



This annual report provides statistical information on the number of UK Service personnel who suffered an amputation for the five-year period 1 April 2014 – 31 March 2019. An amputation is the traumatic (accidental) or surgical removal of part of the body, and can range from the loss of entire limbs, to the loss of part of a finger or toe. The numbers of “significant multiple amputees”; comprising of the loss of more than one limb, and the number of UK Service personnel with an amputation who have been medically discharged have been provided.

Information on the number of UK Service personnel who suffered a traumatic or surgical amputation resulting from injuries sustained in Afghanistan and Iraq has also been provided.

Key Points

Financial Year 2018/19

- There were **17** UK Service personnel who sustained a traumatic or surgical amputation due to injuries or illness (Table 1).
 - There were **no** UK Service personnel whose injuries included a traumatic or surgical amputation due to injuries sustained in **Afghanistan** (Table 2).
 - There were **no** UK Service personnel whose injuries included a traumatic or surgical amputation due to injuries sustained in **Iraq** (Table 3).

Overall time period

- **1 April 2014 to 31 March 2019:** In the latest five-year period, there were **154** UK Service personnel who sustained a traumatic or surgical amputation because of injuries or illness. Of these, **one quarter** have been medically discharged^a. The number of amputations suffered by UK troops has decreased over recent years due to a reduction in operational tempo in combat zones.
- **7 October 2001 to 31 March 2019:** There were **301** UK Service personnel whose injuries included a traumatic or surgical amputation because of injuries sustained in **Afghanistan**. Of these, **three quarters** have been medically discharged^a. The numbers of UK Service personnel serving in Afghanistan that suffered amputations was highest during 2009/10 and 2010/11, coinciding with periods of high operational tempo.
- **1 March 2003 to 31 March 2019:** There were **32** UK Service personnel whose injuries included a traumatic or surgical amputation because of injuries sustained in **Iraq**. Of these, **half** have been medically discharged^a.

^a As at 31 March 2019

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Background quality report: The Background Quality Report for this publication can be found [here](#).

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Would you like to be added to our **contact list**, so that we can inform you about updates to these statistics and consult you if we are thinking of making changes? You can subscribe to updates by emailing DefStrat-Stat-WDS-Pubs@mod.gov.uk

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Other bulletins in this series and the supplementary tables (Annexes A and B) containing all data presented in this publication can be found at:

<https://www.gov.uk/government/collections/uk-service-personnel-amputation-statistics-index>

Introduction

This report has been provided in response to requests for information about injured UK Service personnel. The two main purposes of this report are:

- To report on the impact of operations in Afghanistan and Iraq, with regards to amputations sustained by Service personnel.
- To inform the NHS and charities of the potential caseload involved in caring for amputees discharging from the UK Armed Forces who are eligible to access the veteran's prosthetics and rehabilitation programme.

Defence Statistics ran a consultation regarding the proposal to cease this Official Statistic which ended on 24 August 2017. The decision was made to continue the publication with the focus being on all UK Service personnel amputees during the past five years, with sub-sections on amputations that were as a result of deployment in Iraq or Afghanistan. The consultation outcome can be found here: <https://www.gov.uk/government/consultations/proposed-cessation-of-the-mods-afghanistan-and-iraq-amputation-official-statistics>

A traumatic or surgical amputation can range from the loss part of a finger (e.g. fingertip) or toe up to the loss of entire limbs. This definition only includes personnel who survived their injuries.

A UK Service personnel is defined as an **amputee** if they are recorded as having an amputation in any one of the following data sources: Complex Trauma database, Prosthetics database, Defence Patient Tracking System, Joint Theatre Trauma Register, Armed Forces Compensation Scheme, Health and Safety systems, Defence Medical Information Capability Programme, Directorate of Judicial Engagement Policy.

Information on the types of amputations sustained has not been reported because it would increase the risk of an individual being identified and may compromise their right to medical confidentiality. In addition, there is a risk of compromising operational security by providing information that could be used by the enemy to assess the effectiveness of their attacks.

Introduction (Cont.)

The Defence Medical Rehabilitation Centre (DMRC) is the MOD's premier facility for the rehabilitation of injured Service personnel: it provides clinical rehabilitation, training and research for the operational role, to contribute to optimal military health and fitness. The Department gives the highest priority to the care pathway for injured personnel, including the role of the DMRC in rehabilitation and, to maintain this, constantly invests in staff, facilities, patient welfare and treatments. All limb amputations are managed at DMRC. Prosthetic digits and orthotics were provided by DMRC, but they were relatively rare because most prosthetic digit solutions are cosmetic rather than truly functional and patients rarely requested them. For this reason, personnel with the loss of only a digit or partial digit were not likely to be patients at DMRC.



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Figure 1

Prosthetic limbs are lined up against a wall at the Defence Medical Rehabilitation Centre. This was ahead of an announcement for new funding to ensure injured UK troops get access to the most technologically advanced prosthetics available.

Service personnel who suffer limb amputation can continue in-Service if they regain sufficient medical fitness, it is in the best interests of the Service if the individual wishes to do so.

Service personnel with medical conditions (including amputations) or fitness issues which affect their ability to perform their duties will generally be referred to a medical board for a medical examination and review of their medical grading. In clear cut cases where the individual's fitness falls below the Service employment and retention standards the board will recommend a medical discharge. In many cases however, the patient will first be downgraded, to allow for treatment, recovery and rehabilitation. For personnel who do not make a total recovery, the board may recommend the patient is retained as permanently downgraded with limited duties, or they may recommend a medical discharge. The recommendation is then forwarded to personnel administration units or an employment board for ratification or decision and action.

Service personnel who leave the Armed Forces following their amputation will have their care provided by the NHS. In October 2011, the Government announced an investment of up to £15 million to improve prosthetics for military veterans who have lost a limb due to activities while serving their country. The Department of Health introduced several national specialist prosthetic and rehabilitation centres for amputee veterans across the country, working with charities such as Help for Heroes and BLESMA (The British Limbless Ex-Service Men's association). More information can be found at;

<https://www.gov.uk/government/news/improved-prosthetics-services-for-military-veterans>

<https://www.nhs.uk/NHSEngland/Militaryhealthcare/veterans-families-reservists/Pages/veterans-prosthetics-programme.aspx>

UK Service personnel amputations

1 April 2014 to 31 March 2019

Table 1 presents the number of UK Service personnel who sustained a traumatic or surgical amputation, partial or complete for either upper or lower limbs, including digits, because of injuries or illness during the past five financial years.

This includes personnel deployed on operations in Afghanistan and Iraq and personnel that have been injured or had an amputation because of an illness in non-operational environments.

Table 1: UK Service personnel¹ with partial or complete amputations, Numbers

1 April 2014 to 31 March 2019

Financial year ²	UK Service personnel
All	154
14/15	45 r
15/16	31 r
16/17	35 r
17/18	26 r
18/19	17

Source: Complex Trauma database, Prosthetics database, Defence Patient Tracking System, Joint Theatre Trauma Register, Armed Forces Compensation Scheme, Health and Safety, Defence Medical Information Capability Programme, Directorate of Judicial Engagement Policy. See Background Quality Report for further information.

1. Includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment and RAF personnel. Reservist personnel are only included in the operational data. Civilians and other Nations Service personnel have been excluded.
 2. If a UK Service person suffers more than one amputation over a period, they will be counted within the financial year when they sustained their first amputation.
- r indicates a revision due to improved data received.

Financial Year 2018/19: There were **17** UK Service personnel who sustained a partial or complete amputation because of injuries or illness.

During the latest five-year period 1 April 2014 to 31 March 2019:

There were **154** UK Service personnel who sustained a partial or complete amputation because of injuries or illness. Of these:

- **142** were sustained in locations other than Iraq or Afghanistan.
- **Two thirds** (n=108) were for digits only^b.
- **Three out of five** (n=98) were still in service.
- **One quarter** (n=38) have been medically discharged^c, of which **two thirds** (n=26) were discharged with a principle cause of musculoskeletal disorders and injuries (Table 5, Annexes A and B).

^b Digits include fingers, thumbs and toes. Amputations can be partial (e.g. fingertip) or complete.

^c As at 31 March 2019

UK Service personnel amputations, Afghanistan and Iraq

7 October 2001 to 31 March 2019

Operations in Afghanistan:

Operation VERITAS: UK operations in Afghanistan which started in October 2001 and ended 31 March 2006.

Operation HERRICK: UK operations in Afghanistan which started 1 April 2006 and ended on 30 November 2014.

Operation TORAL: UK's post 2014 contribution to operations in Afghanistan under the NATO RESOLUTE SUPPORT MISSION.

Operations in Iraq:

Operation TELIC: UK operations in Iraq which started in March 2003. There was a drawdown of troops in July 2009 and Operation TELIC closed on 21 May 2011.

See Glossary for further details

Following enhanced first aid delivered in the field, most amputees would have been medically evacuated to the British Military field hospitals (Camp Bastion in Afghanistan and Basra in Iraq). At the field hospital the patient would have been fully stabilised and any emergency procedures would have been carried out, prior to aeromedical evacuation to the Royal Centre for Defence Medicine (RCDM).

Since 2001, the Royal Centre for Defence Medicine (RCDM), based at the University Hospital Birmingham Foundation Trust (UHBFT), has been the main receiving unit for military casualties evacuated from an operational theatre. In the Birmingham area, military patients can benefit from the concentration of five specialist hospitals (including Queen Elizabeth) to receive the appropriate treatment. Queen Elizabeth is at the leading edge in the medical care of the most common types of injuries (e.g. polytrauma) our casualties sustain, and most casualties will be treated there, but others may be transferred to another hospital (in Birmingham or elsewhere) if that is where the best medical care can be given.

Military patients will require further rehabilitation care following initial hospital treatment, in most cases they are referred to the DMRC, which provides advanced rehabilitation and includes inpatient facilities. The prosthetics department is also located at the DMRC, fitting limbs to amputee patients.

Defence Statistics has published a one-off Official Statistic on the types and mechanism of injuries sustained by UK Service personnel in Afghanistan. This report covers the period from when the field hospital opened, 1 April 2006, to the closure of Op HERRICK, 30 November 2014. This report can be found here: <https://www.gov.uk/government/statistics/types-of-injuries-sustained-by-uk-service-personnel-on-operations-in-afghanistan-op-herrick-1-april-2006-to-30-november-2014>

Financial Year 2018/19:

There were **no** UK Service personnel with injuries sustained in Afghanistan or Iraq in the latest year that included a traumatic or surgical amputation.

During the overall time period 7 October 2001 to 31 March 2019:

Afghanistan:

There were **301** UK Service personnel with injuries that included a traumatic or surgical amputation (Table 2, Annexes A and B).

Three quarters (n=225) have been medically discharged, of which the majority (n=198) were discharged with a principal cause of musculoskeletal disorders and injuries (Table 6, Annexes A and B).

UK Service personnel amputations, Afghanistan and Iraq (Cont.)

7 October 2001 to 31 March 2019

The numbers of UK Service personnel that suffered amputations was highest during 2009/10 and 2010/11, coinciding with a period of high operational tempo. The number of amputations suffered by UK troops serving in Afghanistan has decreased over the last eight years. This was due to a reduction in operational tempo of UK Service personnel as responsibility for security transitioned to the Afghanistan National Security Force (ANSF), and a reduction in the numbers of UK Service personnel deploying to Afghanistan.

Iraq:

There were **32** UK Service personnel with injuries that included a traumatic or surgical amputation (Table 3, Annexes A and B).

Half (n=16) have been medically discharged, of which the majority of whom (n=13) were discharged with a principal cause of musculoskeletal disorders and injuries (Table 7, Annexes A and B).

2006/07 recorded the highest annual number of UK Service personnel who sustained a partial or complete limb amputation because of injuries sustained on operations in Iraq, with **11** amputees.

Significant Multiple Amputees, Afghanistan and Iraq

7 October 2001 to 31 March 2019

Significant Multiple Amputee

A UK Service person who has suffered limb amputations at, or above, the wrist or ankle on more than one limb (that is, they have lost at least two hands and/or feet).

Financial year 2018/19:

There were **no** UK Service personnel identified as significant multiple amputees in the latest year because of injuries sustained in Afghanistan or Iraq.

During the overall period, 7 October 2001 to 31 March 2019:

Afghanistan:

There were **113** UK Service personnel identified as significant multiple amputees because of injuries sustained in Afghanistan. Thus, **38%** of all traumatic or surgical amputees suffered due to injuries sustained in Afghanistan were SMAs.

2010/11 recorded the highest annual number of UK Service personnel who sustained significant multiple amputations because of injuries in Afghanistan with **38** amputees.

Iraq:

There were **fewer than five** UK Service personnel identified as significant multiple amputees because of injuries sustained in Iraq.

Methodology

This section provides a brief summary of the methodology and data sources; more detailed information is available in the background quality report for this bulletin.

Amputations Data (see Background Quality Report for more information on each data source)

The amputation data is compiled from ten separate sources:

- UK Service personnel who have sustained a partial or complete limb amputation as a result of injuries on Op VERITAS, Op HERRICK and Op TELIC prior 1 April 2006 have been identified from the dataset used to compile the following research paper: Dharm-datta, S; Etherington, J.; Mistlin A. & Clasper J, 2011, Outcome of amputees in relation to military Service, Journal of Bone and Joint Surgery - British Volume, Vol 93-B, Issue SUPP_I, 52.

From 1 April 2006 onwards, the data is compiled from nine sources;

- The Complex Trauma database managed by the Defence Medical Rehabilitation Centre, which commenced in June 2008 to record information on patients receiving in-patient care on the complex trauma ward
- The Prosthetics database managed by the Defence Medical Rehabilitation Centre, which commenced in June 2006 to record information on patients fitted with a prosthetic limb(s).
- The Defence Patient Tracking System (DPTS) which commenced on 8 October 2007. The DPTS was set up to enable the capture of tracking data for aeromedically evacuated patients at the place where healthcare is being delivered along the care pathway.
- The Joint Theatre Trauma Register (JTTR) which commenced during 2003 to improve the care of the seriously injured patient from the point of injury to the point of discharge from hospital treatment.
- Defence Medical Information Capability Programme (DMICP) has a centralised data warehouse of coded information. It is the source of electronic, integrated healthcare records for primary healthcare and some MOD specialist care providers. DMICP was rolled out in 2007 and legacy medical data for currently serving personnel was migrated across during rollout.
- The Health and Safety database. MOD personnel report health and safety incidents using a variety of reporting mechanisms. Since 2005, Armed Forces personnel and civilians report incidents to Incident Notification Cells or via their on-site Safety, Health, Environment and Fire (SHEF) advisors. Defence Statistics Health collate this data into a single Health and Safety dataset.
- Medical discharges are the result of several specialists (medical, occupational, psychological, personnel, etc.) coming to the conclusion that an individual is suffering from a medical condition that pre-empts their continued service in the Armed Forces. Statistics based on these discharges do not represent measures of true morbidity or pathology. At best they indicate a minimum burden of ill-health in the Armed Forces. Furthermore, the number and diversity of processes involved with administering a medical discharge introduce a series of time lags, as well as impact on the quality of data recorded.
- The Armed Forces Compensation Scheme (AFCS) is a no-fault scheme which provides compensation for injury, illness or death caused by service in the UK Armed Forces on or after 6 April 2005.
- Directorate of Judicial Engagement Policy (DJEP). The Common Law Claims & Policy Division (CLC&P) is responsible for processing common-law, non-contractual compensation claims against and on behalf of the Ministry of Defence (MOD) at home and abroad.

Methodology (Cont.)

All data sources are cross-checked against each other and records that don't appear in all datasets are manually reviewed and, where possible followed up to ensure that an individual is an amputee. Further validation steps are then taken to ensure a unique count of amputees is taken from the nine datasets and presented in the publication.

The figures released in previous publications are checked to see if they require revisions and numbers smaller than five are suppressed, to avoid providing disclosive information on individuals.

This publication does not include UK Service personnel who have had an amputation since leaving the Armed Forces.

Table 1 in the report, and Tables 1 to 4 in Annexes A and B are presented by the financial year in which the amputation was sustained, for patients that have a surgical and/or elective amputation this may not be in the same year in which the injury was sustained. If a UK Service personnel suffers more than one amputation over a period as a result of injuries sustained in the same incident, then in this statistical publication they will be counted within the financial year where they sustained their first amputation. If any subsequent amputation results in the individual being a significant multiple amputee, then in these statistics they will be counted within the year where they became a significant multiple amputee (Table 4 Annexes A and B).

Glossary

	Amputee	A traumatic or surgical amputation can range from the loss of part of a finger (including fingertip) or toe up to the loss of entire limbs. This definition only includes personnel who survived their injuries. A UK Service personnel is defined as an amputee if they are recorded as having an amputation in the following data sources: Complex Trauma database, Prosthetics database, Defence Patient Tracking System, Joint Theatre Trauma Register, Armed Forces Compensation Scheme, Health and Safety, Defence Medical Information Capability Programme, Directorate of Judicial Engagement Policy.
SMA	Significant Multiple Amputation	Significant multiple amputees are defined as live UK Service personnel who have suffered limb amputations at or above the wrist or ankle on more than one limb (that is, they have lost at least two hands and/or feet) using the Abbreviated Injury Scale (AIS) Dictionary 2005 (Military Edition). This definition only includes personnel who survived their injuries.
JTTR	Joint Theatre Trauma Register	The Joint Theatre Trauma Register (JTTR) commenced during 2003 to improve the care of the seriously injured patient from the point of injury to the point of discharge from hospital treatment.
ANSF	Afghanistan National Security Force	Ultimately, Afghans must be able to secure and stabilise their country themselves. NATO training efforts in Afghanistan focus on increasing the capacity of Afghan security forces in order gradually to hand over lead responsibility for security to the Afghans.
NATO	North Atlantic Treaty Organisation	NATO's essential purpose is to safeguard the freedom and security of its members through political and military means.
	NATO Resolute Support Mission	Following the completion of the mission of the International Security Assistance Force (ISAF) at the end of 2014, a new, follow-on, NATO-led mission called Resolute Support was launched on 1 January 2015 to provide further training, advice and assistance for the Afghan security forces and institutions.
	Aeromedical Evacuation	Aeromedical Evacuation (AE) is the medically supervised movement of patients to and between medical treatment facilities by air transportation. See Background Quality Report for further information on Aeromed Evacuations.
	Field Hospital	Injured or ill UK Service personnel on operations were treated at the UK Field Hospital in Afghanistan (Camp Bastion) or Iraq (Basra), or coalition medical facilities.

Glossary (Cont.)

Operations in Afghanistan

- OP VERITAS:** UK operations in Afghanistan which started in October 2001 and ended 31 March 2006. The UK was involved in Afghanistan alongside Coalition forces, led by the US under Operation Enduring Freedom (OEF), from the first attacks in October 2001.
- Op HERRICK:** UK operations in Afghanistan which started 1 April 2006 and ended on 30 November 2014. UK Forces were deployed to Afghanistan in support of the UN authorised, NATO led International Security Assistance Force (ISAF) mission.
- Op TORAL:** Started 1 December 2014 and is the UK's post 2014 contribution to operations in Afghanistan under the NATO RESOLUTE SUPPORT MISSION.

Operations in Iraq

- Op TELIC:** UK operations in Iraq which started in March 2003. There was a drawdown of troops in July 2009 and Operation TELIC closed on 21 May 2011. UK Forces were deployed to Iraq to support the Government's objective to remove the threat that Saddam posed to his neighbours and his people and, based on the evidence available at the time, disarm him of his weapons of mass destruction. The Government also undertook to support the Iraqi people in their desire for peace, prosperity, freedom and good government.

Further Information

Disclosure Control

In line with JSP 200 (April 2016), the suppression methodology has been applied to ensure individuals are not inadvertently identified dependent on the risk of disclosure. Numbers fewer than five have been suppressed and presented as '~'. Where there was only one cell in a row or column that was fewer than five, the next smallest number has also been suppressed so that numbers cannot simply be derived from totals.

Pseudo-anonymisation

Prior to analysis the data sources have been linked using a pseudo-anonymisation process. The individual identifiers were stripped from datasets and replaced by a pseudo-anonymiser, generated by an automated sequential numbering system. The key to the system is that it recognizes previous occurrences of a given Service number and allocates the same pseudo-anonymiser on each occasion. The pseudo-anonymisation process can only be reversed in exceptional circumstances controlled by the Caldicott Guardian under strict protocols.

Symbols

~ Figure has been suppressed due to Statistical Disclosure Control
r Revised

Revisions

The amputation statistics are subject to revisions as the amputations data is a live data system continually updated. Doctors may recommend and/or patients may elect to have an amputation at any point during their care pathway. As a result, any additional live UK Service personnel identified as an amputee from our data sources have been included in this report. Any amendments made since the last release have been indicated by an 'r'.

In Table 1, overall figures for the following years have been revised due to improved data received:

14/15 r up by 1
15/16 r up by 1
16/17 r up by 1
18/19 r up by 1

In Table 2 Afghanistan (Annexes A and B), figures for the following years have been revised due to improved data received:

11/12 r up by 2
12/13 r up by 1

In Table 4 Significant multiple amputees (Annexes A and B), figures for the following year have been revised due to improved data received:

01/02 Iraq r down by 1

Further Information (cont.)

Contact Us

Defence Statistics welcome feedback on our statistical products. If you have any comments or questions about this publication or about our statistics in general, you can contact us as follows:

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If you require information which is not available within this or other available publications, you may wish to submit a Request for Information under the Freedom of Information Act 2000 to the Ministry of Defence. For more information, see:

<https://www.gov.uk/make-a-freedom-of-information-request/the-freedom-of-information-act>

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