

**Effective Disability Management and  
Return to Work Practices:  
What can we learn from low back pain?**

Prepared by

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### **Introduction**

Work-related disability has a negative effect on both employees and employers. Across Canada, one worker in 15 is injured on the job each year. In Ontario alone 500 lost time injuries occur each day and 70 of these lead to permanent impairment. For the workers and their families, these events cause pain, suffering and anxiety. For employers, these disabilities increase business costs through disability insurance premiums, workers' compensation premiums (frequently based on a company's safety record) and worker replacement costs.

Disability management and appropriate return to work programs make sense from every perspective, and these initiatives are growing in frequency as both employers and employees recognize the benefits. But as they become more prevalent it is critical that these programs are implemented in a way that ensures their success.

The paper will proceed as follows: First, the economic and legislative issues concerning return to work in the current Canadian context will be described. Second, drawing on up-to-date research evidence, a review of the most effective ways of reducing work-related disability caused by back pain, both clinically and at the workplace, will be discussed. Third, the prevalence and quality of workplace-based disability management programs in Canada will be presented, along with possible factors that could instigate an improvement in the prevalence and quality of these return to work programs.

The focus on back pain is appropriate because of the frequency of the problem and the availability of research findings. While these cases constitute the single largest cause of work-related disability there is evidence that workers with musculoskeletal problems like low back pain have lower return to work rates than workers with other conditions.<sup>1</sup> Thus the resultant disability is even more significant than the simple prevalence of the condition indicates. It is therefore not surprising that most of the research to date concerning disability management programs has focussed on individuals with back pain.

Despite this focus on back pain, it is important to recognise that many of the principles around effective re-integration of these workers will be helpful when addressing the re-employment of other individuals with work-related disability.

### **A. The Scope of the Issue**

Disability and associated lost productivity are significant cost drivers for employers. In Canada, an average of 9.5 days per employee per year are lost due to disability.<sup>2</sup> Employers typically provide benefits coverage under short-term and long-term disability as well as workers' compensation plans. A recent survey of 305 Canadian employers,<sup>3</sup> showed that the average costs of these programs equals 5.6

percent of payroll. Indirect costs such as recruiting and training replacement workers, reduced productivity due to inexperience, overtime pay for other employees and reduced quality in product or service, may reach twice the direct costs. As a result, it is estimated that Canadian employers pay between \$10 and \$20 billion each year in disability-associated expenses.<sup>2</sup>

Much of the attention and research to date has focused on workers' compensation claims, which generally account for over 40 percent of the direct disability costs. In 1996, there were 380,000 eligible workers' compensation claims in Canada requiring time off work.<sup>4</sup> Over 60% of these cases involved musculoskeletal disorders (WMS), an umbrella term encompassing sprains, strains or inflammation of the muscles, tendons, or ligaments of the back, neck or arms. Back sprains and strains are the largest single diagnostic group. While the absolute number of claims and the workplace accident frequency rate has been declining over the past ten years, costs per claim have not gone down. At the same time, compensation premiums have been more directly pegged to employers' safety records, so that many more companies are beginning to pay rates related to their own accident experience.

Apart from humanitarian concerns and financial incentives, employers have some legal responsibilities related to the return to work of an injured worker. In Canada, labour and human rights statutes protect injured workers from dismissal based on disability and some provinces, notably New Brunswick, Quebec and Ontario, have specific provisions to inhibit employers from dismissing employees who become disabled. In Ontario, larger employers are required to re-employ injured workers who attempt to return to work within two years of work-related injury. Re-employment must be provided to their former (or a comparable) job if the worker is medically capable, or to the first suitable job available, if s/he is not.

There are still other compelling reasons for employers to implement effective disability management and return to work programs. The presence of such programs can contribute to a safer work environment thus reducing the incidence of other injuries involving time lost from the job<sup>5</sup> and at the same time reducing employer costs. Employers and employees both gain from maintaining the employment of a skilled workforce.<sup>6</sup> In addition the perspective of employees, successful programs can assist with re-employment, help with financial needs, and reduce the negative personal family and social consequences of being absent from work. Workers have more commitment and a greater sense of security in a workplace that will provide help and support in the event of disability.

Currently however, employers and the disabled worker are confronted with an increasingly confusing array of service providers offering to assist with rehabilitation and return to work issues and questions about the effectiveness of both clinical and workplace interventions abound. The role of research evidence in decision making thus becomes increasingly important as the range of options proliferate and the costs rise.

## **B. The Evidence From Low Back Pain Studies on Disability Management and Return to Work Practices**

Across the country, musculoskeletal disorders, including back sprains and strains, constitute more than 60% of work-related disability claims. An examination of what we know about how work-related low back injuries should be handled can provide useful insight into the effective management of other work-related disabilities.

The central goal of managing disability is to return the injured worker to his/her job as early as is safely possible. Researchers generally agree that employee disability caused by work-related events is the result of a complex interaction of a number of factors including: the worker's condition and how it is managed; the worker's physical capabilities; ergonomic workplace demands; a wide range of psychosocial factors; and the broader socio-economic and legislative environment.<sup>7</sup>

The evidence on the effectiveness of two of these, clinical interventions and the workplace response to disability in the return to work process is discussed below.

## Clinical Interventions

While a significant and evolving body of evidence<sup>8,9</sup> exists in this area, it must be clearly understood to ensure that the most appropriate clinical practices are adopted by health care providers. Research suggests that *when* an intervention is offered for such cases is as important as *what* is done.

A recent Institute for Work & Health review<sup>10</sup> of research focussed on these components of interventions:— the timing of an intervention, with the need to match the clinical intervention to the phase of recovery<sup>a</sup>; and the place at which an intervention occurs and the importance of a tie-in to the workplace, being highlighted.

Building on the work of the Quebec Task Force on Spinal Disorders<sup>11</sup> and others<sup>12</sup>, Frank et al<sup>9</sup> identified three stages in the recovery from low back pain. Stage 1 - the acute stage - extends from symptom onset up to three or four weeks later. The majority of cases recover in this phase. The second stage - the subacute stage - lasts from about 3 - 4 weeks up to 12 weeks after symptom onset. During this time the rate of recovery slows considerably. After 12 weeks, if there has been no significant recovery, many experts suggest that the third stage - early chronic pain syndrome - has begun. Not surprisingly different clinical interventions have been shown to be more or less effective depending on when during the course of recovery they are initiated.

### *Acute Phase*

In 1994, the U.S. Agency for Health Care Policy and Research (AHCPR) released guidelines for the treatment of acute low-back problems (Bigos, 1994). (Back problems were defined as activity intolerance due to back-related symptoms and “acute” as limitations of less than 3 months duration). The guidelines recommend that in the absence of clinical indications of serious underlying conditions such as cancer, infection or a fracture, diagnostic tests such as X-rays are *not* necessary. The AHCPR guidelines recommend a conservative approach within *the first four weeks* that includes health care providers offering the patient reassurance about the good prognosis, promoting activity and using over-the-counter medication and, in some cases, spinal manipulation for symptom relief. These recommendations suggest minimal clinical involvement early on. Too much intervention too soon may not be helpful. It is important to acknowledge that the conclusions of these evidence-based guidelines are very similar to guidelines developed in a number of other jurisdictions for the management of low back problems.<sup>13-15</sup>

While there is some evidence that a few clinical interventions initiated in the first four weeks after injury, may be helpful in the short term for reducing pain and mobility limitations, there is no evidence to suggest they accelerate a safe return to work. For example, evaluation of a Workers’ Compensation Board-sponsored program in Ontario<sup>16</sup> followed 1,500 workers with work-related musculoskeletal disorders (WMSD), including over 800 low back pain cases. The authors concluded that a daily, active and intensive intervention program of exercise and education for workers within the first four weeks of injury showed no additional benefits in terms of duration on benefits, pain, functional status or quality of life compared to usual care available in the community over a one-year follow-up period. These results do not stand in isolation. A number of other methodologically strong intervention studies<sup>17, 18</sup> which have been conducted since the publication of the 1994 AHCPR Guidelines further substantiate the main

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<sup>a</sup> Phase of recovery refers to the amount of time that has past since symptom onset and the speed with which improvement occurs.

message of the Guidelines, that clinical intervention in the initial acute phase are by and large ineffective in reducing work-related disability as measured by return to work.

### *Subacute Phase*

However, when clinical interventions are indicated, such as during the sub-acute phase, or 4-12 weeks post-symptom on-set, two studies,<sup>19, 20</sup> in particular found effective strategies for managing back problems. Although these strategies encompass different mixes of clinical and occupation treatments both were tied to the workplace and the evaluation of the worker's job was an integral part of the intervention. While expensive in their own right, these programs led to very significant reductions in time off work and, as such, present a considerable cost saving overall. Based on this evidence it appears that workers who have not recovered within four weeks of injury should undergo a more comprehensive and integrated case management approach including appropriately targetted clinical interventions beginning approximately four to six weeks post-injury.

### *Chronic Phase*

Evidence about the effectiveness of multidisciplinary approach on return to work in the management of chronic low back pain is beginning to emerge. Unfortunately, the methodologically higher quality studies suggest more modest effects in improving return to work outcomes than earlier studies suggested.<sup>21-24</sup> Nevertheless, this appears to be a useful line of inquiry for managing this small (less than 10% of cases) but very expensive and disabled subset of the population.

In summary, the evidence suggests that clinical interventions on their own may not be particularly helpful in facilitating return to work, particularly in the first few weeks after symptom onset, and that matching the level of intervention to the phase of recovery is important. The connection of clinical interventions to a workplace goal in the subacute phase is critical for safe and timely return to work. In the chronic stage a multidisciplinary approach which again has a job reintegrate and follow-up component also shows some benefit.

While the studies cited are based on workers with low back problems, the general conclusions can be seen as applicable in a wider range of musculoskeletal conditions.

## **Workplace Response to Disability**

Despite the many return to work programs available, there is only limited evidence of what constitutes an optimally effective workplace response to disability. Many relevant studies on this topic are before-and-after studies of poor scientific quality. However, from a review of the relevant literature to date, as well as on-going qualitative research from one of the authors<sup>b</sup>, the following characteristics appear to be particularly important for the safe and timely return to work of workers with back pain.

- supportive workplace policies and climate;
- communication and cooperation among the worker, his/her health care professional, union or worker representative and the workplace;
- joint labour-management cooperation;
- offers of modified work (preferably of the original job);
- educational programs for management and supervisors; and,

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<sup>b</sup> This qualitative research work is part of a larger study conducted by The Institute for Work & Health along with researchers from Manitoba and Quebec and funded by one of the Canadian Network of Centres of Excellence initiatives.

- on-going evaluation of the program.

### *Development and implementation of return to work policies*

Employers need to develop explicit policies for disabled workers that commit the workplace to the reintegration of injured workers. Policies can cover such issues as: salary replacement, job accommodation, transitional employment, budgetary responsibility and vocational training when necessary.<sup>26</sup> Such policies have a number of helpful functions. With such policies in place, workers are more likely to approach their employer to help them return to work. Furthermore, supervisors, who would authorize return-to-work accommodation, are also more likely to believe that it is within their power to change work requirements. When the policy is tied to the performance appraisal of the supervisors, the positive results are even greater. However, problems can arise when supervisors know that top management support disability management, but are concerned about how the productivity of their own department may be jeopardised by reintegrating workers are not yet “100%”.<sup>25</sup> For unionized workplaces, it is desirable to achieve joint management-labour collaboration in the development and implementation of disability management policies and procedures.<sup>26, 27</sup>

### *The Workplace Climate is Key*

A workplace may appear to have comprehensive return to work procedures in place, but if the program operates in an adversarial context, these efforts are unlikely to fulfil their main aim of getting injured workers back on the job in a safe and timely way. Adversarial circumstances may include situations in which injured workers are treated with suspicion as to the legitimacy of their claims, or when workers believe that the priority of management is only to maximize profits with little regard for worker well-being. Studies by the Institute and others, examining such issues as the perceived legitimacy of injuries and worker’s income security, have found that these factors can lead to damaged relations in the workplace and/or emotional stress and often have a negative impact on the worker’s early return to work.<sup>28-30</sup>

The importance of the worker's trust and buy-in to the process (as well as that of his/her supervisor, union representative and co-workers) cannot be underestimated. Disability management programs must be built on the principle of employee advocacy, with the idea that what is good for the employee will ultimately benefit the company.

### *Joint Labour-management Cooperation*

Literature on disability management programs show the importance of the joint commitment, support and active participation of both labour and management. Cooperation between labour and management is critical to avoid the development of adversarial relationships between worker and employer.<sup>27, 31</sup> Jointly, labour and management can develop appropriate policies and procedures, and address work environment issues which contribute to workplace injury and disability.

### *Communication is Important*

A critical component of successful return to work programming is open communication between the worker, his/her health care provider, the union representative, and the person within the company responsible for the return to work process. If the worker feels needed in the workplace and is motivated to return to work, this crucial communication link is more likely to be established. One unionized company found that using a union representative as a contact for the health care provider proved to be fruitful in that organization's return to work program.<sup>30, 32</sup> In addition, for larger firms, effective communication between departments within the firm is important for efficient return to work.<sup>26</sup>

### *Offering Modified Work*

An important component of disability management programs is the provision of modified work for injured workers. Modified work can mean either a modification of the original job to reduce physical loads, reduced hours or the transfer of the recovering worker to a less demanding job. Offering modified work reduces disability-related costs and can be favourable to the worker's effective recovery from back pain. Such policies also ensure that the company is fulfilling its obligations under workers' compensation legislation and under the human rights code. An Institute for Work & Health study found that injured workers who were offered reduced hours, a flexible schedule, a lighter job, or equipment or ergonomic changes to help them return to work had markedly reduced time on benefits compared to workers with similar injuries who were not offered these options.<sup>33</sup>

A permanent modification of the original job appears to be particularly effective in facilitating return to work, and assists in reducing the likelihood of recurrent episodes of back pain and related work absence. In contrast to temporary stop-gap measures such as reduced work hours or a temporary job change, there is less need to hire temporary replacement workers or to increase the work load of the other employees.<sup>26</sup>

Two types of work-related causes of back pain have been identified in the scientific literature. One is physical workplace factors such as work-related lifting and forceful movements, whole body vibration, heavy physical work and awkward postures. The second is workplace-related psychosocial factors such as intensified workloads and/or poor job control.<sup>34</sup> In theory, one or both of these two types could be addressed to modify the job and facilitate the return to work of an injured worker.

An example of a highly effective intervention for injured nurses in Manitoba,<sup>5</sup> resulted in a decrease in the number of back pain injuries, a decrease in time lost and a reduction in workers' compensation expenditures. The study found that employees themselves were the best resource to help identify the work modifications required to help them return to work most expeditiously.

A recent study of 175 employees in different workplaces in Sherbrooke, Quebec, is another example which shows very promising results for participatory ergonomic interventions involving permanent workplace modification.<sup>19</sup> Workers with back injuries who received on-site ergonomic interventions, were absent from regular work only half as long (60 days, on average, instead of 120 days) as those workers who received 'usual care', (i.e. whatever test, treatment or referral to a specialist that their family physician thought necessary). Workers receiving the ergonomic intervention also reported less pain on a subsequent interview, one year after the injury. The ergonomic intervention consisted of a work site evaluation for workers still absent from work six weeks after injury. The evaluation involved the ergonomist and union and employer representatives to determine the need for job modifications. Then this group, plus the injured worker and his/her supervisor, met to discuss the situation and submit a precise solution to the employer.

### *Educating Management and Supervisors*

In light of the evidence that suggests that workplace culture is an important determinant of the success of return to work programs, implementing an educational program to inform management and first-line supervisors about the disability, in this case back pain, can be beneficial.<sup>35</sup> Education should be directed at providing a more supportive environment for return to work and encouraging a more empathetic response to injury. An Institute for Work & Health study looking at workers with back pain revealed that those with lower employment status and less seniority experienced particularly negative reactions from their workplace concerning their injury.<sup>28</sup> Thus, it is important that all levels of management, including front-line supervisors, have an understanding of the disability. The educational pro-

gram needs to convey that back pain is very common— even more common than the reporting at the work site would indicate — and that malingering is rare.<sup>35</sup>

### *Ongoing Evaluation of the Program*

Like most programs, disability management initiatives require on-going evaluation to ensure that the program operates effectively and weaknesses in its design or operation are identified and corrected.<sup>36</sup> It is important, however, that the outcomes of the program are not measured too narrowly. Returning workers to modified work (or even to their regular job) is only one outcome. Workers may have recurrent episodes of pain and/or time off work, and this is particularly true for those with back injuries who are more likely to have recurrences than those with other types of injuries.<sup>6</sup> Thus the injured worker's improvement on measures, such as pain severity, should also be assessed as a component of the evaluation.

### *Return-to-work programs in smaller sized firms*

As noted by Drury,<sup>37</sup> smaller-sized firms face particular challenges when it comes to implementing sound disability management practices. First, smaller firms lack the economies of scale found in larger firms — thus hiring specialised personnel is more problematic. Furthermore, it appears that smaller-sized firms have much less information about disability management practices than large firms.<sup>37</sup>

Yet, the extent of the difficulties in returning to work within smaller firms may be overstated and smaller-sized firms do offer some advantages in terms of return to work programs. Small-scale operations may be more flexible and informal in their work arrangements, which could facilitate flexible or reduced hours, job sharing, or the redefinition of jobs to accommodate a disabled employee.<sup>37</sup> Second, the relatively shorter chain of command in small firms makes it possible for employees with disabilities to discuss their needs directly with those making the ultimate decisions in the company. A study of more than 200 companies by Shoemaker,<sup>38</sup> found that decreased bureaucratization (in which bureaucratization was defined by: division of labour, positional hierarchy, formality and written rules) was associated with greater numbers of implemented return to work programs.

A US study<sup>39</sup> found that small sized firms (fewer than 250 employees) are not more resistant to having a policy for early return to work. However, larger firms do have more specialized staff, and a greater diversity of jobs. Thus, finding transitional jobs may be more difficult in smaller sized firm, but providing part-time work, light duties, or a modification of the original pre-injury job should be as possible in smaller sized firms, as in larger ones. These suppositions are indeed supported by the evidence in this American study.<sup>39</sup> However, it may mean that small employers require external specialized personnel to help implement and facilitate these processes.

Nonetheless, it is important to recognise the distinction between small employers who have marginally fewer than 250 employees, and employers with fewer than five employees. The latter may face additional difficulties, and are unlikely to be aware of the existence or importance of optimal return to work programs. There are approximately 575, 593 employers with 5 or less employees in Canada, out of a total of 964, 789 businesses.<sup>40</sup>

Employer consortium approaches have been piloted in the USA and offer the potential of overcoming some of the obstacles associated with smaller firms. The consortium seeks to provide economies of scale in disability management services by bringing together a group of employers, usually under the auspices of a non-profit “lead organisation”. Among other things, employer consortia can provide (a) employer education services or (b) direct case management.



An IWH study conducted in Ontario, found that smaller firms were reported to provide arrangements to help an injured worker back to work less frequently than larger firms. The study sample consisted of about 1500 workers who had suffered work-related soft tissue injuries. In the sample, 34% of those had worked in firms of less than 5 employees, reported that they were offered arrangements to help them return to work at some point in the year following their injury. For firms that were larger the percentages are as follows: 31% (firms with 5-19 employees); 41% (firms with 20-99 employees); 47% (firms with 100-999 employees); and 48% (1,000 or more employees).<sup>33</sup>

### **C. Current Versus Optimal Practice: Prevalence and quality of return to work programs in Canada**

There is currently little reliable data on the prevalence of return to work employment policies, their adequacy or effectiveness in Canada. With few exceptions, evaluations have been done in house and are primarily concerned with financial savings for the company. However, we examined a few available sources.

In one study of 305 Canadian employers,<sup>3</sup> 80 percent of respondents reported having transitional or modified return to work programs for employees with occupational injuries. By contrast, 74% offered modified work to workers who had non-occupational injuries. In a representative sample of approximately 1,500 Ontario workers with a variety of work-related soft tissue injuries,<sup>33</sup> an Institute for Work & Health study found only 44.6 percent of workers reported that they had been offered any type of arrangement to help them return to work, at one year post-injury. Beyond the difference in respondent groups one possible reason for this discrepancy is that companies may have return to work policies in place, but may not be actively arranging modified work for every one of their injured employees.

Other researchers<sup>38</sup> studied the characteristics of companies in the United States in which early return-to-work programs existed, and found that acceptance of such programs hinged on several factors, but was most directly linked to the beliefs of key corporate executives.

With regard to the quality of return to work programs again, there is limited documented evidence on those currently offered in Canada. However, one important element of success appears to be increased communication and understanding among the various players — the worker, the health care provider and the workplace. From the Watson Wyatt survey mentioned earlier, 43% of employers reported that educating medical providers about the workplace was a component of their disability management program. Other key components of an optimal program include: educational initiatives (these were offered to supervisors and managers by 31% of employers); and ongoing evaluation of the disability management program by tracking return to work results (this was a feature of 54% of existing programs).

A permanent modification of the pre-injury job is the most advantageous form of modified work. Yet in the Institute for Work & Health study of 1,500 Ontario workers mentioned above, only 3.5 percent reported that they were offered layout or equipment changes to their work station. Temporary modifications such as reduced hours, a flexible schedule and lighter jobs were reportedly offered to 15 percent, 13 percent and 28 percent of workers respectively.<sup>33</sup> Neglecting to alter the pre-injury job leaves open the possibility for recurrent episodes of back pain in the future.

Union workplace representatives have suggested that in settings where less-than-optimal return to work programs are in place (where direct cost savings are the focus), recurrences in injury may be more frequent, income support for subsequent time loss lower and termination of employment more likely.

The evidence indicates that there are still numerous companies which do not have any return to work programs in place. Furthermore, for those companies that have programs, the program quality can differ tremendously from one company to another. These findings were epitomized at a recent National

Roundtable On Employee Health hosted by the Institute for Work & Health. At one extreme, a company was so progressive that their on-site ergonomists were an intrinsic part of the job design team, and work station changes were made only if they satisfied ergonomic specifications and accommodated the requirements of the individuals that worked there. Further, new health and safety concerns, were addressed daily by the plant manager. At the other end of the spectrum, a union representative had dealings with a firm whose modified work program was so thoughtlessly executed, that it was likely exacerbating the injuries of the recently injured workers.

Given the range in both the prevalence and quality of return to work programs offered by employers, attention should focus on the factors (both internal to the firm and external) which could influence more companies to implement high quality and safe return to work programs. These could include:

- special programs targeted to help smaller firms
- more stringent legislation
- additional financial incentives
- collective bargaining
- programs geared at educating corporate executives

## **D. Conclusion**

Overall evidence suggests that an effective disability management program can help address many of the problems that we currently face in maintaining a healthy and involved workforce, yet many in Canada have not yet adopted the type of multi-faceted approach that is required for optimal return to work programs. The problem is complex and requires all those with a stake in the problem to bring their efforts to bear in a coordinated fashion to reduce the burden of occupational disability.

## **E. Key Issues:**

- Research into the effectiveness of clinical interventions suggest that both the timing and nature of the intervention are important.
- Matching the clinical intervention to recovery phase is important.
- Clinical interventions which include a workplace connection or goal appear more successful than clinical intervention on their own.
- Workplaces must develop supportive return to work policies and supportive responses to injury championed throughout the management structure including the very top levels.
- Cooperation and communication amongst all parties - injured workers, employer, labour, health care providers, and payers is imperative.
- Creative problem solving around provision of return to work programs is required especially in the area of small business.
- An underlying philosophy of prevention of incidents and disability is an important building block.
- Ongoing program evaluation is critical.
- The internal and external factors which could contribute to the widespread adoption and implementation of high quality workplace-based return to work programs in Canada should be further investigated.

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