHC landscape. A final objective was included to identify trends regarding age, gender, marital status, and the levels of associated physical (dementia) and Mental Health (MH) (depression, anxiety, alcohol misuse, substance misuse and PTSD) conditions. This was added in recognition that utilising primary care records is a major gap in veterans' capability, and to illustrate that it can be feasible and provide valuable information regarding the prevalence of common MH disorders in military veterans.

Methods

This study builds upon a pilot project conducted in 2018, which raised veteran registration in four PHC practices in Lancashire over a short time period (Finnegan et al., 2018). This study commenced with an international systematic review of veterans help seeking behaviour and progressed to a mixed methods research approach. The site for the study were 12 PHC practices within the two North West England cities of Chester and Warrington. The patient population was 138,098 patients: equating to an estimated veteran sample of 6,477. PHC staff conducted Read / SNOMED CT medical records searches over a 6-month period,

then sent the data to the research team (Centre) on a 6-week basis. The initial search revealed that 9% (N = 601) of veterans had registered and had been coded as a Military Veteran. See Table 1.

Serial	PHC	N Patients	Estimated N of Vets (5%)	N Vets Pre-Search	N Vets Post1	N Vets Post2	N Vets Post3	N Vets Post-Final
Total		138,098	6,477	601	817	1,584	1,786	1,912

Table 1: Summary of Veteran Registration Increases.

The first search was conducted in August 2020 prior to any programme initiatives. Demographic data was collected regarding age, gender, and marital status. The medical record searches also included MH diagnoses that are common within the veteran population; these being depression, anxiety, PTSD, alcohol misuse, substance misuse and the physical disorder of dementia. Qualitative data was obtained through post-project interviews with the PHC practices. This projected the staff's lived experience during the programme and their feedback regarding what went well and what could be improved. This allowed the Centre to understand what the practices deemed to be effective in the project, what the benefits were in taking part as well as any challenges and ways for potential improvement. Interviews were also conducted with an expert panel with participants from each of the four UK countries.

Systematic Review

MH stigma is a barrier that deters veterans' from seeking help. This can refer to stigma that individuals have regarding themselves, stigma which they believe they will receive, or stigma from public perceptions of veterans. Military culture and identity often mean that veterans will view any form of ill health as a sign of weakness and that admitting the need for support is contrary to their perceived status that comes from serving within the military. The study's systematic review on Veteran help-seeking behaviour for MH (Randles & Finnegan, 2022) has provided a clearer picture of detailing the specific barriers. In addition to stigma, these include military culture of stoicism and self-reliance as well as factors associated with combat and psychological trauma leading to avoidance. The facilitators to improve help-seeking include initiatives to dispel MH stigma and myths surrounding help-seeking and MH treatment as well as the involvement of other peer support veterans. The authors concluded that further research is needed within the UK context, noting a lack of longitudinal evidence on the barriers and facilitators as well as the limited research on female veterans.

Motivating Veterans and Educating PHC Staff

There were four phases in the study, each lasting for 6 weeks. The first phase involved internal PHC advertisements such as zap stands/posters and using TV monitors. After this phase, the veteran registration improved by 35.9% (N = 216). Feedback indicated that using highly visible signs were effective and this was enhanced by the creativity of the staff in finding opportunities to connect with veterans. For example, all the surgeries had reduced patient contact due to COVID-19 restrictions but this in part was addressed by ensuring the zap stands and posters were visible during flu clinics or taking the materials with them to regional COVID-19 clinics. The popularity of these materials was re-affirmed by all the PHC centres keeping the signs even after the programme was completed. The second phase required the PHC practices to post the study information on their social media platforms (should they have any) and their websites. They were also required to send a text message to all their patients asking if they are a veteran and to respond

accordingly. This phase raised registration by 93.9% (N = 767). Feedback indicated that differences in text messaging systems made this stage extremely time consuming at a time where PHC practices were facing mounting COVID-19 related pressures. A significant problem for some practices was that patients had to be individually contacted compared to other practices that could send batch texts. Even with the latter, the respondent's answers could not always be automatically coded. Of particular note at this stage is that one practice in Chester raised their veteran registration by 393% (N = 299) and another practice in Warrington saw an improvement of 198% (N = 237). In both cases, the text messages were related to utilising the iPlato messaging system where patients receive a batch text, can then reply to the message and this was automatically coded onto their medical record. The utilisation of this system (or a similar capability) in all PHC is an important recommendation to ensure efficiency and minimise human resource issues. This clearly has benefits far wider than just the veteran population and can improve PHC reporting.

The third phase saw the focus shift to the local community and building external communication through staged activities based outside of the PHC. This involved the Centre team visiting local shops, supermarkets, churches, and other establishments in the areas to ask the proprietor to display a study advertising poster that informed any reader of why they should register with their PHC practice. During this phase, veteran registration raised by 12.8% (N = 202). The Centre staff faced an open door and received an extremely welcoming approach from nearly every contact, indicating an outstanding willingness from the local community to help. They wanted to do what they could to assist their veteran population. This stage also sought collaboration with local organisations such as the police, local borough Councils, schools, and professional sports clubs such as Warrington Wolves. These institutes attended strategy meetings along with local veterans and in Chester by the local MP, Christian Matheson. The response was outstanding with, for example, Warrington Council putting the posters on bus stops and Cheshire police having the posters on display in their stations. Feedback was that this was an exceptionally good strategy, but the main deterrent was that the project was being severely compromised by the COVID-19 pandemic. Those phoning their PHC centres were faced with extensive waits to connect with a receptionist or veterans just felt this was not a high enough priority as they were aware of the pressures on PHC. There is however undoubtable value in mobilising the local community and organisations to support veterans and their families. This recommendation should be built into research and collaboration strategies as they can be achieved at very little cost above a pivotal point of leadership and co-ordination. There is also a real feel-good factor in the local community that can produce added and longer-term outputs.

The fourth and final stage was focused on the potentially isolated and harder to reach elderly veterans and their families. The spotlight was to be Residential Care Homes, but the COVID-19 pandemic made this impossible. Again, there was an excellent response from both Warrington and Cheshire Councils who sent the information to all Care Quality Commission (CQC) registered Care Homes in the areas. The Centre team also individually contacted a total of 62 Care Homes within a 2-mile radius of each of the practices. In addition, the Centre supplied posters and information of the project. The final phase saw registration increase by a further 7.1% (N = 126). Feedback revealed significant human resource implications on Care Home staff. Relatives were restricted from visiting due to the COVID-19 pandemic, and therefore were not aware that they could act on their relative's behalf. Therefore, increases during this period were likely to have been a result of the consistent engagement of the PHC practices.

Overall, veteran registration increased by 218.1% (N = 1311). Estimated coverage of veterans increased from 9.3% to 29.5%. In addition, for individual practices, pre-searches ranged from a veteran population coverage of 1.2% to 21.2%. After the final search this increased to a population coverage ranging from 5.0% to 54.1%. Five PHC practices are now covering over 30% of their estimated veteran population, and 2 are covering 50% or more. At the beginning of this study, these results would have been indicative of success. Given that they were achieved during the largest pandemic in over 100 years, with periods of community

lockdowns, social exclusion, working from home, reduced PHC footfall and huge difficulties contacting PHC make the results extremely encouraging.

PHC Staff Feedback and Expert Interviews

Interviews with PHC staff and UK national experts provided a deeper insight into the project's successes and challenges. PHC staff highlighted the importance of their active and informed involvement that was built on education and increased awareness. The notable result was improved staff commitment and their taking ownership of the responsibility to improve veteran registration. Every practice stated that the primary challenge was the COVID-19 pandemic, in particular the significantly reduced footfall and the diminished communication opportunities with their patients. In addition, staff's priorities were drawn to other pandemic related commitments such as providing vaccinations. However, PHC staff highlighted where future improvements could be achieved; including the utilisation of a social prescriber and encouraging all healthcare staff to complete veteran related education. This, in part, was delivered from the Centre team and these contacts have been maintained and enhanced. These include Primary Care Network (PCN) representatives being embedded into the membership of the Cheshire Armed Forces Covenant Partnership Committee and the Centre supporting PCN initiatives such as providing the veterans with life coaches. Several PHC practices reported that veterans had initially mistrusted the text messages and had contacted the PHC practices to enquire why the staff were asking. Once the veterans were aware of the project, then they generally responded positively.

Sixteen interviews were conducted with expert representatives from the UK AFC. These informed common themes to improve PHC veteran registration and revealed reasons why veterans fail to disclose their status including veteran identity and their use of military terminology, leaving a feeling they were not being understood. The military culture emphasising stoicism, self-reliance, particular challenges linked to transition from the Armed Forces and security concerns. Similarly, participants revealed why veterans may not register due to military culture, poor help-seeking behaviour, and access difficulties such as those in the homeless population. These interviews generated recommendations for improvements, including using consistent prompts and reminders and better connectivity from transition out of the Armed Forces with the third sector. It was perceived that PHC staff did not feel at risk when dealing with a veteran, although there may be a fear that they could not engage. This being influenced by healthcare staff lacking confidence due to insufficient experience and knowledge. Both issues lead to a strong recommendation for a structured, systematic, and common educational module that can take healthcare employees from no knowledge of the AFC through to enough to have confidence to engage. The Centre team have recently produced such a module and are currently in the process of maximising dissemination.

Primary Healthcare Data

This research was the first to use PHC data to examine the recording of common MH diagnosis in PHC and has illustrated that this approach is both feasible and informative, albeit with limitations. From 1,912 veteran PHC medical records, 41% had an assigned code for at least one of PTSD, depression, anxiety, alcohol misuse, substance misuse or dementia. The highest prevalence was alcohol misuse (22%), followed by depression (18%) and anxiety (16.0%). The prevalence of PTSD was 3%, and dementia was 1.5% and substance misuse 0.8%. The registration of alcohol misuse was influenced by a Chester PHC centre as this practice specifically supported those who are suffering from this condition. This has important connotations for future studies using a similar methodology, where researchers must be familiar with any specialist terms of reference for PHC in their study, for example the homeless population.

Demographically, female veterans were more likely to suffer from anxiety and depression with male veterans recorded with higher levels of PTSD and alcohol misuse. There were significant relationships with age and MH disorders with anxiety being more common among younger veterans. Finally, MH disorders appeared to be more prevalent in those who had experienced a relationship breakdown. These findings are broadly as one might expect, which tends to validate the methodology. As with other UK veterans' studies, the findings indicated that substance misuse is very rare, and that middle age is the most common time for MH problems to occur. The stereotype of the young, traumatised veteran can be unhelpful, as it is now some years since they have been exposed to high operational intensity. The findings reinforce the recommendation that veterans' MH services need to reach out and connect with older age-groups.

Recommendations

Based on this research, there are a number of emerging recommendations to help raise veteran registration in PHC and to encourage those currently registered to declare their veteran status. For further detail on the recommendations, see Table 10.

1) **Consistent coding** – The code "Military Veteran" should be used across all GP practices.

2) **Text Message Systems** – iPLATO is the recommended system to allow response and automatic coding of a veteran.

3) **Training of Healthcare Staff** – Knowledge of all healthcare staff including Reception, Nurses and General Practitioners should be improved through training. Educational modules can be found on the Centre's website and NHS Learning Hub.

4) **National Awareness** – Concerted effort is needed to make the public nationally aware of the definition of a veteran and the benefits of declaring a veteran's status to their GP practice. This could also be utilised to destigmatise help-seeking for MH conditions.

5) **Collaboration and Connectivity** – Better collaboration and connectivity are needed between PHC, secondary healthcare, the third sector and also with the MOD.

6) **Utilisation of Social Prescribers** – Ensuring that these Social Prescribers have a knowledge of the military and veteran care would be essential.

7) **Taking Ownership** – Staff within PHC should take ownership of veteran care and ask the question of their patients.

8) **Internal and External Advertisement** – Information should be shared both internally within the PHC practices and externally in places frequented by the general public to spread awareness. A poster template was created by the Centre for this project.

9) **Veterans Champion** – One member of staff within PHC is responsible for developing knowledge and awareness of the military community and services. This will allow those less knowledgeable to refer veterans to the designated individual. This is currently a criterion of the RCGP veteran friendly GP practice accreditation.

10) **Destigmatisation** – Helping to destigmatise help-seeking and the utilisation of veteran services through the normalisation of it.

Summary

Managing an advertising campaign and improving veteran registration during a pandemic was not part of this study's Forces in Mind Trust (FiMT) grant application. It caused huge problems, but it also presented opportunities. Enabling a significant increase in PHC registration during the harshest and most testing conditions, indicates the accomplished achievements have significant merit. The correct text messaging services were beneficial for prompting engagement, reducing human resource demands, and improving the available data. The advertising inside the PHC was favourably reported on and is a signal to the commitment of the respective practices. There was a positive shift in the staff attitudes to one of ownership of the problems, responsibility, and commitment to resolve. They need further educational support, and the Centre has worked on a project that provides that. They also need better communication lines and associations with their local Armed Forces Covenant Partnership groups. The community-based engagement required flexibility from the Centre staff but most importantly the support of organisations such as the Councils, schools, and sports clubs. The message was received by veterans and their families, and if it were not for the sense that during the pandemic this wasn't a priority, or if the veteran could have entered the PHC practice or had easy access via a phone call, then there is face validity that the numbers registered would have been considerably higher. There remains the issue of engaging with elderly veterans and their families. A similar philosophy that underpins the RCGP veteran friendly GP practice accreditation programme and the Veteran Covenant Healthcare Alliance initiative should be constructed for UK Care Homes. This would then help to get an accurate review on the issue with dementia in the veteran population.

The use of PHC data to offer an overview of common MH disorders in the veteran population provides a novel perspective, and should help with policy decisions, commissioning of services and educational programmes. The lessons learnt from this study are cost effective to introduce and are applicable to transfer to a larger nationwide initiative to improve veteran declaration and registration within PHC.

Summary

Systematic Review

An international systematic review was conducted on help-seeking behaviour in veterans and published in BMJ Military Health

Utilising Practice Records

Practices sent anonymised data of the veterans registered in their practices every 6 weeks this included demographic and MH data

Practice Internal Engagement

Posters and Zap Stands were put inside the practices. Practices sent text messages to patients and put information on their websites/social media

Community Engagement

The team engaged with the community putting posters in Supermarkets, Shops and Pharmacies. The local councils were supportive in posters on bus stops and social media.

Where are all the Veterans?

The local councils sent the information to all CQC registered care homes. The research team also contacted all those within a 2-mile radius

Care Home Engagement

Interviews were conducted with the practices following completion. This included the benefits of the project, the challenges, and future improvements.

Practice Interviews

Expert Panel was consulted. Interviews looked at reasons why veterans may not engage with practices and/or declare their status.

Expert Panel Interviews

A profile was created of veterans and the prevalence of MH disorders. An open access article was published in BMJ Military Health.

Prevalence of MH disorders in Veterans

1 Introduction

The Armed Forces Covenant was introduced to ensure there is no disadvantage to serving personnel, veterans and their families, becoming enshrined in the Armed Forces Act as of 2011 (Ministry of Defence, 2011; The Royal British Legion, 2021). Areas specifically mentioned within the Covenant include education, housing, benefits, and family life. This legislation also includes healthcare where veterans should receive priority treatment when it relates to a condition which results from their service (Ministry of Defence, 2011). A veteran has been classified as anyone who has served in the British Armed Forces for a minimum of one day, whether as a regular or as a reservist, including those who were conscripted under National Service (Ministry of Defence, 2011; NHS, 2021a). This applies to Scotland, England, and Wales. However, priority treatment is not applied in Northern Ireland due to the terms outlined in the Belfast Agreement of 1998 (Northern Ireland Office, 1998).

More recently, the NHSE has introduced Op COURAGE: the Veterans Mental Health and Wellbeing Service. Op COURAGE encompasses three services consisting of the Veterans Mental Health Transition, Intervention and Liaison Service (TILS), the Veterans Mental Health Complex Treatment Service (CTS) and the Veterans Mental Health High Intensity Service (HIS) (NHS, 2021b). Op COURAGE also aims to help veterans and their families to access other NHS MH services that they may need as well as signposting to local charities and organisations who can provide health and wellbeing support in areas such as housing, finance and employment (NHS, 2021b). Op COURAGE is part of a NHS nine-point plan to support the AFC with other commitments including better support for families, carers, children and young people as helping those transitioning from the Armed Forces to civilian life (NHS, 2021c).

PHC practices are required to record veteran status by utilising Systematized Nomenclature of Medicine - Clinical Terms (SNOMED CT) or Read codes so that any healthcare staff that come into contact with the patient are aware of their veteran status (Ministry of Defence, 2011; NHS Digital, 2020, 2021). Read Codes have been utilised in PHC since 1985 as a consistent vocabulary for recording patient clinical information such as demographic information such as age and gender, diagnoses and medications. A programme to replace Read Codes with SNOMED CT codes commenced in 2018 (NHS Digital, 2020, 2021). These codes extend to military veterans and a medical records search should reveal the healthcare status of the veteran population. However, although these codes are intended to be consistent across PHC, there are several codes relating to service including the specific military branch and "history relating to military service". Evaluations had identified that between 8 and 9% of PHC practices are correctly coding their military veterans (Simpson and Leach, 2015; Finnegan et al, 2018; Finnegan and Randles, 2022). Similar issues are related to the recording of MH disorders, where there are numerous codes that can be utilised when recording a patient diagnosis. Under the umbrella of depression, there are codes for depressive episodes, postnatal depression as well as mixed anxiety and depression, with over 700 codes listed under "Depression" (NHS Digital, 2017). The code that is used will be at the discretion of the individual who is recording this within the medical record. This could therefore mean that there will be inconsistencies in codes that are used for the same disorder.

In addition, there is believed to be a lack of knowledge on the importance and benefits to recording veteran status within PHC, with 47% of GP's being unaware of how many veterans were registered in their practice (Simpson & Leach, 2015). Many healthcare staff have also been noted as not seeing the benefit in recording veteran's status, leading to barriers among veterans who were seeking support (Finnegan et al., 2018). It is

known that veteran help-seeking behaviour is poor and therefore, this may account for some of the reasoning behind why a veteran may not register with a PHC practice or declare their veteran status (Randles & Finnegan, 2022).

Study Rationale

As such a small percentage of veterans were correctly coded in PHC, it is important to understand the factors behind why this is the case and what can be done to improve on this, with the hopes that lessons learnt would be applicable to transfer to a much larger nationwide initiative to improve veteran declaration and registration within PHC. With previous research suggesting that GP's are unaware of the number of veterans that are registered in their practice (Simpson & Leach, 2015), it may be a case of a lack of awareness and knowledge behind the benefits of declaring veteran status. It is, therefore, important to understand what motivates veterans to declare their status to their GP and methods to increase this awareness as well as the barriers and potential reasons why a veteran may choose to not disclose their status to their PHC practice.

Project Aims and Objectives

The primary aim of this research was to identify what motivates veterans to notify PHC staff of the Armed Forces status or register with a GP and to understand the motivators or barriers leading to not notifying veteran status. The objectives were to:

a)   Identify the barriers that inhibit veterans from seeking help.

b)   Identify what parts of an advertising campaign are effective in motivating veterans to notify PHC staff of their Armed Forces status or register with a GP.

c)   Identify trends regarding age, gender, marital status, and the levels of associated physical (dementia) and MH (depression, anxiety, alcohol misuse, substance misuse and PTSD) conditions.

d)   Evaluate PHC staff assessment of the intervention, including the effectiveness, benefits, problems, and means for improvement.

e)   Provide an expert's view of the challenges, why they exist and how they can be positively addressed.

f)   Distinguish the potential for transferability to a larger national initiative.

g)   Develop a theoretical model highlighting the primary initiatives that will motivate veterans to register with a GP and provide a list of recommendations to help in particular NHSE, other UK lead health organisations, and the RCGP to improve the PHC landscape.

Ethical Approval

Ethical Approval was granted for this research project by the University of Chester Faculty Research Ethics Committee in the Faculty of Health and Social Care (RESC0320-1033). All ethical guidelines were followed and considered for the project.

Publications Arising from this Research

Randles, R. and Finnegan, A. (2022) 'Veteran help-seeking behaviour for mental health issues: A systematic review', *BMJ Military Health*, 168, pp. 99–104. doi: 10.1136/bmjmilitary-2021-001903.

Finnegan, A. and Randles, R. (2022) 'Prevalence of Common Mental Health Disorders in Military Veterans: Utilising Primary Healthcare Data.', *BMJ Military Health,* doi: 10.1136/bmjmilitary-2021-002045 (Open Access).

2 Background

Armed Forces Community and Transition

In 2017 there were estimated to be 2.4 million veterans in the UK, making up an estimated 5% of the overall population, with 9 – 11% of veterans living in North West (NW) England (Ministry of Defence, 2019). Demographically, veterans were estimated to be predominantly male (89%), with the majority married/in a civil partnership (62%) and a much older population with 60% aged 65 and over (Ministry of Defence, 2019). However, since 2018, female representation has been increasing in the regular Armed Forces and increasing in the reserves since 2017, making the total female representation for the 2021 intake 12.7%, therefore future veterans may have a higher proportion of females (Ministry of Defence, 2021a).

The vast majority of service leavers transition effectively and successfully upon leaving the Armed Forces (Ashcroft, 2012). However, a small but significant number of veterans struggle with the transition into a civilian lifestyle where what is considered normal is different to that of being in the military, this includes attitudes towards alcohol misuse and the general ethos and camaraderie of service life (Ashcroft, 2012; Kiernan et al., 2018). Those who have served in the military have a strong sense of military identity and attribute their sense of self-image and self-esteem to their military service (Kleykamp et al., 2021). This then leads to some veterans feeling "disconnected" from the civilian population upon leaving the military (Misra-Hebert et al., 2015). In addition, military culture and identity emphasises that soldiers were heavily self-reliant and with a frequently cited emphasis on stoicism (Fischer et al., 2016; Garcia et al., 2014; Kiernan et al., 2018; Misra-Hebert et al., 2015). This identity can lead to poor help-seeking behaviour within veterans as they do not want to appear to not be self-reliant (Randles & Finnegan, 2022).

Veteran Mental Health

Both serving military personnel and veterans have been identified as having a high prevalence of MH disorders (Rhead et al., 2020). However, there was evidence that rates were broadly similar to the general population in many MH conditions including depression, anxiety and PTSD (Finnegan & Randles, 2022) although Alcohol abuse appeared to be higher (Kiernan et al., 2018; Macmanus et al., 2014; The Royal British Legion, 2014). The latest figures within the British Armed Forces indicate a slight decline in the percentage of those who have been assessed for a MH problem; reducing from 12.7% in 2019/20 to 10.5% in 2020/21 (Ministry of Defence, 2021b). However, this percentage was representative of those who are currently serving within the Armed Forces and therefore may be deflated, with many personnel not reporting / experiencing their MH difficulties until leaving (Godier-McBard et al., 2021). Research has indicated that alcohol misuse, depressive disorders, anxiety disorders, PTSD and substance misuse were the most common MH problems within the veteran population (Iversen & Greenberg, 2009; Mark et al., 2020). USA studies have highlighted an increased prevalence of dementia in veterans compared to non-veterans, particularly when associated with PTSD (Qureshi et al., 2010) although UK research with Scottish veterans indicate there was no difference in dementia prevalence between veterans and non-veterans (Bergman et al., 2021).

Alcohol consumption is viewed as part of military culture and often seen as a way to bond a military unit together, with excessive drinking often declared as something to be proud of (Kiernan et al., 2018). Alcohol misuse has also been highlighted as a potential coping mechanism for those within the veteran population who are suffering from other MH disorders, and is particularly prominent in those suffering from PTSD (Goodwin et al., 2017). In addition, due to the normalisation of drinking within military culture and a

population comprising of large numbers of young people, it is harder for veterans to recognise that they have a problem. They therefore fail to seek support until they are older and may be admitted to a hospital for treatment for the Alcohol related problems (Kiernan et al., 2018; Murphy et al., 2016).

Overall, there are numerous risk factors that increase the likelihood of veterans suffering from a MH disorder including a history of alcohol/substance misuse, operational deployment and combat exposure as well as a lack of social support/relationships (Ross et al., 2021). Furthermore, research has indicated risk factors associated with specific disorders, with those suffering from PTSD to be more likely to be a lower rank within the military, be unmarried and have a history of childhood adversity (Iversen et al., 2008, Thandi, G., 2015). Divorced or separated veterans were significantly more likely to report suffering from depression than veterans in all other marital groups, a finding correlated with research that suggests relationship breakdown was likely to trigger MH difficulties in veterans (The Royal British Legion, 2014). Therefore, demographical differences may also attribute to MH difficulties in veterans, with those suffering from PTSD tending to be younger in age and having lower educational attainment (Iversen et al., 2008).

Research indicates that female serving members accessed Defence Medical Services MH departments more frequently than males, although this may be due to females having better help-seeking behaviour (Finnegan et al., 2014; Godier-McBard et al., 2021; Ministry of Defence, 2021b; Randles & Finnegan, 2022). However, within the general population, females are more likely to suffer from mental distress and have a higher prevalence of mood and anxiety disorders (Boyd et al., 2015; Tedstone Doherty & Kartalova-O'Doherty, 2010). In addition, males are significantly more likely to commit suicide, with females being more likely to self-harm (Carr et al., 2016; Freeman et al., 2017). These characteristics have been identified within the veteran population with females being more likely to be at risk of a lifetime prevalence of depression and suicidal thoughts (Adams et al., 2021). In addition, male veterans, in particular those with front line 'teeth arms' units, have been reported to be significantly more likely to suffer from PTSD and to misuse alcohol than their female counterparts (Jones et al., 2020). However, recent research highlights that there may be little differences in gender for suicidal ideation in veterans (Bergman et al., 2022). Nevertheless, these gender differences may be due to military veterans presenting MH disorders differently to the general population and therefore, their MH difficulties are not being identified. Male veterans may also cite symptoms such as anger and fighting which is not associated with a MH disorder but may be influenced by depression (Finnegan et al., 2014).

Veteran Help-Seeking Behaviour

Help-Seeking behaviour in the general population for MH difficulties has been thoroughly researched in terms of both facilitators and barriers (Gulliver et al., 2010; Oliver et al., 2005). It is recognised that veterans' help-seeking behaviour is poor, (Møller et al., 2020), and the facilitators and barriers were explored in a publication from the research team (Randles & Finnegan, 2022). Research has found that veterans were accurately able to recognise that they were suffering from MH issues, with as many as 76.6% of veterans reporting problems (Brown et al., 2011). However, it appears that veterans need to reach the point of crisis before they consider these MH issues to be worthy of seeking help for (Rafferty et al., 2019). Nevertheless, certain MH disorders within the veteran community have been found to be associated with more substantial health service utilisation, with collaboration between PHC and MH services attributing to successful support and treatment for veterans (Calhoun et al., 2002).

A barrier for the veteran population to seeking help for MH problems, is that of stigma. This can refer to stigma that individuals have regarding themselves, stigma which they believe they will receive or stigma from the public (Fischer et al., 2016; Fox et al., 2018; Kulesza et al., 2015; Williston et al., 2020). Stigma has also been reported as being different amongst different military Services and particularly high amongst

Naval personnel (Langston et al., 2010). Veterans may feel ashamed that they are suffering from MH difficulties, or have an internalised belief that seeking treatment would make them appear weak (Cornish et al., 2014; Fox et al., 2018; Garcia et al., 2014). Furthermore, veterans were often concerned with stigmatising labels from the general public such as being viewed as "damaged goods" or "crazy" (O'Toole et al., 2015; Siegel et al., 2018). However, these negative beliefs can be mediated by the veterans perceived need for care i.e. the belief that they are in crisis and no longer able to self-manage their symptoms (Fox et al., 2018; Rafferty et al., 2019; Williston et al., 2020). In addition, these beliefs did not extend to other veterans, with veterans stating that they would not view someone else as weak if they sought treatment for a MH disorder (Kulesza et al., 2015; Langston et al., 2010). Veterans were also reported as having concerns regarding privacy and security, specifically what may be done with their medical confidential information (Cheney et al., 2018; Cornish et al., 2014; Fischer et al., 2016; Sayer et al., 2009).

Military culture and identity often means that veterans will view any form of ill health as a sign of weakness (Siegel et al., 2018; Wray et al., 2016) and that admitting the need for support would somehow sully their "hero" status that comes from serving within the military (Rodrigues et al., 2013; Schuy et al., 2019). Therefore, there is a sense of pride that may stop veterans from seeking help for any form of ill health, whether physical or mental. Furthermore, the normalisation of alcohol misuse within military culture has meant that many veterans were unable to recognise a problem with their drinking behaviour and therefore, do not seek any help or treatment, and it is only discovered upon veterans seeking help for other MH concerns (Kiernan et al., 2018). To counteract these barriers, recommendations have been suggested to train those in leadership positions within the military to be better equipped to understand how to handle service-personnel who are struggling with MH difficulties and to encourage them to speak out, therefore reducing some of the stigma surrounding seeking help (Cornish et al., 2014). Studies have indicated that veterans believe that the involvement of a veteran as a mentor for seeking help for MH problems would facilitate help-seeking as this was a crucial facilitator in dispelling the stigma (Cornish et al., 2014; Rafferty et al., 2019).

Furthermore, veterans who were deployed to Afghanistan had significantly higher service utilisation (Møller et al., 2020). These differences in deployment can also be more positive as Vietnam veterans were found to be significantly more likely to believe that their therapist cared about them than veterans from Persian Gulf and Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF) (Garcia et al., 2014). This, therefore, highlights that there are differences dependant on deployment and levels of combat exposure.

Female veterans have reported the feeling of pressure to uphold the reputation of female service members as they feel they are often not taken seriously within the military (DiRamio et al., 2015; Eagle et al., 2020). Many female veterans have adopted the same attitudes as male veterans in not wanting to appear weak (DiRamio et al., 2015; Eagle et al., 2020). Subsequently, female veterans feel the need to "prove" their strength with a sense of competitiveness towards their male counterparts with suggestions that males are better at encouraging help seeking (DiRamio et al., 2015; Misra-Hebert et al., 2015). Despite this, gender differences still appear to exist with female veterans tending to seek support in a more timelier manner compared to their male counterparts (Godier-McBard et al., 2021). Nevertheless, female veterans are an under researched area.

3 Methodology

Theory and Methodology

This study builds upon a pilot project conducted in 2018, which raised veteran registration in four practices in Lancashire over a short period. This was enabled by utilising zap stands and posters within the PHC practices as well as providing training materials to the healthcare staff, and external advertisement with local sports clubs and social media. This pilot project was successful in raising registration by nearly 200% and informed the methodology of this project (Finnegan et al., 2018).

This project adopted a mixed method research approach. Quantitative data was gathered from PHC practices via patient medical records. Read/SNOMED CT codes were utilised. These codes provide a consistent vocabulary for PHC staff to record demographic characteristics, diagnostic information, and pharmacological treatments onto a patient's medical record. For example, if a patient is diagnosed with depression, a code will appear on their record for "Depression." There are many different codes available, and it is at the discretion of the staff member who is recording the information to choose the appropriate code. This initial medical record search was conducted in August 2020, prior to any initiatives and were then periodically collected every 6 weeks following a different phase of the project. This allowed for a more systematic data gathering approach, however the COVID-19 pandemic meant that some practices were unable to complete certain stages at the suggested timeline. When this occurred the changes and dates were noted.

Demographic data was collected including age, gender and marital status and MH diagnoses that are common within the veteran population. This included depression, anxiety, PTSD, alcohol misuse, substance misuse and the physical disorder of dementia. PHC practices were asked to include codes related specifically to these disorders. There was direction to try and ensure consistency as there were numerous codes that were utilised. For example, "Depression" included depressive episodes, and depressive disorder, and anxiety often being coded along with depression as "Anxiety with Depression" or "Mixed Anxiety and Depressive" as well as its own code of "Anxiety Disorder". PTSD was only coded as "Post-Traumatic Stress Disorder". Substance misuse was often coded more specifically such as "Heroin Addiction" or "Opioid Dependence", all substance dependencies and addictions were asked to be included within the search. In addition, for Alcohol this was coded as "Alcohol Abuse" or "Chronic Alcoholism" or simply "Alcohol". Dementia was coded as "Dementia in Alzheimer's" or "Alzheimer's Disease" or simply "Dementia". Significant MH disorders such as Bi-Polar and Schizophrenia should have restricted people with these problems from enlisting and were therefore excluded.

The SNOMED CT (Code 753651000000107) or Read Code (Code 13Ji) for "Military Veteran" was the single used code thereby facilitating a reliable and consistent measurement. Practices were also encouraged to recode any veterans that they had placed under different codes. Contact with the practices to collect the data was completed by the same researcher within the research team, this researcher also handled any queries and provided materials for practices to apply for the RCGP Veteran Friendly practice accreditation (Finnegan et al., 2022; Royal College of General Practitioners, 2021). Data was kept anonymous and confidential and was input into the SPSS database upon retrieval for analysis. When anomalies appeared, this was queried with the PHC practice to ascertain potential reasons for this. Data was received in an anonymised and amalgamated form. Being aware of the considerable pressures on PHC, the search strategy was designed to maximise the data that could be collected whilst being cognisant of other demands and priorities on PHC staff. Therefore, the searches were restricted to common military MH

disorders and basic demographical data (age, gender, and marital status). The PHCs were financially remunerated for their time.

Qualitative data was obtained through post-project interviews with the PHC practice staff. This allowed for the researchers to understand what the practice staff deemed to be effective in the project, what the benefits were to taking part as well as any challenges and ways for potential improvement. Their responses were analysed using content analysis (Braun & Clarke, 2006).

Method

The campaign consisted of two phases of advertising with two distinct stages within each. The first phase involved internal advertisement within the PHC centres with the first stage requiring the PHC practices to display zap stands/posters within their practices for a 6-week period. The PHC staff were directed to place these materials where the most patient activity would occur, with many choosing to place the zap stands where patients would be required to queue to enter the practice and posters were placed in the practice windows. Following this period, practice staff were then asked to post the information on their social media platforms, should they have any, and their website as well as sending out a text message to all patients asking if they are a veteran with the intent being that veterans could respond to the text message to inform their PHC practice of their veteran status.

Following this internal phase, external advertisement then commenced. This firstly was based in the community with the involvement including local Councils, Cheshire Police, Warrington Wolves Rugby Club as well as supermarkets, shops, pharmacies, schools, and community centres. Posters were disseminated and distributed throughout the vicinity of the PHC practices. A total of 69 establishments across Cheshire displayed a poster or flyer. In addition, there were 8 community Facebook postings that conveyed the project information. Fifty local schools were contacted and asked to disseminate the information. Following this stage, Care Homes were then contacted to also distribute the information in an attempt to capture the older cohort of veterans. Both Warrington Council and Cheshire West and Chester Council contacted all CQC registered Care Homes. The research team also individually contacted Care Homes within a 2-mile radius of the practices, contacting a total of 62 establishments. All of these stages occurred during the COVID-19 pandemic, some of which occurred under a UK national lockdown where restrictions were in place and certain establishments were shut. It was intended to involve local restaurants and pubs during the community stage, but these were closed due to the UK national lockdown.

The researchers visited each of the 12 PHC practices prior to any initiatives taking place. This was intended to answer any questions the practices had, to deliver the zap stands, posters, and other materials and to build a rapport with the staff. This also provided an opportunity for the researchers to explain the expectations of the study and data capture to ensure consistency across the practices. All practices were given a USB which contained virtual copies of the zap stand and posters, information for TV screens, a timeline of the project, details of the code to be used and demographics to be included as well as a handout containing current veteran services that were available. The researchers designed the zap stand, posters, and TV Screens advertisement. A press release was also sent out and articles subsequently published in the Chester Standard and Warrington Guardian. Following completion of all stages, practices were visited again, with each of the researchers visiting half of the practices each. Two of these interviews, however, were conducted via Microsoft Teams as those practices felt that they were unable to accommodate a practice visit due to the COVID-19 pandemic. All meetings were recorded with permission of the practices and transcribed by the researchers.

Expert Panel Interviews

Interviews were also conducted with an Expert Panel. Participants were sought to be representative of each of the countries within the United Kingdom. The Experts were selected by opportunity sampling where contacts, who were known to the researcher and had experience with the AFC were contacted and invited to interview. Interviews were conducted via Microsoft Teams, were recorded, and transcribed verbatim.

Analysis

Quantitative data was analysed using *IBM SPSS Statistics 27*. This included descriptive statistics of veteran registration numbers, demographical information of gender, age, and marital status as well as MH diagnostic data. Furthermore, this demographical data was then correlated to understand the influence of the demographics on MH diagnosis. The statistical significance of the data was completed using chi square test for analyses.

Qualitative data was analysed differently dependent on the data that was being examined. Practice interviews were analysed using a content analysis, which focused on extracting basic thematical data from the interviews. This process involved familiarising oneself with the data and generating initial open codes to then be made into themes. These themes were then reviewed and defined (Braun & Clarke, 2006, Burnard, 1991). For the Expert Panel interviews, these were analysed using a modified constructivist grounded theory approach (Charmaz, 2014). This approach included the open coding of transcripts without the influence of preconceived assumptions, as well as constant comparisons across the different transcripts to construct categories and codes. Memo writing was used to operationalise the definitions of each of the categories and consider potential relationships.

Triangulation and Development of Theoretical Model

Triangulation refers to the combining of methods, theories or observations to increase the reliability and validity of findings (Noble & Heale, 2019). In the case of this research, methodological triangulation occurred between the quantitative data of the stages within the PHC practices, the qualitative data of the post-project interviews with practices and finally, the qualitative data of the expert panel interviews. Findings were triangulated to create a theoretical model to highlight the key initiatives to motivate veterans to register or declare their status within their PHC practice.

4 Findings

Veteran Registration

It was estimated that veterans form 5% of the total UK population, and that between 9 to 11% of the veteran population reside in the NW of England (Ministry of Defence, 2019), and these numbers should be reflected in PHC military veteran patients. Table 2 shows the population of each practice and the estimated number of veterans that each should have within their practice, based upon the 5% estimate.

Primary Healthcare Practice	Practice Population	Estimated Veteran Population
Chester Practice 1	9,985	499
Chester Practice 2	7,533	377
Chester Practice 3	10,500	525
Chester Practice 4	15,859	793
Chester Practice 5	9,440	472
Chester Practice 6	6,956	348
Warrington Practice 1	13,553	678
Warrington Practice 2	10,400	520
Warrington Practice 3	14,056	703
Warrington Practice 4	16, 216	811
Warrington Practice 5	12,350	618
Warrington Practice 6	11, 250	563
	Total: 138,098 Chester: 60,273 Warrington: 77, 825	Total: 6,477 Chester: 2,584 Warrington: 3,893

Table 2: Practice Populations and Estimated Veteran Population.

Prior to the commencement of this FiMT funded programme, practices were directed to send their current veteran registration figures to the research team. The total patient population across all 12 practices was 138,098, equating to an estimated veteran population of 6,477. The 6 practices in Warrington had a higher starting point with 12.8% (N = 497) of their veteran population covered, compared to 4% (N = 104) across the 6 Chester practices. This brought the total, pre-initiative, to a coverage of 9.3% (N = 601). Warrington's figures were higher as a result of being involved in the management of the pilot "Finding the Forgotten" programme and as part of a local CCG Quality Outcomes Framework, which required the PHC practices to report on veteran registration.

Demographical data was recorded at each stage of the project to help to understand the methods which were more effective in capturing specific veteran populations. In August 2020, Veterans that were registered at these practices were predominately male (89.9%, N = 540) with females totalling 10.1% (N = 61). This presentation of gender is in line with the Ministry of Defence (MOD) data where 89% of veterans were estimated to be male (Ministry of Defence, 2019). However, at this stage of the project four practices

had no female veterans identified. The highest number of females being in Warrington practice 6 with a total of 20 female veterans identified at this practice. See Table 3.

Primary Healthcare Practice	Male	Female
Chester Practice 1	13 (100%)	0
Chester Practice 2	9 (100%)	0
Chester Practice 3	21 (87.5%)	3 (12.5%)
Chester Practice 4	21 (87.5%)	3 (12.5%)
Chester Practice 5	26 (89.7%)	3 (10.3%)
Chester Practice 6	5 (100%)	0
Warrington Practice 1	61 (88.4%)	8 (11.6%)
Warrington Practice 2	100 (90.9%)	10 (9.1%)
Warrington Practice 3	114 (97.4%)	3 (2.6%)
Warrington Practice 4	10 (100%)	0
Warrington Practice 5	65 (85.5%)	11 (14.5%)
Warrington Practice 6	95 (82.6%)	20 (17.4%)

Table 3: Pre-Initiative Gender of Patients Split by Practice.

The mean age of Veterans across all 12 practices prior to any initiatives was 57 (SD = 19.3, Range = 83).

Figure 1: Pre-Initiative Patients Ages Across all 12 Practices, separated into age categories.

Figure 1 shows patient ages across all 12 PHC practices which have been separated into 10 categories. The highest number of patients in any one age category was the 48 – 57 age range (21%, N = 125). See Table 4.

Primary Healthcare Practice	Mean	Range	SD
Chester Practice 1	56	24 - 82	14.0
Chester Practice 2	52	34 – 74	14.6
Chester Practice 3	53	25 – 88	17.7
Chester Practice 4	52	28 – 83	14.1
Chester Practice 5	58	28 – 94	18.2
Chester Practice 6	55	28 – 83	23.1
Warrington Practice 1	59	22 – 97	19.3
Warrington Practice 2	67	22 – 98	18.6
Warrington Practice 3	58	16 – 94	21.2
Warrington Practice 4	44	21 – 64	16.0
Warrington Practice 5	50	20 – 97	17.6
Warrington Practice 6	53	20 – 97	18.0

Table 4: Pre-Initiative Patient Mean Age and Standard Deviation Split by Practices.

Sixty one percent of patients' marital status was unknown (N = 369). Of those whose marital status was known (N = 232), the majority of patients were Married (59%, N = 136), followed by Single (27%, N = 62). See Figure 2.
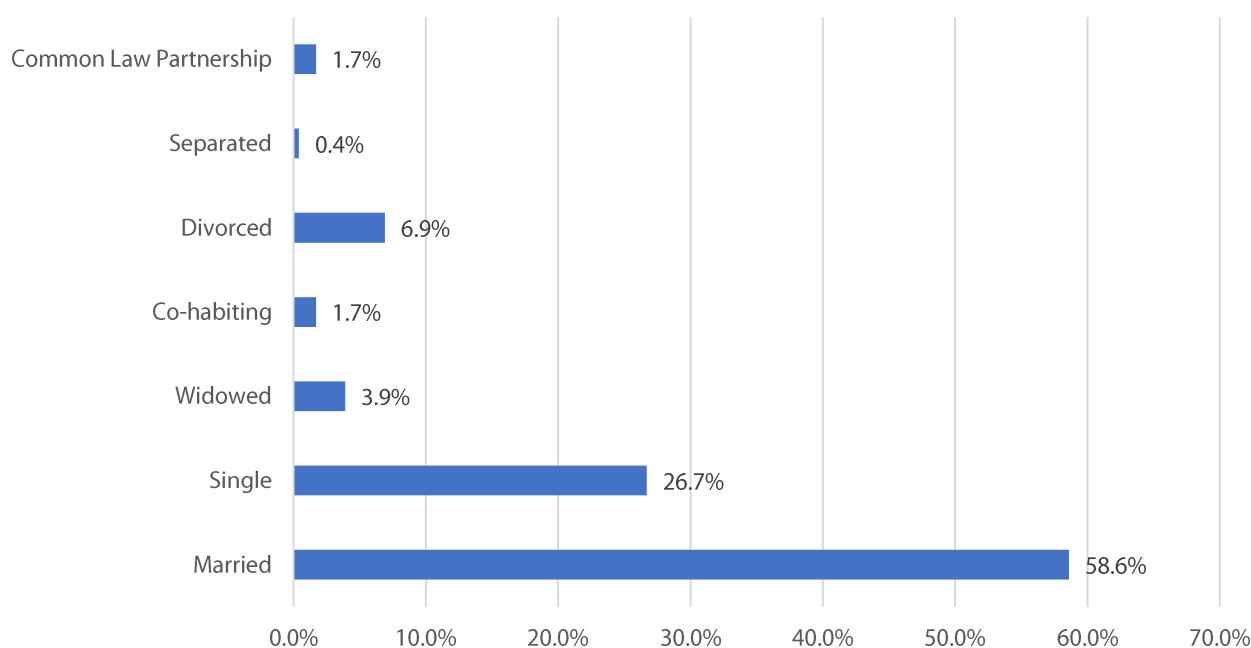
Figure 2: Pre-Initiative Known Marital Statuses Across all 12 Practices of Patients.

Internal PHC Advertising: Zap Stands and Posters

For the first stage of the project, zap stands, and posters were placed inside the practices which contained information on the definition of a veteran as well as showing the benefit of declaring this status to their PHC practice. These could be placed wherever the practices believed would be the most effective, with the majority choosing to place zap stands where patients would be waiting to enter the practice, and others within their waiting rooms. As COVID-19 measures were causing a significant reduction in footfall, the posters were often put up in the windows of the practices. See Figure 3.

Figure 3: Images of Zap Stands and Posters inside the Practices.

Two practices at this stage of the project, chose to take ownership of increasing their veteran registration by using their own initiative to help increase their veteran registration.

	Chester Practice 1	Chester Practice 2	Chester Practice 3	Chester Practice 4	Chester Practice 5	Chester Practice 6	Warrington Practice 1	Warrington Practice 2	Warrington Practice 3	Warrington Practice 4	Warrington Practice 5	Warrington Practice 6
24/08/2020	13	9	24	24	29	5	69	110	117	10	76	115
12/10/2020	18	15	24	76	39	36	154	131	120	10	79	115
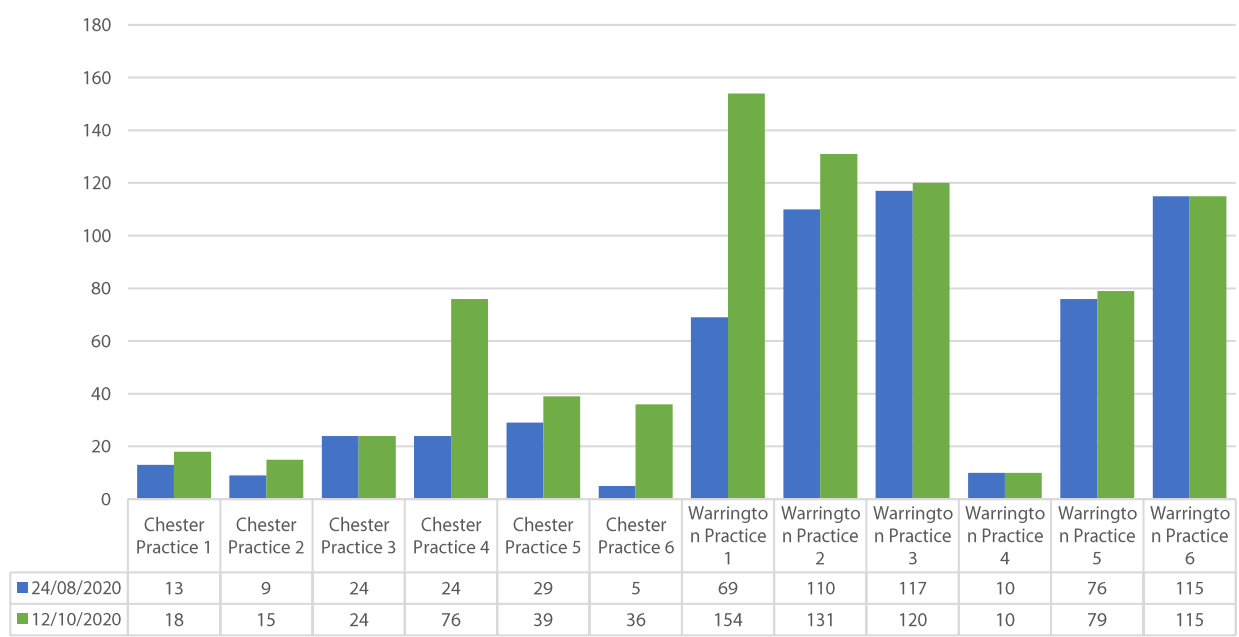
Figure 4: Progression of Veteran Registration from Pre-Search to Stage one.

Warrington practice 1 and Chester practice 4 chose to utilise flu vaccination clinics, where they would ask patients on entry to the practice if they had ever served in the military. Chester practice 6 ensured that the patient registration form for the practice contained the question. This stage of the project raised veteran registration by 35.9% (N = 216). Warrington practice 1, who utilised flu clinics, saw the largest numerical increase at this stage with an increase of 123.2% (N = 85). The practice increased from covering 10.2% (N = 69) of their veteran population to 22.7% (N = 154). Chester practice 4, who took a similar approach with vaccination clinics also increased by 216.7% (N = 52), increasing from covering 3% (N = 24) to 9.6% (N = 76). Chester practice 3, and Warrington practices 4 and 6 all saw no increase at this stage of the project. See Figure 4.

Demographically, the split between male and female Veterans across all 12 practices stayed fairly consistent to the first search. Veterans registered remained predominately male (90.5%, N = 739) with females totalling 9.5% (N = 78). Since the first search the number of male veterans registered had increased by 36.9% (N = 199), with the number of female veterans increasing by 27.9% (N = 17). However, at this stage there was some improvement in the capturing of female veterans. Previously, four practices had no female veterans identified, this had reduced to only two practices. The highest number of females registered remained to be Warrington practice 6 (N = 20). Nevertheless, Chester practice 4 had the biggest improvement increasing female registration by 200% (N = 6), closely followed by Warrington practice 1 who increased female registration by 62.5% (N = 5).
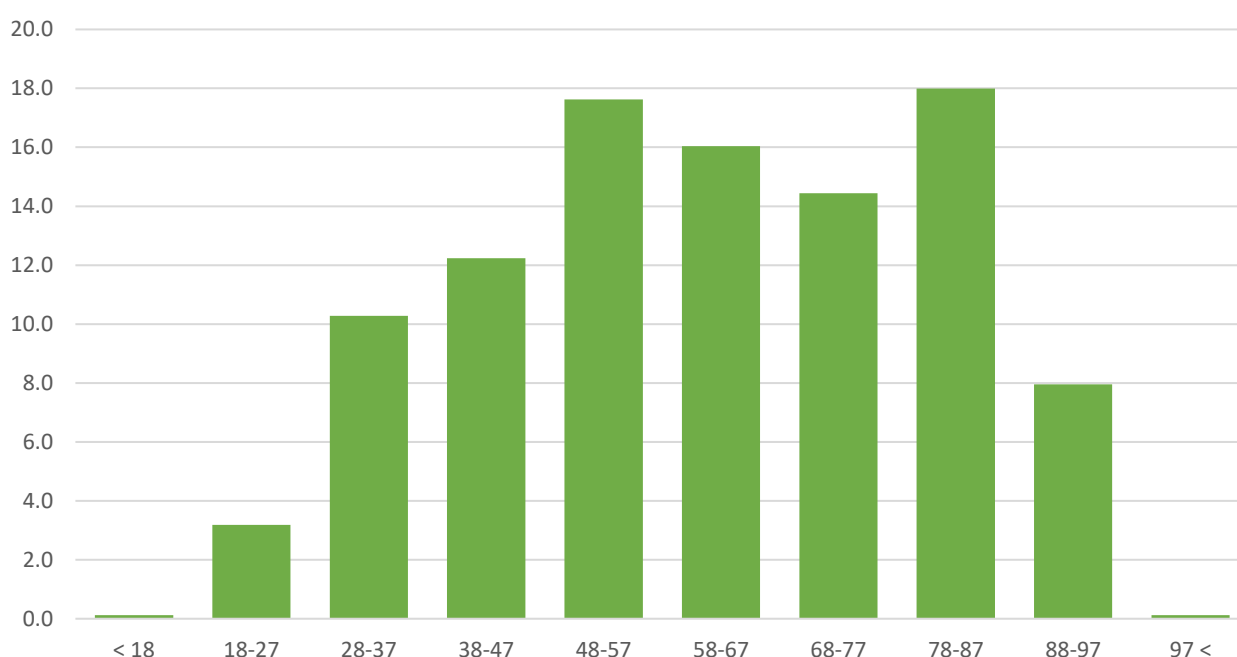
Figure 5: Stage one Patient Ages Classified into Ten Age Categories, Across All 12 Practices.

The mean age of Veterans across all 12 practices was 61 (SD = 19.4, Range = 16 – 98). The average age had increased from the first search where the mean was 57 (SD = 19.3, Range = 16 – 98). See Figure 5. In this search there was a shift in the highest number of patients in any one age category. Previously, in the first search, this was the 48 – 57 age range, whilst during this second search this was the 78 – 87 age range (18%, N = 147). Fifty eight percent (N = 7) of practices average age had also increased from the first search. This shift in age was likely due to the utilisation of the flu clinics by the practices to identify veterans, where those accessing flu vaccinations were much older. Further, this shows that there were numerous unidentified older veterans within these practices, and this could be due to not knowing that National Service classified the patient as a veteran.
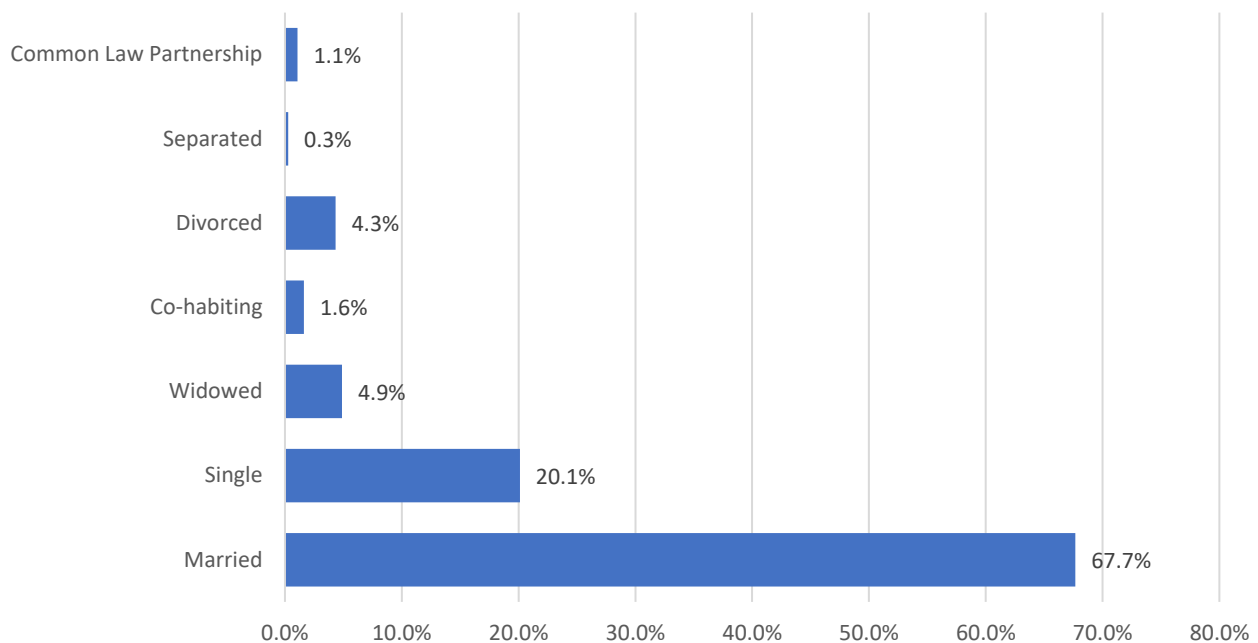
Figure 6: Stage one Known Marital Statuses Across all 12 Practices of Patients.

Fifty-five percent of patient's marital status was unknown (N = 449). Figure 6 shows that of those whose marital status was known (N = 368). The majority of patients were Married (67.7%, N = 249) followed by Single (20.1%, N = 74). See Figure 6. This stayed consistent with the first search, however, there had been an increase in the percentage of married and widowed patients. This was likely due to capturing more of the older age groups within this search, due to the utilisation of flu clinics by practices, as this cohort would be more likely to have a partner who has died.

Internal PHC Connection: Websites, Social Media and Text Messaging

The second stage of the project involved more virtual methods of sharing and disseminating information. PHC practices were asked to put a digital version of the poster onto their website, as well as any social media that they had such as Facebook and Twitter. In addition to this, practices were also given wording to send out as a text message to all patients in their practice which asked patients whether or not they were a veteran. During this time both Warrington practice 5 and Chester practice 2 also inserted the information requesting veterans to inform the practice of their veteran status into their newsletters. Chester practice 2 also took it upon themselves to post into local Facebook groups to further spread the word.

Several different text messaging systems were made known to the researchers. MJOG seemed to be the most common, where patients were able to be contacted in batches and were able to respond to text messages. iPlato was also mentioned by Chester practice 4 and Warrington practice 3, and they both stated that this system had the same capabilities as MJOG, but responses were automatically coded, and it appeared much more user-friendly. However, there were also messaging systems which did not allow for batch texting and/or responses. These included accuRx, NHS mail and SystmOne. For those who could not receive a response to their messages, they would ask those who were veterans to contact the practice via phone or email. At this stage, five of the practices were unable to send out text messages. Warrington practice 4 were unable to find the time during this stage but sent text messages on the 5th of January 2021. Chester practice 6 were having technical difficulties with their text messaging system and therefore did not send out text messages until stage 4 of the project which began in January 2021. Chester practice 2

unfortunately had a text messaging system that did not have the batch messaging capability, meaning every patient in their practice would need to be messaged individually and this is why it was not completed in this time. To their credit, this practice managed to send out these messages in December 2020 with huge human resource implications but showed the commitment of the two responsible staff who were both children of veterans. Warrington practice 2 and Chester practice 5, unfortunately, were unable to send out text messages at all. Warrington practice 2 stated that should they have sent out the messages, due to patients being unable to respond to the text, the surgery did not have capacity to manage the responses and to code them due to the increased influx of phone calls due to the COVID-19 pandemic. Chester practice 5 stated that their system did not have the capability for batch messaging, and that they did not have the capacity to send single messages to every patient in the practice.

Both Chester practice 4 and Warrington practice 3 had large increases in their numbers, both of which attributed this to the text messaging system. Both of these practices were using the iPlato system, which automatically codes any responses that the PHC centres received. Chester practice 4 increased by 393.4% (N = 299) and Warrington practice 3 increased by 197.5% (N = 237). Chester practice 3 also saw a substantial increase due to text messaging, increasing by 512.5% (N = 123). Chester practice 3 reported that they used the MJOG text messaging system. See Figure 7.

	Chester Practice 1	Chester Practice 2	Chester Practice 3	Chester Practice 4	Chester Practice 5	Chester Practice 6	Warrington Practice 1	Warrington Practice 2	Warrington Practice 3	Warrington Practice 4	Warrington Practice 5	Warrington Practice 6
12/10/2020	18	15	24	76	39	36	154	131	120	10	79	115
23/11/2020	19	22	147	375	42	47	199	131	357	14	81	150
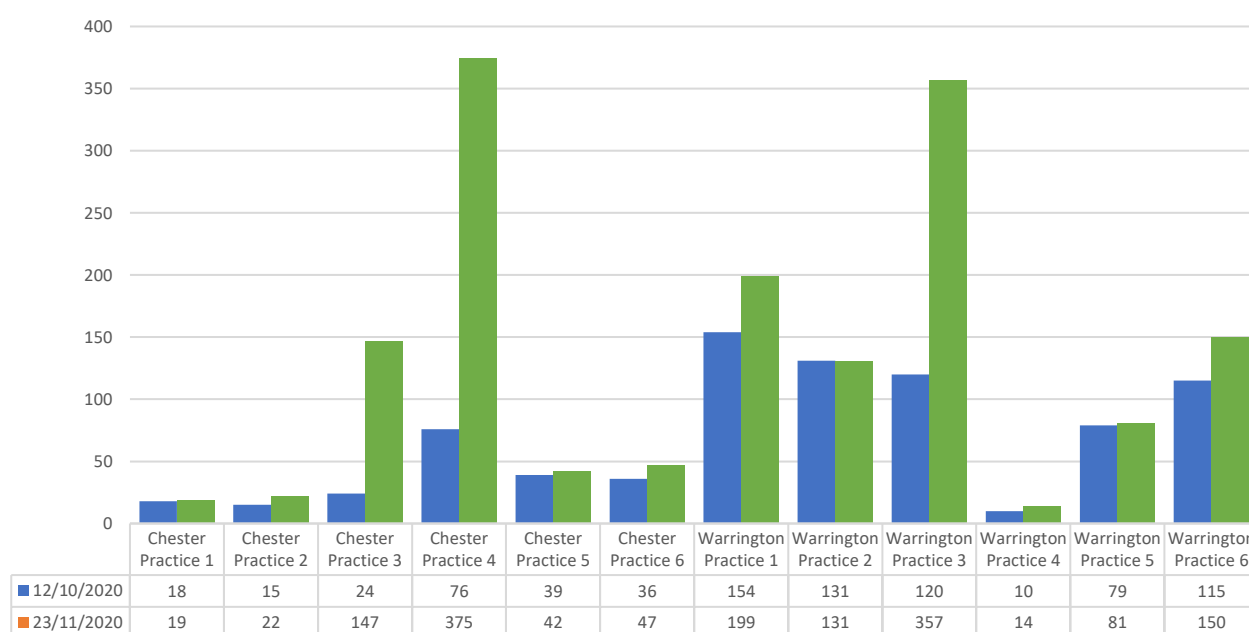
Figure 7: Progression of Veteran Registration from Stage one to Stage two.

However, due to the automatic coding system of iPlato, there was found to be a potential room for error. Due to the practice sending out messages to all numbers that they had on file, children sometimes had their parents phone number registered as a contact. This meant that there would be instances of children being recorded as a veteran, as the parent had responded believing the message to be for themselves. The researchers waited until the final stage of the project to do data cleansing and to remove these records from the data. Meaning there were instances where veteran registration decreased from stage 3 to stage 4 as these records were removed.

Overall, the number of veterans registered across the 12 practices increased by 93.9% (N = 767) from the text messaging and social media stage of the project. The smaller increases in other practices were due to the system that they had, or that they had not yet sent out the messages at this stage.

Demographically, the split between male and female veterans improved across those practices who have seen large increases in veteran registration. The percentage of males overall decreased from 90.5% in the last search to 89%. Since the second search, the number of male veterans registered increased by 90% (N = 663) and the number of females registered increased by 13% (N = 104). This shows a significant improvement in the registration of female veterans. This change is likely due to the capturing of more veterans through the text messages. This method of communication appeared to be efficient in significantly increasing veteran declaration in some of the practices, particularly those that could batch text and have the response automatically coded. Two practices remain as having no female veterans registered. However, four practices now had over 20 Female veterans registered. The highest number of females registered was Warrington practice 3 (N = 40).
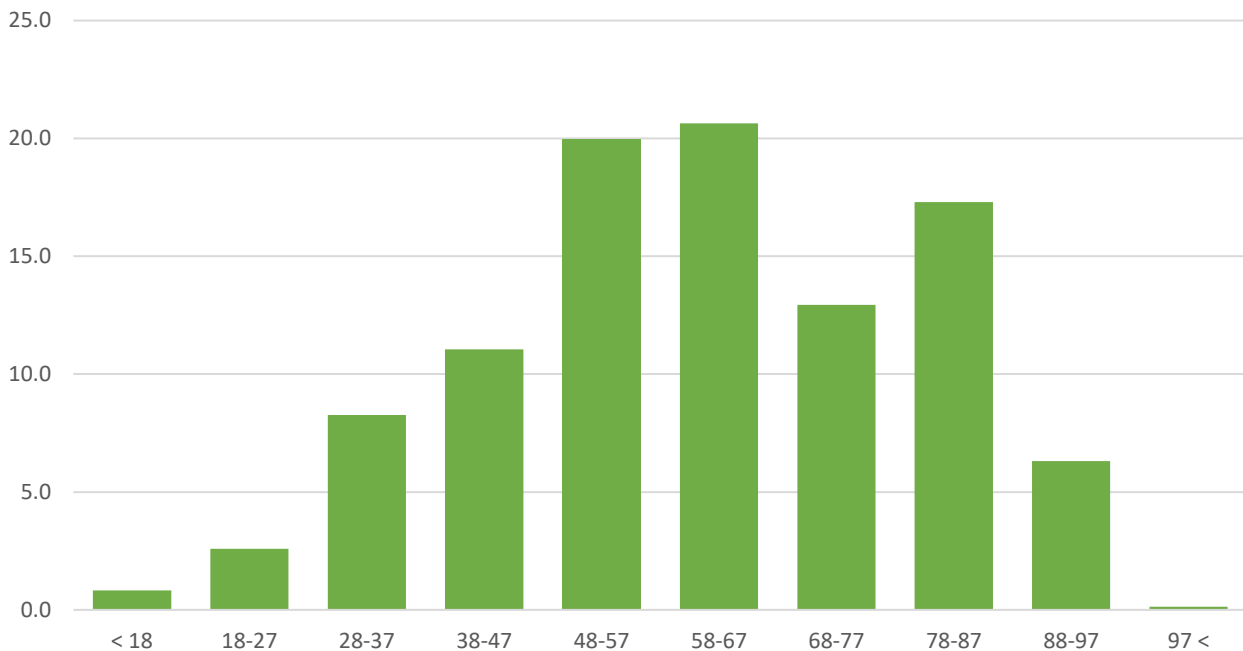
Figure 8: Stage two Patient Ages Classified into Ten Age Categories, Across All 12 Practices.

The mean age of veterans across all 12 practices was 61, unchanged from the previous search (Range = 0 – 99, SD = 18.6). In this search there was a shift in the highest age category. The previous search saw the 78 – 87 age group, and now the 58 – 67 age group is the highest across all practices. See Figure 8.
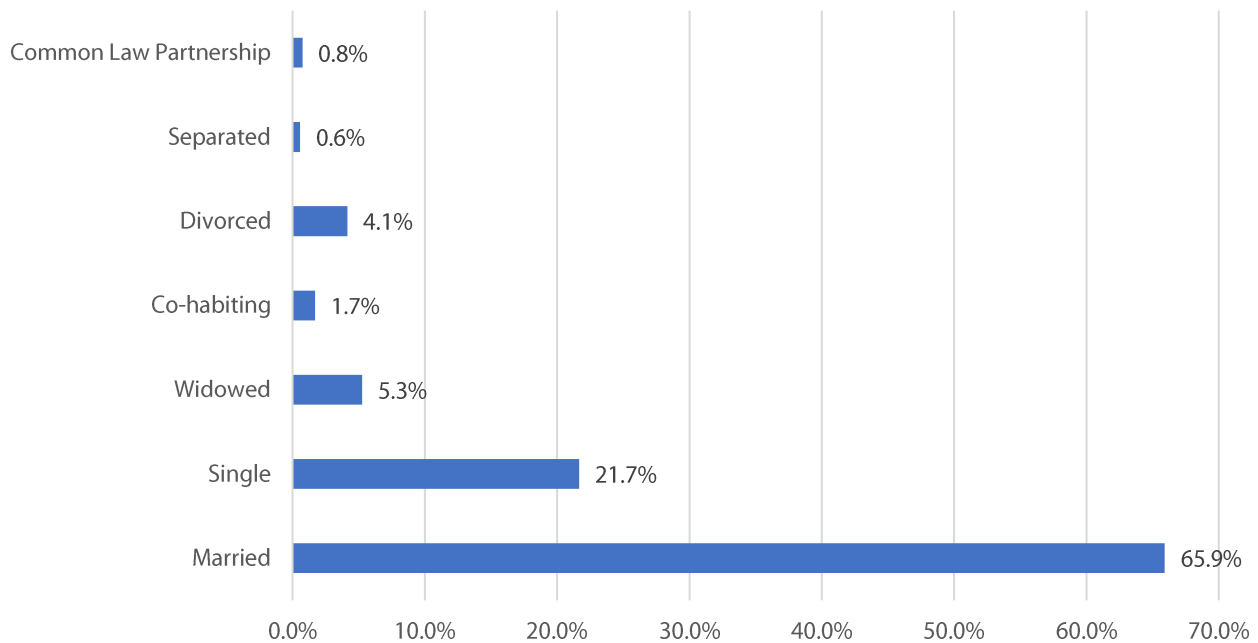
Figure 9: Stage two Known Marital Statuses, Across all 12 Practices of Patients.

Sixty six percent of patients' marital status was unknown (N = 1053). Figure 9 shows the percentages for those whose marital status was known (N = 531). The majority of patients were married (65.9%, N = 350) followed by single (21.7%, N = 115). This stayed consistent across all three searches.

External Engagement: Community

The third stage was to be based in the community and target areas where younger veterans and their families in particular may assemble such as public houses, gymnasiums, and sports grounds. However, as these were all closed due to the COVID-19 pandemic restrictions, then the focus of attention had, by necessity, to change.

To assist with the advertising campaign, two meetings were set-up with key contacts in each of the areas of Warrington and Chester (See Table 5). The Centre researchers shared the aims of the project and asked as to whether these individuals were able to assist and whether they had any further ideas that had not been considered. Valuable connections and ideas came out of the meetings which uncovered an altruistic desire from key community figures to engage in this project. We also made links with other contacts who we believed would be vital in sharing the message across the two areas.

In the meetings, it was suggested to potentially use the COVID-19 vaccination clinics as this would help to target the older population. Warrington Council shared that these vaccinations would be taking place in the Halliwell Jones Stadium, home to the Warrington Wolves, and a zap stand was put up in the stadium during these times. We also advised PHC practices who were administering COVID-19 vaccinations within their practice, to utilise the zap stands as they did for the flu vaccination clinics. Furthermore, there was a suggestion to contact schools to distribute the information to parents/guardians.

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Warrington	Chester
Cheshire Police Force: Shared the information around the police stations, including putting posters in the areas we are targeting.	**Cheshire Police Force:** Shared the information around the police stations, including putting posters in the areas we are targeting.
Pharmacies: Six pharmacies agreed to put a poster on display and include flyers in their flyer display stands. One pharmacy was directly connected to Warrington practice 5.	**Pharmacies:** Three pharmacies agreed to display the information.
Public Transport: Warrington Council put the posters up on the bus stops nearest to each of the six practices.	**Public Transport:** Information was on display in Chester Train station and 9 bus stops contained the poster.
Supermarkets: Three Large Supermarkets displayed the poster on their community noticeboard.	**Supermarkets:** Eleven Supermarkets displayed the information on their community noticeboard**.**
Shops/Garages: Four shops displayed the posters on the community board with one displaying it outward facing in their window. Two Post Offices both had the poster on display.	**Shops/Garages:** Twelve shops and garages displayed the information. Chester Markets also displayed the posters around the area.
Food and Drink: Two restaurants displayed the poster in their window.	**Food and Drink:** A coffee shop and a butcher's displayed information.
LiveWire CIC: Distributed posters throughout their facilities, this included gymnasiums, libraries, and community centres.	**Leisure/Gyms:** A large Gym and Community Centre both displayed the information.
Schools: Two schools disseminated information in their network.	**Schools:** A Primary School shared the information in their network.
Social Media: Several community groups posted the information on Facebook. Warrington Borough Council also shared on their social media.	**Social Media:** Three community groups posted the information on Facebook.
Warrington Wolves: Placed advertising cards in the bags used for the purchased merchandise. This included shop and online orders.	**Other:** Several community boards were targeted, and the poster displayed. The British Army's local HIVE and Dale Barracks shared the information digitally and within their networks.

Table 5: Information on Distribution of Campaign within the Community.

A distribution list of the schools within Cheshire was obtained from the University of Chester's Education department. A total of 50 schools were contacted in Chester and Warrington. Of these schools there were two responses. One school in Chester distributed the information within their school, another school in Warrington included the information within a Newsletter. From the 1st of December 2020 the researchers went out into the community to ask establishments, within close proximity of each of the practices, whether they would be willing to display the information. See Figure 10.

Figure 10: Images of the Posters within the Community.

Warrington practice 4 and Chester practice 2 had sent out the text messages at this stage, which explained their sudden increase in registrations with Chester practice 2 increasing by 195.5% (N = 43) and Warrington practice 4 increasing by 214.3% (N = 30). Warrington practice 5 also increased at this stage by 50.6% (N = 41). They stated that at this stage they sent the text messages out for a second time due to not having a system where patients can respond, they used this as a "reminder" which created a surge in veteran registrations. Chester practice 4 increased by 11.5% (N = 43). The rest of the practices increased by lesser amounts. This was likely due to the UK entering into full lockdown meaning that patients were unlikely to be leaving their home during this time.

Overall, across all 12 practices, there was an increase of 12.8% (N = 202) from stage 2 to stage 3. The larger increases were due to the late text messaging of some of the practices. However, there was still some smaller increases in other practices. See Figure 11.

	Chester Practice 1	Chester Practice 2	Chester Practice 3	Chester Practice 4	Chester Practice 5	Chester Practice 6	Warrington Practice 1	Warrington Practice 2	Warrington Practice 3	Warrington Practice 4	Warrington Practice 5	Warrington Practice 6
■ 23/11/2020	19	22	147	375	42	47	199	131	357	14	81	150
■ 04/01/2021	24	65	160	418	42	59	205	131	361	44	122	155
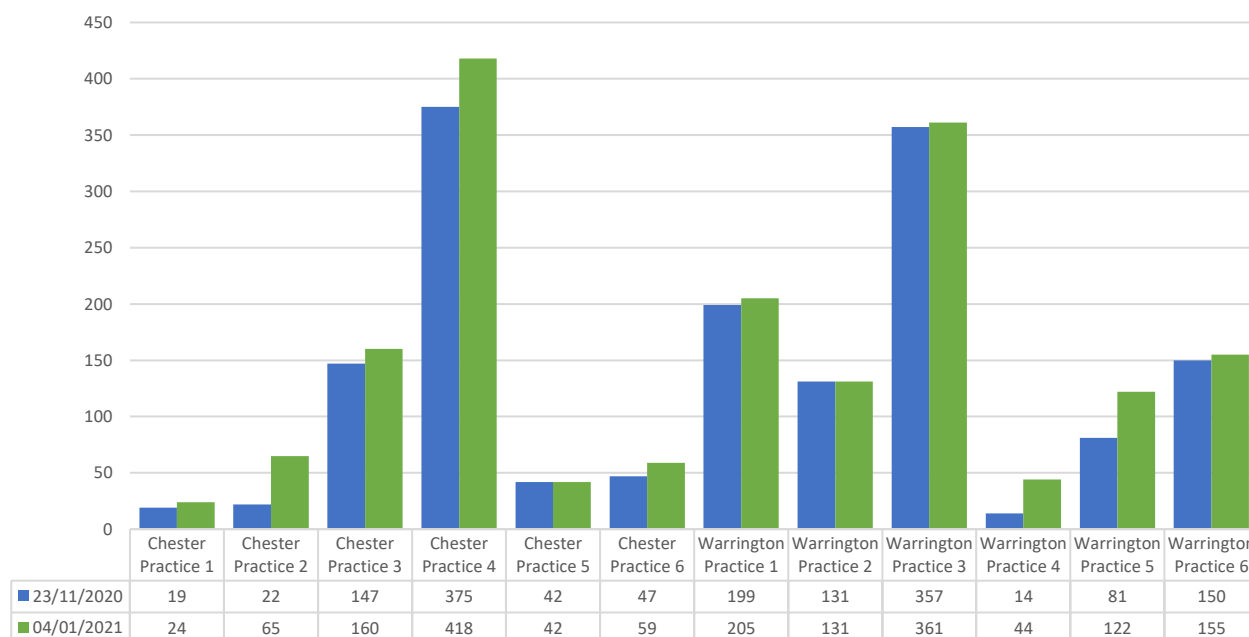
Figure 11: Progression of Veteran Registration from Stage two to Stage three.

Demographically, across all twelve practices, the percentage of females and males remained consistent. Previously, two practices had no female veterans registered; this was now no longer the case, with no practices reported no female veteran registrations. Five practices had twenty female veterans registered.

The mean age of veterans across all 12 practices was 62, which increased slightly from 61 in the last search (Range = 0 – 99, SD = 18.5). The highest age category remained as the 58-67 age group with 21% of veterans being part of this age group. See Figure 12.
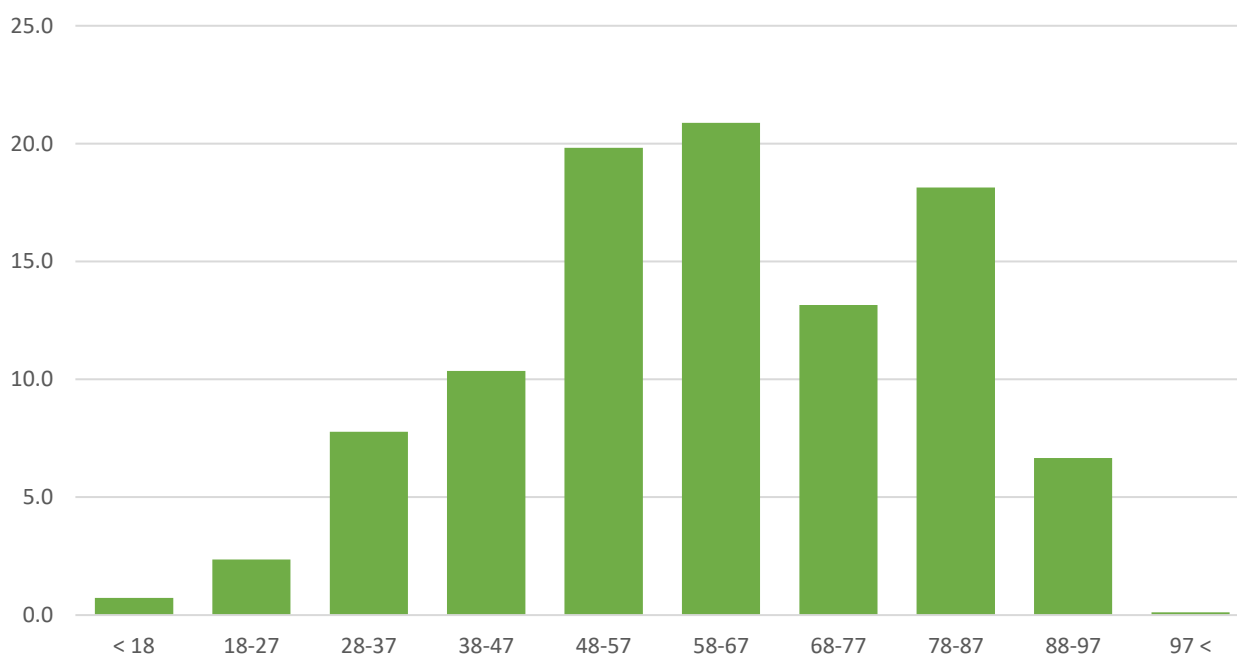
Figure 12: Stage Three Patient Ages Classified into Ten Age Categories, Across All 12 Practices.

Warrington practice 1 ($\bar{x}$ = 69, SD = 17.2) and Warrington practice 2 ($\bar{x}$ = 69, SD = 18.3) have the highest average age within the practices with Chester practice 1 ($\bar{x}$ = 54, SD = 16.8) now being the lowest.

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Previously, Warrington practice 4 had the lowest average age at 51, this now increased to 66 ($\bar{x}$ = 66, SD = 20.6). All practices average age increased or stayed consistent except from Warrington practice 1 who decreased from 70 to 69. Chester practices 1, 4, 5 and 6 and Warrington practices 2 and 3 remained the same as the previous search.
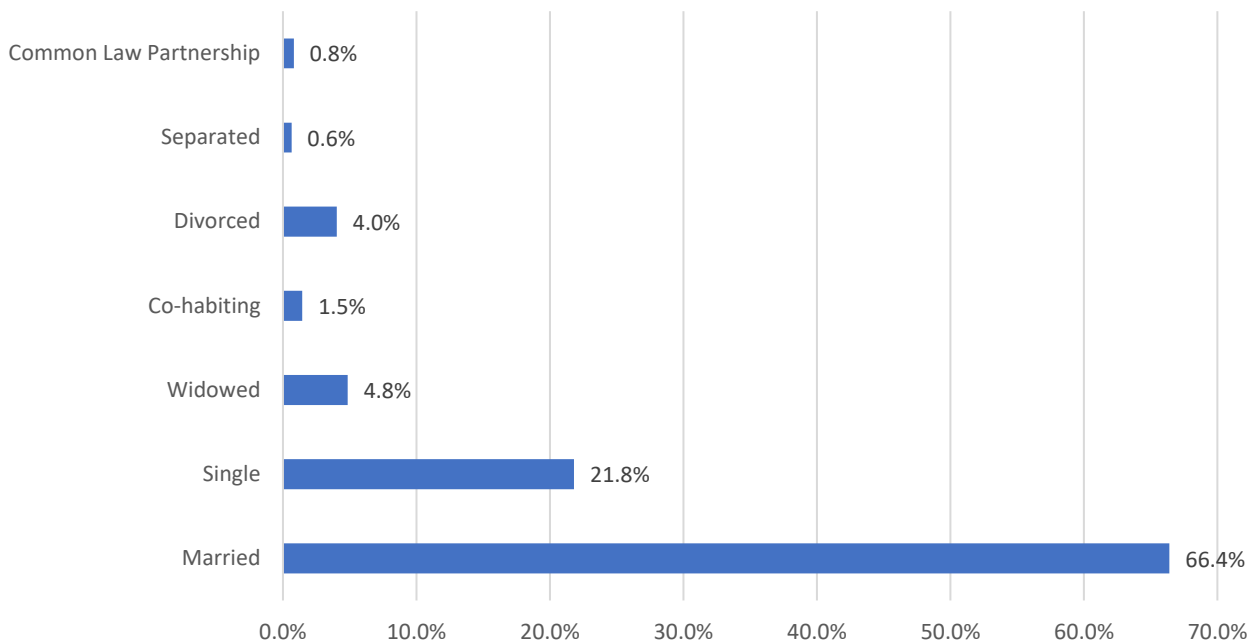
Figure 13: Stage Three Known Marital Statuses Across all 12 practices of Patients.

Sixty five percent of patients' marital status was unknown (N = 1167). Figure 13 shows percentages of those whose marital status was known (N = 619). The majority of patients were married (66%, N = 411), followed by Single (22%, N = 135). This stayed consistent across all searches.

External Connection: Care Homes
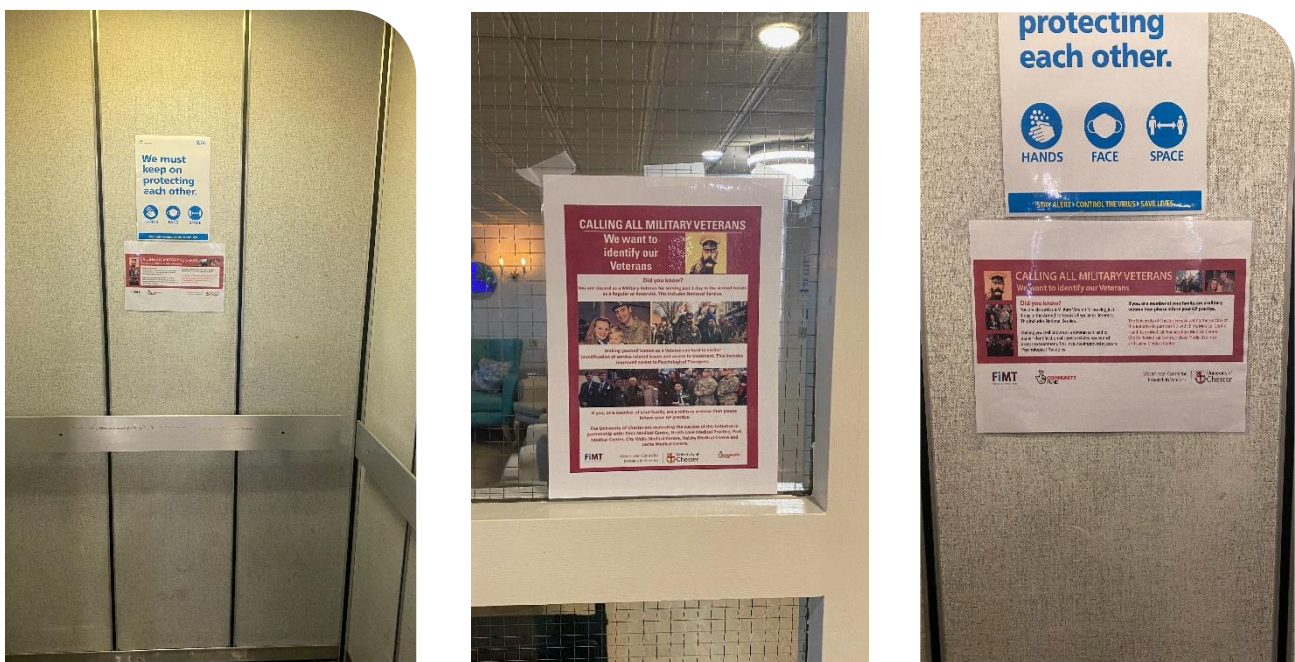
Figure 14: Photos from Chester Care Home of the Posters on Display.

The final stage of the community engagement phase was planned to engage with the older veterans' population. The Centre researchers had identified from the pilot study and the initial search results that older veterans were not sufficiently registered. As this stage was completed during full UK lockdown, the project team could not physically enter Care Homes.

Both Cheshire West and Chester Council and Warrington Council sent an e-mail to all CQC registered care facilities giving them the information and asking if they could disseminate to their residents and residents' families. The researchers also individually contacted Care Homes within a 2-mile radius of each of the practices which came to a total of 62 Care Homes. Unfortunately, responses were limited, however, we did receive images from a Chester Care Home of posters displayed around the Care Home. See Figure 14.

At this stage, data was cleansed for anomalies, such as children being wrongly coded as a veteran due to parents answering the text message believing it to be for themselves. This led to Warrington practice 3 dropping by 10 registrations from stage 3 to stage 4. All the other practices remained as an increase.

	Chester Practice 1	Chester Practice 2	Chester Practice 3	Chester Practice 4	Chester Practice 5	Chester Practice 6	Warrington Practice 1	Warrington Practice 2	Warrington Practice 3	Warrington Practice 4	Warrington Practice 5	Warrington Practice 6
■ 04/01/2021	24	65	160	418	42	59	205	131	361	44	122	155
■ 01/03/2021	25	69	163	429	47	137	213	131	351	56	130	161
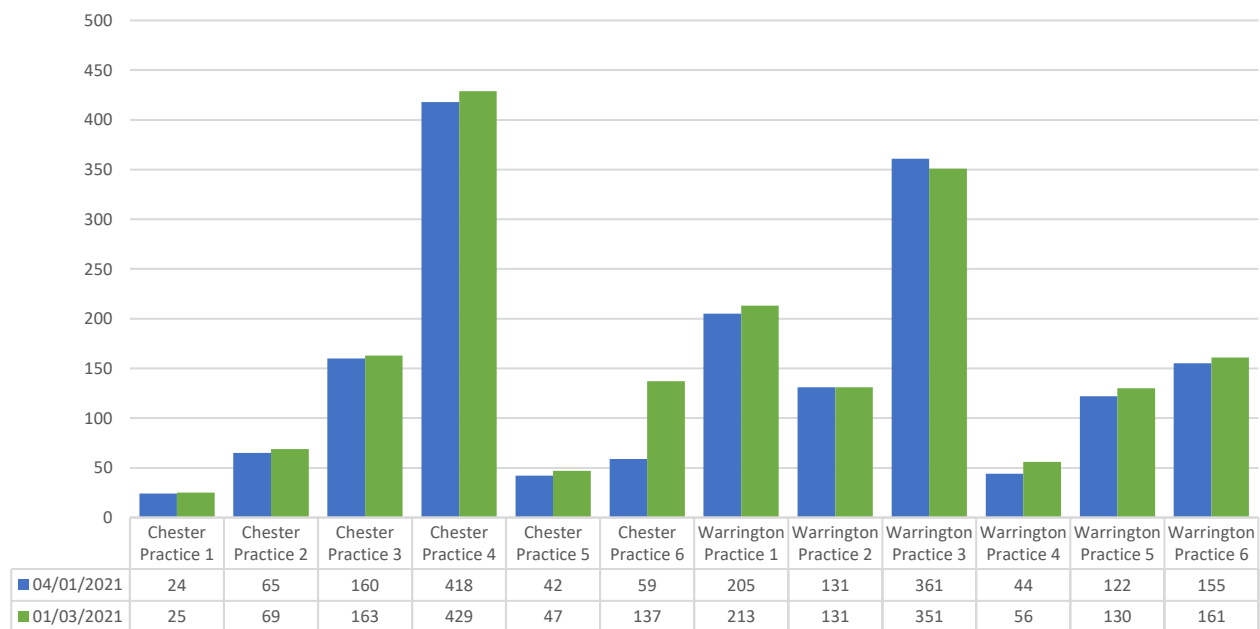
Figure 15: Progression of Veteran Registration from Stage Three to Stage Four.

Overall, across the 12 PHC practices, there was an increase of 7.1% (N = 126) from stage 3 to stage 4. See Figure 15. Despite the difficulties with Care Home communication, it was clear that the practices remained engaged. However, Warrington practice 2 only increased after the zap stand/poster stage of the project. They were unable to send out text messages and did not appear to receive any further registrations.

Primary Healthcare Practice	Male	Female
Chester Practice 1	22 (88.0%)	3 (12.0%)
Chester Practice 2	65 (94.2%)	4 (5.8%)
Chester Practice 3	125 (76.2%)	39 (23.8%)
Chester Practice 4	389 (90.7%)	40 (9.3%)
Chester Practice 5	42 (89.4%)	5 (10.6%)
Chester Practice 6	124 (90.5%)	13 (9.5%)
Warrington Practice 1	193 (90.6%)	20 (9.4%)
Warrington Practice 2	119 (90.8%)	12 (9.2%)
Warrington Practice 3	320 (88.6%)	41 (11.4%)
Warrington Practice 4	49 (87.5%)	7 (12.5%)
Warrington Practice 5	107 (82.3%)	23 (17.7%)
Warrington Practice 6	135 (83.9%)	26 (16.1%)

Table 6: Stage Four Gender of Patients Split by Practice.

Demographically, the overall percentage of females remained at 12% with males at 88%. Since stage three, the number of male veterans registered had increased by 7% (N =111), with females increasing by 13% (N = 26). This shows improvement, particularly for veteran registration for women. See Table 6.
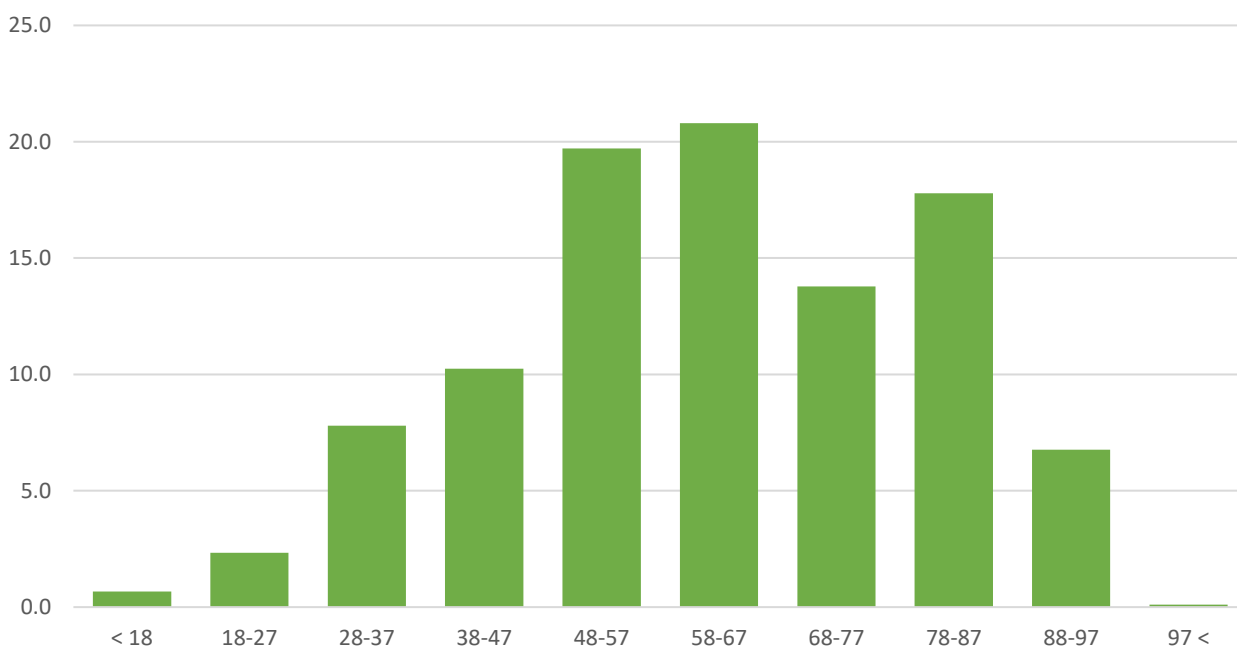
Figure 16: Stage Four Patient Ages Classified into Ten Age Categories, Across All 12 Practices.

Primary Healthcare Practice	Mean	Range	SD
Chester Practice 1	54	18 – 89	16.6
Chester Practice 2	63	30 – 91	15.7
Chester Practice 3	56	20 – 95	17.3
Chester Practice 4	62	19 – 95	16.9
Chester Practice 5	60	22 – 94	18.5
Chester Practice 6	64	25 – 93	15.7
Warrington Practice 1	70	22 – 97	17.1
Warrington Practice 2	69	22 – 98	18.3
Warrington Practice 3	60	16 – 99	17.5
Warrington Practice 4	67	21 – 93	20.8
Warrington Practice 5	58	18 – 97	19.4
Warrington Practice 6	56	20 – 97	17.7

Table 7: Stage Four Patient Mean Age, Range and Standard Deviation (SD), Split by Practices.

The mean age of veterans across all 12 practices was 62, which stayed the same from the previous search (Range = 16 – 99, SD = 17.9). The highest age group remains to be the 58 - 67 age group, with 21% of veterans belonging to this age group. See Table 7 and Figure 16.

Sixty-five percent of veterans' marital status was unknown (N = 1247). Figure 17 shows percentages of those whose marital status was known (N = 676).
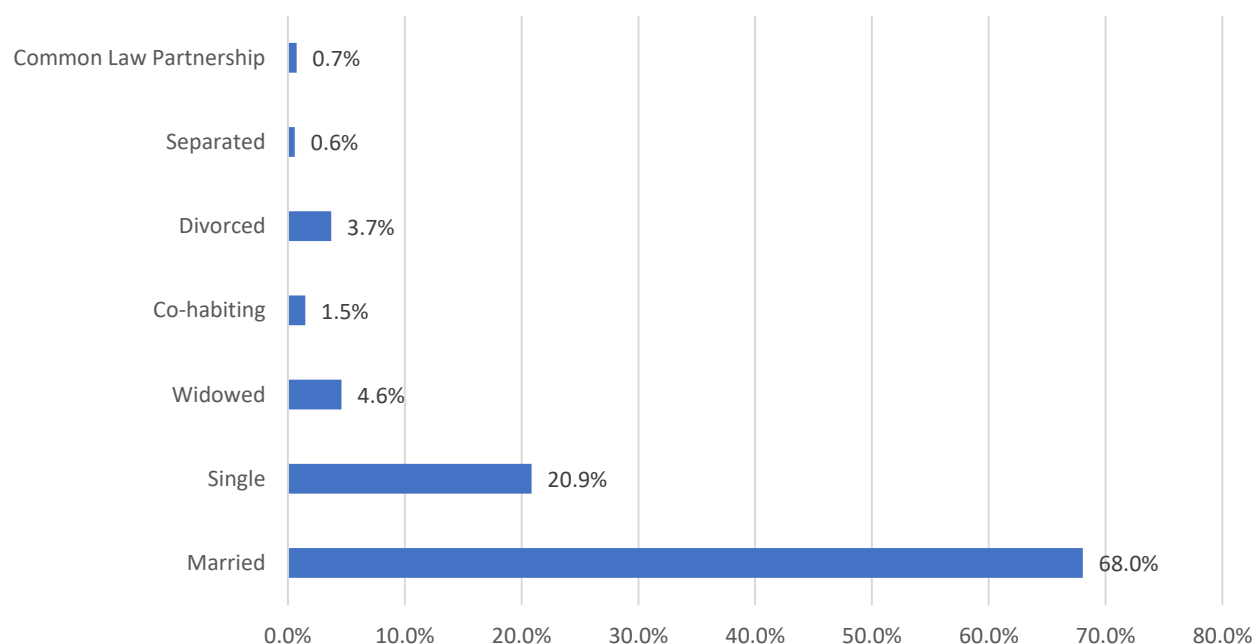
Figure 17: Stage Four Known Marital Statuses Across All 12 Practices of Patients.

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The majority of patients were married (68%, N = 460), followed by Single (21%, N = 141). This stayed consistent across all searches. However, the percentage of veterans married increased slightly from the previous search which was 66% (N = 411).

Total Veteran Registration Increase

Chester practice 6 had the largest overall percentage increase of 2640% (N = 132) and Chester practice 4 had the largest overall increase of 1687.5% (N = 405). Warrington practice 2 had the lowest percentage increase of 19.1% (N = 21) with Chester practice 1 having the lowest overall increase 92.3% (N = 12). See Figure 18.

	Chester Practice 1	Chester Practice 2	Chester Practice 3	Chester Practice 4	Chester Practice 5	Chester Practice 6	Warrington Practice 1	Warrington Practice 2	Warrington Practice 3	Warrington Practice 4	Warrington Practice 5	Warrington Practice 6
■ 24/08/2020	13	9	24	24	29	5	69	110	117	10	76	115
■ 01/03/2021	25	69	163	429	47	137	213	131	351	56	130	161
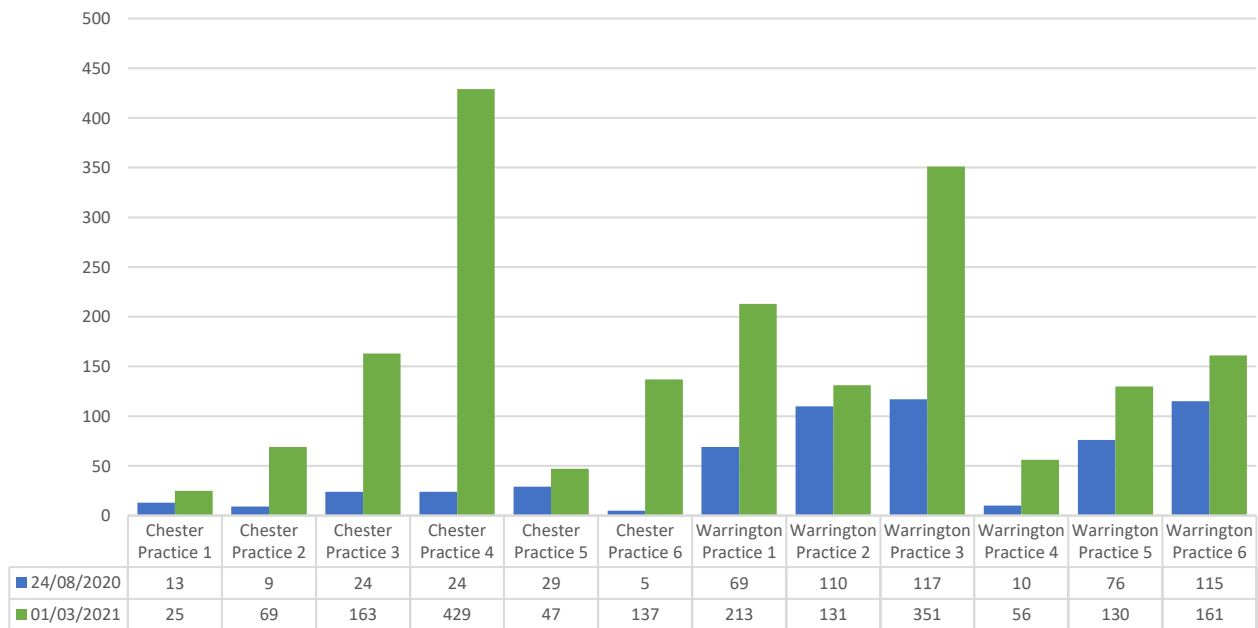
Figure 18: Progression of Veteran Registration from the Pre-initiative to Stage 4.

Figure 19 shows from the pre-initiative to the end of the project, veteran registration raised by 218.1% (N = 1,311). In Chester PHC Centres, veteran registration raised by 736.5% (N = 766). Warrington practices started with a higher number of registrations. Veteran registration still raised by 109.7% (N = 545). Appendix A, Table 11 shows the break down of the registrations for each practice and the number and percentage each have increased by.
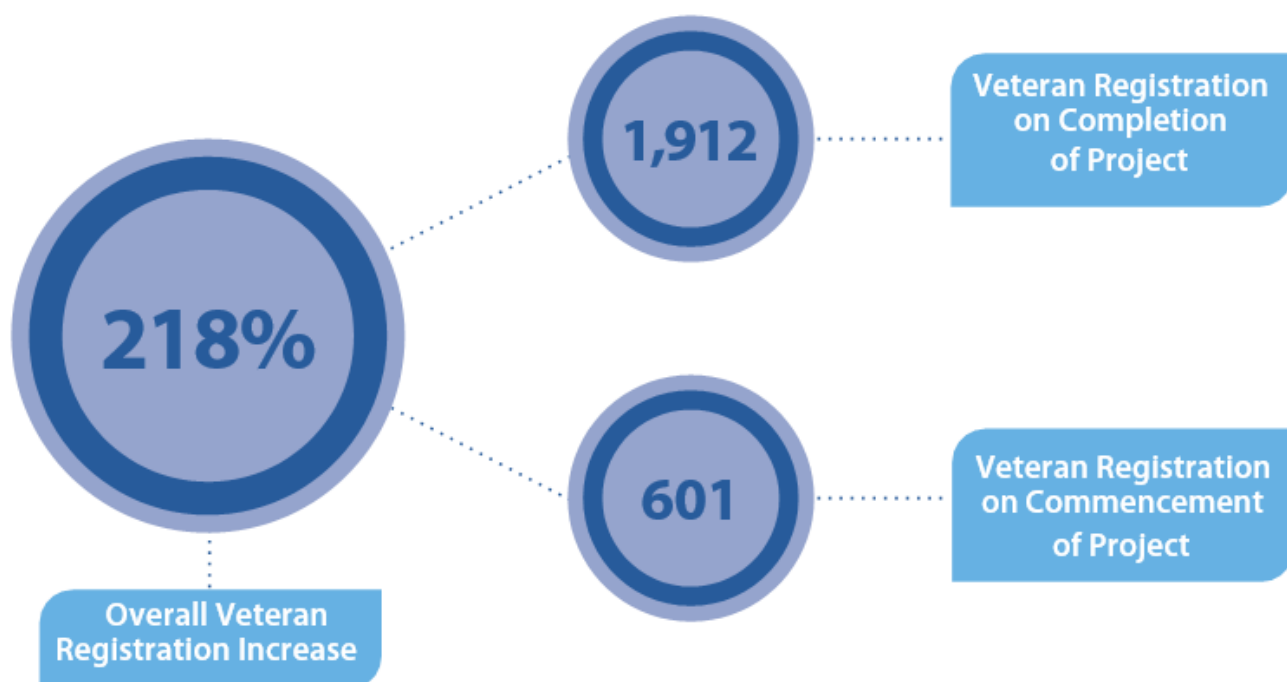
Figure 19: Overall Veteran Registration Increase.

In addition, Figure 20 shows for the estimated coverage of veteran population, the project have increased the coverage from 9.3% to 29.5%. For Chester this increased from 4% to 33.7%, with Warrington increasing from 12.8% to 26.8%. In addition, for individual practices, pre-searches ranged from a veteran population coverage of 1.2% to 21.2%. After the final search this increased to a population coverage ranging from 5.0% to 54.1%. As well as this, 5 practices were now covering over 30% of their veteran population, and 2 were covering 50% or more of their veteran population. Appendix A, Table 12 shows the veteran population coverage for each of the practices.
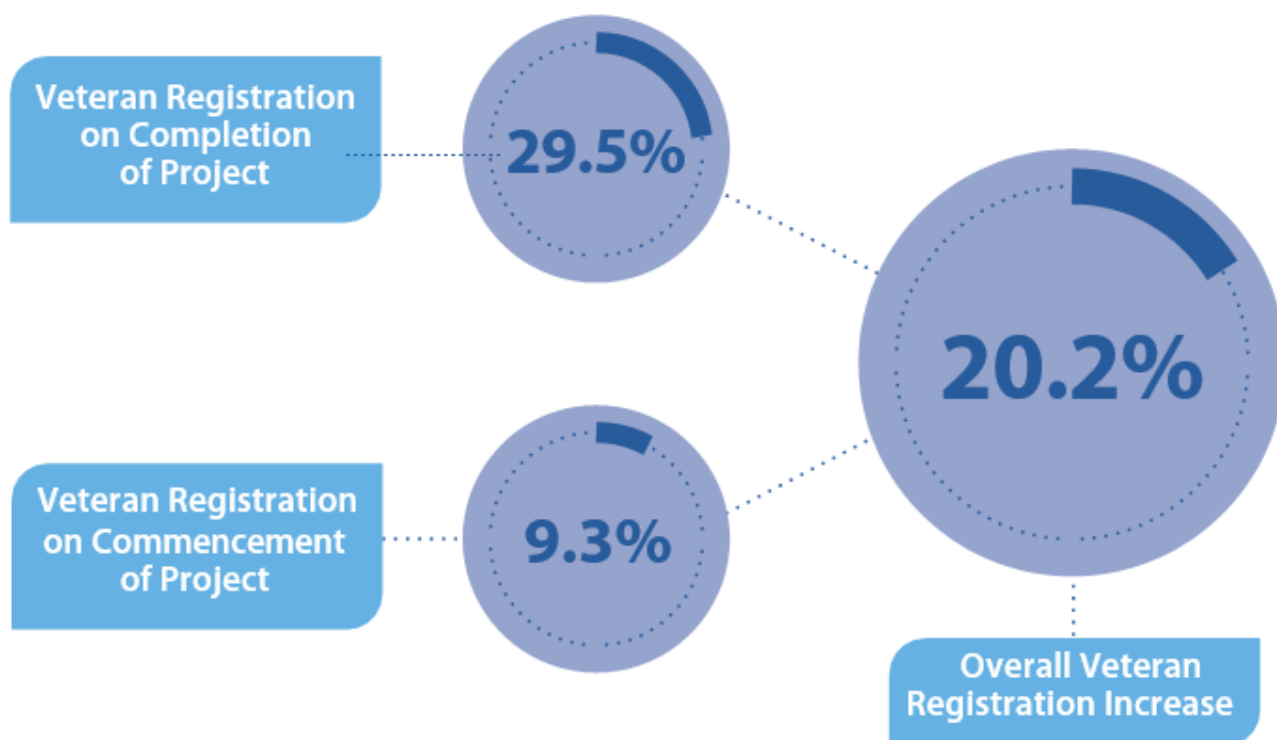
Figure 20: Veteran Coverage Increase

As previously discussed, there were some practices who, due to the challenges of COVID-19 pandemic experienced reduced staffing and the time able to allocate to the project, and they completed stages of the project at different times to the original schudule. This means that in some cases, the changes to veteran registration demographics may not be attributed to the stage itself but rather to the initiatives that the practices were conducting at the time.

Warrington practice 4 did not send out a text message in stage 2, but rather in stage 4. Chester practice 6 also sent out a text message during stage 4. Chester practice 2 sent their text messages in stage 3. Both Warrington practice 2 and Chester practice 5 were unable to send text messages out at all, which may have resulted in a skew of results if they had been able to increase their registration more significantly. These are important to note, as this may account for some demographic changes such as the increase in female veterans registered as well as the change in age.

Appendix B and Appendix C shows the changes in gender and mean age over the different initiatives and across the different practices. It is clear that, overall, the identification of veterans meant an improvement with all practices having some female veteran registrations by the final search. Furthermore, the average age for most practices had increased from the pre-initiatives to the final search, suggesting that older veterans were also being reached.

Post-Project Practice Interviews

Following completion of all stages, staff from each of the 12 PHC practices were interviewed. Ten were in person and 2 via Microsoft Teams.

Theme	Axial Coding	Open Coding	Interview frequency (N)	%	Overall frequency (N)
Positives The positive outcomes of the project according to the practices.	Identification (91.7%, N = 11)	Coding when not a Veteran	1	8.3	2
		Improved Registration	4	33.3	4
		Identifying Veterans	7	58.3	10
		Pride	2	16.7	2
	Internal Initiatives (83.3%, N = 10)	Social Media	2	16.7	2
		Text Messaging	6	50	8
		Utilising Flu Clinics	9	75	10
		Visual Reminders	7	58.3	10
	Healthcare Staff (100%, N = 12)	Involvement and Education of Staff	11	91.7	19
		Knowing Benefits	4	33.3	4
		Taking Ownership	7	58.3	9
		Understanding Veteran Definition	7	58.3	9
Challenges The challenges that were faced by the practice during the project.	Accessing Veterans (58.3%, N = 7)	Care Homes	4	33.3	6
		Reluctance from Veterans	3	25	4
	Communication (100%, N = 12)	How to Communicate Information	2	16.7	4
		Lack of Reach with Social Media	3	25	3
		Text Messages	8	66.7	9
		Lack of Opportunities to Communicate	9	75	12
	COVID-19 Pandemic (100%, N = 12)	Concentration on Vaccines	5	41.7	7
		Decreased Staff Capacity	7	58.3	8
		Increase in Phone calls	5	41.7	6
		Lack of Footfall	12	100	15
		Pandemic in the Community	1	8.3	1
Future Improvements Means for Improvement to further facilitate veteran registration in PHC.	Accessing Veterans (33.3%, N = 4)	Contacting Elderly	2	16.7	2
		Improve Text Messaging	3	25	3
		Regular Reminder	2	16.7	2
	External Improvements (16.7%, N = 2)	Improve Veteran Services	1	8.3	1
		Transition	1	8.3	2
	Healthcare Staff (50%, N = 6)	Involvement of GP's	1	8.3	1
		Education and Opportunities	2	16.7	2
		Social Prescriber	4	33.3	4
	Recording Veteran Status (33.3%, N = 4)	Improvement of Codes	1	8.3	1
		Include Question Elsewhere	3	25	3

Table 8: Thematic Coding of Post-Project Interviews with Practices.

91.7% of practices saw the involvement and education of practice staff as a positive outcome of the project.

83.3% of practices believed the internal initiatives, such as text messages, were effective in increasing registration.

'I would say staff awareness, making the staff aware. We had training days where we made them aware. We regularly sent emails around to them as well and discussed it with them. That worked well. Had the staff not been aware then maybe we wouldn't have got as many.'
- **Chester Practice 2**

58.3% of practices stated that understanding the veteran definition, by healthcare staff, was a positive outcome of the project.

75% of practices utilised flu clinics to identify veterans, which led to the capturing of an older population.

100% of practices recognised the lack of footfall as a challenge

Future improvements suggested the use of a social prescriber for veteran issues.
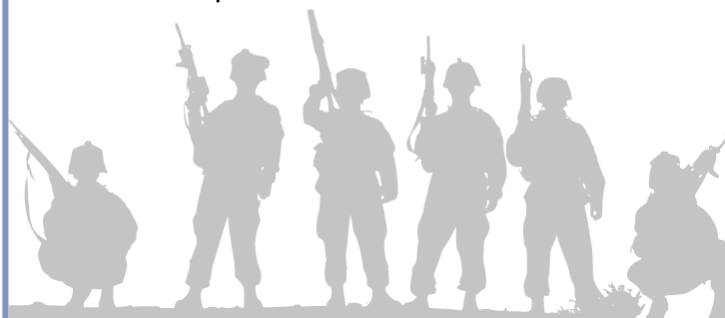
The COVID-19 pandemic was recognised to be an overall challenge of the project, with a lack of opportunities for communication with patients.

'That's the biggest challenge, a lot of the stuff was going to be visual with screens and that sort of thing, and we're not seeing very many people face to face.'
- **Chester Practice 6**

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All meetings were recorded with permission of the practices and transcribed by the researchers. Transcripts were analysed using content analysis (Braun & Clarke, 2006) whereby open coding was generated to identify themes within the data. The final Core Categories were Positives, Challenges and Future Improvements with a total of 10 themes across all three Core categories. The coding and frequencies can be seen in Table 8.

Positives

Figure 21: Word cloud for Positives from Post-Project Practice Interviews.

The positives of the project consisted of any outcomes that were beneficial to the healthcare staff, practice or veterans themselves, Figure 21 shows a word cloud of the most frequent words. This consisted of three themes of Identification (91.7%, N = 11), Internal Initiatives (83.3%, N = 10) and Healthcare Staff (100%, N = 12). Within the identification theme, practices discussed coding veterans when they are not a veteran, so patients were not asked the question of veteran status constantly. They also stated that they were able to improve registration. The majority of respondents reported that being able to identify veterans was a positive, with veterans being proud to share their status. Ten of the 12 respondents highlighted the importance of the internal initiatives which included the use of social media and the text messaging to all practice patients, visual reminders inside the practice such as posters and zap stands and the utilisation of flu clinics:

> "We had a list of patients that were coming in, two of us were in the car park and we had a list of questions that were mostly related to COVID-19, but we also asked, have you ever served in the military and would later code it in the system, so that's how we picked most of them up."

> – Warrington Practice 1

The final theme was mentioned by all respondents and related to healthcare staff, and in particular, the involvement, education and increased knowledge and awareness of staff. Staff reported being aware of the benefits of identifying veterans and had a better understanding of the definition of a veteran. Finally, 58.3% (N = 7) of practices took ownership of the project and were able to increase registration in more creative ways than what was required by the project itself.

"Having one of the reception team – one doing it and taking ownership of it. Because they will remind the team – don't forget to ring the military veterans – you need someone on the ground floor to do that. I made sure I shared all the information with the team. All the information whenever our figures went up and had a really big think about it. It keeps it on people's minds."

– Chester Practice 4

Overall, all practices viewed the project as being a worthwhile exercise, with many stating that they would continue to utilise the visual information to be able to increase veteran registration further once footfall increased. None of the practices returned the zap stands to the researchers and wanted to continue to display them.

Challenges

Figure 22: Word cloud for Challenges from Post-Project Practice Interviews.

The challenges of the project consisted of any difficulties or barriers that were encountered by the healthcare staff, practice or veterans themselves, Figure 22 shows a word cloud of the most frequent words. This consisted of three themes, and these were Accessing Veterans (58.3%, N = 7), Communication (100%, N = 12) and the COVID-19 Pandemic (100%, N = 12). Within the accessing veterans' theme, difficulties were mentioned due to accessing of Care Homes as well as difficulties engaging with the residents.

"Our nurse practitioners were going into the nursing homes every other day, and they had a couple of patients come forward. But contact was limited and therefore they were only seeing patients that they had to see if they were unwell. If they were fit and well, they wouldn't always see the patients."

– Chester Practice 2

Communication was mentioned by all practices (100%, N = 12). This included a lack of opportunities to communicate with patients which also related to the COVID-19 pandemic as there was a lack of patients entering the practice. In addition, 66.7% (N = 8) of practices discussed difficulties with text messaging including being unable to batch text patients, patients not being able to respond and relying on them contacting the practice, as well as some reluctance to answer the messages from veterans for fear of what

was being done with the information. Finally, some of practices stated that there was a lack of reach with social media, highlighting that although a useful tool, it is only useful to those who access it.

All practices highlighted the challenges caused by the COVID-19 pandemic, which in all but one exception resulted in patients being prevented from entering the practice without an appointment and also patients wanting to avoid the social contact involved when entering a PHC Centre. All practices recognised the lack of footfall as a challenge to increasing veteran registration. This lack of footfall also led to an increase in phone calls which would have meant that those veterans who had to contact the practice to declare their status, would have had to do so via a phone call. This may have caused some veterans not to do so with the long wait times that were occurring to be able to get through to the practices. The COVID-19 pandemic also caused a decrease in staff capacity which was often due to the concentration on vaccines or with staff having to isolate due to being exposed to the virus. Furthermore, one practice mentioned that due to the COVID-19 pandemic in the community it is likely that patients were not seeing the information as they would be trying to leave the house as little as possible, especially those who were vulnerable.

> **"We have had to deploy staff and it was often at short notice when we were getting the vaccines in, and we have had to deploy staff to work there. So, any additional time we would normally have on our telephones we haven't had that at all."**
>
> **– Warrington Practice 4**

Overall, the main challenges of the project appeared to be related to the COVID-19 pandemic and the lack of footfall that the practices were getting during this time. Under normal circumstances, these challenges would not be present and therefore, more veterans would have been identified.

Future Improvements

Themes identified for improving access and registration were Accessing Veterans (33.3%, N = 4), External Improvements (16.7%, N = 2), Healthcare Staff (50%, N = 6) and Recording Veteran Status (33.3%, N = 4). For accessing veterans, there were ideas such as considerations of improvements to text messaging services for those who were unable to batch text and receive patients' responses as well as PHC practices mentioning the idea of patients receiving regular reminders to declare if they are a veteran and connecting with the elderly,

> **"As a practice we could look at sending something out to them [the elderly] in the post, the CCG and local radio involvement also, bulletins. Bit more of a town wide campaign may be better rather than down to individual practices"**
>
> **– Warrington Practice 6**

Within the healthcare staff theme, several practices highlighted the use of social prescribers, whether that be a veteran specific social prescriber for the area, or the existing one having the knowledge of veteran services and charities. Practices reinforced the message that staff should take up the educational opportunities to increase veteran registration further. This includes staff asking the question "*Have you ever served*" whenever in contact with a patient. Finally, several practices also mentioned that GP's engagement could be improved.

Finally, improvements to the actual recording of veteran status were also cited and a need to improve the coding structure, including veterans' specific questions on routine assessment and registration forms.

> "When you type in military veteran there are hundreds of different ones. Served in the Armed Forces, served in the military forces, civil servant, there are so many different ones."
>
> – Chester Practice 3

Overall, practices believed that improvements were needed both internally within the practice itself including with healthcare and administrative staff, and externally within the community to achieve more national awareness of the need to declare veteran status and the benefits of doing so.

Expert Interviews

A total of sixteen interviews were conducted with experts who were either a member of the AFC or had extensive experience of working with the AFC. Table 9 shows a breakdown of participants.

Identifier	Gender	Served?	Country	Job Role
AA	Male	Yes	England	Academic involved in Veterans Research
BB	Female	Yes	England	Consultant Psychiatrist
CC	Female	No	England	Solicitor specialising in Military Personnel, their families, and veterans
DD	Male	Yes	England	General Practitioner with both DMS and NHS experience
EE	Male	Yes	England	NHS England and NHS Improvement
FF	Female	No	England	Regional Veterans Lead
GG	Female	No	Scotland	Psychologist
HH	Male	Yes	England	Veterans Wellbeing Co-ordinator
II	Female	Yes	England	Military Mental Health Nurse
JJ	Male	No	Northern Ireland	Assistant Director Mental Health Charity
KK	Male	No	Northern Ireland	Psychologist
LL	Female	No	England	Wife of Serving Personnel
MM	Female	No	England	Wife of Veteran
NN	Female	Yes	England	Medically Discharged Veteran
OO	Male	Yes	Wales	Veteran Service Project Manager
PP	Male	Yes	Wales	Veteran Case Manager

Table 9: Overview of Participants for Expert Panel Interviews.

Fifty percent (N = 8) of participants were male and 50% (N = 8) female. 56% (N = 9) of participants were either serving or ex-serving personnel. 69% (N = 11) of participants were based in England, 12.5% (N =2) based in Wales, 12.5% (N = 2) in Northern Ireland and 6% (N = 1) in Scotland. Interviews were transcribed verbatim and analysed using a modified grounded theory approach (Charmaz, 2014). The interviews lasted between 15 minutes and 44 minutes with an average of 30 minutes. This generated approximately 61,000 words of data.

"And civvies don't understand, that's another phrase isn't it, civvies just don't understand, don't understand what we've been through."

– Participant NN

"I think military people, I probably sound really arrogant, but I think they're quite humble. Whilst they might have done some really lifesaving/life-threatening things, it's all part of the job. So, they don't want any special status."
– Participant II

"I did work with a veteran who did not want to disclose anything at all in case it affected his pension, which was his perception."

– Participant FF

"Well, some of the older boys, they were taught to never disclose their veteran status. Going back into the 80's and 90's there were service personnel who were encouraged to wear their uniforms and then the IRA started shooting them. We had guys shot outside the recruitment centres just for going in. And you were told to keep quiet. So, that's one, certainly in places like Northern Ireland, without a doubt that still exists. Served four years in Northern Ireland, they will tell you nothing."

– Participant AA

"I think especially, in my experience, the more elderly veterans tend to dissociate from that especially if they've been out of service for 20-30 years, they tend not really to see themselves as a veteran."

– Participant GG

"They don't know about having to contact a GP because they've just gone to their medical officer, on base. They don't know how to do it, they don't know how to register, there's no real help or assistance for them and they become lost in the system."
– Participant CC

"You present the presenting problem and then the next time you're seen by someone else who deals with the next problem and there's – what's missing is that holistic approach. Beginning to unpick why the person might be drinking too much, why their wife might have left them, why they're depressed rather than just dealing – rather than actually unpicking it and having some understanding of why they might be presenting with this."

– Participant DD

"I'm thinking as well, large numbers of our homeless population, people who aren't at a fixed abode, they're not probably touching or knocking on the doors of any healthcare providers."

– Participant BB

A total of 8 categories were identified, seven of which were related to veterans of: Veterans Not Disclosing, Veterans Not Registering, Motivating Initiatives for Veterans, Facilitators and Effective Support for Veterans, Difficulties of Declaring, Healthcare Staff and Civilian Perceptions. A further theme was identified whereby participants were asked what they would like to know from the research study.

Veterans Not Disclosing

A theme which was identified were reasons for veterans not disclosing their status. Figure 23 shows a word cloud of the most frequent words. With several participants stating that many veterans would be unaware of what the criteria is to classify someone as a veteran.

Figure 23: Word cloud for Veterans Not Disclosing Code in Expert Interviews.

Within this theme, the veteran terminology was discussed by the majority of participants. Specifically, there was confusion around the terminology with some veterans believing that you have to have served in a conflict, as well as that those who had completed National Service/reservist would not classify as a veteran. Several also stated that there were problems with the term "veteran" which would mean that the younger cohort does not identify with the term as it is more associated with older ex-servicemen.

> "One of the things we face at the moment is around the word "veteran". When we say people don't identify as veterans, we aren't saying people don't actively identify, some people don't realise that their service actually gives them – some people say, "I only did three years" or "I was discharged during training for an injury", and they will not realise that they have a veteran status."
>
> – Participant HH

The perceptions of the veterans were also seen as a barrier to disclosing veteran status by the vast majority of participants. This included the belief that civilians were not interested or that they do not understand them. Furthermore, experts believed that veterans would not see the benefit of disclosing their status, with some having previously experienced poor service.

Military Culture was discussed by half of the participants as a reason for not disclosing veteran status. This was centred around stigma which overlapped with numerous other themes and appeared to be an

important aspect of veterans not disclosing their status. Surrounding this there was also references to veterans not wanting special treatment and also not liking the feeling of being processed.

Security issues were also mentioned by half of the participants, in particular a lack of trust and fear. This was a particularly prominent issue for those based in Northern Ireland, who stated that veterans were often in close vicinity of those who were attempting to hurt them during their conflicts.

> "I think in Northern Ireland it's a legacy of the troubles and in terms of fear and actual risk levels go up and down here as you can see if you've been watching the news. Again, we have rioters on the street from both sides of the community"
>
> – Participant KK

Furthermore, the newly found civilian status was raised as a potential reason for not declaring veteran status. With the majority of participants believing that once serving personnel leave the Armed Forces, they now identify as a civilian and therefore, do not feel the need to reveal that they had previously served. In addition, some participants stated that it may likely be due to having a short service career and therefore, not considering themselves to qualify as a veteran. Finally, there were some reasons for not disclosing which were the responsibility of the practice, a number of participants felt that veterans were simply not asked the question by their practice staff. In addition, several participants believed that practices were unaware that they should be recording veteran status and did not know the reasons why this was important.

> "It's quite interesting that there are a number of people who work within primary healthcare who still don't have the knowledge about what they can do as a practice with regards to becoming veteran friendly accredited. During the pilot test for one of the surveys I am designing, someone from a primary healthcare practice completed it as part of a test and they weren't aware that it was a possibility for them to become accredited as their practice. Which was interesting."
>
> – Participant LL

Overall, the majority of participants believed the reasons for not disclosing their veteran status was the veteran terminology and the perceptions that veterans themselves have. There was also a belief that the practice staff were not making veterans aware that they need to disclose their status by not asking the question, though some participants believed the practice staff themselves were aware.

Veterans Not Registering

A theme was also identified of reasons for veterans not registering with a PHC practice, Figure 24 shows a word cloud of the most frequent words. Access difficulties were mentioned by several of the participants. This included discussions around homeless and traveller population who would not have a static address as well as secondary healthcare being easier to access as registration was not needed. Furthermore, access difficulties also included being unable to get into the GP practice itself whether this be due to COVID-19 pandemic, practices not taking on new registrations or the veteran not knowing where they are going to settle.

In addition, military culture was mentioned by the vast majority of participants. This included having language and culture barriers such as the use of dark humour and the normalisation of offensive language which may be deemed as inappropriate by some healthcare professionals. This also relates back to the idea of civilians "not understanding" as was mentioned in reasons why a veteran does not disclose their status.

Furthermore, as part of military culture, both poor help seeking behaviour and stigma were discussed as barriers to not registering.

Discussions surrounding stigma included mentions of the military "macho" image and the belief that they "should be able to resolve issues for themselves". Indeed, there was also the idea that, with veterans being predominantly male, that men "don't want to discuss their medical problems" and would "actively avoid going to see the doctor unless he had to." Stigma was also related to the public believing that those with PTSD may be "unhinged" or "deranged" which would stop a veteran from seeking help, and therefore from registering with a GP practice.

Figure 24: Word cloud for Veterans Not Registering Code in Expert Interviews.

Another view was that veterans had a lack of trust for those outside of the military and veterans being used to their health practices they had experienced in the Armed Forces,

> "While you are in the military, you reminded me of the term "going sick" it's a fate worse than death for a soldier. Particularly if they were on their training, to go sick was the worst thing that could happen to them because it usually meant they got taken out of training, and the time that they were in training was delayed. So, therefore, the last thing you wanted to do was to go sick. Maybe that "going sick" feeling is something that carries on when you become a veteran, so it wouldn't be on your priority list."

> – Participant DD

The final area that was discussed as a reason a veteran may not register with a GP practice, was that of transition difficulties when leaving the Armed Forces. This was mentioned by 75% (N = 12) of participants. Several stated that service leavers were unaware of civilian life and therefore, were unaware that they had to register with a GP practice rather than it being a case of them not wanting to. In addition, a quarter of participants believed that veterans would not see the benefit of registering and would not have this as an immediate priority due to other issues such as housing, careers and other more pressing matters. Finally, a lack of understanding from civilians was also mentioned more specifically, and links back to the military culture and comradery as well as reasons for veterans not declaring their status once they were registered.

Overall, participants believed that veterans were not registering with a GP practice due to difficulties in transition. As well as veterans not believing that they needed to access a GP practice until they needed to due to some form of health problem or difficulty. Furthermore, participants also mentioned access difficulties for veterans such as those within the homeless population.

Motivating Initiatives for Veterans

Another theme that was identified was motivating initiatives for veterans looking at both registration and declaration. This theme focused on the initiatives that would encourage veterans to register with a PHC practice or to declare their veteran status. Prompts and reminders were mentioned by 87.5% (N = 14) of participants. This included external advertisement in the community as well as internal practice advertisement such as posters. Furthermore, several participants stated that there needed to be an intentional effort by the practice staff. National Awareness and Destigmatisation was also highlighted by the majority of participants, in particular in regard to MH difficulties.

Connectivity was also a recurring theme to motivate veterans to register and declare their veteran status. In particular, participants discussed the need for better connectivity in the transition process, the need for better packages to assist service leavers into healthcare and also the need for a better system for transferring of medical records, particularly due to the current system being reliant on paper records, with several participants believing electronic records would be much more efficient. Connectivity with the third sector such as charities, social services and other veteran services was mentioned as an area for improvement.

> "I think what they should do is every soldier, every service personnel, should be given half an hour in a room, as part of their medical discharge, to read over – to see what is in their medical notes. To then be able to go into the doctor and say if any of these issues occur in the future, or any of these are still ongoing, what do I do about it. So, you should have connectivity and they should be given really good direction of how to then raise that with their primary healthcare service, when they go there."
>
> – Participant AA

Finally, the physical act of recording the veteran status and ways in which to do so, was mentioned by 69% (N = 11) of participants. There were discussions surrounding the use of the census, the possibility of incentivisation to motivate veterans to register and/or declare their status as well as the use of technology being improved upon. Specifically, the use of technology discussed utilising electronic systems to allow veterans to record their own status. Furthermore, a link between primary and secondary healthcare systems was viewed as a benefit and motivation for veterans as they would know that within secondary healthcare, all staff would be aware of their veteran status. Participants also stated that disclosure should not be left to veterans themselves but that the information should be sought from veterans.

Overall, the majority of participants believed the most effective motivator to get veterans to register and declare their status would be some form of prompt or reminder. Though better connectivity across sectors was believed to be needed and more effective means for the actual recording of the veteran status.

Facilitators and Effective Support for Veterans

The interviews revealed a theme regarding facilitators and effective support for veterans. This specifically focused on what worked well in achieving effective support for veterans once they had declared their veteran status to their PHC practice. Collaboration was discussed by the majority of participants. This included collaboration with the third sector to ensure effective care as well as the involvement of veteran

families and veteran peers. Specifically, veterans would feel more comfortable sharing their stories with another veteran than a civilian. In addition, there were different traits that should be present in the healthcare staff that would be dealing with the veteran. These included showing interest in the veteran, the veteran feeling comfortable with the member of staff and allowing the veteran to show their pride in their service. It is believed that these traits would develop from building a rapport with the veteran and having an awareness of the medical history of the individual, especially that which was service related.

> "I think that when they say to their GP practice that they're a veteran, I think it would do the world of good if they made an appointment specifically to go over their military history. Something like a military MOT, just like "what tours have you done?" "Has there been any events that really stick out in your mind?" Just so they've got it there on paper, so if in the future the veteran comes and asks for help, they don't have to tell their story again, it's already there on paper. And I think from the veterans' point of view, that would make them feel a little bit understood but supported as well, and that actually civilians do care about us because they know that that's a real big issue."
>
> – Participant MM

Relating to this, the majority of participants believed that there was immense importance in opening up a dialogue with a veteran once they had declared their status. This included explaining the benefits of declaring, listening to the veterans needs and signposting early to the appropriate services. Emphasis was also put on ensuring that it was not just a tick-box exercise and that something was actually done with the information of knowing that the patient had served in the military. In order to achieve effective support for veterans, 75% (N = 12) of participants believed training for healthcare staff was needed. This included, more specifically, better knowledge of the military and resources to help staff in areas such as available veterans' services. Some participants believed that this training should start from undergraduate level, and veteran care should be included within the curriculum.

Finally, the majority of participants believed that ensuring PHC and services were veteran friendly would help to facilitate effective support for veterans. Several participants stated that veteran specific services and charities would help to provide better support for veterans. In addition, some participants stated that the implementation of the RCGP Veteran friendly GP practice accreditation programme would help to make PHC practices more veteran aware and friendly. Related to this, and as part of the criterion for the RCGP accreditation, participants believed that there should be a veteran champion who would stay up to date with available services and support, who other members of staff could consult and refer to if needed.

> "I think what they generally want is a periodic update, possibly face to face rather than just e-mailing because that just gets buried. And then an opportunity to be aware of what resources are available, whether that be on a website that's frequently updated where all this information sits that they can keep referring back to. I know GP's, being pushed for time and everybody wants a bit of a GP, everybody thinks their little niche is important and GPs should know about it, but GP's have a broad brush understanding of things. So, for GP's, I know just sending them an email with here's a leaflet will just get buried somewhere. A 20-minute masterclass or a catch-up session or an update session and then here's a resource you can refer to, and this is where all the information sits and will be updated so you don't have to keep worrying that what list of contacts you have has gone out of date. Will probably be really well received."
>
> – Participant BB

Overall, the most effective means of support for veterans once their status is disclosed appeared to come from the healthcare staff. This would include the traits of the staff member and the way in which they treat the veteran as well as ensuring that the appropriate knowledge of the military and available services was present.

Difficulties of Declaring

As with effective support and motivators, there also comes potential difficulties in declaring veteran status. This theme included any barriers that were mentioned by participants, with frequent overlap in reasons why veterans may not register with a PHC practice and reasons why veterans may not disclose their veteran status once they do. Figure 25 shows a word cloud of the most frequent words.

Figure 25: Word cloud for Difficulties for Declaring Code in Expert Interviews.

Firstly, potential issues exist in relation to the healthcare that the veterans may receive. This includes a lack of education from healthcare staff and a lack of awareness of the Armed Forces Covenant within the NHS. In addition to this, numerous participants stated that the recording system that was currently in place was insufficient, with numerous problems with the coding system itself, having a vast variety of coding options as well as the veteran code often becoming hidden within the notes of the individual.

Finally, several participants noted that there are also difficulties when working with other organisations such as veterans' charities where the people who work for said charities may not have the knowledge to deal with a veteran. Participants also discussed difficulties surrounding help-seeking behaviour. This included the idea that veterans do not want special treatment due to a sense of pride and want to be treated as equals to their civilian counterparts. A more emphasised help-seeking difficulty was the problem with stigma, particularly in relation to military culture and identity where veterans believe it would make them appear weak. There were also discussions of difficulties surrounding veteran identity, which was mentioned by 75% (N = 12) of participants. Participants discussed the idea that there is a certain stereotype surrounding the image of what a veteran may look like meaning those who have served who do not fit this image, may be missed. Furthermore, there was also the sense of a feeling of segregation, an "us" and "them" attitude of veterans and civilians, this segregation was particularly prominent in those participants

from Northern Ireland. Finally, one participant mentioned that veterans may often present their problems in a different way to what a healthcare professional may expect.

> "In terms of other issues for disclosing, stigma is a massive issue for a lot of people. There are three facets within that one being public stigma in terms of the PTSD fears and people think that there's an unhinged-ness to people and they are deranged and things like that, which I think has stemmed from media and films, which I think is a massive challenge for people to come over. It makes them not really want to disclose that they are a veteran. There's also an internal stigma that if they go to a GP or primary healthcare professional and say I'm having anxiety, I'm having this, I'm having that and then disclose that they're a veteran there's that idea of you're crazy and that internalised idea of that as well. And I think there's also a kind of organisational stigma."
>
> – Participant GG

Difficulties were also mentioned in relation to transition. Particular emphasis was put on the difficulty in the transfer of medical records from the military to the veterans PHC practice. Discussions included, veterans being unaware of what they needed to do to ensure their practice could gain access to their military medical records, if the PHC practice follows up with what they need to do to receive those records, and the difficulty in actually receiving them. A further potential difficulty was discussed of de-registration whereby if the military accesses a record of a veteran, this would de-register a patient from a PHC practice. A further barrier to declaring was veteran knowledge. These included veterans having a lack of awareness of the services that were available, not knowing the definition of a veteran and also being misinformed.

> "Well, the military carry around their medical records called FMed's. And I think getting – the FMed's are stored in Glasgow, and they are still using paper records there. And during COVID-19 they completely almost shutdown. They are inundated with requests for military medical records, including those who want to know what their great-grandfather did in the war, the great war. They have thousands and thousands of requests monthly, which they are way behind and can't control. I think if we could get to a situation where the military medical records are scanned or on a CD-ROM so they can be very quickly forwarded to a GP and identified as a veteran with a military background medical record. I think that would promote greater understanding as well."
>
> – Participant CC

The final difficulty that was discussed were the perceptions that the veterans themselves had, this was mentioned by 81% (N = 13) of participants. In particular, this related to bad experiences veterans may have had in the past, which may have led to a lack of trust. This lack of trust would be particularly prominent in Northern Ireland due to serving personnel needing to be constantly cautious, which was believed to have not yet entirely gone away. Furthermore, the majority of participants stated that there would often be a reluctance from veterans as they may also feel let down by the government and fear the potential legal implications of sharing their service stories. Overall, difficulties of declaring focused on the veterans themselves. This included the poor help-seeking behaviour of veterans as well as the reluctance and negative perceptions that they may hold.

Healthcare Staff

Another theme was regarding the healthcare staff and their attitudes toward veterans and veteran care. Discussions about healthcare staff were regarding the confidence that they would have in signposting veterans to the appropriate services and charities. The majority of participants believed that staff would

have a lack of knowledge and would be unaware of the services available. However, participants were aware that healthcare staff would be able to treat clinical conditions and therefore could transfer those skills to veterans.

Participants also discussed whether a member of staff would feel at risk if they were asked to deal with a veteran. The majority believed that healthcare staff would not think that veteran status was a concern and that veterans were the same as other patients. However, some participants believed that healthcare staff would fear that they would be unable to engage with a veteran. Furthermore, it was felt that military culture may come across inappropriately for some healthcare staff, believing that veterans can sometimes come across as "aggressive" due to their assertive nature, and that the normalisation of offensive language could be perceived as rude.

> "If they can't get their own way they can come across as quite aggressive. And I don't think they mean that, I think it's just because whilst they are in the Army or whichever service, they're used to getting what they want, and if they don't get what they want then they punish someone until they get what they want. Not necessarily physically punish someone, but there's always a punishment somewhere along the line, if you're not getting what you need. You can't get rid of that when you become a civilian, you can't just switch it off overnight. Although I don't think they mean to be aggressive or get angry when they're not getting what they want, I think if they go into a GP practice and they don't get what they want, then that frustration and that aggression comes out. And I can see why somebody without any understanding of military personnel might fear that a little bit, yeah. But I don't think its intentional from the veterans' point of view."

> – Participant MM

The majority of participants believed that staff would have a lack of knowledge and lack of confidence with veterans which may make them reluctant to engage. In addition, staff would not want to appear ignorant of veterans' issues. Furthermore, reluctance was deemed to be much stronger in Northern Ireland due to the sectarian divides, with that lack of trust and fear still being deeply engrained. There was also the belief that there may be a reluctance as there may be demanding care that was needed to support a veteran. Overall, it appeared to be a lack of knowledge with healthcare staff that would potentially lead to a lack of confidence in signposting, feeling at risk and being reluctant to deal with a veteran. There were fears that they would be unable to engage and would not want to appear ignorant. However, generally participants believed that veteran status would not be a risk and would be no different to dealing with any patient, including those presenting with MH difficulties, and therefore down to individual circumstances rather than veteran status.

Civilian Perceptions

Participants also discussed what they believed the perceptions of civilians were towards veterans, both positively and negatively. The majority of participants believed that civilians were generally supportive of veterans. In particular, veterans are viewed as brave and heroic, and civilians had a strong sense of pride towards veterans. The majority of participants believed civilians care about veterans, that they should receive the appropriate support and treatment and that they had an understanding that veterans have specialised needs. Figure 26 shows a word cloud of the most frequent words.

However, some participants believed that veterans were sometimes prioritised unnecessarily because of the need to reward veterans for their service. Similarly, participants also believed that civilians were

appreciative of veterans, with this being reflected in thanking veterans for their service and responding positively when veterans wore military attire at public events.

Figure 26: Word cloud for Civilian Perceptions Code in Expert Interviews.

However, there were also discussions on the negative beliefs that are held by the public, the majority of which were related to stigma. This included misinformation that is perceived by the public such as not believing someone who is younger and female could be a veteran, and difficulties faced by veterans' families when settling into new locations. Participants indicated that there were also rare instances where civilians disbelieved that a veteran could be mentally ill, and that they were malingering.

Several participants, however, believed that there would be numerous civilians and clinical staff who would not understand the prioritisation of veterans. In addition, participants stated that there will be members of the public who oppose the military entirely. This would mainly come in the form of pacifism, though there was also the mention of the military being seen as an expensive burden. Related to this, politics were also discussed, in particular in the context of Northern Ireland.

> "I went to a wedding recently, I was sat there – I'm wriggling now because my back hurts if I sit down too much, I was at the wedding and I just took a couple of painkillers. At our table, there was somebody who couldn't walk as he'd had a brain tumour and he'd had part of his skull removed to be operated on and put back on. So, he was not in good shape. And the medication I was on was part of the Armed Forces Covenant, I'd been discharged with it, I had to keep taking it and I'll always be able to take it. He couldn't get that medication, that painkiller, yet comparatively we are sat there with me relatively well just wriggling a bit whereas he couldn't walk. So, there is that huge rub of why I should still be able to get more than the person next to me, we should all get the same. Again, I would say that would cause a massive tension. Once you're discharged, you're discharged. You're seen as a civilian, but that's because we don't promote the veteran status."

> – Participant NN

Finally, participants believed there will be some civilians who view veterans as victims. More specifically, holding the belief that veterans will be damaged by their service. With discussions also stating that there's a hierarchy of injury, some which are taken more seriously than others. Overall, participants believed that

civilian perceptions were generally positive and empathetic towards veterans for the sacrifices they have made. Though this image can sometimes lead to the myth that all veterans have MH difficulties and need support. However, participants did state that there are members of the population who will oppose the military entirely.

Research Interest

At the end of the interviews, the participants were asked to report on what they would be interested to learn from this project. Many stated that the project was important and/or interesting, and they were interested in the study recommendations i.e., what worked well, and what were the challenges and failures. The participants were also interested in the different perspectives in this project including healthcare staff, the practice itself and veterans. Participants were also interested in the general outcomes of the study; this included the study veteran's population demographic and the differing UK perspectives from the expert panel interviews.

Common Mental Health Disorders

From 1,912 veteran PHC records, 41% (N = 785) had a code on their medical record for PTSD, depression, anxiety, alcohol misuse, substance misuse or dementia. Furthermore, there was some co-morbidity with veterans with more than one disorder. Figure 27 shows the differences across practices in veterans with at least one mental health disorder and those without.
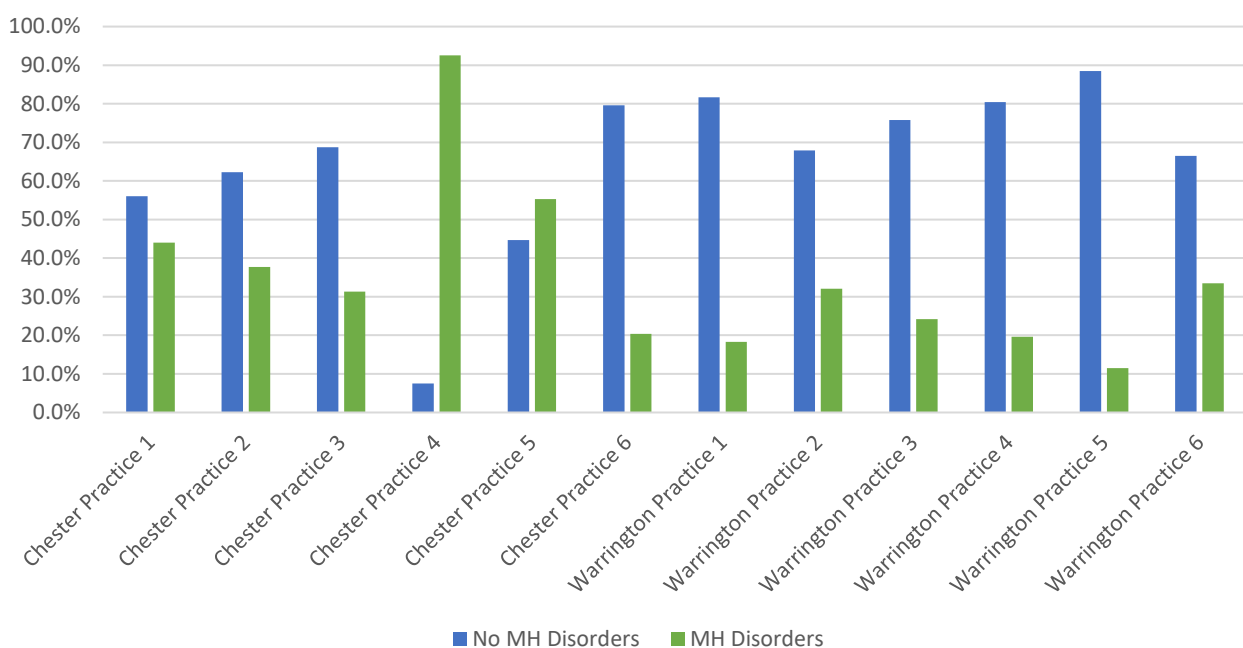
Figure 27: Difference in MH disorder presence Across Practices.

When looking at each individual practice, Chester practice 4 had the highest percentage of MH disorders in their veteran population (92.5%, N = 397). However, this is likely due to the efforts of the practice in supporting those with alcohol misuse. Following this was Chester practice 5 who had 55.3% (N = 26) of their veterans with a code for a MH disorder on their record.
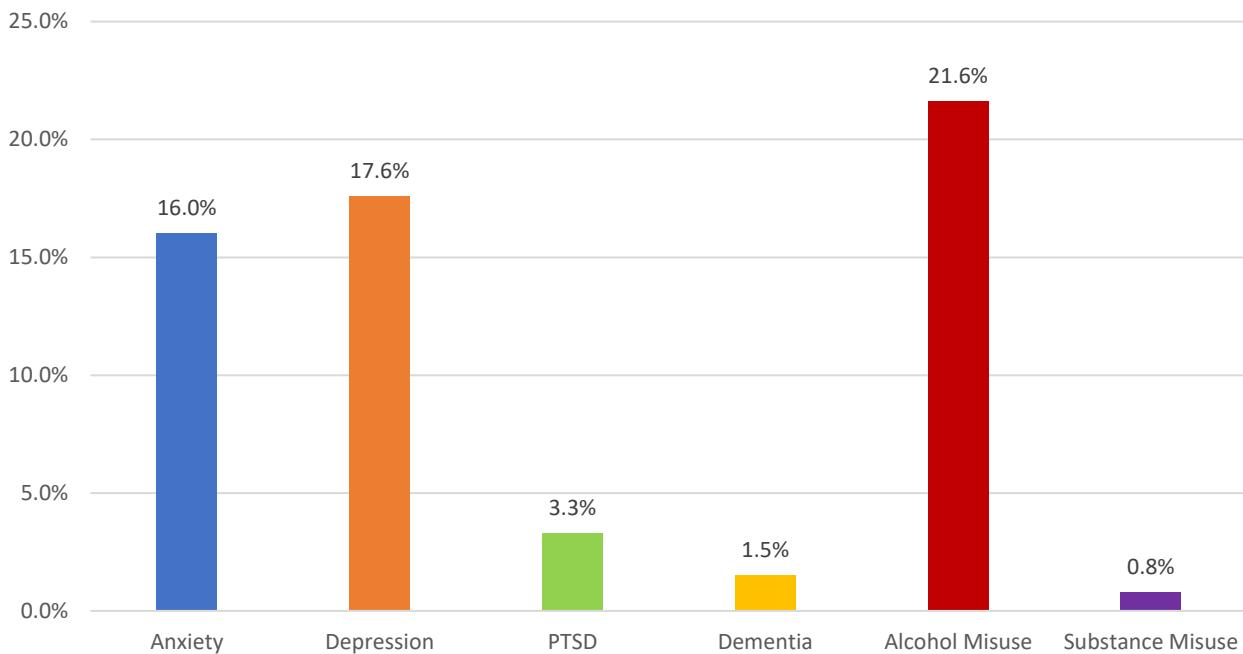
54

Figure 28: Prevalence of MH Disorders in Veteran Population.

The highest prevalence within this group of veterans was that of alcohol misuse (21.6%, N = 413). Followed by depression (17.6%, N = 337) and anxiety (16.0%, N = 305). However prevalence of PTSD was fairly low (3.3%, N = 64), as was prevalence of dementia (1.5%, N = 28) and substance misuse (0.8%, N = 15). See Figure 28. As previously discussed, this prevalence is likely due to the inflation from Chester practice 4. Appendix D, Table 15 shows the prevalence of each disorder split by practice, percentages show the prevalence within each practices' veteran population.

Demographical Differences

40.4% of males (N = 680) and 45.7% of females (N = 105) had a code on their record for a mental disorder suggesting that female veterans have a higher prevalence of mental disorders than their male counterparts, which is consistent with the general population (Boyd et al., 2015). Females had a higher prevalence for both anxiety (26.5%, N = 61) and depression (26.1%, N = 60) which may be due to poorer help-seeking behaviour from the male population (Godier-McBard et al., 2021). The relationship between anxiety and gender were also found to be significant (X^2 (1, N = 1912) = 21.8, P < .01), as was the relationship between depression and gender (X^2 (1, N = 1912) = 12.9, P < .01). Females also had a higher prevalence of substance misuse (0.9%, N = 2), however this difference was not statistically significant (X^2 (1, N = 1912) = .02, P > .05). This was also the same for dementia with females having a higher prevalence (1.7%, N = 4), yet was not significant (X^2 (1, N = 1912) = .14, P > .05). However, males had a higher prevalence of PTSD (3.6%, N = 61), but this difference was not significant (X^2 (1, N = 1912) = 3.4, P > .05). Males also had a higher prevalence of alcohol misuse (22.5%, N = 378), this gender difference was also found to be statistically significant (X^2 (1, N = 1912) = 6.3, P < .05). As previously discussed, this may be inflated. Figure 29 shows the prevalence of each disorder by gender.
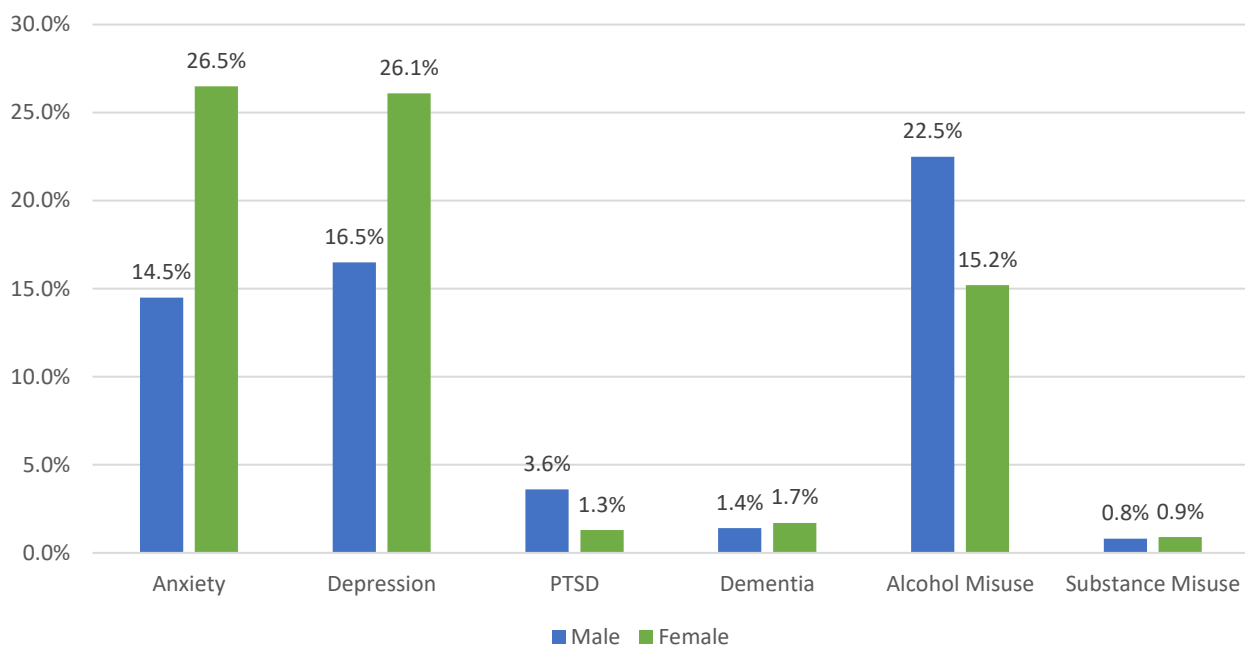
Figure 29: Prevalence of MH disorders Split by Gender.

The age with the highest percentage of mental disorders was 41, meaning 69.2% (N = 9) of those aged 41 had a mental disorder coded on their record. However, the age group with the highest number of veterans with mental disorders, and therefore the mode, was ages 48 and 49 (N = 24). The age group with the highest percentage of mental disorders was the 48 – 57 age group (47.8%, N = 181), closely followed by the 58 – 67 age group (47.5%, N = 190). This percentage then decreased in the 68 – 77 age group (33.2%, N = 88) followed by a slight increase at the 78 – 87 age group (36.0%, N = 123) likely due to a higher prevalence of dementia in the older populations (Bergman et al., 2021). Figure 30 shows the presence of MH disorders split by different age groups.
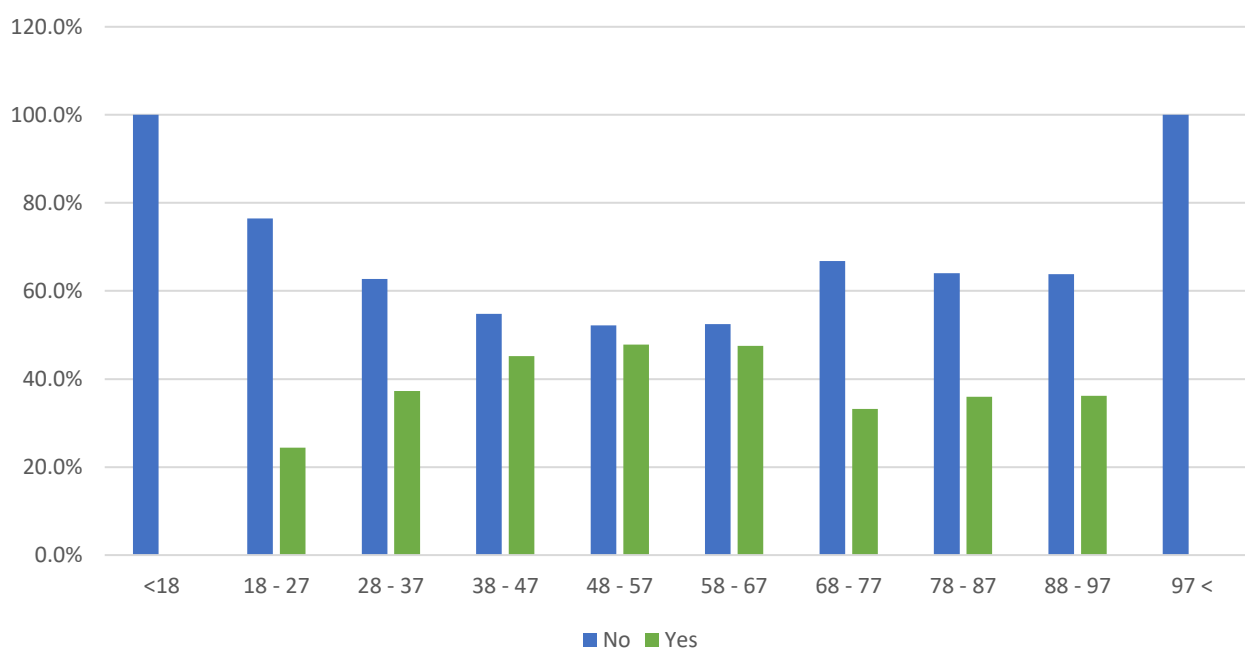
Figure 30:Presence of MH disorders Split by Age Groups.

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The results indicated the presence of each disorder within the different age groups. Anxiety was most prevalent amongst the 28 – 37 age group (20.7%, N = 31), closely followed by the 38 – 47 age group (19.8%, N = 39). This suggests that anxiety is more prevalent amongst the younger age groups. This percentage decreased with the older age groups. This relationship was found to be significant (X^2 (9, N = 1912) = 24.6, P < .01). Depression was the most prevalent amongst the 38 – 47 age group (26.9%, N = 53) closely followed by the 58 – 67 age group (21.5%, N = 86). This shows that depression was the most prevalent amongst the middle age groups, and this relationship was found to be significant (X^2 (9, N = 1912) = 46.8, P < .01). For PTSD, the highest prevalence was in the 38 – 47 age group (7.6%, N = 15), the relationship between PTSD and age groups was also found to be significant (X^2 (9, N = 1912) = 39.7, P < .01). See Figure 31.

	< 18	18 - 27	28 - 37	38 - 47	48 - 57	58 - 67	68 - 77	78 - 87	88 - 97	97 <
Anxiety	0.0%	17.8%	20.7%	19.8%	17.7%	19.3%	13.6%	11.1%	6.9%	0.0%
Depression	0.0%	17.8%	20.7%	26.9%	21.1%	21.5%	12.5%	10.8%	6.9%	0.0%
PTSD	0.0%	0.0%	6.0%	7.6%	6.1%	2.3%	2.3%	0.3%	0.8%	0.0%
Dementia	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.8%	3.5%	9.2%	0.0%
Alcohol Misuse	0.0%	2.2%	10.0%	17.8%	25.1%	29.5%	16.6%	23.1%	20.0%	0.0%
Substance Misuse	0.0%	2.2%	0.0%	0.5%	2.1%	0.8%	0.4%	0.3%	0.0%	0.0%
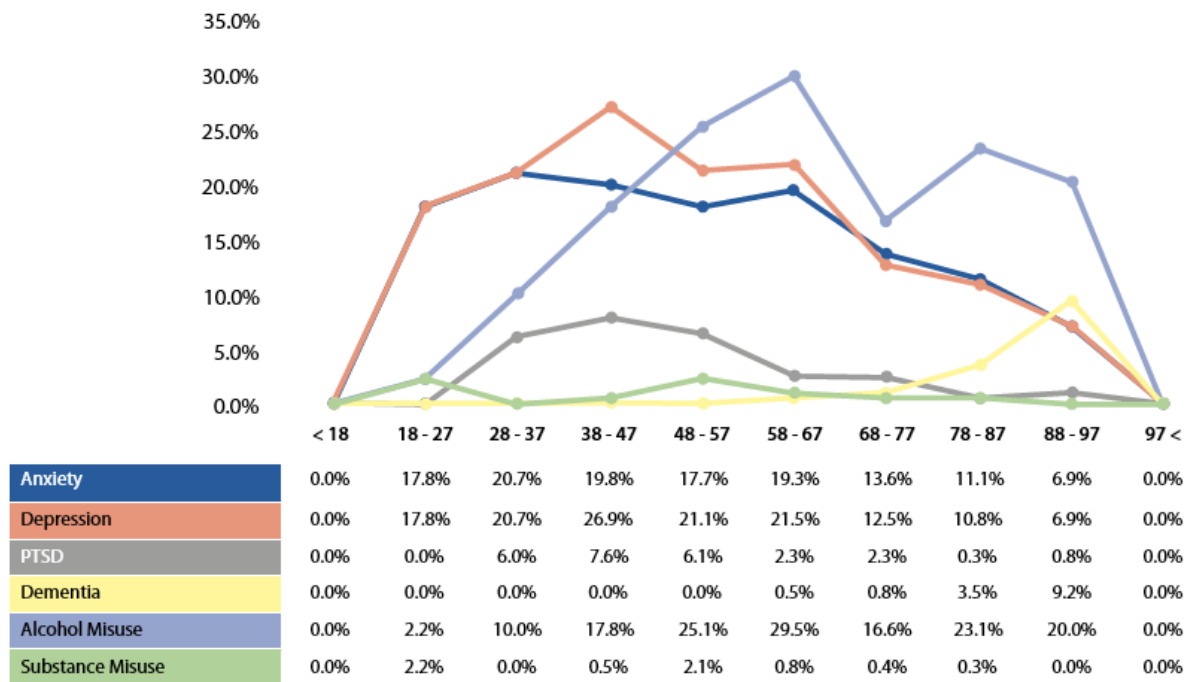
Figure 31:Prevalence of MH disorders Split by Age Group.

Dementia had the highest prevalence in the 88-97 age group (9.2%, N = 12), as would be expected, and this relationship was also significant (X^2 (9, N = 1912) = 79.3, P < .01). Furthermore, alcohol misuse had the highest prevalence in the 58 – 67 age group (29.5%, N = 118), with a significant relationship (X^2 (9, N = 1912) = 46.7, P < .01). Finally, substance misuse was highest in the 18-27 age group (2.2%, N = 1), closely followed by the 48 – 57 age group (2.1%, N = 8), however this relationship was not significant (X^2 (9, N = 1912) = 13.8, P > .05).
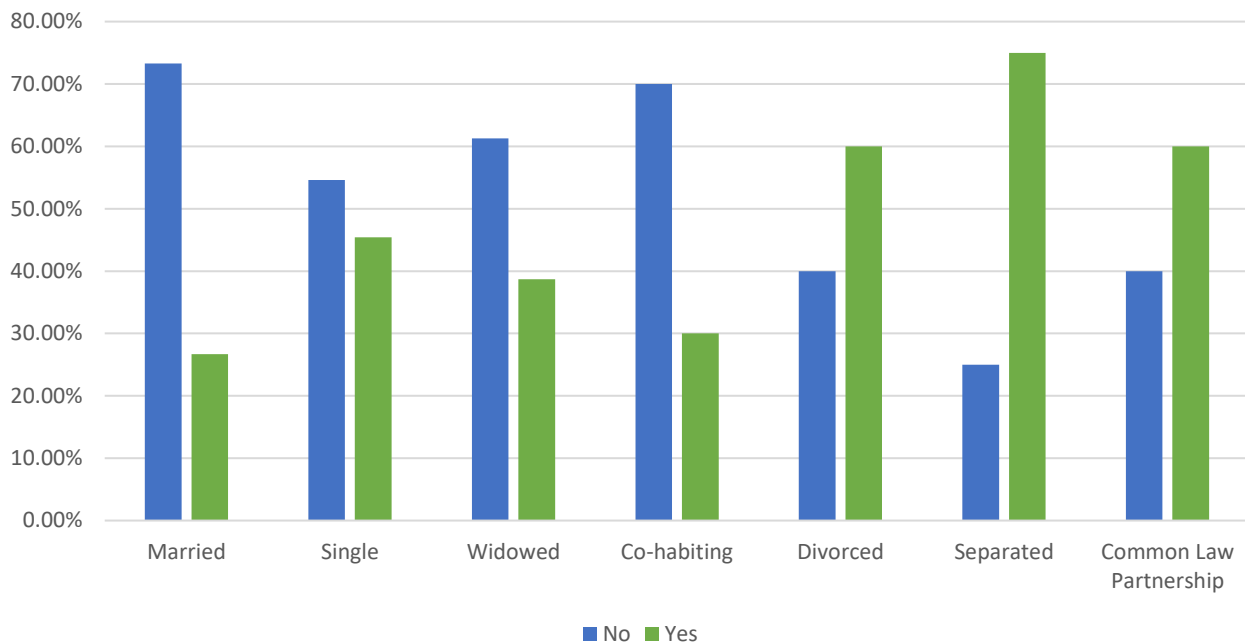
Figure 32:Presence of MH disorders Split by Marital Status.

Of the 1,912 veterans, for 64.6% (N = 1236) the marital status was unknown. Of those whose marital status was known, the highest prevalence of MH disorders is within those who have experienced a breakdown in their relationship, with separated being the most prevalent (75%, N = 3), followed by divorced (60%, N = 15). Those who were single also had a high prevalence of MH disorders (45.4%, N = 64). This supports the research that a breakdown in relationships or lack of relationships are risk factors for MH disorders (The Royal British Legion, 2014). See Figure 32.

Anxiety was the most prevalent amongst those who were divorced (36%, N = 9), the relationship between anxiety and marital status was found to be significant (X^2 (6, N = 1912) = 27.4, P < .01). Depression was the most prevalent amongst common law partnership (40%, N = 2) however this is likely due to the small numbers inflating this prevalence as only 5 veterans listed as being in a common law partnership. Therefore, the next prevalent marital status was those who were divorced (32.0%, N = 8), this relationship was significant (X^2 (6, N = 1912) = 30.6, P < .01). PTSD had a similar story with common law partnership (40%, N = 2), though the next most highly prevalent was that of veterans who were separated (25%, N = 1), this relationship was also significant (X^2 (9, N = 1912) = 40.1, P < .01).

For dementia, this was most prevalent amongst those who were widowed (6.5%, N = 2), this is likely due to those who were widowed generally being from the older population and therefore, the older population were more likely to be suffering from dementia. However, this relationship was not significant (X^2 (6, N = 1912) = 4.1, P > .05). Alcohol misuse was the most prevalent amongst those who are widowed (25.8%, N = 8) closely followed by those who were separated (25%, N = 1) and those who were divorced (24%, N = 6). This relationship between alcohol misuse and marital status was found to be significant (X^2 (6, N = 1912) = 16.7, P < .05). Finally, substance misuse was most prevalent amongst those who were divorced (4.0%, N = 1), followed by those who were listed as single (2.1%, N = 3). However, this relationship was not significant (X^2 (6, N = 1912) = 6.7, P > .05). See Figure 33.
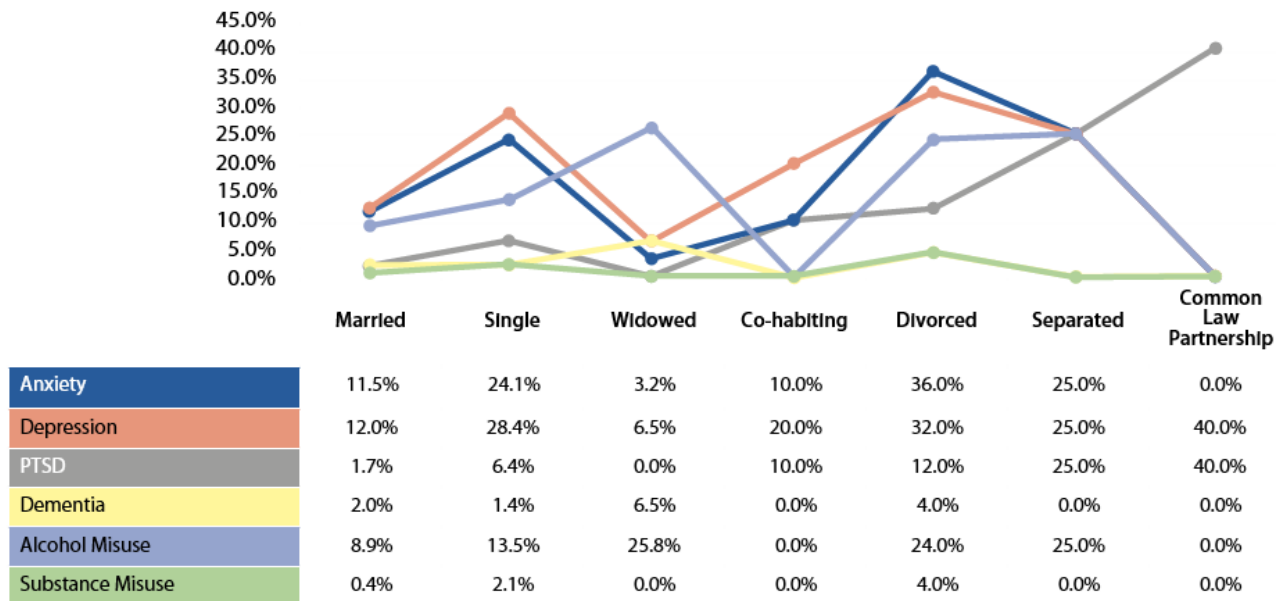
	Married	Single	Widowed	Co-habiting	Divorced	Separated	Common Law Partnership
Anxiety	11.5%	24.1%	3.2%	10.0%	36.0%	25.0%	0.0%
Depression	12.0%	28.4%	6.5%	20.0%	32.0%	25.0%	40.0%
PTSD	1.7%	6.4%	0.0%	10.0%	12.0%	25.0%	40.0%
Dementia	2.0%	1.4%	6.5%	0.0%	4.0%	0.0%	0.0%
Alcohol Misuse	8.9%	13.5%	25.8%	0.0%	24.0%	25.0%	0.0%
Substance Misuse	0.4%	2.1%	0.0%	0.0%	4.0%	0.0%	0.0%

Figure 33:Prevalence of MH disorders Split by Marital Status.

Overall, there seemed to be female veterans who were more likely to suffer from anxiety and depression with male veterans being more likely to suffer from PTSD and alcohol misuse. In addition, there were also significant relationships with age and MH disorders with anxiety being more likely among the younger age groups. Finally, MH disorders appeared to be more prevalent in those who had experienced a breakdown in relationships.

Combining the data from the current project and pilot project, the research team published an open access publication on the prevalence of common MH disorders in the military veteran population (Finnegan & Randles, 2022).

Theoretical Model

A theoretical model was created by triangulating the findings to highlight the primary initiatives that will motivate veterans to register with a GP. These included: Collaboration and Connectivity, National Awareness and Advertisement, Healthcare Staff and Veterans themselves. These factors are influenced by the workforce pressures on staff and quality of educational material.
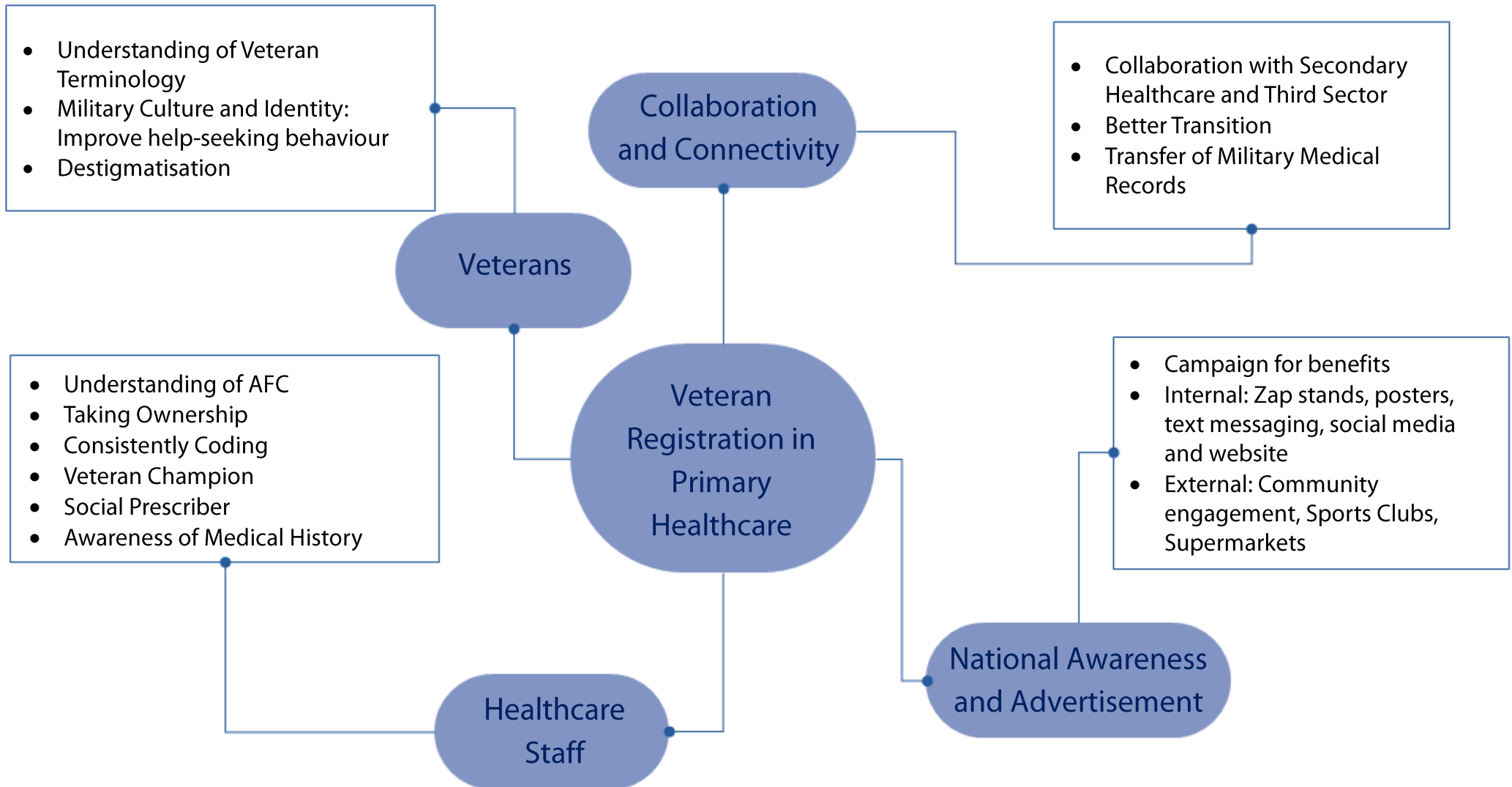
5 Discussion

Introduction

PHC Centres were estimated to have a low percentage of veterans with the correct Read/SNOMED CT code applied, with research indicating that it was below 10% (Finnegan et al., 2018; Simpson & Leach, 2021). In this project, veteran registration was raised across the 12 practices by 218.1% (N = 1,311), increasing by 736.5% (N = 766) in Chester PHC practices and by 109.7% (N = 545) in Warrington PHC practices. The practices had on average a coverage of 26.7% (Range 5.0% - 54.1%) on completion of the initiatives. This provided the population for the medical record searches which included the demographics of age, gender and marital status and the common Military MH disorders of PTSD, depression, anxiety, alcohol misuse, substance misuse and the physical disorder of dementia.

Systematic Review

MH stigma is a barrier that deters veterans from seeking help. This can refer to stigma that individuals have regarding themselves, stigma which they believe they will receive, or stigma from the public. Military culture and identity often mean that veterans would view any form of ill health as a sign of weakness and that admitting the need for support was contrary to their perceived status that comes from serving within the military. The study's systematic review on Veteran help-seeking behaviour for MH (Randles & Finnegan, 2022) has provided a clearer picture of detailing the specific barriers. In addition to stigma, these include military culture of stoicism and self-reliance as well as factors associated with combat and psychological trauma leading to avoidance behaviour. The facilitators to improve help-seeking include initiatives to dispel MH stigma and myths surrounding help-seeking and MH treatment as well as the involvement of other peer support veterans. The authors concluded that further research is needed within the UK context, noting a lack of longitudinal evidence on the barriers and facilitators as well as the limited research on female veterans.

Veteran Registration

Arguably, the most successful initiative in increasing veteran registration in this project was the text messages, with three practices increasing by over 197%. However, upon speaking to the practice staff, several reported that the training and education of staff in addition to the visual reminders provided by the posters and zap stands were the most successful initiatives. The staff also highlighted the impact of the COVID-19 pandemic and a lack of footfall from patients entering the PHC Centres leading to veteran registration difficulties. Many of the practices cited taking ownership of the project, with many utilising flu clinics to increase veteran registration and also attempting to capture the older veteran population. When exploring reasons why a veteran may not disclose their status, expert panel participants believed that veterans were simply not asked the question, nor were they aware of the benefits this may bring with some potentially even unaware that they were classified as a veteran. This may go some way to explaining the low veteran registrations in GP practices, with many simply being unidentified as they were unaware that they needed to declare their status. These identification problems were slightly different in Northern Ireland, with the context providing feelings of distrust and fear of declaring their veteran status. Stigma appeared to be a common theme amongst many of the discussions that occurred with the expert panel, with the idea of self-reliance often coming up; reinforcing the evidence presented in the literature (Randles & Finnegan, 2022).

Within this study, demographics from a gender perspective aligned to this known non-parametric population with 88% being male. Forty-five percent of the veterans were aged 65 and over, significantly lower than the MOD estimate of 60% for this age group (Ministry of Defence, 2019). The data from this study indicated that approximately 70% of veterans were in a relationship (68% married) and only 4% divorced. These are significantly lower than the general population and may be due to factors such as medical records not being updated as 65% (N = 1247) of veterans' marital status was unknown. Age does indicate that, in particular, the more elderly veterans were not correctly registered with their GP practice. There were multiple reasons for this, such as veterans being unaware of the one-day inclusion criteria and therefore being unaware of their veteran status and never declaring as such. This could extend to those more vulnerable members of the population in Care and Residential Homes, or with dementia, who may be reliant on others for much of their engagement with PHC. The intention upon commencement of the project was to enter Care Homes to access this older, more isolated population. However, lockdown restrictions due to the COVID-19 pandemic meant this was no longer possible. As an attempt to work around this, the local councils contacted all CQC registered Care Homes as well as the research team contacting 62 Care Homes within a 2-mile radius. Unfortunately, there was limited response during this time, likely due to the COVID-19 pandemic and the resulting demands on Care Homes.

Motivating Veterans and Educating PHC staff

There were four phases in the study, each lasting for 6 weeks. The first phase involved internal PHC advertisements such as zap stands/posters and using TV monitors. After this phase, the veteran registration improved by 35.9% (N = 216). Feedback indicated that using highly visible signs was effective and this was enhanced by the creativity of the staff in finding opportunities to connect with veterans. For example, all the surgeries had reduced patient contact due to COVID-19 restrictions but this in part was addressed by ensuring the zap stands and posters were visible during flu clinics or taking the materials with them to regional COVID-19 clinics. The popularity of these materials was re-affirmed by all the PHC Centres keeping the signs even after the programme was completed.

The second phase required the PHC practices to post the study information on their social media platforms (should they have any) and their websites. They were also required to send a text message to all their patients asking if they are a veteran and to respond accordingly. This phase raised registration by 93.9% (N = 767). Feedback indicated that differences in text messaging systems made this stage extremely time consuming at a time where PHC practices were facing mounting COVID-19 pandemic related pressures. A significant problem for some practices was that patients had to be individually contacted compared to other practices that could send batch texts. Even with the latter, the respondent's answers could not be automatically coded. This result was that five practices implemented the text messaging system later than others and outside of the specified second phase. Of particular note at this stage is one practice in Chester raised their veteran registration by 393% (N = 299) and another practice in Warrington saw an improvement of 198% (N = 237). In both cases, the text messages were related to utilising the iPlato messaging system where patients receive a batch text, can then reply to the message and this was automatically coded onto their medical record. The utilisation of this system (or a similar capability) in all PHC is an important recommendation to ensure efficiency and minimise human resource issues. This clearly has benefits far wider than just the veteran population and can improve PHC reporting in all parts of the NHS.

The third phase saw the focus shift to the local community and building external communication through staged activities based outside of PHC. This involved the Centre team visiting local shops, supermarkets, churches and other establishments in the areas to ask the proprietor to display a study advertising poster which would inform the reader of why they should register with their PHC practice. During the phase

veteran registration raised by 12.8% (N = 202). The Centre staff faced an open door and received an extremely welcoming approach from nearly every contact indicating an outstanding willingness from the local community to help. They wanted to do what they could to assist their veteran population. This stage also sought collaboration with local organisations such as the police, local borough councils, schools, and professional sports clubs such as Warrington Wolves. These institutes attended strategy meetings along with local veterans and in Chester by the local MP, Christian Matheson. Their response was outstanding and included actions such as Warrington Council putting the posters on bus stops and Cheshire police having the posters on display in their stations. Feedback was that this was a very good strategy, but the main deterrent was that the project was being severely compromised by the COVID-19 pandemic. Those phoning their PHC centres were faced with extensive waits to connect with a receptionist or veterans just felt this was not a high enough priority as they were aware of the pressures on PHC. There is however undoubtable value in mobilising the local community and organisations to support veterans and their families. This recommendation should be built into research and collaboration strategies as they can be achieved at very little cost above a pivotal point of leadership and co-ordination. There is also a real feel-good factor in the local community that can produce added and longer-term benefits.

The fourth and final stage was focused on the potentially isolated and harder to reach elderly veterans and their families. The spotlight was to be Residential Care Homes, but the COVID-19 pandemic made this impossible. Again, there was an excellent response from both Warrington and Cheshire Councils who sent the information to all CQC registered Care Homes in their areas. The Centre team also individually contacted a total of 62 Care Homes within a 2-mile radius of each of the practices. In addition, the Centre supplied posters and information about the project. The final phase saw registration increase by a further 7.1% (N = 126). Feedback revealed significant human resources implications on Care Home staff and restrictions on relatives visiting meant they were unaware that they could act on their relative's behalf. Therefore, increases during this period were likely to have been a result of the consistent engagement of the PHC practices.

Overall, veteran registration increased by 218.1% (N = 1311). Estimated coverage of veterans increased from 9.3% to 29.5%. In addition, for individual practices, pre-searches ranged from a veteran population coverage of 1.2% to 21.2%. After the final search this increased to a population coverage ranging from 5.0% to 54.1%. Five PHC practices now cover over 30% of their veteran population, and 2 are covering 50% or more. At the beginning of this study, these results would have been indicative of success. That they were achieved during the largest pandemic in over 100 years, with periods of community lockdowns, social exclusion, working from home, reduced PHC footfall and huge difficulties contacting PHC make the results extremely encouraging.

PHC Staff Feedback and Expert Interviews

The low levels of veteran registration in PHC is an issue of deep concern for statutory and non-statutory organisations. Interviews with UK national experts provided a unique overview of the issue and how it could be resolved whilst PHC staff provided a deeper insight into the project's successes and challenges. PHC staff highlighted the importance of their active and informed involvement that was built on education and increased awareness. The result being notable improved staff commitment and their taking ownership of the responsibility to improve veteran registration. Every practice stated that the primary challenge was the COVID-19 pandemic, in particular the significantly reduced footfall and the communication opportunities with their patients. In addition, staff's priorities were drawn to other pandemic related commitments such as providing vaccinations. However, PHC staff highlighted where future improvements could be achieved; including the utilisation of a social prescriber and encouraging all healthcare staff to complete veteran related education. This in part was delivered from the Centre team and these contacts

have been maintained and enhanced. These include PCN representatives being embedded into the membership of the Cheshire Armed Forces Covenant Partnership Committee and the Centre supporting PCN initiatives such as providing the veterans with life coaches. Several PHC reported that veterans had initially mistrusted the text messages and had contacted the PHC practices to enquire why the staff were asking. Once the veterans were aware of the project, then they generally responded positively.

Sixteen interviews were conducted with expert representatives from the UK AFC. These informed common themes to improve PHC veteran registration and revealed reasons why veterans fail to disclose their status including veteran identity and their terminology leaving a feeling they were not being understood, the military culture emphasising stoicism, self-reliance, particular challenges linked to transition from the Armed Forces and security concerns. Similarly, participants revealed why veterans may not register at all due to access difficulties such as those in the homeless population, military culture, and poor help-seeking behaviour. The expert interviews provided recommendations for improvements. Motivating initiatives were required with consistent prompts and reminders and better connectivity with the third sector during transition out of the Armed Forces. It was felt that healthcare staff lacked confidence due to insufficient experience and knowledge. It was believed that PHC staff did not feel at risk when dealing with a veteran, although there may be a fear that they could not adequately engage. Both issues lead to a strong recommendation for a structured, systematic, and common educational module that can take healthcare employees from no knowledge of the AFC through to enough to have confidence to engage. The Centre team have recently produced such a module and are currently in the process of maximising dissemination.

Primary Healthcare Data

The overall rate of MH morbidity in the UK Armed Forces was found to be broadly comparable to the UK general population (Ministry of Defence, 2021b). For the veteran cohort within this research study, depression, anxiety and alcohol misuse were the leading MH disorders. However, the levels of depression were lower than identified within the Defence Medical Services and the national population. Within this study, level of depression was 17.6%, while in the general population this stands at 21%, and for serving personnel at 32%, though prior to the levels of isolation that resulted due to the COVID-19 pandemic, the level in the general population was lower at 19% (Ministry of Defence, 2020; Office for National Statistics, 2021). Both within the MOD and the general population, mild to moderate depression is predominately due to situational stressors such as relationship problems, employment and financial problems (Mental Health Foundation & Forces in Mind Trust, 2013). The older age group may be retired, and for those veterans who served a full career, the military pension is highly competitive and this may in part explain why levels of anxiety and depression reduced notably as the veteran got older. Depression and anxiety were also often linked (co-morbidity) and some research studies may place an emphasis on the depressed element. There is also the issue that GPs will often not identify depression or record depression due to the direction of their patients who are concerned about the impact of a MH diagnosis on their future career options, or other everyday issues such as higher travel insurance costs (Mitchell et al., 2009).

Depression and anxiety were both significantly higher in women, which warrants further investigation. Previous studies have indicated that GPs were more likely to see female patients on a regular basis, which may help indicate why such issues may be picked up more often in women (Finnegan et al., 2014). Furthermore, the Armed Forces may be seen as having a more "macho" culture than some other careers, which may lead to poor help-seeking behaviour and concerns of being labelled 'weak' - potentially another factor in lower levels of depression and anxiety being identified in male veterans (Randles & Finnegan, 2022). However, there is evidence that help-seeking behaviour is increasing among both serving and ex-serving personnel (Stevelink et al., 2019). In terms of age difference, the study revealed that anxiety in 18 to 27-year-olds accounted for 17.8% (N = 8) of cases. By their very essence, this age group will include

young early service leavers. As the peak of the last major deployments (and therefore associated operationally related MH problems) was over 10 years ago, their anxiety may be due to their current living situations and potentially not related to their military service. However, depression was highest in the 38 to 47 age group, a possible reason being that veterans who served longer had greater difficulties in transitioning from the Armed Forces in relation to accommodation, finance, housing and employment. There may also have been adjustment issues for their spouse and children including schooling, but the coding of the veterans' medical records does not capture this information.

PTSD in a combined sample of veterans and serving personnel was found to be 4% in 2004/6 and 2007/9 but had risen to 6% in 2014/16 (KCMHR, 2018). This compares to a rate of 4.4% within the civilian population (KCMHR, 2018). The prevalence of PTSD is not consistent across these groups, however, with serving personnel having a prevalence of 4.8% and veterans significantly higher at 7.4% (KCMHR, 2018). The PTSD levels in this study were comparable at 3.3% (N = 64). The results, however, might be inflated as PTSD may remain on a patient record even when the patient is deemed to have received successful treatment, and unless the date of the last positive assessment or treatment is recorded then diagnosis will remain in the patient's medical record. Ideally, an inclusion criterion such as a positive assessment and affirmation of the condition in the last 5 years would help rectify this concern. Many studies show male veterans have significantly higher levels of PTSD but that was not the case in this study. In the UK, front line troops are identified as having 17% compared to 4% on non-front-line troops which can be attributed to their role in the military and the increased likelihood that they have been in contact (combat) situations (KCMHR, 2018).

The levels of listed alcohol misuse are of concern but were significantly less than that often associated with the military. A potential reason is that veterans may be consuming more than the recommended weekly average but they are functioning very well, have no concerns about their behaviour, and were therefore not raising it as an issue with their GP. Even when they have, as it was not causing any problems then the GP has not recorded the detail. There were differences between genders with men more likely to be diagnosed with an alcohol related problem. Potentially harmful alcohol misuse remains a common behavioural problem but has declined steadily from 16% in 2004/6 to 10% in 2014/16 (KCMHR, 2018), within this studies veteran population the highest was in the 58 to 67 age group. A combination of factors such as the progressive nature of alcohol misuse, potentially being retired and that the records may be related to a diagnosis some years before were all potential factors. Substance misuse was higher in women but listed in only 1% of cases and not statistically significant. Within the military, random drug tests occur which may act as a deterrent from drug use. This may have then transitioned into veteran behaviour. It could also be due to under-reporting and that this is a more elderly population. Substance misuse was most prevalent in the 18- to 27-year-old group, so again the early service leavers. There may also be a sense of shame from those who were discharged due to substance misuse and therefore they may not want to declare their veteran status.

Dementia was notable in the 78 years old and above cluster and most prevalent in the 88-to-97-year age group. As 60% of the veteran population are over 65 years and 50% over 70 years old, the authors had expected to see higher levels of dementia. As the leading cause of death within the UK, with a population estimate of 7.1%, then the 1.5% within this study appears low (Wittenberg et al., 2019). Recent studies have indicated that dementia rates in the veteran population were no higher than the general population (Bergman et al., 2021). The low rate in this study was likely to be an under-recording, due to PHC being unaware of the veteran status and therefore not having the correct military veteran code attached to their records. NHSE and RCGP would need to identify if there is a mechanism for increasing registration for this age group which would provide a more reliable source of data. It would be reasonable to anticipate that large numbers of veterans are residing in Care/Residential Homes and a means of connecting with them

to get them registered is required. In addition to ensure this opportunity to record veteran status can be utilised to provide the best clinical care, there are also important implications for non-statutory and third sector organisations which have considerable resources to assist all the veteran population. There is also the issue of UK women living on average to an older age then men (83 compared to 79 years), and veterans' spouses being left socially isolated, with financial difficulties and increasing dementia issues without their needs being correctly identified, assessed, and supported.

This research was the first to use PHC data to examine the recording of MH diagnosis in PHC and has illustrated that this approach is both feasible and informative, albeit with limitations. The registration of alcohol misuse was influenced by a Chester PHC centre as this practice specifically supported those who are suffering from this condition. This has important connotations for future studies using a similar methodology, where researchers must be familiar with any specialist terms of reference for PHC in their study, for example the homeless population.

Demographically, female veterans were more likely to suffer from anxiety and depression while male veterans were recorded with higher levels of PTSD and alcohol misuse. There were significant relationships with age and MH disorders with anxiety being more common among younger veterans. Finally, MH disorders appeared to be more prevalent in those who had experienced a relationship breakdown. These findings were broad as one might expect, which tends to validate the methodology. As with other UK veterans' studies, the findings indicated that substance misuse is very rare, and that middle age is the commonest time for MH problems to occur. The stereotype of the young, traumatised veteran can be unhelpful, as it is now some years since they have been exposed to high operational intensity. The finding reinforces the recommendation that veterans' MH services need to reach out and connect with older age-groups. With any male over 80 years of age, there is a 90% probability that they are a veteran, at least of National Service. Many of them will not identify as a veteran which reinforces another message from this study in that PHC needs to be better informed and educated and motivated to ask the specific question "Have you ever served in the Armed Forces?"

Limitations

The authors intention with this project was to take a systematic approach to the medical record searches to attribute any increases to particular initiatives. However, due to COVID-19 pandemic demands, some practices were unable to implement initiatives, in particular the text messages, at the intended time. Whilst these were noted, it made it difficult to conclude whether the external phases were effective for some of the practices due to the later implementation of the requirement. In addition, the limitations that came with the COVID-19 pandemic meant that both the external phases and the initial phase inside the practices were less effective than under normal circumstances due to a lack of footfall which will have meant that the zap stands, and posters would not have the same impact as when patient flow was more consistent.

Although Read/SNOMED CT codes were created to ensure a consistent vocabulary is utilised across medical records, there are issues with consistent coding of information. Within this study, the authors chose to utilise codes and subtypes of the disorders in an attempt to show a more inclusive picture. However, there is likely still coding issues where some subtypes could classify as "Depression" or "Anxiety" but have not been included. For example, phobias were not included in this project nor were obsessive-compulsive disorder, both of which could be seen as a subtype of an anxiety disorder. Furthermore, disorders such as "Seasonal Affective Disorder" were not included, which could be viewed as a depressive subtype. Furthermore, within some practices, when a patient presented with anxiety and depression this was grouped as one code of "Mixed Anxiety and Depressive" or "Anxiety with Depression" showing some inconsistencies with coding as both of these different codes were often used within the same practices.

Therefore, there are numerous consistency problems with the Read/SNOMED CT codes which may have affected the results of this project.

The results do not provide information into the causes of the MH disorders and therefore it was unclear as to whether the disorders were service related. In addition, to be classified as a "Veteran" an individual need only have served for 1 day; this includes basic training, National Service and reservists (NHS, 2021a). Essentially, this could mean that there were individuals who left after a significantly short period and were unlikely to have been affected by their military service, and their MH disorder/s were not attributable to their time in the military. Furthermore, the coding of a MH disorder could indicate a lifetime prevalence. The conditions have been added onto the patient's medical record, but without interrogation of the notes or asking the doctor or patient, it was unclear if the condition has been resolved or was on-going. Therefore, the results of the study could be potentially inflated. The authors are aware of previously raised concerns with MH disorder such as Schizophrenia, where a diagnosis in the patient's teens could remain with that person for their entire life, irrespective of any future manifestation or symptoms. That one patient was listed as a veteran and was 16 years old indicates that there was the potential for some incorrect coding.

6 Recommendations

Based on the research conducted, there are a number of recommendations to help to improve PHC veteran registration and to encourage those currently registered to declare their veteran status.

1. Consistent Coding Due to the numerous codes that are available within the SNOMED CT and Read Code systems, GP practices must consider a more consistent approach to the codes that they are using. This includes utilising the code "Military Veteran" for those who have served and to consistently code MH conditions.	**2. Text Message Systems** Text Messaging Systems were found to be effective when practices were able to send batch messages to all patients and patients were able to reply and be automatically coded. The system that is recommended and is able to meet these criteria is iPlato.
3. Training of Healthcare Staff Knowledge of all healthcare staff including Reception, Nurses and General Practitioners should be improved through training. This training would include a background of the Armed Forces Community as well as vocabulary utilised by the veteran patients and their symptoms that may be displayed when in MH distress. Educational modules can be found on the Centre's website and NHS Learning Hub.	**4. National Awareness** There should be a concerted effort to make the public nationally aware of the definition of a veteran and the benefits of declaring a veteran's status to their GP practice. A campaign led by a body such as the NHS would have national reach. This could also be utilised to destigmatise help-seeking for MH conditions.
5. Collaboration and Connectivity Better collaboration and connectivity are needed between PHC, secondary healthcare, the third sector and also with the Ministry of Defence. This would allow for medical records to be more easily transferred and for a better transitioning experience for Service leavers.	**6. Utilisation of Social Prescribers** Social Prescribers are often responsible for more than one GP practice. Ensuring that these Social Prescribers have a knowledge of the military and veteran care services is essential.
7. Taking Ownership It is important that PHC staff take ownership for veterans and their families care. To ensure that this happens, the patients' military status should be determined by reception staff or at the point of registration, and those providing clinical care should be made aware of the veteran status.	**8. Internal and External Advertisement** Information should be displayed both within PHC practices and the community regarding the veteran inclusion criteria of one day's service: and the benefits to the veteran of declaring their status. A poster template was created by the Centre for this project.
9. Veterans Champion The establishment of a PHC Veterans Champion is a criterion for the RCGP veteran friendly accreditation programme. This study endorses that commendation, in that one member of PHC staff is responsible for leading on AFC knowledge and awareness of the military community and services.	**10. Destigmatisation** Improving help-seeking behaviour by positively addressing MH stigma is required to improve veteran registration. This could be facilitated through the involvement of veteran peer support workers and veteran families. In turn, this would make veterans more likely to register and declare their veteran status.

Table 10: Research Recommendations.

7 Conclusions

The PHC medical record searches were limited to the MH disorders commonly associated with the Armed Forces and veterans with PTSD, depression, anxiety, alcohol misuse, substance misuse and the physical disorder of dementia. This was a deliberate strategy with a key determinant being not to overwhelm the PHC staff completing the searches. This requirement was discussed with each of the 12 participating practices before the programme started and it was clear that the association between the rationale for these searches was embraced by the PHC staff and therefore helped compliance with conducting the data collection. The SNOMED CT searches do not detail why certain groups had higher recordings of a certain disorder. A future study that accesses the written medical notes would prove enlightening to specifically identify what situational factors were having the most impact on the veteran population. These results from a sizeable English population provide information that should be considered in developing veteran-specific clinical provision, educational syllabuses, and policy.

Furthermore, it would also be beneficial to follow-up with the practices within this research at 6-month and 12-month periods. It is likely, after this period of time, that the practices would be more open and therefore have more footfall. This would allow practices to have further communication with their patients, allowing them to ask the question of "are you a veteran?" and for healthcare staff to begin opening a dialogue once the veteran status has been declared.

Managing an advertising campaign and improving veteran registration during a pandemic was not part of this study's scope or funding. It caused huge problems, but it also presented opportunities. Enabling a significant increase in PHC registration during the harshest and most testing conditions indicates that the accomplished achievements have significant merit. The correct text messaging services are beneficial for prompting engagement, reducing human resource demands, and improving the available data. The advertising inside the PHC was favourably reported on and is a sign of the commitment of the respective practice staff. There was a positive shift in the staff attitudes to one of ownership of the problems and responsibility and commitment to resolve. They need further educational support, and the Centre has worked on a project that provides that. They also need better communication and connection with their local Armed Forces Covenant Partnership groups. The community-based engagement required flexibility from the Centre staff but most importantly the support of organisations such as the Councils, schools and sports clubs. This was offered in abundance. The message was received by veterans and their families. The COVID-19 pandemic created challenges, and had this project been completed at another time then the numbers registered would have been considerably higher. There remains the issue of engaging with elderly veterans and their families.

The interviews reinforced the Centres' experience that civilian perceptions were generally positive and empathetic towards veterans for the sacrifices they have made, although it was acknowledged that there would be UK civilians and medical staff who may oppose the military. The use of PHC data to inform on veterans' registration in PHC provides a different perspective to reports from other cohort studies and should help with defining AFC policy, the commissioning of services and educational programmes. That lessons learnt from this study would be cost effective to introduce and are applicable to transfer to a larger nationwide initiative to improve veteran declaration and registration within PHC.

References

Adams, R. E., Hu, Y., Figley, C. R., Urosevich, T. G., Hoffman, S. N., Kirchner, H. L., Dugan, R. J., Boscarino, J. J., Withey, C. A., & Boscarino, J. A. (2021). Risk and protective factors associated with mental health among female military veterans: results from the veterans' health study. *BMC Women's Health*, *21*(55), 1–11. https://doi.org/10.1186/s12905-021-01181-z

Ashcroft. (2012). Armed Forces & Society. In *Armed Forces & Society*. https://lordashcroftpolls.com/wp-content/uploads/2012/05/THE-ARMED-FORCES-SOCIETY.pdf

Bergman, B. P., Mackay, D. F., & Pell, J. P. (2021). Dementia in Scottish military veterans: early evidence from a retrospective cohort study. *BMJ Open*, *11*(7), 0–5. https://doi.org/10.1136/bmjopen-2020-044465

Bergman, B. P., Mackay, D. F., & Pell, J. P. (2022). Suicide among Scottish military veterans: follow-up and trends. *Occupational and Environmental Medicine*, *79*(2), 88–93. https://doi.org/10.1136/oemed-2021-107713

Boyd, A., Van De Velde, S., Vilagut, G., De Graaf, R., O'Neill, S., Florescu, S., Alonso, J., & Kovess-Masfety, V. (2015). Gender differences in mental disorders and suicidality in Europe: Results from a large cross-sectional population-based study. *Journal of Affective Disorders*, *173*, 245–254. https://doi.org/10.1016/j.jad.2014.11.002

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp

063oa

Brown, M. C., Creel, A. H., Engel, C. C., Herrell, R. K., & Hoge, C. W. (2011). Factors associated with interest in receiving help for mental health problems in combat veterans returning from deployment to Iraq. *Journal of Nervous and Mental Disease*, *199*(10), 797–801. https://doi.org/10.1097/NMD.0b013e31822fc9bf

Calhoun, P. S., Bosworth, H. B., Grambow, S. C., Dudley, T. K., & Beckham, J. C. (2002). Medical service utilization by veterans seeking help for posttraumatic stress disorder. *The American Journal of Psychiatry*, *159*(12), 2081–2086. https://doi.org/10.1176/appi.ajp.159.12.2081

Carr, M. J., Ashcroft, D. M., Kontopantelis, E., Awenat, Y., Cooper, J., Chew-Graham, C., Kapur, N., & Webb, R. T. (2016). The epidemiology of self-harm in a UK-wide primary care patient cohort, 2001-2013. *BMC Psychiatry*, *16*(1), 1–10. https://doi.org/10.1186/s12888-016-0753-5

Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed.). Sage Publications, Ltd.

Cheney, A. M., Koenig, C. J., Miller, C. J., Zamora, K., Wright, P., Stanley, R., Fortney, J., Burgess, J. F., & Pyne, J. M. (2018). Veteran-centered barriers to VA mental healthcare services use. *BMC Health Services Research*, *18*(1), 591. https://doi.org/10.1186/s12913-018-3346-9

Cornish, M. A., Thys, A., Vogel, D. L., & Wade, N. G. (2014). Post-deployment difficulties and help seeking barriers among military veterans: Insights and intervention strategies. *Professional Psychology: Research and Practice*, *45*(6), 405–409.

https://doi.org/10.1037/a0037986

DiRamio, D., Jarvis, K., Iverson, S., Seher, C., & Anderson, R. (2015). Out from the shadows: Female student veterans and help-seeking. *College Student Journal, 49*(1), 49–68.

Eagle, D. R., Iwanaga, K., Kaya, C., Muller, V., Lee, B., Rumrill, S., Chiu, C.-Y., Tansey, T. N., & Chan, F. (2020). Assessing self-stigma of help-seeking in student veterans: A psychometric validation study. *Journal of College Student Psychotherapy.* https://doi.org/10.1080/87568225.2020.1806163

Finnegan, A., Finnegan, S., Thomas, M., Deahl, M., Simpson, R. G., & Ashford, R. (2014). The presentation of depression in the British Army. *Nurse Education Today, 34*(1), 83–91. https://doi.org/10.1016/j.nedt.2013.02.020

Finnegan, A., Jackson, R., & Simpson, R. (2018). Finding the forgotten: Motivating military veterans to register with a primary healthcare practice. *Military Medicine, 183*(11–12), e509–e517. https://doi.org/10.1093/milmed/usy086

Finnegan, A., & Randles, R. (2022). *Prevalence of common mental health disorders in military veterans: using primary healthcare data.* 1–6. https://doi.org/10.1136/bmjmilitary-2021-002045

Finnegan, A., Salem, K., Ainsworth-Moore, L., Randles, R., West, L., Simpson, R., & Grant, V. B. (2022). An evaluation of the veteran friendly practice accreditation programme. *BJGP Open.* https://doi.org/https://doi.org/10.3399/BJGPO.2022.0012

Fischer, E. P., McSweeney, J. C., Wright, P., Cheney, A., Curran, G. M., Henderson, K., & Fortney, J. C. (2016). Overcoming Barriers to Sustained Engagement in Mental Health Care: Perspectives of Rural Veterans and Providers. *Journal of Rural Health, 32*(4), 429–438.

https://doi.org/10.1111/jrh.12203

Fox, A. B., Smith, B. N., & Vogt, D. (2018). How and when does mental illness stigma impact treatment seeking? Longitudinal examination of relationships between anticipated and internalized stigma, symptom severity, and mental health service use. *Psychiatry Research, 268,* 15–20. https://doi.org/10.1016/j.psychres.2018.06.036

Freeman, A., Mergl, R., Kohls, E., Székely, A., Gusmao, R., Arensman, E., Koburger, N., Hegerl, U., & Rummel-Kluge, C. (2017). A cross-national study on gender differences in suicide intent. *BMC Psychiatry, 17*(1), 1–11. https://doi.org/10.1186/s12888-017-1398-8

Garcia, H. A., Finley, E. P., Ketchum, N., Jakupcak, M., Dassori, A., & Reyes, S. C. (2014). A Survey of Perceived Barriers and Attitudes Toward Mental Health Care Among OEF/OIF Veterans at VA Outpatient Mental Health Clinics. *MILITARY MEDICINE, 179*(3), 273–278. https://doi.org/10.7205/MILMED-D-13-00076

Godier-McBard, L. R., Cable, G., Wood, A. D., & Fossey, M. (2021). Gender differences in barriers to mental healthcare for UK military veterans: A preliminary investigation. *BMJ Military Health,* 1–6. https://doi.org/10.1136/bmjmilitary-2020-001754

Goodwin, L., Norton, S., Fear, N. T., Jones, M., Hull, L., Wessely, S., & Rona, R. J. (2017). Trajectories of alcohol use in the UK military and associations with mental health. *Addictive Behaviors, 75*(December 2016), 130–137. https://doi.org/10.1016/j.addbeh.2017.07.010

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry, 10*(113).

Iversen, A. C., Fear, N. T., Ehlers, A., Hughes, J. H., Hull, L., Earnshaw, M., Rona, R., Wessely, S., & Hotopf, M. (2008). Risk factors for Post Traumatic Stress Disorder amongst United Kingdom Armed Forces personnel. *Psychol Med, 38*(4), 511–522. https://doi.org/10.1017/S003329170800 2778.Risk

Iversen, A. C., & Greenberg, N. (2009). Mental health of regular and reserve military veterans. *Advances in Psychiatric Treatment, 15*(2), 100–106. https://doi.org/10.1192/apt.bp.107.004 713

Jones, N., Jones, M., Greenberg, N., Phillips, A., Simms, A., & Wessely, S. (2020). UK military women: Mental health, military service and occupational adjustment. *Occupational Medicine, 70*(4), 235–242. https://doi.org/10.1093/occmed/kqaa0 19

KCMHR. (2018). *The mental health of the UK Armed Forces Fact Sheet. September*, 1–5.

Kiernan, M. D., Osbourne, A., McGill, G., Greaves, P. J., Wilson, G., & Hill, M. (2018). Are veterans different? Understanding veterans' help-seeking behaviour for alcohol problems. *Health & Social Care in the Community, 26*(5), 725–733. https://doi.org/10.1111/hsc.12585

Kleykamp, M., Montgomery, S., Pang, A., & Schrader, K. (2021). Military identity and planning for the transition out of the military. *Military Psychology, 33*(6), 372–391. https://doi.org/10.1080/08995605.2021. 1962176

Kulesza, M., Pedersen, E., Corrigan, P., & Marshall, G. (2015). Help-Seeking Stigma and Mental Health Treatment Seeking Among Young Adult Veterans. *Military Behavioral Health, 3*(4), 230–239. doi: 10.1080/21635781.2015.1055866

Langston, V., Greenberg, N., Fear, N., Iversen, A., French, C., & Wessely, S. (2010). Stigma and mental health in the Royal Navy: A mixed methods paper. *Journal of Mental Health, 19*(1), 8–16. https://doi.org/10.3109/0963823080252 2999

Macmanus, D., Jones, N., Wessely, S., Fear, N. T., Jones, E., & Greenberg, N. (2014). The mental health of the UK armed forces in the 21st century: Resilience in the face of adversity. *Journal of the Royal Army Medical Corps, 160*(2), 125–130. https://doi.org/10.1136/jramc-2013-000213

Mark, K. M., Leightley, D., Pernet, D., Murphy, D., Stevelink, S. A. M., & Fear, N. T. (2020). Identifying Veterans Using Electronic Health Records in the United Kingdom: A Feasibility Study. *Healthcare, 8*(1), 1–13.

Mental Health Foundation, & Forces in Mind Trust. (2013). *The Mental Health of Serving and Ex-Service Personnel: A review of the evidence and perspectives of key stakeholders.*

Ministry of Defence. (2011). The Armed Forces Covenant. In *Ministry of Defence.* https://assets.publishing.service.gov.uk/ government/uploads/system/uploads/a ttachment_data/file/49469/the_armed_ forces_covenant.pdf

Ministry of Defence. (2019). *Annual Population Survey: UK Armed Forces Veterans residing in Great Britain, 2017.* https://www.gov.uk/government/publi cations/mod-national-and-official-statistics-by-topic/mod-

Ministry of Defence. (2020). *Armed Forces Mental Health 2020 Report.* https://www.gov.uk/government/statist ics/uk-armed-forces-mental-health-annual-statistics-financial-year-201920

Ministry of Defence. (2021a). *UK armed forces biannual diversity statistics: index.* Gov. https://www.gov.uk/government/collec tions/uk-armed-forces-biannual-diversity-statistics-index

Ministry of Defence. (2021b). *UK Armed Forces Mental Health: Annual Summary & Trends Over Time, 2007/08 to 2020/21.*

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/993208/20210617_MH_Annual_Report_2020-21.pdf

Misra-Hebert, A. D., Santurri, L., DeChant, R., Watts, B., Rothberg, M., Sehgal, A. R., & Aron, D. C. (2015). Understanding the Health Needs and Barriers to Seeking Health Care of Veteran Students in the Community. *SOUTHERN MEDICAL JOURNAL, 108*(8), 488–493.

Mitchell, A. J., Vaze, A., & Rao, S. (2009). Clinical diagnosis of depression in primary care: a meta-analysis. *The Lancet, 374*(9690), 609–619. https://doi.org/10.1016/S0140-6736(09)60879-5

Møller, S. O., Forsberg, O. K., Sørensen, H. J., Enemark, M. H., Lyk-Jensen, S. V., & Madsen, T. (2020). Help-seeking behavior among danish veterans with self-reported mental problems – a 22 years register-based follow-up study. *Nordic Journal of Psychiatry, 74*(1), 51–59. https://doi.org/10.1080/08039488.2019.1669072

Murphy, D., Palmer, E., Westwood, G., Busuttil, W., & Greenberg, N. (2016). Do alcohol misuse, service utilisation, and demographic characteristics differ between UK veterans and members of the general public attending an NHS general hospital? *Journal of Clinical Medicine, 5*(11). https://doi.org/10.3390/jcm5110095

NHS. (2021a). *Healthcare for the Armed Forces community: a forward view From serving to civilian life: health and wellbeing for all.* https://www.england.nhs.uk/publication/healthcare-for-the-armed-forces-community-a-forward-view/

NHS. (2021b). *Mental health support for veterans, service leavers and reservists.* https://www.nhs.uk/nhs-services/armed-forces-community/mental-health/veterans-reservists/

NHS. (2021c). *Who counts as a veteran? Veterans, Service Leavers, and Non-Mobilised Reservists.* https://www.nhs.uk/nhs-services/armed-forces-community/veterans-service-leavers-non-mobilised-reservists/

NHS Digital. (2017). *The NHS Digital SNOMED CT Browser.* NHS. https://termbrowser.nhs.uk/?

NHS Digital. (2020). *Read Codes.* https://digital.nhs.uk/services/terminology-and-classifications/read-codes

NHS Digital. (2021). *SNOMED CT.* https://digital.nhs.uk/services/terminology-and-classifications/snomed-ct

Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-Based Nursing, 22*(3), 67–68. https://doi.org/10.1136/ebnurs-2019-103145

Northern Ireland Office. (1998). *The Belfast Agreement.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1034123/The_Belfast_Agreement_An_Agreement_Reached_at_the_Multi-Party_Talks_on_Northern_Ireland.pdf

O'Toole, T. P., Johnson, E. E., Redihan, S., Borgia, M., & Rose, J. (2015). Needing Primary Care But Not Getting It: The Role of Trust, Stigma and Organizational Obstacles reported by Homeless Veterans. *Journal of Health Care for the Poor & Underserved, 26*(3), 1019–1031. https://doi.org/10.1353/hpu.2015.0077

Office for National Statistics. (2021). Coronavirus and depression in adults , Great Britain: January to March 2021. *Office for National Statistics, March,* 1–18. https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/coronavirusanddepressioninadultsgreatbritain/januarytomarch2021

Oliver, M. I., Pearson, N., Coe, N., & Gunnell, D.

(2005). Help-seeking behaviour in men and women with common mental health problems: Cross-sectional study. *British Journal of Psychiatry, 186*(APR.), 297–301. https://doi.org/10.1192/bjp.186.4.297

Qureshi, S. U., Kimbrell, T., Pyne, J. M., Magruder, K. M., Hudson, T. J., Petersen, N. J., Yu, H. J., Schulz, P. E., & Kunik, M. E. (2010). Greater prevalence and incidence of dementia in older veterans with posttraumatic stress disorder. *Journal of the American Geriatrics Society, 58*(9), 1627–1633. https://doi.org/10.1111/j.1532-5415.2010.02977.x

Rafferty, L. A., Wessely, S., Stevelink, S. A. M., & Greenberg, N. (2019). The journey to professional mental health support: a qualitative exploration of the barriers and facilitators impacting military veterans' engagement with mental health treatment. *EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY, 10*(1). https://doi.org/10.1080/20008198.2019.1700613

Randles, R., & Finnegan, A. (2021). Veteran help-seeking behaviour for mental health issues: A systematic review. *BMJ Military Health*, 1–6. https://doi.org/10.1136/bmjmilitary-2021-001903

Randles, R., & Finnegan, A. (2022). Veteran help-seeking behaviour for mental health issues: A systematic review. *BMJ Military Health, 168*, 99–104. https://doi.org/10.1136/bmjmilitary-2021-001903

Rhead, R., MacManus, D., Jones, M., Greenberg, N., Fear, N. T., & Goodwin, L. (2020). Mental health disorders and alcohol misuse among UK military veterans and the general population: A comparison study. *Psychological Medicine, May*. https://doi.org/10.1017/S0033291720001944

Rodrigues, S., Bokhour, B., Mueller, N., Dell, N., Osei-Bonsu, P. E., Zhao, S., Glickman, M.,

Eisen, S. V., & Elwy, A. R. (2013). Impact of stigma on veteran treatment seeking for depression. *American Journal of Psychiatric Rehabilitation, 16*(1), 128–146. https://doi.org/10.1080/15487768.2014.903875

Ross, D., Mackay, D. F., & Bergman, B. P. (2021). Risk factors for mental ill health in UK Army personnel: an overview. *BMJ Military Health, 167*(2), 1–7. https://doi.org/10.1136/bmjmilitary-2020-001679

Royal College of General Practitioners. (2021). *Veteran friendly GP practices.* https://www.rcgp.org.uk/clinical-and-research/resources/a-to-z-clinical-resources/veteran-friendly-gp-practices.aspx

Sayer, N. A., Friedemann-Sanchez, G., Spoont, M., Murdoch, M., LE, P., Chiros, C., Rosenheck, R., Sayer, N. A., Friedemann-Sanchez, G., Spoont, M., Murdoch, M., Parker, L. E., Chiros, C., & Rosenheck, R. (2009). A qualitative study of determinants of PTSD treatment initiation in veterans. *Psychiatry: Interpersonal & Biological Processes, 72*(3), 238–255. https://doi.org/10.1521/psyc.2009.72.3.238

Schuy, K., Brants, L., Dors, S., Horzetzky, M., Willmund, G., Zimmermann, P., Stroehle, A., Rau, H., & Siegel, S. (2019). Psychological stigma costs as barriers to healthcare use in former soldiers of the German Armed Forces: A qualitative analysis. *MILITARY PSYCHOLOGY, 31*(4), 279–291. https://doi.org/10.1080/08995605.2019.1598228

Siegel, S., Dors, S., Brants, L., Schuy, K., & Rau, H. (2018). Understanding health care avoidance and initial help-seeking behavior in German veterans: A theory of planned behavior. *Psychology Research and Behavior Management, 11*. http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-

38292-001&site=ehost-live

Simpson, R. G., & Leach, J. (2015). The general practitioner and the military veteran. *Journal of the Royal Army Medical Corps, 161*(2), 106–108. https://doi.org/10.1136/jramc-2013-000243

Simpson, R. G., & Leach, J. (2021). UK military veteran-friendly GP practices. *BMJ Military Health*, bmjmilitary-2020-001734. https://doi.org/10.1136/bmjmilitary-2020-001734

Stevelink, S. A. M., Jones, N., Jones, M., Dyball, D., Khera, C. K., Pernet, D., MacCrimmon, S., Murphy, D., Hull, L., Greenberg, N., MacManus, D., Goodwin, L., Sharp, M.-L., Wessely, S., Rona, R. J., & Fear, N. T. (2019). Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems? *European Journal of Psychotraumatology, 10*(1). https://doi.org/10.1080/20008198.2018.1556552

Tedstone Doherty, D., & Kartalova-O'Doherty, Y. (2010). Gender and self-reported mental health problems: Predictors of help seeking from a general practitioner. *British Journal of Health Psychology, 15*(1), 213–228. https://doi.org/10.1348/135910709X457423

The Royal British Legion. (2014). *A UK Household Survey of the Ex-Service Community.* https://storage.rblcdn.co.uk/sitefinity/docs/default-source/campaigns-policy-and-research/rbl_household_survey_report.pdf?sfvrsn=5bcbae4f_4

The Royal British Legion. (2021). *The Armed Forces Covenant: Reflections on a decade of the nation's promise.*

Williston, S. K., Bramande, E. A., Vogt, D. S., Iverson, K. M., & Fox, A. B. (2020). An examination of the roles of mental health literacy, treatment-seeking stigma, and perceived need for care in female veterans' service use. *Psychiatric Services, 71*(2), 144–150. https://doi.org/10.1176/appi.ps.201800405

Wittenberg, R., Hu, B., Barraza-Araiza, L. F., & Rehill, A. (2019). Projections of Older People with Dementia and Costs of Dementia Care in the United Kingdom, 2019-2040. *CPEC Working Paper 5, November*, 1–79. https://www.alzheimers.org.uk/sites/default/files/2019-11/cpec_report_november_2019.pdf

Wray, L. O., Pikoff, E., King, P. R., Hutchison, D., Beehler, G. P., & Maisto, S. A. (2016). Veterans' Mental Health Beliefs: Facilitators and Barriers to Primary Care-Mental Health Use. *FAMILIES SYSTEMS & HEALTH, 34*(4), 404–413. https://doi.org/10.1037/fsh0000231

Appendix A – Veteran Registration

PHC	N Veterans Registered 24/08/20	N Veterans Registered 12/10/20	N Veterans Registered 23/11/20	N Veterans Registered 04/01/21	N Veterans Registered 01/03/21	N of Veterans Registered Total Increase
Chester Practice 1	13	18	19	24	25	12 (92.3%)
Chester Practice 2	9	15	22	65	69	60 (666.7%)
Chester Practice 3	24	24	147	160	163	139 (579.2%)
Chester Practice 4	24	76	375	418	429	405 (1687.5%)
Chester Practice 5	29	39	42	42	47	18 (62.1%)
Chester Practice 6	5	36	47	59	137	132 (2640.0%)
Warrington Practice 1	69	154	199	205	213	144 (208.7%)
Warrington Practice 2	110	131	131	131	131	21 (19.1%)
Warrington Practice 3	117	120	357	361	351	234 (200%)
Warrington Practice 4	10	10	14	44	56	46 (460%)
Warrington Practice 5	76	79	81	122	130	54 (71.1%)
Warrington Practice 6	115	115	150	155	161	46 (40%)
	Total: 601 C: 104 W: 497	Total: 817 C: 208 W: 609	Total:1,584 C: 652 W: 932	Total:1,786 C: 768 W: 1,018	Total:1,912 C: 870 W: 1,042	Total:1,311 (218.1%) C: 766 (736.5%) W: 545 (109.7%)

Table 11: Veteran Registration Changes Across all 12 Practices and All Stages.

PHC	% Veteran Population 24/08/20	% Veteran Population 12/10/20	% Veteran Population 23/11/20	% Veteran Population 04/01/21	% Veteran Population 01/03/21	Total Veteran Population Increase
Chester Practice 1	2.6%	3.6%	3.8%	4.8%	5.0%	2.4%
Chester Practice 2	2.4%	4.0%	5.8%	17.2%	18.3%	15.9%
Chester Practice 3	4.6%	4.6%	28.0%	30.5%	31.1%	26.5%
Chester Practice 4	3%	9.6%	47.3%	52.7%	54.1%	51.1%
Chester Practice 5	6.1%	8.3%	8.9%	8.9%	10.0%	3.9%
Chester Practice 6	1.4%	10.3%	13.5%	17.0%	39.4%	38.0%
Warrington Practice 1	10.2%	22.7%	29.4%	30.2%	31.4%	21.2%
Warrington Practice 2	21.2%	25.2%	25.2%	25.2%	25.2%	4.0%
Warrington Practice 3	16.6%	17.1%	50.8%	51.4%	49.9%	33.3%
Warrington Practice 4	1.2%	1.2%	1.7%	5.4%	6.9%	6.7%
Warrington Practice 5	12.3%	12.8%	13.1%	19.7%	21.0%	8.7%
Warrington Practice 6	20.4%	20.4%	26.6%	27.5%	28.6%	8.2%
	Total: 9.3% Chester: 4% Warrington: 12.8%	Total: 12.6% C: 8.1% W: 15.6%	Total: 24.5% C: 25.2% W: 23.9%	Total: 27.6% C: 29.7% W: 26.2%	Total: 29.5% C: 33.7% W: 26.8%	Total: 20.2% C: 29.7% W: 14%

Table 12: Veteran Population Coverage Changes Across All 12 Practices and All Stages.

Appendix B – Veteran Gender Split

PHC	24/08/20		12/10/20		23/11/20		04/01/21		01/03/21	
	M	F	M	F	M	F	M	F	M	F
Chester Practice 1	13 (100%)	0	17 (94.4%)	1 (5.6%)	18 (94.7%)	1 (5.3%)	22 (91.7%)	2 (8.3%)	22 (88.0%)	3 (12.0%)
Chester Practice 2	9 (100%)	0	15 (100%)	0	22 (100%)	0	61 (93.8%)	4 (6.2%)	65 (94.2%)	4 (5.8%)
Chester Practice 3	21 (87.5%)	3 (12.5%)	21 (87.5%)	3 (12.5%)	113 (76.9%)	34 (23.1%)	124 (77.5%)	36 (22.5%)	125 (76.2%)	39 (23.8%)
Chester Practice 4	21 (87.5%)	3 (12.5%)	67 (84.8%)	9 (11.8%)	342 (91.2%)	33 (8.8%)	380 (90.9%)	38 (9.1%)	389 (90.7%)	40 (9.3%)
Chester Practice 5	26 (89.7%)	3 (10.3%)	36 (92.3%)	3 (7.7%)	38 (90.5%)	4 (9.5%)	38 (90.5%)	4 (9.5%)	42 (89.4%)	5 (10.6%)
Chester Practice 6	5 (100%)	0	34 (94.4%)	2 (5.6%)	45 (95.7%)	2 (4.3%)	57 (96.6%)	2 (3.4%)	124 (90.5%)	13 (9.5%)
Warrington Practice 1	61 (88.4%)	8 (11.6%)	141 (91.6%)	13 (8.4%)	180 (90.5%)	19 (9.5%)	186 (90.7%)	19 (9.3%)	193 (90.6%)	20 (9.4%)
Warrington Practice 2	100 (90.9%)	10 (9.1%)	119 (90.8%)	12 (9.2%)	119 (90.8%)	12 (9.2%)	119 (90.8%)	12 (9.2%)	119 (90.8%)	12 (9.2%)
Warrington Practice 3	114 (97.4%)	3 (2.6%)	117 (97.5%)	3 (2.5%)	317 (88.8%)	40 (11.2%)	320 (88.6%)	41 (11.4%)	320 (88.6%)	41 (11.4%)
Warrington Practice 4	10 (100%)	0	10 (100%)	0	14 (100%)	0	41 (93.2%)	3 (6.8%)	49 (87.5%)	7 (12.5%)
Warrington Practice 5	65 (85.5%)	11 (14.5%)	67 (84.8%)	12 (15.2%)	69 (85.2%)	12 (14.8%)	101 (82.8%)	21 (17.2%)	107 (82.3%)	23 (17.7%)
Warrington Practice 6	95 (82.6%)	20 (17.4%)	95 (82.6%)	20 (17.4%)	125 (83.3%)	25 (16.7%)	130 (83.9%)	25 (16.1%)	135 (83.9%)	26 (16.1%)

Table 13: Changes in Gender Demographics Across All 12 Practices and All Stages.

Appendix C – Veteran Age Split

PHC	24/08/20 $\bar{x}$	SD	12/10/20 $\bar{x}$	SD	23/11/20 $\bar{x}$	SD	04/01/21 $\bar{x}$	SD	01/03/21 $\bar{x}$	SD
Chester Practice 1	56	14.0	2	17.1	54	18.6	54	16.8	54	16.6
Chester Practice 2	52	14.6	57	15.0	61	16.5	63	15.8	63	15.8
Chester Practice 3	53	17.7	53	17.7	55	17.7	56	17.7	56	17.3
Chester Practice 4	52	14.1	65	17.0	62	16.6	62	16.8	62	16.9
Chester Practice 5	58	18.2	58	18.7	59	18.9	59	18.9	60	18.5
Chester Practice 6	55	23.1	68	14.5	68	15.1	68	14.5	64	15.7
Warrington Practice 1	59	19.3	69	17.6	70	17.3	69	17.2	70	17.1
Warrington Practice 2	67	18.6	69	18.3	69	18.3	69	18.3	69	18.3
Warrington Practice 3	58	21.2	59	21.1	59	19.4	59	19.3	60	17.5
Warrington Practice 4	44	16.0	44	16.0	51	22.7	66	20.6	67	20.8
Warrington Practice 5	50	17.6	51	17.9	52	18.3	57	19.5	58	19.4
Warrington Practice 6	53	18.0	53	18.0	56	16.6	56	17.9	56	17.7

Table 14: Changes in Age Across All 12 Practices and All Stages

Appendix D – Mental Health Prevalence

PHC	Anxiety	Depression	PTSD	Dementia	Alcohol Misuse	Substance Misuse
Chester Practice 1	8 (32.0%)	10 (40%)	4 (16.0%)	0	1 (4.0%)	1 (4.0%)
Chester Practice 2	16 (23.2%)	17 (24.6%)	6 (8.7%)	1 (1.4%)	2 (2.9%)	2 (2.9%)
Chester Practice 3	36 (22.1%)	28 (17.2%)	3 (1.8%)	1 (0.6%)	2 (1.2%)	6 (3.7%)
Chester Practice 4	103 (24.0%)	86 (20.0%)	13 (3.0%)	7 (1.6%)	381 (88.8%)	1 (0.2%)
Chester Practice 5	3 (6.4%)	19 (40.4%)	7 (14.9%)	2 (4.3%)	2 (4.3%)	2 (4.3%)
Chester Practice 6	9 (6.6%)	23 (16.8%)	0	2 (1.5%)	4 (2.9%)	0
Warrington Practice 1	18 (8.5%)	14 (6.6%)	11 (5.2%)	7 (3.3%)	2 (0.9%)	0
Warrington Practice 2	24 (18.3%)	23 (17.6%)	2 (1.5%)	4 (3.1%)	4 (3.1%)	0
Warrington Practice 3	47 (13.4%)	60 (17.1%)	8 (2.3%)	1 (0.3%)	9 (2.6%)	1 (0.3%)
Warrington Practice 4	7 (12.5%)	4 (7.1%)	1 (1.8%)	1 (1.8%)	1 (1.8%)	1 (1.8%)
Warrington Practice 5	7 (5.4%)	12 (2.9%)	5 (3.8%)	0	0	0
Warrington Practice 6	27 (16.8%)	41 (25.5%)	4 (2.5%)	2 (1.2%)	5 (3.1%)	1 (0.6%)

Table 15: Mental Health Prevalence in Veteran Population Split by Practice

Appendix E – Poster/Zap Stand

CALLING ALL MILITARY VETERANS

We want to identify our Veterans

Did you know?
You are classed as a Military Veteran for serving just 1 day in the Armed Forces.

Making yourself known as a Veteran can lead to earlier identification of service related issues and access to treatment. This includes improved access to Psychological Therapies.

If you, or a member of your family, are a military veteran then please inform the reception staff. If you have a friend or know a Veteran, then please ask them to inform their GP Practice.

FiMT forces in mind trust

Westminster Centre for Research in Veterans | University of Chester

COMMUNITY FUND

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Professor Alan Finnegan PhD RN FRCN FRSA CF FAAN

Director of the Centre and Professor of Nursing and Military Mental Health. Alan is a Registered Nurse (Adult) and Registered Nurse (Mental Health). Since commencing at the University of Chester in 2016, Alan has been appointed as the principal investigator for over 30 research projects including awards from the NHS, Armed Forces Covenant Fund Trust, Forces in Mind Trust, Health Education England and Business.

See: https://www1.chester.ac.uk/departments/health-and-social-care/staff/alan-finnegan

Dr Rebecca Randles BSc PhD FHEA PGCert MBPsS

Senior Researcher in the Centre, Becky has a background rooted in Psychology, achieving her PhD from Liverpool John Moores University. She has extensive experience in both quantitative and qualitative methodologies and analysis. Becky is a member of the Faculty Research Ethics committee and has been involved in numerous other research projects in the centre.

About the Centre

The Westminster Centre for Research in Veterans are part of the University of Chester. Our mission is to support the military community through innovative and high-quality research, educational provision, and community engagement. Our vision is to provide subject matter expertise and a focal point of consultation to our partners within the Northwest of England for the betterment of military veterans and their family's wellbeing. We hope to support a vibrant, inspirational, and innovative learning environment to provide a rewarding academic experience to University of Chester personnel and academic partners; Clinical, welfare and military staff who provide care or services to the military community; local authority partners engaged in the care and support of veterans; as well as the veteran population.

We aim to grow a robust research profile that will have a positive impact on veteran's health and healthcare at regional, national, and international level. This profile will embrace new technologies and creative methodologies to address issues that negatively affect the wellbeing of the military population.

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