Ministry of Defence

# Ad Hoc Statistical Bulletin

## Defence Medical Rehabilitation Centre, Headley Court – Inpatient (Ward) Attendance

**1 April 2013 - March 2016**

Published 7 November 2016

## Overview

This ad hoc statistical bulletin provides information regarding UK Armed Forces and Civilians admissions to, discharges from, and length of admission to Inpatient (Ward) clinics at the Defence Medical Rehabilitation Centre, Headley Court (DMRC). In addition, the initial indicator of severity of injury/illness prior to admission plus the numbers of those remaining in Service (and their Medical Deployability Standard (MDS)) following admission to DMRC, are included.

This ad hoc statistical bulletin has been provided to support the work being undertaken on the economic benefits associated with the National (N) Element of the Defence National Rehabilitation Centre (DNRC) development on the Stanford Hall Estate. The statistics were provided to aid (1) a comparison of the patients admitted to DMRC with those seen by the National Health Service (NHS) and (2) a comparison of the different types of rehabilitative care provided by DMRC and the NHS.
The publication of the bulletin ensures that MOD is open and transparent about the methodology and quality of the statistics and that equal access is given to all, as required by the Code of Practice for Official Statistics.

DMRC, Headley Court is a premier facility for the rehabilitation of injured Service personnel, providing world-class levels of care for our patients. Among other services, DMRC provides Complex Trauma and Neuro Inpatient (Ward) clinics. Patients admitted to these clinics are allocated a ward bed with a clinical team of doctors and nurses providing care. At DMRC, there are currently 44 beds available for Complex Trauma patients and 20 beds available for Neuro patients. If there is a demand for more beds at one clinic and availability in the other, then there is the flexibility to accommodate such requirements.

**Complex Trauma:** The department responsible for the rehabilitation of personnel with injuries such as amputations or multiple fractures, and require input from multiple medical disciplines.

**Neuro:** The department responsible for the rehabilitation of personnel with complex brain injuries, strokes or other neurological conditions.

This information includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians. These UK Armed Forces and Civilian personnel shall be referred to throughout this report as “personnel”.

**Responsible statistician: Deputy** Head of Health Tel: 030 6798 4467 Email: DefStrat-Stat-Health-PQ-FOI@mod.uk

**Further Information:** DefStrat-Stat-Health-PQ-FOI@mod.uk

**Enquiries:** Press Office: 020 721-83253

**Link to Statistics:** https://www.gov.uk/government/statistics/mod-national-and-official-statistics-by-topic

## Results – Admissions and Discharges

Between 1 April 2013 and 31 March 2016, 636 personnel were admitted to a DMRC inpatient ward clinic at DMRC.

There were 2,495 admissions to and 2,497 discharges from[1,2] an Inpatient (Ward) clinic at DMRC (**Table 1**). Of these:

- 2,100 admissions and 2,105 discharges were in Complex Trauma (429 personnel).
- 395 admissions and 392 discharges were in Neuro (216 personnel).

The median average[3] length of admission to an Inpatient (Ward) clinic was 23 days. Complex Trauma admissions were shorter than Neuro admissions (23 days and 24 days respectively) (**Table 1**).

Admissions to Neuro had greater variability in length, with 25% of admissions being longer than 40 days compared to 25% of Complex Trauma admissions being longer than 26 days (see **Table 1**, upper quartile). This is because the Neuro ward admits a wide range of diagnoses and injury severity, whereas the Complex Trauma ward admits only acute and complex injuries that require inpatient (ward) care. Patients who are admitted to Neuro for a long period of time have sustained severe brain injuries and require a lengthy period of rehabilitation. In addition, these patients may be awaiting a future placement within the medical care pathway as they are unable to return home or to their units. Additionally, Neuro patients are more likely to have one longer period of rehabilitation at DMRC, whereas Complex Trauma patients tend to have several periods of care with time at home to recover. These different models of care result in the difference in length of admission seen in **Table 1**.

**Table 1: UK Armed Forces and Civilian Personnel[1], DMRC Inpatient (Ward) admissions, discharges[2] and length of admission[3], Numbers**
1 April 2013 to 31 March 2016

| | Admissions | Discharges | Length of Admission (Days) | | | |
|---|---|---|---|---|---|---|
| | | | Median | Lower Quartile 25% of admissions shorter than: | Upper Quartile 25% of admissions longer than: | Inter-Quartile Range |
| **Inpatient (Ward)** | **2,495** | **2,497** | **23** | **17** | **26** | **9** |
| Complex Trauma | 2,100 | 2,105 | 23 | 18 | 26 | 8 |
| Neuro | 395 | 392 | 24 | 15 | 40 | 25 |

Source: Defence Patient Tracking System (DPTS)
[1] Personnel includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians. These exclude Other Nations Service personnel.
[2] Discharges include personnel discharged between 1 April 2013 and 31 March 2016. Therefore, discharges include personnel admitted prior to 1 April 2013.
[3] Information on length of admission has been presented as a median average with an inter-quartile range, rather than a mean average and standard deviation, as these statistics are affected less by outliers. Please see the Background Notes for further information.

## Results – Severity of Condition

When a patient becomes injured or ill and there is an expectation that they will require hospitalisation, a Notification of Casualty (NOTICAS) will be raised. NOTICAS is the name of the formalised system of reporting casualties within the UK Armed Forces. NOTICAS reports raised for casualties contain information on how seriously medical staff 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 initial NOTICAS severity for those admitted to DMRC Headley court has been used to provide an indication of the complexity of conditions for which patients were admitted.

[1] Nine personnel attended both Complex Trauma and Neuro within the period.
[2] Discharges include personnel discharged between 1 April 2013 and 31 March 2016. Therefore, discharges include personnel admitted prior to 1 April 2013.
[3] Please see the Methodology section for further information.

**NOTICAS classifications:**

**Very Seriously Injured (VSI):** The patient's condition is of such severity that life or reason is imminently endangered.

**Seriously Injured (SI):** The patient's condition is of such severity that there is cause for immediate concern, but there is no imminent danger to life or reason.

**Incapacitating Injury/Illness (III):** Any illness or injury (including battle casualties) which does not warrant classification of VSI or SI but renders them physically and/or mentally incapacitated.

**Unlisted Casualties (UC):** An individual whose illness or injury requires hospitalisation but whose condition does not warrant classification as VSI. SI or III.

Please note that NOTICAS is initiated very early in the patient's admission to the field hospital; 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 bulletin is only the initial listing for each patient and not any subsequent listing.

NOTICAS was available for 445 (70%) of the 636 personnel that attended an Inpatient (Ward) clinic at DMRC between 1 April 2013 and 31 March 2016 (**Table 2**). Personnel may not have had a NOTICAS raised if the criteria leading to a NOTICAS were not met. For information regarding these criteria, please see the Data Sources section.

**Table 2: UK Armed Forces and Civilian Personnel[1] admitted to Inpatient (Ward) clinic at DMRC, Initial NOTICAS classification, by year of admission, Numbers[2]**

1 April 2013 to 31 March 2016

| | All Personnel | 2013/14 | 2014/15 | 2015/16 |
|---|---|---|---|---|
| **All Personnel** | **636** | **347** | **285** | **281** |
| **All Personnel with NOTICAS** | **445** | **283** | **214** | **179** |
| VSI | 171 | 132 | 86 | 60 |
| SI | 103 | 60 | 51 | 37 |
| III | 86 | 50 | 41 | 41 |
| UL | 85 | 41 | 36 | 41 |
| **Complex Trauma** | **328** | **242** | **174** | **130** |
| VSI | 134 | 120 | 75 | 41 |
| SI | 77 | 54 | 36 | 28 |
| III | 63 | 40 | 33 | 32 |
| UL | 54 | 28 | 30 | 29 |
| **Neuro** | **124** | **43** | **42** | **51** |
| VSI | 39 | 12 | 12 | 19 |
| SI | 29 | 7 | 15 | 11 |
| III | 24 | 11 | 8 | 9 |
| UL | 32 | 13 | 7 | 12 |

Source: DPTS and NOTICAS

[1] Personnel includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians. These exclude Other Nations Service personnel.

[2] Numbers may sum to more than the total as personnel may have attended both Complex Trauma and Neuro clinics within the time period and/or over a number of years.

~ Data has been suppressed in line with JSP 200 on statistical disclosure.

## Results – Personnel in Service and Medical Deployability Standard

In order to further understand the proportion of personnel that returned to work following admission to a DMRC Inpatient (Ward) clinic, the employment outcomes were provided. This information determined whether personnel were still in Service, if they Medically Discharged or if they had left Service due to other reasons.

**Medical Discharge:** When a medical condition or fitness issue affects an individual's ability to perform their duties and no alternative role can be found to suit their reduced functionality, they may be medically discharged. These personnel leave the Armed Forces prior to the completion of their contract and may be entitled to additional payments as part of their military pension.

As at 1 June 2016, of the 636 personnel that attended an Inpatient (Ward) clinic at DMRC between 1 April 2013 and 31 March 2016 (**Table 3**):

- 47% (n = 300) remained in Service.
- 37% (n = 235) were Medically Discharged[4].
- 16% (n = 101) had left Service for reasons other than Medical Discharge.

A higher proportion of personnel admitted to the Neuro ward remained in Service than those admitted to Complex Trauma (63% and 39% respectively) (**Table 3**). This is because of the differences in type and severity of injury the each ward sees; some of the patients admitted to the Neuro ward have sustained mild and moderate brain injuries or strokes, and are therefore able to return to Service following the high quality and intensive rehabilitation offered by DMRC. Complex Trauma admits only acute and complex injuries that must be treated in an inpatient (ward) environment. These injuries often result in physical limitations such as limb loss or spinal injury which limit a patient's ability to return to Service despite any length of rehabilitation.

Please note that percentages of Medical Discharges seen in **Table 3** may be lower in later years than seen in previous years due to the time lag between injury/illness and Medical Discharge process completion.

Service personnel with medical conditions or fitness issues which affect their ability to perform their duties may be medically downgraded to allow for treatment and rehabilitation. Such personnel are awarded a Medical Deployability Standard (MDS) of Medically Limited Deployable (MLD) or Medically Not Deployable (MND). So as to give further understanding of the employment outcomes of personnel admitted to an Inpatient (Ward) clinic at DMRC, their MDS was identified, however please be aware that this MDS may be due to a condition unrelated to that for which the person was admitted to DMRC.

Of the 300 personnel that remained in Service as at 1 June 2016, 73% had a MDS of MND (**Table 4**).

**Medical Deployability Standard (MDS):**

**Medically Fully Deployable (MFD):** Personnel medically fit for duty with no employment limitations.

**Medically Limited Deployable (MLD):** Personnel medically fit for duty with minor employment limitations.

**Medically Not Deployable (MND):** Personnel medically fit for duty with major employment limitations or are medically unfit for Service.

[4] Medical Discharge may be due to a medical condition other than that for which the Inpatient (Ward) admission was required.

**Table 3: UK Armed Forces and Civilian Personnel[1] admitted to Inpatient (Ward) clinic at DMRC, Employment outcomes as at 1 June 2016, by year of admission, Numbers[2] and Percentages[3]**

1 April 2013 to 31 March 2016

| | Total | | 2013/14 | | 2014/15 | | 2015/16 | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Personnel** | **636** | | **347** | | **285** | | **281** | |
| In Service | 300 | *47* | 70 | *20* | 121 | *42* | 221 | *79* |
| Medically Discharged[4] | 235 | *37* | 196 | *56* | 106 | *37* | 32 | *11* |
| Other not in Service[5] | 101 | *16* | 81 | *23* | 58 | *20* | 28 | *10* |
| **Complex Trauma** | **429** | | **277** | | **217** | | **193** | |
| In Service | 168 | *39* | 53 | *19* | 77 | *35* | 139 | *72* |
| Medically Discharged[4] | 177 | *41* | 153 | *55* | 88 | *41* | 29 | *15* |
| Other not in Service[5] | 84 | *20* | 71 | *26* | 52 | *24* | 25 | *13* |
| **Neuro** | **216** | | **72** | | **70** | | **91** | |
| In Service | 135 | *63* | 17 | *24* | 44 | *63* | 85 | *93* |
| Medically Discharged[4] | 64 | *30* | 45 | *63* | 20 | *29* | ~ | *3* |
| Other not in Service[5] | 17 | *8* | 10 | *14* | 6 | *9* | ~ | *3* |

Source: DPTS, FMed 23 and the Joint Personnel Administration (JPA)

[1] Personnel includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians. These exclude Other Nations Service personnel.

[2] Numbers may sum to more than the total as personnel may have attended both Complex Trauma and Neuro clinics within the time period.

[3] Percentages may sum to more than 100% due to rounding.

[4] Medical Discharge may be due to a medical condition other than that for which the Inpatient (Ward) admission was required.

[5] Refers to personnel who were not in Service as at 1 June 2016 but who had not Medically Discharged.

~ Data has been suppressed in line with JSP 200 on statistical disclosure.

**Table 4: UK Armed Forces and Civilian Personnel[1] admitted to an Inpatient (Ward) clinic at DMRC who remained in Service, by MDS as at 1 June 2016 and year of admission, Numbers[2] and Percentages[3]**

1 April 2013 to 31 March 2016

| | Total | | 2013/14 | | 2014/15 | | 2015/16 | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Personnel** | **300** | | **70** | | **121** | | **221** | |
| MFD | 41 | *14* | 15 | *21* | 19 | *16* | 15 | *7* |
| MLD | 39 | *13* | 11 | *16* | 16 | *13* | 20 | *9* |
| MND | 220 | *73* | 44 | *63* | 86 | *71* | 186 | *84* |
| **Complex Trauma** | **168** | | **53** | | **77** | | **139** | |
| MFD | 14 | *8* | 8 | *15* | 8 | *10* | 6 | *4* |
| MLD | 27 | *16* | 9 | *17* | 12 | *16* | 16 | *12* |
| MND | 127 | *76* | 36 | *68* | 57 | *74* | 117 | *84* |
| **Neuro** | **135** | | **17** | | **44** | | **85** | |
| MFD | 27 | *20* | ~ | *41* | ~ | *25* | ~ | *11* |
| MLD | 12 | *9* | ~ | *12* | ~ | *9* | ~ | *5* |
| MND | 96 | *71* | 8 | *47* | 29 | *66* | 72 | *85* |

Source: DPTS and JPA

[1] Personnel includes Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians, on Strength as at 1 June 2016. These exclude Other Nations Service personnel.

[2] Numbers may sum to more than the total as personnel may have attended both Complex Trauma and Neuro clinics within the time period.

[3] Percentages may sum to more than 100% due to rounding.

~ Data has been suppressed in line with JSP 200 on statistical disclosure.

## Limitations

Please note that percentages of Medical Discharges seen in **Table 3** may be lower in later years than seen in previous years due to the time lag between injury/illness and Medical Discharge process completion.

## Data sources

### Defence Patient Tracking System (DPTS)

Data are compiled by Defence Statistics from the 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. Patients receiving treatment that were aeromedical evacuated prior to this date may not be included. Since October 2008, the figures presented include Armed Forces personnel that have returned on routine flights and subsequently been referred to DMRC for an operational related injury or illness.

The DPTS is a live system that is constantly being updated. The data for this report was extracted on 6 July 2016.

### Notification of Casualty (NOTICAS)

NOTICAS is the name for the formalised system of reporting casualties within the UK Armed Forces. NOTICAS reports raised for casualties contain information on how seriously medical staff in theatre 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:

- **Very Seriously Injured/ill (VSI)** – A patient is termed 'very seriously injured/ill' when his/her injury is of such severity that life is imminently endangered.
- **Seriously Injured/ill (SI)** – A patient is termed 'seriously injured/ill' when his/her injury is of such severity that there is cause for immediate concern but there is no imminent danger to life.
- **Incapacitating Injury/Illness (III)** - Any illness or injury (including battle casualties) which does not warrant classification of VSI or SI but renders them physically and/or mentally incapacitated.
- **Unlisted Casualties (UL)** - An individual whose illness or injury requires hospitalisation but whose condition does not warrant classification as VSI, SI or III. Casualties who have been unexpectedly admitted to hospital and medically categorised as UL in the following circumstances must have a NOTICAS raised:
  - On duty away from their home base; on operations, overseas deployments and exercises.
  - On board HM ships at sea or away from home ports.
  - The casualty has been admitted to hospital for less than 72 hours, but their injuries were caused by circumstances that would be of public interest, i.e. personnel Wounded in Action (WIA).

When admissions exceed 72 hours they must be reported with effect from the date and time of admission.

A patient may not have a NOTICAS raised following their injury or illness if the criteria above are not met.

### Joint Personnel Administration (JPA)

JPA (the Armed Forces personnel system) was used to identify if the Service personnel remained in Service and to identify Medical Deployability Standard (MDS) of personnel remaining in Service.

## Methodology

### Median and Inter-Quartile Range

Information on length of stay and length of pathways has been presented as a median average with an inter-quartile range, rather than a mean average and standard deviation as these statistics are affected less by outliers.

An **outlier** is an observation within a dataset that appears to be inconsistent with the remainder of the dataset.

The **median** is the value in the centre of the data set when they are arranged from smallest to largest.

A **quartile** is any of three values (first/lower quartile, second quartile (median), third/upper quartile) that divides the sorted (from smallest value to largest value) dataset into four equal parts. The lower quartile is the value that at which 25% of the values in the dataset will be below. The upper quartile is the value that at which 75% of the values in the dataset will be below.

The **inter-quartile range** is the range in which the middle 50% of the data points fall (i.e. the distance between the lower and upper quartile). The longer the inter-quartile range the wider the spread of data.

## Glossary

### Medical Discharge

Medical Discharges are the result of a number of 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.

### Medical Deployability Standard (MDS)

Service personnel with medical conditions or fitness issues which affect their ability to perform their duties are referred to a Medical Board or primary care for a medical examination and review of their medical grading. The patient may be downgraded to allow for treatment and rehabilitation. Medically downgraded personnel are those personnel who have been assessed by a Medical Board and subsequently awarded a MDS of either Medically Limited Deployable (MLD) or Medically Non Deployable (MND).

MLD personnel are medically fit for duty with minor employment limitations. MLD personnel may have a medical condition or functional limitation that prevents the meeting of all Medically Fully Deployable (MFD) requirements. MLD personnel can undertake full employment with possible limitations on their deployability. Their condition must not be vulnerable to exacerbation due to deployment or impose a constant demand on medical service on exercise or deployment.

MND personnel are medically fit for duty with major employment limitations or are medically unfit for Service. MND personnel have a medical condition or functional limitation that prevents the meeting of all MLD requirements. MND personnel are not fit to deploy on Operations but may be deployable on UK based exercises and should be able to work effectively for at least 32.5 hours per week. They may require continued medical care, long term medication and access to secondary care facilities.

MND personnel become medically unfit for Service if they cannot perform their primary employment with reasonable adaptation, are unable to attend work for 32.5 hours per week, if they are unable to deploy on local exercises or if employment would exacerbate their condition and affect their health.

### Personnel

Naval Service personnel, Army personnel including those from the Gibraltar Regiment, RAF personnel, Reservists and UK Civilians

## Further Information

### Suppression

A small number of the figures presented in this report have been suppressed in line with the Defence Statistics' rounding policy for health statistics (May 2009), and in keeping with the Office for National Statistics Guidelines, have been referred to as less than five. This measure has been taken to match other reports containing this information produced by Defence Statistics and to ensure individual identities have not been revealed inadvertently.

### Other Publications

Defence Statistics release quarterly updates on UK personnel treated at the Royal Centre for Defence Medicine or the Defence Medical Rehabilitation Centre, Headley Court. The latest report can be found at:
https://www.gov.uk/government/collections/uk-service-personnel-patient-treatments-statistics-index

Defence Statistics release annual updates on personnel that were Very Seriously Injured or Seriously Injured in Afghanistan. The latest report can be found at:
https://www.gov.uk/government/collections/op-herrick-afghanistan-very-seriously-injured-and-seriously-injured-tracking-index

Defence Statistics release annual updates on medical discharges among UK personnel. The latest report can be found at:
https://www.gov.uk/government/collections/medical-discharges-among-uk-service-personnel-statistics-index

## 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:

**Defence Statistics (Health)** Telephone: 030 679 84423
Email: DefStrat-Stat-Health-PQ-FOI@mod.uk

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

### Other contact points within Defence Statistics are:

| | | |
|---|---|---|
| Defence Expenditure Analysis | 030 6793 4531 | DefStrat-Econ-ESES-DEA-Hd@mod.uk |
| Price Indices | 030 6793 2100 | DefStrat-Econ-ESES-PI-Hd@mod.uk |
| Naval Service Manpower | 023 9254 7426 | DefStrat-Stat-Navy-Hd@mod.uk |
| Army Manpower | 012 6488 6175 | DefStrat-Stat-Army-Hd@mod.uk |
| RAF Manpower | 014 9449 6822 | DefStrat-Stat-Air-Hd@mod.uk |
| Tri-Service Manpower | 020 7807 8896 | DefStrat-Stat-Tri-Hd@mod.uk |
| Civilian Manpower | 020 7218 1359 | DefStrat-Stat-Civ-Hd@mod.uk |
| Health Information | 030 6798 4423 | DefStrat-Stat-Health-Hd@mod.uk |

### If you wish to correspond by mail, our postal address is:

Defence Statistics (Health)
Ministry of Defence
Abbey Wood North
Oak 0 West
#6028
Bristol
BS34 8JH

For general MOD enquiries, please call: 020 7218 9000

For press enquiries, please call our Press Office: 020 7218 3253