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Outpatient Based Injury Management versus Inpatient Rehabilitation [1]

by
G.E. Tilbrook [2]

Ideally, these interventions should be conducted at the workplace or linked to the workplace and directed to return to work.

Michael K. Nicholas, PhD [2]

ABSTRACT
The Australian Defence Force (ADF) presents a unique situation in workplace injury management. The workforce is biased towards a younger population, with higher demands on physical fitness and a higher degree of 'risk-related' activities. Consequently, the majority of injuries tend to be acute musculoskeletal 'sporting' type injuries. Unlike civilian workplaces, facilities are provided on-site specifically for management of these injuries.

This review briefly examines relevant literature in its consideration of the arguments for provision of an outpatient work-based injury management program, rather than an inpatient based model, at the First Health Support Battalion. This paper appraises the current best practice for rehabilitation and injury management programs. Physiotherapy injury management systems and programs, as well as psycho-social aspects of injury management, are discussed. The latest Defence and Work Cover NSW policies support using the workplace as a means of rehabilitation. The current outpatient system takes in all the ideals of the most up to date defence and civilian policies and produces a workable model for injury management

INTRODUCTION
The ADF, and particularly the Australian Army, presents a unique situation in workplace injury management. The workforce is biased towards a younger population, with higher demands on physical fitness and a higher degree of 'risk-related' activities. Consequently, the majority of injuries tend to be acute musculoskeletal 'sporting' type injuries, although there is a reasonably large prevalence of chronic or recurring injuries.'

The ADF is also unique in its ability to provide onsite workplace facilities and medical and specialist personnel for the management of these injuries. This personnel include general practitioners, surgeons, physiotherapists, radiographers, pharmacists and psychologists, who are provided for the management of these injuries. This is in contrast to the civilian working population where facilities and medical support are rarely on-site.

This review briefly examines relevant literature in its consideration of the arguments for provision of an outpatient work-based injury management program, rather than an inpatient based model, at the First Health Support Battalion. This paper appraises the current best practice for rehabilitation and injury management programs. Physiotherapy injury management systems and programs, as well as psycho-social aspects of injury management, are discussed. Physiotherapy injury management systems and programs, as well as psycho social aspects of injury management will be discussed.

PROGRAMS
Civilian inpatient systems often do not translate well to a military population. Civilian case mixes are generally much broader due to greater age variation and a more diverse range of activity levels. These case mixes also

span many more areas in which inpatient rehabilitation is appropriate such as stroke, spinal, amputee and head injury rehabilitation.[5] The ADF presents a distinctive situation where a high level of fitness is required for deployment and therefore even simple musculoskeletal injuries may require extended time and treatment to facilitate full recovery. This is in contrast to civilian standards due to the need for ADF members to sustain a high level of risk related activity. American military rehabilitation facilities do not provide a good template for ADF facilities to follow as they also deal with older members discharged from the military, presenting a whole new demographic and group of problems.[5]

Current procedures were developed in line with Item 12 of Defence Instruction (General) DI (G) PERS 19-19. That is, return members to normal duties in a timely, efficient and cost-effective manner with mini mal disruption to an ADF Unit activities. This instruction has now been superseded by SAFETY MAN Volumes One and Two. One of the fundamental principles of this new policy is "Workplace-based rehabilitation". [7] SAFETY MAN states that:

> *"As Jar as possible the workplace should be used as the means of rehabilitation. Using meaningful and productive duties in the workplace increases the members' ability to perform those duties and maintains their con tact with the workplace."*[7]

In accordance with both old and new policies, the current approach in this facility aims at keeping members in their unit and encouraging participation in appropriate unit activities at a level compliant with the member's restrictions.[8] The emphasis is on returning the member to normal work duties, activities of daily living (ADL) and normal physical training, and keeping members at work (restricted duties if necessary) whilst undergoing injury management. The participation of an ADF member in the above programs allows minimal disruption to their normal workday. The vast majority of this personnel are able to perform modified, if not normal, duties. They attend on a part-time or outpatient basis with programs usually scheduled during unit Physical Training (PT) timings. The most up to date Work Cover policies and findings support this work-based approach.[1]

There are a minority of patients with musculoskeletal injuries who would be best managed in the ward.

For the small number of patients involved, this does not warrant any great additional infrastructure and can be appropriate. However, the majority of patients with musculoskeletal injuries are best managed on an out patient basis, with good communication between medical staff and the members' workplace. Reasons for patients with musculoskeletal injuries staying on the ward may include uncontrolled pain requiring IV analgesia, unreasonable or inappropriate travel requirements, personal circumstances or inability to care for themselves. As most of our patients do not fall into these categories, inpatient rehabilitation is inappropriate for them. These members should be returning to normality as soon as possible rather than being institutionalised by remaining in hospital unnecessarily. Waddell and Burton present strong evidence for advising patients in the acute and subacute phases of injury to continue ordinary ADL as normally as possible despite the pain.[9] They demonstrated that this can give equivalent or faster recovery from symptoms, lead to shorter periods of work loss, fewer recurrences and less work loss the following year than traditional medical treatment.[9] Patients with more complex or specialist management needs may be referred on to more appropriate facilities or specialist services and, as this would be in a small minority of cases, it would allow appropriate management to be cost-effective.

The support for inpatient based injury rehabilitation programs is usually based on the argument of 'all under the one roof ', where the medical, psychological and physiotherapy services are more readily accessible and therefore are more effectively and efficiently utilised. This concentrated medical rehabilitation management away from the workplace and other ADL theoretically should result in the speedier 'rehabilitation' of the soldier; however, current best practice suggests this is probably not the case.[1]

CURRENT BEST PRACTICE

Current literature examining the effectiveness of injury rehabilitation supports early return to work and ADL. [1]

Waddell and Burton showed evidence that return to work rates can be enhanced by workplace arrangements designed to facilitate it.[9] A report by Michael K. Nicholas PhD for Workover NSW in 2002 reviews current literature involving work hardening and conditioning rehabilitation programs.[1] He emphasises throughout the report that current evidence supports the resumption or continuance of ADL, including a return to work as soon as possible, despite the pain, as the preferred option for 'non-red flag' injuries.[1]

Sanderson *et al*. and Waddell and Burton report that those who managed to stay at work (modified if necessary) with activity/work-based programs, had better long term outcomes.[9.10] The longer a person is away from work the less likely it is that they will return to work.[11] The recommended effective management for acute musculoskeletal low back injuries with no evidence of red flags is activity-based rehabilitation involving resumption of normal activities, symptomatic pain relief, education and reassurance. [1.9.10] Current best practice of maintaining the injured person in workplace-based rehabilitation is in direct contrast to an intensive inpatient live-in program away from the normal workplace.

Williams et al. found distance to be a big factor in their inpatient versus outpatient randomised controlled trial. This study was fraught with problems generalising to a wider population. This was due to a high rate of patient refusal of randomisation.[12] Studies in this area consistently struggle with ethics, control group enrolment and problems with randomisation due to distance of facilities to patients' homes.[13] Definition of treatments, study populations, similarity of treated versus control groups, generalisation of results and potential adverse effects of treatments are additional compounding factors in this area of study.[13]

At the sub-acute and chronic phases, programs that included pain management using behavioural principles and graduated exercises were more effective in returning the individual to the workplace. Individual and work related psychosocial factors, known as yellow flags, are a strong predictor of future symptoms and disability.[10.14] Cognitive behavioural programs are necessary to address and prevent entrenched behaviours such as activity avoidance, pain-related distress and fears of re-injury. These are more effective when linked to the work place.[1] Waddell and Burton concluded that there was:

> *" ...strong evidence that individual and work-related psychosocial factors play an important role in persisting symptoms and disability, and influence response to treatment and rehabilitation".*[9]

PSYCHOSOCIAL ASPECTS

Psychosocial factors may include distress, unhelpful beliefs, fears, workplace issues, activity avoidance, pain responses, behaviour patterns and medication dependence.[1] The review by Waddell and Burton actually indicates that psychosocial factors were better predictors of future disability than standard physical measures of injury and impairment.[9] Outpatient management with a strong return to work focus avoids psychological problems with members becoming distanced from their unit and developing illness behaviour and attitudes. The member feels better in themself because they are contributing and not seen as "bludging". It is also easier for the member to keep in touch with their supervisors, keep them informed and ensure their career and trade remain on track and the unit does not forget about them.

Treatment approaches should be on an individual basis, taking into account personalities as well as injury / pathology, as motivation and psychological issues also play a large part in prognosis. Screening questionnaires, as predictors of outcomes, tested whether patients thought they would return to work if they believed they had no personal control of their pain, and whether they thought continuing to work would worsen their pain. The prognosis of patients indicating that they did not feel they would return to work in the next two weeks, had no personal control of their pain and would be made worse by continuing to work were poorer. [11] 'Medicalisation' of chronic low back pain may actually be a "contributing factor to the epidemic of disability." [13.16.17] It is imperative to reduce fear about musculoskeletal pain and avoid sickness behaviour. [9.14] Encouraging early movement in the absence of red flag symptoms, is best practice[1] and education via Physiotherapy can play an important role in this.

PHYSIOTHERAPY AND INJURY MANAGEMENT

The label "rehabilitation physiotherapist", which is sometimes thrown around, is largely not applicable to the role of a Physiotherapist working with ADF members. Physiotherapists working in ADF establishments deal primarily with musculoskeletal sports injuries. The term "rehabilitation physiotherapist" in clinical Physiotherapy circles usually refers to neurological type rehabilitation (stroke/head injuries etc.) and amputees, which are rarely seen day to day in ADF establishments. In general, the term 'rehabilitation' could be replaced with 'injury management' to specify what is actually happening rather than giving visions of long-term neurological rehabilitation.

On-site, there are clinics for Orthopaedic Specialists, a Consultant Psychologist, Sports Physician and Neurosurgeon, which provide a comprehensive network for patients requiring these services to be referred from their Regimental Medical Officer (RMO). Referral to other services such as radiology, pathology, physiotherapy, physical training instructors, vocational guidance, pain clinics, and counselling can also be made as appropriate. Physiotherapy injury management procedures are just one of the management options available to RMOs. 1 HSB is presented with almost the ideal situation. Our units and managers must find appropriate work for the member, who can access on-site treatment facilities and can remain included in all appropriate unit activities. Furthermore, the members and their unit are responsible for the patient being compliant to their treatment regime, giving ownership to those involved. Injured soldiers must comply with rehabilitation programs and work restrictions, which are supervised and enforceable.[8] Good communication with supervisors and managers is critical to the intent of restrictions being carried out. This is an area which could be improved upon through education of civilian and military health workers as well as unit managers and supervisors.

CONCLUSION

In summary, the current system complies with the policy and ideals of returning members to work as quickly as practicable, keeping them at work and in their unit. Current best practice dictates an early return to work and that strong ties to the workplace are essential in returning personnel to work.[1] This is in direct contrast to inpatient rehabilitation which takes members away from their workplace and their normality. Psychology, illness behaviours and motivation factors play a key part in likely prognosis and response to treatment. [11] The current outpatient system takes in all the ideals of the most up to date Defence and civilian policies and produces a workable model for injury management.

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