



ARMED
SERVICES
TRAUMA
REHABILITATION
OUTCOME
STUDY

Study protocol for a prospective, longitudinal cohort study investigating the medical and psychosocial outcomes of UK combat casualties from the Afghanistan war: the ADVANCE Study

AN Bennett, et al. DOI: 10.1136/bmjopen-2020-037850.

Published in *BMJ Open* in Oct 2020; access the full article [here](#).

Background

The Afghanistan war (2003–2014) was a unique period in military medicine. Many service personnel survived injuries of a severity that would have been fatal at any other time in history. The long-term health outcomes of such injuries are unknown. The **Armed Services Trauma Rehabilitation Outcome (ADVANCE)** Study a is a 20-year prospective cohort study which aims to determine the long-term effects on both physical and psychosocial health of servicemen surviving such severe combat related trauma.

Methods and analysis

Approximately 1,200 Afghanistan-deployed male UK military personnel and veterans have been recruited and will attend six study visits - a baseline visit and five follow-up visits at approximately 3, 6, 10, 15 and 20 years. Half of the participants have sustained combat trauma, and the other half act as the control group and have been frequency matched based on deployment to Afghanistan, age, sex, service, rank and role. Participants undergo a series of physical health tests and questionnaires through which information is collected on cardiovascular disease (CVD), CVD risk factors, musculoskeletal disease, mental health, functional and social outcomes, quality of life, employment and mortality. The Study has a Ministry of Defence Research Ethics Committee approval.

Hypotheses and objectives

The objective of the ADVANCE Study is to investigate the long-term medical and psychosocial outcomes of UK military personnel who sustained combat trauma. We hypothesise 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.



Strengths and limitations of ADVANCE

- The ADVANCE Study is, worldwide, the only longitudinal cohort study evaluating the effect of combat trauma on a range of health indicators in military personnel who served in the Afghanistan war.
- ADVANCE will provide a wide range of longitudinal data across sociodemographic, physical health and mental health outcomes, providing evidence for incidence and risk of disease and non-disease outcomes.
- ADVANCE will provide high levels of evidence that will influence future healthcare of combat and major trauma patients.
- Participants were injured between 5 and 16 years prior to baseline data collection, and the length of time since injury may have an effect on various physical and mental health indicators.
- As with any cohort study, there is potential for response bias.

Participant consultation

Rehabilitation of injured military personnel from the Afghanistan war took place at the Defence Medical Rehabilitation Centre (DMRC) at Headley Court. Ex-patients of DMRC Headley Court were involved in the development and design of ADVANCE from the outset, as were a number of experienced clinicians, regarding appropriate outcomes, feasibility, tolerability, priorities and recruitment. Ongoing participant consultation continues to influence the ADVANCE Study design and operation.

Many thanks to the ADVANCE cohort for taking part and to all ADVANCE funders for their generous support.