The Chavasse Report
The Evidence

Improving Armed Forces and Veteran Care Whilst Raising NHS Standards for All
A strategic partnership between the Nation, the Armed Forces, and the NHS
As we approach the 100th anniversary of the start of World War I, Service Personnel, Reservists and Veterans quite rightly hold a special place in our hearts and minds. Moreover, the Armed Forces Covenant recognises our moral obligation to ensure that they are not disadvantaged compared to others. The Covenant emphasises that special consideration should be afforded to those who have given the most, especially the injured, just in case we forget the sacrifices they have made.

The nation has made great strides in this area recently, but there is more to do given the unpredictable frequency and nature of modern military conflict.

Inspired by the selfless heroism of Captain Noel Chavasse VC and Bar in 1917, Professor Tim Briggs has highlighted areas where we can and should do more for the injured. His guiding principle is to ensure better and greater continuity of care for those people severely wounded in action or suffering debilitating musculoskeletal infirmity as a consequence of their military service. Not only does he highlight the problems around the management of musculoskeletal injuries, the most common cause of downgrading and discharge from the forces but also suggests the solutions. He emphasises the need for a network of NHS hospitals to provide the care for veterans and proposes setting up a number of NHS Veteran Rehabilitation units, linked to those within the military, to make sure of a seamless transition of care and shared learning between the DMS and the NHS. This will improve care for all patients and provide a very much more consistent approach to rehabilitation, indeed some of my fellow Falklands veterans - often forgotten by the ‘system’ - are living confirmation of the urgent need for this.

Professor Briggs is already forging ahead with his NHS England funded “Getting It Right First Time” programme of work which will improve the quality of orthopaedic care for all. The knowledge gained from this will suggest the networks that need be developed to improve the musculoskeletal care of both NHS patients and Veterans. He is also working with funding charities on an initial enhancement to the NHS rehabilitation infrastructure across the nation.

On behalf of all veterans and those in the military service of the nation, I commend his commitment and strongly encourage others in positions of authority and influence to follow suit by enacting his recommendations.

HRH The Duke of York, KG
ii. Captain Noel Godfrey Chavasse

VC and Bar, MC
9th November 1884 – 4th August 1917

Noel Chavasse qualified in medicine from the University of Liverpool in 1912 and worked for Sir Robert Jones, the founder of the British Orthopaedic Association (BOA) as his houseman. He joined the Royal Army Medical Corps (RAMC) in 1913 and was attached to the 10th Battalion of The Kings (Liverpool Regiment), the Liverpool Scottish, a Territorial battalion. During World War I (WWI) Chavasse was promoted to Captain and remained attached to the 1st/10th (Scottish Battalion) of The Kings (Liverpool Regiment). He saw action in Belgium in June 1915 where he was awarded the Military Cross (MC) and mentioned in Dispatches.

In 1916 Noel was awarded his first Victoria Cross (VC) whilst rescuing men from no-man’s land during the battle of Guillemont despite being injured himself. His second VC was awarded during the Allied offensive of Passchendaele in 1917 where he was again wounded but refused to leave his post and continued to care for his men. He died two days later of his injuries on the 4th August 1917.

Chavasse’s headstone is in a small cemetery in Brandhoek New Military Cemetery Vlamertinge and is the only one on the Western Front carved with two VCs.
Citation for the award of The Victoria Cross for his actions on 9th August 1916 at Guillemont
Published on 24 October 1916:

Captain Noel Godfrey Chavasse, M.C., M.B., Royal Army Medical Corps.

For most conspicuous bravery and devotion to duty.
During an attack he tended the wounded in the open all day, under heavy fire, frequently in view of the enemy. During the ensuing night he searched for wounded on the ground in front of the enemy’s lines for four hours.

Next day he took one stretcher-bearer to the advanced trenches, and under heavy shell fire carried an urgent case for 500 yards into safety, being wounded in the side by a shell splinter during the journey. The same night he took up a party of twenty volunteers, rescued three wounded men from a shell hole twenty-five yards from the enemy’s trench, buried the bodies of two Officers, and collected many identity discs, although fired on by bombs and machine guns. Altogether he saved the lives of some twenty badly wounded men, besides the ordinary cases which passed through his hands. His courage and self-sacrifice, were beyond praise.

Citation for the award of second Victoria Cross for his actions between 31 July and 2nd August at Wielte, Belgium
Published on 14 September 1917: War Office

His Majesty the KING has been graciously pleased to approve of the award of a Bar to the Victoria Cross to Capt. Noel Godfrey Chavasse, V.C., M.C., late K.A.M.C., attd. L'pool R.

For most conspicuous bravery and devotion to duty when in action.
Though severely wounded early in the action while carrying a wounded soldier to the Dressing Station, Capt. Chavasse refused to leave his post, and for two days not only continued to perform his duties, but in addition went out repeatedly under heavy fire to search for and attend to the wounded who were lying out.

During these searches, although practically without food during this period, worn with fatigue and faint from his wound, he assisted in carrying in a number of badly wounded men, over heavy and difficult ground.

By his extraordinary energy and inspiring example, he was instrumental in rescuing many wounded men who would have otherwise undoubtedly succumbed under the bad weather conditions.

This devoted and gallant officer subsequently died of his wounds.
Military training is by necessity arduous and it is therefore not surprising that musculoskeletal injury is the greatest cause of secondary care referral for Service personnel, although patients are managed whenever possible by rehabilitation delivered by the Defence Medical Services within the Defence Medical Rehabilitation Programme. The veteran population is also at increased risk of earlier presentation of musculoskeletal problems as a result of the arduous nature of military training and operational exposure that they have undertaken during their Service career. Moreover, the greater reliance on Reservists will place additional pressure on the NHS to deliver timely access to elective orthopaedic care and rehabilitation if the Government’s direction to increase the use of Reservists in the future is to be delivered. The Defence Medical Services are therefore committed to working with NHS England and the Devolved Administrations to deliver optimal orthopaedic care for Service personnel, Reservists and veterans.

Professor Tim Briggs, President of the British Orthopaedic Association, approached me earlier last year indicating his desire to create improved access to quality NHS elective orthopaedic care for Service personnel, Reservists and veterans within the UK under the banner of the Armed Forces Covenant and the ‘duty of the nation’.

His proposal is contained within the Chavasse Report. It builds on his previous paper, entitled ‘Getting It Right First Time’ (GIRFT), which sought to identify regional centres within England that would act as ‘hubs’ for managing elective orthopaedic care and provide a better evidence base for the most appropriate intervention for patients with musculoskeletal conditions. His aim within the Chavasse Report is to identify NHS hospitals on a regional basis that would provide timely access for elective orthopaedic care for Service personnel, Reservists and veterans under the banner of the Armed Forces Covenant. If this can be incorporated within NHS care pathways in the future, it would help to maximise the fitness of currently serving personnel and Reservists and provide early and appropriate elective orthopaedic interventions for the veteran community.
2014 is the one hundredth anniversary of the start of WWI. Captain Noel Chavasse was awarded his two VCs during this conflict. His citations describe a doctor who was clearly dedicated, and valued the care and wellbeing of his men above all else. These values should still be central to what we do today. He was, and should continue to be, an inspiration to the medical profession and allied healthcare professional groups, to always strive to do the best for patients, no matter the circumstances in which we may find ourselves. It is remembrance of his dedication, and selfless action in times of extreme adversity that inspired me to write this report.

I am a senior consultant orthopaedic surgeon in the National Health Service (NHS), and am regularly asked to see serving and retired military personnel. It has become clear to me that when the military are no longer responsible for their care our heroes often have to fend for themselves. The quality and provision of care is variable across the country and, despite these times of financial austerity, we can and must address this urgently. In my opinion, if we fail to act urgently, the care of our heroes, now and in the future, will be further compromised.

The Surgeon General Air Marshal Paul Evans gave his full support when I approached him with the idea of compiling this report. General the Lord Dannatt and Mr Andrew Selous MP, both ex-servicemen, have given encouragement throughout. Consequently, I assembled a small team of medical personnel from the Services and the NHS to try to establish the scale and nature of the problems, and to try to offer solutions for them. This report has focused on musculoskeletal disease, the commonest and most urgent problem in need of a long-term solution; however, it could be used as the template for other surgical and medical disciplines.

I sincerely hope that this report will be the catalyst for action, and help to strengthen the partnership between our Armed Forces, The Nation and the NHS to ensure reliable access to high quality and timely musculoskeletal care for members of the Armed Forces whether they are serving regular, volunteer reserve, or retired, and it will also improve the quality of musculoskeletal care and rehabilitation services across the country for the whole of the NHS which will benefit us all.

**Professor Tim Briggs**

*MBBS(Hons), MD(Res), MCh(Orth) Liverpool, FRCS(Ed), FRCS(Eng)*

*Consultant Orthopaedic Surgeon, Royal National Orthopaedic Hospital*

*President of the British Orthopaedic Association*

*Member of Council Royal College of Surgeons, England*

*Fellow of the Royal College of Surgeons, Edinburgh*
I’m writing on behalf of all the members of the Noel Chavasse’s family. You asked us for permission to use his name to title your report “Improving Armed Forces and Veteran Care Whilst Raising NHS Standards for All”.

As a family we are so heartened that Noel’s inspired behaviour touches a prominent person in the modern medical world. It is flattering for all of us that he is still remembered in such a way by you. What a tremendous honour it will be for Noel to receive this recognition. As you point out in your introductory comments, it is nearly one hundred years since his death. Most people’s reputation dies with them or if they’re lucky it lasts for a few years after their death. But for Noel his reputation is enhanced as time goes by. So this is a tribute for him to be placed in a position of such respect.

How much he would have agreed with the spirit of what you’re saying - that all injured servicemen deserve care and support.

Noel would have a crude understanding of the details of how our healthcare system works but he would no doubt support wholeheartedly bringing different parts of our society together to serve injured service people.

So, as a family, we are happy and honoured for you to use Noel Chavasse as the source of inspiration and title for your report.

With best wishes and regards,

Yours sincerely,

Peter Chavasse

11th September 2013
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<th>Description</th>
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<tr>
<td>AFCRG</td>
<td>Armed Forces Clinical Reference Group</td>
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<td>BLESMA</td>
<td>British Limbless Ex Service Men’s Association</td>
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<td>BMI</td>
<td>Body Mass Index</td>
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<td>BMA</td>
<td>British Medical Association</td>
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<td>BOA</td>
<td>British Orthopaedic Association</td>
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<td>CCGs</td>
<td>Clinical Commissioning Groups</td>
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<tr>
<td>CRG</td>
<td>Clinical Reference Group</td>
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<tr>
<td>DASA</td>
<td>Defence Analytical Services and Advice</td>
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<td>DMRC</td>
<td>Defence Medicine Rehabilitation Centre</td>
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<td>DMS</td>
<td>Defence Medical Services</td>
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<td>DSC</td>
<td>Disablement Services Centres</td>
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<tr>
<td>FTE</td>
<td>Full Time Equivalent</td>
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<tr>
<td>GP</td>
<td>General Practitioner</td>
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<td>GIRFT</td>
<td>Getting It Right First Time</td>
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<td>IED</td>
<td>Improvised Explosive Devices</td>
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<td>H4H</td>
<td>Help for Heroes</td>
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<td>MRS</td>
<td>Medical Reception Service</td>
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<td>MOD</td>
<td>Ministry of Defence</td>
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<td>MDHU</td>
<td>Ministry of Defence Hospital Unit</td>
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<td>NHS</td>
<td>National Health Service</td>
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<td>NICE</td>
<td>National Institute for Health and Clinical Excellence</td>
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<td>NJR</td>
<td>National Joint Registry</td>
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<td>NOHSH</td>
<td>Network of Health Service Hospitals</td>
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<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
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<td>ODEP</td>
<td>Orthopaedic Data Evaluation Panel</td>
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<td>Pbr</td>
<td>Payment by Results</td>
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<td>PRC</td>
<td>Personnel Recovery Centres</td>
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<td>PCT</td>
<td>Primary Care Trust</td>
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<tr>
<td>PCRF</td>
<td>Primary Casualty Receiving Facility</td>
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<tr>
<td>PROMs</td>
<td>Patient Reported Outcome Measures</td>
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<tr>
<td>QRF</td>
<td>Quick Reaction Fund</td>
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<tr>
<td>QEIH</td>
<td>University Hospital Birmingham’s Queen Elizabeth’s Hospital</td>
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<tr>
<td>RCDM</td>
<td>Royal Centre for Defence Medicine</td>
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<tr>
<td>RN</td>
<td>Royal Navy</td>
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<tr>
<td>RRU</td>
<td>Regional Rehabilitation Unit</td>
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<tr>
<td>RYM</td>
<td>Restoring Your Mobility</td>
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<tr>
<td>RAF</td>
<td>Royal Air Force</td>
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<td>RAMC</td>
<td>Royal Army Medical Corps</td>
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<td>RBL</td>
<td>Royal British Legion</td>
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<tr>
<td>RNOHT</td>
<td>Royal National Orthopaedic Hospital Trust</td>
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<tr>
<td>SI</td>
<td>Seriously Injured</td>
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<tr>
<td>TA</td>
<td>Territorial Army</td>
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<tr>
<td>THR</td>
<td>Total Hip Replacement</td>
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<tr>
<td>TKR</td>
<td>Total Knee Replacement</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>MC</td>
<td>Military Cross</td>
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<tr>
<td>VSI</td>
<td>Very Seriously Injured</td>
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<td>VC</td>
<td>Victoria Cross</td>
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1.0 Background

1.1 Introduction

In 1914, Sir Robert Jones, the founder of the BOA, ‘re-organised the pathway of care and evacuation of casualties from WWI. He devised a system based on the use of the railway, which quickly removed casualties from the frontline dressing stations to casualty clearing stations behind the battlefield for treatment, and from there, back to England. Once back in the UK, casualties were cared for in a network of military hospitals which offered in total, over 250,000 beds. This system worked well, but there was little provision for long-term care after their discharge from the forces.

In World War II, although casualty numbers were much lower than WWI, similar medical systems were used. Some specialist centres, such as East Grinstead, developed an expertise in one area, and continued to care for badly burned servicemen after the war, however, there was no NHS or Covenant, at that time, to provide for their on-going care. Indeed, the NHS was not established until 1948.

Since 1945, UK forces have been involved in 25 conflicts, and the MOD anticipates there will be an increasing number of conflicts, which may affect British interests. However, the numbers of UK service personnel have declined since the Korean War in the 1950s. At that time, there were over 900,000 personnel in uniform. In October 2012, UK regular forces numbered 165,890 in total, with another 29,960 made up from the volunteer reserve. By 2020, the number of regular soldiers within the army will have reduced from 102,000 to 82,000 and to make up for this reduction, the number of army Reservists will increase from 15,000 to 30,000. It will be imperative, if we are to maintain an effective fighting force, to provide medical care in a timely manner to all of these groups to ensure that they are battle-ready at all times.

Historically, medical provision for serving forces personnel was developed independently for each of the three services and civilian advisers were available to provide specialist opinions and expertise if required. Defence cuts and cost savings will necessitate more of the care to be transferred to the NHS, and a shared care model to be adopted, with mixed NHS and Military facilities. The University Hospital Birmingham’s Queen Elizabeth’s Hospital (QEH), which is the main receiving hospital for management of acute complex wounded, and Queen Alexandra Hospital in Portsmouth are examples of this model. For injured, serving personnel, both the acute care and rehabilitation provided is of the highest calibre, aiming to restore the best possible function within the boundaries of the severity of the injury sustained in this group of highly motivated individuals. The MOD, and charities RBL and H4H, are in the process of establishing eight rehabilitation units throughout the country, which will significantly enhance access and availability.

The care of increasing numbers of serving personnel, our reserve forces, and those that are discharged, whether fit or injured, will need to be provided by the NHS. We need to be ready to respond to this challenge.

1.2 National Health Service

The NHS has been through many changes since it was founded in 1948, but the core principles remain: Namely being free at the point of delivery and placing patients at the heart of everything it does. However, during this time of financial austerity, the NHS is struggling to preserve its principles, in the context of an ageing population with increasing needs.

In 2009 the Health Act introduced an NHS Constitution. The aim of the Constitution was ‘to safeguard the enduring principles and values of the NHS’. It sets out rights for patients, public and staff, with the intention of empowering all those involved to help the NHS improve the care it provides. All NHS bodies and private providers supplying NHS services are required by law to practice in accordance with the Constitution.

The Constitution has been further developed by three public consultations. The most significant of which was in March 2010 with two changes in patients’ rights:

- ‘A new right for patients to start consultant-led non-emergency treatment within a maximum of 18 weeks of a GP referral, and for the NHS to take all reasonable steps to offer a range of alternatives if this is not possible’
- ‘A new right to be seen by a specialist within a maximum of two weeks from GP referral, for urgent referrals where cancer is suspected’

Between 2008/9 NHS spending tripled compared with 1997, increasing by £33.5 billion to £96.4 billion. It now stands at £111.5 billion for 2013/14. The current annual budget for musculoskeletal disease is £10 billion and there is still pressure on orthopaedic services.

This increase in spending enabled the delivery of the NHS commitments; to reduce waiting times, expand the NHS workforce, and improve buildings and facilities. It also resulted in a number of initiatives which changed the way
the NHS worked. The NHS Plan 2000 was launched to make the NHS an international leader in best practice. This plan involved progressive investment and reform to create a health service based around the patient.

One initiative was the launch of Payment by Results (PbR). The principal aim was to provide a fairer system structured by clear rules for the payment of NHS trusts. The intended by-products of which were to be increased efficiency, a reduction in waiting times and increased patient choice. Payment was to be based on activity with adjustment for case-mix.

Although there were many improvements during this period, the new PbR culture led to a target-based approach. The worst example of this has been well documented by the Francis Report on the Mid Staffordshire Enquiry. It is thought that prioritising targets, rather than patient care, may have resulted in up to 13,000 patients dying needlessly.

1.3 Increasing Demand

The average age of the population of the United Kingdom (UK) is increasing. Over the last 25 years the percentage of the population aged 65 and over has increased from 15% to 17%, and is predicted to reach 23% by 2035. The total number of people aged 65 and over will reach 15.3 million by 2031. The result of an ageing population is an indirect increase in osteoarthritis. Despite the growing number of treatments for sports injuries and joint replacements occurring in younger patients, the main workload of orthopaedics reflects an elderly population with a variety of musculoskeletal conditions.

Not only is the population living longer, they are also becoming more obese. By 2050, 60% of men and 50% of women will be classified as obese, with a Body Mass Index (BMI) equal to or greater than 30. Unsurprisingly, the proportion of patients classified as obese, who are receiving operations, has significantly increased. Between 2004 and 2010, the percentage of patients classified as obese, having knee replacements, has increased from 44% to 54%, and for hip replacements, from 29% to 37%.

Moreover, there is growing demand for arthroplasty as older people wish to remain active for longer, and younger people with problems, have the choice of implants which may now last up to 20 years; 35% of hip and knee replacements are now being carried out in patients below the age of 65.

Between 1998 and 2004, Orthopaedic consultant episodes increased by 23%, with the number of referrals increasing by 7-8% per annum. Over the last 6 years, there has been a steady increase in hip and other joint replacements. 47,000 Total Hip Replacements (THR) and Total Knee Replacements (TKR) were carried out in 2004 compared with 182,000 in 2011, and in the last 5 years, there has been a 92.1% increase in revision TKR, and a 49.1% increase in revision THR. This increase is calculated to cost £1.5 - 2 billion over next 10 years. There has also been an increase in upper limb surgery, with a 746% increase in sub acromial decompression, and a 544% increase in arthroscopic rotator cuff repair. Spinal surgery also contributes a significant bill. Lower back surgery alone, costs £100 million per annum. The long-term results of these new procedures need to be properly evaluated to determine whether they are cost effective.

1.4 18-Week Wait and Musculoskeletal Disease

In June 2013 it was found that overall waiting lists had increased to 2.88 million, a rise of 250,000 compared to June 2012, due to an ever increasing demand. There were a total of 4 million patient episodes, including admitted and non-admitted (combined into complete), as well as the incomplete patient episodes. 72% of the total patients have incomplete episodes (2.9 million), i.e. they are awaiting either inpatient or outpatient care. Of these patients, 13.6% (391,911), are awaiting Trauma and Orthopaedic treatment. The graph in figure 1 shows that Trauma and Orthopaedics have the largest number of Incomplete and Complete patient episodes, when compared to the other 17 major medical specialities. Not only are the incomplete episodes substantially higher but also the combined complete episodes.

Orthopaedics is an area of care where patients tend to wait the longest for treatment, with nearly 60,000 patients waiting for more than 18 weeks (14% of the overall total), and approximately 20,000 for more than six months (13% of the overall total). Orthopaedics is one of three specialities, which failed to meet the waiting time standard for admitted patients with only 88.3% starting inpatient treatment in 18 weeks.
As already demonstrated from the 2010 statistics, and as was re-confirmed in 2013, musculoskeletal disease has, on average, the largest number of patient episodes\textsuperscript{12}. It is the leading cause of disability worldwide and the most common reason for hospital referral, yet it only ranks third in NHS funding. Today 25\% of surgical interventions in secondary care are related to musculoskeletal disease\textsuperscript{12}.

The NHS budget has a separate section for acute trauma and injuries, which includes funding for Trauma Centres and other trauma specialties, but does not include costs for the long-term effects of traumatic injuries. These fall within the budget of the musculoskeletal system.
2.0 The Current Situation

An independent think tank, Reform, has warned that even under the brightest financial scenario, austerity will have to continue for ten years. Due to the mistakes made in the previous decade, it is thought that the UK needs to endure a period of low growth to retain financial stability. Despite the work of the government to reduce the deficit, the Chancellor of the Exchequer’s autumn statement 2012 announced a deficit reduction by 25% but continued debt increase due to poor economic performance. There was similarly bad news from the budget in March 2013, with the growth forecast being downgraded to 0.6% leaving the Chancellor with little room for manoeuvre. Furthermore, the Office for Budget Responsibility’s economic outlook 2012-2015 pronounced, “The Debt burden is set to exceed that of France and Spain within three years and will be close to 100% of GDP”.

However, there has been good news in the last few months with an economy that is now growing again, faster than previously thought. The service sector is growing at its fastest rate for six years and construction is at a six year peak. Indeed, manufacturers are indicating that we are in the best climate for work since early 2011. For the second quarter of 2014, the predicted growth of the economy has been raised to 0.8%.

Focusing on the NHS, the National Audit Office (Thursday 13th December 2012) was only able to verify £3.4 billion of the £5.8 billion efficiency savings supposedly achieved by the NHS in England in 2011-12 as part of a drive to save up to £20 billion by 2015. In order to achieve the NHS Constitution in the difficult financial climate, a number of new health reforms have been introduced.

2.1 The Health and Social Care Act 2012

The Health and Social Care Act 2012, introduced in April 2013, divided the NHS budget for England between new Clinical Commissioning GPs (CCGs) managing £60 billion, and the National Commissioning Board (NCB) managing £20 billion. Both are independent of the government. CCGs are clinically led groups which aim to give GPs and other clinicians the power to influence commissioning decisions for their patients. NHS England was formally established as the NHS Commissioning Board on October 2012.

The assumption is that “Commissioning will make the savings” of £20 billion, required by 2015. However, the new format of GP led commissioning boards assessing local providers to deliver NHS services will only be able to achieve the intended savings if GPs are given correct and validated information. The new commissioning structure does not account for how money will be saved from the provision of care, which makes up 80% of costs. ‘Getting it right first time’, reducing complications and using evidence-based treatments are also required to both improve efficiency and reduce cost.

Despite the real term increase in NHS funding, compared with other government departments, there continues to be service pressure due to increasing demand. Although the number of patients waiting for more than a year for treatment has fallen from 18,000 in May 2010 to just 842 patients, there are still problems with waiting times. In June 2012, there were 155,439 people across all specialties that had been waiting for longer than 18 weeks, compared with 143,337 in May 2012. In June 2013 waiting lists have risen to 2.88 million, a rise of 250,000 compared with June 2012. This is despite an additional 400,000 operations being carried out annually.

A study by the BMJ published in 2012 found that nine out of ten Primary Care Trusts (PCTs) had introduced draconian referral criteria with the aim of restricting expenditure on surgery. Of these PCTs, two thirds were found to be withholding appropriate funding for joint replacement surgery. This approach extends to other orthopaedic procedures (including those for carpal tunnel, shoulder, ankle and spine) and leads to rationing. This clearly departs from “best practice”, where decisions should be based on clinical need alone. This may leave patients without access to some of the most successful operations for improving quality of life.

2.2 Current Provision of Rehabilitation within the NHS

Access to rehabilitation within the NHS remains patchy and variable across the country, despite the awareness amongst health professionals about its importance in helping to achieve optimum outcomes for patients. Although there are some excellent examples of rehabilitation services such as those for spinal cord and brachial plexus injury and indeed specialist amputation services, access is otherwise very variable.

Dealing with physical disabilities and psychiatric and social rehabilitation is a medical speciality. Many different disease groups may require rehabilitation. Apart from amputee rehabilitation, a major proportion of patients suffer from neurological disease, including spinal and brain injury, stroke and chronic neurological conditions.
There are also congenital diseases that require on-going rehabilitation throughout the patient's lifetime. Other disease groups may not require as much physical input but more psychiatric and social rehabilitation; for instance, cancer (multiple requirements), eating disorders, pain, continence, drug and alcohol dependence, lymphoedema, fatigue and several psychiatric disorders. Therapy is often provided by a team, which includes rehabilitation doctors, physiotherapists, occupational therapists, prosthetists and orthotists. Complimentary therapies such as acupuncture, pilates and others have a place as an important additional resource in a holistic rehabilitation treatment programme.

There are approximately 105 rehabilitation consultants countrywide, (2009 figures)\textsuperscript{23}. Most hospitals within the NHS are affiliated to a rehabilitation facility but these are not generally used for young, healthy, injured, retired soldiers or veterans who have different needs and baselines. Pathways for rehabilitation of soldiers in service are more succinct than those in the NHS. The NHS is also seeing an increasing demand for rehabilitation placements and assessments, as shown in figure 2 below.

It is predicted that by 2031 there will be significant growth in the need for rehabilitation services especially in those aged 60+ years. Currently there is no plan to cope with this demand. Further “routine rehabilitation” in-patient therapy, for those with slow or poor outcomes following joint replacement are not readily available, except at specialised units like the Royal National Orthopaedic Hospital Trust (RNOHT). Most patients have to rely on outpatient physiotherapy, which is chronically underfunded within the NHS.

In the military, intensive, three week long rehabilitation courses are available should patients be deemed to need them, in order to speed up their recovery and return to full fitness. However, despite its recognised value within the armed forces, it is almost impossible to access similar courses within the NHS.

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**Figure 2:** 2031 population estimate and indication of age and gender of the 2011 population using Rehabilitation Medicine services\textsuperscript{a}
2.3 Current Prosthetic Availability within the NHS

In England there are currently 34 Disablement Service Centres (Limb Centres). These provide prosthetic services for the NHS. There is limited choice of prostheses within the NHS compared with those available on the market. The most advanced limb prostheses currently available contain microprocessors to assist the user in a variety of environments. Ottobock introduced the C-Leg in 1997, which has been subsequently updated in 2006 and 2011. It also produces a state of the art prosthesis called the Genium, (figure 3).

These prostheses have advanced technology which enables a more normal gait pattern, as well different mode settings to allow activities such as skiing, cycling, and riding. There is evidence that these reduce energy consumption for patients, increase stability and even allow walking on uneven ground and stairs as well as protecting patients from stumbling and falls. However this technology is expensive, with typical costs for a C-Leg being around £30,000 and for a Genium prosthesis around £45,000. There are other companies manufacturing prostheses with microprocessors, Össur produces the Rheo knee, similar to the C-Leg, but much less costly at approximately £15,000. However this less expensive option does not have as many features as the Genium or C-Leg.

The NHS provides basic prosthetic limbs. It provides knee units, which use a hydraulic mechanical system. It will also provide high activity limbs but not microprocessor controlled knee units, which provide a much-improved gait. NHS patients do not have access to high definition silicone covers, which are more aesthetic, or high activity sports limbs. It is very difficult for young patients to access a state of the art prosthetic limb. Multiple requests from treating consultants, to committees set up by primary care providers, are often rejected. This means that patients have to either accept the prosthesis available from the NHS, or find money themselves to pay for “new technology” prosthesis.

The NHS has been heavily criticised in the past for its provision of prosthetics both to the general population and to forces veterans. This criticism led to the Murrison report, ‘A better deal for military amputees’, commissioned by the Prime Minister and published in June 2011.29

![Figure 3: C-Leg and Genium on the left versus the standard non-microprocessor damped knee on the right provided by the NHS](image)
This report highlights the rising number of patients with amputations and the rising costs both now and into the future (which are highlighted in figure 4 and figure 5). The report makes several recommendations, the most pertinent being the ability for choice of NHS provision, a program of military/civilian exchange, national commissioning, a prospective study of amputee veterans and NICE to produce national guidance.

In Scotland there are five DSCs and a designated amputation centre, as well as a specialist spinal rehabilitation centre in Glasgow.

Figure 4: Graph showing the rising number of amputees in service and in the NHS, taken from data from, ‘A better deal for military amputees’.

Figure 5: Graph showing the rising cost of rehabilitation and prosthetic limbs, taken from data from, ‘A better deal for military amputees’.
2.4 Summary

Whilst the current Government has honoured its pledge to real term increases in NHS spending, the current budget for musculoskeletal disease remains under significant pressure due to increasing demand from an ageing population. Targets, such as the 18-week wait for all patients, are admirable, but not financially sustainable in the long-term. In this new climate of financial austerity, it is imperative that we fundamentally change the “provision of care” urgently to prevent the current situation deteriorating further.

Our ageing population is living longer and has increasing needs from the musculoskeletal services within the NHS. Some of these changes have already been suggested in the report ‘Getting it Right First Time’ which concluded that, through appropriate referrals, use of evidence based treatments and gold standard prostheses, reducing complications, and by coupling these with different modes of working, the quality of patient care can be maintained and further improved and significant savings can be made.

Summary 1

- Large increase in musculoskeletal disorders, ageing population, living longer, obesity
- Increasing Referrals 7-8% per annum
- 25% of all surgical interventions in secondary care sector are for musculoskeletal disorders
- Increasing numbers of primary and revision hip and knee replacement
- Pressure on waiting times for inpatient treatment for orthopaedic conditions
- Rehabilitation services patchy and variable across the UK
- Prosthetic services provided by NHS are basic but functional
- NHS savings required – £20 billion by 2015 and further £15 billion by 2020
- To maintain timely and excellent care will require a major reorganisation of the provision of orthopaedic care as outlined in “Getting it Right First Time”, and “Restoring Your Mobility”
3.0 The Armed Forces

3.1 Current Military Organisation

The British Forces are respected throughout the world for their professionalism, expertise, and for “getting the job done”. They are composed of three armed services, the Royal Navy (RN), the Army and the Royal Air Force (RAF). Each comprises Regulars, and Reserves.

Modern warfare is complex and relies on Joint Service approach to conflict. The Falklands conflict in 1982 was won by the combined forces of the RN and the Royal Marines, including the Fleet Air Arm (augmented by the RAF) and Army working together. In the last two major engagements, namely Iraq and Afghanistan, the major burden of the campaign has fallen on the Army with air support provided by the Army Air Corps, RN aviation and the RAF.

The British Army is comprised of Corps including Armoured, Artillery, Aviation, Engineers, Infantry, Intelligence, Logistics and Signals. The infantry can be divided into 19 regiments and 51 battalions. These include both 37 battalions from the regular army and 14 from the Territorial Army (TA).

3.2 Recruitment of Armed Forces Personnel

The British Army Infantry battalions traditionally are recruited from different areas of the country. For example The Royal Anglian Regiment almost exclusively recruits from East Anglia and the East Midlands whilst the Rifles come mainly from the South West (figure 6). Whilst recruitment is national, the majority of the current DMS/NHS medical facilities in England are situated in the Midlands, South East and South West with only one in the North at Northallerton in North Yorkshire.

The majority of service personnel are recruited from England (89%). Scotland provides 7% of recruits, whilst Wales and Northern Ireland account for 4%. Those recruited from England in 2012, came from all over the country. Figure 6 shows the recruitment regions and Table 2 demonstrates the distribution. 19,160 recruits came from the North (North East, North West, Yorkshire and Humber), 32,340 were recruited from the Midlands and East of England (West Midlands, East Midlands, East England), and 48,730 from London and the South East. 39,040 were recruited from the South West.

<table>
<thead>
<tr>
<th>Region</th>
<th>2011</th>
<th>2012</th>
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</thead>
<tbody>
<tr>
<td>United Kingdom</td>
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<td>156,970</td>
</tr>
<tr>
<td>England</td>
<td>142,860</td>
<td>139,260</td>
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<tr>
<td>East of England</td>
<td>18,210</td>
<td>17,350</td>
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<td>East Midlands</td>
<td>9,080</td>
<td>8,420</td>
</tr>
<tr>
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<td>6,020</td>
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</tr>
<tr>
<td>North West</td>
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<td>2,160</td>
</tr>
<tr>
<td>South East</td>
<td>42,490</td>
<td>43,330</td>
</tr>
<tr>
<td>South West</td>
<td>41,540</td>
<td>39,040</td>
</tr>
<tr>
<td>West Midlands</td>
<td>6,900</td>
<td>6,570</td>
</tr>
<tr>
<td>Yorkshire &amp; The Humber</td>
<td>15,110</td>
<td>15,600</td>
</tr>
<tr>
<td>Wales</td>
<td>2,820</td>
<td>2,780</td>
</tr>
<tr>
<td>Scotland</td>
<td>12,090</td>
<td>11,190</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>4,010</td>
<td>3,740</td>
</tr>
</tbody>
</table>

Table 1: Origin of recruitment of All Service Personnel, source Defence Analytical Services and Advice (DASA)²

Table 2: Service Personnel by Region, source DASA)²
Figure 6: Relationship between the British Army Infantry Recruiting Areas and the Defence Medical Service / NHS facilities
3.3 Background – Change in Size of Force

The total size of British Armed Forces peaked during the First and Second World Wars but has been steadily declining since the end of the Korean War in the 1950’s (figure 7).

In October 2012, UK Regular Forces numbered 165,890, while the Volunteer Reserve Forces (excluding University Units) totalled only 29,960 in April 2012.

![Figure 7: Changing Size of UK Service Personnel Numbers](image)

![Figure 8: Trends in Military and Civilian (MOD Level 0 Total) Personnel Strengths, at 1st April Each Year](image)
The outcome of the Strategic Defence and Security Review of 2010 was the reduction in size of the Regular Forces, with an increase in the size and role of the Reserve Forces, who will be expected to play an increasingly important role. By 2020, the Army Regular Forces will number 82,000 and the Army Reservists are planned to increase to 30,000 to maintain the current strength. Currently, Reservists in full or part-time employment are required to complete their training in their free time, committing to between 19 and 27 days training per year. The changes would see an increase in Reservists’ training to 40 days a year.

### Figure 9: Army 2020 Restructure

#### Regular Forces
- 2010: 102,000
- 2020: 82,000

#### Reserve Forces
- 2010: 15,000
- 2020: 30,000

### 3.4 Conflicts

The Armed Forces provide security to the UK and operate to deliver British foreign policy.

Since 1945 our armed forces have been involved in 25 conflicts; they have been deployed for peacekeeping, humanitarian aid and disaster relief tasks, many under the auspices of the United Nations (UN) and North Atlantic Treaty Organization (NATO).

It is predicted in the MOD’s “Future Character of Conflict” paper (February 2010) that the number of conflicts affecting UK interests is likely to increase. In addition, conflict will “blur” and for all environments the battle space will be more “congested, cluttered, contested, connected and constrained”.

### Figure 10: Background - Conflicts UK involved in since 1940s
3.5 Number and Type of Injuries

Musculoskeletal conditions are the commonest cause of downgrading and loss of fighting fitness. There are two distinct groups:

- **Force generation** - This is the bedrock of injury presentation and directly relates to the culture and training to optimise fitness for task
- **Conflict trauma** - From 2008-2012, 544 patients were seen and treated at the Royal Centre for Defence Medicine (RCDM) Birmingham and Defence Medicine Rehabilitation Centre Headley Court as a result of injury and natural causes/illness caused by the conflict in Iraq, and 3801 from the conflict in Afghanistan.

Field hospital only admissions for battle injuries for the Iraq and Afghanistan conflicts (including both UK Military and Civilians) totalled 2461 (315 Iraq and 2146 Afghanistan)

- Non-battle injuries (including all admissions for disease and non battle injuries) totalled 8074 (3283, Iraq and 4791, Afghanistan)

There was a total of 622 fatalities in both conflicts (178 Iraq and 444 in Afghanistan)

The ratio of total injuries (admitted to field hospital) to fatalities is 17 to 1 but when comparing fatalities to those injured in battle the ratio drops to 4 to 1.

### Table 3: Battle & Non Battle Injuries Iraq

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Battle Injury</th>
<th>Non Battle Injury</th>
<th>Natural Cause</th>
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<tbody>
<tr>
<td>2008/09</td>
<td>284</td>
<td>60</td>
<td>132</td>
<td>92</td>
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<tr>
<td>2009/10</td>
<td>148</td>
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<td>2010/11</td>
<td>70</td>
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<td>16</td>
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<tr>
<td>2011/12</td>
<td>42</td>
<td>20</td>
<td>13</td>
<td>9</td>
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</table>

### Table 4: Battle & Non Battle Injuries Afghanistan

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Battle Injury</th>
<th>Non Battle Injury</th>
<th>Natural Cause</th>
</tr>
</thead>
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<tr>
<td>2008/09</td>
<td>643</td>
<td>284</td>
<td>199</td>
<td>160</td>
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<tr>
<td>2009/10</td>
<td>1023</td>
<td>564</td>
<td>268</td>
<td>191</td>
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<tr>
<td>2010/11</td>
<td>1146</td>
<td>700</td>
<td>256</td>
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<tr>
<td>2011/12</td>
<td>989</td>
<td>631</td>
<td>173</td>
<td>185</td>
</tr>
</tbody>
</table>
Table 6 shows the number of patients (across the three services and attached UK civilians) treated at RCDM and DMRC. Patients suffered battle injuries and accidental injuries such as sports injuries and road traffic accidents.

When an incident occurs the resulting injury is classified as seriously or very seriously injured/wounded. Seriously injured/wounded (SI) is when the patient’s condition is of such severity that there is cause for immediate concern, but there is no imminent danger to life. Very seriously injured/wounded (VSI) requires the injury to be of such severity that life is imminently endangered. Between 2002 and 2012 the total number of service personnel sustaining injuries defined as SI or VSI totalled 790 from the conflicts in the Balkans, Iraq and Afghanistan. This peaked between the years 2009 to 2011 when 318 such injuries occurred, almost all of which occurred in Afghanistan (Table 5).

The number of amputations peaked with 75 in 2010-11. Given the nature of the type of conflict where the insurgents have developed increasingly sophisticated Improvised Explosive Devices (IEDs) multiple traumatic amputations have occurred to single individuals (Table 7). From April 2004 - April 2010, 125 amputations were performed during the Afghanistan conflict and totalled 150 for the Iraq and Afghanistan conflict combined. However these figures do not include either suppressed figures, where there are less than 5 amputations in any year, or amputations carried out at a later stage for chronic infection and failure of reconstructive surgery if personnel have left the services.

**UK Service personnel with amputations sustained in Afghanistan and Iraq**

- Number of Single Partial or Complete Amputees 295
- Number of Significant Multiple Amputees 109

A study in 2011 attempted to track amputees from the conflicts in Afghanistan and Iraq and found 52. Of these servicemen 4 required delayed amputation after attempted limb reconstruction. The overall number of amputations undertaken is therefore substantially higher but unknown. The military do not have easy access to full records for late amputations as these may occur outside of the DMS when service personnel have left the service.

### Table 5: Seriously & Very Seriously Injured Iraq, Afghanistan, Balkans

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<tr>
<td>Very Seriously Injured or Wounded (VSI)</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>34</td>
<td>80</td>
<td>63</td>
<td>170</td>
<td>147</td>
<td>54</td>
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<tr>
<td>Seriously Injured or Wounded (SI)</td>
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<td>1</td>
<td>1</td>
<td>19</td>
<td>29</td>
<td>29</td>
<td>94</td>
<td>69</td>
<td>32</td>
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<tr>
<td>Seriously Injured or Wounded (SI)</td>
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<td>21</td>
<td>18</td>
<td>32</td>
<td>34</td>
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<td>Balkans</td>
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<tr>
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<td>3</td>
<td>4</td>
<td>-</td>
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<tr>
<td>Seriously Injured or Wounded (SI)</td>
<td>2</td>
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### Table 6: Patients Treated at RCDM (Birmingham) and DMRC (Headley Court)

<table>
<thead>
<tr>
<th></th>
<th>2008/09</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
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<tbody>
<tr>
<td>Iraq (Op TELIC)</td>
<td>284</td>
<td>148</td>
<td>70</td>
<td>42</td>
</tr>
<tr>
<td>Afghanistan (Op HERRICK)</td>
<td>643</td>
<td>1,023</td>
<td>1,146</td>
<td>989</td>
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</tbody>
</table>

**Table 6: Patients Treated at RCDM (Birmingham) and DMRC (Headley Court)**
In recent years the number of medical discharges has steadily increased. There were 470 Regular Naval Service medical discharges in 2011/12, 963 Regular Army medical discharges and 182 Regular RAF medical discharges (figure 11). Once we withdraw from Afghanistan it is likely that the rate of medical discharges will accelerate, with a natural lag between being injured and the completion of appropriate rehabilitation to allow re-integration into civilian life. This varies between patients and can take up to several years.

Another factor to take into account is the annual churn rate, which is when serving personnel leave at the end of their service contract. This makes up the greatest number of annual discharges. The total number of discharges in 2011/12 (which will include retirement etc) was 21,370. Due to the size of this figure it is estimated by the RBL that there are 4.8 million veterans alive in the UK. The armed forces community including past and present and their immediate family totals about 10 million².

<table>
<thead>
<tr>
<th>Year</th>
<th>Iraq (Op TELIC)</th>
<th>Afghanistan (Op HERRICK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/07</td>
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<tr>
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<td>17</td>
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<td>2009/10</td>
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<td>46</td>
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<tr>
<td>2012/13</td>
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Table 7: Patients Treated at RCDM (Birmingham) and DMRC (Headley Court)³⁵
## Intake and Outflow from the Regular Forces

<table>
<thead>
<tr>
<th>All Services</th>
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<th>2010/11</th>
<th>2011/12</th>
<th>As of May 2013</th>
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</thead>
<tbody>
<tr>
<td><strong>Strength at start</strong></td>
<td>188,600</td>
<td>191,710</td>
<td>186,360</td>
<td>170,710</td>
</tr>
<tr>
<td><strong>Intake</strong></td>
<td>21,500</td>
<td>12,730</td>
<td>14,800</td>
<td>2,040</td>
</tr>
<tr>
<td><strong>Outflow</strong></td>
<td>18,270</td>
<td>18,140</td>
<td>21,370</td>
<td>3,570</td>
</tr>
<tr>
<td><strong>Strength at end</strong></td>
<td>191,710</td>
<td>186,360</td>
<td>179,800</td>
<td>169,190</td>
</tr>
</tbody>
</table>

### Royal Navy

<table>
<thead>
<tr>
<th>Royal Navy</th>
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<th>2010/11</th>
<th>2011/12</th>
<th>As of May 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strength at start</strong></td>
<td>38,340</td>
<td>38,730</td>
<td>37,660</td>
<td>33,960</td>
</tr>
<tr>
<td><strong>Intake</strong></td>
<td>4,130</td>
<td>2,550</td>
<td>2,220</td>
<td>470</td>
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<tr>
<td><strong>Outflow</strong></td>
<td>3,720</td>
<td>3,630</td>
<td>4,320</td>
<td>680</td>
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<tr>
<td><strong>Strength at end</strong></td>
<td>38,730</td>
<td>37,660</td>
<td>35,540</td>
<td>33,750</td>
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</table>

### Army

<table>
<thead>
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<th>Army</th>
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<th>2010/11</th>
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<tbody>
<tr>
<td><strong>Strength at start</strong></td>
<td>106,700</td>
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<tr>
<td><strong>Intake</strong></td>
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<td>8,760</td>
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<td><strong>Outflow</strong></td>
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<tr>
<td><strong>Strength at end</strong></td>
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<td>106,240</td>
<td>104,250</td>
<td>98,760</td>
</tr>
</tbody>
</table>

### Royal Air Force

<table>
<thead>
<tr>
<th>Royal Air Force</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>As of May 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strength at start</strong></td>
<td>43,560</td>
<td>44,050</td>
<td>42,460</td>
<td>37,030</td>
</tr>
<tr>
<td><strong>Intake</strong></td>
<td>3,460</td>
<td>1,410</td>
<td>1,390</td>
<td>300</td>
</tr>
<tr>
<td><strong>Outflow</strong></td>
<td>2,990</td>
<td>3,010</td>
<td>3,850</td>
<td>630</td>
</tr>
<tr>
<td><strong>Strength at end</strong></td>
<td>44,050</td>
<td>42,460</td>
<td>40,000</td>
<td>36,680</td>
</tr>
</tbody>
</table>

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*Strengths may not equal to the sum due to movements across Services

*Outflow is defined as all exits from the Regular armed forces including voluntary departures and deaths.
Musculoskeletal injuries are the most significant cause for medical discharges (Table 9), although it should be noted that not all causes for medical discharge are coded. The commonest age range of discharged personnel is 30-45 years. As a consequence, it is likely that there will be a considerable need for on-going musculoskeletal health provision for these veterans as they age. However, it is difficult to quantify the costs of on-going medical and rehabilitation care due to lack of data collected on veterans continuing needs. Many of the veterans return to the part of the country from where they were recruited, however, some will inevitably move to a different area, with a subsequent change of health care provider and the detrimental loss of continuity of care.

When service personnel are discharged, the NHS becomes the sole provider of their on-going care. There is a risk that they will not receive on-going care in a timely manner.

Investigations and treatment plans could be different to civilian counterparts and surgical interventions may be necessary at a much earlier stage due to increased severity of the musculoskeletal disorders. Some NHS providers might well be unable to treat complex problems and need to refer patients onwards, possibly outside the local commissioning area. The risk of this, along with a variable and patchy rehabilitation network, is for veterans to miss appropriate clinical consultations and getting lost ‘in the system’.

The MOD has made the Annual Medical Discharges available on a regular basis. The key points regarding medical discharges during 2008/9–2012/13, for each service are:

**Royal Navy**

Over the five-year period, a total of 1,612 Naval Service personnel were medically discharged, at an overall crude rate of 8.6 per 1,000 personnel. Musculoskeletal disorders and injuries were the most common causes of medical discharges (937 cases of 58% of all cause coded). Injuries to the knee accounted for 29% (n=273) and low back pain accounted for 11% of all musculoskeletal disorders. There has been increase of 122% from 116 in 2009/10 to 258 in 2012/13. Mental and behavioural disorders were the second most common cause of medical discharge.

**Army**

Over the same reporting period, a total of 4,991 Army personnel were medically discharged, at an overall crude rate of 9.1 per 1,000 personnel. Annual number and crude rates of medical discharge have risen continuously from 2009/10 (n=685, rate = 6.1 per 1,000) to the highest in 2012/13 (n=1,670, rate= 15.6 per 1,000 strength). The largest year on year increase was seen from 2011/12 to 2012/13 with an increase of 73%.

Musculoskeletal disorders were the commonest cause of medical discharge (2,390 cases or 59%). Injuries and disorders of the knee accounted for 21% (n=619) with knee pain accounting for 272 of those cases. Back pain was the second commonest cause accounting for 12% (n=366). Mental and behavioural disorders were the second most common cause of medical discharges. Cold injuries accounted for 8% (n=226) of all musculoskeletal disorder and 5% of all medical discharges.

**Royal Air Force**

Over the five-year reporting period, a total of 914 personnel were medically discharged with a crude rate of 4.3 per 1,000 personnel. Musculoskeletal disorders and injuries were the commonest cause for medical discharges (460 cases or 56% of all coded medical discharges). Back pain accounted for 28% (n=127), of which lower back pain was the most common cause. Mental and behavioural disorders were the second most common cause for medical discharge of which depression and neurotic disorders formed the majority of the coded mental and behavioural disorders.

### 3.7 Natural Wastage – The Churn Rate

In addition to the medical discharges that occur annually across all three services, fit men and women leave the forces at the end of their service time. This accounts for the greatest number of discharges and is known as the annual churn rate (Table 9). This figure varies but between 15,000 – 22,000 may leave the services annually. Although most are discharged fit and well, due to the nature of the jobs they were undertaking, they are more likely to suffer from musculoskeletal problems at an earlier time of their life compared with the general population.

<table>
<thead>
<tr>
<th>Discharged personnel 2008/09 – 2012/13</th>
<th>Royal Navy</th>
<th>Army</th>
<th>Royal Air Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal injuries</td>
<td>937 (58%)</td>
<td>2,930 (59%)</td>
<td>460 (56%)</td>
</tr>
<tr>
<td>Mental health problems</td>
<td>176 (11%)</td>
<td>682 (14%)</td>
<td>149 (18%)</td>
</tr>
</tbody>
</table>

Table 9: Summary of medical cause coded discharges across the three services
4.0 Current UK Provision of Healthcare to the Armed Forces

Over the last 50 years, there have been significant changes to the delivery of health care to serving personnel and veterans. The DMS is currently responsible for providing health care to all three services: Army, RN and the RAF, with the NHS responsible for the provision of hospital-based care. The DMS works very closely with the NHS and other charitable trusts to ensure that optimum health care is provided to the 160,000 serving personnel (figures from June 2013).

4.1 General Provision

The DMS is staffed by around 7,000 regular uniformed and 3,000 reserve medical personnel from all three services delivering healthcare to 258,000 people. The DMS provides primary care (general practice, dentistry, occupational medicine, rehabilitation and community mental health services) and secondary care within the UK and at outposts overseas.

The primary care practitioner (uniformed or MOD employed civilian) is the first point of contact for active Service personnel and is based in the local Medical Centre or Sick Bay. The Medical Centre usually consists of a team of qualified primary care physicians, nurses, physiotherapists and exercise rehabilitation instructors.

The DMS is also responsible for rehabilitation through the Defence Medical Rehabilitation Programme that is based on a tiered approach usually dependent on complexity of injury. This consists of:

- **Tier 1** – Primary Care Rehabilitation Facilities (PCRFs)
- **Tier 2** – Regional Rehabilitation Units (RRUs). There are 15 Regional Rehabilitation Units (RRUs): Aldergrove, Aldershot, Bulford, Catterick, Colchester, Cosford, Cranwell, Edinburgh, Halton, Honnington, Plymouth, Portsmouth, St Athan and Tidworth, with 2 located in Germany.
- **Tier 3** – Defence Medical Rehabilitation Centre Headley Court for the most complex cases.

4.2 Provision of Secondary Health Care Across the UK

In the UK, Armed Forces personnel are now treated within the NHS based on clinical need and this is generally delivered by the local NHS hospital, some of which are NHS Trusts that host Ministry of Defence Hospital Units (MDHUs).

Since the 1990s, secondary care provision has undergone significant changes and traditional military hospitals such as Cambridge Military Hospital, Princess Mary's Hospital, Halton, Duchess of Kent's Military Hospital Catterick, Queen Elizabeth Military Hospital, Woolwich, Princess Alexandra Hospital, Wroughton Royal Naval Hospital, Stonehouse, Princess of Wales Hospital, Ely and Royal Hospital Haslar, Gosport have been closed.

As a direct consequence, there is much closer co-operation between the DMS and the NHS to provide treatment for the Armed Forces and also to maintain the skills of the armed forces medical personnel, and to provide high quality postgraduate training to serving clinicians. The MOD contracts with six NHS trusts to provide appropriate placements for the majority, but by no means all, of DMS secondary care personnel to meet this operational requirement. These are:

- RCDM University Hospitals Birmingham NHS Foundation
- MDHU Frimley Park Hospital, Surrey
- MDHU Northallerton, North Yorkshire
- MDHU Peterborough City Hospital, Cambridgeshire
- MDHU Derriford Hospital, Plymouth
- MDHU Queen Alexandra Hospital, Portsmouth

The location of the hospital units reflects the regular service locations and evidence from Defence Statistics shows that the highest population of military units are in the South East and South West of England. Many service families settle in the area where they work and break the ties with their place of recruitment.

The DMS is also responsible for rehabilitation through Headley Court Defence

Medical Rehabilitation Centre and other regional units in the UK and Germany. Service personnel recovering from orthopaedic and neurological problems are treated at one of 13 RRUs across the UK. It is well recognised that the quality of acute care they receive and their subsequent rehabilitation is provided to a world class standard. A study with a 2.4 year mean follow up looking at the outcome of 52 British combat amputees from the conflicts in Afghanistan and Iraq (50 of which were treated at Headley Court) found that a staggering 44 continue to serve. Only 8 patients had left the forces by medical discharge and of the 44 continuing to serve 33 had returned to active service. They also found that Physical Component Summary of the Short Form-36 Health Survey mean scores increased significantly from 36.4 to 43.4 (p=0.001) following rehabilitation.
Figure 12: UK map showing the geographical position of MDHUs & RRU s
Figure 13: UK map showing the position of MDHUs, RRU s, PRCs and sponsorship centres from The RBL and H4H

Ministry of Defence Hospital Units (MDHUs)
- Queen Elizabeth Hospital, Birmingham
- Frimley Park Hospital, Surrey
- Friarage Hospital, Northallerton
- Peterborough City Hospital, Cambridgeshire
- Derriford Hospital, Plymouth
- Queen Alexandra Hospital, Portsmouth

Regional Rehabilitation Units (RRUs)
- Aldergrove
- Bulford
- Colchester
- Edinburgh
- Headley Court
- Litchfield
- Plymouth
- Portsmouth
- Aldershot
- Catterick
- Cranwell
- Halton
- Honnington
- Hasler
- Plymouth
- Brydon House, Germany

Personnel Recovery Centres (PRCs)
- Edinburgh House, Edinburgh
- Chavasse VC House, Colchester
- Tedworth House, Tidworth
- Phoenix House, Catterick
- Battle Back Centre, Lilleshall
- Hasler Plymouth
- (Brydon House, Germany)

Sponsorship:
- Royal British Legion
- Help for Heroes

Combined Units

Regional Rehabilitation Units

Personnel Recovery Centres
4.3 Armed Forces Covenant

The MOD defines the Armed Forces Covenant as “a relationship between the nation, the state and the Armed Forces. It recognises that the whole nation has a moral obligation to members of the Armed Forces and their families, and it establishes how they should expect to be treated.”

The MOD highlights the two principles behind the Covenant:

1. The Armed Forces community should not face disadvantage compared with other citizens in the provision of public and commercial services.

2. Special consideration is appropriate in some cases, especially for those who have given most, such as the injured and the bereaved.

The Covenant exists to redress the disadvantages that the Armed Forces community may face in comparison to other citizens, and to recognise sacrifices made. The Armed Forces Covenant itself is not a legal document, but it has been referenced in law through the Armed Forces Act 2011. This Act ensures that the principles of the Covenant are recognised in law. It also obliges the Defence Secretary to report annually on progress made by the government in honouring the Covenant. The first Armed Forces Covenant Annual Report (2012) is only the beginning of a process to deliver the Covenant commitments.

The report sets out a number of areas requiring improvement and contains 29 new commitments, including implementation of a unified MOD Primary Healthcare Service.

4.4 Current UK Provision for Military Casualties

At present the majority of military casualties are repatriated to the University Hospitals Birmingham Trust’s Queen Elizabeth Hospital (QEH), the home of the RCDM Clinical unit. During their treatment at QEH, most military patients are treated together in a trauma ward staffed by both military and NHS medical staff when this is clinically appropriate. Armed Forces personnel who are SI or VSI abroad are airlifted to the UK by the RAF’s aeromedical evacuation squadron at RAF Brize Norton.

Armed Forces personnel recovering from orthopaedic and neurological problems are treated in the most appropriate military rehabilitation facility (PCRF, RU or DMRC as described earlier). It is well recognised that the quality of acute care they receive and their subsequent rehabilitation is provided to a world class standard. In addition, there are also seven newly opened Defence Personnel Recovery Centres (PRCs) funded by the MOD, RBL and H4H. The PRCs are a key part of the Defence Recovery Capability. They are residential facilities situated in or near garrisons available to all members of the Armed Forces during their recovery from sickness or injury. They aim to assist personnel back to either military service or a second career in a civilian occupation. PRCs are not hospitals or rehabilitation centres. They offer a more comprehensive, holistic, care package including activities such as Pilates, which are usually not available. It is thought that providing the right military environment increases recovery rates. Agencies and service charities provide advice and support to current serving personnel and their families as a ‘one-stop shop’ at many of the centres.

The PRCs:

- Catterick PRC: Phoenix House, opened in 2013 within Catterick Garrison providing accommodation for 50 personnel and 30 day attendees.
- Colchester PRC: Chavasse VC House, opened in May 2012; it provides residential accommodation for 29 personnel and 30 day attendees. Facilities include classrooms and fitness centre.
- Edinburgh PRC: Edinburgh House, opened August 2009; it provides residential accommodation for 12 personnel and 15 day attendees. Facilities include gym, classrooms and computer suite.
- Hasler Company, PRC Plymouth was set up in 2009 and is based in HMS Drake and is equipped with facilities for personnel with both short and long-term illness and injuries. As part of HMS Drake there is Parker VC which has 60 cabins and 6 family rooms as well as the Endeavour facilities including 25 metre liftable floor swimming pool, hydrotherapy pool, sprung floor gymnasium, cardiovascular equipment and a physiotherapy suite. H4H funded both the construction of Parker VC and the Endeavour and the daily cost of running is raised from the MOD and H4H. Hasler company forms part of the Naval Service Recovery Pathway which also includes Recovery cells in Faslane, Plymouth and Portsmouth Naval Bases.
- Tidworth PRC: Tidworth House is a stately home owned by the MOD and leased to H4H since 2011. It has been restored to offer accommodation to 56 personnel and 30 day attendees. Its facilities include the Phoenix Centre, a state of the art sports complex including a Swimex and Skiplex, a wellbeing therapy centre and social areas.
- Germany: Brydon House PRC, opened February 2012; it provides accommodation for 9 personnel and a further 15 day attendees. It is found within the Garrison facilities in Normandy Barracks, Sennelager, Germany. The purpose of Brydon house is to provide support to those wishing to settle in Germany or the UK.
The Defence Adaptive Sports and Adventurous Training Centre, often referred to as the Battle Back Centre Lilleshall, opened in October 2011; it provides accommodation for 24 personnel. The Centre is hosted by Sport England in the Eaton, Colson, Altham House complex. The purpose of the centre is to allow service personnel to achieve their best recovery from injury or sickness. It aims to provide both for the physical and mental recovery with adaptive sport and adventure training beneficial to the patient’s recovery combined with world class coaching from Leeds Metropolitan University to help those attending to have a positive mental attitude and manage stress.

4.5 Current Medical Provision for Force Generation Patients & Veterans

The NHS is responsible for the secondary healthcare of all servicemen and women in the UK, as well as the hospital treatment for Reserves and veterans. Priority access is provided for veterans for all conditions related to their service according to clinical need, regardless of whether or not they receive a war pension. On leaving the Armed Forces, veterans are provided with a summary of their medical records, which they should provide to their new GP on registration. The onus is placed upon the ex-Service personnel to inform their GP of their veteran status in order to ensure they gain access to priority treatment. In the past many Service personnel were unaware of this, as are many GPs working in Primary Care, and hospital staff in the secondary care sector. However, the MOD is in the process of introducing a new system from late 2013 which will see a letter placed into the Service Leaver’s NHS medical record when they register with a civilian GP. This will inform the new civilian GP that their patient has been under the care of the Defence Medical Services and should prompt the GP to consider whether there is a case for priority treatment, in line with clinical need. The MOD is looking to further improve its systems to allow for a summary of Service Leaver’s in-service medical record to be placed on the NHS medical record on registering with a civilian GP. These improvements will reduce the reliance on the patient to proactively declare their veteran status and GPs will have a better understanding of the veteran population under their care.

4.6 Summary of Secondary Care Provision for Armed Forces Service Personnel from the NHS

There are three distinct groups within the Armed Forces that need the expertise in musculoskeletal care that the NHS can provide:

1. Men and women currently serving are entitled to emergency and elective secondary care from the NHS.

2. The TA (renamed the Army Reserve), whose numbers will increase to 30,000 by 2020, and other reserve forces, will require timely and expert care to ensure they remain fit and ready for training exercises or deployment if required. Due to the reduction in number of the regular forces, we will become increasingly reliant on this group, and as a result these forces must be offered the same level of access and quality of medical care as the regular forces.

3. The largest group estimated at 4.8 million are those retired service personnel, who when discharged, may be injured or fit. Injured service personnel (both battle and non-battle injured) may require on-going surgical care and rehabilitation. Non-injured personnel, who have received an honourable discharge, have an increased incidence and earlier onset of osteoarthritis compared to the general population (2012) revealed that more than a third of GPs did not know that veterans should be prioritised, and those that did, received the information from the media rather than Whitehall.

The NHS is expected to provide the expert care for certain specialist treatments and operations (e.g. Autologous chondrocyte implantation, complex spinal surgery etc.)

4.7 Realities of Current Medical Provision

The NHS is responsible for the healthcare of all servicemen and women on their discharge from the Armed Forces, as well as those still serving, who require expert care not available within the existing DMS/NHS contracts. Priority access is provided for all conditions related to a veteran’s service, regardless of whether or not they receive a war pension. On leaving the Armed Forces, veterans are provided with a summary of their medical records, which they should provide to their new GP on registration. The onus is placed upon the ex-service personnel to inform their GP of their veteran status in order to ensure they gain access to priority treatment. Most service personnel are unaware of this, as are the vast majority of GPs working in Primary Care, and hospital staff in the secondary care sector.

In November 2007, in response to the RBL’s documentation of failures within the system, Alan Johnson, who was the Secretary of State for Health, announced new guarantees to Armed Forces’ veterans. These included receiving priority treatment on the NHS, and injured veterans being treated immediately in hospital, thus bypassing waiting lists. Prescription charges were also to be waived for veterans. The first annual report on the Government’s Command Paper (2012) revealed that more than a third of GPs did not know that veterans should be prioritised, and those that did, received the information from the media rather than Whitehall.
The 170,000 veterans who have been pensioned out of the Forces with a specific injury are entitled to priority NHS treatment. Despite this, research for the Legion found that only 22% were offered fast-track care. Reservists currently have no established pathway within the NHS to provide fast-tracked care. This young, fit, group may need orthopaedic services, however the BOA is not aware of any system to identify those who should qualify or to inform CCGs or NHS trusts of their responsibilities. The current pathway (figure 14) is disjointed with no real evidence of shared working to streamline care.

The government has taken some steps to re-dress the disadvantages that service personnel face. They have announced the availability of £22 million to support veterans’ physical and mental health from 2010 to 2015. In February 2013, it was announced that, as a result of the Murrison Report £11 million was to be designated, over the next 2 years for prosthetics and rehabilitation services across the country for ex-servicemen and women who are amputees. Of this, £6.7 million in funding is to guarantee that all serving personnel and veterans injured in Iraq or Afghanistan will be able to upgrade to the latest prosthetics technology, including the Genium Bionic Prosthetic System. NHS Scotland has followed this lead. However, given the significant underestimation of the number of amputations required at a later date, it is unlikely that the current increased funding will be enough. Although the military will be aware of personnel that undergo amputations whilst in service, some will require amputations at a later date when under the care of the NHS following discharge.

**Figure 14: Existing Military Personnel Patient Flows**
5.0 Efforts Made to Improve the Delivery of Medical Care

5.1 MOD Achievements Since the Inception of the Armed Forces Covenant

The MOD has made great strides since the 2010 inception of the Armed Forces’ Covenant, developing comprehensive mental health support services to veterans and catering for the needs of the very seriously injured. Key developments, many of which have been made working with the military charities, include the creation of:

- 10 Veterans’ Mental Health Teams across England
- A 24-hour veterans Mental Health Helpline
- The Big White Wall – an on-line, early intervention peer support, wellbeing and counselling service for Armed Forces, their families and veterans
- An E-learning package for GPs which provides basic advice for GPs on the specific health needs of the Armed Forces, their families and veterans
- A Veterans’ Information Service, designed to contact those who have left the Armed Forces after a year
- Acute PTSD Services
- Timebank – a mentoring service for veterans with mental health problems

Thanks to funding from the LIBOR fine, many additional programmes have been possible – these include the creation/enhancement of:

- Mental Health First Aid - mental health training for the Armed Forces Community
- Combat Stress Outreach Teams to provide funding for veterans with alcohol problems
- The Warrior Programme to help support veterans moving into civilian life
- The Veterans Council HQ – to create a one-stop shop for accessing mental health, health and social care and transitional services tailored to the needs of the military community
- Veterans Aid – to expand their substance abuse and mental health programmes for homeless and needy veterans
- The Beacon – a residence for homeless veterans in Catterick

Seriously Injured Personnel have also benefited under the Covenant, and developments since 2010 include the introduction of a Transition Protocol for Seriously Injured Service Leavers to create a seamless transition from Armed Forces to NHS care and the provision of national commissioning of specialist prosthetic and rehabilitation services for amputee veterans. Furthermore, the Veterans’ Prosthetics Panel meets regularly to consider applications for prosthetic components for veteran amputees, and three cycles of IVF infertility treatment are available to veterans with infertility caused by being in conflict.

Whilst such achievements since the introduction of the Armed Forces Covenant should not be underestimated, a further hard focus is required on those military personnel and veterans with serious musculoskeletal problems.

5.2 Work of Military Charities

5.2.1 The Royal British Legion (RBL)

The RBL was formed in 1921 as a result of the merger of four National Organisations of ex-servicemen, which were founded after the Great War of 1914–1918. It is the only charity that looks after service personnel and veterans from all conflicts.

Today, the RBL is the leading Service charity in the UK, providing a wide range of practical care, advice and assistance to service and ex-service men and woman, and their families. The Legion provides financial advice (e.g. information about war pensions, compensation claims and benefits), can supply emergency funds, or loans during a temporary crisis such as homelessness, and can provide short and long-term care in their six homes around the country, in addition to four ‘break centres’ located in popular seaside resorts. The Legion is the principal advocate on all issues surrounding the welfare and interests of current and former members of the British Armed Forces, such as physical and mental health, homelessness, community and adult care.

During the Legion’s annual fund-raising, the Poppy Appeal raises £35 million, which forms 30.5% of the Legion’s total income. This money goes towards:

- Running their care homes and break centers
- Providing welfare services to their beneficiaries
- Supporting their membership
- Campaigning on behalf of their beneficiaries
- Remembering those that have fallen
- Raising the money
- Governing the charity

The Royal British Legion has pledged £50 million over ten years to support the Defence Recovery Capability programme for wounded, injured and sick military personnel. The programme is an MOD led initiative, in partnership with Help for Heroes and other Service agencies and charities. The aims are to ensure that personnel have the support, facilities, time and space to help them to recover and either return to Service or make a successful transition to civilian life and a new career. This funding pledge will be used in two ways; to provide £27 million to create and
operate the Battle Back Centre at Lilleshall, and £23 million to support the operating costs of the UK PRCs at Edinburgh (£5.5 million); Catterick (£8.5 million); Colchester (£5.5 million) and Tidworth (£3.5 million) and also a PRC in Germany. The Royal British Legion is working very closely with Help for Heroes (H4H) on the PRC project, with H4H taking the lead role in the delivery (including capital expenditure) of the PRCs in Catterick, Colchester and Tidworth, and the delivery of new facilities to enhance those already in existence in Plymouth, as part of the wider Defence Recovery Capability.

The PRCs are a key aspect of the Defence Recovery Capability. They are residential facilities for wounded, injured and sick personnel from across the Armed Forces who can access them during the recovery phase of their treatment. PRCs are not hospitals or rehabilitation centres, but are designed to assist Service personnel in their recovery, and either their return to duty, or, with support, their successful transition into civilian life. The PRCs are sited within or close to garrisons, providing the right military environment for personnel to recover in, which is widely considered to improve recovery rates. These facilities offer a more comprehensive, holistic care package including activities such as pilates, which are usually not available.

- Catterick PRC
- Colchester PRC
- Edinburgh PRC
- Tidworth PRC
- Brydon House PRC
- Battle Back Centre Lilleshall

5.2.2 Help for Heroes (H4H)

The H4H charity provides facilities, programmes and financial support for servicemen and women who have experienced life-changing injuries in the conflicts of Iraq and Afghanistan. H4H runs four Personnel Recovery Centres across the country, forming part of the Defence Recovery Capability. H4H took the lead role in the delivery (including capital expenditure) of the PRCs in Catterick, Colchester and Tidworth, and delivery of new facilities to enhance those already in existence in Plymouth, as part of the wider Defence Recovery Capability. In addition, H4H has been involved with the redevelopment of an £8.5 million Rehabilitation Complex at Headley Court where physiotherapy staff are able to adjust treatment regimens to meet the needs of their patients.

Emergency financial support is offered through H4H’s Quick Reaction Fund (QRF), enabling injured personnel to purchase invaluable equipment, make home adaptations and/or support travel costs for families of the wounded. The QRF can essentially be used for anything that alleviates the distress caused by injury or illness.

5.2.3 British Limbless Ex-Service Men’s Association (BLESMA)

BLESMA is a UK charity that provides support and advice to military personnel, both serving and retired, who have lost limbs, the use of limbs, or the loss of eyesight while in service and includes counselling, advice, grants, employment, prosthetics, liaison and representation.

BLESMA’s extensive rehabilitation programme allows members to rebuild confidence and learn new skills through participating in and re-discovering activities such as skiing, sailing and diving, post-amputation.

The charity also offers advice and support to members who may have been fitted for prosthesis or are awaiting fitting. Members are in contact with regional BLESMA Support Officers, while assistance can also be provided by the Prosthetics-specialised HQ based BLESMA Support Officer.

At the Elizabeth Frankland Moore BLESMA Home in Blackpool, there is 24 hour residential and nursing support for members on a full-time, convalescent or respite basis, whether they are unaccompanied or accompanied by partners. A local doctor and health care practitioners support qualified nursing and care staff at the home. Members can participate in a wide range of activities from skiing, skydiving and sailing to photography.

5.3 The Murrison Report – A Better Deal for Military Amputees

Dr. Andrew Murrison MP was asked by the Prime Minister to review the prosthetic services that were available for veterans with amputations within the NHS. There was concern that access to state of the art prostheses was not always available, and services needed to be strengthened. He reported on his findings and recommendations in October 2011. His report highlighted:

- A sharp increase in the number of amputees leaving the services which will continue up to the year 2020. Many of these personnel also had multiple healthcare problems and complex amputations requiring access to NHS services.
- There was concern amongst the military charities and the NHS Disablement Services Centres (DSC) regarding the
They are:

Nine NHS DSCs have so far been chosen, all in England.

- There was concern from clinicians within the Disablement Services Centres that civilian amputees might find it difficult if veterans were seen in NHS centers with state of the art prostheses, when civilian amputees were denied access to the same technology via the NHS. It would be less controversial if military amputees attended specialist centers.

- There was also concern from the military charities, due to the variability in NHS services provided, that they were becoming the main vehicle to support the veterans.

As a consequence of his findings Murrison recommended the following:

- Funding for specialist prosthetic and rehabilitation for veterans should be centrally funded.

- Eight DSC centers, from across the country would be responsible for the veteran amputee care. These centres would receive funding for the prosthetics from a central source.

- Veterans should be able to access mainstream NHS provision through a DSC of their choice and each centre should have a support officer from BLESMA.

- Closer integration between the DMS and the NHS, in terms of rehabilitation, holds considerable potential for improved health services at all stages of the care pathway, with advantages for the wider civilian amputation community.

- Developing a programme of military/civilian expertise exchange and capacity building to grow the rehabilitation and prosthetic network.

- Tasking the National Institute for Health and Clinical Excellence (NICE) with the production of national guidelines for all prosthetic prescription and rehabilitation for all amputees within the NHS, including provision for war veterans.

Nine NHS DSCs have so far been chosen, all in England. They are:

- Bristol - Disablement Services Centre, North Bristol NHS Trust
- Leicester - Specialist Mobility Centre, provided by Blatchford Clinical Services on behalf of the NHS
- Sheffield - Mobility and Specialised Rehabilitation Centre, Northern General Hospital
- Carlisle - Disablement Services Centre, Cumberland Infirmary, North Cumbria University Hospitals NHS Trust
- Preston - Specialist Mobility & Rehabilitation Centre, Lancashire Teaching Hospitals NHS Foundation Trust
- Stanmore - Prosthetic Rehabilitation Unit, Royal National Orthopaedic Hospital NHS Trust
- Portsmouth - Prosthetic Regional Rehabilitation Department, Portsmouth Hospitals NHS Trust
- Birmingham - West Midlands Rehabilitation Centre, Birmingham Community Healthcare NHS Trust
- Cambridge - Addenbrooke’s Rehabilitation Clinic, Cambridge University Hospitals NHS Foundation Trust

To date, there is one national centre in Scotland, but none in Wales, or Northern Ireland despite the plan that each country would have at least one.

5.4 Getting it Right First Time (GIRFT) – Improving the Quality of Orthopaedic Care within the NHS in England

This report, published in 2012 and fully supported by the BOA, highlighted the problems facing the NHS, namely an explosion in musculoskeletal problems because of an ageing population who are living longer and a rapid rise in obesity rates. It also provided the solutions to enable the NHS to continue to provide excellent, timely care against a background of financial austerity. By appropriate referral with closer working together between the primary and secondary sector, getting it right first time using evidence based treatments and gold standard prostheses, reducing complications, and coupling all of these with different modes of working, will lead to improved care and significant savings.

The GIRFT report has now been endorsed by the Secretary of State for Health and NHS England and is being used as a national pilot. Over the next eight months, a small project team of senior clinicians with managerial support will visit 145 musculoskeletal NHS providers as a peer to peer service, to advise on how best the local health economies can work in a network to provide better care. Already a unique data set on every trust’s activity and outcomes has been generated and this will be shared with each individual trust and then suggestions made on how, by working in networks, care can be improved, and how ensuring the patient sees the right clinician at the right time can achieve an excellent outcome. This approach has been endorsed by the orthopaedic community and will enhance care which includes rehabilitation. Already 63 Trusts have requested visits, and to date there have been no refusals. This will change the way in which orthopaedic care is delivered within England and will also allow us to identify the units with the best outcomes and use them to improve the overall care across the NHS. It is hoped that NHS Wales and NHS Scotland, having seen the value of this exercise, will endorse a similar approach across their musculoskeletal sector thereby enhancing the delivery and quality of orthopaedic care.
5.5 Restoring Your Mobility (RYM)

This report was published by the BOA in 2012⁹. The six commonest pathways, which account for 40% of orthopaedic referrals, have already been mapped out. These pathways have now gone “live” and provide a guide to the primary care sector as to when to refer patients for treatment to achieve an optimum outcome. This will enhance care and provide savings by reducing inappropriate or low value referrals. Although produced for the general population accessing NHS care, it will also enhance the care provided to serving and retired service personnel. The report also highlights the need for developing good medical leadership to bring about change, as well as the need to change professional behaviour. It fully endorses the “Hub and Spoke” model as recommended by GIRFT as the favoured methodology for improving the quality of care.

Musculoskeletal injuries account for 60% of medical discharges from the forces. Our Reservists, as a consequence of the reorganisation of our fighting forces, will assume a more central role in our Nation’s security. Again, the most common complaint preventing deployment or training is musculoskeletal. The government has taken steps to re-dress the disadvantages that veterans face. They have announced the availability of £22 million to support veterans’ physical and mental health from 2010 to 2015. It was announced by the Department of Health in February 2013 that, as a result of the Murrison Report £11 million was to be designated, over the next 2 years for prosthetics and rehabilitation services across the country for ex-servicemen and women who are amputees. Of this £6.7 million will be shared by nine NHS facilities in

6.0 The Scale of the Problem
England to access the latest technology and provide the highest quality of prosthetic care for veteran amputees. The MOD also announced in February that an additional £6.5 million was being made available from the Treasury Reserve to ensure that all serving personnel and veterans injured in Iraq and Afghanistan will be able to upgrade to the latest prosthetics technology, including the Genium Bionic Prosthetics System, where clinically appropriate.

Although the military will be aware of personnel that undergo amputations whilst in service, some may require amputations at a later date when under the care of the NHS following discharge. However:

- There is no recognised fast-tracked pathway within the NHS system to ensure urgent medical care for Reservists when they are outside the DMS system which only becomes active when they are on active duty.

- The stresses encountered by the musculoskeletal system during service and training will significantly increase the risk of the premature onset of degenerative arthritis at an earlier stage in later life.

- The responsibilities of CCGs, NHS managers, and clinicians in both the primary and secondary care sector towards Reservists and veterans as envisaged by the Covenant is poorly understood, and in many cases does not register at all. In Scotland healthcare workers have been reminded of their responsibilities.

- It is impossible under the current system for NHS systems to recognise serving Reservists and veterans in order to ensure fast tracked care.

- Although work has been previously been undertaken by the MOD and BMA to try and address this issue armed forces personnel, whether serving or retired, are not routinely made aware of their rights on discharge from the services regarding subsequent medical care.

- When discharged from service it used to be the individual’s responsibility to inform the GP about their veteran status. And from late 2013 a letter will now be placed in Service Leavers’ NHS medical records when they first register with a civilian GP. This will prompt the GP to consider whether there is a case for priority treatment, in line with clinical need.

- Evidence collected by the British Legion and the experience of clinicians working within the NHS suggests that the NHS Covenant is not working. Other than in Scotland, both clinicians and veterans seem unaware of the Covenant and its implications to their care. As a result veterans often neglect to inform the GP that they are an ex-serviceman and do not provide the GP with their discharge report.

- With the frequent re-organisation of the NHS over the last 10 years there is a risk that the healthcare needs of armed forces personnel who are serving or retired have not been given the priority that has been promised.

- Specific problems with Reservists with musculoskeletal problems include the lack of a clear fast-track referral pathway; the failure to acknowledge the specialist requirements of this highly motivated group and their need to be returned to their maximum levels of fitness as quickly as possible.

- The establishment of the PRCs and RRUs, with help from the Armed Forces charities, is improving recovery in its broadest sense for serving personnel to ensure maximum restoration of function and mobility to this unique group of individuals. Currently there are no definitive links between the service rehabilitation units and the NHS. This fails to ensure shared learning and to ensure a seamless transition of care to maintain best possible function and mobility in these patients. However the recent appointment of DDR as the national lead for rehabilitation and the identification of the nine Murrison Disablement Services Centres should improve this seamless transition in the future.

- Funding for state of the art prosthetics has been agreed for veterans, and nine DSC centers have been identified to provide this service. However, it is likely that the number of late amputations has been underestimated. The funding stream has been identified for the next five years but not guaranteed beyond this.

- There is still some disconnection between the MOD and the NHS, especially in rehabilitation with a clear separation of responsibilities. This results in a fragmented service overall and risks serving personnel, Reservists and veterans falling into “no-mans” land just when they need help most.

- Once the acute episodes of care and rehabilitation are completed, often to a world class standard, there is no clear pathway for continued support in the community other than that provided by the military charities.

Prof Michael Clarke, the director of the Royal United Services Institute stated: "With 82,000 we've got a "one-shot" Army. If we don't get it right the first time, there probably won't be a second chance." In short, unless we work more cohesively and the boundaries of separation broken down between the DMS and the NHS we will not be able to ensure the maximum number of personnel are available if required nor guarantee the on-going care for those injured and retired.

As it stands, the current organisation is not fit for purpose and some of the above issues were highlighted in the Murrison report. Despite the initial positive response by the government which provided £11 million to ensure continuing access to state of the art prostheses for injured veterans, many of the recommendations made by Murrison in 2011 still remain to be implemented. We can and need to do better.
The NHS Covenant is not legally binding and so does not guarantee fast-tracked care within the NHS for Military Personnel.

The NHS Covenant is poorly understood by CCG’s, NHS managers and clinicians in primary and secondary care.

NHS Scotland has reminded its healthcare work force of their responsibilities in treating veterans. Wales an England must do the same.

There is lack of a clear, fast-tracked referral pathway, and recognition of the specialist requirements of this young, fit highly motivated group and their need to be returned to their prior level of function, or that which their injuries allow.

Veterans are responsible for informing GPs about their veteran status. However, they are often not aware of their rights, with regard to access to NHS care, on discharge.

There is currently no fast-tracked pathway of care for Reservists within the NHS.

It is impossible for the current NHS systems to recognize serving personnel, Reservists, and veterans in order to ensure fast-tracked care.

There is a clear separation of the responsibilities of the MOD and the NHS, and little co-operative working between the DMS and the NHS to ensure that all our forces are battle-ready, and that all those who are retired continue to receive appropriate on-going care.

Rehabilitation services within the military have been enhanced by the work of military charities. However, there is no networking with the NHS to ensure continuity of on-going care and opportunities for shared learning.

Funding for state of the art prostheses for veterans has been agreed, and eight DSC centres identified to provide this service. The funding stream has been guaranteed for the next five years but not beyond this. However, it is likely that the number of late amputations has been underestimated.
7.0 Provision of Medical Care for Foreign Forces

It is important to evaluate whether other nations, especially our allies who have been involved in both the conflicts of Iraq and Afghanistan, have a system in place that provides a level of care to both serving and retired forces personnel that we in the UK can learn from and implement.

7.1 USA

The USA’s Military Health System (MHS) employs more than 137,000 personnel in 65 hospitals, 412 clinics, and 414 dental clinics at facilities across the nation and around the world. TRICARE insurance provides civilian medical care for military personnel, dependents of active duty personnel, and for retirees and their dependents. In addition, TRICARE Reserve Select is a premium-based health plan that active status qualified National Guard and Reserve members may purchase. It requires a monthly premium and offers coverage similar to Tricare Standard and Extra for the military member and eligible family members. It has a partial premium cost sharing arrangement with the Department of Defence at a lower cost than civilian plans51.

The Veterans Health Administration provides 152 hospitals, 800 community-based outpatient clinics, 126 nursing home care units and 35 domiciliaries – providing medical, surgical, and rehabilitative care. Eligibility for benefits is determined by a system of Priority Groups. Retirees from military service, veterans with service-connected injuries or conditions rated by the Veterans Administration, and Purple Heart (military medal of service) recipients, are within the higher priority groups. Veterans without rated service-connected conditions may become eligible based on financial need, adjusted for local cost of living. Veterans without service-connected disabilities totalling 50% or more may be subject to co-payments for any care they received for non-service connected conditions52.

7.2 France

French military healthcare provides support to troops throughout pre-deployment, deployment and post-deployment stages (Personnel 348 000, Reserves 9400). There are 9 military hospitals, with a holding capacity of 2,700 beds, for which the primary objective is the provision of special medical healthcare and high-quality expert resources, as well as the training of medical and paramedical personnel. Military Hospitals contribute to staffing, medical treatment and facilities deployed in operations abroad. Over 250 French military medical centres and unit medical services provide outreach medical support to the Armed Forces, worldwide.

Disabled Veterans are entitled to free healthcare if the individual has “bled” for France. The below table illustrates the cost paid by military personnel and veterans.

<table>
<thead>
<tr>
<th>Medical Care</th>
<th>% Cost to be covered by service personnel or veteran</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP Consultation</td>
<td>30%</td>
</tr>
<tr>
<td>Nurse/ Allied Healthcare Consultation</td>
<td>40%</td>
</tr>
<tr>
<td>Access to specialist services not available within current structure .eg complex spines</td>
<td>40%</td>
</tr>
<tr>
<td>Access to novel/new therapies eg ACI/MACI Tests</td>
<td></td>
</tr>
<tr>
<td>Surgery and inpatient stay &lt;30days</td>
<td>20%</td>
</tr>
<tr>
<td>&gt;30 days of inpatient stay</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 10: Medical Care for French Veterans53

From research into other healthcare systems used by our allies, it is clear that most have an excellent system to deal with injuries and medical conditions that occur during active service. It is clear however, that there is no system in place that provides a rapid pathway of free care to Reservists who may need to be deployed quickly or to those that are retired, whether injured or not. In the USA on-going care may be provided through the veteran’s hospital network but depends upon the level of disability and accurate documentation of all injuries at discharge from the service. However universal care is not available for all those who have served.

In France, retired military personnel receive a discount in both out- and inpatient costs going forwards. However healthcare is free for those service personnel who have ‘split blood’ for France.
Summary 3

- Other countries have systems in place that care for serving personnel to a high standard.
- Little evidence of systems in place for fast tracked medical care for reserve forces to ensure their battle readiness.
- Veterans have to pay for on-going care for injuries sustained whilst serving. However there is a reduction of both out- and in-patient care costs.
- No healthcare system in other countries is free at the point of delivery like the NHS.
8.0 The Solutions

8.1 The NHS / Military Covenant

The Armed Forces Covenant for serving military personnel and veterans does not have the prominence that was intended and it needs to be re-emphasised throughout England and Wales (in Scotland, clinicians have been reminded of their responsibilities to veterans within the last 18 months). The promise made by the NHS to provide high quality, timely care to both serving and retired armed forces personnel must be re-inforced. GPs, hospital doctors, allied healthcare professionals and the NHS as a whole need to be reminded about what is expected from them, and they need to guarantee to provide quality care in a timely fashion. This re-launched NHS Covenant must define what is meant by fast-tracked and timely care, as well as clarifying what is covered, and who is eligible. For musculoskeletal conditions, all conditions should be covered and all veterans who have received an honourable discharge should be eligible. This needs to be agreed across the UK with NHS England, NHS Wales and NHS Scotland, and will require political buy-in by all.

Service personnel need to be made aware during discharge from the forces of the referral methodology. The transfer of the patient care record from the DMS to the NHS on discharge must be championed to provide a summary of their medical records that also contains the treatment pathways already completed. Service personnel will be provided with a unique number/code that will be attached to their records that will identify them to their primary care service as a veteran.

Those veterans who have already left the services need to be informed of the referral process and provided with their unique identification number/code. This would place veterans in a position where they could remind their GPs and hospital practitioners in order to access the fast-tracked care pathway in the future, especially if injured and in need of on-going care and rehabilitation.

The link with the community care system is assumed but in fact needs strengthening.

In order for the referral system to work, a single point of contact for advice and referral for patients with a musculoskeletal problem must be created across the UK.

8.2 Timely Access to NHS Care

Currently serving personnel must be provided with a timely high quality NHS care pathway that focuses on access to specialist services such as complex spinal surgery. In addition, they should be able to access to novel therapies such as Autologous Chondrocyte Implantation/ Matrix Assisted Autologous Implantation ACI/MACI when clinically appropriate.

Reservists must be able to access a fast-tracked, high quality pathway of care within the NHS to ensure that they are ready for training exercises or active deployment. This should happen at the same speed as occurs in the regular forces.

Veterans must receive timely access to both routine and specialist treatment from the NHS. This should include access to high quality NHS high rehabilitation units, with the aim of restoring veterans to their maximum mobility and functionality.

For serving personnel and those serving in the reserve forces, a referral to treatment time of 6 weeks is proposed.

For those retired, a referral to treatment time of 12 weeks is proposed.

Without a target and firm end point, it is unlikely that fast-tracked care will occur. Having learnt the lessons from the Mid Staffordshire Enquiry, and the relatively small number of personnel involved it is unlikely that previous problems will arise.

8.3 Network of Health Service Hospitals (NOHSH)

We propose the establishment of a NOHSH across the country to also include Wales, Scotland and Northern Ireland. The resulting networks in England will divide the country into the following regions: London and the South East, Midlands and East Anglia, Northeast, Northwest, South and Southwest. All these hospitals will be current NHS units that are known for their high quality of care.

Approximately thirty to fifty hospitals will be required and selected on the conclusions of the report “Getting it Right First Time”, a national orthopaedic pilot looking at all 158 orthopaedic providers in England. A unique data set has been produced that will inform local areas on ways of re-organising orthopaedic care and highlight excellent practice. This offers a unique opportunity to celebrate hospitals that offer excellent orthopaedic care and badge them as a health service hospital in addition to their normal NHS activities. In order to maintain the quality of the service provided to our forces and veterans, there should be competitive criteria for hospital inclusion in the network. We would envisage a total of 30-50
such hospitals in order to provide choice and care for personnel close to their homes.

During this national pilot it is feasible to carry out a national stock take on the availability and quality of rehabilitation, an important component of improving and maximising recovery. The Chartered Society of Physiotherapists has expressed willingness to be involved in this exercise. By working with the National Clinical Director for rehabilitation, this will improve rehabilitation services generally across the NHS, where there has been under-investment over the last few years, and allow us to identify a network of rehabilitation units that can provide care for veterans, many who have complex orthopaedic problems.

We need to link the successful NHS hospitals chosen to have a dual role and NHS rehabilitation centres to the military rehabilitation units such as Headley Court, and the seven units set up and funded by The Royal British Legion (RBL) and Help for Heroes (H4H).

This will ensure a seamless transfer of care for this unique group of highly motivated individuals from the military to civilian care. The nine DSC recommended by the findings of the Murrison report should be linked into this network, with the support of BLESMA, to ensure veterans continue to receive the prosthetics that they have been promised.

A culture of cross-boundary working between NHS units and military units needs to be encouraged, in order to allow NHS personnel to learn from military counterparts, especially in the art of rehabilitation. This will result in the maintenance of maximum gain in function and mobility when service personnel are discharged from the service.

Furthermore, using a model such as this will also improve standards across the NHS and benefit the whole population.

8.4 Funding and Commissioning

Commissioning of services differs between nations: in Wales and Scotland it remains very much as before, with central control being maintained by NHS Wales and NHS Scotland. However NHS Scotland has reinforced the NHS Covenant by reminding healthcare professionals of their responsibilities for treating veterans. Commissioning has been reorganised in England following the introduction of the Health and Social Care Act in 2012. Commissioning responsibility for specialised services has been delegated to NHS England, whilst routine services have been devolved down to 212 CCGs. To make sure access to care remains appropriate for Service personnel Reservists and veterans, independent of where they reside in the UK, it will require co-operation across the different health economies. There will need to be political agreement and an undertaking by all, to honour the Armed Forces Covenant and its stipulations. The establishment of the Armed Forces Clinical Reference Group and the specialist Musculoskeletal Reference Group will be crucial to facilitate this. This should also include specialist rehabilitation and provision of prosthetics for service personnel who require amputations, whether early or late, following their initial injury.

8.4.1 Centralised Commissioning in England

The Armed Forces CRG has been formed and will advise on specialist needs across all the medical, surgical and rehabilitation disciplines for forces personnel that need central funding. However, the specialist musculoskeletal needs specification must be agreed urgently. This should also include specialist rehabilitation and provision of prosthetics for service personnel who require amputations, whether early or late, following their initial injury. This could be achieved quickly by forming a subgroup from the CRGs for specialised orthopaedics and rehabilitation. This will ensure urgent action.

8.4.2 Devolved Funding into CCGs for Routine Care

Funding for routine musculoskeletal problems that may be on-going or which develop in the future will be managed by CCGs. These groups will need to accept the NHS Covenant in its entirety and must prioritise funding. Furthermore, they will have to agree on the fast-tracked care principles within the NHS Covenant for veterans and Reservists and ensure timely access. This arrangement will avoid the rationing and potential long-waiting times which could otherwise develop. Each CCG will know and work closely with the health service hospitals in the locality as they all have to maintain a high quality rehabilitation service throughout their networks.

If these solutions are implemented, high quality care, that both the Nation and NHS have promised its Armed Forces, can continue to be provided within the current financial envelope (figure15). The general population receiving NHS care will also benefit from these changes. These solutions will encourage improvement of standards and treatment protocols across the wider NHS in both acute care and rehabilitation services and, if networks are well managed, significant savings can still be realised.
Combined NHS MOD Forces
Clinical Reference Group
Advice to CCGs Military Covenant

Serving Military Personnel
6 week pathway

Voluntary Reserves
6 week pathway

Retired Service Personnel
12 week pathway

Defence Medical Services
(Medical Reception Services)
Combined NHS Referral Centre

Ministry of Defence Hospital Units /
Network of NHS Service Hospitals (NOHSH)

Regional Rehabilitation Units *13
Defence Medical Rehabilitation Centre

Personnel Recovery Centres

NHS Specialist / Tertiary Care

NHS Rehabilitation NHS Prosthetics

Figure 15: Proposed Streamlined Military Personnel Patient Flows
This year is the hundredth anniversary of the beginning of WWI. During this conflict, which was to last 1500 days, over 9 million died in uniform and more than 18 million were injured on all sides. The British dead numbered 908,371 and more than two million were injured.

This was the first major conflict where a system was introduced by the British Army to evacuate and treat the huge number of casualties that occurred. Sir Robert Jones, the founder of the BOA was its architect and he used the railway system to take casualties from the casualty clearing stations via the channel ports back to one of the 225,000 beds that were available through a network of services hospitals in the UK. After treatment and subsequent discharge from the forces, many had on-going needs for continuing medical care. However, there were no plans in place by the government to make sure the veterans were looked after. Ex-servicemen had to manage as best as they could, relying on hospitals that received public donations to remain viable and offer the care required.

In the last two conflicts, namely Iraq and Afghanistan, both the death toll and injury count has been very small in comparison. Further, with the medical advances made by the DMS, along with the widespread use of body armour and early evacuation from the scene of operations by helicopter, there has been an increase in the survival of service personnel who would previously have died on the battlefield. Their subsequent care at RCDM Birmingham and rehabilitation at DMRC Headley Court has been world class, but once discharged from the forces, the NHS is expected to continue to care for these highly motivated individuals.

Notwithstanding the Armed Forces Covenant which enjoins excellent care that is fast-tracked and provided in a timely manner, it is clear from the evidence that subsequent treatment can be variable. This has been highlighted in the report “A better deal for military amputees” written by Dr. Andrew Murrison MP.

The “Chavasse Report” highlights the current problems and provides the solutions to ensure the on-going care of musculoskeletal problems for all service personnel by the NHS from 2014 onwards.

This report highlights the three groups that require NHS support, namely, those currently serving that need access to specialist care not available within the services provided by the DMS, those within the volunteer reserve whose usual care is the responsibility of the NHS, and finally, those that are discharged whether fit or with on-going musculoskeletal needs. The current system is not currently able to guarantee timely high quality care. In order to change this we need to:

- Re-energise and re-communicate the Armed Forces Covenant across the NHS in England and Wales. This should stipulate the referral to treatment times for serving and reserve personnel of 6 weeks and retired veterans of 12 weeks. This also needs extending into social services.
- Service personnel need to be made aware of their rights and the network of care available for them.
- GPs working in Primary care need to be made aware of the Covenant and what it means for ex-service personnel who require care.
- We need to ensure that CCGs are aware of their responsibilities when service personnel either serving or retired need access to musculoskeletal facilities.
- We need to establish a network of NHS hospitals which will be responsible for the delivery of orthopaedic care to retired and reserve service personnel, in terms of both treatment and rehabilitation.
- A Forces CRG responsible for the commissioning of specialised care has been established in England. It needs to produce a specification for specialist musculoskeletal care.
- These hospitals will be suggested as part of the “Getting it Right First Time” national professional pilot. This will be based on the availability and quality of the services provided. They will link into the nine prosthetics centres as identified by Dr. Andrew Murrison.
- We need joined up working between the DMS and the NHS to ensure a seamless transition of care.
- We need a partnership between the DMS and the NHS to ensure treatments, and rehabilitation skills are transferred across both organisations.
- NHS Scotland has reinforced the NHS Covenant to its healthcare providers within the last 18 months. England and Wales need to do the same.
- Create a single point of contact/patient advisory and liaison service for forces personnel and retired veterans.

The Nation and the Armed Forces quite rightly expect the NHS to rise to the challenge laid out in the Covenant, even in these times of austerity. This report proposes ways to deliver high quality, affordable and fast-tracked care by working together within networks. Further, by encouraging excellence, we will see an improvement in standards of care and rehabilitation across the wider NHS.
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Defence Medical Services: https://www.gov.uk/defence-medical-services

The armed forces Covenant: https://www.gov.uk/the-armed-forces-Covenant


Defence recovery and personnel recovery centres: https://www.gov.uk/defence-recovery-and-personnel-recovery-centres


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Help for Heroes: http://www.helpforheroes.org.uk

British Limbless Ex Service Men’s Association: http://www.blesma.org/

Restoring Your Mobility: http://www.boa.ac.uk/LIB/LIBPUB/Documents/Restoring%20your%20Mobility.pdf


Military Health System: http://www.health.mil

U.S. Department of Veteran Affairs: http://www.va.gov/health/

Servicemen and women are making great personal sacrifices for this country and it is only right that the NHS honours its lifelong moral and legal duty of care for our armed forces. We agree with the armed forces covenant that veterans should receive priority treatment where it relates to a condition which results from their service, and the Defence Medical Services and NHS England must continue to support high-quality services for the benefit of serving personnel and the reserves. I very much hope this timely report will help to generate further debate, discussion, and action to improve the care our armed forces and their families rightly deserve.

**Norman Williams**  
President, The Royal College of Surgeons of England

The care of soldiers after the battle has been a problem for society for as long as war has been waged. In the current generation, the immediate care of the wounded is first class and getting better all the time. But there is still a sense that once the physical wounds are healed, we have a tendency to forget the physical and psychological disability that persists and have a profound effect on the soldier. This leads to a need for continuing support, often for life. I personally hope this report will help to raise the needs of the injured soldier in our collective consciousness. We owe them our gratitude and respect.

**Ian K Ritchie**  
President of the Royal College of Surgeons of Edinburgh

Our military personnel have selflessly devoted their lives to upholding the values of this country. In doing so many have sustained both physical and mental illnesses. It is clearly the responsibility of our National Health Services to provide them with the support they require once their military careers are over and particularly where those careers have been foreshortened by injuries sustained in service. The Chavasse report offers clear and sensible solutions and I feel this report is an outstanding piece of work and support its recommendations with considerable enthusiasm; both as an NHS doctor and as President of a Medical College. I trust that this report will encourage debate as to how the medical needs of those military personnel requiring care from the NHS can best be delivered honoring the tenets of the armed forces covenant.

**J-P van Besouw**  
President of the Royal College of Anaesthetists
BLEMS A – The Limbless Veterans’ Charity has always been at the forefront of coping with the consequence of significant musculoskeletal injury. Our members live with that consequence for the rest of their lives. We fully endorse the clinical solutions recommended by Professor Briggs. They are coherent, supportive, practical and effective, particularly those that impact on prosthetic services for veterans who have suffered attributable amputation, and we strongly commend their implementation at the earliest opportunity.

Jerome Church MBE
General Secretary BLEMS A – The Limbless Veterans Charity

I believe it is a most comprehensive evaluation of the needs of the Veterans and the recommendations need full support of all relevant authorities and organisations involved in caring for the war-wounded in a holistic manner.

As Chair of the Specialist Commissioning Clinical Reference Group, relevant to the needs of the Amputees, I believe it is relevant to note that the recommendations cover all four countries in the UK and should ensure equity across the whole nation.

As President-Elect of the International Society for Prosthetics and Orthotics with membership across 52 countries world-wide, I feel that every nation should have a comprehensive plan to serve their own veterans and this report is a leading example. We do hope that the recommendations are accepted and implemented.

Professor Rajiv S. Hanspal MBBS, Hon DSc, FRCP, FRCS
President Elect of International Society for Prosthetics and Orthotics

We support the key thrust of this paper which confirms the need for additional orthopaedic care and resources for service people who have been wounded, those who have left the service needing treatment now and in the future and to ensure that our smaller Armed Forces can deploy fit-to-fight.

D Francis G Dunn
President, The Royal College of Physicians and Surgeons of Glasgow

The long-term impacts of serious musculoskeletal injuries on Service personnel are largely unknown. Proposals such as those made by Prof. Briggs, which have the potential to improve outcomes from surgical interventions, have the unreserved support of The Royal British Legion and we are therefore pleased to commend his clinical solutions for improving healthcare across the Armed Forces community.

Chris Simpkins DMA, Hon.DUniv, DL
Director General, Royal British Legion
After over a decade of fighting, the country is looking for a period of peace but, for those who have been injured while serving, their battles will continue. The public has demonstrated by donation that it wishes to support our servicemen and women and demands that support be second to none. The Chavasse report, if fully integrated and delivered in true partnership, will deliver that support and ensure that our young men and women receive the care they deserve; for life. H4H supports this report and very much hopes that the recommendations are implemented.

Bryn Parry OBE  Co-founder and CEO Help for Heroes
& General the Lord Dannatt