



Merry Christmas

A Look Back at This Year's Accomplishments and Stories from Across Our Study

Welcome to our new look newsletter!

As we approach the end of a busy and exciting 2024, we want to thank all of you for your continued support of the ADVANCE Study – you know we couldn't do this without you!

We have seen record numbers of you coming through the doors here at Stanford Hall, nearly 350 of you since January, which is incredible. I'm sure you realise how much work goes on in the background to ensure your visit to us is not only enjoyable but goes smoothly. We always receive great feedback thanking our amazing admin and clinical teams whose focus is always to ensure your experience whilst visiting us is a positive one.

PSST When you next visit us do pop some comments and feedback about your day in our visitors book, or better still, send us an email – it really gives the team a boost to know how much you got out of your visit.

Looking Ahead to 2025

You have told us that it's important to you to receive updates about the study results so far. All of our academic summaries are available on our website [here](#) and our newer findings can be found on pages 6 to 10 in this newsletter. As we produce more high-quality research papers and continue to collect more data from you our evidence slowly grows and our attention is turning to ensuring that the research findings are being heard by those who need to hear it! In future newsletters, we'll make sure we provide you more detail on the current and potential impact of our research.

And finally, as we celebrate the festive season, we wish you a very Merry Christmas and a Happy New Year.

Best wishes,
The ADVANCE Team

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Research LATEST OUTCOMES

Investigating Medical & Psychosocial Outcomes of UK Combat Casualties from the Afghanistan War

Last month whilst talking at BAsem 2024, Professor Alex Bennett discussed the background of ADVANCE and emphasised the importance of looking into the long-term outcomes, both medically and psychosocially of combat casualties from the Afghanistan war. Professor Bennett highlighted cardiovascular risk and disease and metabolic diseases such as diabetes and obesity alongside bone health, pain, mental health, functional outcomes, relationships and alcohol and drug use and abuse..

The hypothesis of our study is that combat trauma casualties will have an increased incidence of adverse medical, psychosocial and vocational long-term outcomes compared with equivalent but non-injured service personnel. Study progress has been steady, and we have now completed baseline and follow-up 1 with over half of our follow-up 2 participants already seen.



Group Captain (Prof) Alex Bennett
Defence Professor
ADVANCE Board Member

Current Outcomes

Indication that combat casualties, especially those severely injured have a higher risk of cardiovascular disease. Their risk was measured in terms of metabolic syndrome data (a group of health problems that put you at risk of type 2 diabetes or conditions that affect your heart or blood vessels) and through augmentation index data (a measurement of arterial stiffness that reflects how well blood vessels function).

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A higher prevalence of early Osteo Arthritis (OA) of the knees in those with combat injury, including in those without injury specific knee injury or amputation.

[LEARN MORE](#)

COMING SOON
Proteomics (the study of proteins, including their structure, function, and interactions) indicate that those who were injured had higher cardiovascular risk and increased premature ageing.

Increased upper limb dysfunction, particularly in those who have experienced limb injury or amputation - not just those with upper limb injury but also those with lower limb injury without upper limb injury.

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Mental health (MH) outcomes indicate that overall those with injury experience worse MH outcomes - these results were specifically driven by those who have non-amputation injuries. Amputees have good MH outcomes that are equal to the non-injured cohort.

COMING SOON
Above-knee amputees have significant Osteoporosis in the hip on the amputated side. Our team are looking at interventions to try and improve or prevent this with physical interventions, starting with a feasibility study.

ADVANCE data is currently being used:.

IN

50+ PROJECTS

BY

42 RESEARCHERS

**Average number of
participants:**

1100

***average of baseline & follow-up
1 numbers**

Approximate data points collected at baseline:

12,000
per person

Approximate total data points collected at baseline:

13,500,000



BAsem 2024

Thu 07 November 2024

Last month Maj Oliver O'Sullivan spoke at the 2024 BAsem conference highlighting the BioMilOA study improving our identification & management of osteoarthritis in the military.

[READ MORE](#) →



Podcast: Optimal HRV

Thu 15 August 2024

Listen to our very own Dr Rabeea Maqsood as she joins Matthew Bennett to discuss her research on Ultra-Short-Term Heart Rate Variability and Combat-Related Traumatic Injury.

[READ MORE](#) →



NEW! Research Paper

September 2024

A new paper discussing development of exercise intervention to minimise hip bone mineral density loss following traumatic lower limb amputation.

[READ MORE](#) →

The Association Between Perceived Social Support and Mental Health in Injured and Uninjured Military Personnel

Laura Grover et al., Journal of Psychiatric Research, November 2024

What does this piece of ADVANCE research look at?

Humans are innately social beings. Throughout life, we form relationships with others and naturally thrive when we feel supported by our social circle. This piece of research aimed to find out whether those who have been physically injured in combat have differences in their social support compared to those who have not been injured, and whether social support is linked to mental health. Studies in the general population have highlighted the importance of “perceived social support”, defined as “an individual's belief that they are cared for by their family and friends”, for improving health and enhancing recovery from trauma. During the Iraq and Afghanistan conflicts, combat deployment exposed some military personnel to potentially traumatic events that can have lasting impacts on their health and wellbeing. High levels of perceived social support may help reduce negative outcomes following combat deployment.

What did we measure?

ADVANCE participants completed a range of questionnaires to measure their social support as well as their mental health.

Social Support: Participants were asked to rate a series of statements from “very strongly disagree” to “very strongly agree” about how they perceived their social support, for example, “there is a special person around when I am in need” and “I can talk about problems with my friends”.

Mental Health: We looked at three different mental health problems - PTSD (repeated, unwanted memories and flashbacks following a traumatic event), anxiety (intense, excessive and persistent worry), and depression (a prolonged period of low mood or loss of interest in activities).

What were our findings?

Our findings showed that:

- Those injured in combat reported the same level of social support as those not injured.
- Those injured with an amputation reported the same level of social support as those injured without an amputation.
- Those who reported higher levels of social support, beyond a certain threshold, had a decreased risk of experiencing PTSD, anxiety or depression.

What do the findings mean?

Enhancing people's perceptions of feeling supported by their social circle may be a target for intervention within this population, despite whether they were physically injured in combat or not. Having higher social support, beyond a certain level, may reduce the chance of experiencing mental health difficulties



READ MORE



Laura Grover
PhD Student
King's College London

ADVANCE-SOCIAL: A subsidiary of ADVANCE

The purpose of the project is to better understand the relationships of ex-serving military personnel following deployment to Afghanistan, and how these relationships support the individual and fulfil their needs.

The ADVANCE-SOCIAL study is a PhD project led by Laura Grover and supervised by Professor Nicola Fear, Dr Laura Palmer and Dr Howard Burdett.

David Etale

In this issue, we meet British Army veteran and ADVANCE participant David Etale. David was injured in 2009 by a roadside IED while on patrol in Helmand Province. His injuries led to years of rehabilitation and, in 2016, the amputation of his left leg. Recently, he spoke with ADVANCE's Jodie Stevenson about his transition to civilian life, recovery, and the support of the ADVANCE study.

The Transition to Civilian Life

"Since leaving active service in 2017, life has been tough—I won't lie," David begins, speaking candidly about his post-military transition. Like many veterans, he faced the dual challenges of coping with physical injuries and the mental toll of service. "Mentally and physically adjusting to a 'normal' way of being has thrown many challenges my way. I have experienced PTSD, pain, and trying to get used to life with my disability. But with the help of my psychiatrist and sheer perseverance, I've been ticking off one day at a time."

For a time, he worked as a motivational speaker, sharing his insights on adversity and resilience. Yet even then, he knew he needed to focus inward. "Deep down, I hadn't come to terms with everything," he recalls.

"I felt I hadn't figured out my way or purpose in life yet."

The turning point, he shares, was recognising the importance of taking care of himself while staying mindful of his family and their well-being. "I made a conscious effort not to bring them into a dark place. That's when I tried looking at life differently - focusing on myself and spending time talking to professionals (if I felt like it)', he laughs 'If I didn't, they understood.'"

The Role of ADVANCE

For David, the ADVANCE study has been an integral part of this journey. "I decided to get involved in the ADVANCE Study back in 2018 because I was more concerned about my health as an amputee," he explains. "I've had a chance to learn so much more about my body—things I wouldn't necessarily have thought about before. Bone mineral density, blood sugars, weight-bearing information—it's all been really valuable."

David highlights the unique support he's received from the study. "I learn new things each and every time I come," he says. "The nurses and team provide practical information throughout the day and personally, I have gained a lot through that." Beyond the health insights, the study has offered a sense of purpose. "The elements that keep bringing me back are the key findings and the pace at which the study is going. It's all helpful, it's all been set up for a purpose"



Reconnecting with Purpose

Over the years, David has worked to rebuild his confidence and adapt to a new way of living. "You can be trained to go to a war zone, but you can never be trained on how to come back home from one," he reflects.

With time and commitment, David has found his foundations. "I realised I love holidays and doing amazing things," he shares with a smile. "To do all of that you have to re-connect yourself with civilian life. Stop worrying about what people may think or say and go out and meet new people."

David's advice to fellow veterans? "Pull your chest up, say, 'I will live my life and my truth,' and that will get you through."

A New Chapter

Today, David lives in Edinburgh, a city he's come to call home. Recently, he started a new role with Edinburgh City Council, where he drives an automatic truck four days a week, collecting commercial waste and refuse.

"It's a new challenge, and so far, so good," he says. "Returning to work has been a big step, but it's reminded me that new challenges can be good for us and not too daunting."

A Message to Fellow Participants

As the festive season approaches, David has a message for his fellow ADVANCE participants.

'You only have one life—live it as best you can.'

Research **HIGHLIGHTS**

Questionnaires: Their Importance When Looking at Physical Health

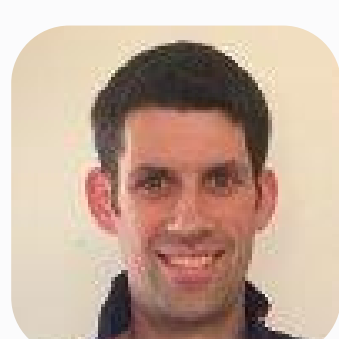
Merry Christmas Everyone!

My name is Ollie, and I wanted to say thank you for all of your enthusiasm and engagement in the study. In particular, I wanted to thank you for completing the many questionnaires we asked of you!

I use a lot of these questionnaires, especially the pain and symptom ones, to help understand who is likely to develop long-term problems with their joints. You might think, if you don't have any problems, that I don't want or need you to complete the questionnaire, but that is not true!

The wonderful thing about ADVANCE is the ability to compare a large group of people with lots in common between specific areas of difference, such as a combat injury or a painful joint. If you complete the questionnaire and report that you are 'pain-free', then it is as helpful as if you say 'currently in pain'. We use the differences between those with or without pain to study what factors increase the risk of joint pain. We also combine them with other outcomes, such as your X-rays, to give us more detail. We do this in the hope we can use that to improve our future ways of finding and treating pain.

So, the greatest gift you could give me this year is to keep ticking those boxes, even if it is really boring because the results are not boring for me!



Maj Oliver O'Sullivan RAMC
Specialty Registrar
Ministry of Defence

Green Light for New Pain Study

We are pleased to report that the Pain Research Group at Imperial College has been awarded the British Journal of Anaesthesia and Royal College of Anaesthetists Project Grant to continue investigating pain-related outcomes in the ADVANCE Study.

Many people who experience serious injuries also suffer from long-lasting pain, which can make it harder for them to recover and go back to work. Pain may affect both their body and mind in various ways. We know some things make it more likely for a person to have pain that lasts for a long time. However, we do not have a good understanding of how pain changes over time after an injury or how different factors, like biology, psychology, and social aspects, affect these changes. This is because most studies collecting this type of information follow up with patients for only a short period of time or only at a single point in time.

We want to understand why some people continue to feel pain after their injury. We will look at factors like the injury itself, how it was treated on the battlefield and in the hospital, as well as psychological factors like anxiety and depression. If parts of how their care was managed immediately following their injury are linked to better long-term pain outcomes, we can also use this information to improve trauma care in both military and non-military patients.

The long-term nature of the ADVANCE study also helps us to understand how a change in some factors may lead to a change in pain over time. For example, we know that those with problematic pain after injury are more likely to have depression – we do not know whether those with depression are more likely to develop pain or whether pain makes it more likely for a person to develop depression.

This work will help us to understand more about how these factors are related and we hope this could lead to the development of new treatments targeting these factors.

We would like to say a HUGE thank you to the ADVANCE PPI panel for their input in developing ideas for this project. We look forward to discussing the work with you once it has begun.



Harriet Kemp
Clinical Senior Lecturer
Imperial College London



Sarah Dixon-Smith
Research Associate
Imperial College London

Community AWARDS & RECOGNITION



Soldiering On Awards 2024

We are delighted to celebrate the achievements of two remarkable participants from our medical study, Andy Reid MBE and Hari Buda Magar MBE, who were both finalists for the Inspiration Award at the prestigious 2024 Soldiering On Awards. This award honours individuals in the Armed Forces community who have overcome significant challenges to inspire others through their exceptional efforts.

We are proud to share that Hari Buda Magar MBE was named the winner of the Inspiration Award. Hari's determination is unmatched: in 2023, he became the first above-the-knee double-amputee to summit Mount Everest, overcoming physical and legal barriers after campaigning to lift a ban on climbers with disabilities in Nepal. His next goal is to conquer the highest peaks on all seven continents, with his next challenge, Aconcagua in South America, scheduled for February. Hari's achievements and advocacy for disability awareness have set a powerful example within the Armed Forces community and beyond.

Andy Reid MBE, a fellow finalist, continues to inspire with his unwavering dedication to veterans and people with disabilities. An ambassador for The Army Benevolent Fund, Andy has completed numerous fundraising challenges, including skydives, abseiling, and in 2022 became the first-ever triple amputee from the UK to climb Mount Kilimanjaro. As the founder of the Standing Tall Foundation, Andy works tirelessly to promote mental and physical well-being, and his contributions were recognised with an MBE in 2019.

Both Andy and Hari represent the strength and commitment that define the Armed Forces community. Please join us in celebrating their incredible achievements.



Community CHARITY SPOTLIGHT

Fares4Free

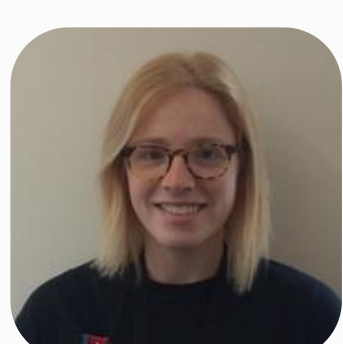
In July 2024, our team received a call from Cpl Scott Brown who was very keen to book in for his 2nd follow up visit with ADVANCE. Like many participants, he was eager to have a full health MOT and help continue our research for future service personnel.

Scott was struck by an IED whilst serving in Afghanistan and after returning to active duty was diagnosed with complex PTSD which resulted in his subsequent discharge. Scott now faces PTSD and memory problems- making travel difficult. For his first follow up appointment, Scott, who is based in Scotland, had to get multiple trains and taxis to get to us here at ADVANCE, which was a difficult process for him. Whilst he wanted to come in for his second ADVANCE visit, the idea of having to do that journey again was something he knew he would struggle with.

As always, the ADVANCE administration team explored as many avenues as possible to find a good alternative travel option for Scott but were struggling to find a decent solution. This is when Scott introduced us to Fares4Free. Fares4Free are a Scottish based charity that was established in 2018 by a former taxi driver who offered free taxi fares to veterans to get them to medical or mental health appointments.

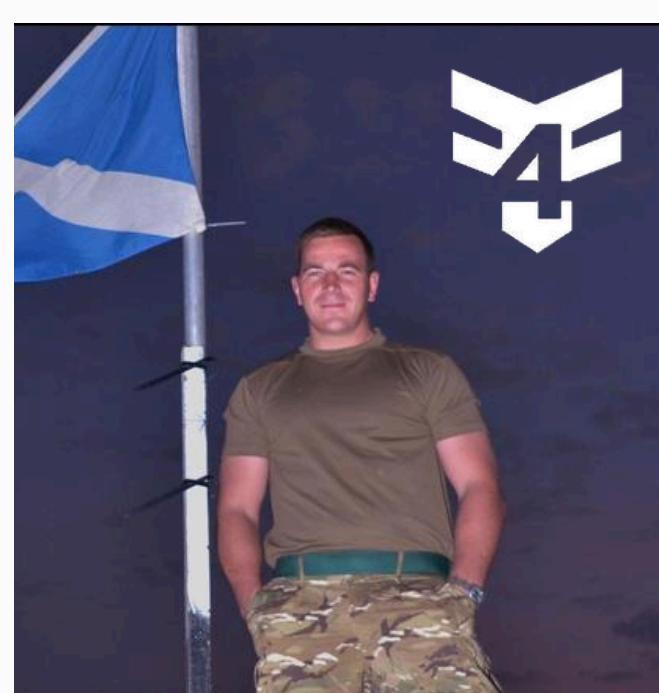
Since then, they have grown exponentially and now have a team of mental health trained, qualified drivers that help veterans with all sorts of journeys, including medical appointments, care home/ hospice visits and activities that help combat loneliness. Fares4Free were very happy to help Scott get to his ADVANCE appointment. They drove him all the way down and back and made a massive improvement to his journey to us.

We are so grateful to Scott for introducing us to Fares4Free, who are willing to support our other Scottish based participants who may not be able to get to us without their help. Our aim is always to remove as many barriers as possible for our participants to allow them to attend their appointments with us, if you know of any other resources or charities who may be able to help with that, please do get in touch.



[LEARN MORE](#)

Tasarla White
Clinical Operations Lead
ADVANCE Study



Congratulations, Dr. Rabeea Maqsood!



Dr Rabeea Maqsood
Research Assistant
Imperial College London

We are thrilled to celebrate the remarkable achievement of Dr. Rabeea Maqsood, who recently completed her PhD. Rabeea joined the ADVANCE study as a PhD student in September 2021, focusing on the relationship between combat injury and heart rate variability within the ADVANCE cohort. Her research aimed to uncover how combat injuries impact autonomic balance, shedding light on critical recovery pathways for those affected.

Please join us in congratulating her on this well-deserved accomplishment!

Military Skills Day: A Hands-On Insight

On a 'scorching hot' day in June, our team participated in a Military Skills Day. The event provides an opportunity for staff to better understand the challenges faced by service personnel in the field through hands-on activities.

We learned first hand how heavy military gear can be and it quickly became evident how difficult it is to detect someone in full camouflage, even at close range. Nicola Goodman, our Clinical Project Assistant said 'we realised how hard it is to spot someone in full camo in long grass, even though they're only a couple of metres away!'. The effort that goes into effective concealment – from face paint to creatively "decorated" helmets – gave us a newfound appreciation for the skill and patience involved.

'We came away with a lot of respect for what soldiers do in the field.'

The team also took on a casualty care scenario with a mix of humour and sobering reality. Nicola said 'We got to (carefully!) try out the tourniquets that soldiers carry in case of 'cat hem' or catastrophic haemorrhage – it was quite sobering to know that a good number of our participants have used these for real, often on themselves, having lost legs in IED blasts. It was also interesting that such a small item could mean the difference between life and death.'

Overall the team really enjoyed the experience and opportunity to gain a tiny insight into life in the military, which helped us gain more understanding of the experiences of our participants.



Visiting PhD Student: Hannah Cockram



Last week we had the pleasure of welcoming University of South Australia PhD student Hannah Cockram to ADVANCE. She spent the day with the clinical team, observing a participants visit, and all of the assessments done at ADVANCE.

Hannah is working on her PhD in 'Supporting the wellbeing of veterans and their families as they transition through the Invictus Pathways Program.'

It was lovely to have a visitor from so far afield and we wish her every success!

Community BOOK REVIEW

Anatomy of a Soldier

Anatomy of a Soldier by Harry Parker tells the story of Captain Tom Barnes, a 25-year-old British army Captain (probably stationed in Afghanistan - although the book never defines the actual field of combat) covering his deployment and then his fight to survive and adapt after stepping on an improvised explosive device and losing both his legs.

The structure is of relatively short chapters, where unexpectedly the narration comes from the witness of 45 (in many cases extraordinarily diverse and unusual) objects that play a role in and relate the tale of Barnes' wounding, recovery, and rehabilitation (a gun, helmet, wheelbarrow, virus, catheter, battery, rug). Without knowing this, reading the first few chapters is a bit disconcerting but it's well worth sticking with it as the book is well-crafted and a great read.

The story almost nightmarishly flits from the voice of one witness to another with a swiftness and brevity which reflects the rapidity with which the action of battle occurs. This sense of fracture is compounded by a non-linear structure - in that, the narrative jumps around in time. The disorientation the reader can feel at times in this approach, reflects and seems to capture both the chaos of war and Barnes' own displacement as he comes to terms with the loss of his limbs and his sense of purpose as a soldier who can no longer continue to do the job he loves and is good at. The different voices and viewpoints are like bringing together shattered particles again reflecting the explosion, the physical and psychological fragmentation of Barnes himself.

Giving a voice to the inanimate objects is an interesting approach and provides some surprisingly moving moments. I found that it wasn't so much the army kit but the perspective of some of the clinical objects such as the forceps and the breathing apparatus which held my attention. Barnes's mother's handbag - a poignant symbol of maternalism - transitions from a homely kitchen where it's positioned next to the 'dog lead' to the frightening unknown of Selly Oak Hospital intensive care unit and is as unsettling as the description of the blast itself. Often the objects treat Barnes as just another object, defining him by his service number instead of his name. There are some nice touches, which the fluidity of the timeline enhances, where one object makes a brief reference to one of the other narrational objects, creating a web of connection. There are also some quite poignant contrasts in objects such as the army boot, which we know will become redundant after Barnes is blown up, and a Chinese knock-off pair of Nikes which is a proud reward and becomes a sort of insignia of his affiliation to the radical cause for a young insurgent who helped in the creation of the IED.

When you understand who Harry Parker is, someone who comes from a long line of soldiers, who served, was critically wounded in Afghanistan and who now walks with bilateral prosthetics, it adds to the authenticity of the story.

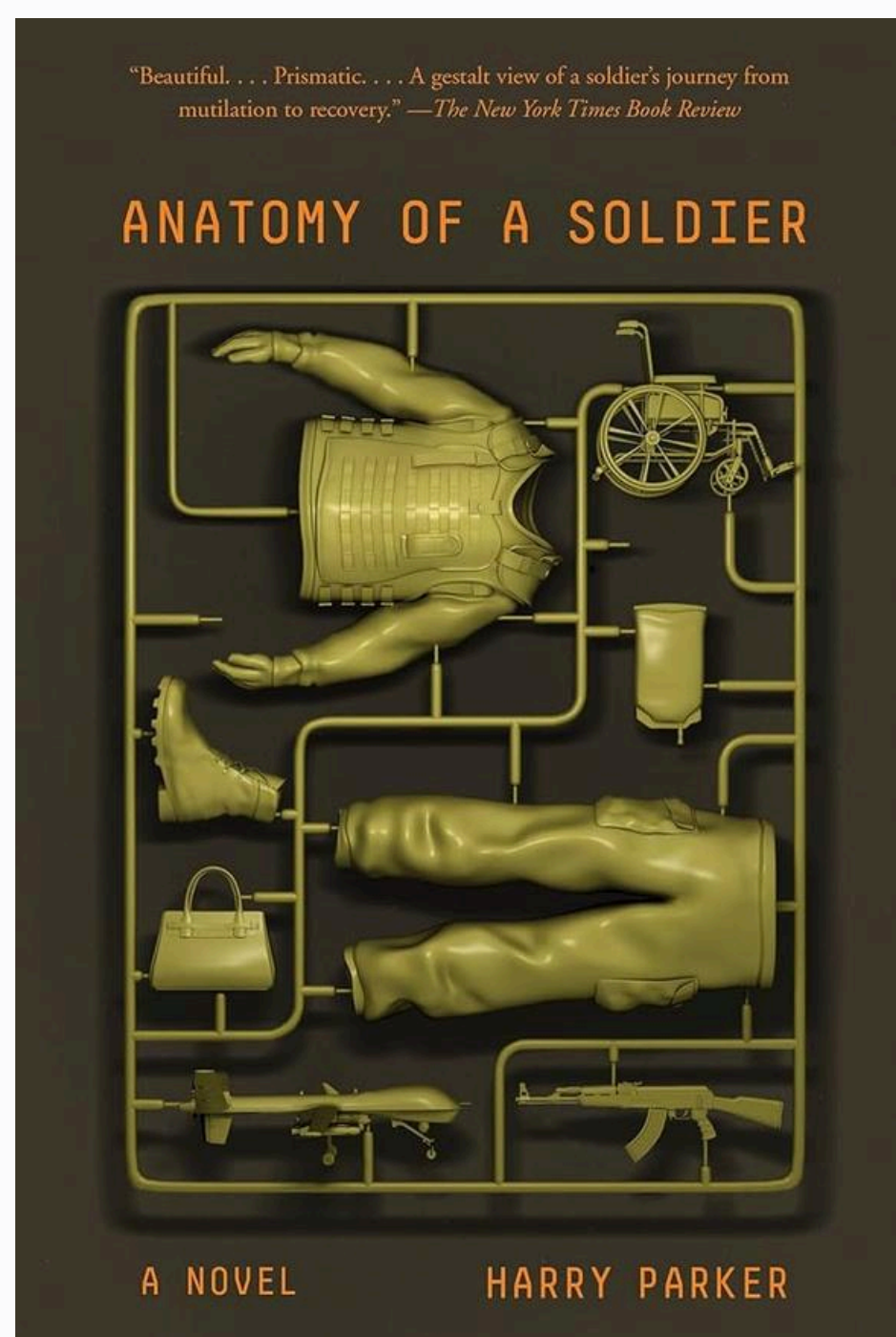
Recommended read? Definitely, Parker has written about what he knows and the unusual way he has done so makes this book stand out in the genre of military writing.



Jocelyn Keshet-Price
Senior Clinical Research Nurse
ADVANCE Study

An informative article on Harry Parker and his thoughts about writing Anatomy of a Soldier can be found here:

[READ MORE](#)



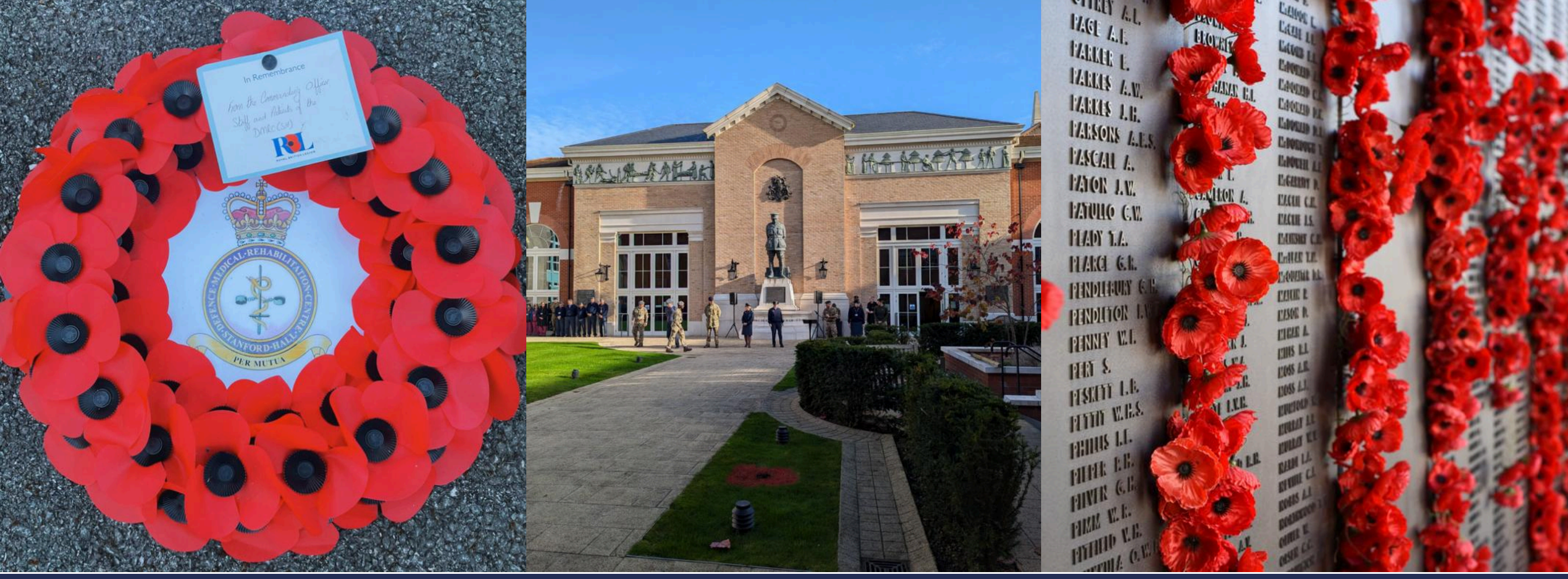
Remembrance 2024

This year marks the 80th anniversaries of momentous battles and turning points of the Second World War.

This year also marks the 10th anniversary of the end of combat operations by British Armed Forces in Afghanistan (Operation Herrick). Some 150,000 British Armed Forces personnel served in Afghanistan, and 457 lost their lives.

ADVANCE staff came together with staff, patients and families across the DMRC to remember our fallen, those who served on Operations past and those deployed around the globe today. For those we have lost, their courage and sacrifice must never be forgotten.

At the going down of the sun and in the morning, We will remember them.



Community **TEAM INTERVIEW**

Meet the Team: Severija Juškaitė



Severija Juškaitė
Research Assistant
King's College London

What is your role within ADVANCE?

I work as a research assistant, primarily handling recruitment. This involves managing all forms of communication with our participants, from letters and emails to phone calls, to schedule and coordinate their visits. So, if you've received an email inviting you to return for another appointment, chances are it was from me!

What jobs did you have before joining ADVANCE?

During university, I worked as a bartender, and after graduating, I spent a year at a mental health care home, supporting individuals with severe mental health challenges and complex needs.

What do you enjoy most about your job?

I really enjoy chatting with participants during booking calls and appreciate the structured, organised nature of the work.

What is the most interesting thing about our research?

I am most interested in mental health outcomes and their associated factors.

If you could see all our participants together, what would you say to them?

Thank you for taking the time to participate in the study and for always being so kind and friendly on the phone!

What is your favourite meal?

Probably dessert—I have a massive sweet tooth and love to bake.

What is your favourite drink?

It changes with the seasons, so right now it's an oat latte and mulled wine.

What is the last book you read?

It was Little Eyes by Samanta Schwebelin—I loved it! The whole book felt like a Black Mirror episode.

You are stuck on a desert island - who are you taking with you?

My best friend and her cat, Theodore—even a desert island would be fun with them!

What was no. 1 in the UK charts on the day you were born?

Westlife - If I Let You Go, first time I listened to it was while doing this segment.

Community **NEW TEAM MEMBERS**



Nicola Edmonds
Administrator

Nicola joined the ADVANCE team in September 2024 as an ADVANCE Study administrator. She will be contacting participants and booking them in for their ADVANCE visits. She will be working closely with other members of the team to ensure the smooth running of the project.



Jessica Valentine-Short
Communications Manager

Jessica joined ADVANCE in September 2024. As the ADVANCE Communications Manager she is responsible for the ADVANCE website, internal communications and most importantly, communicating the stories and events from across the ADVANCE teams and participants.



Emily Williamson
Data Manager

Emily joined ADVANCE in December 2024. She studied BSc in Human Biology at the University of Birmingham and an MSc in Genomic Medicine at Imperial College London. Her role will involve managing and cleaning data collected from the study participants as well as supporting Researchers and Data Users with the data access requests.



Max Matravers
Clinical Project Assistant

Max joined the ADVANCE team in November 2024. His main role is to carry out neuropsychological assessments for ADVANCE Traumatic Brain Injury (TBI) study. Max studied BA Psychology and Philosophy at the University of Durham.



Sandra Simpson
Clinical Project Assistant

Sandra joined the ADVANCE Team in 2024 as a Clinical Project Assistant. Sandra's role is to assist in the collection of the neuropsychiatric assessments ADVANCE Traumatic Brain Injury (TBI) study. Sandra also assists with the collection and processing of MRI brain scan data.

Community
KEY DATES & INFO

NEW!
Get booked in!
Appointments available

FESTIVE CLOSURE
Closed: **20th Dec**
Reopening: **6th Jan**

Community
MERRY CHRISTMAS



Merry Christmas &
a Happy New Year

From all of us at

