Care pathways for UK and US service personnel who are visually impaired

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ABSTRACT

Objectives The aim of this paper is to outline the different care pathways for sudden and gradual vision loss within UK and US military systems, as well as the provision of support by the main third-sector organisations looking after visually impaired (ex-) service personnel.

Methods The Defence Medical Rehabilitation Centre, Headley Court and Queen Elizabeth Hospital Birmingham were consulted to obtain information and relevant documentation on UK care pathways. Experts in the field of visual impairment and the military-provided information on care pathways for US service personnel were consulted. The majority of the information on US care pathways was gathered from the Department of Veterans Affairs website and unclassified documents.

Results The care pathways for UK and US service personnel with a visual impairment vary depending on the cause of visual impairment. Blind Veterans UK and the Blinded Veterans Association are the main organisations that support UK and US (ex-) service personnel, often filling in the gaps that other services do not have the resources to provide. The main difference between the two pathways, other than the UK healthcare system being free at the point of service, is that the Veteran Health Administration is one of the first national healthcare systems to integrate rehabilitation services for personnel with a visual impairment into the health services provided.

Discussion The UK could benefit from having specific care coordinators for service personnel that specifically integrate rehabilitation, medical care and treatment for their visual impairment.

INTRODUCTION

Having a visual impairment can lead to difficulties in carrying out daily activities, social isolation, poor self-rated health, depression, impaired functional status and functional decline. Risk factors for visual impairment include systemic health conditions, ocular diseases or abnormalities and trauma. Currently, the most common causes of visual impairment in the adult population are cataract, age-related macular degeneration, glaucoma and diabetic retinopathy. Injured military personnel are at particularly high risk of becoming visually impaired as a consequence of blast events while on operational deployment.

Combat operations in Iraq and Afghanistan have resulted in more military personnel—than from previous conflicts—becoming visually impaired. Several sources publish data on the number of service personnel who have been injured on operational deployment over different time periods. Between 8 October 2007 and 31 March 2012, 518 British military personnel were Very Seriously Injured (VSI) or Seriously Injured (SI) on Operation HERRICK in Afghanistan. In 2009, the University Hospitals Birmingham NHS Trust carried out an audit using a retrospective consecutive case series of eye injuries sustained by UK service personnel serving in Iraq or Afghanistan from July 2004 to May 2008. It was reported that 48 individuals (58 eyes) sustained significant ocular injuries out of a total of 630 UK service personnel who survived major traumatic injuries. In 2011, up to five British military patients a week returned home with an eye injury, with the most common being a result of fragment damage from a roadside bomb and disease.

Between 2001 and 2006, over 1000 US service personnel were evacuated from overseas military operations with combat-related eye trauma. In the USA, there are approximately 157 000 ex-service personnel who are legally blind, and more than one million with low vision. Between 1996 and 2005, the rate of eye injury among US active duty military personnel increased which could be attributable to changes in how clinic data are collected and reported. However, it has been posited that US personnel who have served in the Iraq or Afghanistan conflicts are more likely than personnel who have served in other conflicts to sustain eye injuries as a result of the use of improvised explosive devices. This, in combination with a reduction in death due to the use of body armour and improved medical treatment may account for the rise in eye injuries.

The care pathways for service personnel who become visually impaired are different to that of civilians. This, in part, is due to the higher number of military personnel who sustain high-energy explosive blast injuries (83%) compared with civilians (3%) and that military personnel are injured while on operational deployment and receive care from a range of organisations and services.

The aim of this paper is to outline the different care pathways for sudden and gradual vision loss, within UK and US military systems, as well as the provision of support by the main third-sector organisations looking after visually impaired (ex-) service personnel.

METHODOLOGY

In order to provide a comprehensive view of care pathways, two services (the Defence Medical Rehabilitation Centre (DMRC), Headley Court and the Queen Elizabeth Hospital Birmingham (QEHB)) were contacted. Authors (EM and SS) visited both service to consult with staff and obtain information and relevant documentation on care pathways. Blind Veterans UK, formerly known as St Dunstan’s, is the
The majority of the information on US care pathways was gathered from the Department of Veterans Affairs (VA) website and unclassified documents provided by a King’s Centre for Military Health Research member of staff. After reviewing information from all sources, it was determined that when a member of UK or US armed forces becomes visually impaired their treatment pathway can vary depending on the cause and onset of the impairment.

The standards for blindness differ in the UK and the USA, therefore, this review focuses on (ex-) service personnel with a significant reduction in vision. The term, visual impairment, will be used in reference to low vision (<6/12 (<20/40) best-corrected vision in the better seeing eye) or blindness (<6/120 (<20/400) best-corrected vision in the better seeing eye) as defined by WHO.12

Sudden vision loss requires urgent treatment; therefore, the care pathway for gradual and sudden visual impairment will be outlined separately. Due to the number of third-sector organisations that can be involved in a care pathway, the organisations included will be limited to Blind Veterans UK and Blinded Veterans Association (BVA), as these are the main third-sector organisations that provide support and care to (ex-) service personnel with a visual impairment in the UK and the USA, respectively.

RESULTS

UK
The Defence Medical Services (DMS), NHS, charities and welfare organisations work in partnership to provide medical services that are free at the point of use to nearly 193 000 servicemen and servicewomen.13 The DMS is structured to provide primary and secondary care within the UK and at defence posts overseas. Service personnel in the UK who are in need of hospital treatment may visit one of five Ministry of Defence Hospital Units (MDHU) where they have priority access. Service personnel who are VSI or SI overseas are aeromedically evacuated to the UK by the Royal Air Force’s (RAF) aeromedical evacuation squadron at RAF Brize Norton. They receive treatment in the UK from the Royal Centre for Defence Medicine (RCDM). Rehabilitation is delivered by DMRC Headley Court or one of 14 other Regional Rehabilitation Units (R RU) across the UK. If injured personnel cannot be returned to duty, transitional services provide continued support to help ease their return to civilian life. Third-sector organisations also help in rehabilitating injured service personnel by providing physical and emotional support to help them adjust to civilian life and, possibly, living with a disability. In general, specific rehabilitation related to the visual impairment will take place at DMRC, Headley Court.

Care pathway
Gradual onset of visual impairment
When a serviceman or servicewoman experiences gradual vision loss, they would first present to their medical officer where, if needed, they are referred to one of five MDHUs for diagnosis and treatment, or to the local NHS hospital.

Sudden non-traumatic visual impairment
When vision loss occurs in theatre and not due to trauma, service personnel present to their medical officer and would be referred to the ‘Role 3’ enhanced medical facility at the Main Operating Base. The term, ‘Role 3’, describes the tier in which medical support is organised, and this tier provides specialist diagnostic resources, surgical and medical capabilities. If they require immediate specialist treatment they are aeromedically evacuated by the RAF aeromedical evacuation squadron to RCDM at the QEH B. If sudden vision loss takes place outside of theatre subsequent to service, for example, during training, initial presentation is to the medical officer who can refer them to one of five NHS trusts or the QEH B. The QEH B has recently acquired a ‘one-stop shop’ mobile military eye clinic. Previously, service personnel were transferred to a different site for complete eye examination. Now diagnosis and treatment can take place more quickly. If service personnel are referred to a hospital other than the QEH B, they may need to be assessed and treated in different hospitals. When service personnel have recovered enough for discharge from hospital, ophthalmic treatment can be provided in an outpatient setting.

Blind Veterans UK support (ex-) servicemen and servicewomen with a visual impairment by providing training, rehabilitation and support to them and their families. People are eligible to become a member of Blind Veterans UK if they have served at some point in the UK Armed Forces, as a regular or reservist, or served during World War II in the Merchant Navy, or Polish or Indian Forces under British Command. Additionally, they have to meet the ophthalmic criteria whereby they sustained an injury or have been affected by a deterioration of sight in both eyes resulting in difficulties to read the largest line on an eye chart or count fingers at arm’s length. Blind Veterans UK is notified by, or approaches facilities about, service personnel who will potentially need their assistance while they are in hospital or receiving rehabilitation care. Social services provide support to service personnel with a visual impairment through the Visual Impairment Services. Depending on an individual’s needs, the range of services offered include mobility support (mobility canes, travel concessions), equipment for daily living (talking watch), adaptations to the home, help with cooking, cleaning and washing, counselling, retraining for employment and education advice. Although healthcare is free at the point of use for UK service personnel, all the aids that social services provide are not free of charge. Blind Veterans UK provides aids to its members free of charge and often has more specialist equipment than those provided by social services.

When outpatient or inpatient care is complete, under the tri-service policy, not all service personnel are discharged from service. The military now retain those SI if they can fulfil a deployable role. If they cannot be retained in the UK Armed Forces, they are discharged from service and receive further treatment and support from the NHS and Blind Veterans UK if required. Of note, once (ex-) service personnel become members of Blind Veterans UK, they remain a member of the organisation for life, even if they are not currently engaging with the services, provided they can attend again when required. All service personnel who leave the UK Armed Forces are given a summary of their medical records to give to their new NHS doctor when they register with them. The Seriously Injured Leavers Protocol is a rigorous handover process which is in place for veterans with healthcare requirements after leaving the forces.14

Sudden traumatic visual impairment
Service personnel who experience visual impairment due to trauma while in theatre rarely receive an injury to their eyes in isolation. Their most critical injuries are treated as a priority
and they are airlifted to QEHB for treatment. From July 2004 to May 2008, the mean time it took service personnel serving in Iraq or Afghanistan from the point of injury to arrival in the UK was 2.63 days. A minority of service personnel have their visual impairment managed in-theatre and are then returned home via the US facilities in Germany. Once service personnel reach QEHB, they receive ‘world class care’ (as described by an independent House of Commons Defence Committee report). Diagnosis and treatment of eye injury takes place at QEHB. At this point, Blind Veterans UK is notified about service personnel who will potentially need their assistance.

Service personnel can be discharged from hospital for outpatient treatment and, if needed, rehabilitation in one of 14 RRUs. DMRC Headley Court is the main Defence rehabilitation centre where service personnel can receive rehabilitation for neurological, complex trauma or ‘force generation’ musculoskeletal conditions. Force generation refers to rehabilitation of the physical component of fighting power in combination with a moral support component. While undergoing treatment, service personnel can receive support from Blind Veterans UK. Blind Veterans UK relies on liaising with medical services to receive information on service personnel with a visual impairment. Therefore, in some cases, first contact with them is not until an individual is back at home, and some people can slip through the net. However, a formal protocol is in place for referrals between DRMC Headley Court, QEHB and Blind Veterans UK so that potential Blind Veterans UK members can be enrolled into the charity at the earliest point. As most critical injuries are treated as a priority over the visual impairment, Blind Veterans UK is often contacted once these other injuries are stabilised. After the completion of treatment from Headley Court, another RRU, outpatient or inpatient care, service personnel are either discharged from military service where they receive NHS care, or remain in service and are treated by the DMS and NHS. Depending on the severity of disability, some service personnel will be referred to their local personal recovery unit (PRU) depending on the unit’s capacity. PRUs take care of service personnel with more complex injuries in order to get them back to work or help them transition out of the Armed Forces. Many service personnel will continue to be managed by their unit recovery officers and some will be allocated a personnel recovery officer (PRO). Clinical facilitators support those assigned to PRUs and PROs, and have medical knowledge that can be helpful when supporting service personnel in attending appointments. PROs are not specialists in visual impairment and act as the main point of contact to coordinate the treatment, care and recovery pathway of the person.

Gradual onset of visual impairment

Active duty members are automatically enrolled into Tricare Prime which is one of three types of Tricare. The local military medical facility (base hospital) is usually the active duty member’s Primary Care Provider (PCP). There is no cost for this service, and when a member is injured they will present to the PCP where they will be referred for specialist care. Service personnel present to their PCP when not in theatre, and when in theatre they present to their military medical facility (which is often the PCP). After assessment, treatment is delivered by a Tricare authorised provider or from a non-PCP service. Under Tricare Prime, there is an enrolment option called point of service (POS) where a member can receive reimbursement for medical care from non-PCP services if they were referred to the service by the PCP.

Tricare Extra is the second type of Tricare and does not automatically enrol members. It offers more flexibility than Tricare Prime. The military has contracts with authorised Tricare providers where with the presentation of an identification card, members can receive medical care that does not exceed designated amounts. Members are required to pay a portion of some costs.

Tricare Standard is the third type of Tricare and is the most flexible. It is similar to the Civilian Health and Medical Program Uniformed Services that was developed to enable veterans to receive government-subsidised medical care from civilian providers in 1966. Tricare Standard is the most expensive type of Tricare as members pay 20% of treatment costs and if the medical care provider charges more than what Tricare estimates it to cost, members have to pay the additional difference. Often, members have to pay more for their Tricare service once they retire.

After initial treatment under Tricare, service personnel often have their care delivered by the VA. The VA provides free or low-cost healthcare to veterans who have served in active military service and were separated/discharged under any condition other than dishonourable. Veterans who were reserves or part of the National Guard may also be eligible for VA health benefits if they undertook a full period of active duty. VA medical centres and community-based outpatient clinics have Visual Impairment Services Teams (VIST) that comprise a coordinator, healthcare and allied healthcare professionals. Severely disabled veterans and active duty personnel with a visual impairment are allocated a VIST coordinator who manages their case. VIST coordinators arrange treatment and referrals to Blind Rehabilitation Centres (BRC) and Visual Impairment Services in Outpatient Rehabilitation (VISOR). VIST coordinators also identify new severely disabled individuals with a visual impairment, and provide counselling, problem resolution, arrange reviews of benefits and services as well as conducting educational and outreach programmes related to blindness. Within the VIST team, service personnel can have access to representatives from financial services, Veterans Benefits Administration, psychology, nutrition, podiatry, audiology, nursing, primary care, geriatrics, prosthetics, optometry, ophthalmology and social work.

The VA provides rehabilitation programmes in 12 sites across the USA to eligible veterans and active duty service personnel who are visually impaired. The VISOR programme gives service personnel with a visual impairment training in computer use, communication and other topics. Accommodation can be provided for up to 2 weeks if needed, but to be eligible, the individual must be able to perform basic activities of daily living. The VA also has 12 inpatient BRCs throughout the USA and Puerto Rico. The BRC offers skill courses, such as orientation, mobility, communication skills, activities of daily living and visual skills to help personnel become independent. Counselling services and group therapy is provided to help individuals make emotional and behavioural adjustments to their visual impairment.

In the USA, there are VA Transition Patient Advocates (TPA) who act as personal advocates to help veterans move through the VA healthcare system. The Blind Rehabilitation Specialist continuum of care specifically works with veterans and service-men and servicewomen returning from Iraq and Afghanistan.
with wounds/trauma that have resulted in a visual impairment. The BVA helps US veterans and their families meet and overcome the challenges of a visual impairment. All legally blind veterans are eligible for the BVA’s assistance whether they become visually impaired during or after active duty military service. Field Service Representatives locate and assist veterans with a visual impairment and are responsible for linking veterans with local services so that the newly visually impaired person can take advantage of VA Blind Rehabilitation Services. The BVA also assists veterans with VA claims, employment training and placement. The BVA is established within the VA, as BVA volunteers work out of the VA Medical Centres, Outpatient Clinics and Regional Offices. BVA volunteers demonstrate equipment and aids used by (ex-) service personnel with a visual impairment, and provide information on programmes and services.

Sudden onset of visual impairment

When active duty members suffer sudden onset of vision loss from the point of injury, they are taken to a combat support hospital which is a type of military field hospital that is transportable by aircraft trucks. From here, they are taken to a ‘Role 3’ hospital. Severely wounded soldiers are taken here if they won’t be able to recover quickly. From the ‘Role 3’ hospital, service personnel are taken to Ramstein airbase in Southwestern Germany and transported to Landstuhl Regional Medical Centre which is the largest military hospital outside of continental USA. The US strategy for treating troops wounded in Afghanistan is to keep them moving. This can ensure that soldiers are evacuated to an ideal environment where optimal facilities are available and there is a full range of equipment with experienced and well-trained staff. From the point of injury, US soldiers normally arrive back in the USA within 5 or 6 days of being wounded. The US service personnel are discharged from Landstuhl Regional Medical Center to outpatient care or sent to Walter Reed Army Medical Center in Washington, the National Naval Medical Center in Bethesda or Brooke Army Medical Center in San Antonio.

DISCUSSION

The care pathways for service personnel with a visual impairment differ depending on how they became visually impaired and whether they have any accompanying injuries. Nevertheless, irrespective of the cause of visual impairment, service personnel should receive the same standard of treatment from care providers. In the UK, treatment is provided by the NHS, DMS, charities and welfare organisations. Specific NHS trusts provide the major portion of care to service personnel but there are some regional variances in the care pathway, so treatment can occur close to individuals’ homes or parent unit. Although healthcare in the UK is free at the point of use, visual impairment aids available from social services are not always free of charge. Input from social services can vary depending on the capacity of the relevant visual impairment service. Blind Veterans UK provides support and equipment to its members for free as well as rehabilitation specifically for their visual impairment. Close links have been developed between Blind Veterans UK, QEHB and DMRC Headley Court so that support, training and equipment can be provided to service personnel while they are still receiving treatment for their injuries.

In the USA, medical care for service personnel is subsidised by the government and provided by the VA and the Department of Defense healthcare programme, Tricare. Initial treatment is delivered by Tricare-authorised providers, after which it is provided by the VA who provides rehabilitation. The VA integrates rehabilitation services for individuals with a visual impairment into the health services provided. VA medical centres have VIST coordinators who arrange treatment, manage referrals and ensure service personnel have access to a range of services. The TPA, which is embedded within the VA system, acts as a personal advocate to help (ex-) service personnel navigate through the system. The BVA which is established within the VA provides support to (ex-) service personnel by linking them to local services and assisting them with VA claims and employment training.

The VA has found that since the 1940s, their service user population has changed from young veterans who have been visually impaired as a result of traumatic injury to predominantly older veterans with age-related eye diseases. This led the VA to review the availability and usage of their visual impairment services, concluding that more outpatient rehabilitation services were needed. In the USA, the VA TPA act as personal advocates to help veterans move through the VA healthcare system. This type of service is not available in the UK which may be because the healthcare system is relatively easier to navigate as it is free at the POS.

The US care pathway was presented to give an international perspective and highlights some of the similarities between the UK and US pathways. Of note is that healthcare in the UK and the USA is delivered by different organisations that, to some extent, work collaboratively. Both care pathways include third-sector organisations for (ex-) service personnel with a visual impairment, and the services they provide fill some of the gaps that the healthcare systems do not cover. Many of the services offered by Blind Veterans UK are similar to that of the VA and BVA. One example is Operation Peer Support in the USA which helps to connect combat-blinded veterans of World War II, Korea and Vietnam with newly blinded veterans who have been wounded in Iraq or Afghanistan. In the UK, Blind Veterans UK has an informal buddy system which aims to connect newly visually impaired (ex-) service personnel with those who have been Blind Veterans UK members for several years to encourage peer support (Alison Bradley, Welfare and Grants Manager, personal communication). Another similarity between the UK and the USA is that when service personnel become visually impaired, they present to and are treated by their PCP or within a designated military medical facility before being aeromedically evacuated to a higher specialist hospital if needed. Both care pathways have been developed to ensure that the highest level of care is provided to service personnel.

The main difference between the UK and US care pathways is that the UK provides healthcare that is free at the POS, therefore, UK personnel do not have to take out healthcare insurance, and after leaving the Armed Services will receive priority care within the NHS that is free at the POS. Another difference is that the VA is one of the first national healthcare systems to integrate rehabilitation services for individuals with a visual impairment into the health services provided. Within the USA, care coordinators help service personnel navigate through the system in relation to all aspects of their recovery. In the UK, only those that have been out of work for more than 56 days and with a more severe level of disability will get allocated a PRO; however, the PRO does not have specific expertise related to care and support for those with a visual impairment.

IMPLICATIONS

The UK care pathway for (ex-) service personnel with a visual impairment has not been clearly outlined before, and this review has provided a unique perspective by comparing it with
the USA. A caveat underlying any conclusions that can be drawn from comparing the UK and US care pathways is that the majority of the information collected to inform the US care pathway was from the VA website. The accuracy of the VA website has not been verified, therefore, caution should be taken when interpreting the results. However, by outlining the care pathway and highlighting the role of two charities that work with (ex-) service personnel with a visual impairment, it has identified ways in which the needs of (ex-) service personnel can be better met.

The care coordinators of health and social care services for service personnel with a visual impairment could be beneficial in the UK. This could help organisations plan and review treatment goals, monitor progress throughout the rehabilitation process and make timely and effective decisions about the care of (ex-) service personnel. With current austerity measures, it would be difficult to make structural changes to services, so an alternative would be to have third-sector organisations working more closely with visual impairment services to identify potential members and collaboratively provide care. For example, organisations like Blind Veterans UK could strengthen their links with DMS and the NHS so that visual rehabilitation is prioritised as much as physical rehabilitation and carried out in tandem.

CONCLUSION

The care pathways for UK and US military personnel with a visual impairment vary depending on the cause and onset of visual impairment. Blind Veterans UK and Blinded Veterans Association are the main third-sector organisations that support UK and US military personnel, often filling in the gaps that other services do not cover. The UK could benefit from having specific care coordinators for military personnel who specifically integrate rehabilitation, medical care and treatment for their visual impairment, irrespective of the amount of time personnel have been out of work. The (ex-) service personnel would benefit from better access to third-sector organisations, like Blind Veterans UK, by there being improved links with the DMS and NHS, so physical and visual rehabilitation is coordinated.

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Contributors

All authors were involved in the planning of this manuscript and carried out preparatory research. EM and SAMS were involved in the writing of this manuscript and NTF made extensive comments.

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