



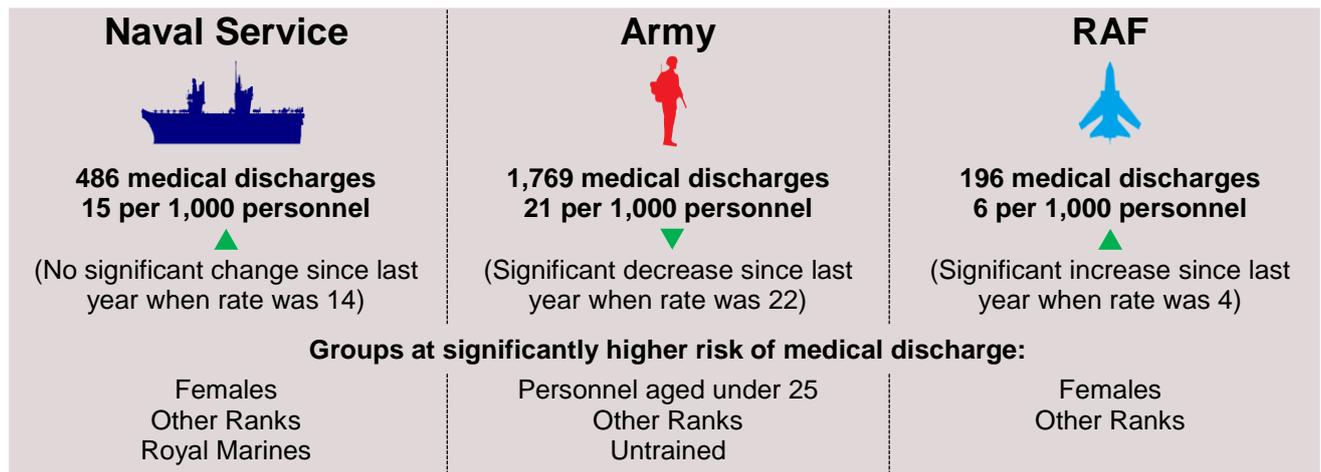
This Official Statistic provides time trends for the last five years of medical discharges among UK Regular Service personnel and a focus on the most recent year of information, including demographic factors and the medical causes leading to the discharge.

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.

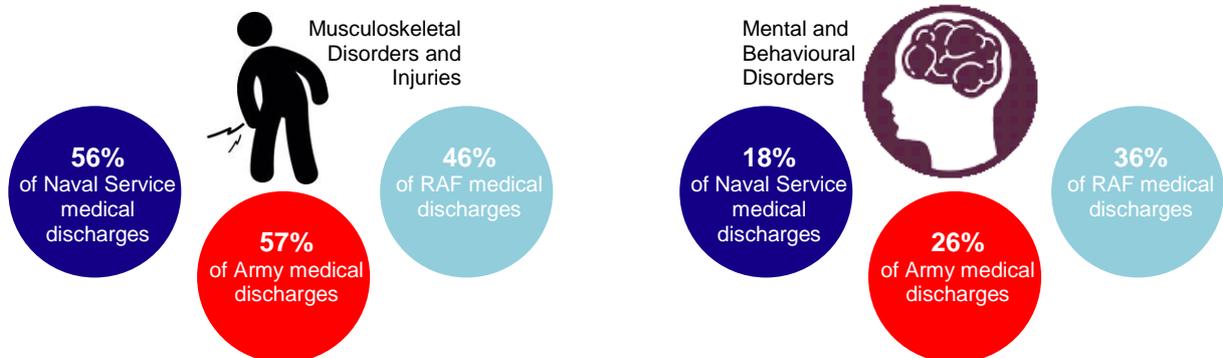
When UK Armed Forces personnel are medically discharged, the medical reason for the discharge is recorded and categorised. It is possible for personnel to be medically discharged for multiple reasons.

Key Points and Trends

Between 1 April 2017 and 31 March 2018 (2017/18):



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. There was a statistically significant increase in the proportion of medical discharges due to Mental and Behavioural Disorders among Naval Service and Army personnel.



Approximately half of personnel medically discharged leave as a result of multiple medical conditions.

Responsible statistician: Head of Defence Statistics Health 030 67984423 DefStrat-Stat-Health-PQ-FOI@mod.gov.uk
Further Information/mailling list: DefStrat-Stat-Health-PQ-FOI@mod.gov.uk
Enquiries: Press Office: 020 72183253
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>

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 standards¹ 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 excluded². 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.

Please note that Defence Statistics Health did not receive all Army discharge paperwork confirming cause of medical discharge for 1 April 2013 to 31 March 2018, 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. Please see the Annual Medical Discharges in the UK Regular Armed Forces Background Quality Report³ for further information.

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

² 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>.

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

Executive Summary

Between 1 April 2017 and 31 March 2018 (2017/18) of the UK Regular Armed Forces population:



486 Naval Service personnel were medically discharged, equating to **15 per 1,000 personnel**. This is not a significant change from 2016/17 when the rate was 14 per 1,000 personnel.



1,769 Army personnel were medically discharged, equating to **21 per 1,000 personnel**. This is a significant decrease compared to 2016/17 when the rate was 22 per 1,000 personnel.



196 RAF personnel were medically discharged, equating to **6 per 1,000 personnel**. This is a significant increase since 2016 when the rate was 4 per 1,000 personnel.

This is a total of **2,451 medical discharges** which equates to approximately 7 UK Regular Armed Forces personnel medically discharged each day during 2017/18.

For each of the Services, changes in policy and practices influenced the rate of medical discharge. All three Services currently operate a retention positive employment policy, seeking to keep personnel in Service wherever a job exists that can be performed with the limitations imposed by the individual's illness or injury.

In 2017/18, the rate of medical discharges increased on the previous year for the Naval Service and RAF which may be as a result of limited numbers of roles suitable for ill or injured personnel. There was a decrease in the rate of medical discharges over the same period for the Army which may be as a result of a retention-positive policy.

Between 1 April 2017 and 31 March 2018 certain demographic groups were significantly more likely to medically discharge:

- **Females** in the Naval Service and RAF.
- **Other Ranks** for each of the three Services.
- **Royal Marines** in the Naval Service.
- **Untrained** personnel in the Army.

Possible explanations for the higher rates among these demographic groups are explored in the single Service sections of this Official Statistic.

Females had a significantly higher rate of medical discharges than males in 2017/18 in the Naval Service and RAF. There was no significant difference in the rates between genders in the Army this year, however there has been a difference in previous years. The RAF was the only service where the rate of medical discharges was higher for females over the entire displayed time period (2013/14 to 2017/18).

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 military⁴ also report Musculoskeletal Disorders and Injuries and Mental and Behavioural Disorders as their two most common reasons for medical release.

Between 2013/14 and 2017/18 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.

⁴ 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 2017 to 31 March 2018, there were **486** medical discharges equal to 15.0 medical discharges per 1,000 personnel. This was not a significant change compared to the previous year (13.7 per 1,000) (**Figure 1**). For each service:

- 316 Royal Navy personnel, a rate of 12.5 per 1000.
- 170 Royal Marines personnel, a rate of 23.7 per 1000.

- **486** medical discharges from the Naval Service in 2017/18.
- This equates to **15 per 1,000** personnel.

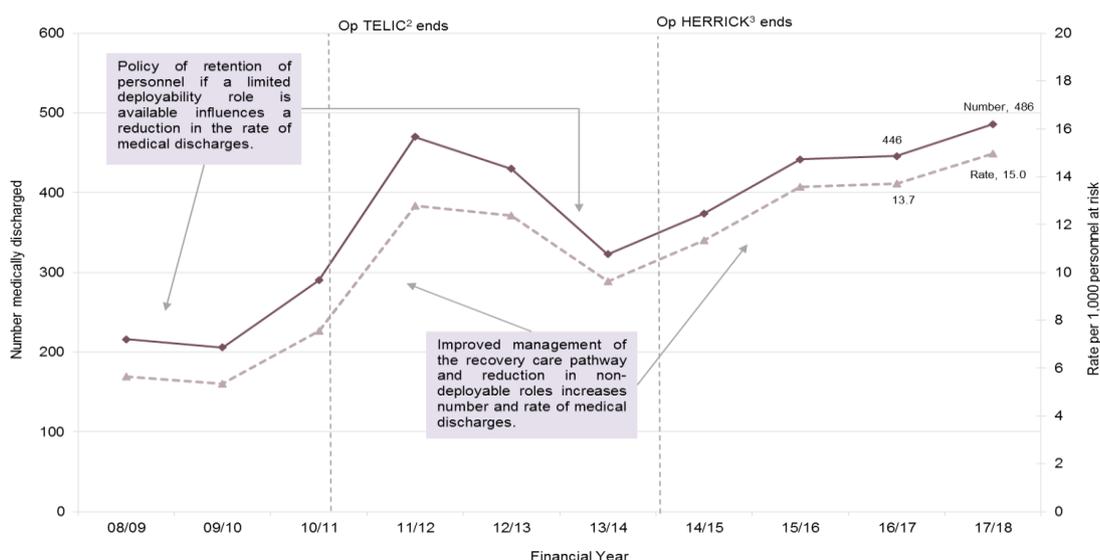
▼ The rate of medical discharges fell between 1 April 2008 and 31 March 2010. This was partly due to the Naval Service retaining personnel where an alternative role was available, and where retention was in the best interests of both the individual and the Service. Manpower shortages within the Naval Service resulted in an increase in suitable roles that personnel could transfer into.

▲ 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 pathway⁵, 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.

Figure 1: UK Regular Naval Service¹ medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk
1 April 2008 to 31 March 2018



Source: DMICP, FMed 23 and JPA

¹ Naval Service includes Royal Navy and Royal Marines.

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

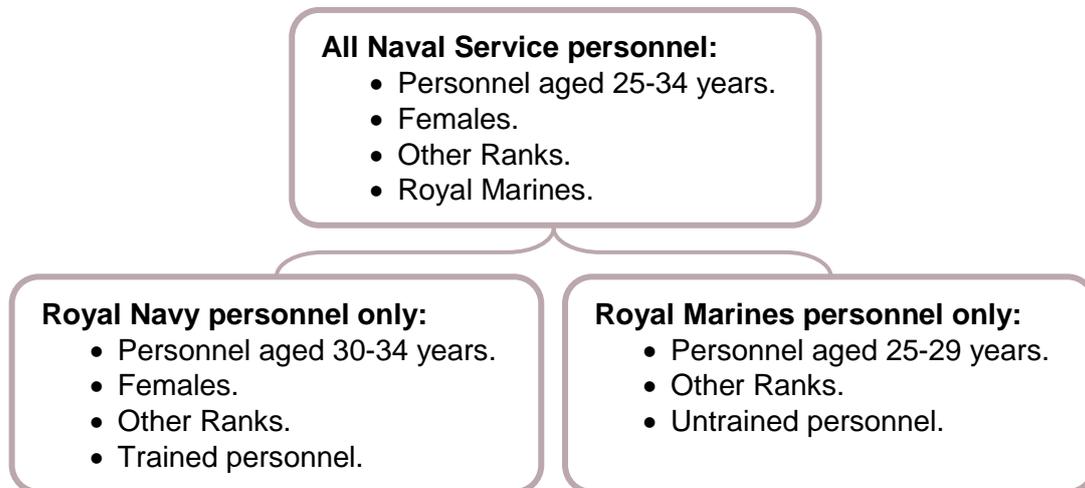
³ Operation HERRICK is the name for UK operations in Afghanistan which began 1 April 2006 and ended on 30 November 2014.

⁵ <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 2017 and 31 March 2018, the rate of medical discharge was significantly⁶ 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 2017 and 31 March 2018 were consistent with results seen in the recovery pathway^{7,8} which found that Females and Other Ranks had higher proportions of personnel under the care of the Naval Service recovery capability.

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 population⁹.

Table 1 can be found for Royal Navy and Royal Marines as individual populations in **Annex A** (pages 33 to 36). 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.

⁶ Tested using a z-test for proportions at a 95% confidence level.

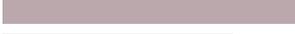
⁷ <https://www.gov.uk/government/collections/uk-armed-forces-recovery-capability-wounded-injured-and-sick-in-the-recovery-pathway-statistics>

⁸ Recovery is the non-medical care for those who are wounded, injured or sick.

⁹ <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

Naval Service Continued

Table 1: UK Regular Naval Service¹ medical discharges by age group², gender², rank² and training status², Numbers and Rates per 1,000 personnel at risk
1 April 2017 to 31 March 2018

		2017/18		
		n	r	Rate of UK Regular Naval Service personnel medically discharged
Number of UK Regular Naval Service personnel medically discharged		486	15.0	
Age				
	Aged Under 20	~	2.3	
	Aged 20-24	76	12.7	
	Aged 25-29*	137	17.6	
	Aged 30-34*	127	21.1	
	Aged 35-39	77	16.9	
	Aged 40-44	33	11.5	
	Aged 45-49	~	9.6	
	Aged 50 and over	10	6.4	
Gender				
	Male	411	14.0	
	Female*	75	24.8	
Rank				
	Officer	37	6.1	
	Other Rank*	449	19.0	
Training Status				
	Trained	445	15.3	
	Untrained	41	11.9	
Service				
	Royal Navy	316	12.5	
	Royal Marines*	170	23.7	

Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

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

* 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 2013 to 31 March 2018 with possible explanations for the differences observed.

Figure 2: UK Regular Naval Service¹ medical discharges by age group² and financial year, Rates per 1,000 personnel at risk 1 April 2013 to 31 March 2018



The rate of medical discharge in the Naval Service rose by 9% from 2016/17 to 2017/18.

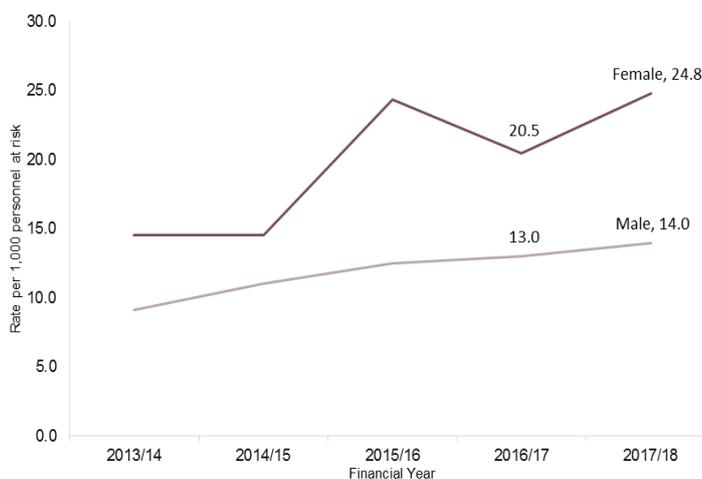
The rate of medical discharge for personnel aged 25-29 was higher than that for those aged 35-39 in all years presented. However this disparity was lessened in 2017/18 (**Figure 2**). The reasons for the difference last financial year are unclear. Other age groups are presented in graphs within the supporting Excel tables.

Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

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

Figure 3: UK Regular Naval Service¹ medical discharges by gender² and financial year, Rates per 1,000 personnel at risk 1 April 2013 to 31 March 2018



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 due to the higher rate of presenting with Musculoskeletal Disorders and Injuries and Mental Health conditions in the female population¹¹.

Source: DMICP, FMed 23 and JPA

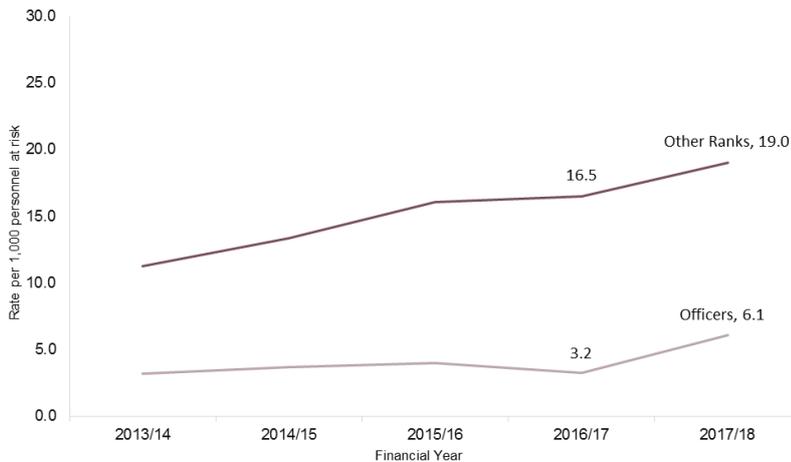
¹ Includes Royal Navy and Royal Marines.

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

Naval Service Continued

Figure 4: UK Regular Naval Service¹ medical discharges by rank² and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



In each of the years presented, the rate of medical discharges among Other Ranks was significantly higher than Officers (**Figure 4**).

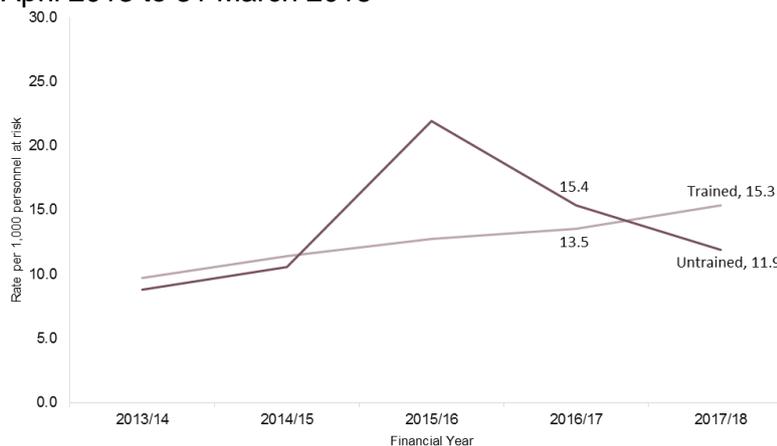
Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

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

Figure 5: UK Regular Naval Service¹ medical discharges by training status² and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



There was no significant difference in the rate of medical discharges among trained and untrained personnel, with the exception of 2015/16; in that year, the rate of medical discharges among untrained personnel doubled and the rate was significantly higher compared to the rate among trained personnel (**Figure 5**). However, there was a difference when considering the Royal Navy and Royal Marines separately; trained Royal Navy personnel and untrained Royal Marines personnel had a significantly higher rate of medical discharge than their counterparts.

Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

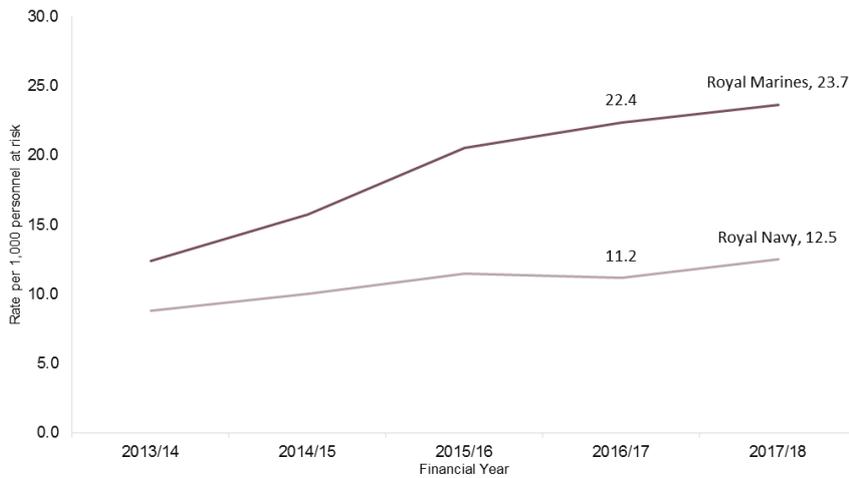
² As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

The increase in the rate of medical discharge among untrained personnel between 1 April 2015 and 31 March 2016 was likely to be the result of policy changes where Phase 1 trainees with emergent medical conditions were discharged earlier from the Naval Service. Between 1 April 2015 and 31 March 2016 the rise was due to a combination of Naval Service Phase 1 trainees being discharged through the standard Medical Board of Service (MBOS) route and those being discharged earlier under the new policy not requiring MBOS. So this is unlikely to represent a true increase, rather it reflects the change in policy to decrease the time taken to medically discharge a Naval Service Phase 1 trainee. The subsequent reduction in rate of medical discharges between 1 April 2016 and 31 March 2018 may be due to the clearing of a backlog of untrained personnel between 1 April 2015 and 31 March 2016.

Naval Service Continued

Figure 6: UK Regular Naval Service medical discharges by Royal Marines/Royal Navy¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



Source: DMICP, FMed 23 and JPA

¹ 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.
- Less availability of roles within the Royal Marines for personnel with limited deployability compared to the Royal Navy.

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 year for the five-year period from 1 April 2013 to 31 March 2018.

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

18% of medical discharges (approx. 1 in 5) were due to **Mental and Behavioural Disorders**.

Table 2: UK Regular Naval Service¹ medical discharges by principal ICD-10 cause code group and financial year, Numbers² and Percentages³ 1 April 2013 to 31 March 2018

	All		2013/14		2014/15		2015/16		2016/17		2017/18	
	n	%	n	%	n	%	n	%	n	%	n	%
All medical discharges	2,071		323		374		442		446		486	
All cause coded medical discharges	2,065	100	323	100	374	100	436	100	446	100	486	100
Infectious and parasitic diseases (A00 - B99)	~	<1	~	<1	0	0	~	<1	~	<1	0	0
Neoplasms (C00 - D48)	21	1	~	1	~	1	~	<1	6	1	~	<1
Blood disorders (D50 - D89)	7	<1	~	<1	~	<1	0	0	~	<1	~	<1
Endocrine, nutritional and metabolic diseases (E00 - E90)	29	1	9	3	6	2	~	1	~	<1	6	1
- Of which diabetes (E10-E14)	24	1	7	2	6	2	~	<1	~	<1	6	1
- Of which insulin-dependent (E10)	20	<1	5	2	6	2	~	<1	~	<1	~	1
- Of which non-insulin-dependent (E11)	~	<1	~	<1	0	0	0	0	~	<1	~	<1
Mental and behavioural disorders (F00 - F99)	299	14	36	11	40	11	72	17	62	14	89	18
- Of which mood disorders (F30 - F39)	109	5	15	5	19	5	25	6	18	4	32	7
- Of which depression (F32 & F33)	90	4	13	4	14	4	18	4	17	4	28	6
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	152	7	13	4	16	4	36	8	39	9	48	10
- Of which post-traumatic stress disorder (PTSD) (F431)	76	4	5	2	5	1	16	4	23	5	27	6
- Of which adjustment disorder (F432)	12	<1	~	<1	0	0	~	<1	~	<1	6	1
Nervous system disorders (G00 - G99)	64	3	8	2	5	1	16	4	16	4	19	4
- Of which epilepsy (G40)	13	<1	~	<1	~	<1	~	<1	6	1	~	<1
Eye and adnexa diseases (H00 - H59)	19	<1	~	1	7	2	~	<1	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	~	<1	0	0	~	<1	~	<1	~	<1	0	0
Ear and mastoid process diseases (H60 - H95)	101	5	19	6	14	4	21	5	19	4	28	6
- Of which hearing loss (H833 & H90 - H91)	89	4	18	6	14	4	18	4	16	4	23	5
- Of which noise-induced hearing loss (H833)	22	1	9	3	8	2	~	<1	~	<1	~	<1
- Of which tinnitus (H931)	7	<1	0	0	0	0	~	<1	~	<1	~	<1
Circulatory system disorders (I00 - I99)	34	2	7	2	6	2	10	2	5	1	6	1
Respiratory system disorders (J00 - J99)	34	2	~	2	~	1	10	2	7	2	8	2
- Of which asthma (J45 & J46)	29	1	~	2	~	1	9	2	6	1	5	1
Digestive system disorders (K00 - K93)	73	4	8	2	14	4	19	4	13	3	19	4
Skin and subcutaneous tissue diseases (L00 - L99)	46	2	6	2	11	3	10	2	8	2	11	2
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	1,245	60	196	61	248	66	253	58	278	62	270	56
- Of which injuries and disorders of the knee ⁴	305	15	47	15	71	19	62	14	69	15	56	12
- Of which knee pain (M2556)	127	6	20	6	16	4	24	6	35	8	32	7
- Of which back pain (M549)	195	9	29	9	31	8	39	9	43	10	53	11
- Of which low back pain (M544-5)	170	8	25	8	24	6	34	8	38	9	49	10
- Of which injuries and disorders of the ankle and foot ⁵	113	5	17	5	25	7	29	7	24	5	18	4
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	22	1	0	0	~	<1	10	2	~	<1	7	1
Genitourinary system diseases (N00 - N99)	13	<1	~	<1	~	<1	~	<1	~	<1	5	1
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	6	<1	~	<1	0	0	~	<1	~	<1	~	<1
Clinical and laboratory findings (R00 - R99)	55	3	10	3	7	2	8	2	16	4	14	3
External Causes of Morbidity and Mortality (V01 - Y98)	~	<1	0	0	0	0	0	0	0	0	~	<1
Factors influencing health status (Z00 - Z99)	15	<1	~	<1	6	2	~	<1	~	<1	~	<1
No details held on principal condition for medical boarding	6		0		0		6		0		0	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

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

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

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

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

^r Indicates where a revision to a figure has been made.

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 33 to 36).

Naval Service Continued

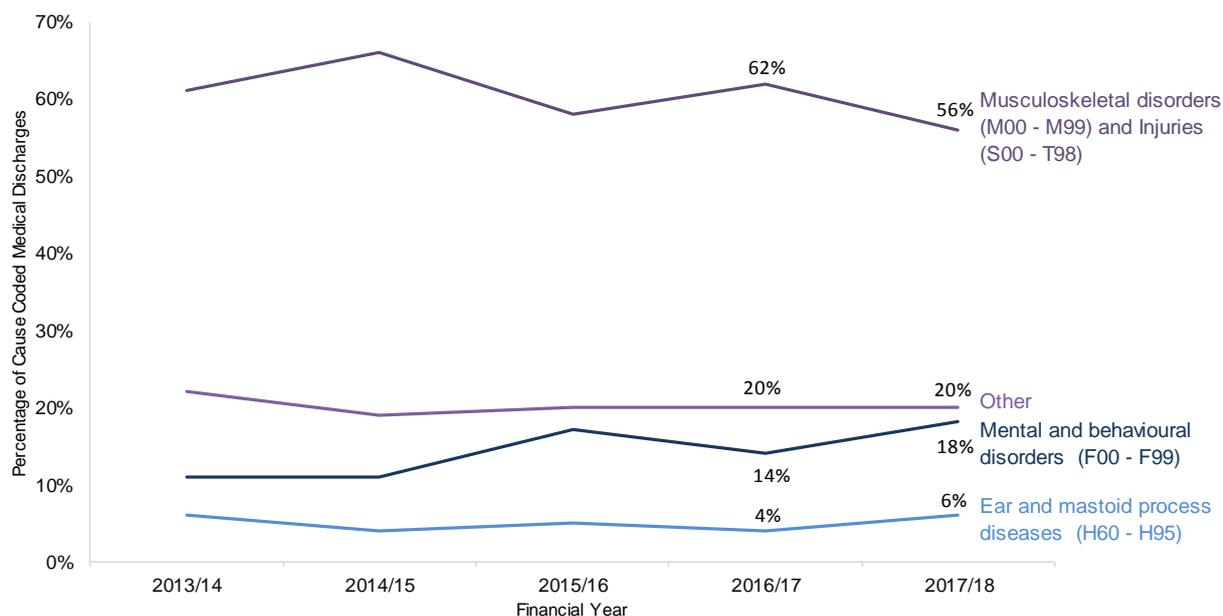
Between 1 April 2013 and 31 March 2018, Musculoskeletal Disorders and Injuries were the largest principal cause of Naval Service medical discharges, accounting for between 56% and 66% of all medical discharges. The proportion of discharges for this cause fell by 6 percentage points in 2017/18 compared to the previous year (**Figure 7**).

Mental and Behavioural Disorders remained the second largest principal cause of Naval Service medical discharges and the proportion of discharges due to these reasons significantly increased by 4% in 2017/18 compared to the previous year. Over this period there was also a rise in the presentations at Departments of Community Mental Health for mental health conditions¹⁰. Mental and Behavioural Disorders is also a large cause for medical discharge from the Canadian Military¹¹; however Mental and Behavioural Disorders were responsible for a larger proportion of personnel released from the Canadian military than the UK Armed Forces (41%).

The proportion of medical discharges as a result of Hearing Loss remained between 4% and 6% throughout the latest five year period. It accounted for 5% of medical discharges in 2017/18 (n = 23).

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 7: UK Regular Naval Service¹ medical discharges by principal ICD-10 cause code group and financial year, Percentage of all medical discharges
1 April 2013 to 31 March 2018



Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

The greatest proportions of Musculoskeletal Disorders and Injuries were linked to the leg (below and including the knee) and the back (**Figure 8**). The high percentage of medical discharges due to injuries and disorders of the knee 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.

¹⁰ Please see the "UK armed forces mental health annual statistics: financial year 2017/18" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

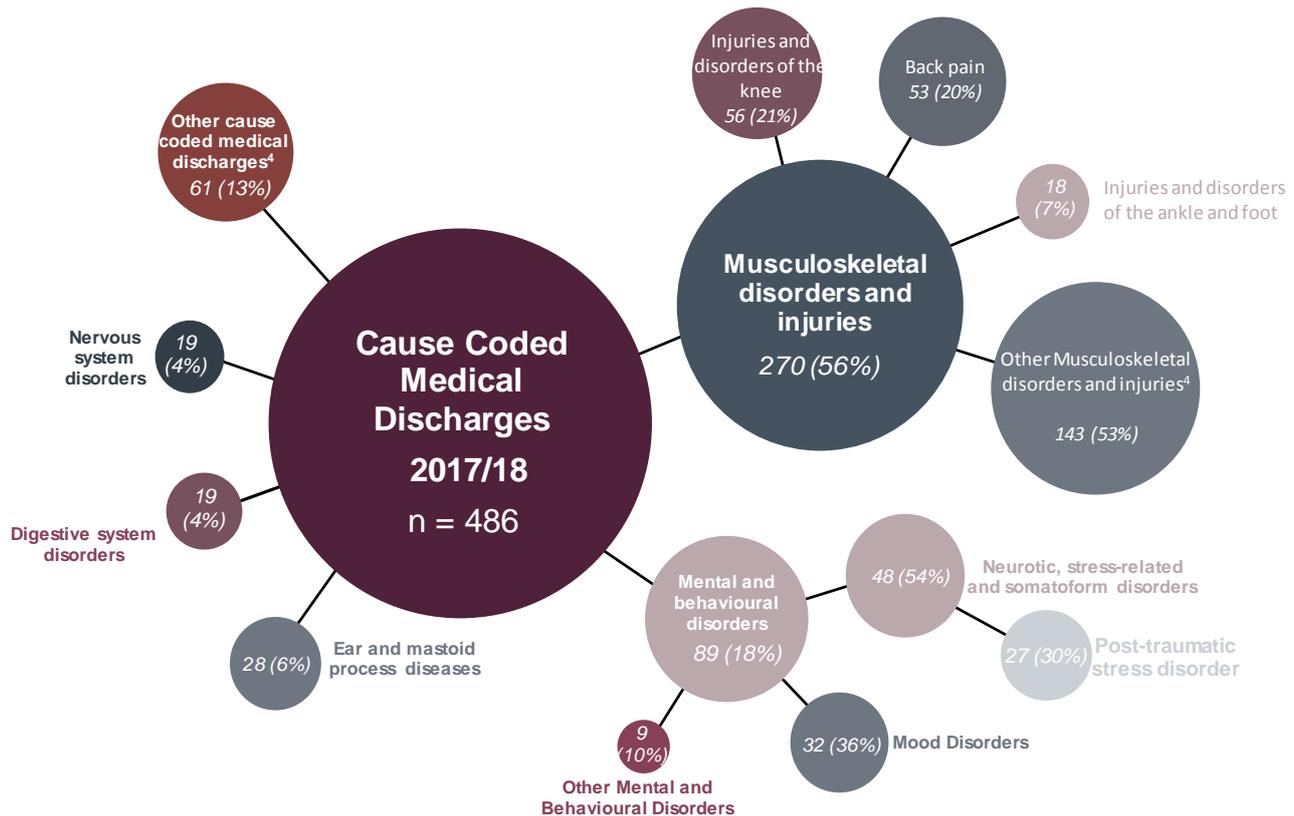
¹¹ Poisson, R. (2015). The imperative of military medical research and the duty to protect, preserve, and provide advanced evidence-informed care [online], *Journal of Military, Veteran and Family Health*; 1(1) available at <http://jmvfh.utpjournals.press/doi/pdf/10.3138/jmvfh.2014-11> accessed on 9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

Naval Service Continued

The majority of medical discharges for Mental and Behavioural Disorders in 2017/18 were as a result of Neurotic, Stress and Somatoform Disorders (n = 48, 54%) and Mood Disorders (n = 32, 36%). 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 personnel¹². 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 Service¹ medical discharges by principal ICD-10 cause code group, Numbers and Percentages²

1 April 2017 to 31 March 2018



Source: DMICP, FMed 23 and JPA

¹ Includes Royal Navy and Royal Marines.

² Due to rounding, percentages might not add to 100%.

³ Includes 13 cause code groups; each accounting for a maximum of 3% of all Naval Service cause coded medical discharges

⁴ Clinical and Laboratory Findings are often used by clinicians to record unusual clinical findings and symptoms.

When considering both the principal and contributory causes of discharge in the Naval Service between 1 April 2013 and 31 March 2018:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for two thirds of all cause coded discharges (n = 307, 63%).
- Mental and Behavioural Disorders remained the second highest cause (n = 122, 25%).
- Ear and Mastoid process diseases were the third greatest cause of discharge (n = 39, 8%).

In the previous year (2016/17), Nervous System Disorders were the third highest principal and contributory cause of medical discharge.

¹² Please see the "UK armed forces mental health annual statistics: financial year 2017/18" Official Statistic publication <https://www.gov.uk/government/collections/defence-mental-health-statistics-index>

Army

Trends in Medical Discharges

In the latest year, 1 April 2017 and 31 March 2018, there were **1,769** medical discharges, equal to 20.7 medical discharges per 1,000 personnel. This was a significant decrease since last year when the rate was 22.2 per 1,000 personnel (**Figure 9**).

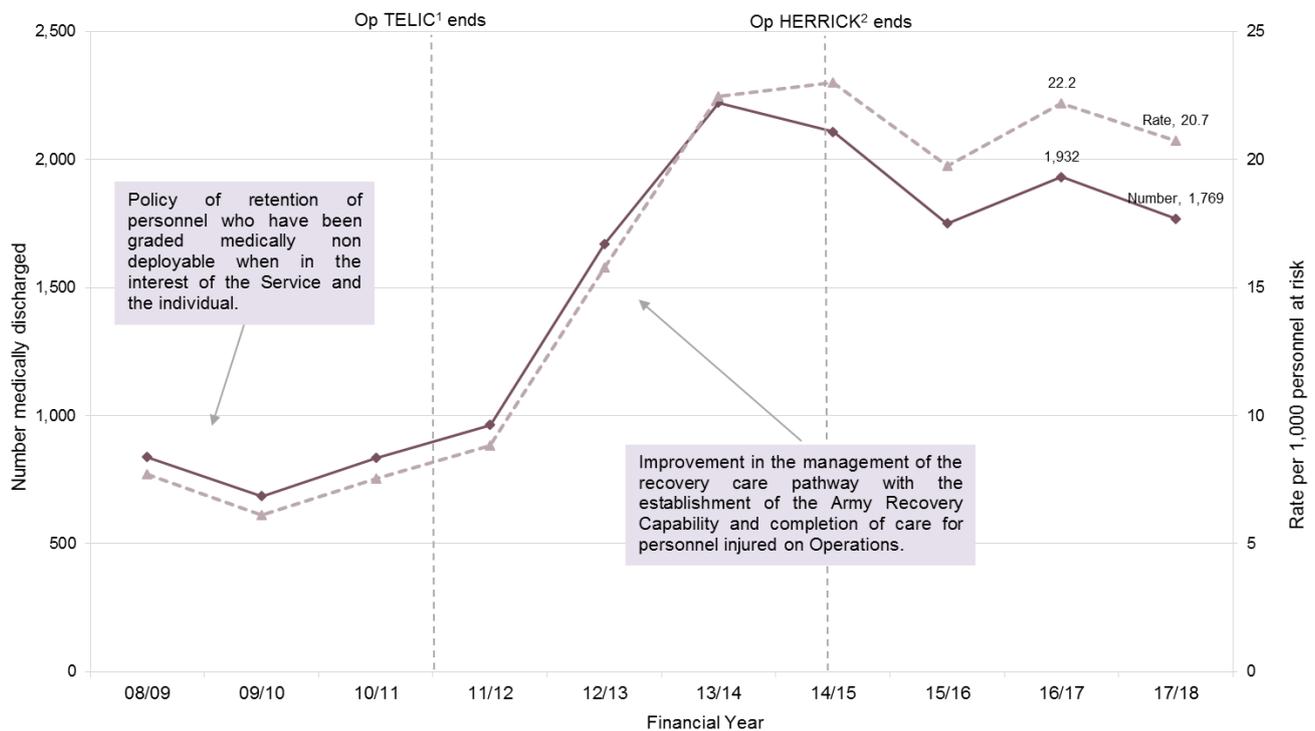
- **1,769** medical discharges from the Army in 2017/18.
- This equates to **21 per 1,000** personnel.

▼ The rate fell between 1 April 2007 and 31 March 2010. This may have been due to the policy of retaining personnel graded as medically non-deployable in cases where this was in the best interests of both the individual and the Service.

▲ Between 1 April 2010 and 31 March 2015 the rate of medical discharge within Army personnel more than trebled (6.1 to 23.0 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, plus increased restriction of non-deployable roles within the Army.

▲ Between 1 April 2014 and 31 March 2018 the rate of medical discharges fluctuated between 23.0 and 19.8 per 1,000 personnel.

Figure 9: UK Regular Army medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk
1 April 2008 to 31 March 2018



Source: DMICP, FMed 23 and JPA

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

² 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 2017 and 31 March 2018, the rate of medical discharge was significantly higher for Regular Army personnel within specific demographic groups (**Table 3**):

- Personnel aged under 25.
- Other Ranks.
- Untrained personnel.

These findings were broadly consistent with results seen in the recovery pathway^{13,14} which found that personnel aged under 25 and aged 30-39 and Other Ranks had higher proportions of personnel under the care of the Army Recovery Capability (ARC).

Please note that on 1 October 2016 the definition of Army Trained personnel changed so as to include UK Regular Forces and Gurkha personnel who had completed Phase 1 training (basic Service training) but not necessarily Phase 2 training (trade training). Previously, “Trained” referred to personnel who had completed both Phase 1 and Phase 2 training. In order to remain consistent with previous Medical Discharge Official Statistics, this report has renamed “Trained” personnel to “Trade Trained” and includes personnel who completed both Phase 1 and Phase 2 training (please see Glossary for full definition).

Table 3: UK Regular Army medical discharges by age group¹, gender¹, rank¹ and training status¹, Numbers and Rates per 1,000 personnel at risk
1 April 2017 to 31 March 2018

	2017/18		Rate of UK Regular Army personnel medically discharged
	n	r	
Number of UK Regular Army personnel medically discharged	1,769	20.7	
Age			
Aged Under 20 ⁺	149	26.7	
Aged 20-24 ⁺	471	26.2	
Aged 25-29	475	22.9	
Aged 30-34	315	19.6	
Aged 35-39	215	16.4	
Aged 40-44	69	10.0	
Aged 45-49	39	12.1	
Aged 50 and over	36	21.3	
Gender			
Male	1,593	20.5	
Female	176	23.3	
Rank			
Officer	80	6.2	
Other Rank*	1,689	23.4	
Training Status			
Trained	1,316	17.0	
Untrained*	453	57.3	

Source: DMICP, FMed 23 and JPA

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

⁺ 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.

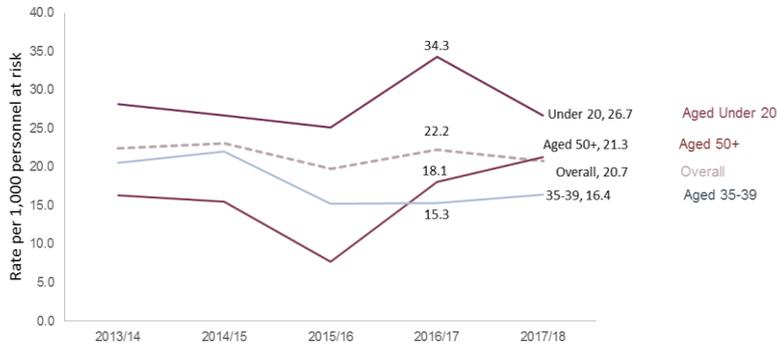
¹³ <https://www.gov.uk/government/collections/uk-armed-forces-recovery-capability-wounded-injured-and-sick-in-the-recovery-pathway-statistics>

¹⁴ Recovery is the non-medical care for those who are wounded, injured or sick.

Army Continued

Figures 10 to 13 present the Army medical discharges by demographic group from 1 April 2013 to 31 March 2018 with possible explanations for the differences observed.

Figure 10: UK Regular Army medical discharges by age group¹ and financial year, Rates per 1,000 personnel at risk
1 April 2013 to 31 March 2018



Source: DMICP, FMed 23 and JPA

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

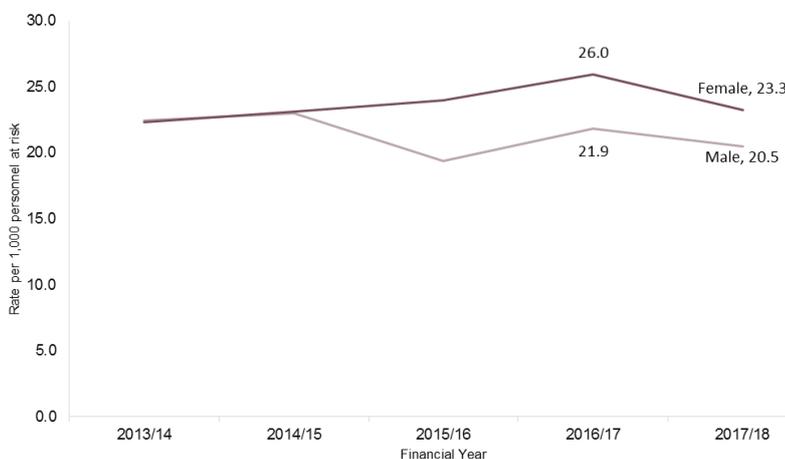
The rate of Army medical discharges significantly decreased in 2017/18 compared to the previous year.

- Personnel aged under 20 have consistently had a higher rate of medical discharge than other age groups.

- The rate of medical discharges in personnel aged 50 and over increased since 2015/16 however small numbers of personnel in this age group are susceptible to large rate changes (**Figure 10**).

- 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 gender¹ and financial year, Rates per 1,000 personnel at risk
1 April 2013 to 31 March 2018



Source: DMICP, FMed 23 and JPA

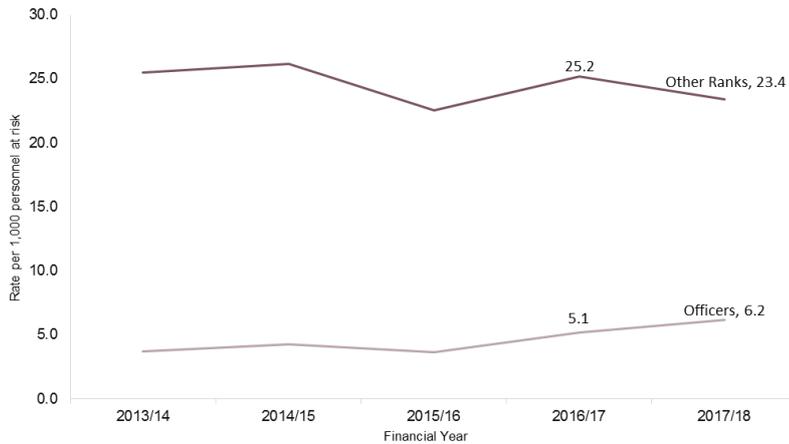
¹ As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

There were no significant differences between rates of medical discharge among males and females between 1 April 2013 and 31 March 2015, and 1 April 2017 to 31 March 2018 (**Figure 11**), however, the rate of medical discharge for females was found to be significantly higher than for males between 1 April 2015 and 31 March 2017. The reasons for this are currently unclear.

Army Continued

Figure 12: UK Regular Army medical discharges by rank¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



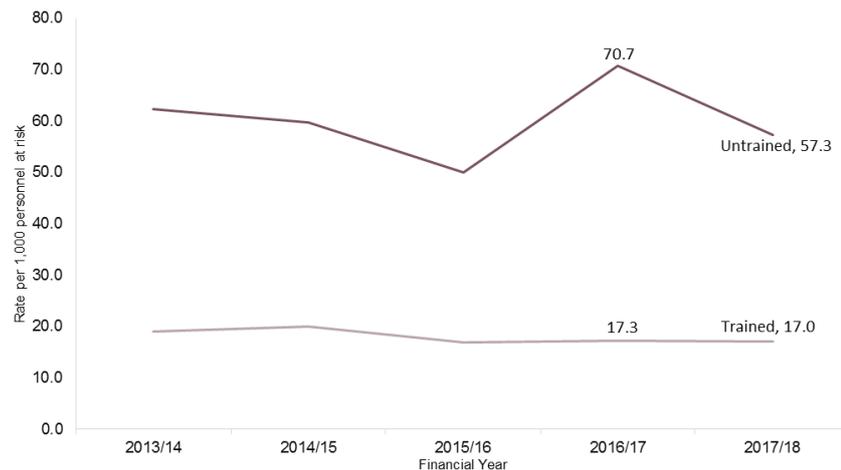
The rate of medical discharge among Other Ranks was significantly higher than for Officers throughout the period presented (**Figure 12**). Current Army policy is to retain personnel at Major and above in staff roles and thus Officers are more likely to be employed in or can be reassigned to duties that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

Source: DMICP, FMed 23 and JPA

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

Figure 13: UK Regular Army medical discharges by training status¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



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

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

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 financial year for the five-year period from 1 April 2013 to 31 March 2018.

57% of medical discharges (approx. 1 in 2) were due to **Musculoskeletal Disorders and Injuries**.

26% of medical discharges (approx. 1 in 4) were due to **Mental and Behavioural Disorders**.

Table 4: UK Regular Army medical discharges by principal ICD-10 cause code group and financial year, Numbers¹ and Percentages²
1 April 2013 to 31 March 2018

	All		2013/14		2014/15		2015/16		2016/17		2017/18		
	n	%	n	%	n	%	n	%	n	%	n	%	
All medical discharges	9,782		2,222		2,109		1,750		1,932		1,769		
All cause coded medical discharges	8,976	100	2,043	100	1,736	100	1,695	100	1,825	100	1,677	100	
Infectious and parasitic diseases (A00 - B99)	35	<1	17	<1	9	<1	~	<1	~	<1	~	<1	
Neoplasms (C00 - D48)	66	<1	14	<1	14	<1	16	<1	14	<1	8	<1	
Blood disorders (D50 - D89)	~	<1	~	<1	~	<1	~	<1	~	<1	~	<1	
Endocrine, nutritional and metabolic diseases (E00 - E90)	73	<1	21	1	17	<1	11	<1	11	<1	13	<1	
- Of which diabetes (E10-E14)	47	<1	15	<1	11	<1	~	<1	9	<1	~	<1	
- Of which insulin-dependent (E10)	31	<1	13	<1	7	<1	5	<1	~	<1	~	<1	
- Of which non-insulin-dependent (E11)	8	<1	~	<1	~	<1	0	0	~	<1	~	<1	
Mental and behavioural disorders (F00 - F99)	1,745	19	279	14	282	16	363	21	393	22	428	26	
- Of which mood disorders (F30 - F39)	443	5	52	3	61	4	105	6	108	6	117	7	
- Of which depression (F32 & F33)	375	4	41	2	51	3	82	5	97	5	104	6	
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	1,142	13	185	9	204	12	227	13	248	14	278	17	
- Of which post-traumatic stress disorder (PTSD) (F431)	766	9	123	6	137	8	156	9	176	10	174	10	
- Of which adjustment disorder (F432)	133	1	22	1	17	<1	24	1	31	2	39	2	
Nervous system disorders (G00 - G99)	227	3	59	3	50	3	39	2	37	2	42	3	
- Of which epilepsy (G40)	62	<1	23	1	12	<1	12	<1	9	<1	6	<1	
Eye and adnexa diseases (H00 - H59)	48	<1	20	<1	10	<1	8	<1	~	<1	~	<1	
- Of which blindness, low vision and visual disturbance (H53 & H54)	15	<1	8	<1	~	<1	~	<1	~	<1	~	<1	
Ear and mastoid process diseases (H60 - H95)	433	5	151	7	97	6	62	4	65	4	58	3	
- Of which hearing loss (H833 & H90 - H91)	378	4	136	7	89	5	51	3	54	3	48	3	
- Of which noise-induced hearing loss (H833)	142	2	64	3	38	2	17	1	12	<1	11	<1	
- Of which tinnitus (H931)	37	<1	8	<1	6	<1	11	<1	5	<1	7	<1	
Circulatory system disorders (I00 - I99)	170	2	38	2	25	1	36	2	42	2	29	2	
Respiratory system disorders (J00 - J99)	85	<1	12	<1	18	1	22	1	20	1	13	<1	
- Of which asthma (J45 & J46)	71	<1	12	<1	11	<1	19	1	17	<1	12	<1	
Digestive system disorders (K00 - K93)	144	2	45	2	27	2	28	2	19	1	25	1	
Skin and subcutaneous tissue diseases (L00 - L99)	122	1	30	1	25	1	16	<1	34	2	17	1	
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	5,388	60	1,246	61	1,087	63	1,016	60	1,079	59	960	57	
- Of which injuries and disorders of the knee ³	1,000	11	228	r	11	195	r	11	179	11	220	r	
- Of which knee pain (M2556)	390	4	84	4	73	4	78	5	83	5	72	4	
- Of which back pain (M549)	604	7	156	8	138	r	8	95	6	100	5	115	7
- Of which low back pain (M544-5)	512	6	129	6	118	r	7	78	5	86	5	101	6
- Of which injuries and disorders of the ankle and foot ⁴	542	6	141	7	100	6	91	5	107	6	103	6	
- Of which heat injury (T67)	21	<1	9	<1	~	<1	~	<1	~	<1	5	<1	
- Of which cold injury (T68 & T69)	411	5	81	4	65	4	90	5	98	5	77	5	
Genitourinary system diseases (N00 - N99)	50	<1	12	<1	9	<1	9	<1	7	<1	13	<1	
Pregnancy, childbirth and puerperium (O00 - O99)	~	0	0	0	0	0	0	0	0	0	~	0	
Congenital malformations (Q00 - Q99)	28	<1	~	<1	~	<1	8	<1	8	<1	~	<1	
Clinical and laboratory findings (R00 - R99)	265	3	49	2	49	3	46	3	70	4	51	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)	76	<1	42	2	8	<1	7	<1	12	<1	7	<1	
No details held on principal condition for medical boarding	805		178		373		55		107		92		
Withheld consent	1		1		0		0		0		0		

Source: DMICP, FMed 23 and JPA

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

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

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

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

^r Indicates where a revision to a figure has been made.

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

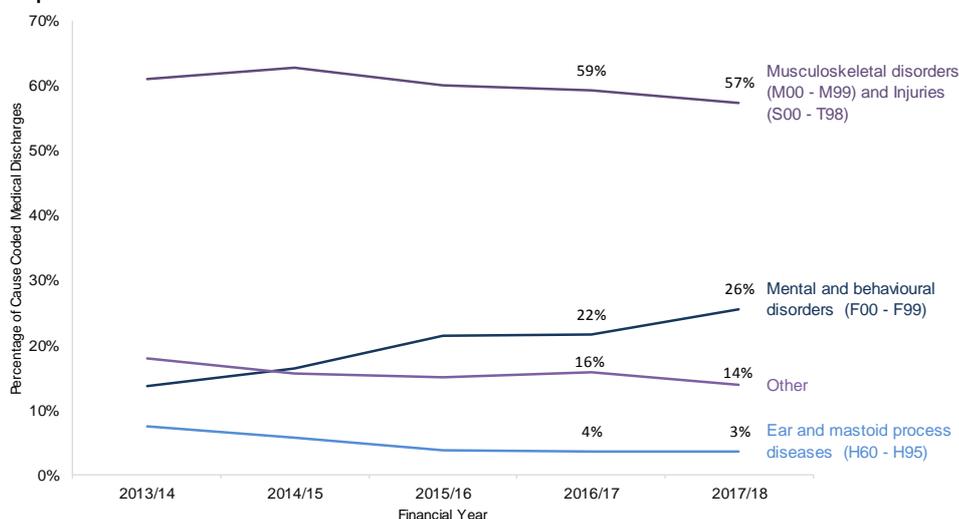
Between 1 April 2013 and 31 March 2018, Musculoskeletal Disorders and Injuries were the largest cause of principal cause coded Army medical discharges, accounting for around 60% of all medical discharges (**Figure 14**).

Since 1 April 2013, 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 have also increased in recent years and this may in part be the result of an increase in awareness of mental health due to the success of anti-stigma campaigns. Mental and Behavioural Disorders is also a large cause for medical discharge from the Canadian Military¹⁵; however Mental and Behavioural Disorders 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 2013 to 31 March 2018



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**). The high prevalence of personnel medically discharged for injuries and disorders of the knee may 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. Back pain is also the leading cause of disability in the UK and global populations¹⁶.

The majority of medical discharges due to Mental and Behavioural Disorders between 1 April 2017 and 31 March 2018 were the result of Neurotic, Stress Related and Somatoform Disorders (n = 278, 65% of Mental and Behavioural Disorder medical discharges). This was broadly comparable to initial assessments at MOD Specialist Mental Health services (DCMHs) with neurotic and mood disorders being the most prevalent disorders among serving Army personnel¹⁷. 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.

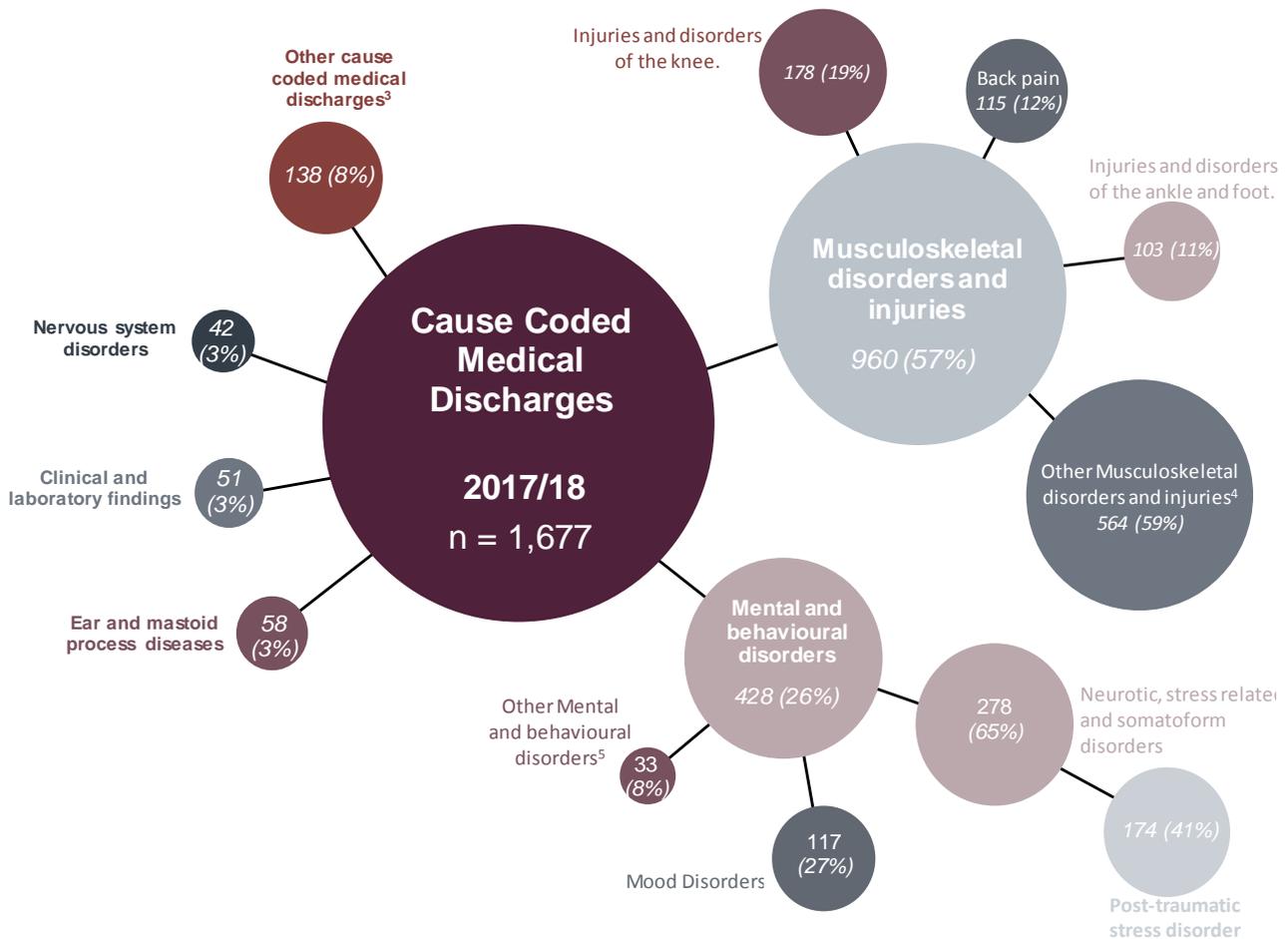
¹⁵ Poisson, R. (2015). The imperative of military medical research and the duty to protect, preserve, and provide advanced evidence-informed care [online], *Journal of Military, Veteran and Family Health*; 1(1) available at <http://jmvfh.utpjournals.press/doi/pdf/10.3138/jmvfh.2014-11> accessed on 9 June 2017.

¹⁶ 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.

¹⁷ Please see the "UK armed forces mental health annual statistics: financial year 2017/18" 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, Numbers¹ and Percentages^{1,2}
1 April 2017 to 31 March 2018



Source

DMICP, FMed 23 and JPA

¹ Please note: all data is provisional.

² Due to rounding, percentages might not add to 100%.

³ Includes 13 cause code groups; each accounting for a maximum of 2% of all Army cause coded medical discharges.

When considering both the principal and contributory cause of discharge between 1 April 2017 and 31 March 2018:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for over two thirds of all cause coded discharge (n=1,171, 70%).
- Mental and Behavioural Disorders was the second highest cause (n = 614, 37%).
- Factors Influencing Health Status (n = 329, 20%) 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 2017 to 31 March 2018, there were **196** medical discharges, equal to 5.9 medical discharges per 1,000 personnel. This was a significant increase since last year when the rate was 4.4 per 1,000 personnel (**Figure 16**).

- **196** medical discharges from the RAF in 2017/18.
- This equates to **6 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.

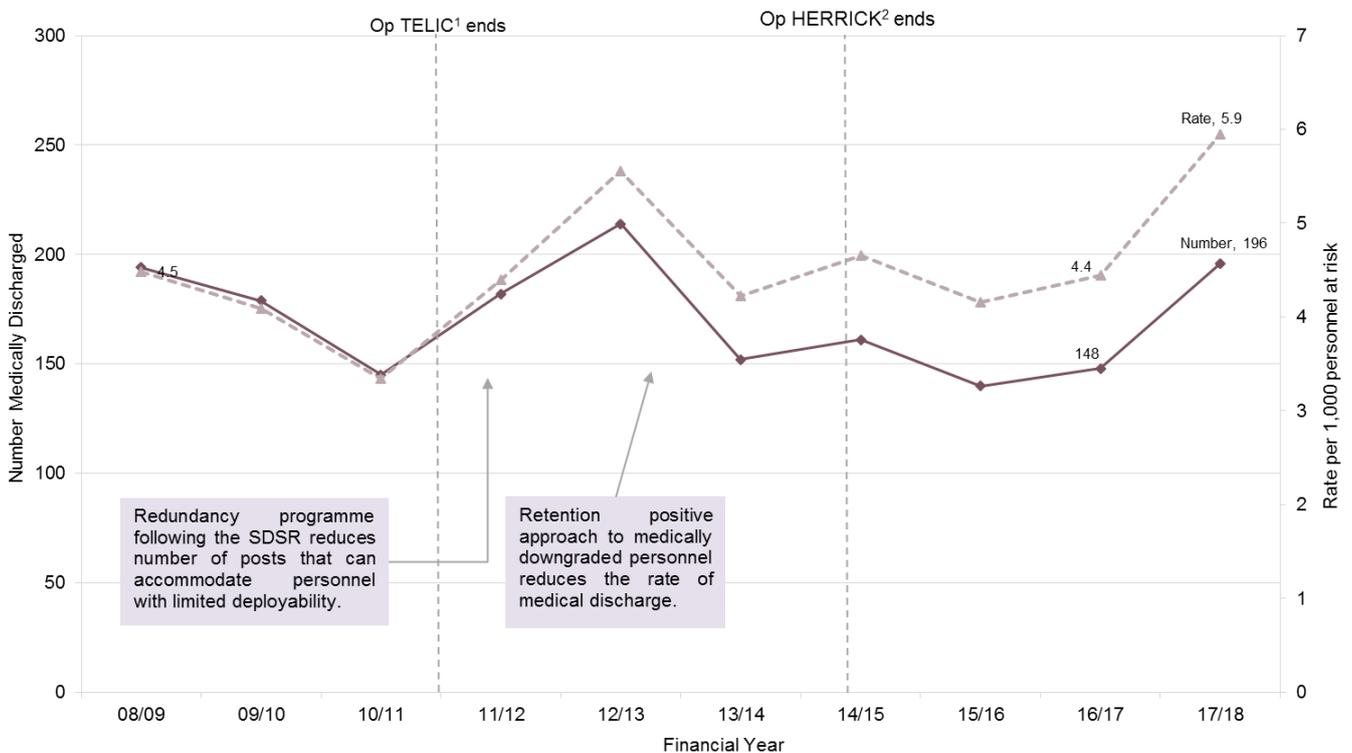
▲ The rate of medical discharges rose between 1 April 2010 and 31 March 2013. This may be because of the Strategic Defence and Security Review (SDSR) which reduced the number of roles available and may have limited the roles available that would accommodate the needs of personnel with limited deployability.

▼ 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.

● Between 1 April 2014 and 31 March 2017, the rate of medical discharges in the RAF levelled compared to previous years.

▲ In the most recent reporting year, 1 April 2017 to 31 March 2018, the rate of medical discharges significantly increased from 4.4 to 5.9 per 1,000 personnel.

Figure 16: UK Regular RAF medical discharges by financial year, Numbers and Crude rates per 1,000 personnel at risk
1 April 2008 to 31 March 2018



Source: DMICP, FMed 23 and JPA

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

² 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

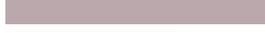
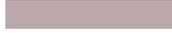
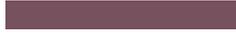
Between 1 April 2017 and 31 March 2018, the rate of medical discharge was significantly higher for Regular RAF personnel within specific demographic groups (**Table 5**):

- Females.
- Other Ranks.

The demographic groups that displayed a high rate of medical discharge between 1 April 2017 and 31 March 2018 were consistent with results seen in the recovery pathway^{18,19} which found that female and Other Ranks had higher proportions of personnel under the care of the RAF recovery capability.

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 population²⁰.

Table 5: UK Regular RAF medical discharges by age group¹, gender¹, rank¹ and training status¹, Numbers and Rates per 1,000 personnel at risk
1 April 2017 to 31 March 2018

	2017/18		Rate of UK Regular RAF personnel medically discharged
	n	r	
Number of UK Regular RAF personnel medically discharged	196	5.9	
Age			
Aged Under 20	~	3.2	
Aged 20-24	12	2.7	
Aged 25-29	44	6.3	
Aged 30-34	40	6.2	
Aged 35-39	43	7.5	
Aged 40-44	18	5.1	
Aged 45-49	22	7.8	
Aged 50 and over	~	7.0	
Gender			
Male	137	4.8	
Female*	59	12.7	
Rank			
Officer	24	3.2	
Other Rank*	172	6.8	
Training Status			
Trained	186	6.1	
Untrained	10	4.1	

Source: DMICP, FMed 23 and JPA

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

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

¹⁸ <https://www.gov.uk/government/collections/uk-armed-forces-recovery-capability-wounded-injured-and-sick-in-the-recovery-pathway-statistics>

¹⁹ Recovery is the non-medical care for those who are wounded, injured or sick.

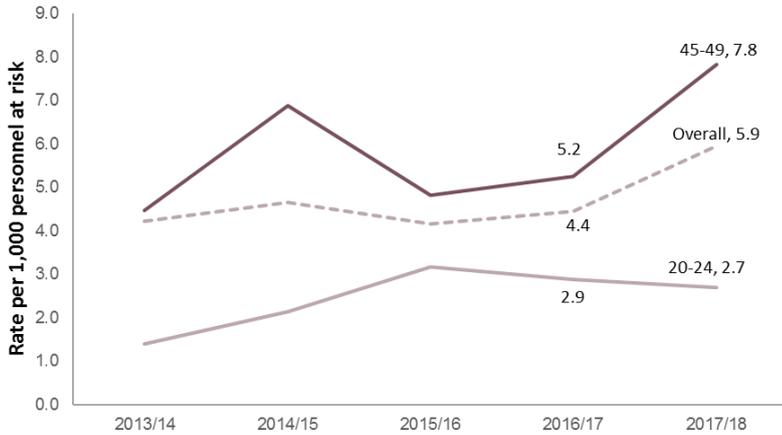
²⁰ <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

RAF Continued

Figures 17 to 20 present RAF medical discharges for each demographic group between 1 April 2013 and 31 March 2018 with possible explanations for the differences observed.

Figure 17: UK Regular RAF medical discharges by age group¹ and financial year, Rates per 1,000 personnel

1 April 2013 to 31 March 2018



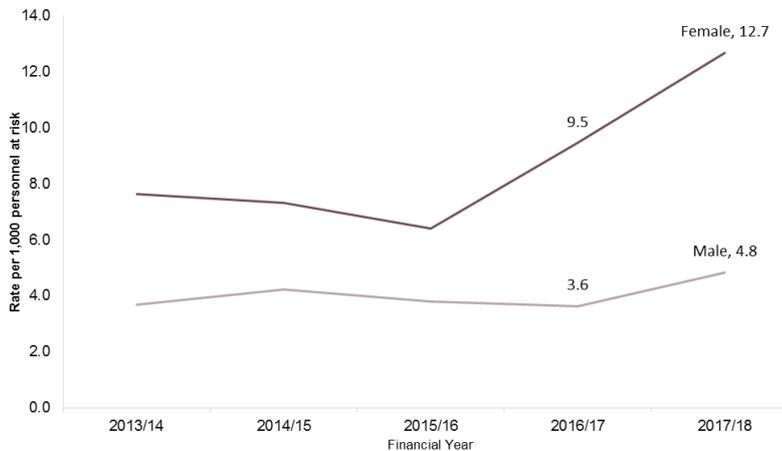
The rate of medical discharge among RAF personnel rose significantly by 6% from 2016/17 to 2017/18 (Figure 17). Personnel aged 45 to 49 have consistently had a higher rate of medical discharge than the overall rate whereas personnel aged 20 to 24 have consistently had a lower rate. It should be noted that the underlying numbers are low and are therefore more susceptible to large percentage changes.

Source: DMICP, FMed 23 and JPA

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

Figure 18: UK Regular RAF medical discharges by gender¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



The rate of medical discharge was significantly higher for females than for males since 2013/14 (Figure 18). 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% in the rate of medical discharge for female personnel compared to 2016/17. The reason for the higher rate of medical discharges in females is unclear however may be due to the higher rate of presenting with Musculoskeletal Disorders and Injuries and Mental Health conditions in the female population²³.

Source: DMICP, FMed 23 and JPA

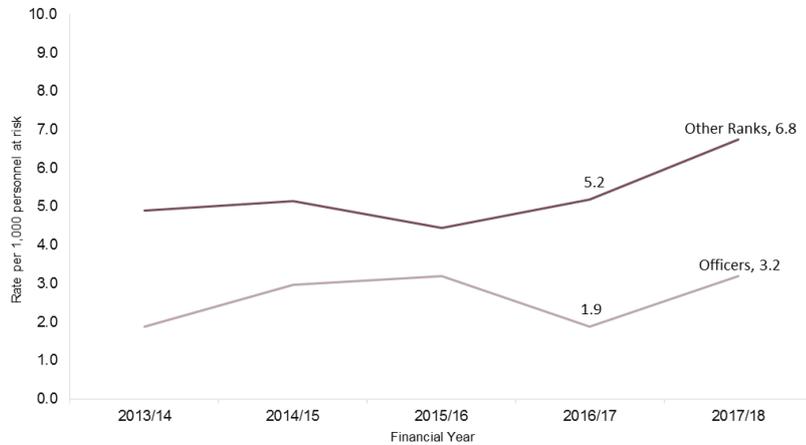
¹ As recorded on the Joint Personnel Administration System (JPA) at the time of discharge.

²¹ <https://www.gov.uk/government/publications/women-in-ground-close-combat-roles-review-2016>

RAF Continued

Figure 19: UK Regular RAF medical discharges by rank¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



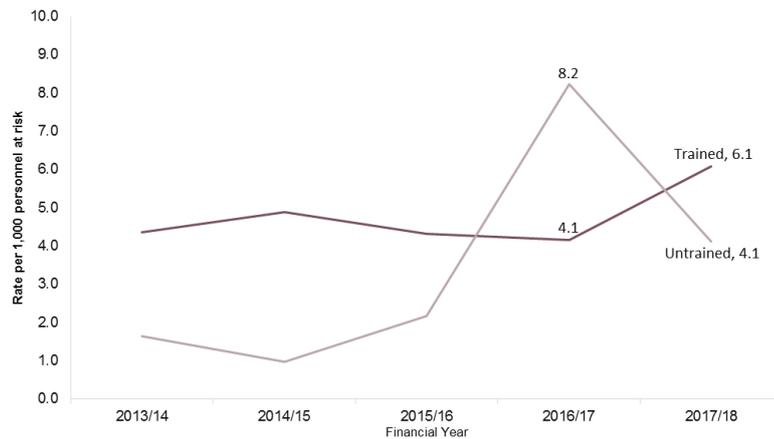
For the majority of the period presented, Other Ranks had a significantly higher rate of medical discharge than Officers (apart from 2015/16) (**Figure 19**).

Source: DMICP, FMed 23 and JPA

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

Figure 20: UK Regular RAF medical discharges by training status¹ and financial year, Rates per 1,000 personnel at risk

1 April 2013 to 31 March 2018



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 2013 to 31 March 2018 only 40 untrained RAF personnel were medically discharged, compared to 757 trained personnel (**Figure 20**).

Source: DMICP, FMed 23 and JPA

¹ 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 financial year for the five-year period from 1 April 2013 to 31 March 2018.

46% of medical discharges (approx. 1 in 2) were due to **Musculoskeletal Disorders and Injuries**.

36% 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, Numbers¹ and Percentages²
1 April 2013 to 31 March 2018

	All		2013/14		2014/15		2015/16		2016/17		2017/18	
	n	%	n	%	n	%	n	%	n	%	n	%
All medical discharges	797		152		161		140		148		196	
All cause coded medical discharges	776	100	150	100	146	100	136	100	148	100	196	100
Infectious and parasitic diseases (A00 - B99)	0	0	0	0	0	0	0	0	0	0	0	0
Neoplasms (C00 - D48)	16	2	~	3	~	3	~	1	~	2	~	2
Blood disorders (D50 - D89)	~	<1	0	0	0	0	0	0	~	<1	0	0
Endocrine, nutritional and metabolic diseases (E00 - E90)	7	<1	~	2	~	<1	0	0	~	1	~	<1
- Of which diabetes (E10-E14)	~	<1	~	1	0	0	0	0	~	<1	~	<1
- Of which insulin-dependent (E10)	~	<1	~	1	0	0	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)	219	28	29	19	37	25	38	28	44	30	71	36
- Of which mood disorders (F30 - F39)	90	12	13	9	11	8	18	13	14	9	34	17
- Of which depression (F32 & F33)	78	10	9	6	9	6	17	13	13	9	30	15
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	107	14	14	9	20	14	17	13	25	17	31	16
- Of which post-traumatic stress disorder (PTSD) (F431)	42	5	~	2	~	5	9	7	10	7	12	6
- Of which adjustment disorder (F432)	25	3	~	2	6	4	~	1	8	5	6	3
Nervous system disorders (G00 - G99)	49	6	13	9	8	5	9	7	7	5	12	6
- Of which epilepsy (G40)	6	<1	~	<1	0	0	0	0	~	1	~	2
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	0	0	~	<1	0	0	0	0
Ear and mastoid process diseases (H60 - H95)	29	4	11	7	5	3	7	5	~	3	~	<1
- Of which hearing loss (H833 & H90 - H91)	26	3	~	7	5	3	~	4	~	3	~	<1
- Of which noise-induced hearing loss (H833)	~	<1	~	<1	0	0	0	0	~	<1	~	<1
- Of which tinnitus (H931)	~	<1	~	<1	0	0	~	<1	~	<1	0	0
Circulatory system disorders (I00 - I99)	18	2	5	3	~	<1	~	3	~	2	5	3
Respiratory system disorders (J00 - J99)	~	<1	~	2	0	0	0	0	~	<1	0	0
- Of which asthma (J45 & J46)	~	<1	0	0	0	0	0	0	~	<1	0	0
Digestive system disorders (K00 - K93)	16	2	~	2	6	4	0	0	~	2	~	2
Skin and subcutaneous tissue diseases (L00 - L99)	7	<1	~	<1	~	1	0	0	~	1	~	1
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	371	48	72	48	76	52	66	49	67	45	90	46
- Of which injuries and disorders of the knee ³	76	10	18	12	15	10	11	8	10	7	22	11
- Of which knee pain (M2556)	47	6	9	6	9	6	6	4	5	3	18	9
- Of which back pain (M549)	75	10	16	11	19	13	14	10	12	8	14	7
- Of which low back pain (M544-5)	66	9	15	10	17	12	13	10	9	6	12	6
- Of which injuries and disorders of the ankle and foot ⁴	20	3	~	2	5	3	~	3	~	3	~	2
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	9	1	0	0	0	0	~	<1	~	2	5	3
Genitourinary system diseases (N00 - N99)	~	<1	~	<1	~	<1	~	<1	~	<1	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	0	0	~	<1	0	0	~	1
Clinical and laboratory findings (R00 - R99)	25	3	~	2	~	3	6	4	8	5	~	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	~	<1	0	0	~	<1	0	0	0	0
No details held on principal condition for medical boarding	15		0		12		3		0		0	
Withheld consent	6		2		3		1		0		0	

Source: DMICP, FMed 23 and JPA

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

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

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

⁴ 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 2013 and 31 March 2018, Musculoskeletal Disorders and Injuries were the largest cause of principal cause coded RAF medical discharges, accounting for between 45% and 52% of all medical discharges (**Figure 21**).

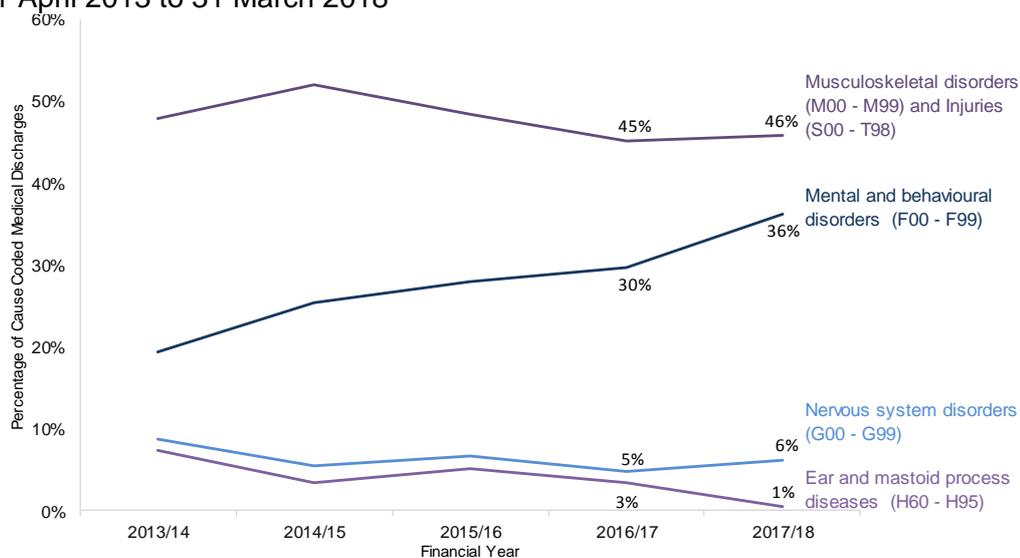
Since 1 April 2013 to 31 March 2014 the proportion of medical discharges for Mental and Behavioural Disorders increased from 19% to 36% whilst the proportion of Musculoskeletal Disorders and Injuries fell from 48% to 46%. Please note the increase in the proportion of medical discharges for Mental and Behavioural Disorders in the most recent year (1 April 2017 to 31 March 2018) was not statistically significant when compared to the previous year. Possible explanations for the changing proportions in these causes of medical discharges include:

- The retention of personnel in a limited deployability role wherever feasible.
- An increase in awareness of mental health issues among UK Armed Forces personnel, Commanding Officers and clinicians in the primary care setting in recent years following the success of anti-stigma campaigns run by the MOD to reduce stigma. There was also a rise in the rate of RAF personnel presenting to MOD Specialist Mental Health Services since 1 April 2008.

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

1 April 2013 to 31 March 2018



Source: DMICP, FMed 23 and JPA

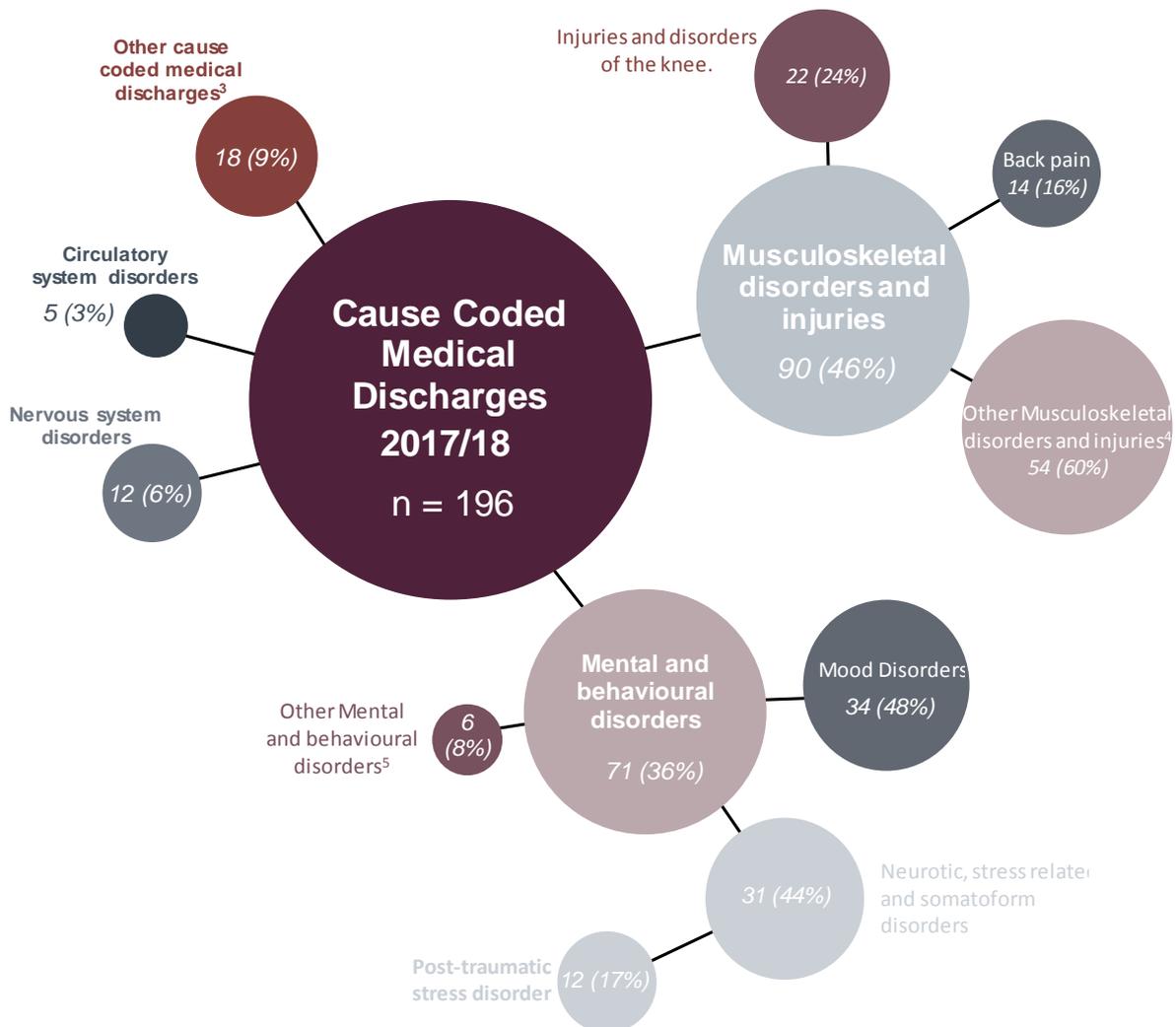
The high prevalence of personnel medically discharged for back pain and injuries and disorders of the knee may be the result of the physical activity required of many RAF personnel, such as training on hard ground carrying heavy loads. Back pain is also the leading cause of disability in the UK and global populations²².

²² 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 2017 and 31 March 2018 the most common principal cause of medical discharge was Musculoskeletal Disorders and Injuries (n = 90, 46%) and the second highest cause of medical discharge was Mental and Behavioural Disorders (n = 71, 36%). This finding is consistent with the Canadian military⁴; 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, Numbers¹ and Percentages^{1,2}
1 April 2017 to 31 March 2018



Source: DMICP, FMed 23 and JPA

¹ Please note: all data is provisional.

² Due to rounding, percentages might not add to 100%.

³ Includes 15 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 2017 and 31 March 2018:

- Musculoskeletal Disorders and Injuries remained the most common cause, accounting for over two thirds of all cause coded discharge (n = 127, 65%).
- Mental and Behavioural Disorders remained the second highest cause (n = 111, 57%).
- Nervous System Disorders were the third highest cause (n = 26, 13%).

Methodology

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

<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

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 bi-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

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.

International Statistical Classification of Diseases and Health-Related Disorders 10th 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 the UN authorised, NATO led International Security Assistance Force (IASF) 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 Royal Marines, 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 the medical discharge documents (FMed 23).

Contributory condition/cause

Contributory cause contains all other principal conditions and any contributory conditions on the medical discharge paper (FMed 23).

Trained in this report are those that have completed training or artificer candidacy for Naval Service and those that have completed both Phase 1 and 2 training for Army and RAF.

Trade Trained Following public announcement and public consultation the definition of Army Trained Strength has changed. From 1 October 2016, UK Regular Forces and Gurkha personnel in the Army who have completed Phase 1 training (basic Service training) but not Phase 2 training (trade training), are now considered Trained personnel. This change will enable the Army to meet the SDSR 15 commitment to improve support to UK resilience. Previously, only personnel who had completed Phase 2 training were considered trained.

This change does not affect the Royal Navy/Royal Marines (RN/RM) or the Royal Air Force (RAF).

As a result of this change, the Full-time Trained Strength (FTTS) includes:

- UK Regular Forces who have passed Phase 1 and Phase 2 training, in the RN/RM & RAF, and UK Regular Forces and Gurkha personnel who have passed Phase 1 training in the Army;

- Those elements of the Full Time Reserve Service (FTRS) who are counted against the liability, for all three Services. This change was implemented in the 1 October 2016 edition of this publication

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

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.

Provisional Data

Between 1 April 2013 and 31 March 2018, Defence Statistics Health did not receive confirmation of all Army cause information for discharge. Therefore, Army cause information data for 1 April 2017 to 31 March 2018 are provisional. Defence Statistics Health are investigating these personnel and may revise figures in the next release when more data becomes available. Please see the Annual Medical Discharges in the UK Regular Armed Forces Background Quality Report²³ for further information.

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.

In July 2018 Defence Statistics found that incorrect information was published on the number of personnel medically discharged with a principal condition of hearing loss and back disorders in the Naval Services and the Army. These affected some figures in 2013/14, 2014/15 and 2015/16. These revisions had no impact on the messages portrayed in the official statistic. This was as a result of a processing error, therefore a series of steps have been put in place to reduce the risk of future amendments.

²³ <https://www.gov.uk/government/statistics/uk-service-personnel-medical-discharges-background-quality-report>

Contact Us

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

Defence Statistics Health Telephone: 030 6798 4423
Email: DefStrat-Stat-Health-PQ-FOI@mod.gov.uk

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www.gov.uk/make-a-freedom-of-information-request/the-freedom-of-information-act

Other contact points within Defence Statistics are:

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

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

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

For general MOD enquiries, please call: 020 7218 9000

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

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>.

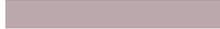
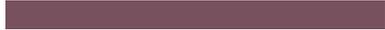
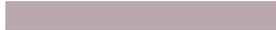
Royal Navy

Demographic Risk Groups

Between 1 April 2017 and 31 March 2018, 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 group¹, gender¹, rank¹ and training status¹, Numbers and Rates per 1,000 personnel at risk
1 April 2017 to 31 March 2018

	2017/18		Rate of UK Regular Royal Navy personnel medically discharged
	n	r	
Number of UK Regular Royal Navy personnel medically discharged	316	12.5	
Age			
Aged Under 20	~	0.9	
Aged 20-24	50	11.3	
Aged 25-29	72	12.8	
Aged 30-34 ⁺	92	19.7	
Aged 35-39	53	14.3	
Aged 40-44	25	10.6	
Aged 45-49	14	6.9	
Aged 50 and over	~	6.6	
Gender			
Male	243	10.9	
Female [*]	73	25.1	
Rank			
Officer	30	5.0	
Other Rank [*]	286	14.8	
Training Status			
Trained [*]	304	13.5	
Untrained	12	4.3	

Source: DMICP, FMed 23 and JPA

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

⁺ 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, Numbers¹ and Percentages²

1 April 2013 to 31 March 2018

	All		2013/14		2014/15		2015/16		2016/17		2017/18	
	n	%	n	%	n	%	n	%	n	%	n	%
All medical discharges	1,361		227		252		285		280		316	
All cause coded medical discharges	1,360	100	227	100	252	100	285	100	280	100	316	100
Infectious and parasitic diseases (A00 - B99)	~	<1	~	<1	0	0	~	<1	~	<1	0	0
Neoplasms (C00 - D48)	18	1	~	<1	~	2	~	1	5	2	~	<1
Blood disorders (D50 - D89)	5	<1	~	1	0	0	0	0	~	<1	~	<1
Endocrine, nutritional and metabolic diseases (E00 - E90)	20	1	6	3	~	1	~	1	~	1	5	2
- Of which diabetes (E10-E14)	15	1	~	2	~	1	~	<1	~	<1	5	2
- Of which insulin-dependent (E10)	12	<1	~	1	~	1	~	<1	~	<1	~	1
- Of which non-insulin-dependent (E11)	~	<1	~	<1	0	0	0	0	~	<1	~	<1
Mental and behavioural disorders (F00 - F99)	251	18	33	15	36	14	64	22	46	16	72	23
- Of which mood disorders (F30 - F39)	98	7	14	6	18	7	21	7	15	5	30	9
- Of which depression (F32 & F33)	82	6	13	6	13	5	15	5	15	5	26	8
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	119	9	12	5	13	5	32	11	28	10	34	11
- Of which post-traumatic stress disorder (PTSD) (F431)	49	4	~	2	~	2	13	5	14	5	14	4
- Of which adjustment disorder (F432)	11	<1	~	<1	0	0	~	<1	~	<1	6	2
Nervous system disorders (G00 - G99)	47	3	~	3	~	2	12	4	12	4	13	4
- Of which epilepsy (G40)	12	<1	~	<1	~	<1	~	<1	5	2	~	<1
Eye and adnexa diseases (H00 - H59)	18	1	~	2	7	3	~	1	~	<1	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	~	<1	0	0	~	<1	~	<1	~	<1	0	0
Ear and mastoid process diseases (H60 - H95)	32	2	~	2	~	1	10	4	~	1	11	3
- Of which hearing loss (H833 & H90 - H91)	26	2	~	1	~	1	9	3	~	<1	10	3
- Of which noise-induced hearing loss (H833)	~	<1	0	0	~	<1	0	0	0	0	0	0
- Of which tinnitus (H931)	~	<1	0	0	0	0	~	<1	~	<1	0	0
Circulatory system disorders (I00 - I99)	24	2	5	2	~	2	8	3	~	1	~	<1
Respiratory system disorders (J00 - J99)	22	2	~	<1	~	<1	9	3	~	1	6	2
- Of which asthma (J45 & J46)	18	1	~	<1	~	<1	8	3	~	<1	~	1
Digestive system disorders (K00 - K93)	59	4	6	3	13	5	17	6	10	4	13	4
Skin and subcutaneous tissue diseases (L00 - L99)	42	3	5	2	10	4	10	4	6	2	11	3
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	756	56	134	59	157	62	137	48	170	61	158	50
- Of which injuries and disorders of the knee ³	187	14	34	15	50	20	32	11	43	15	28	9
- Of which knee pain (M2556)	78	6	15	7	12	5	13	5	23	8	15	5
- Of which back pain (M549)	125	9	24	11	21	8	20	7	24	9	36	11
- Of which low back pain (M544-5)	105	8	20	9	15	6	18	6	20	7	32	10
- Of which injuries and disorders of the ankle and foot ⁴	63	5	11	5	16	6	13	5	13	5	10	3
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	6	<1	0	0	0	0	~	1	~	<1	~	<1
Genitourinary system diseases (N00 - N99)	12	<1	~	<1	~	<1	~	<1	~	1	5	2
Pregnancy, childbirth and puerperium (O00 - O99)	0	0	0	0	0	0	0	0	0	0	0	0
Congenital malformations (Q00 - Q99)	~	<1	~	<1	0	0	~	<1	0	0	~	<1
Clinical and laboratory findings (R00 - R99)	36	3	8	4	~	2	~	2	9	3	10	3
External Causes of Morbidity and Mortality (V01 - Y98)	~	<1	0	0	0	0	0	0	0	0	~	<1
Factors influencing health status (Z00 - Z99)	10	<1	~	1	~	2	~	<1	~	<1	~	<1
No details held on principal condition for medical boarding	1		0		0		1		0		0	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

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

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

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

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

^r Indicates where a revision to a figure has been made.

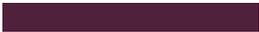
Royal Marines

Demographic Risk Groups

Between 1 April 2017 and 31 March 2018, the rate of medical discharge was significantly higher for Regular Royal Marines personnel within specific demographic groups (**Table A3**):

- Personnel aged 25-29 years.
- Other Ranks.
- Untrained personnel.

Table A3: UK Regular Royal Marines medical discharges by age group¹, gender¹, rank¹ and training status¹, Numbers and Rates per 1,000 personnel at risk
1 April 2017 to 31 March 2018

	2017/18		Rate of UK Regular Royal Marines personnel medically discharged
	n	r	
Number of UK Regular Royal Marines personnel medically discharged	170	23.7	
Age			
Aged Under 20	~	8.6	
Aged 20-24	26	17.0	
Aged 25-29 ⁺	65	30.2	
Aged 30-34	35	26.0	
Aged 35-39	24	28.3	
Aged 40-44	8	15.9	
Aged 45-49	9	23.7	
Aged 50 +	~	5.3	
Gender			
Male	~	23.8	
Female	~	17.5	
Rank			
Officer	7	8.7	
Other Rank*	163	24.7	
Training Status			
Trained	141	21.5	
Untrained*	29	45.7	

Source: DMICP, FMed 23 and JPA

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

+ 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, Numbers¹ and Percentages²
1 April 2013 to 31 March 2018

	All		2013/14		2014/15		2015/16		2016/17		2017/18	
	n	%	n	%	n	%	n	%	n	%	n	%
All medical discharges	710	100	96	100	122	100	156	100	166	100	170	100
All cause coded medical discharges	705	100	96	100	122	100	151	100	166	100	170	100
Infectious and parasitic diseases (A00 - B99)	0	0	0	0	0	0	0	0	0	0	0	0
Neoplasms (C00 - D48)	~	<1	~	1	0	0	~	<1	~	<1	0	0
Blood disorders (D50 - D89)	~	<1	0	0	~	<1	0	0	~	<1	0	0
Endocrine, nutritional and metabolic diseases (E00 - E90)	9	1	~	3	~	2	~	1	0	0	~	<1
- Of which diabetes (E10-E14)	9	1	~	3	~	2	~	1	0	0	~	<1
- Of which insulin-dependent (E10)	8	1	~	2	~	2	~	1	0	0	~	<1
- Of which non-insulin-dependent (E11)	~	<1	~	1	0	0	0	0	0	0	0	0
Mental and behavioural disorders (F00 - F99)	48	7	~	3	~	3	8	5	16	10	17	10
- Of which mood disorders (F30 - F39)	11	2	~	1	~	<1	~	3	~	2	~	1
- Of which depression (F32 & F33)	8	1	0	0	~	<1	~	2	~	1	~	1
- Of which neurotic, stress related and somatoform disorders (F40 - F48)	33	5	~	1	~	2	~	3	11	7	14	8
- Of which post-traumatic stress disorder (PTSD) (F431)	27	4	~	1	~	<1	~	2	9	5	13	8
- Of which adjustment disorder (F432)	~	<1	0	0	0	0	0	0	~	<1	0	0
Nervous system disorders (G00 - G99)	17	2	~	2	~	<1	~	3	~	2	6	4
- Of which epilepsy (G40)	~	<1	0	0	0	0	0	0	~	<1	0	0
Eye and adnexa diseases (H00 - H59)	~	<1	0	0	0	0	0	0	0	0	~	<1
- Of which blindness, low vision and visual disturbance (H53 & H54)	0	0	0	0	0	0	0	0	0	0	0	0
Ear and mastoid process diseases (H60 - H95)	69	10	15	16	11	9	11	7	15	9	17	10
- Of which hearing loss (H833 & H90 - H91)	63	9	15	16	11	9	9	6	15	9	13	8
- Of which noise-induced hearing loss (H833)	21	3	9	9	7	6	~	2	~	<1	~	<1
- Of which tinnitus (H931)	~	<1	0	0	0	0	~	<1	0	0	~	2
Circulatory system disorders (I00 - I99)	10	1	~	2	~	2	~	1	~	<1	~	2
Respiratory system disorders (J00 - J99)	12	2	~	3	~	2	~	<1	~	2	~	1
- Of which asthma (J45 & J46)	11	2	~	3	~	2	~	<1	~	2	~	<1
Digestive system disorders (K00 - K93)	14	2	~	2	~	<1	~	1	~	2	6	4
Skin and subcutaneous tissue diseases (L00 - L99)	~	<1	~	1	~	<1	0	0	~	1	0	0
Musculoskeletal disorders (M00 - M99) and injuries (S00 - T98)	489	69	62	65	91	75	116	77	108	65	112	66
- Of which injuries and disorders of the knee ³	118	17	13	14	21	17	30	20	26	16	28	16
- Of which knee pain (M2556)	49	7	~	5	~	3	11	7	12	7	17	10
- Of which back pain (M549)	70	10	5	5	10	8	19	13	19	11	17	10
- Of which low back pain (M544-5)	65	9	5	5	9	7	16	11	18	11	17	10
- Of which injuries and disorders of the ankle and foot ⁴	50	7	6	6	9	7	16	11	11	7	8	5
- Of which heat injury (T67)	0	0	0	0	0	0	0	0	0	0	0	0
- Of which cold injury (T68 & T69)	16	2	0	0	~	2	7	5	~	1	5	3
Genitourinary system diseases (N00 - N99)	~	<1	0	0	0	0	0	0	~	<1	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	0	0	~	<1	~	<1	0	0
Clinical and laboratory findings (R00 - R99)	19	3	~	2	~	2	~	2	7	4	~	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)	5	<1	0	0	~	2	0	0	~	1	~	<1
No details held on principal condition for medical boarding	5		0		0		5		0		0	
Withheld consent	0		0		0		0		0		0	

Source: DMICP, FMed 23 and JPA

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

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

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

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

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