

MUSCULOSKELETAL DISORDERS PREVENTION IN THE UNITED KINGDOM

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This paper provides a brief overview of current approaches and new initiatives regarding work related musculoskeletal disorders (MSD's) in the UK, set within a European context. It does not attempt to provide a comprehensive overview but rather to highlight a number of key issues, including the need for regulation and for standards, educational and training requirements and for the provision of practical, standardised assessment tools for use by practitioners to help assess exposure and risk in the workplace. The extent of the problem and the need to develop appropriate preventative strategies is evident. The setting of targets linked to absence from work in the UK is ambitious and may direct effort away from primary prevention and towards rehabilitation and return to work. The requirement for risk assessment at the level of the worker and workstation should not obscure the need to consider an ergonomics approach to work systems, organisational design, use of technology and the work environment. Greater adherence to the ergonomics process in design and assessment of work systems would seem the most likely strategy for securing long term primary prevention of these disorders both within the UK and elsewhere.

INTRODUCTION

The strategies for prevention of these disorders within the UK must be seen within the current European Union directive framework. Key directives, introduced in 1992, such as those relating to the management of health and safety at work, manual handling and the use of display screen equipment have significantly altered the approach to prevention. However, after more than 10 years of their application the extent of the problem of musculoskeletal disorders (1.2 million people affected by work related MSD's per year with 9.9 million working days lost), and their impact on health and well-being remains unacceptable (on average each affected worker takes 13 days off work). The economic costs to individuals, industries and society are also excessive. The Health and Safety Executive (HSE) estimate the cost to the economy to be £5.7 billion per year.

The Health and Safety Commission have made prevention of MSDs a priority programme as part of their "Securing Health Together" agenda. This strategy aims to reduce ill health in employees and public caused or made worse by work, to help people who have been ill to return to work, to improve work opportunities for those excluded from work on health related

grounds and to use the work environment to help people maintain or improve their health. Further, there is a vision, as part of a 10 year plan, that "No individuals should be made ill by work".

These important goals are based on an extensive consultation process that brought together a wide range of key stakeholders, including government departments, professional groups and industry. In delivering this agenda, targets have been set to reduce working days lost from work related ill health by 30% by 2010, to reduce the incidence rate of cases of work related ill health by 20% by 2010 and to achieve at least half of these improvements (for each target) by 2004.

These targets have been set for all work related disorders. However, given the disproportionate extent of the problems attributed to msd's, it becomes imperative that these are dealt with as a priority.

APPROACHES TO PREVENTION

Hitherto, the major focus of the HSE has been of primary prevention. The setting of targets to reduce work days lost has shifted the emphasis of the strategy to develop a more holistic approach that embraces guidance on

assessment, treatment and the prevention of acute episodes becoming chronic. This would seem to be a significant move away from the traditional approach of primary prevention and has implications for ergonomists that will be considered later in this paper.

The potential dilemmas and conflicts that can arise in developing a strategy along these lines can perhaps be illustrated through reference to a recent European report (Buckle and Devereux, 1999) on work-related upper limb disorders (WRULDs.) This report reached the following conclusions:

1. WRULDs are a significant problem and there is a credible biomechanical pathogenesis for some WRULDs.
2. The epidemiological evidence shows a strong positive relationship between (some) WRULDs and a number of work factors, especially for high levels of exposure.
3. Psychosocial and work organisation factors are important, especially control over work, perceived demands and social support.
4. With respect to the potential for intervention, there is suitable evidence from both controlled and uncontrolled studies that work system interventions were effective for reducing the problem and that such interventions were most likely to be successful amongst workers in high risk exposure groups.
5. The focus for successful interventions should be on work organisation interventions and work place interventions, not solely on worker interventions (i.e. training/work hardening.)
6. It was also considered prudent to reduce both discomfort and fatigue.
7. The potential benefits from work system interventions are supported by scientific knowledge.

The scientific literature shows the benefits of primary prevention, and the need to emphasise and focus on this, seems inescapable. Also, in redirecting effort from primary prevention to treatment and rehabilitation, there is the potential to send an unfortunate message that "fixing the broken worker" is an acceptable alternative to preventing the damage in the first instance. The long term benefits of treatment(s) and prevention for active episodes is unclear, especially when workers return to high risk jobs. Such a strategy also increases the likelihood of legal action with respect to negligence and breach of statutory duty.

STRATEGIES FOR PREVENTION

There seems to be general recognition that a systems ergonomics approach based on a

participatory model that engages with key stakeholders is important. This is demonstrated by the key elements identified for ergonomic intervention. These include commitment from senior management, worker involvement, risk assessment, control measures and instruction and training. Recent publications by the HSE (e.g. HSG60, 2002) provide a good basis for developing a preventative strategy at a local level.

TOOLS FOR ASSESSING RISK AND EXPOSURE IN THE WORKPLACE

The recent EU report (Buckle and Devereux, 1999) also considers the ability of practitioners to assess both risks and interventions. It identifies the need for practitioner user-friendly assessment tools (e.g. Quick Exposure Check (QEC) Li and Buckle, 1998) as well as the desirability of health and surveillance programmes. More recently, Fallentin et al (2001), in a report for the Nordic Council of Ministers, reviewed and evaluated 24 standards/guidelines concerning physical workload. They used criteria developed for establishing scientifically good and practical standards. The criteria used were based on: scientific coherence; effectiveness with regard to prevention of occupational disease and accidents; and usability for practical implementation. They found that standards divided into 2 groups according to their level of accuracy. One group of standards presented *quantitative* guidelines for specific exposures with precise and numeric criteria. The other group was process type standards presenting mainly *qualitative* guidelines and focussing on a program approach. Elsewhere, the Italian Society of Occupational Medicine and Industrial Hygiene (SIMLII) is preparing guidelines for Upper Limb Musculoskeletal Disorders. These cover the traditional areas of risk assessment and health surveillance, but contain suggestions on educational and legal aspects too.

In the UK, QEC is undergoing further developments to ensure it includes current knowledge with regard to psychosocial factors whilst remaining a tool designed using a participatory approach and driven by practitioner needs (see <http://www.eihms.surrey.ac.uk/robens/erg/tool.htm>). It continues to differ from other tools in that it assesses exposure and changes in exposure to risk rather than making a formal risk assessment.

Other more traditional physical risk assessment tools such as Manual Handling Assessment Charts (MAC) have recently been developed by the HSE (Monnington et al, 2003) for use by the inspectorate. This tool, designed to assess risk following the current Manual Handling Guidance, has yet to be tested for usability with a wider, general health and safety practitioner group.

THE FUTURE

There are a number of obvious challenges we still face. These include:

Understanding the integration and interaction of risk factors, particularly physical and psychosocial (Devereux et al, 2002) and applying these to risk assessment.

Understanding the nature and importance of the interactions between (potentially) co-existing conditions, notably stress and MSDs (Devereux and Buckle, 2000).

The need to understand the capacities and capabilities of those with pre-existing msd conditions (e.g. schoolchildren entering the workforce)

Providing ergonomics advice and understanding to those who remain at or return to work with diminished capacities, particular with respect to their ability to withstand exposure to known risk factors (physical and psychosocial.)

Further, regulations are also needed. In May 2001, partly as a response to the report on upper limb disorders cited above (Buckle and Devereux, 1999), the Advisory committee on Safety Hygiene and Health Protection at Work 15/5/2001 recommended to the European commission that: "*consideration should be given to a further regulatory initiative.*" Such an initiative would, we feel, be welcome.

CONCLUSIONS

The extent of the problem and the need to develop appropriate strategies is evident. The setting of targets linked to absence from work in the UK is ambitious and may direct effort away from primary prevention and towards rehabilitation and return to work.

Secondary prevention should be viewed as a complementary approach that takes careful consideration of both scientific understanding and legal duty.

The requirement for risk assessment at the level of the worker and workstation should not obscure the need to consider a wider ergonomics approach to work systems, organisational design, use of technology and the work environment.

Greater adherence to the ergonomics process in design and assessment of work systems would seem the most likely strategy for securing long term primary prevention of these disorders within the UK, and elsewhere.

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