

Force Generation – Deployment-aligned MIACs

ARL Colvine

Clinical Specialist Physiotherapist. RRU Bulford (Wessex Region)

Abstract

As the pressure mounts to supply more ground forces in Afghanistan, the Defence Medical Services (DMS) are directly supporting surge activity through ensuring the provision of deployable personnel. Delivery of this goal requires a change in the practice, focus and resources of the DMS. Identification, treatment and rehabilitation of injured service personnel is a priority in improving the pool of personnel available for deployment on Operations. This paper details the drivers, process and potential benefits of aligning Multi-Disciplinary Injury Assessment Clinic's activity with a unit's formation readiness cycle, to more appropriately and proactively manage injured service personnel to improve both the quality and quantity of Force Generation.

Introduction

“Army Force Generation (FG) is the cyclic process of training a unit for deployment, deploying a unit, returning from deployment, reintegrating the Soldiers and families, resetting the units and starting all over again” [1]. In order to maximise FG a ‘fit for task’ population of service personnel needs to be provided for unit commanders to draw the appropriate personnel to create an effective force. The relative impact of any injury is subject to the employment of the individual. Effective forces may be negatively impacted by non-deployable personnel and essential staff in key roles unable to deploy for medical reasons.

The problem

The Health of the Army report in 2005 observes that *“medical grading is not a good measure of operational effectiveness and work continues to refine a new measure of ‘fit for task’”* [2]. ‘Fit for task’ is defined as fit to deploy for any form of duty on deployment, including personnel listed as having limited deployability [3]. Of the 67,400 Army personnel deemed deployable, the remainder being in roles preventing deployment, 80% are medically fully deployable (MFD), 11.5% medically limited deployable (MLD) (7,600) in a range of roles and 9.5% are medically not deployable (MND) (6400) [4]. Of the 22,677 soldiers serving in the infantry, the main fighting units of the British Army, 20,060 or 88.5% of those, are considered to be “fit for task”, 2,617 or 11.5% are not [3]. The MoD commented that the 2,617 personnel *“represents those who are non-deployable because they are non-available for a combat role or non-effective, for example, due to medical reasons”* [3]. More recent reports estimate this figure to be higher and suggest 22% of personnel available for combat roles are unable to deploy or only able to deploy in a limited role [5].

Since the introduction of a military grading system a proportion within a unit are always likely to be non-deployable, but a partially deployable force may not be tolerated in both military and political terms, in the current environment. Furthermore, service personnel who have sustained significant injuries and are then retained by the

organisation in a limited number of non-deployable roles without the expectation of returning to a deployable status may negatively impact the transition and progression of injured service personnel likely to retain full or partial deployability by blocking appropriate employment posts.

The Defence Medical Rehabilitation Plan

The impact of musculoskeletal complaints has created changes and different approaches to the management and configuration of health systems. It is important to remember that musculoskeletal disorders remain the predominant cause (47%) of downgrading [2], and it seems reasonable to assume that a significant number of MND and MLD personnel have musculoskeletal injuries. The DMS formulated the Defence Medical Rehabilitation Plan (DMRP) to provide an operational model to achieve a co-ordinated and effective management and delivery of rehabilitation to injured service personnel (ISP). The approach has the aim of reducing *‘the number of injured service personnel unfit for operational purposes because of an injury’* [6].

Multi Disciplinary Injury Assessment Clinics (MIAC)

A core facet of this integrated plan has led to the creation of Regional Rehabilitation Units (RRU's) supporting a number of Primary Care Rehabilitation Facilities (PCRf's). Contained within an RRU, the MIAC exists as a regional resource and is critical in providing co-ordinated clinical management of ISP. MIAC operates a 360° referral pathway, as referrals to MIAC can be generated from Primary or Secondary care (Figure 1). In addition to providing a specialist assessment clinic, the MIAC can access imaging, periods of intensive rehabilitation, cortico-steroid injection therapy, advise on patient management and ‘Fast Track’ surgical intervention. MIAC's have been utilised as a portal and triage for the secondary care health system. The clinic should also know when to draw a line underneath management of chronic problems to limit ineffective resource use.

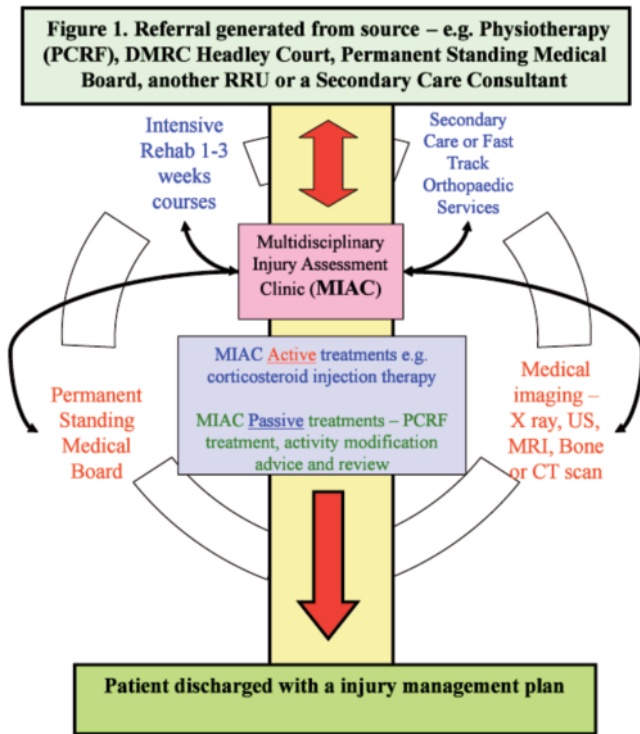
MIAC's utilise a Sports and Exercise Medicine qualified doctor and an experienced physiotherapist to generate a dynamic and specialised clinic capable of enhanced patient assessment, diagnosis, intervention and management. Historically, services for people with musculoskeletal disorders tended to be poorly planned and too focussed within secondary care [7], whereas MIAC's can span the boundaries into both primary and secondary care.

Corresponding Author: A Colvine, RRU Bulford (Wessex Region), Ward Gymnasium, Kashmir Road, Bulford Camp, Salisbury, Wiltshire SP4 9LS.

Tele: 01980672709 Fax: 01980673477

Email: APHCSWXBULRRUPhysio3@emsra.mod.uk

The Defence Medical Services have gained extensive experience in returning injured personnel to a high functional level e.g. the work of the Defence Medical Rehabilitation Centre unit at Headley Court [8]. MIAC's close association with RRU's ensures patients are assessed and treated in a timely fashion and receive the optimal high quality treatment and rehabilitation to maximise functional outcome and return to operational fitness when this is clinically possible [9].



Cultural Change

The current method of MIAC management is a familiar consulting model where patients are referred to RRU for MIAC opinion. MIAC appointments are available through referral to standard clinics. MIAC clinics are booked in advance and demand led, without unit preference. Imminent deployments, indicated on referral, can accelerate appointments but triage is more on the basis of clinical need rather than availability, which can not always be accommodated.

Whilst normal MIAC clinical service for non-deploying patients remains unaffected, MIAC aligned deployment clinics are arranged in addition to normal services and assimilate these extra patients through normal review appointments and joint MO/MIAC or MIAC/OH liaison. In deployment alignment MIAC is responding to the environmental conditions

The organisational change already undertaken by the MIAC demonstrates a high degree of interdisciplinary working, which it is argued may avoid previous failures in similar services, at the core of which lies internal and external communication; collaboration and integration [10]. A high level of collaboration between the therapeutic team, the patient and stakeholder is seen as 'facilitating' optimal practice [11]. Specifically, MIAC seeks to work with, support and empower the MO during the formation readiness cycle in facilitating decision making and outcomes of ISP.

Deployment cycle and target populations

In the one to two years leading up to an operational deployment in the training/formation readiness cycle (Figure 2), unit commanders and MO, through the Unit Health Committee (UHC) should identify the pool of ISP from within the unit and assess the impact of this population in terms of unit deployability and effectiveness. Analysis of MND, MLD personnel and ISP, will indicate to the MO the scale of the issue, the later two groups combine to form the target population. At this point unit commanders and MO have the opportunity of accelerating the medical management with the objective of increasing the potential pool graded for deployment, and conversely in consultation with ROHT offer advice that may prevent deployment. Identification and analysis of ISP should take place at the earliest possible opportunity – at least 12 months prior to deployment - for the various processes of medical management and rehabilitation to be accessed, maximised and exhausted allowing appropriate grading to be achieved by the MO, who has the responsibility of unit management of ISP. Initial triage of ISP and consultation with PCRF or MIAC members will identify a group of potentially deployable soldiers (PDS) within the unit; this is made up of MLD, MND and ISP undergoing treatment but not medically downgraded.

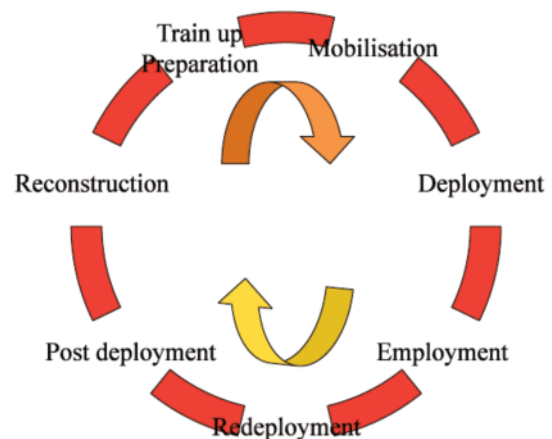
Patient supply

PCRF's and Unit Medical Officers (MO) effectively 'own' or case manage injured ISP with musculoskeletal injuries, referring to MIAC when treatment is exhausted or a further or alternative opinion as to management is sought. This treatment management model exerts little control on demand on the MIAC resulting in peaks and troughs in referral rates. This results in a need-driven rather than deployment-orientated scenario. Classical health care models are biased towards an on demand operating model, which can limit delivery through over demand and lack of appropriate timescales in which to react and provide appropriate treatment. Furthermore it can be argued that the main focus of effort, and potentially services, should be targeted towards the service personnel with impending deployments, in which role the MIAC should be proactive rather than reactive.

MIAC Ethos

The approach has significant aspects of occupational rehabilitation combined with Sports Medicine and exercise medicine, which forms a significant component of Military Medicine generally. Equally, it is as important to recognise the MIAC has a role in uncovering significant injury that may impact deployment. In this sense it is likely that increased scrutiny and visibility of units' injured personnel may result in increased downgraded numbers through realistic recognition and recording of injury. The ownership of ISP grading status remains the MO's prerogative, appropriately guided by MIAC observation and treatment. The MIAC approach seeks to achieve a fit/medically stable, self managing, appropriately graded soldier (under the MO's remit) as soon as is possible. As a result MIAC has strong links to the Regional Occupational Health Team (ROHT) and works together in joint clinics aimed at soldiers with occupational and employment issues.

Deployment cycle



Focus of MIAC Aligned Deployment Strategy (MADS)

The main focus of effort for the MIAC involvement is to increase the quantity of deployable soldiers within the unit and the quality of that deployment by increasing the potential availability of P2 MFD and P3 MLD graded soldiers, enhancing the units' force preparation and generation and potentially minimising the need to fill posts with soldiers from other units and the TA. The MIAC intervention is to return the ISP to fully fit or a deployable grade, if an appropriate role can be found. For example an ISP with a meniscal injury identified early and appropriately graded MND whilst awaiting surgery may be Fast Tracked via MIAC and rehabilitated through a PCRf and RRU to MLD and eventual MFD. The aim is to increase the pool of deployable service personnel (DSP). Care should also be taken to establish that the self managing P3 MLD (Perm) soldier is well controlled and unlikely to suffer condition degeneration in theatre, and previous deployment-aligned MIAC clinics have found a period of rehabilitation has been required to re-establish control over permanently downgraded personnel with long term musculoskeletal conditions.

The key to aligned process integration with a unit's readiness cycle is a movement away from the tiered stages of referral to MIAC or secondary care and increased prioritisation on unit deployment cycles, and monitoring over an injury episode to produce an outcome. The outcome may only achieve a small numerical increase in soldiers, perhaps as few as 10 out of 30 PDS or 2% of a 500 strong unit, but this figure represents soldiers, perhaps with specialist skills, who otherwise would not be considered for deployment in or out of role and spend six months on rear party. There is the potential to reduce the collateral burden of deployment on other units and the TA. A 2% uplift in deployable soldiers may be of great benefit to both unit commanders and deployment decision makers.

MIAC Aligned Deployment Phases

The first step is identification of the patients by the measures outlined above. The ideal target population is between 20-40 personnel and the final figure will determine the scale of the MIAC involvement. Psychological illness, permanently downgraded ISP with static chronic conditions unlikely to respond to intervention or changes in management are excluded. A formal request is made to the RRO for MIAC involvement within a suitable time frame.

Initial Clinic (FG 1)

At this initial clinic, assessment and treatment planning take place, and interventions may be organised such as a scan or a period of rehabilitation. Previous MIAC clinics for units have taken place in various locations – Castlemartin ranges, St Athan and the Land Warfare Centre, emphasising the mobility and adaptability of the concept. The objective of FG 1 is minimal disruption to unit activity and maximal MO involvement.

Initial review clinic (FG 2)

This clinic is a follow up to initial intervention e.g. to explain the results of tests or scans, potentially administering corticosteroid injections and review injury progress through treatment. For quality and clinical control this should be a standard review appointment in MIAC. ROHT input or advice may be appropriate.

Second review clinic (FG 3)

The second phase of review post MIAC is important to avoid

losing control of the injury episode and continuing the drive to achieve either a resolution of the injury episode or a firm management plan and the consequences for deployment. Ideally this would involve a member of the ROHT to offer grading advice.

For injuries occurring in the later stages prior to deployment the RRO and Clinical Specialist (CS) Physiotherapist - MIAC should be the point of contact with the MO to manage and ensure utilisation of the best resources to enhance the likelihood of deployment.

Regeneration clinic (FG 4)

This clinic would review ongoing injury episodes and new injuries sustained in theatre. Unit attendance at the Deployed Medical Rehabilitation Team (DMRT) should be evaluated to identify suitable potential patients likely to present as unit tempo increases after leave and re-adjustment periods.

Review of intervention post-deployment

In this phase, improvements to the process are sought by feedback and discussion with Unit representatives, UMO and RRO regarding the approach, usefulness and benefits, improvements for next time and identification of the gross benefits.

The potential benefits of this approach

Early identification of patients enables appropriate referral and treatment; treatment pathways are often lengthy and extensive, and MADS attempts to facilitate the identification of suitable patients and ensure appropriate and timely use of facilities and services available. The approach also attempts to exert control and direction over an injury episode, to ensure that the right decisions and processes are initiated at the right time with the focussing effect of MADS. The systems already in place – MO, PCRf and Unit Health Committee (UHC) may work effectively at managing patient injury episodes but MIAC support to the MO has the ability to accelerate and broaden the scenario. By supporting and empowering the MO the units 'landscape' of downgraded personnel can be clearly identified, reviewed and appropriate actions taken.

The MADS approach allows the MO to review his target personnel and revise the treatment plans supported by MIAC, in turn facilitating his/her knowledge and awareness of musculoskeletal rehabilitation. Regular command group meetings or UHC improves commanders visibility of the manning situation and more clearly identifies the MO's efforts and influence on FG. For commanders there may be some benefits from the assurance of target focussed support mechanisms at work to improve manning.

Whilst outcomes may not always be positive, clarification of an individuals' situations means effective grading and career management decisions can be made by the MO. Appropriate gradings in the later stages of the alignment process through the close working relationship with ROHT result in expert advice to the MO allowing the necessary risk assessments or alternative arrangements to be made.

Measuring success of the initiative is problematic and should not be viewed in terms of grading change purely, but also of quality and stability of deployment. Success will not be easily measured but may be shown through reduced demand on the deployed medical rehabilitation teams and medical evacuations from theatre of personnel with pre-existing musculoskeletal injury. Initial feedback suggests there is improved morale within units at the level of support visible to treat ISP.

Conclusion

MIAC aligned deployment clinics have the ability to improve the deployable pool of service personnel enhancing operational effectiveness. Changes in culture, practice and objectives of the DMS are required to work closer with units and between specialities in the process of FG.

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