

## **Background Quality Report**

### **Quarterly Afghanistan and Iraq Amputation Statistics**

#### **1. Introduction**

##### **Overview**

The Quarterly Amputation Statistic was first published in February 2010, providing statistical information on the number of UK Service Personnel who as a result of an injury sustained whilst deployed in Iraq or Afghanistan have suffered a traumatic or surgical amputation. This ranges from the loss of part of a finger or toe up to the loss of entire limbs. In addition, the numbers of “significant multiple amputees” are provided on an annual basis, as are the number of surviving amputees that have been medically discharged. Defence Statistics have also incorporated an annex to include the number of UK Service Personnel that have had an amputation as a result of injuries or illness sustained in locations that were not Afghanistan or Iraq, to give a fuller picture of amputees within the UK Armed Forces.

This report was provided in response to the increasing number of requests for information about injured UK Service Personnel. The MOD are committed to making information on Operational Casualties public but have to draw a line between how much information is provided regularly in the public domain and information which compromise operational security of UK Armed Forces personnel or which risks breaching an individual’s right to medical confidentiality. This report is supporting the MOD’s commitment to release information wherever possible.

##### **Methodology and Production**

The quarterly statistic includes:

- Counts of the number of surviving amputees from Iraq and Afghanistan, by quarter and financial year, a month in arrears of the latest quarter.
- Counts of significant multiple amputees from Iraq and Afghanistan, provided on an annual basis, a month in arrears of the last quarter of the financial year.
- Counts of surviving amputees as a result of injuries sustained in locations other than Iraq and Afghanistan, provided on an annual basis, a month in arrears of the last quarter of the financial year.
- Counts of the number of surviving UK Service Personnel amputees that have been medically discharged, updated in the first report released after the ‘Medical Discharges in the UK Regular Armed Forces’ report, which is released in July of each year.

The amputation figures presented are by the quarter/year an amputation was sustained, for patients that have a surgical and/or elective amputation this may not be in the same quarter/year in which the injury was sustained. If a UK Service personnel suffers more than one amputation over a period of time as a result of injuries sustained in the same incident then in this statistical publication they will be counted within the quarter/year where they sustained their first amputation. In the Significant Multiple Amputees (SMA) table, individuals are counted in the financial year in which they become an SMA. As such, figures presented are provisional and subject to revisions with each new publication.

The amputation data is compiled from five separate sources. Data prior to 1 April 2006 is sourced from a dataset used to compile a 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 four sources; The Complex Trauma database, Prosthetics Database, Defence Patient Tracking System and the Joint Theatre Trauma Register. All data sources are cross-checked against each other and records that don't appear in all datasets are followed up to ensure that an individual is definitely an amputee. Further validation steps are then taken to ensure a unique count of amputees is taken from the four datasets and presented in the publication.

Once the data is confirmed as being accurate, the tables can be populated. 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. If suppression is needed, previous publications are also checked to ensure numbers cannot be derived from totals and would therefore need to be revised.

The Quarterly Amputation Statistic is an Official Statistic and is produced in line with the UK Code of Practice for Official Statistics. The publication date is pre-announced on the UK National Statistics Publication Hub. 24 hour pre-release access is provided to an agreed list of people, with the list being available on the Gov.UK website (<https://www.gov.uk/government/publications/defence-statistics-pre-release-access-list>). A ministerial submission accompanies the pre-release publication, which contains the key information about the publication and also lines to take for Defence media communications.

### **Contact details**

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We welcome feedback on this Background Quality Report or any of the statistics mentioned.

## **2. Relevance**

These statistics are provided in response to the increased number of requests for information on the injuries sustained by UK Service Personnel on Operations. During 2009 the Department had numerous requests for information regarding the number of UK Service personnel who have sustained an amputation as a result of injuries in Iraq or Afghanistan; these included an e-petition request to 10 Downing Street and a question being raised in Prime Ministers Questions about whether the Prime Minister would release amputation numbers. The Prime Minister agreed that the stats would be produced quarterly and published on the internet.

The release is used to answer parliamentary questions and Freedom of Information requests. The report is also useful for internal customers in Surgeon General's department as, for example, the statistics are used to inform policy and funding decisions in the Prosthetics department at the Defence Medical Rehabilitation Centre (DMRC).

This report is currently limited in terms of the amount of information it can include, specifically in relation to the type of amputations seen (e.g. lower limb/upper limb), as it can harm the Operational security of service personnel that are still deployed on Operations. At a time when UK Service Personnel are no longer deployed in Afghanistan, there will be scope to review the content of the report with key stakeholders, with a view to potentially including more information.

### **3. Accuracy and Reliability**

Defence Statistics use four sources of data to collate the amputation statistics for the period from 1 April 2006 onwards. It is therefore unlikely that an operational in-service amputee will not be picked up in one of these datasets and the figures presented are accurate. Data for amputations prior to April 2006 aren't available from these data sources (due to the systems not being implemented) so data is sourced from the dataset used in a research paper (Dharm-datta et al., 2011). Defence Statistics are unable to validate this data against other sources but it is the most accurate data held by the MOD.

Due to the lack of statistical analysis in this report, there are no estimates or potential for bias. The main sources of error within the report sit in the source data itself. Underreporting may be an issue as it is possible that a UK Service Person may leave service and then later have an elective amputation as a result of the injuries they sustained while on Operations but wouldn't be picked up in our datasets. On occasions, if an amputee only appears in one dataset, it can be unclear whether they are genuinely an amputee as the information provided is sometimes limited. We can normally clarify this with our data suppliers but for older records, this isn't always possible and gives rise to the potential for counting personnel as amputees who aren't actually amputees. Defence Statistics felt on balance it was more prudent to accept a false positive rather than a false negative.

### **4. Timeliness and Punctuality**

The report for the latest quarter is published a month after the end of the quarter i.e. for Quarter 1 (1 April - 30 June), the report will be published on 31st July (or the nearest available date). Data is requested from the relevant suppliers at DMRC in the first few days after the end of the latest quarter. It takes approximately 3 weeks for the data to be returned to our IT team, pseudo-anonymised, processed and the report produced.

All external publication deadlines have been met. Historic and planned publication dates can be found on the Publication Release Dates section of the Defence Statistics website and on the UK National Statistics Publication Hub.

The report was previously presented by calendar years but was changed to present by financial year in December 2010 at the request of Surgeon General, in order to align with

the Defence planning and business cycle. Historical publications that were produced by calendar year were removed from the website to avoid the potential for suppressed figures to be derived from totals.

## **5. Accessibility and Clarity**

The reports are published on the Gov.UK website at:

<https://www.gov.uk/government/publications/mod-national-and-official-statistics-by-topic>.

They can also be accessed via the UK National Statistics Publication Hub or through an internet search engine such as Google.

24 hour pre-release access to the report is available to a limited distribution list within the MOD. The full list can be found in the Pre-Release access list available on the Gov.UK website.

The statistics provided are straightforward counts in tables, with no deeper analysis provided. The associated commentary identifies the key changes in the data and explains the reasons for the changing time trends, where possible. Each table has a number of footnotes clarifying what is included/excluded and provides appropriate caveats. A detailed methodology presents the user with the data sources used and collection methods.

## **6. Coherence and Comparability**

The Defence Statistics figures on Operational Amputations to UK Service Personnel are the definitive statistics in the MOD. There are no other publically available regular publications on the numbers of amputees with which to ensure coherence.

Statistics on coalition amputees can be found on the internet although the definitions used for amputations differ, or are at least are unclear on how they're counted, making it difficult to compare trends with other nations.

The numbers of UK Service Personnel suffering amputations is comparable over time as there have not been any changes in the way amputees are defined or counted. Changes seen over time are merely reflective of changes in Operational tempo and tactical approach as operations in Iraq and Afghanistan have progressed.

## **7. Trade-offs between Output and Quality Components**

The main trade-off is between the level of information presented in the output, without breaching medical confidentiality or compromising operational security.

The MOD are committed to making information on Operational Casualties public but have to draw a line between how much information is provided regularly in the public domain and information which compromise operational security of UK Armed Forces personnel or which risks breaching an individual's right to medical confidentiality.

## **8. Assessment of User Needs and Perceptions**

Defence Statistics developed the Amputation Statistic in response to increased interest from the general public and Ministers in the injuries sustained by UK Service Personnel on Operations.

Users are encouraged to provide feedback on the publication itself and Defence Statistics also welcome feedback from any other internal and external customers. Defence Statistics seek advice from key internal stakeholders to ensure the commentary provided helps to adequately explain the trends seen in the data for users.

There is currently no process in place to assess the satisfaction of users for this report, though it is an objective of Defence Statistics (Health) to assess each part of the quality report for all of our Official and National Statistics. This will result in an assessment of user needs and may lead to a consultation process for internal and external users to assess their satisfaction with the report.

## **9. Performance, Cost and Respondent Burden**

To develop each quarterly report, it takes approximately 0.1 FTE to perform the analysis and compile the report. The burden on the data providers in DMRC is low as the upkeep of the databases forms part of their daily routines and they just provide us with the latest cut of data when we request it. Respondent burden is low as the data is obtained from administrative, clinical audit systems, namely the JTTR and Defence Patient Tracking System. These systems are maintained by other teams in Defence Statistics and MOD.

## **10. Confidentiality, Transparency and Security**

### **Security**

All Defence Statistics (Health) staff involved in the production of the amputation statistics have signed a declaration that they have completed the Government wide Protecting Information Level 1 training and they understand their responsibilities under the Data Protection Act and the Official Statistics Code of Practice. All MOD, Civil Service and data protection regulations are adhered to. The data is stored, accessed and analysed using the MOD's restricted network and IT systems. The databases supplied by our external customers are password protected.

### **Confidentiality**

Defence Statistics receive data from the Complex Trauma and Prosthetics team which contains service numbers. The data first goes to a different team in Defence Statistics to convert service numbers into random pseudo-anonymised personal identifiers, so the analysts never see service number level data. This enables the data to be linked with the other data sources, which have also already been pseudo-anonymised.

The tables in the report are scrutinised to ensure individual identities are not revealed inadvertently. In line with Defence Statistics' rounding policy for the health statistics (May, 2009), and in keeping with the Office for National Statistics guidelines, all numbers less than five are suppressed and presented as '~'. Where there is only one cell in a row

or column that is less than five, the next smallest number (or numbers where there are tied values) is also been suppressed so that numbers cannot simply be derived from totals.

**Transparency**

The Quarterly Amputations Statistic provides key features of the outputs and identifies any issues or caveats to the data. This quality report provides further information on the method, production process and quality of the output.