Background Quality Report

Monthly Afghanistan Casualty and Fatality Statistics

1. Introduction

Overview

The Monthly Casualty and Fatality Statistic was first published in April 2006, it provided statistical information on the number of UK Armed Forces personnel and UK Civilians, who died, were injured or became ill on Operations in Afghanistan. The report covered the time period 7 October 2001, (the start of Operations in Afghanistan) to present.

The 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. For these reasons information on the mechanism of injuries sustained and the types of injuries sustained was not provided in this publication.

Methodology and Production

The monthly statistic was released a fortnight in arrears of the latest month and included counts of:

- The number of Very Seriously Injured (VSI) and Seriously Injured (SI) casualties from Afghanistan.
- The number of field hospital admissions split by Disease or Non-Battle Injuries (DNBI) or Wounded in Action (WIA) from Afghanistan.
- The number of aeromedical evacuations from Afghanistan.
- The number of fatalities that occurred in Afghanistan.

The casualty and fatality figures presented were by the month/year of injury, illness or death occurred. If a UK Service personnel or UK Civilian suffered more than one injury or illness over a period of time they will all be counted.

The casualty data was compiled from three separate sources; Field Hospital Admissions from J97 Returns, Operational Emergency Department Attendance Register (OpEDAR), Joint Theatre Trauma Register (JTTR) and Whole Hospital Information System (WHIS), Very Seriously Injured (VSI) and Seriously Injured (SI) casualties from Initial Notification of Casualty (NOTICAS) and Aeromedical Evacuations from data supplied by the Aeromedical Evacuation Control Centre (AECC). For validation purposes all data sources are cross-checked against each other. The data is also cross checked against the Defence Patient Tracking System. Numbers from the NOTICAS, Field Hospital and Aeromedical Evacuations are presented individually and does not sum to the total number of personnel who sustained an injury or illness in that month. The reason for this is that individuals may appear in more than one of the data sets and will be counted in each data source and only a subset of the initial NOTICAS data is presented in this summary, i.e. only those who are VSI or SI.

The fatality data was compiled from; Notifications from Permanent Joint Headquarters (PJHQ) at the time of death for all Operational deaths, weekly notifications of all regular Armed Forces deaths from the Joint Casualty and Compassionate Cell (formerly the single Service casualty cells) and additional information on cause of death from military medical sources in the single Services. These records were then validated against the UK's Joint Theatre Trauma Registry (JTTR), which contains information recorded by one the UK's Trauma Nurses who attends the post mortems. A VSI or SI casualty who subsequently dies of their wounds (from hostile action) or from the injuries sustained (from non-hostile action) would have been moved from the VSI and SI tables to the fatality tables but will remain in the field hospital admission and aeromed tables.

The Monthly Casualty and Fatality Statistic is an Official Statistic and was 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 was 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
Dr Kate Harrison, the head of Defence Statistics (Health), is responsible for these statistics. Her contact details are:

Defence Statistics (Health)	Tel: 030679 84423
Ministry of Defence	Fax: 01179 130928
Oak 0 West	E-mail: Def Strat-Stat-Health-PQ-FOI(MULTIUSER)
Abbey Wood North	Website: www.gov.uk
Bristol	
BS34 8JH	

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

2. Background Notes

Notification of Casualty (NOTICAS)
Notification of Casualty (or "NOTICAS") is the name for the formalised system of reporting casualties within the UK Armed Forces. NOTICAS information is available from the start of each operation. The NOTICAS reports raised for casualties contain information on how seriously medical staff on operations judge their condition to be. They are not strictly medical categories but are designed to give an indication of the severity of the injury or illness to inform what the individual's next of kin are told. The NOTICAS system medically categorises casualties as either:

i.   Very Seriously Injured (VSI) – A patient is termed 'very seriously injured' when his/her injury is of such severity that life is imminently endangered.
ii. Seriously Injured (SI) – A patient is termed 'seriously injured' when his/her injury is of such severity that there is cause for immediate concern but there is no imminent danger to life.

The NOTICAS system is initiated very early in the patient's admission, the classification of a casualty will change as time progresses. The initial signal listing may in some cases be followed by an updated less serious listing if the case appeared worse on admission than transpires. The listing provided in this publication is only the initial listing for each casualty and not any subsequent listing.

Field Hospital Data

J97 Returns
Defence Statistics received information on the patients who were admitted to or attended the UK Field Hospital at Camp Bastion from the J97 Returns. The J97 return also included those patients admitted to the following two locations:

- The HQ of Multinational Brigade (South) in Kandahar maintains a Field Hospital which provides support for International Security Assistance Force (ISAF) and Coalition personnel. This facility includes additional capabilities to that of the Role 2 including specialist diagnostic resources and specialist surgical and medical capabilities. (Information on Role 1,2,3 or 4 medical support can be found here: http://www.nato.int/docu/logi-en/1997/lo-1610.htm)
- In Kabul, UK Personnel may be admitted to either the French or Greek Field Hospital. There is also a US facility which provides physiotherapy and dentistry.

Data is available from 1 April 2006 to 22 September 2014 due to the closure Camp Bastion. From 23 September 2014 to 30 November 2014 Field Hospital data was sourced from Coalition Medical Facilities only.

The data quality of J97 Returns is reasonable. Service numbers and nationalities are sometimes entered incorrectly. The level of detail provided in the 'Nature of Injury' field, which is used to help determine whether a casualty is correctly recorded as Battle Injury, Non Battle Injury or Natural Cause, can be quite poor and hard to categorise, especially when there are no other casualty records to compare against.

Operational Emergency Department Attendance Register (OpEDAR)

Until 31 December 2011, the OpEDAR database recorded all patients who had attended or been admitted through the A&E department of the UK operational field hospital. The data included all patients including UK Service personnel, other NATO forces, civilians (both UK and nationals) and detainees. This register was replaced with a new IT system; Whole Hospital Information System (WHIS).

Whilst most of the data is captured via drop down menus, some fields, including 'Diagnosis' are free text and thus the quality of medical information captured is variable. OpEDAR captures diagnosis at the initial assessment. It is possible for diagnosis to change over the course of treatment or for a patient to have multiple conditions, however, this information is not captured in this database

Joint Theatre Trauma Register (JTTR)
The 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. A casualty is

entered onto the JTTR if the incident triggers activation of the trauma team in a deployed field hospital.

The data quality of JTTR is good. Pre 2010 some Service numbers were recorded incorrectly but the system is now linked to the Joint Personnel Administration system (JPA) which has resolved this problem. The Type of Injury is recorded for all personnel and aligns with other sources of casualty data.

Whole Hospital Information System (WHIS)

The WHIS is the Patient Administration system for the Medical Treatment Facility (MTF) at Camp Bastion. It commenced 1 October 2010 and ceased on 22 September 2014 when the MTF closed at Camp Bastion. The WHIS system was decommissioned and returned to the UK.

The data quality of WHIS is reasonable. The majority of Service numbers could be validated but there are some records with blanks in this field so this data cannot be used. There is a Discharge Method column which determines whether the patient was admitted to the field hospital and a Patient Group field to determine whether a patient has a Battle Injury, Non-Battle Injury or Natural Causes (including Disease), these are fully populated.

Aeromedical Evacuation

Aeromedical Evacuation is the medically supervised movement of patients to and between medical facilities by air transportation. The RAF Aeromedical Evacuation Service provides the worldwide patient air movement capability for Defence 24 hours a day, 365 days a year. Patients are risk assessed prior to flight, and when necessary, trained medical teams are provided to deliver care in the air.

Defence Statistics receive Aeromedical evacuation records fortnightly from the Aeromedical Evacuation Control Centre (AECC) at RAF Brize Norton for operations. The numbers presented in this section include the number of personnel aeromedically evacuated out of Theatre and the number of aeromedical evacuations (which includes connecting flights and reverse Aeromedical evacuations). If a casualty was Aeromedically evacuated from Theatre, returned to Theatre at a later date and then have been Aeromed again for the same original injury/illness, they will be counted twice.

Aeromed Priority: When patients require Aeromedical evacuation they will be given appropriate degrees of Priority so that if the aircraft space is limited the more urgent patients may be evacuated before those with conditions less serious. The Priorities are:

- Priority 1 – Urgent. Patients for whom speedy evacuation is necessary to save life, limb or eyesight, to prevent complication of serious illness, or to avoid serious permanent disability. Priority 1 patients will normally be returned to the UK within 24 hours.

- Priority 2 – Priority. Patients who require specialised treatment not available locally and who are liable to suffer unnecessary pain or disability unless evacuated with the least possible delay. Priority 2 patients will normally be returned to the UK within 48 hours.

- Priority 3 – Routine. Patients whose immediate treatment requirements are available locally but whose prognosis would definitely benefit by air evacuation on routine scheduled flights. Priority 3 patients will normally be returned to the UK within 7 days.

Critical Care Air Support Team (CCAST)

Some patients who are aeromedically evacuated will require intensive support and monitoring in-flight, such as patients requiring ventilation, monitoring of central venous pressure or cardiac monitoring. In these instances they may be evacuated by CCAST.

The Critical Care Air Support Team members consist of an anaesthetist, ITU Nurses, Medical Assistant and Medical and Dental Services Equipment Technician. They are all AE qualified and have expertise in the Aeromedical evacuation of critically ill patients.

The quality of Aeromed data for Afghanistan is reasonable; the data fields that are critical to ensure medically supervised movement of patients to and between medical facilities by air transportation are fully populated and accurate. However there are some fields that are not critical for the movement of the patient that occasionally require validation with other data sources to ensure higher data quality. For example:

- The operation name was not always provided and it isn't until the record is compared with other casualty data that it can be determined as an operational record.

- The diagnosis code in the Aeromed dataset was used to determine whether the casualty has a Battle Injury, Non Battle Injury or Natural Cause. There are some codes that can cover both injury and illness, making it hard to categories the casualty. On these occasions cross-validation with other casualty data or from speaking to the AECC team would normally provide the correct categorisation.

Ongoing treatment in the UK/Home Country: Patients aeromedically evacuated from Theatre received ongoing treatment in Primary or Secondary Care in their home country. In the UK, the principal location of secondary Care is provided by the NHS, through the Royal Centre for Defence Medicine (RCDM) in Birmingham.

3. Relevance

These statistics were provided in response to the increased number of requests for information on the injuries sustained by UK Service Personnel on Operations. Prior to 2006, the MOD sustained significant levels of criticism over the perceived covering up of operational casualty figures from both the media and Parliamentarians, so it was agreed to produce statistics on a monthly basis which could be 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 PJHQ, the Ops Directorate and Land Forces.

This report is currently limited in terms of the amount of information it can include, specifically in relation to the type of casualties seen, as it can harm the Operational security of service personnel that are still deployed on Operations.

4. Accuracy and Reliability

Defence Statistics use initial NOTICAS, Field Hospital data (including J97 field Hospital returns, OpEDAR, JTTR and WHIS) and Aeromedical Evacuations to collate the casualty statistics. Validation routines on each of the datasets were carried out to check

on the names and Service numbers of casualties, to ensure accurate counting of UK Military casualties and to check whether they've previously been included in the statistics. Defence Statistics also then carry out additional validation of the casualty and fatality data by linking it to the Defence Patient Tracking System (DPTS). This allows us to check on both the Operational Theatre and the classification of injury/illness/death. Any mismatches between the datasets are investigated and amendments are made to the raw data if necessary before the report is processed, ensuring accuracy.

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. It's possible for Service numbers and nationalities to be recorded incorrectly. If that casualty does not appear in another dataset, Defence Statistics have no other sources to validate against and will assume they have been entered correctly at source. It is therefore possible to exclude a UK casualty if the nationality and service number have been recorded incorrectly.

For accuracy Defence Statistics have explored all datasets that are received relating to the Field Hospital to ensure all patients admitted are included in the data.

5. Timeliness and Punctuality

The report for the latest month was published a fortnight after the end of the month on a Thursday i.e. for August 2014; the statistics were published on 18 September 2014. Data was provided from the relevant suppliers on a weekly or fortnightly basis. It takes approximately 2 weeks to ensure all of the data has been received, validated and the report produced.

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

6. 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. Each table has a number of footnotes clarifying what is included/excluded and provides appropriate caveats. It is not possible to use the statistic to calculate a combined number of fatalities and casualties of UK Military and Civilian personnel. This is because an individual can appear in one or all of the datasets, dependent on the criteria for entry into each of the data sources. For example, it is possible that an individual may have a NOTICAS raised due to being Very Seriously Injured, admitted to

the Field Hospital for treatment and then Aeromedically Evacuated back to the UK for further treatment. As such, if you add each data source together, that would count as three casualties rather than just one.

7. Coherence and Comparability

The Defence Statistics figures on UK Service Personnel Operational Casualties and Fatalities are the definitive statistics in the MOD. There are no other publically available regular publications on the numbers of casualties with which to ensure coherence. The icasualties.org website (http://icasualties.org/oef/) releases numbers of fatalities as a result of Operations in Afghanistan for all coalition countries. It isn't possible to use these statistics on fatalities to compare to the UK fatalities as all countries deploy a different number of personnel and have differing operational responsibilities.

The numbers of UK Service Personnel casualties and fatalities as a result of Operations in Afghanistan are comparable over time as there have not been any changes in the way casualties are defined or counted. Changes seen over time are merely reflective of changes in Operational tempo and tactical approach as operations in Afghanistan have progressed.

8. Trade-offs between Output and Quality Components

The main trade-off was 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.

9. Assessment of User Needs and Perceptions

Defence Statistics developed the Casualty and Fatality 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.

10. Performance, Cost and Respondent Burden

To develop each monthly report took approximately 0.2 FTE to perform the analysis and compile the report. The burden on the data providers was low as the upkeep of the databases forms part of their daily routines and they just provide us with the latest data when it's available on a regular basis. Respondent burden is low as the data is obtained from administrative, clinical audit systems that are maintained by other teams within the MOD.

11. Confidentiality, Transparency and Security

Security
All Defence Statistics (Health) staff involved in the production of the casualty statistics have signed a declaration that they have completed the Government wide 'Responsible for information: general user' 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
The data that Defence Statistics received from JCCC, AECC, J97, OpEDAR, JTTR and WHIS contains service numbers. Once the analyst performed some basic validation checks on the service numbers provided, the data was imported into the Defence Health Database which converts service numbers into random pseudo-anonymised personal identifiers and therefore no longer able to see service number level data when extracting data. This also 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.

Deaths data in England and Wales are supplied by and used with the permission of ONS. Deaths in Northern Ireland are supplied by and used with the permission of NISRA and GRO supply deaths in Scotland.

Transparency
The Monthly Operational Casualty and Fatality statistic was currently a very basic statistic, which contains tables and identifies any issues or caveats to the data but no commentary. This quality report provides further information on the method, production process and quality of the output.