



# Ministry of Defence

## Annual Medical Discharges in the UK Regular Armed Forces

1 April 2014 to 31 March 2019

Published 11 July 2019

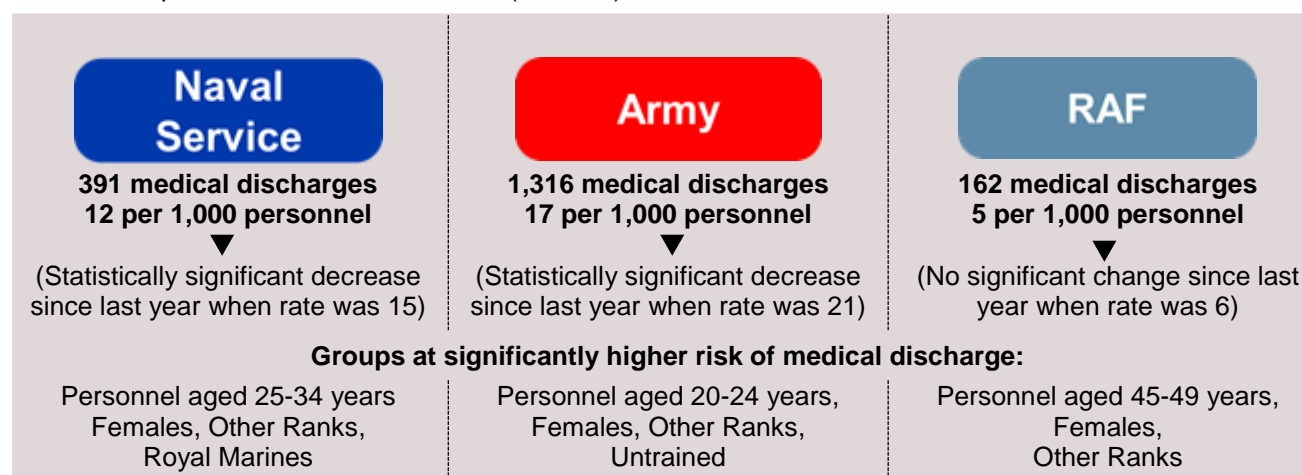
This Official Statistic provides time trends for the last five years of medical discharges among UK Regular Service personnel with a focus on the most recent year of information, including demographic factors and the medical causes leading to the discharge.

When a medical condition or fitness issue affects a member of UK Armed Forces personnel, their ability to perform their duties is assessed. If they are unable to perform their duties and alternative employment is not available, personnel can then be medically discharged. Medically discharged 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.

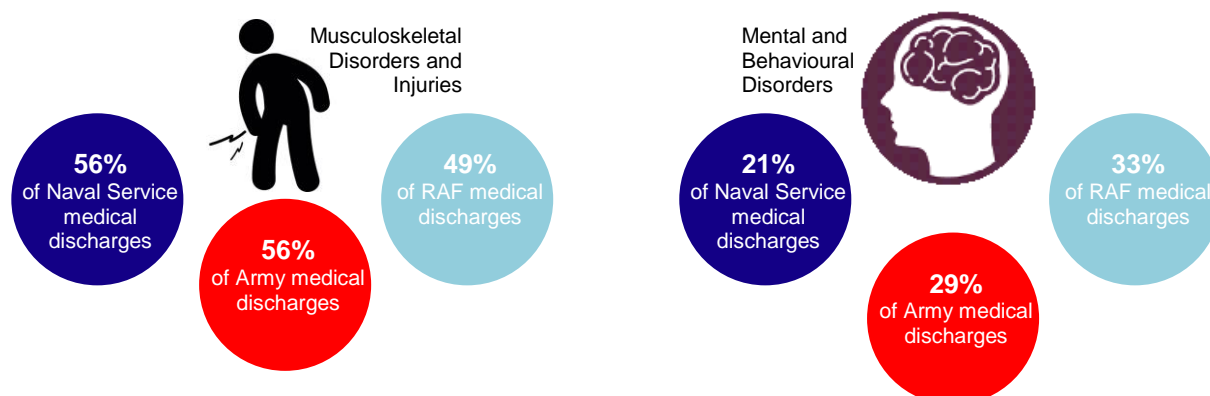
When UK Armed Forces personnel are medically discharged, the medical reason for the discharge is recorded and categorised. It is possible for personnel to be medically discharged for multiple reasons.

### Key Points and Trends

Between 1 April 2018 and 31 March 2019 (2018/19):



For all three Services, the main causes of medical discharges were *Musculoskeletal Disorders and Injuries* and *Mental and Behavioural Disorders*. This was in line with findings from previous years.



More than half of personnel (57%) medically discharged leave as a result of multiple medical conditions.

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**Background quality report:** <https://www.gov.uk/government/collections/medical-discharges-among-uk-service-personnel-statistics-index>

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Past publications and supplementary tables containing all data presented in this publication, including detailed monthly breakdowns, can be found at <https://www.gov.uk/government/collections/medical-discharges-among-uk-service-personnel-statistics-index>.

## Introduction

Service personnel with medical conditions 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<sup>1</sup> 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.

This report provides the Ministry of Defence (MOD), the general public and the media with information on medical discharges in the UK Regular Armed Forces. In addition this information is used to prioritise resources used for the rehabilitation and reintegration of personnel leaving the Armed Forces for medical reasons and to help inform discussions on injury prevention in the Armed Forces. Each of the three Services are presented separately as comparisons between the Services are considered invalid. This is because practices and protocols for recommending and awarding a medical discharge differ. This is particularly true for untrained personnel.

Please note that this report focuses exclusively on medical discharges that have actually occurred; medically downgraded personnel that are retained in Service or exit the forces for any other reason are excluded<sup>2</sup>. Also, as these statistics relate only to the population of personnel who medically discharged, the proportions of medical reasons leading to discharge are not necessarily indicative of the prevalence of such conditions in the entire UK Armed Forces population. This document focuses on principal cause of medical discharge; information on principal and contributory is found in the supplementary tables.

Please note that Defence Statistics Health did not receive all Army discharge paperwork confirming cause of medical discharge for 1 April 2014 to 31 March 2019, and Naval Service and RAF paperwork for 1 April 2015 to 31 March 2016. Therefore, cause information for these years should be considered a minimum. It is not expected that further information will be obtained and therefore figures are not provisional. Please see the annual Medical Discharges in the UK Regular Armed Forces Background Quality Report<sup>3</sup> for further information.

<sup>1</sup> As laid down in JSP 346 and/or the single Services retention standards for their career group.

<sup>2</sup> Official Statistics on UK Service Personnel outflows can be found at <https://www.gov.uk/government/collections/uk-armed-forces-monthly-service-personnel-statistics-index>.

<sup>3</sup> <https://www.gov.uk/government/statistics/uk-service-personnel-medical-discharges-background-quality-report>

## Executive Summary

Between 1 April 2018 and 31 March 2019 (2018/19) of the UK Regular Armed Forces population:

### Naval Service

**391** Naval Service personnel were medically discharged, equating to **12 per 1,000 personnel**. This is a significant decrease from 2017/18 when the rate was 15 per 1,000 personnel.

### Army

**1,316** Army personnel were medically discharged, equating to **17 per 1,000 personnel**. This is a significant decrease compared to 2017/18 when the rate was 21 per 1,000 personnel.

### RAF

**162** RAF personnel were medically discharged, equating to **5 per 1,000 personnel**. This is not a significant change compared to 2017/18 when the rate was 6 per 1,000 personnel.

This was a total of **1,869 medical discharges** which equates to approximately 5 UK Regular Armed Forces personnel medically discharged each day during 2018/19.

Between 1 April 2018 and 31 March 2019 certain demographic groups were significantly more likely to medically discharge:

- **Females** in each of the three Services.
- **Personnel aged 25-34** years in the Naval Service, **aged 20-24** years in the Army and **aged 45-49** years in the RAF.
- **Other Ranks** in each of the three Services.
- **Royal Marines** in the Naval Service.
- **Untrained** personnel in the Army.

The above findings are consistent with those seen in the Annual MOD Health and Safety Statistics<sup>4</sup>, which found that females that Females, personnel aged under 30 and Untrained had higher proportions of personnel with injury and ill health related health and safety incidents. This was also consistent with the Women in Ground Close Combat roles review<sup>5</sup> which found that female personnel had a higher rate of injuries than males.

For each of the Services, the two most common principal causes of medical discharge were **Musculoskeletal Disorders and Injuries** and **Mental and Behavioural Disorders**. This finding is likely to be due to the physical demands of the role of the UK Armed Forces and difficulty retaining personnel with severe or enduring mental ill-health given the nature of their role and access to weapons, as well as the commonality of these conditions among the general population. The Canadian military<sup>6</sup> also report Musculoskeletal Disorders and Injuries and Mental and Behavioural Disorders as their two most common reasons for medical release.

Between 2014/15 and 2018/19 there was a significant increase in the proportion of medical discharges with a cause of Mental and Behavioural Disorders in the Naval Service and Army. This may have been due to anti-stigma campaigns run by the MOD, leading to an increase in awareness regarding mental health issues among UK Armed Forces personnel, Commanding Officers and clinicians. This in turn may have led to greater detection rates.

<sup>4</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

<sup>5</sup> <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

<sup>6</sup> Poisson, R. (2015). The imperative of military medical research and the duty to protect, preserve, and provide advanced evidence-informed care [online], Journal of Military, Veteran and Family Health; 1(1) available at <http://jmvfh.utpjournals.press/doi/pdf/10.3138/jmvfh.2014-11> accessed on 9 June 2017.

# Naval Service

## Trends in Medical Discharges

In the latest year, 1 April 2018 to 31 March 2019, there were **391** medical discharges equal to 12 medical discharges per 1,000 personnel. This was a significant decrease from 2017/18 (15 per 1,000) (**Figure 1**). For each service:

- 249 Royal Navy personnel, a rate of 10 per 1000.
- 142 Royal Marines personnel, a rate of 21 per 1000 (**Figure 6**).

- **391** medical discharges from the Naval Service in 2018/19.
- This equates to **12 per 1,000** personnel.

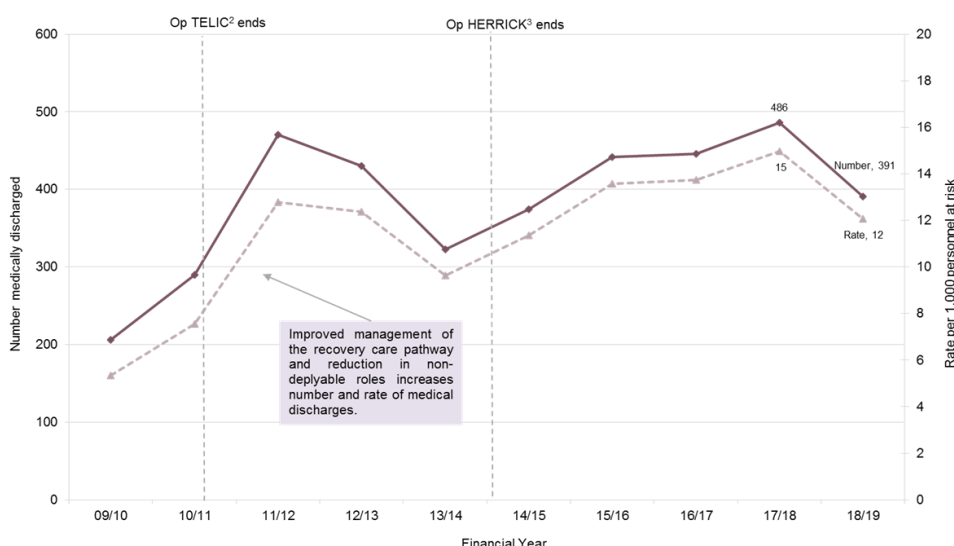
▲ The rate of medical discharges rose between 1 April 2010 and 31 March 2012. This may have been a result of the improved management of the recovery care pathway<sup>7</sup>, the completion of treatment of personnel injured on operations and the limited number of non-deployable roles available in the Naval Service.

▼ The rate of medical discharges fell between 1 April 2013 and 31 March 2014. During this financial year there was a reduction in the capacity of Naval Service Medical Boards due to a lack of administrative support; this may have contributed to the fall in the rate of medical discharges. Additionally, following the Strategic Defence and Security Review (SDSR), there was a greater need to retain downgraded personnel.

▲ The rate of medical discharges rose between 1 April 2014 and 31 March 2018. This may have been due to an increase in the capacity of Naval Service medical boards. Increased capacity also meant that the medical boards could reduce any backlog of personnel awaiting a formal medical board.

▼ The rate of medical discharges fell between 1 April 2018 and 31 March 2019, this was a significant decrease and this decrease is consistent in both Royal Navy and Royal Marines personnel.

**Figure 1: UK Regular Naval Service<sup>1</sup> medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk**  
1 April 2009 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Naval Service includes Royal Navy and Royal Marines.

<sup>2</sup> Operation TELIC is the name for UK operations in Iraq which began March 2003 and ended on 21 May 2011.

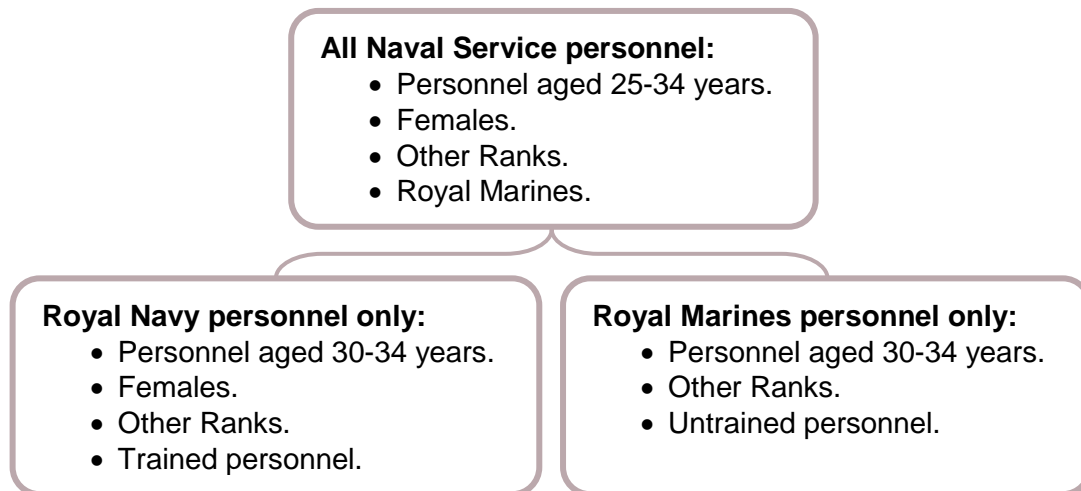
<sup>3</sup> Operation HERRICK is the name for UK operations in Afghanistan which began 1 April 2006 and ended on 30 November 2014.

<sup>7</sup> <https://www.gov.uk/government/collections/uk-armed-forces-recovery-capability-wounded-injured-and-sick-in-the-recovery-pathway-statistics>

## Naval Service Continued

### Demographic Risk Groups

Between 1 April 2018 and 31 March 2019, the rate of medical discharge was significantly<sup>8</sup> higher for Regular Naval Service personnel within specific demographic groups (**Table 1**):



The demographic groups that displayed a high rate of medical discharge between 1 April 2018 and 31 March 2019 were broadly consistent with results seen in the Annual MOD Health and Safety Statistics<sup>9</sup>, which found that Females, personnel aged under 30 and Untrained and in the Naval Service had higher proportions of personnel with injury and ill health related health and safety incidents.

The lower rate of medical discharges among certain demographic groups may be due to their role requirements; for example, officers and older personnel with a longer length of Service may have more opportunities to be placed in an ashore role. There are complexities of retaining personnel with medical needs in on-board ship roles as it is easier to deliver medical care and access necessary treatment when ashore.

The reasons for the significantly higher rate of medical discharges among female Naval Service personnel are unknown, however it may be in part to the higher risk of Musculoskeletal Disorders and Injuries and higher presentation of mental health problems (the leading two causes of medical discharge) in the female population<sup>10,11</sup>.

**Table 1** can be found for Royal Navy and Royal Marines as individual populations in **Annex A** (pages 32 to 35). As shown in the boxes above, there are different populations with significantly higher rates of medical discharge. For example trained Royal Navy personnel had a higher rate of medical discharge than untrained; in the Royal Marines this finding is reversed.

<sup>8</sup> Tested using a z-test for proportions at a 95% confidence level.


















<sup>9</sup> <https://www.gov.uk/government/collections/defence-health-and-safety-statistics-index>

<sup>10</sup> <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

<sup>11</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

## Naval Service Continued

**Table 1: UK Regular Naval Service<sup>1</sup> medical discharges by age group<sup>2</sup>, gender<sup>2</sup>, rank<sup>2</sup> and training status<sup>2</sup>, Numbers<sup>3</sup> and Rates per 1,000 personnel at risk**  
1 April 2018 to 31 March 2019

2018/19			Rate of UK Regular Naval Service personnel medically discharged
	n	r	
<b>Number of UK Regular Naval Service personnel medically discharged</b>	<b>391</b>	<b>12.1</b>	
<b>Age</b>			
Aged Under 20	4	2.7	
Aged 20-24	60	10.0	
Aged 25-29*	108	14.6	
Aged 30-34*	113	18.8	
Aged 35-39	61	13.0	
Aged 40-44	29	10.1	
Aged 45-49	11	4.7	
Aged 50 and over	5	3.0	
<b>Gender</b>			
Male	330	11.2	
Female*	61	20.0	
<b>Rank</b>			
Officer	23	3.4	
Other Rank*	368	14.4	
<b>Training Status</b>			
Trained	348	12.1	
Untrained	43	11.9	
<b>Service</b>			
Royal Navy	249	9.7	
Royal Marines*	142	20.6	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

<sup>2</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>3</sup> In line with JSP 200, numbers fewer than five were not suppressed in demographics tables as Defence Statistics assessed that these figures did not disclose sensitive personal information.

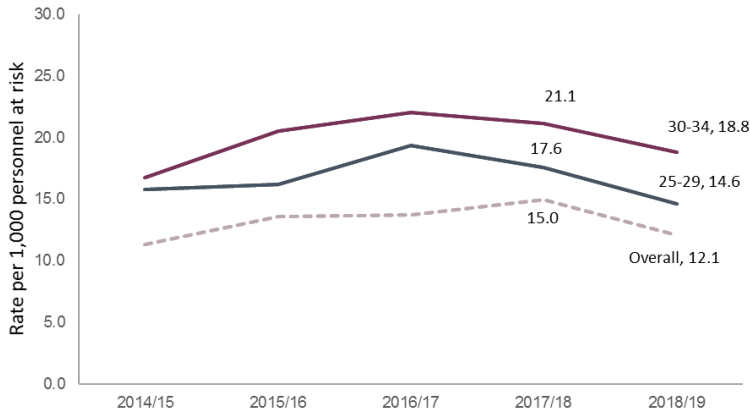
\* Groups found to be at a significantly higher than average risk using a z-test for a single proportion at a 95% confidence level.

\* Groups found to be at a significantly higher risk using a z-test for proportions at a 95% confidence level.

## Naval Service Continued

**Figures 2 to 6** present the Naval Service medical discharges by demographic group from 1 April 2014 to 31 March 2019 with possible explanations for the differences observed.

**Figure 2: UK Regular Naval Service<sup>1</sup> medical discharges by age group<sup>2</sup> and financial year, Rates per 1,000 personnel at risk**  
1 April 2014 to 31 March 2019



The rate of medical discharge in the Naval Service fell by three percentage points from 2017/18 to 2018/19.

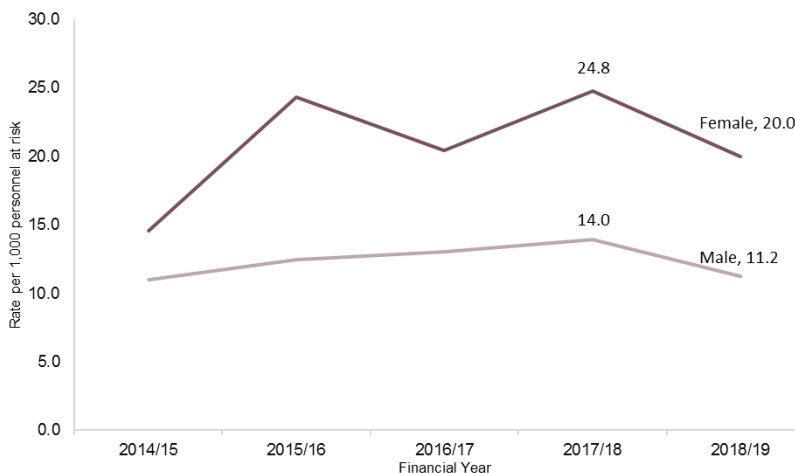
The rate of medical discharge for personnel aged 30-34 was higher than that for those aged 25-29 in all years presented (**Figure 2**). Other age groups are presented in graphs within the supporting Excel tables.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

<sup>2</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

**Figure 3: UK Regular Naval Service<sup>1</sup> medical discharges by gender<sup>2</sup> and financial year, Rates per 1,000 personnel at risk**  
1 April 2014 to 31 March 2019



The rate of medical discharges has remained higher for females than males for each of the years presented (**Figure 3**). The reason for this is unclear, however it may be partly due to the higher rate of presenting with Musculoskeletal Disorders and Injuries and Mental Health conditions in the female population<sup>9,10</sup>.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

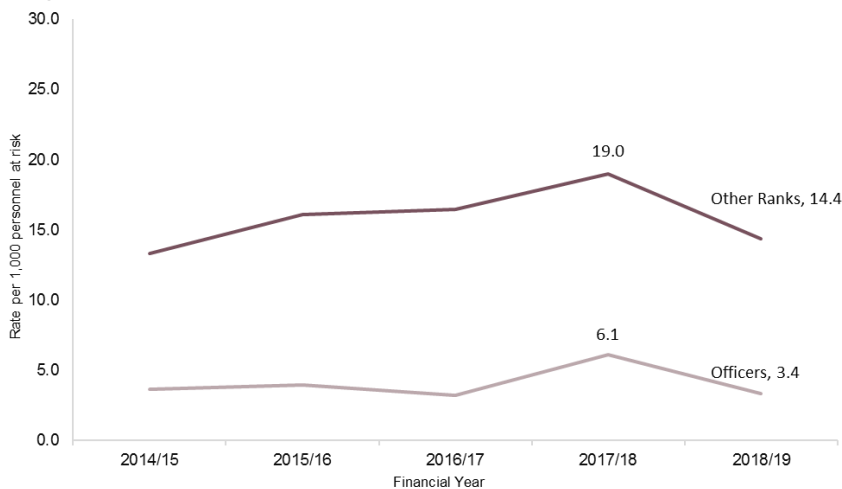
<sup>2</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.



## Naval Service Continued

**Figure 4: UK Regular Naval Service<sup>1</sup> medical discharges by rank<sup>2</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



In each of the years presented, the rate of medical discharges among Other Ranks was significantly higher than Officers (**Figure 4**). The reason for this is unclear however it may be due to role requirements; Officers may have more opportunities to be placed in an ashore role.

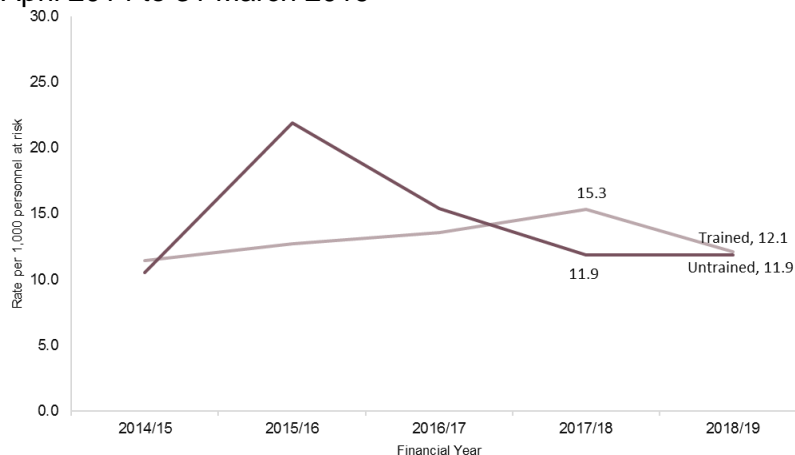
Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

<sup>2</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

**Figure 5: UK Regular Naval Service<sup>1</sup> medical discharges by training status<sup>2</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



In the last five years, 2015/16 was the only year where there was a significant difference in the rate of medical discharges between untrained and trained personnel (**Figure 5**). However, when considering the Royal Navy and Royal Marines separately; it was trained personnel in the Royal Navy and untrained personnel in the Royal Marines that had a significantly higher rate of medical discharge than their counterparts.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

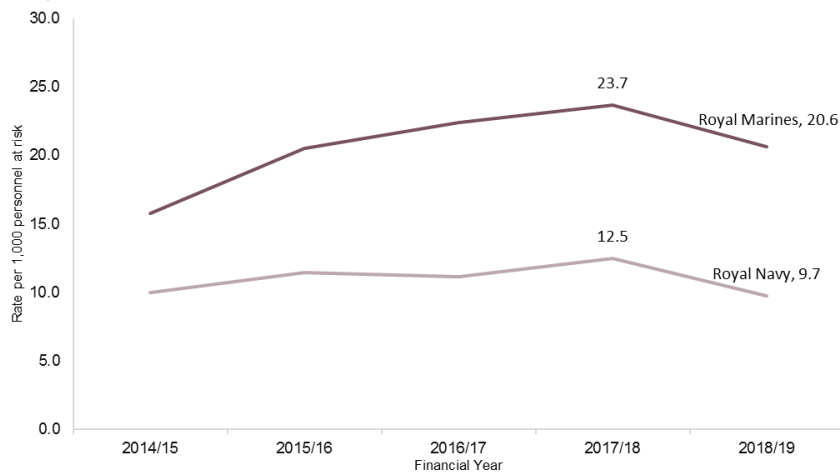
<sup>2</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

The increase in the rate of medical discharge among untrained personnel between 1 April 2015 and 31 March 2016 reflects a change in policy where Phase 1 trainees with emergent medical conditions were discharged earlier from the Naval Service. This resulted in 2015/16 medical discharge including: phase 2 discharges, phase 1 discharged in line with the old policy and phase 1 discharged in line with the new policy. Subsequent years including phase 2 discharges and only phase 1 discharges in line with new policy hence the return to a rate which was comparable to 2014/15.



## Naval Service Continued

**Figure 6: UK Regular Naval Service medical discharges by Royal Marines/Royal Navy<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**  
1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

In each of the years presented, the rate of medical discharges among Royal Marines was significantly higher than the Royal Navy (**Figure 6**).

This is likely to be due to a number of factors:

- A higher standard of physical fitness associated with deployment is required in the Royal Marines. Therefore, rigorous training routines may cause increases in injuries.

- Less availability of roles within the Royal Marines for personnel with limited deployability

# Naval Service Continued

## Causes of Medical Discharge

When UK Armed Forces personnel are medically discharged, the medical reason for the discharge is recorded and categorised using a coding system known as ICD-10 (see Glossary). **Table 2** shows this information by principal ICD-10 cause code group (the chapter within which the condition is categorised) and for the past five years 1 April 2014 to 31 March 2019.

**56%** of medical discharges (approx. 1 in 2) were due to **Musculoskeletal Disorders and Injuries**.

**21%** of medical discharges (approx. 1 in 5) were due to **Mental and Behavioural Disorders**.

**Table 2: UK Regular Naval Service<sup>1</sup> medical discharges by principal ICD-10 cause code group and financial year, Numbers<sup>2</sup> and Percentages<sup>3</sup>**

1 April 2014 to 31 March 2019

	All		2014/15		2015/16		2016/17		2017/18		2018/19	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>All medical discharges</b>	<b>2,139</b>		<b>374</b>		<b>442</b>		<b>446</b>		<b>486</b>		<b>391</b>	
<b>All cause coded medical discharges</b>	<b>2,132</b>	<b>100</b>	<b>374</b>	<b>100</b>	<b>436</b>	<b>100</b>	<b>446</b>	<b>100</b>	<b>486</b>	<b>100</b>	<b>390</b>	<b>100</b>
Infectious and parasitic diseases (A00 - B99)	~	<1	0	0	~	<1	~	<1	0	0	0	0
Neoplasms (C00 - D48)	19	<1	~	1	~	<1	6	1	~	<1	~	<1
Blood disorders (D50 - D89)	~	<1	~	<1	0	0	~	<1	~	<1	0	0
Endocrine, nutritional and metabolic diseases (E00 - E90)	26	1	6	2	~	1	~	<1	6	1	6	2
- Of which diabetes (E10-E14)	20	<1	6	2	~	<1	~	<1	6	1	~	<1
- Of which insulin-dependent (E10)	16	<1	6	2	~	<1	~	<1	5	1	~	<1
- Of which non-insulin-dependent (E11)	~	<1	0	0	0	0	~	<1	~	<1	~	<1
Mental and behavioural disorders (F00 - F99)	346	16	40	11	72	17	62	14	89	18	83	21
- Of which mood disorders (F30 - F39)	127	6	19	5	25	6	18	4	32	7	33	8
- Of which depression (F32 & F33)	106	5	14	4	18	4	17	4	28	6	29	7
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	186	9	16	4	36	8	39	9	48	10	47	12
- Of which post-traumatic stress disorder (PTSD) (F431)	99	5	5	1	16	4	23	5	27	6	28	7
- Of which adjustment disorder (F432)	19	<1	0	0	~	<1	~	<1	6	1	8	2
Nervous system disorders (G00 - G99)	71	3	5	1	16	4	16	4	19	4	15	4
- Of which epilepsy (G40)	14	<1	~	<1	~	<1	6	1	~	<1	~	<1
Eye and adnexa diseases (H00 - H59)	17	<1	7	2	~	<1	~	<1	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	5	<1	~	<1	~	<1	~	<1	0	0	~	<1
Ear and mastoid process diseases (H60 - H95)	94	4	14	4	21	5	19	4	28	6	12	3
- Of which hearing loss (H833 & H90 - H91)	80	4	14	4	18	4	16	4	23	5	9	2
- Of which noise-induced hearing loss (H833)	15	<1	8	2	~	<1	~	<1	~	<1	~	<1
- Of which tinnitus (H931)	8	<1	0	0	~	<1	~	<1	~	<1	~	<1
Circulatory system disorders (I00 - I99)	34	2	6	2	10	2	5	1	6	1	7	2
Respiratory system disorders (J00 - J99)	35	2	~	1	10	2	7	2	8	2	~	2
- Of which asthma (J45 & J46)	29	1	~	1	9	2	6	1	~	1	~	1
Digestive system disorders (K00 - K93)	78	4	14	4	19	4	13	3	19	4	13	3
Skin and subcutaneous tissue diseases (L00 - L99)	47	2	11	3	10	2	8	2	11	2	7	2
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	1,268	59	248	66	253	58	278	62	270	56	219	56
- Of which injuries and disorders of the knee <sup>4</sup>	309	14	71	19	62	14	69	15	56	12	51	13
- Of which knee pain (M2556)	131	6	16	4	24	6	35	8	32	7	24	6
- Of which back pain (M549)	197	9	31	8	39	9	43	10	53	11	31	8
- Of which low back pain (M544-5)	173	8	24	6	34	8	38	9	49	10	28	7
- Of which injuries and disorders of the ankle and foot <sup>5</sup>	116	5	25	7	29	7	24	5	18	4	20	5
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	26	1	~	<1	10	2	~	<1	7	1	~	1
Genitourinary system diseases (N00 - N99)	12	<1	~	<1	~	<1	~	<1	5	1	~	<1
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	7	<1	0	0	~	<1	~	<1	~	<1	~	<1
Clinical and laboratory findings (R00 - R99)	58	3	7	2	8	2	16	4	14	3	13	3
External Causes of Morbidity and Mortality (V01 - Y98)	~	<1	0	0	0	0	0	0	~	<1	0	0
Factors influencing health status (Z00 - Z99)	13	<1	6	2	~	<1	~	<1	~	<1	~	<1
No details held on principal condition for medical boarding	7		0		6		0		0		1	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

<sup>2</sup> ~ In line with JSP 200 on statistical disclosure, figures less than five have been suppressed. Please see background quality report for more information.

<sup>3</sup> Data presented as "<1%" represent a percentage of cause coded medical discharges of greater than 0% but smaller than 1%.

<sup>4</sup> Injuries and disorders of the knee have been compiled using ICD-10 codes, please see annex for specific codes.

<sup>5</sup> Injuries and disorders of the ankle and foot have been compiled using ICD-10 codes, please see annex for specific codes.

**Principal cause** is the main medical cause of the discharge.

**Contributory causes** include any other conditions identified that would result in a medical discharge.

**Table 2** can be found for Royal Navy and Royal Marines as individual populations in **Annex A** (pages 32 to 35).

## Naval Service Continued

Between 1 April 2014 and 31 March 2019, Musculoskeletal Disorders and Injuries were the largest principal cause of Naval Service medical discharges, accounting for 59% of all medical discharges. This remained consistent for the past five years, and is seen in both Royal Navy and Royal Marines medical discharges (**Figure 7**).

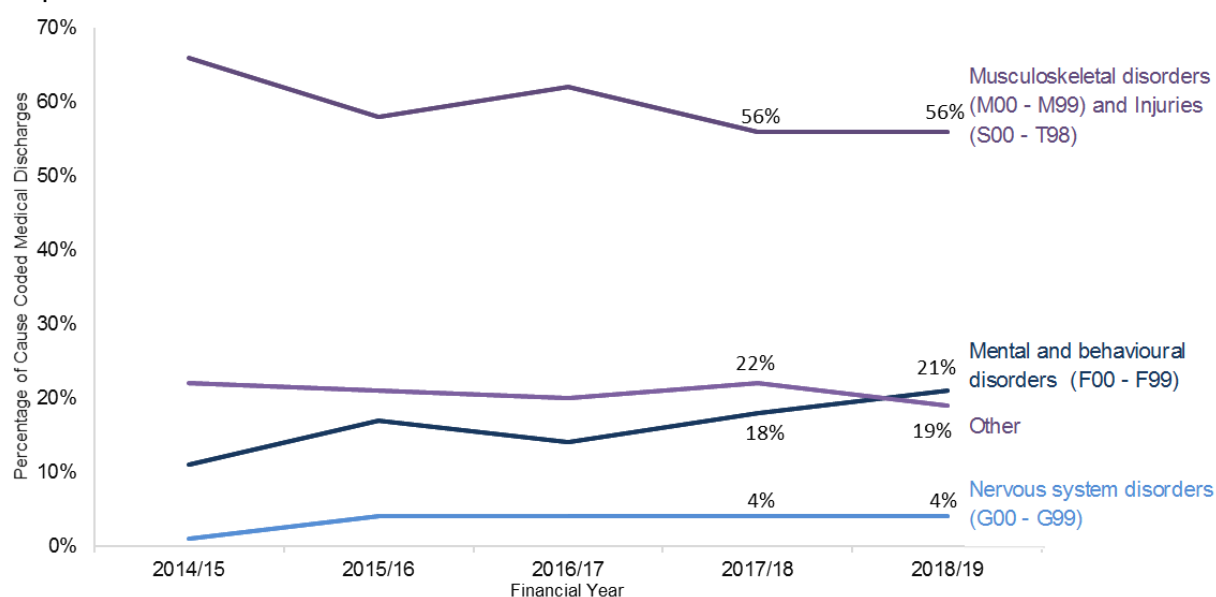
Mental and Behavioural Disorders remained the second largest principal cause of Naval Service medical discharges. The proportion of discharges for this cause increased by three percentage points in 2018/19 compared to the previous year. In 2017/18, there was a significant increase compared to previous year and over this period there was also rise in the presentations at Departments of Community Mental Health for mental health conditions<sup>12</sup>. Mental and Behavioural Disorders is also a large cause for medical discharge from the Canadian Military<sup>13</sup>; however they were responsible for a larger proportion of personnel released from the Canadian military than the UK Armed Forces (41%).

Nervous System Disorders were the third largest principal cause of Naval Service medical discharges, accounting for 4% of medical discharges in 2018/19 (n = 15).

It is important to note that each medical discharge can only have one principal condition, and a decrease in one cause code group may appear as an increase in another. Therefore it is important to consider all cause code groups when looking at trends over time.

**Figure 7: UK Regular Naval Service<sup>1</sup> medical discharges by principal ICD-10 cause code group and financial year, Percentage of all medical discharges**

1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

The greatest proportions of Musculoskeletal Disorders and Injuries discharges were linked to the leg (below and including the knee) and the back (**Figure 8**). This was consistent over the past five years and is seen in both Royal Navy and Royal Marines. Back pain is also the leading cause of disability in the UK and global populations<sup>14</sup>. The high percentage of medical discharges for these conditions is likely to be a result of the physical activity required in many portions of the Naval Service; training on uneven ground carrying heavy loads, adopting firing positions, climbing ladders and working on a moving platform aboard ship.

<sup>12</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

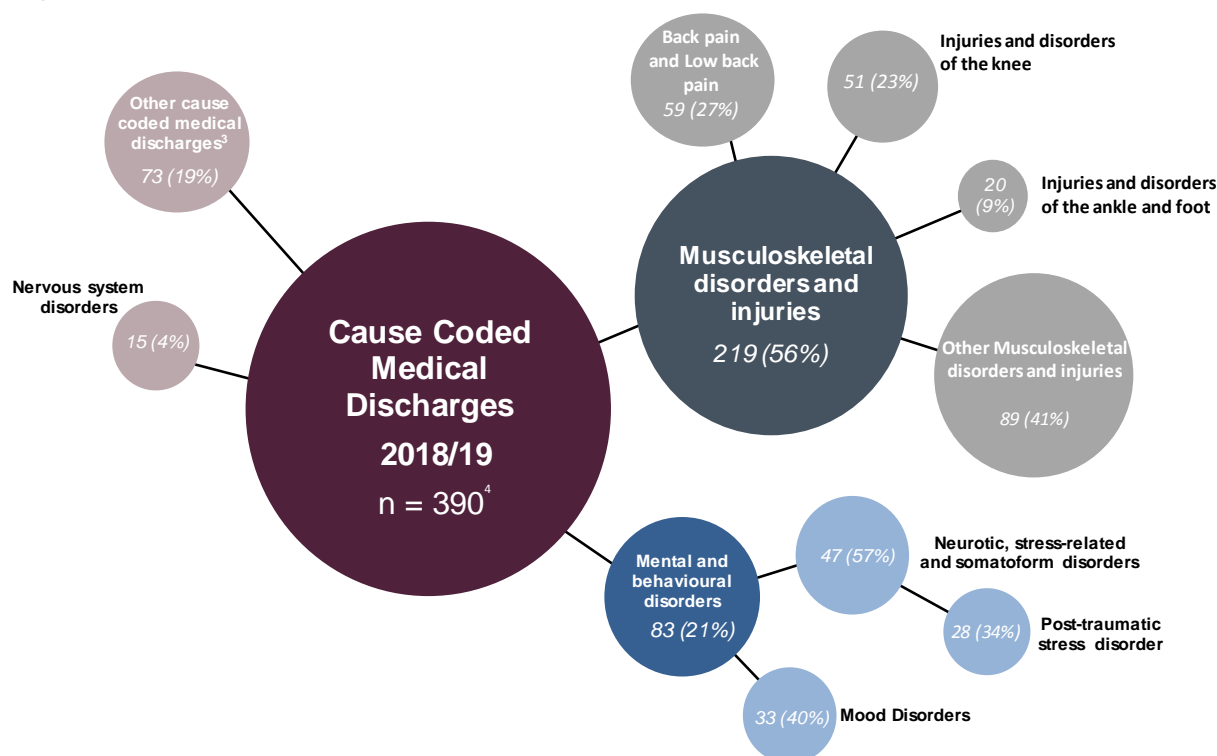
<sup>13</sup> Poisson, R. (2015). The imperative of military medical research and the duty to protect, preserve, and provide advanced evidence-informed care [online], Journal of Military, Veteran and Family Health; 1(1) available at <http://jmvfh.utpjournals.press/doi/pdf/10.3138/jmvfh.2014-11> accessed on 9 June 2017.

<sup>14</sup> Hoy D, March L, Brooks P, Blyth F, Woolf A, Bain C, Williams G, Smith E, Vos T, Barendregt J, Murray C, Burstein R, Buchbinder R. (2014). The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Annals of the Rheumatic Diseases*. 73 (6), 968-74.

## Naval Service Continued

The majority of medical discharges for Mental and Behavioural Disorders in 2018/19 were as a result of Neurotic, Stress and Somatoform Disorders (n = 47, 57%) and Mood Disorders (n = 33, 40%). These findings were broadly comparable to initial assessments seen at MoD Specialist Mental Health Services (DCMHs) with Neurotic and Mood disorders being the most prevalent disorders among serving Naval Service personnel<sup>15</sup>. However, Post-Traumatic Stress Disorder (PTSD) accounts for a higher proportion of medical discharges than the proportion of assessments at DCMHs which may be due to the severity of PTSD and how it impacts upon personnel's career.

**Figure 8: UK Regular Naval Service<sup>1</sup> medical discharges by principal ICD-10 cause code group, Numbers and Percentages<sup>2,3</sup>**  
1 April 2018 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Includes Royal Navy and Royal Marines.

<sup>2</sup> Due to rounding, percentages might not add to 100%.

<sup>3</sup> Includes 16 cause code groups; each accounting for a maximum of 3% of all Naval Service cause coded medical discharges.

<sup>4</sup> Total number of Naval service discharges were 391, however one person had no details on principal condition for medical boarding.

When considering both the principal and contributory causes of discharge in the Naval Service between 1 April 2018 and 31 March 2019:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for two thirds of all cause coded discharges (n = 256, 66%).
- Mental and Behavioural Disorders remained the second highest cause (n = 109, 28%).
- Ear and Mastoid process diseases were the third greatest cause of discharge (n = 29, 7%).

These findings were seen in medical discharges from both Royal Navy and Royal Marines.

<sup>15</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

## Trends in Medical Discharges

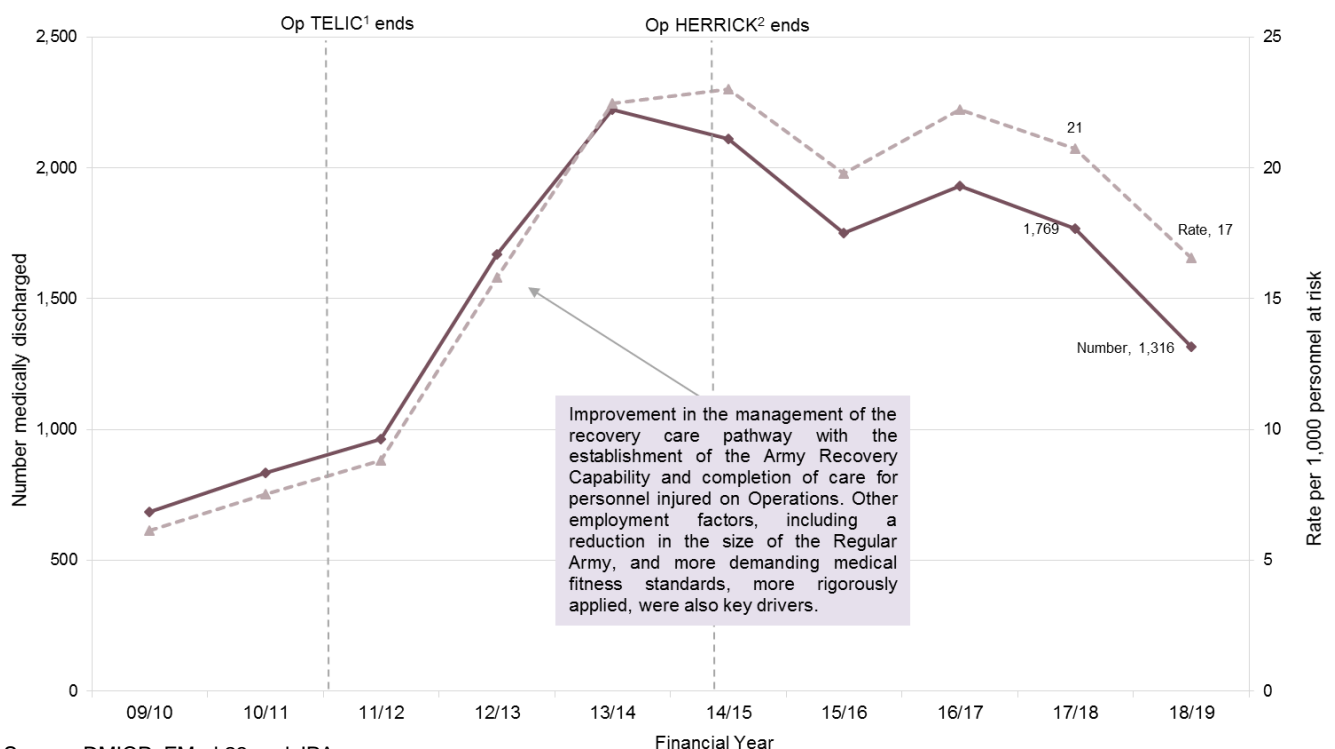
In the latest year, 1 April 2018 and 31 March 2019, there were **1,316** medical discharges, equal to 17 medical discharges per 1,000 personnel. This was a significant decrease since last year when the rate was 21 per 1,000 personnel (**Figure 9**).

- **1,316** medical discharges from the Army in 2018/19.
- This equates to **17 per 1,000** personnel.

▲ Between 1 April 2010 and 31 March 2015, the rate of medical discharge within Army personnel more than trebled (6 to 23 per 1,000 personnel). This is likely to be the result of improved management of the recovery care pathway with the establishment of the Army Recovery Capability (ARC). The ARC were established to manage the transition of ill and injured personnel either back to active Service, or back to civilian life. Additionally, it may be the result of the completion of treatment of personnel injured in Iraq and Afghanistan, and limited availability of roles suitable for personnel with medical restrictions.

▲ Between 1 April 2014 and 31 March 2018, the rate of medical discharges fluctuated between 23.0 and 19.8 per 1,000 personnel. And there has been a consistent downward trend between 1 April 2016 and 31 March 2019. This may be due to availability of roles suitable for personnel with medical restrictions.

**Figure 9: UK Regular Army medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk**  
1 April 2009 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Operation TELIC is the name for UK operations in Iraq which began March 2003 and ended on 21 May 2011.

<sup>2</sup> Operation HERRICK is the name for UK operations in Afghanistan which began 1 April 2006 and ended on 30 November 2014.

## Army Continued

### Demographic Risk Groups

Between 1 April 2018 and 31 March 2019, the rate of medical discharge was significantly higher for Regular Army personnel within specific demographic groups (**Table 3**):
















- Personnel aged 20-24
- Females.
- Other Ranks.
- Untrained personnel.

These findings were broadly consistent with results seen in the Annual MOD Health and Safety Statistics<sup>16</sup>, which found that Females, personnel aged under 30 and Untrained had higher proportions of personnel with injury and ill health related health and safety incidents. This was also consistent with the Women in Ground Close Combat roles review<sup>17</sup> which found higher risk of injuries to Female personnel.

From October 2016 the definition of “Trained” Army Personnel referred to personnel who had completed Phase 1 training (basic Service training). “Trade Trained” refers to personnel who had completed Phase 1 and 2 (trade-specific training); this is the equivalent of “Trained” in the Naval Service and the RAF.

**Table 3: UK Regular Army medical discharges by age group<sup>1</sup>, gender<sup>1</sup>, rank<sup>1</sup> and training status<sup>1</sup>, Numbers and Rates per 1,000 personnel at risk**

1 April 2018 to 31 March 2019

	2018/19		Rate of UK Regular Army personnel medically discharged
	n	r	
<b>Number of UK Regular Army personnel medically discharged</b>	<b>1,316</b>	<b>16.6</b>	
<b>Age</b>			
Aged Under 20	99	19.4	
Aged 20-24 <sup>+</sup>	292	18.8	
Aged 25-29	316	17.0	
Aged 30-34	281	18.2	
Aged 35-39	173	13.6	
Aged 40-44	108	15.4	
Aged 45-49	26	8.0	
Aged 50 and over	21	12.0	
<b>Gender</b>			
Male	1,154	16.0	
Female*	162	21.6	
<b>Rank</b>			
Officer	51	3.9	
Other Rank*	1,265	18.2	
<b>Training Status</b>			
Trade Trained <sup>2</sup>	1,046	13.8	
Untrained*	270	40.5	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>2</sup> Trade Trained - in this report those that have completed both Phase 1 and 2 training for Army (see full definition in Glossary).

\* Groups found to be at a significantly higher than average risk using a z-test for a single proportion at a 95% confidence level.

\* Groups found to be at a significantly higher risk using a z-test for proportions at a 95% confidence level.

<sup>16</sup> <https://www.gov.uk/government/collections/defence-health-and-safety-statistics-index>

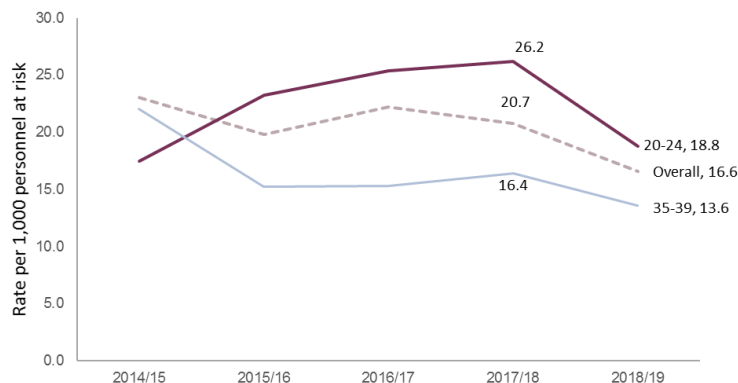
<sup>17</sup> <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

## Army Continued

Figures 10 to 13 present the Army medical discharges by demographic group from 1 April 2014 to 31 March 2019 with possible explanations for the differences observed.

**Figure 10: UK Regular Army medical discharges by age group<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

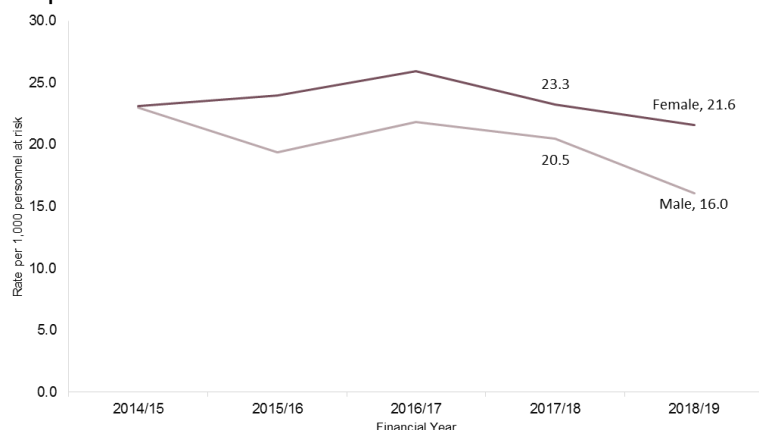
The rate of Army medical discharges significantly decreased in 2018/19 compared to the previous year.

Personnel aged 20-24 had a significantly higher rate of medical discharge compared to other age groups in 2018/19.

Lower rates of medical discharges seen in personnel aged over 35 are believed to be due to greater work experience and skill sets allowing for older personnel to be retained in less physically demanding roles.

**Figure 11: UK Regular Army medical discharges by gender<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

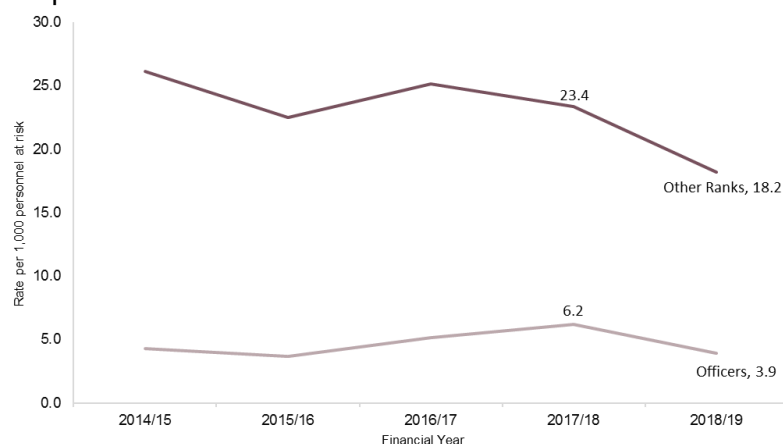
The rate of medical discharge for females was significantly higher than for males in the years 2015/16, 2016/17 and 2018/19. (Figure 11). The reason for this is unclear, however it may be partly due to the higher rate of presenting with Musculoskeletal Disorders and Injuries and Mental Health conditions in the female population<sup>15,16</sup>.



## Army Continued

**Figure 12: UK Regular Army medical discharges by rank<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



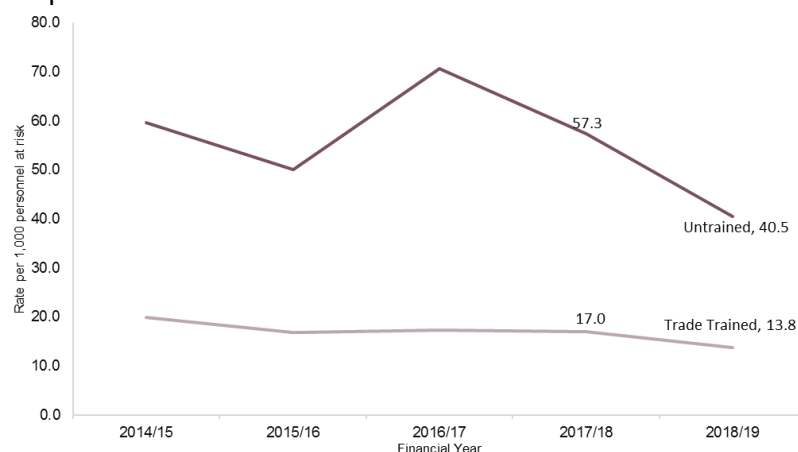
The rate of medical discharge among Other Ranks was significantly higher than for Officers throughout the period presented (**Figure 12**). Current Army policy is to retain personnel at Major and above in staff roles and thus Officers are more likely to be employed in or can be reassigned to duties that can be continued with certain injuries and illnesses.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

**Figure 13: UK Regular Army medical discharges by training status<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



The rate of medical discharge among Army untrained personnel was significantly higher compared to trained personnel throughout the period presented (**Figure 13**). The rate of medical discharge was also higher in the untrained Royal Marines population which may be due to the similarly intensive nature of the Army and Royal Marines training programmes.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge. Trade Trained - in this report those that have completed both Phase 1 and 2 training for Army (see full definition in Glossary).

## Army Continued

### Causes of Medical Discharges

When Army personnel are medically discharged, the medical reason for the discharge is recorded and categorised using a coding system known as ICD-10 (see glossary). **Table 4** shows this information by principal ICD-10 cause code group (the chapter within which the condition is categorised) and for the past five years 1 April 2014 to 31 March 2019.

**56%** of medical discharges (approx. 1 in 2) were due to **Musculoskeletal Disorders and Injuries**.

**29%** of medical discharges (approx. 1 in 3) were due to **Mental and Behavioural Disorders**.

**Table 4: UK Regular Army medical discharges by principal ICD-10 cause code group and financial year, Numbers<sup>1</sup> and Percentages<sup>2</sup>**  
1 April 2014 to 31 March 2019

	All		2014/15		2015/16		2016/17		2017/18		2018/19	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>All medical discharges</b>	<b>8,876</b>		<b>2,109</b>		<b>1,750</b>		<b>1,932</b>		<b>1,769</b>		<b>1,316</b>	
<b>All cause coded medical discharges</b>	<b>8,178</b>	<b>100</b>	<b>1,736</b>	<b>100</b>	<b>1,695</b>	<b>100</b>	<b>1,825</b>	<b>100</b>	<b>1,677</b>	<b>100</b>	<b>1,245</b>	<b>100</b>
Infectious and parasitic diseases (A00 - B99)	22	<1	9	<1	5	<1	~	<1	~	<1	~	<1
Neoplasms (C00 - D48)	62	<1	14	<1	16	<1	14	<1	8	<1	10	<1
Blood disorders (D50 - D89)	~	<1	~	<1	~	<1	~	<1	~	<1	~	<1
Endocrine, nutritional and metabolic diseases (E00 - E90)	56	<1	17	<1	~	<1	~	<1	13	<1	~	<1
- Of which diabetes (E10-E14)	35	<1	11	<1	8	<1	9	<1	~	<1	~	<1
- Of which insulin-dependent (E10)	21	<1	7	<1	5	<1	~	<1	~	<1	~	<1
- Of which non-insulin-dependent (E11)	6	<1	~	<1	0	0	~	<1	~	<1	0	0
Mental and behavioural disorders (F00 - F99)	<b>1,829</b>	<b>22</b>	<b>282</b>	<b>16</b>	<b>363</b>	<b>21</b>	<b>393</b>	<b>22</b>	<b>428</b>	<b>26</b>	<b>363</b>	<b>29</b>
- Of which mood disorders (F30 - F39)	507	6	61	4	105	6	108	6	117	7	116	9
- Of which depression (F32 & F33)	435	5	51	3	82	5	97	5	104	6	101	8
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	1,183	14	204	12	227	13	248	14	278	17	226	18
- Of which post-traumatic stress disorder (PTSD) (F431)	782	10	137	8	156	9	176	10	174	10	139	11
- Of which adjustment disorder (F432)	153	2	17	<1	24	1	31	2	39	2	42	3
Nervous system disorders (G00 - G99)	<b>192</b>	<b>2</b>	<b>50</b>	<b>3</b>	<b>39</b>	<b>2</b>	<b>37</b>	<b>2</b>	<b>42</b>	<b>3</b>	<b>24</b>	<b>2</b>
- Of which epilepsy (G40)	45	<1	12	<1	12	<1	9	<1	6	<1	6	<1
Eye and adnexa diseases (H00 - H59)	<b>32</b>	<b>&lt;1</b>	<b>10</b>	<b>&lt;1</b>	<b>8</b>	<b>&lt;1</b>	<b>7</b>	<b>&lt;1</b>	<b>~</b>	<b>&lt;1</b>	<b>~</b>	<b>&lt;1</b>
- Of which blindness, low vision and visual disturbance (H53 & H54)	9	<1	~	<1	~	<1	~	<1	~	<1	~	<1
Ear and mastoid process diseases (H60 - H95)	<b>321</b>	<b>4</b>	<b>97</b>	<b>6</b>	<b>62</b>	<b>4</b>	<b>65</b>	<b>4</b>	<b>58</b>	<b>3</b>	<b>39</b>	<b>3</b>
- Of which hearing loss (H833 & H90 - H91)	272	3	89	5	51	3	54	3	48	3	30	2
- Of which noise-induced hearing loss (H833)	85	1	38	2	17	1	12	<1	11	<1	7	<1
- Of which tinnitus (H931)	31	<1	6	<1	11	<1	~	<1	7	<1	~	<1
Circulatory system disorders (I00 - I99)	<b>156</b>	<b>2</b>	<b>25</b>	<b>1</b>	<b>36</b>	<b>2</b>	<b>42</b>	<b>2</b>	<b>29</b>	<b>2</b>	<b>24</b>	<b>2</b>
Respiratory system disorders (J00 - J99)	<b>84</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>13</b>	<b>&lt;1</b>	<b>11</b>	<b>&lt;1</b>
- Of which asthma (J45 & J46)	68	<1	11	<1	19	1	17	<1	12	<1	9	<1
Digestive system disorders (K00 - K93)	<b>113</b>	<b>1</b>	<b>27</b>	<b>2</b>	<b>28</b>	<b>2</b>	<b>19</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>14</b>	<b>1</b>
Skin and subcutaneous tissue diseases (L00 - L99)	<b>99</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>16</b>	<b>&lt;1</b>	<b>34</b>	<b>2</b>	<b>17</b>	<b>1</b>	<b>7</b>	<b>&lt;1</b>
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	<b>4,837</b>	<b>59</b>	<b>1,087</b>	<b>63</b>	<b>1,016</b>	<b>60</b>	<b>1,079</b>	<b>59</b>	<b>960</b>	<b>57</b>	<b>695</b>	<b>56</b>
- Of which injuries and disorders of the knee <sup>3</sup>	906	11	195	11	179	11	220	12	178	11	134	11
- Of which knee pain (M2556)	352	4	73	4	78	5	83	5	72	4	46	4
- Of which back pain (M549)	521	6	138	8	95	6	100	5	115	7	73	6
- Of which low back pain (M544-5)	449	5	118	7	78	5	86	5	101	6	66	5
- Of which injuries and disorders of the ankle and foot <sup>4</sup>	477	6	100	6	91	5	107	6	103	6	76	6
- Of which heat injury (T67)	17	<1	~	<1	~	<1	~	<1	5	<1	5	<1
- Of which cold injury (T68 & T69)	385	5	65	4	90	5	98	5	77	5	55	4
Genitourinary system diseases (N00 - N99)	<b>46</b>	<b>&lt;1</b>	<b>9</b>	<b>&lt;1</b>	<b>9</b>	<b>&lt;1</b>	<b>7</b>	<b>&lt;1</b>	<b>13</b>	<b>&lt;1</b>	<b>8</b>	<b>&lt;1</b>
Pregnancy, childbirth and puerperium (O00 - O99)	~	<1	0	0	0	0	0	0	~	<1	0	0
Congenital malformations (Q00 - Q99)	<b>29</b>	<b>&lt;1</b>	~	<1	8	<1	8	<1	~	<1	~	<1
Clinical and laboratory findings (R00 - R99)	<b>244</b>	<b>3</b>	<b>49</b>	<b>3</b>	<b>46</b>	<b>3</b>	<b>70</b>	<b>4</b>	<b>51</b>	<b>3</b>	<b>28</b>	<b>2</b>
External Causes of Morbidity and Mortality (V01 - Y98)	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Factors influencing health status (Z00 - Z99)	<b>39</b>	<b>&lt;1</b>	<b>8</b>	<b>&lt;1</b>	<b>7</b>	<b>&lt;1</b>	<b>12</b>	<b>&lt;1</b>	<b>7</b>	<b>&lt;1</b>	<b>5</b>	<b>&lt;1</b>
No details held on principal condition for medical boarding	<b>698</b>		<b>373</b>		<b>55</b>		<b>107</b>		<b>92</b>		<b>71</b>	
Withheld consent	<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> ~ In line with JSP 200 on statistical disclosure, figures less than five have been suppressed. Please see background quality report for more information.

<sup>2</sup> Data presented as "<1%" represent a percentage of cause coded medical discharges of greater than 0% but smaller than 1%.

<sup>3</sup> Injuries and disorders of the knee have been compiled using ICD-10 codes, please see annex for specific codes.

<sup>4</sup> Injuries and disorders of the ankle and foot have been compiled using ICD-10 codes, please see annex for specific codes.

**Principal cause** is the main medical cause of the discharge.

**Contributory causes** include any other conditions identified that would result in a medical discharge.

## Army Continued

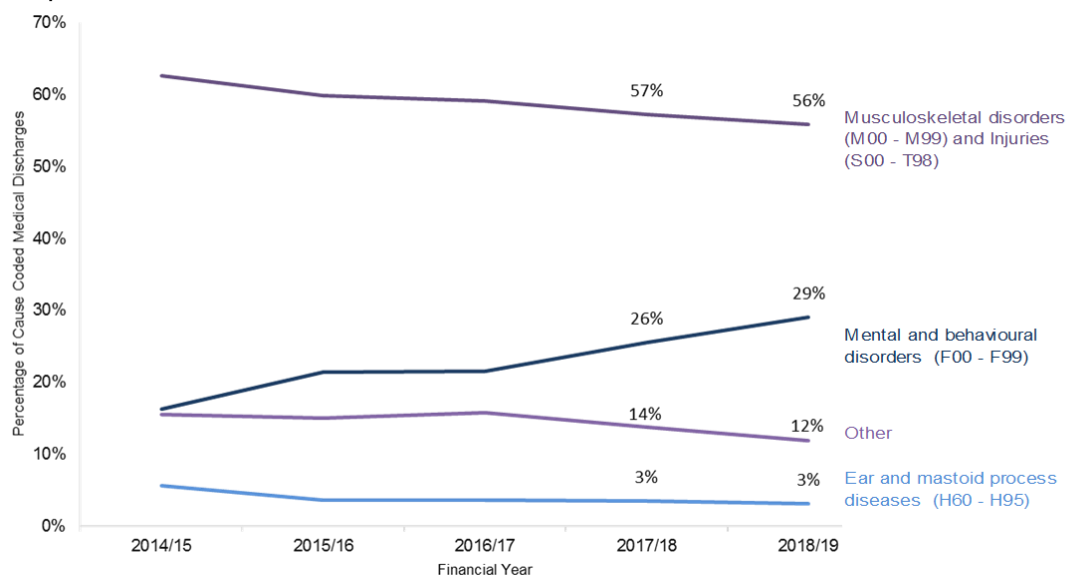
Between 1 April 2014 and 31 March 2019, Musculoskeletal Disorders and Injuries were the largest cause of principal cause coded Army medical discharges, accounting for 59% of all medical discharges (**Figure 14**).

Since 1 April 2014, the proportion of medical discharges for Mental and Behavioural Disorders has increased year on year. Presentations of Army personnel at MOD Specialist Mental Health Services increased up to 2017/18 and this may in part be result of an increase in awareness of mental health due to success of anti-stigma campaigns. Mental and Behavioural Disorders are also a large cause for medical discharge from the Canadian Military<sup>18</sup>; however these were responsible for a larger proportion of personnel released from the Canadian military than the UK Armed Forces (41%).

It is important to note that each medical discharge can only have one principal condition and a percentage decrease reduction in one cause code group may appear as an increase in another. Therefore, it is important to consider all cause code groups when looking at trends over time.

**Figure 14: UK Regular Army medical discharges by principal ICD-10 cause code group and financial year, Percentage of all medical discharges**

1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

The greatest proportions of Musculoskeletal Disorders and Injuries were linked to the leg (below and including the knee) and back (**Figure 15**). Back pain is also the leading cause of disability in the UK and global populations<sup>19</sup>. However, the high prevalence of personnel medically discharged for injuries and disorders of the knee may also be the result of the physical activity required of many Army personnel, such as training on hard ground carrying heavy loads, marching and assuming fire positions.

The majority of medical discharges due to Mental and Behavioural Disorders between 1 April 2018 and 31 March 2019 were the result of Neurotic, Stress Related and Somatoform Disorders (n = 225, 62% of Mental and Behavioural Disorder medical discharges). This was comparable to initial assessments at MOD Specialist Mental Health services (DCMHs) with neurotic and mood disorders being the most prevalent disorders among serving Army personnel<sup>20</sup>. However, Post-Traumatic Stress Disorder (PTSD) accounts for a higher proportion of medical discharges than the proportion of assessments at DCMHs which may be due to the severity of PTSD and how it impacts upon personnel's career.

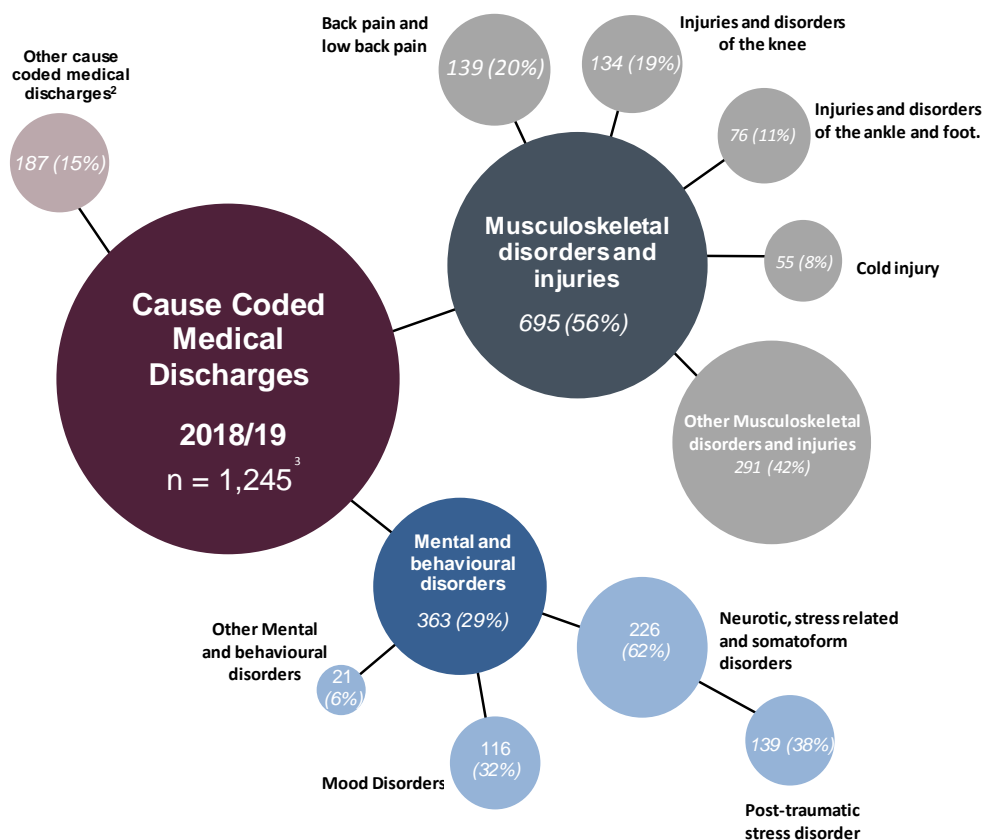
<sup>18</sup> Poisson, R. (2015). The imperative of military medical research and the duty to protect, preserve, and provide advanced evidence-informed care [online], *Journal of Military, Veteran and Family Health*; 1(1) available at <http://jmvfh.utpjournals.press/doi/pdf/10.3138/jmvfh.2014-11> accessed on 9 June 2017.

<sup>19</sup> Hoy D, March L, Brooks P, Blyth F, Woolf A, Bain C, Williams G, Smith E, Vos T, Barendregt J, Murray C, Burstein R, Buchbinder R. (2014). The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Annals of the Rheumatic Diseases*. 73 (6), 968-74.

<sup>20</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

## Army Continued

**Figure 15: UK Regular Army medical discharges by principal ICD-10 cause code group, Numbers and Percentages<sup>1,2</sup>**  
1 April 2018 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Due to rounding, percentages might not add to 100%.

<sup>2</sup> Includes 17 cause code groups; each accounting for a maximum of 3% of all Army cause coded medical discharges.

<sup>3</sup> Total number of Army discharges were 1316, however 71 personnel had no details on principal condition for medical boarding.

When considering both the principal and contributory cause of discharge between 1 April 2018 and 31 March 2019:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for over two thirds of all cause coded discharge (n = 886, 71%).
- Mental and Behavioural Disorders was the second highest cause (n = 548, 44%).
- Factors Influencing Health Status (n = 330, 27%) was the third highest cause. Factors influencing health are usually secondary to the main condition and therefore more likely to be listed as a contributory cause and not as a principal cause of discharge.

Defence Statistics receive more medical discharge information from paper forms (FMed 23s) for the Army whereas more information is gained from patients' electronic medical records (DMICP) in the Naval Service and RAF. FMed 23s allow Defence Statistics to see free text from clinicians and occupational health practitioners which may provide greater granularity about the injuries/illnesses for which personnel are medically discharged; for example medical examinations and tests. This additional information allows for more coding of the medical discharge and these codes often fall within the Factors Influencing Health Status chapter. Therefore, there was a greater proportion of personnel with Factors Influencing Health Status within the contributory causes of medical discharges in the Army than in other services.

Further information on the principal and contributory causes of medical discharge in the UK Regular Army can be found in the supporting Excel tables to this report.

## Trends in Medical Discharges

In the latest year, 1 April 2018 to 31 March 2019, there were **162** medical discharges, equal to 5 medical discharges per 1,000 personnel. This was not a statistically significant decrease since last year when the rate was 6 per 1,000 personnel (**Figure 16**).

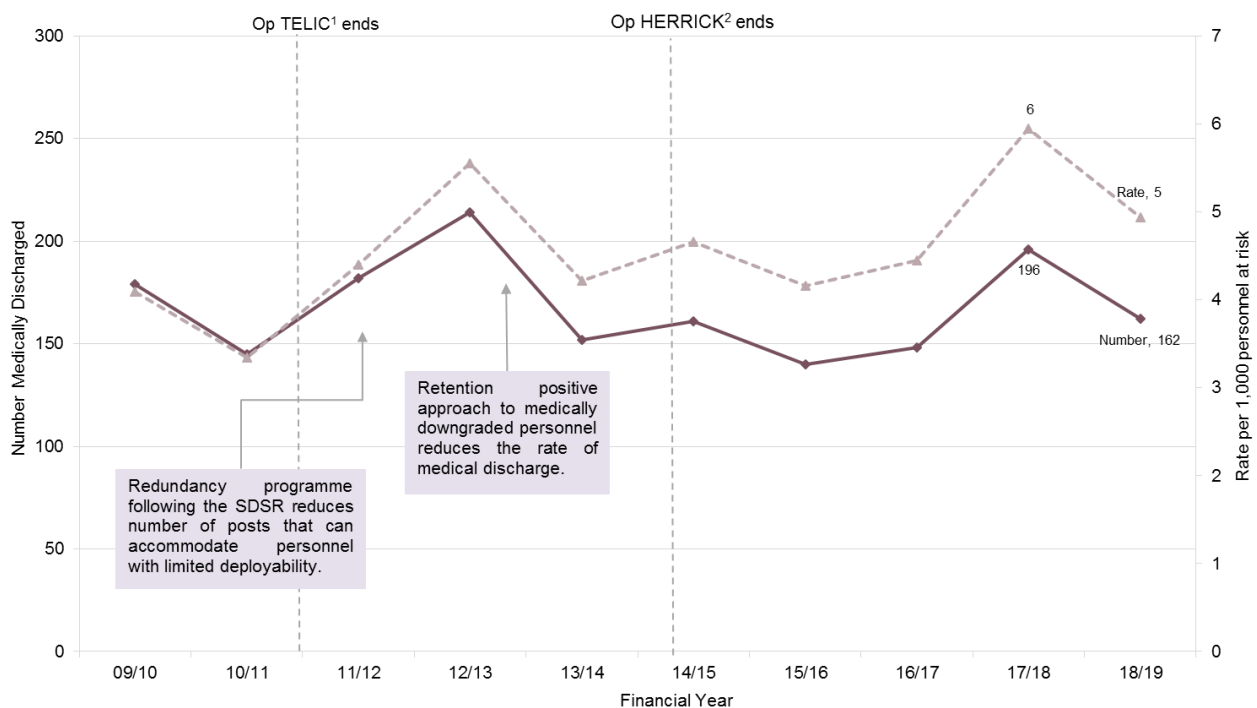
- **162** medical discharges from the RAF in 2018/19.
- This equates to **5 per 1,000** personnel.

▼ The rate of medical discharges fell between 1 April 2008 and 31 March 2010. This was partly due to the RAF retaining personnel where an alternative role was available, and where retention was in the best interests of both the individual and the Service.

▲ The rate of medical discharges rose between 1 April 2010 and 31 March 2013. This may be because of the Strategic Defence and Security Review (SDSR) which reduced the number of roles available and may have limited the roles available that would accommodate the needs of personnel with limited deployability.

▼ The rate of medical discharges fell from 1 April 2013 and 31 March 2014. During this time the RAF were operating a retention positive approach which endeavoured to find alternative roles for personnel with limited deployability.

**Figure 16: UK Regular RAF medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk**  
1 April 2009 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Operation TELIC is the name for UK operations in Iraq which began March 2003 and ended on 21 May 2011.

<sup>2</sup> Operation HERRICK is the name for UK operations in Afghanistan which began 1 April 2006 and ended on 30 November 2014.

## RAF Continued

### Demographic Risk Groups

Between 1 April 2018 and 31 March 2019, the rate of medical discharge was significantly higher for Regular RAF personnel within specific demographic groups (**Table 5**):
















- Personnel aged 45-49 years.
- Females.
- Other Ranks.

The demographic groups that displayed a high rate of medical discharge between 1 April 2018 and 31 March 2019 were consistent with results seen in the Annual MOD Health and Safety Statistics<sup>21</sup>, which found that Females had higher proportions of personnel with injury and ill health related health and safety incidents. This was also consistent with the Women in Ground Close Combat roles review<sup>22</sup> which found higher risk of injuries to female personnel.

The reasons for the significantly higher rate of medical discharges among female RAF personnel are unknown, however it may be in part to the higher risk of Musculoskeletal Disorders and Injuries and higher presentation of mental health problems (the leading two causes of medical discharge) in the female population<sup>20,23</sup>.

**Table 5: UK Regular RAF medical discharges by age group<sup>1</sup>, gender<sup>1</sup>, rank<sup>1</sup> and training status<sup>1</sup>, Numbers and Rates per 1,000 personnel at risk**

1 April 2018 to 31 March 2019

	2018/19		Rate of UK Regular RAF personnel medically discharged
	n	r	
<b>Number of UK Regular RAF personnel medically discharged</b>	<b>162</b>	<b>4.9</b>	
<b>Age</b>			
Aged Under 20	7	6.9	
Aged 20-24	14	3.0	
Aged 25-29	29	4.4	
Aged 30-34	35	5.6	
Aged 35-39	21	3.6	
Aged 40-44	22	6.2	
Aged 45-49 <sup>+</sup>	21	7.6	
Aged 50 and over	13	5.4	
<b>Gender</b>			
Male	118	4.2	
Female <sup>*</sup>	44	9.4	
<b>Rank</b>			
Officer	16	2.1	
Other Rank <sup>*</sup>	146	5.8	
<b>Training Status</b>			
Trained	145	4.8	
Untrained	17	6.3	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>\*</sup> Groups found to be at a significantly higher than average risk using a z-test for a single proportion at a 95% confidence level.

<sup>\*</sup> Groups found to be at a significantly higher risk using a z-test for proportions at a 95% confidence level.

<sup>21</sup> <https://www.gov.uk/government/collections/defence-health-and-safety-statistics-index>

<sup>22</sup> <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

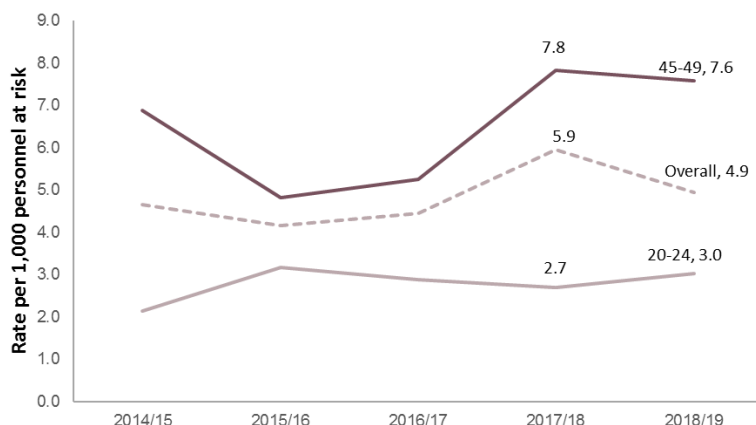
<sup>23</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

## RAF Continued

Figures 17 to 20 present RAF medical discharges for each demographic group between 1 April 2014 and 31 March 2019 with possible explanations for the differences observed.

**Figure 17: UK Regular RAF medical discharges by age group<sup>1</sup> and financial year, Rates per 1,000 personnel**

1 April 2014 to 31 March 2019



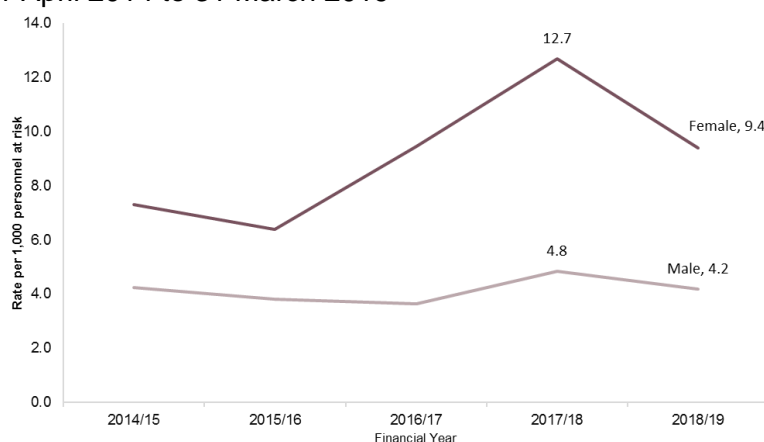
The rate of medical discharge among RAF personnel fell by less than one percentage point from 2017/18 to 2018/19 (**Figure 17**). Personnel aged 45 to 49 have consistently had a higher rate of medical discharge than the overall rate whereas personnel aged 20 to 24 have consistently had a lower rate. It should be noted that the underlying numbers are low and are therefore more susceptible to large percentage changes.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

**Figure 18: UK Regular RAF medical discharges by gender<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



The rate of medical discharge has been significantly higher for females than for males since 2014/15 (**Figure 18**). This may be due to the higher rate of presenting with Musculoskeletal Disorders and Injuries and Mental Health conditions in the female population<sup>22,23</sup>. Prior to this, there was no significant difference between male and female discharges in the RAF.

In 2017/18 there was a significant increase of 24 percentage points in the rate of medical discharge for female personnel compared to 2016/17. However in 2018/19, female personnel rate decreased from 12.7 to 9.4 in 2017/18.

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>24</sup> <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

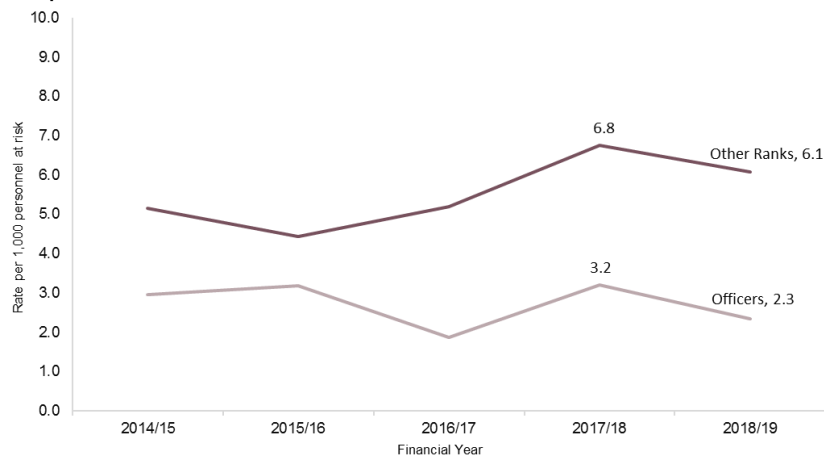
<sup>23</sup> Please see the "UK armed forces mental health annual statistics: financial year 2018/19" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>



## RAF Continued

**Figure 19: UK Regular RAF medical discharges by rank<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



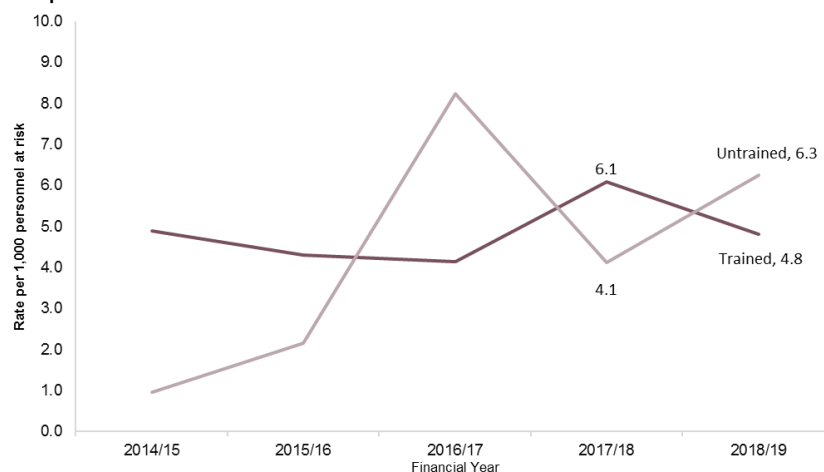
For the majority of the period presented, Other Ranks had a significantly higher rate of medical discharge than Officers (apart from 2015/16) (**Figure 19**).

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

**Figure 20: UK Regular RAF medical discharges by training status<sup>1</sup> and financial year, Rates per 1,000 personnel at risk**

1 April 2014 to 31 March 2019



The fluctuation shown in the rate of discharge among the untrained population may be a result of the small numbers involved; in total over the five year period from 1 April 2014 to 31 March 2019 only 54 untrained RAF personnel were medically discharged, compared to 753 trained personnel (**Figure 20**).

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

## RAF Continued

### Causes of Medical Discharges

When UK Armed Forces personnel are medically discharged, the medical reason for the discharge is recorded and categorised using a coding system known as ICD-10 (see glossary). **Table 6** shows this information by principal ICD-10 cause code group (the chapter within which the condition is categorised) and for the past five years 1 April 2014 to 31 March 2019.

**49%** of medical discharges (approx. 1 in 2) were due to **Musculoskeletal Disorders and Injuries**.

**33%** of medical discharges (approx. 1 in 3) were due to **Mental and Behavioural Disorders**.

**Table 6: UK Regular RAF medical discharges by principal ICD-10 cause code group and financial year, Numbers<sup>1</sup> and Percentages<sup>2</sup>**

1 April 2014 to 31 March 2019

	All		2014/15		2015/16		2016/17		2017/18		2018/19	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>All medical discharges</b>	<b>807</b>		<b>161</b>		<b>140</b>		<b>148</b>		<b>196</b>		<b>162</b>	
<b>All cause coded medical discharges</b>	<b>788</b>	<b>100</b>	<b>146</b>	<b>100</b>	<b>136</b>	<b>100</b>	<b>148</b>	<b>100</b>	<b>196</b>	<b>100</b>	<b>162</b>	<b>100</b>
Infectious and parasitic diseases (A00 - B99)	0	0	0	0	0	0	0	0	0	0	0	0
Neoplasms (C00 - D48)	15	2	~	3	~	1	~	2	~	2	~	2
Blood disorders (D50 - D89)	~	<1	0	0	0	0	~	<1	0	0	~	<1
Endocrine, nutritional and metabolic diseases (E00 - E90)	~	<1	~	<1	0	0	~	1	~	<1	0	0
- Of which diabetes (E10-E14)	~	<1	0	0	0	0	~	<1	~	<1	0	0
- Of which insulin-dependent (E10)	~	<1	0	0	0	0	~	<1	~	<1	0	0
- Of which non-insulin-dependent (E11)	0	0	0	0	0	0	0	0	0	0	0	0
Mental and behavioural disorders (F00 - F99)	244	31	37	25	38	28	44	30	71	36	54	33
- Of which mood disorders (F30 - F39)	94	12	11	8	18	13	14	9	34	17	17	10
- Of which depression (F32 & F33)	84	11	9	6	17	13	13	9	30	15	15	9
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	126	16	20	14	17	13	25	17	31	16	33	20
- Of which post-traumatic stress disorder (PTSD) (F431)	53	7	8	5	9	7	10	7	12	6	14	9
- Of which adjustment disorder (F432)	29	4	~	4	~	1	8	5	~	3	7	4
Nervous system disorders (G00 - G99)	43	5	8	5	9	7	7	5	12	6	7	4
- Of which epilepsy (G40)	5	<1	0	0	0	0	~	1	~	2	0	0
Eye and adnexa diseases (H00 - H59)	~	<1	~	<1	~	<1	~	<1	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	~	<1	0	0	~	<1	0	0	0	0	0	0
Ear and mastoid process diseases (H60 - H95)	20	3	5	3	7	5	5	3	~	<1	~	1
- Of which hearing loss (H833 & H90 - H91)	16	2	5	3	6	4	~	3	~	<1	0	0
- Of which noise-induced hearing loss (H833)	~	<1	0	0	0	0	~	<1	~	<1	0	0
- Of which tinnitus (H931)	~	<1	0	0	~	<1	~	<1	0	0	~	<1
Circulatory system disorders (I00 - I99)	15	2	~	<1	~	3	~	2	5	3	~	1
Respiratory system disorders (J00 - J99)	~	<1	0	0	0	0	~	<1	0	0	~	1
- Of which asthma (J45 & J46)	~	<1	0	0	0	0	~	<1	0	0	0	0
Digestive system disorders (K00 - K93)	15	2	6	4	0	0	~	2	~	2	~	1
Skin and subcutaneous tissue diseases (L00 - L99)	10	1	~	1	0	0	~	1	~	1	~	2
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	378	48	76	52	66	49	67	45	90	46	79	49
- Of which injuries and disorders of the knee <sup>3</sup>	75	10	15	10	11	8	10	7	22	11	17	10
- Of which knee pain (M2556)	47	6	9	6	6	4	5	3	18	9	9	6
- Of which back pain (M549)	83	11	19	13	14	10	12	8	14	7	24	15
- Of which low back pain (M544-5)	70	9	17	12	13	10	9	6	12	6	19	12
- Of which injuries and disorders of the ankle and foot <sup>4</sup>	23	3	5	3	~	3	~	3	~	2	6	4
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	12	2	0	0	~	<1	~	2	5	3	~	2
Genitourinary system diseases (N00 - N99)	~	<1	~	<1	~	<1	~	<1	0	0	0	0
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	~	<1	0	0	~	<1	0	0	~	1	~	<1
Clinical and laboratory findings (R00 - R99)	26	3	~	3	6	4	8	5	~	2	~	2
External Causes of Morbidity and Mortality (V01 - Y98)	0	0	0	0	0	0	0	0	0	0	0	0
Factors influencing health status (Z00 - Z99)	~	<1	0	0	~	<1	0	0	0	0	0	0
No details held on principal condition for medical boarding	15		12		3		0		0		0	
Withheld consent	4		3		1		0		0		0	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> ~ In line with JSP 200 on statistical disclosure, figures less than five have been suppressed. Please see background quality report for more information.

<sup>2</sup> Data presented as "<1%" represent a percentage of cause coded medical discharges of greater than 0% but smaller than 1%.

<sup>3</sup> Injuries and disorders of the knee have been compiled using ICD-10 codes, please see annex for specific codes.

<sup>4</sup> Injuries and disorders of the ankle and foot have been compiled using ICD-10 codes, please see annex for specific codes.

**Principal cause** is the main medical cause of the discharge.

**Contributory causes** include any other conditions identified that would result in a medical discharge

## RAF Continued

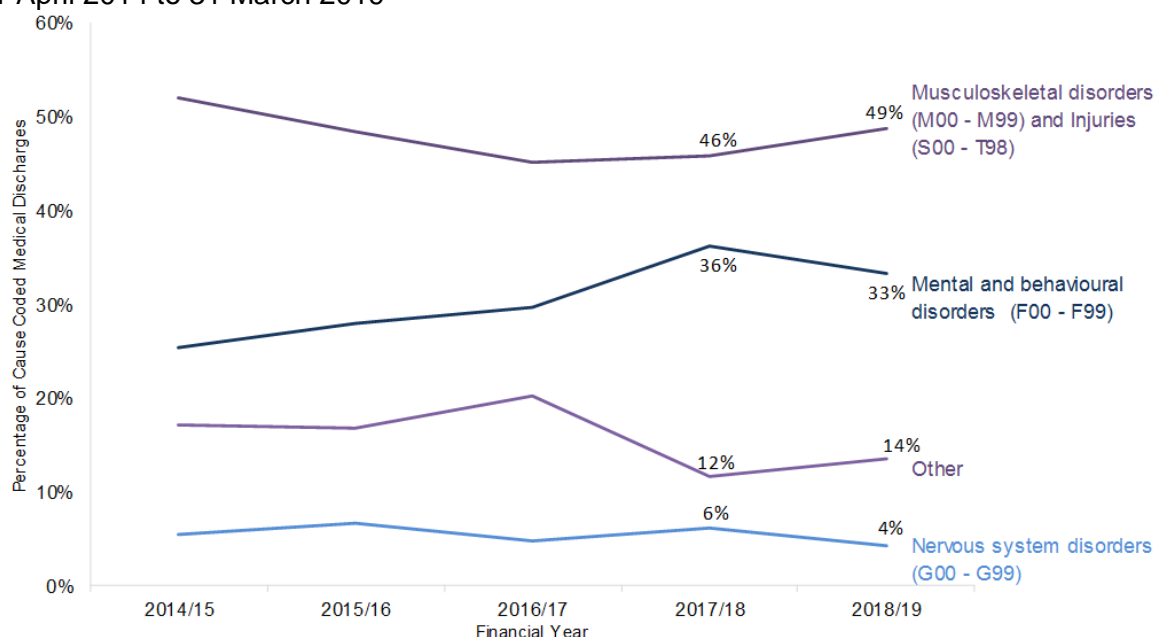
Between 1 April 2014 and 31 March 2019, Musculoskeletal Disorders and Injuries were the largest cause of principal cause coded RAF medical discharges, accounting for between 46% of all medical discharges (**Figure 21**).

Between 2017/18 and 2018/19, the decrease in the proportion of medical discharges for Mental and Behavioural Disorders was not statistically significant when compared to the previous year.

It is important to note that each medical discharge can only have one principal condition and a decrease in one cause code group may appear as an increase in another. Therefore, it is important to consider all cause code groups when looking at trends over time.

**Figure 21: UK Regular RAF medical discharges by principal ICD-10 cause code group and financial year, Percentage of all medical discharges**

1 April 2014 to 31 March 2019



Source: DMICP, FMed 23 and JPA

The greatest proportions of Musculoskeletal Disorders and Injuries were linked to the leg (below and including the knee) and back (Figure 12). Back pain is also the leading cause of disability in the UK and global populations<sup>25</sup>. The high prevalence of personnel medically discharged for these conditions may be the result of the physical activity required of many RAF personnel, such as training on hard ground carrying heavy loads.

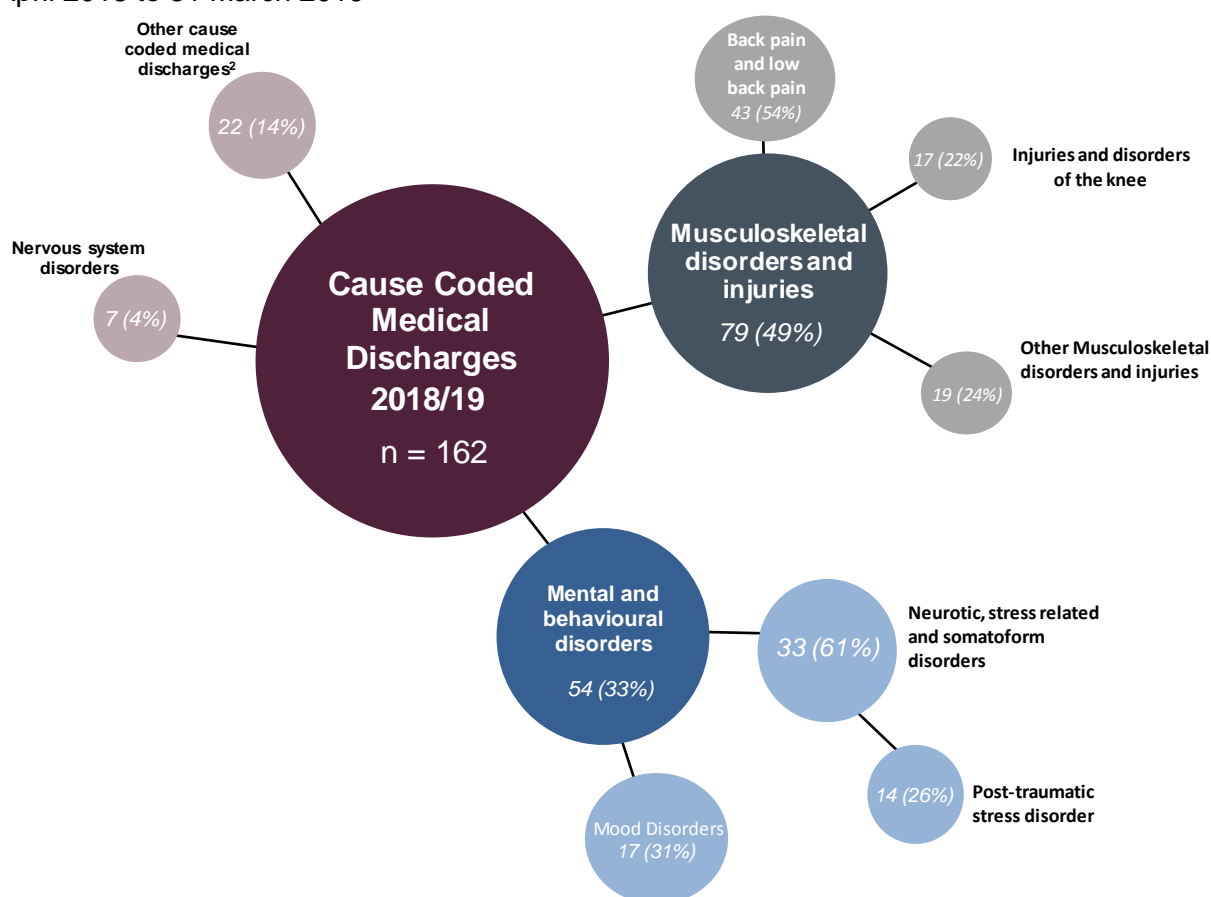
<sup>25</sup> Hoy D, March L, Brooks P, Blyth F, Woolf A, Bain C, Williams G, Smith E, Vos T, Barendregt J, Murray C, Burstein R, Buchbinder R. (2014). The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Annals of the Rheumatic Diseases*. 73 (6), 968-74.

## RAF Continued

In line with previous years, between 1 April 2018 and 31 March 2019 the most common principal cause of medical discharge was Musculoskeletal Disorders and Injuries (n = 79, 49%) and the second highest cause of medical discharge was Mental and Behavioural Disorders (n = 54, 33%). This finding is consistent with the Canadian military<sup>4</sup>; however Mental and Behavioural Disorders were responsible for a larger proportion of personnel released from the Canadian military than the UK Armed Forces (41%) (**Figure 22**).

**Figure 22: UK Regular RAF medical discharges by principal ICD-10 cause code group, Numbers and Percentages<sup>1,2</sup>**

1 April 2018 to 31 March 2019



Source: DMICP, FMed 23 and JPA

<sup>1</sup> Due to rounding, percentages might not add to 100%.

<sup>2</sup> Includes 16 cause code groups; each accounting for a maximum of 3% of all RAF cause coded medical discharges

When considering both the principal and contributory causes of discharge between 1 April 2018 and 31 March 2019:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for over two thirds of all cause coded discharge (n = 104, 64%).
- Mental and Behavioural Disorders remained the second highest cause (n = 83, 51%).
- Nervous System Disorders were the third highest cause (n = 17, 10%).

## Methodology

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**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:**

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

### *Data Sources*

1. Data are compiled by Defence Statistics from three sources:
  - Medically discharged personnel are identified in monthly downloads taken from the Joint Personnel Administration System (JPA). JPA is used to hold the administration data for all Regular Forces. The number of Service personnel in each year is also taken from the monthly downloads from JPA.
  - The principal and contributory causes of medical discharge are taken from F Med 23s. F Med 23s are official medical documents used to record all medical board proceedings. Defence Statistics are supplied FMed 23s by the single Service medical boards and code them into the medical discharge database. If consent for Defence Statistics to hold the information is not given the individual appears in the database with no clinical information recorded.
  - Where paper versions of the FMed 23 form have not been made available to Defence Statistics, the electronic version as recorded on the Defence Medical Information Capability Programme (DMICP) has been utilised.

### *Data Coverage*

2. This bulletin covers Regular Service personnel (trained and untrained). Royal Navy and Royal Marines personnel are recorded as Naval Service personnel; Army Regular personnel include Gurkha Regiments and Military Provost Guard Service (MPGS).
3. This bulletin focuses exclusively on personnel that have already left the UK Regular Armed Forces on a medical discharge; downgraded personnel that are expected to be medically discharged after the reporting period are excluded.
4. Note that untrained personnel are sometimes discharged under administrative categories, albeit on medical grounds. These discharges usually concern individuals who have failed their initial training for medical reasons, or who at their initial medical failed to disclose medical reasons which may later affect their application and training. As these cases are not defined as medical discharges they are not included in this report.
5. Time series graphs present the overall number and crude rates per 1,000 personnel at risk of medical discharges for the last ten years, to help assess the impact of changes in policy and practices. For presentational purposes, demographic and cause information is presented for the last five years only.
6. Any trends in the statistics presented within this report do not directly reflect actual occupational health morbidity within the Armed Forces. Medical discharge data are presented by year of medical discharge, and not year of injury / onset of condition that led to medical discharge. Therefore any trends identified may only be corresponding directly to changes in boarding practice, retention policies or changes to continuing employment standards.
7. The length of time between detecting and diagnosing a medical condition and the date at which an individual is eventually released under a medical discharge varies for each individual. The timing of a discharge medical board must strike an appropriate balance between the needs of the individual Service and those of the patient. The date of the medical discharge board should allow the timely provision of occupational health advice following the initial referral, and time elapsed waiting for further treatment may affect this process.

## Methodology Continued

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8. This report only focuses on medical causes for medical discharges. Medical boards are not called upon to decide possible causes for the medical conditions. Therefore the report does not offer analysis of external causes of injury related conditions or illnesses such as exposure to hazardous substances.
9. Medical Boards do not make decisions on attributability to Service. These decisions are made by administrators of the MOD pension and compensation schemes at Vets-UK, previously Service Personnel and Veterans' Agency (SPVA). Defence Statistics produce annual reports on the Armed Forces Compensation Scheme and annual reports on War Pension Scheme which can be found at <https://www.gov.uk/government/organisations/ministry-of-defence/about/statistics>.

### *Calculating Rates*

10. Rates enable comparison between groups by removing the issue of different populations at risk (group sizes). The rates in this bulletin present the number of medical discharges per 1,000 personnel. As the size of the Armed Forces varies through time, this is a more accurate means of comparing the proportion of personnel medically discharged from Service in different years than utilising counts of the personnel medically discharged
11. All the rate data provided in this bulletin are calculated in the form of crude rates. Crude rates are calculated by dividing the number of events (in this case medical discharges for each year) by the population at risk (in this case the average number of Service personnel on strength in each year).
12. The z test for independent proportions is used to evaluate if two rates are different to a statistically significant degree. The confidence level to which this test has been run in this report is 95%: this means that if the test determines two populations to have different medical discharge rates, this will be true in greater than 95% of cases.
13. In order to identify age groups with a significantly higher than average rate of medical discharge, Z tests for a single proportion were performed comparing each age group to the average rate of discharge. In some cases, Defence Statistics have also performed Z tests for two proportions between specific age groups to provide greater clarity on the relationship between age and rate of discharge.

## Glossary

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**Defence Medical Information Capability Programme (DMICP)** is the MOD electronic primary health care patient record.

**FMed 23** is the form completed whenever a medical board is held for a member of the UK Armed Forces.

**Joint Personnel Administration (JPA)** is the system used by the Armed Forces to deal with matters of pay, leave and other personnel administrative tasks. JPA replaced a number of single-Service IT systems and was implemented in April 2006 for RAF, November 2006 for Naval Service and April 2007 for Army.

**Department for Community Mental Health (DCMH)** are specialised psychiatric services based on community mental health teams closely located with primary care service at sites in the UK and abroad.

**International Statistical Classification of Diseases and Health-Related Disorders 10<sup>th</sup> edition (ICD-10)** is the standard diagnostic tool for epidemiology, health management and clinical purposes.

**Officer** An Officer is a member of the Armed Forces holding the Queen's Commission to lead and command elements of the forces. Officers form the middle and senior management of the Armed Forces. This includes ranks from Sub-Lt/2nd Lt/Pilot Officer up to Admiral of the Fleet/Field Marshal/Marshal of the Royal Air Force, but excludes Non-Commissioned Officers.

**Operation HERRICK** is the name for UK operations in Afghanistan which started in April 2006. UK Forces are deployed to Afghanistan in support of UN authorised, NATO led International Security Assistance Force (ISAF) mission and as part of the US-led Operation Enduring Freedom (OEF).

**Operation TELIC** is the name for UK operations in Iraq which started in March 2003 and finished on 21 May 2011. UK Forces were deployed to support the Government's objective to remove the threat that Saddam Hussein posed to his neighbours and his people and, based on 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 and freedom.

**Other Ranks** Other Ranks are members of the Naval Service, Army and Royal Air Force who are not Officers but Other Ranks include Non-Commissioned Officers.

### **Principal/Contributory Condition/Cause of Discharge**

#### *Principal condition/cause*

The principal condition is the first principal ICD-10 code on medical discharge documents.

#### *Contributory condition/cause*

Contributory cause contains all other principal conditions and any contributory conditions on the medical discharge documents.

**Trained** in this report are those that have completed training or artificer candidacy for Naval Service and RAF.

**Trade Trained** in this report those that have completed both Phase 1 and 2 training for Army. From 1 October 2016, UK Regular Forces and Gurkha personnel in the Army who have completed Phase 1 (basic Service training) and Phase 2 training (trade training), are considered Trade Trained personnel.

**UK Regulars** are full time Service personnel, including Nursing Services, Gurkhas and Military Provost Guarding Service (MPGS) but excluding FTRS personnel, Naval activated Reservists, mobilised Reservists, and Non Regular Permanent Service (NRPS). Unless otherwise stated, includes trained and untrained personnel. This definition may differ from other reports produced by the Ministry of Defence.

**Untrained** personnel or "trainees" in this report are those classified as under training or artificer candidate for Naval Service and Phase 1 and 2 training for Army and RAF Trained personnel are defined as those who have complete both.



## Further Information

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### Symbols

~ Data has been suppressed due to Statistical Disclosure Control (greater than zero, fewer than 5).  
P Provisional data.

### Disclosure Control

In line with JSP 200 (October 2017), 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. If suppressing the next smallest number would result in multiple subsequent suppressions, the most efficient way to protect identifiable information has been employed; this may mean suppressing a number that is not the next smallest. If a disclosure control method has been applied to a table, the method is stated in the footnotes. For further information on statistical disclosure control see Background Quality Report.

If Defence Statistics Health are asked to release further information on medical discharges the information provided may require further disclosure control to ensure individuals cannot be identified.

### Revisions

There are no planned revisions of this bulletin. Amendments to figures for earlier reports may be identified during the bi-annual and/or annual compilation of this bulletin. This will be addressed in one of two ways:

- Where the number of figures updated in a table is small, figures will be updated and those which have been revised will be identified with the symbol "r". An explanation for the revisions will be provided in the section below.
- Where the number of figures updated in a table is substantial, the revisions to the table, together with the reason for the revisions will be identified in the commentary at the beginning of the relevant chapter / section, and in the commentary above the affected tables. Revisions will not be identified by the symbol "r" since where there are a large number of revisions in a table this could make them more difficult to read.

Occasionally updated figures will be provided to the editor during the course of the year. Since this Bulletin is published electronically, it is possible to revise figures during the course of the year. However to ensure continuity and consistency, figures will only be adjusted during the year where it is likely to substantially affect interpretation and use of the figures.

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# Annex A

Due to interest in the differences between Royal Navy and Royal Marines personnel, Table 1 and Table 2 from the main report have been presented with a Royal Navy and Royal Marines split and are provided this annex; **Annex A**. All other tables and figures are provided by Royal Navy and Royal Marines split in the corresponding Excel file found at <https://www.gov.uk/government/collections/medical-discharges-among-uk-service-personnel-statistics-index>.
















## Royal Navy

### Demographic Risk Groups

Between 1 April 2018 and 31 March 2019, the rate of medical discharge was significantly higher for Regular Royal Navy personnel within specific demographic groups (**Table A1**):

- Personnel aged 30-34 years.
- Females.
- Other Ranks.
- Trained personnel.

**Table A1: UK Regular Royal Navy medical discharges by age group<sup>1</sup>, gender<sup>1</sup>, rank<sup>1</sup> and training status<sup>1</sup>, Numbers<sup>2</sup> and Rates per 1,000 personnel at risk**  
1 April 2018 to 31 March 2019

	2018/19		Rate of UK Regular Royal Navy personnel medically discharged
	n	r	
<b>Number of UK Regular Royal Navy personnel medically discharged</b>	<b>249</b>	<b>9.7</b>	
<b>Age</b>			
Aged Under 20	1	0.8	
Aged 20-24	31	6.7	
Aged 25-29	64	11.8	
Aged 30-34 <sup>+</sup>	68	14.6	
Aged 35-39	46	12.1	
Aged 40-44	23	9.7	
Aged 45-49	11	5.6	
Aged 50 and over	5	3.4	
<b>Gender</b>			
Male	191	8.5	
Female <sup>*</sup>	58	19.7	
<b>Rank</b>			
Officer	21	3.5	
Other Rank <sup>*</sup>	228	11.7	
<b>Training Status</b>			
Trained <sup>*</sup>	242	10.7	
Untrained	7	2.3	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>2</sup> In line with JSP 200, numbers fewer than five were not suppressed in demographics tables as Defence Statistics assessed that these figures did not disclose sensitive personal information.

+ Groups found to be at a significantly higher than average risk using a z-test for a single proportion at a 95% confidence level.

\* Groups found to be at a significantly higher risk using a z-test for proportions at a 95% confidence level.

# Royal Navy Continued

## Causes of Medical Discharge

**Table A2: UK Regular Royal Navy medical discharges by principal ICD-10 cause code group and financial year, Numbers<sup>1</sup> and Percentages<sup>2</sup>**  
1 April 2014 to 31 March 2019

	All		2014/15		2015/16		2016/17		2017/18		2018/19	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>All medical discharges</b>	<b>1,383</b>		<b>252</b>		<b>286</b>		<b>280</b>		<b>316</b>		<b>249</b>	
<b>All cause coded medical discharges</b>	<b>1,381</b>	<b>100</b>	<b>252</b>	<b>100</b>	<b>285</b>	<b>100</b>	<b>280</b>	<b>100</b>	<b>316</b>	<b>100</b>	<b>248</b>	<b>100</b>
Infectious and parasitic diseases (A00 - B99)	~	<1	0	0	~	<1	~	<1	0	0	0	0
Neoplasms (C00 - D48)	16	1	~	2	~	1	5	2	~	<1	~	<1
Blood disorders (D50 - D89)	~	<1	0	0	0	0	~	<1	~	<1	0	0
Endocrine, nutritional and metabolic diseases (E00 - E90)	19	1	~	1	~	1	~	1	5	2	5	2
- Of which diabetes (E10-E14)	13	<1	~	1	~	<1	~	<1	5	2	~	<1
- Of which insulin-dependent (E10)	9	<1	~	1	~	<1	~	<1	~	1	0	0
- Of which non-insulin-dependent (E11)	~	<1	0	0	0	0	~	<1	~	<1	~	<1
Mental and behavioural disorders (F00 - F99)	290	21	36	14	64	22	46	16	72	23	72	29
- Of which mood disorders (F30 - F39)	113	8	18	7	21	7	15	5	30	9	29	12
- Of which depression (F32 & F33)	96	7	13	5	15	5	15	5	26	8	27	11
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	146	11	13	5	32	11	28	10	34	11	40	16
- Of which post-traumatic stress disorder (PTSD) (F431)	67	5	~	2	~	5	14	5	14	4	22	9
- Of which adjustment disorder (F432)	17	1	0	0	~	<1	~	<1	6	2	8	3
Nervous system disorders (G00 - G99)	51	4	~	2	12	4	12	4	13	4	~	4
- Of which epilepsy (G40)	12	<1	~	<1	~	<1	5	2	~	<1	~	<1
Eye and adnexa diseases (H00 - H59)	15	1	7	3	~	1	~	<1	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	~	<1	~	<1	~	<1	~	<1	0	0	~	<1
Ear and mastoid process diseases (H60 - H95)	32	2	~	1	10	4	~	1	11	3	~	2
- Of which hearing loss (H833 & H90 - H91)	26	2	~	1	9	3	~	<1	10	3	~	1
- Of which noise-induced hearing loss (H833)	~	<1	~	<1	0	0	0	0	0	0	0	0
- Of which tinnitus (H931)	~	<1	0	0	~	<1	~	<1	0	0	0	0
Circulatory system disorders (I00 - I99)	24	2	~	2	8	3	~	1	~	<1	5	2
Respiratory system disorders (J00 - J99)	22	2	~	<1	9	3	~	1	6	2	~	<1
- Of which asthma (J45 & J46)	17	1	~	<1	8	3	~	<1	~	1	~	<1
Digestive system disorders (K00 - K93)	65	5	13	5	17	6	10	4	13	4	12	5
Skin and subcutaneous tissue diseases (L00 - L99)	44	3	10	4	10	4	6	2	11	3	7	3
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	740	54	157	62	137	48	170	61	158	50	118	48
- Of which injuries and disorders of the knee <sup>3</sup>	177	13	50	20	32	11	43	15	28	9	24	10
- Of which knee pain (M2556)	75	5	12	5	13	5	23	8	15	5	12	5
- Of which back pain (M549)	120	9	21	8	20	7	24	9	36	11	19	8
- Of which low back pain (M544-5)	103	7	15	6	18	6	20	7	32	10	18	7
- Of which injuries and disorders of the ankle and foot <sup>4</sup>	62	4	16	6	13	5	13	5	10	3	11	4
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	7	<1	0	0	~	1	~	<1	~	<1	~	<1
Genitourinary system diseases (N00 - N99)	10	<1	~	<1	~	<1	~	1	5	2	0	0
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	~	<1	0	0	~	<1	0	0	~	<1	~	<1
Clinical and laboratory findings (R00 - R99)	37	3	~	2	~	2	9	3	10	3	9	4
External Causes of Morbidity and Mortality (V01 - Y98)	~	<1	0	0	0	0	0	0	~	<1	0	0
Factors influencing health status (Z00 - Z99)	8	<1	~	2	~	<1	~	<1	~	<1	~	<1
No details held on principal condition for medical boarding	2		0		1		0		0		1	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> ~ In line with JSP 200 on statistical disclosure, figures less than five have been suppressed. Please see background quality report for more information.

<sup>2</sup> Data presented as "<1%" represent a percentage of cause coded medical discharges of greater than 0% but smaller than 1%.

<sup>3</sup> Injuries and disorders of the knee have been compiled using ICD-10 codes, please see annex for specific codes.

<sup>4</sup> Injuries and disorders of the ankle and foot have been compiled using ICD-10 codes, please see annex for specific codes.














# Royal Marines

## Demographic Risk Groups

Between 1 April 2018 and 31 March 2019, the rate of medical discharge was significantly higher for Regular Royal Marines personnel within specific demographic groups (**Table A3**):

- Personnel aged 30-34 years.
- Other Ranks.
- Untrained personnel.

**Table A3: UK Regular Royal Marines medical discharges by age group<sup>1</sup>, gender<sup>1</sup>, rank<sup>1</sup> and training status<sup>1</sup>, Numbers<sup>2</sup> and Rates per 1,000 personnel at risk**  
1 April 2018 to 31 March 2019

	2018/19		Rate of UK Regular Royal Marines personnel medically discharged
	n	r	
<b>Number of UK Regular Royal Marines personnel medically discharged</b>	<b>142</b>	<b>20.6</b>	
<b>Age</b>			
Aged Under 20	3	11.7	
Aged 20-24	29	20.9	
Aged 25-29	44	22.8	
Aged 30-34 <sup>+</sup>	45	33.2	
Aged 35-39	15	16.8	
Aged 40-44	6	12.0	
Aged 45-49	0	-	
Aged 50 and over	0	-	
<b>Gender</b>			
Male	139	20.5	
Female	3	27.6	
<b>Rank</b>			
Officer	2	2.5	
Other Rank <sup>*</sup>	140	23.0	
<b>Training Status</b>			
Trained	106	16.9	
Untrained <sup>*</sup>	36	58.0	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

<sup>2</sup> In line with JSP 200, numbers fewer than five were not suppressed in demographics tables as Defence Statistics assessed that these figures did not disclose sensitive personal information.

+ Groups found to be at a significantly higher than average risk using a z-test for a single proportion at a 95% confidence level.

\* Groups found to be at a significantly higher risk using a z-test for proportions at a 95% confidence level.

# Royal Marines Continued

## Causes of Medical Discharge

**Table A4: UK Regular Royal Marines medical discharges by principal ICD-10 cause code group and financial year, Numbers<sup>1</sup> and Percentages<sup>2</sup>**

1 April 2014 to 31 March 2019

	All		2014/15		2015/16		2016/17		2017/18		2018/19	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>All medical discharges</b>	<b>756</b>		<b>122</b>		<b>156</b>		<b>166</b>		<b>170</b>		<b>142</b>	
<b>All cause coded medical discharges</b>	<b>751</b>	<b>100</b>	<b>122</b>	<b>100</b>	<b>151</b>	<b>100</b>	<b>166</b>	<b>100</b>	<b>170</b>	<b>100</b>	<b>142</b>	<b>100</b>
Infectious and parasitic diseases (A00 - B99)	0	0	0	0	0	0	0	0	0	0	0	0
Neoplasms (C00 - D48)	~	<1	0	0	~	<1	~	<1	0	0	~	<1
Blood disorders (D50 - D89)	~	<1	~	<1	0	0	~	<1	0	0	0	0
Endocrine, nutritional and metabolic diseases (E00 - E90)	7	<1	~	2	~	1	0	0	~	<1	~	<1
- Of which diabetes (E10-E14)	7	<1	~	2	~	1	0	0	~	<1	~	<1
- Of which insulin-dependent (E10)	7	<1	~	2	~	1	0	0	~	<1	~	<1
- Of which non-insulin-dependent (E11)	0	0	0	0	0	0	0	0	0	0	0	0
Mental and behavioural disorders (F00 - F99)	56	7	~	3	~	5	16	10	17	10	11	8
- Of which mood disorders (F30 - F39)	14	2	~	<1	~	3	~	2	~	1	~	3
- Of which depression (F32 & F33)	10	1	~	<1	~	2	~	1	~	1	~	1
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	39	5	~	2	~	3	11	7	14	8	7	5
- Of which post-traumatic stress disorder (PTSD) (F431)	32	4	~	<1	~	2	9	5	13	8	6	4
- Of which adjustment disorder (F432)	~	<1	0	0	0	0	~	<1	0	0	0	0
Nervous system disorders (G00 - G99)	20	3	~	<1	~	3	~	2	6	4	5	4
- Of which epilepsy (G40)	~	<1	0	0	0	0	~	<1	0	0	0	0
Eye and adnexa diseases (H00 - H59)	~	<1	0	0	0	0	0	0	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	~	<1	0	0	0	0	0	0	0	0	~	<1
Ear and mastoid process diseases (H60 - H95)	62	8	11	9	11	7	15	9	17	10	8	6
- Of which hearing loss (H833 & H90 - H91)	54	7	11	9	9	6	15	9	13	8	6	4
- Of which noise-induced hearing loss (H833)	14	2	7	6	~	2	~	<1	~	<1	~	1
- Of which tinnitus (H931)	5	<1	0	0	~	<1	0	0	~	2	~	<1
Circulatory system disorders (I00 - I99)	10	1	~	2	~	1	~	<1	~	2	~	1
Respiratory system disorders (J00 - J99)	13	2	~	2	~	<1	~	2	~	1	~	3
- Of which asthma (J45 & J46)	12	2	~	2	~	<1	~	2	~	<1	~	3
Digestive system disorders (K00 - K93)	13	2	~	<1	~	1	~	2	6	4	~	<1
Skin and subcutaneous tissue diseases (L00 - L99)	~	<1	~	<1	0	0	~	1	0	0	0	0
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	528	70	91	75	116	77	108	65	112	66	101	71
- Of which injuries and disorders of the knee <sup>3</sup>	132	18	21	17	30	20	26	16	28	16	27	19
- Of which knee pain (M2556)	56	7	~	3	~	7	12	7	17	10	12	9
- Of which back pain (M549)	77	10	10	8	19	13	19	11	17	10	12	9
- Of which low back pain (M544-5)	70	9	9	7	16	11	18	11	17	10	10	7
- Of which injuries and disorders of the ankle and foot <sup>4</sup>	53	7	9	7	16	11	11	7	8	5	8	6
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	19	3	~	2	7	5	~	1	5	3	~	2
Genitourinary system diseases (N00 - N99)	~	<1	0	0	0	0	~	<1	0	0	~	<1
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	~	<1	0	0	~	<1	~	<1	0	0	~	1
Clinical and laboratory findings (R00 - R99)	21	3	~	2	~	2	7	4	~	2	~	3
External Causes of Morbidity and Mortality (V01 - Y98)	0	0	0	0	0	0	0	0	0	0	0	0
Factors influencing health status (Z00 - Z99)	5	<1	~	2	0	0	~	1	~	<1	0	0
No details held on principal condition for medical boarding	5		0		5		0		0		0	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

<sup>1</sup> ~ In line with JSP 200 on statistical disclosure, figures less than five have been suppressed. Please see background quality report for more information.

<sup>2</sup> Data presented as "<1%" represent a percentage of cause coded medical discharges of greater than 0% but smaller than 1%.

<sup>3</sup> Injuries and disorders of the knee have been compiled using ICD-10 codes, please see annex for specific codes.

<sup>4</sup> Injuries and disorders of the ankle and foot have been compiled using ICD-10 codes, please see annex for specific codes.