

Return To Work Issues In The Industrial Population

Michael Schabacker, MD

Northern Rockies Regional Pain Center

Billings, MT

Workplace Injuries In The United States

- 4.1 million nonfatal workplace injuries and illnesses in 2006
- 3.9 million were injuries
- 2.1 million of the 4.1 million injuries and illness resulted in time away from work, job transfer and /or restrictions
- 2.0 million did not result in time off work

US Department of Labor 10-16-07; <http://www.bls.gov/iif/oshwc/osh/os/osnr0028.pdf>

Nonfatal Injury Rates Per 100 Full Time Workers In 2006

- 4.4 Nationally
- 7.0 Maine
- 6.9 Montana
- 6.6 Washington
- 6.2 Alaska
- 4.8 Wyoming
- 3.0 New York

Direct Cost Of Workplace Injuries

- Benefit payments under workers' compensation programs was \$55.3 billion in 2005
- Medical benefits accounted for \$26.2 billion
- Wage loss compensation accounted for \$29.1 billion

U.S. Social Security Administration Office of Policy;
www.ssa.gov/policy/docs/statcomps/supplement/2007/workerscomp.html

Indirect Costs Of Workplace Injuries

- Lost productivity
- Overtime
- Injury investigation
- Record keeping
- Training and replacement of employees
- Product damage
- Increased insurance premiums

Indirect Costs

- Estimated to be between \$2 to \$5 per for each \$1 of direct cost
- Indirect cost in 2005 may range from \$110.6 to \$276.5 billion based on reported direct cost of \$55.3

Montana Workers' Compensation Claim Data

Benefits paid to cover injured workers

Fiscal Year 2002

\$179,621,821

Fiscal Year 2003

\$200,415,727

Fiscal Year 2004

\$209,755,330

Fiscal Year 2005

\$210,193,923

Fiscal Year 2006

\$227,106,250

<http://erd.dli.mt.gov/annualrpt/ar07/Section%204.pdf>

Montana Workers' Compensation Benefits Paid in FY 2007 \$233,860,202

- Medical Payments
\$134,704,792

- Indemnity Payments
\$99,155,409

Distribution of Injury Location And Type For Reported Claims in Montana FY 2007

• Upper extremity	31.9%	• Sprain/rupture	42.8%
• Back	19.4%	• Cut abrasion	21.0%
• Head	10.9%	• Bruise/swelling	18.3%
• Lower Extremity	11.4%	• Occup Disease	3.5%
• Knee	7.8%	• Fracture	4.1%
• Wrist	4.6%		
• Multiple Parts	4.3%		

There Are Multiple Factors That Influence the Potential For Return to Work

- Length of time off from work
- Injured worker's satisfaction with their job
- Compensation payments
- Work relatedness of injury
- Pending litigation
- Type of injury

Return to work rates decrease to 50% if the injured worker is off work for 6 months, 25% if off for 1 year and 0% if off for 2 years.

McGill JM. Industrial back problems. A control program. J Occup Med 1968; 10:174-178.

At 6 weeks, most people with LBP have RTW. After 3 months, the percentage of patients who remain off work is nearly constant. The probability of RTW is less than 25% after 1 year and 0% at 2 years.

Waddell G. A new clinical model for the treatment of low back pain. *Spine*

1987;12:632-44.

Workers who “hardly ever”
enjoyed their work were 2.5
times more likely to report a back
injury than workers who “almost
always” enjoyed their work.

Bigos ST, Battie M, Spengler DM, *et al.* A prospective study of work
perceptions and psychosocial factors affecting the report of back injury.
Spine 1991;16:1-6.

Workers' satisfaction with their employer's treatment of their disability claim is more important in explaining RTW than satisfaction with healthcare providers or expectations for recovery.

Butler RJ, Johnson WG, Cote P. It pays to be nice: employer-worker relationships and the management of back claims. *J Occup Environ Med* 2007 Feb;49(2):214-25.

Litigation often slows recovery,
limits response to treatment and
complicates attempts to return the
injured worker to work.

Schuchmann J: *Physical Medicine and Rehabilitation*. 2nd
Edition. Philadelphia, W.B. Sanders Company, 2000

2932 Workers' Compensation Claims For Spinal Injuries Evaluated For Disability

- 91% of the claimants represented by an attorney were not working.
- 77% of claimants not represented by an attorney were working.
- Clearly demonstrated the impact of jurisgenic factors on prolongation of medical care and delay in returning to gainful employment.

Haddad GH. Analysis of 2932 workers' compensation back injury cases. The impact on the cost to the system. Spine. 1987;12(8):765-9.

Prognostic Factors of Long-Term Disability

- Delay between injury and first medical treatment
- Older age
- Construction industry
- Longer time from medical treatment to claim filing
- Back injury
- Dependents
- Smaller frame size
- Higher unemployment

Stover B et al. Prognostic factors of long-term disability in a workers' compensation system.
J Occup Environ Med. 2007 Jan;49(1):31-40.

Primary Factors Identified For A Predictive Model of Disability Due to LBP

- Work Environment
- Perception of compensability
- Duration of current episode of LBP

Frymoyer, JW. Predicting disability from low back pain.
Clin Orthop. 1992 Jun;(279):101-9.

In a study of 240 injured workers,
half of the workers experienced
employer indifference or hostility in
response to their attempts to return
to work.

Strunin L, Boden LI. Paths of reentry: employment experiences of injured workers. Am J Ind Med. 2000. Oct;38(4):373-84.

Comparison of LBP patients based upon receipt of workers' compensation benefits

- Demonstrated 33% less objective evidence of impairment than non-compensated patients.
- Received twice as many physical therapy treatments as the non-compensated group.
- Demonstrated long-term improvement in 44% fewer cases when compared to the non-compensated group.

Railroad workers who suffered
lumbosacral strain on the job
averaged 14.9 months off work.

Lumbosacral strain suffered when
not at work in the same population
averaged only 3.6 months off work.

Sanders RA, Meyers JE. The relationship of disability to compensation status in railroad
workers. Spine 1986; 11:
141-143.

Railroad workers with back surgery necessitated by a work injury were off work on average 9.3 months after surgery.

Railroad workers requiring back surgery for an off-duty injury returned to work on average 4.4 months after surgery.

Factors Contributing To Disability Exaggeration

- Fear of reinjury.
- Overly protective spouse.
- Physician warning against painful activity.
- Sick-role familiarity.
- Anxiety.
- Depression.
- Fear of dismissal or discrimination on RTW.

Hazard RG, Bendix A, Fenwick J: Disability exaggeration as a predictor of functional restoration outcomes for patients with chronic low-back pain. Spine 9:1062-1067, 1991.

- 1595 consecutive injured workers referred for rehabilitation were evaluated for psychiatric disorders.
- 64% of injured workers were diagnosed with at least one current psychiatric disorder.
- 15% of general population had at least one current psychiatric disorder.
- Prevalence of psychiatric disorders were elevated only after the work-related disability.

Dersh J, Gatchel RJ, Polatin P, Mayer T. Prevalence of psychiatric disorders in patients with chronic work-related musculoskeletal pain disability. *J Occp Environ Med.* 2002;44(5):459-68.

Physical Factors Assumed To Complicate Return to Work

Poor endurance

Deconditioning

Loss of flexibility

Reduced joint range of motion

No statically significant association
between disability and aerobic
fitness was demonstrated.

Fear of reinjury correlated
significantly with disability.

Verbunt JA, Seelen HA, Vlaeyen JW et al. Fear of injury and physical
deconditioning in patients with chronic low back pain. Arch Phys Med
Rehabil. 2003 Aug;84(8):1227-32.

Fear of reinjury leads to avoidance of activity, impaired pain coping strategies and ultimately chronic disability.

Rehabilitation efforts should, at least in part, should address the fear of reinjury and to modify pain-coping strategies

Prognostic Factors Associated With Return to Work

- Fear-avoidance belief is the main prognostic factor for not returning to work.
- Subjective health complaints and low coping were significant risk factors for not returning to work.
- Interventions for injured workers who are not at the worksite should target fear of RTW and illness perception.

Oyeflaten I et al. Prognostic factors associated with return to work following multidisciplinary vocational rehabilitation. *J Rehabil Med.* 2008;40:548-554.

There is evidence in patients with sub acute and chronic nonspecific low back pain, that an exercise program leads to return to work earlier, with less perceived pain, improved fitness and sense of well-being.

Nordin M, Campello M. Physical therapy: exercises and the modalities: When, what and why? Neurological Clinics of North America 2000;17: 75-89.

Exercise therapy is ineffective for acute LBP (less than 6 weeks).

Intensive exercise was shown to provide positive results (improved strength, less disability and pain) in patients with chronic LBP.

Faas A. Exercises: which ones are worth trying, for which patients, and when? *Spine* 1996;21: 2874-2879.

There is no evidence that physical modalities improve short-term or long-term treatment outcomes in patients with nonspecific LBP.

There are no specific recommendations concerning type, frequency, duration, and intensity of exercises to address chronic LBP.

Nordin M, Campello M. Physical therapy: exercises and the modalities: When, what and why? *Neurological Clinics of North America* 2000;17: 75-89.

Rehabilitation of the Injured Worker with the Goal of Return To Work

- Outpatient Therapies
- Work Conditioning
- Work Hardening

Work Conditioning

- Structured Reconditioning
- Physical And Occupational Therapists
- 3 to 5 Days per Week
- Usually Last 3 To 5 Weeks
- Includes Work Simulation
- Majority Of Motivated Workers Return To Work

Work Hardening

- Multidisciplinary Rehabilitation Approach
- PT, OT, Psychologist, Physician, Vocational Counselor And Others As Indicated
- 5 Half Or Whole Days Per Week For Up To 6 Weeks
- Work Simulation
- Emphasis On Psychological Factors
- Costly

90 patients with disabling LBP and felt to have poor prospect for RTW.

Functional restoration program with behavioral support for 53 hours per week for 3 weeks. Followed for 1 year after completion of the program.

- 81% of program graduates had RTW.
- 40% of program dropouts had RTW.
- 29% of control patients had RTW.

Hazard R, Fenwick J, Kalisch s, *et al.* Functional restoration with behavioral support. A one-year prospective study of patients with chronic low-back pain. *Spine* 1989;14:157-161.

Systematic Review Of RCT Of The Effectiveness Of Physical Conditioning Programs In Reducing Time Lost From Work

- Physical Conditioning programs that include a cognitive-behavioral approach, and are closely associated with the workplace, can reduce the number of sick days lost by workers with chronic back pain.
- For workers with chronic back pain, specific exercises are less effective in reducing days lost than physical conditioning programs.

The Role Of The Physician In RTW

- Physician proactivity concerning RTW may influence the duration of disability within 30 days of the injury.
- Workers with a proactive primary treating physician were 34% more likely to get off disability-benefit status.
- Workers who were told they were ready to RTW were 60% more likely to do so at any time than workers not receiving this recommendation.
- Workplace factors (i.e. job satisfaction, length of time at work, supervisor support) were clearly demonstrated to be more important than physician factors.

Dasinger L, Krause N, Thompson P *et al.* Doctor proactive communication, return-to-work recommendation, and duration of disability after workers' compensation low back injury. *J Occup Environ Med.* 43:515-525, 2001.

Recommendation for Return To Work

- Consider need for ongoing off-duty status at each office visit.
- Consider light duty as an option for early return to work.
- Perpetuate the idea that RTW is a goal of treatment.
- Distinguish between pain and harm.
- Gradual return to work and anticipate increased pain.
- Work restrictions.
- Vocational Rehabilitation.

240 Workers With Time Loss From A New York Utility Due To Back Injury.

- 43% of injured workers were returned with work restrictions.
- The decision for work restrictions was related to job category with craftsman and labors released with restrictions 50% of the time and managers and office workers 33%.
- Time to RTW with restrictions was 14 days and 15 days without restrictions.
- Median duration of restrictions was 32.5 days.

Hiebert R, Skovron ML, Nordin M, Crane M. Work restrictions and outcome of nonspecific low back pain. *Spine* 2003;28:722-728.

Restrictions Prescribed

- Only occasional pushing or pulling or lifting up to 10-25 lbs 67%
- No work requiring repeated stair or ladder climbing 64%
- No prolonged walking or standing (25% of work hours) 62%
- Only occasional pushing or pulling or lifting up to 45-60 lbs 25%
- Sedentary work only 15%
- Work requiring use of arm or hand 3%
- Not to operate motor vehicle 2%
- No prolonged walking or standing (50% of work hours) 2%
- No prolonged sitting 2%
- No work requiring repeated stooping 2%
- No work in crawling, kneeling or cramped positions 2%

Conclusions Of Hiebert Study

- Return to work rates were the same between the group with restrictions and the group without restrictions.
- Work restrictions appeared to impart only a modest, if any, benefit relative to recurrence of LBP.
- Temporary work restrictions remained in place for longer than 6 months in 30% of all cases.

Hiebert R, Skovron ML, Nordin M, Crane M. Work restrictions and outcome of nonspecific low back pain. Spine 2003;28:722-728.

Vocational Rehabilitation

- Permanent medical impairment and inability to return to TOI job or similar job with similar physical requirements AND
- Have a wage loss due to injury OR
- Have at least 15% whole person impairment and no wage loss
- Tuition, books, fees and other cost associated with education

“The balance of available evidence suggests that clinicians generally should adopt a proactive approach to rehabilitation by recommending, whenever possible, early return to normal rather than restricted duties as well as complementary psychosocial advice if the issue of chronic disability is to be successfully tackled.”

Burton A and Erg E. Spine update: Back injury and work loss. Spine 1997;21:2575-2580.

Psychosocial and work
environmental factors are far
more accurate predictors of
disability than physical factors.

Frymoyer, JW. Predicting disability from low back pain. Clin Orthop. 1992 Jun;(279):101-9.

Conclusion

- RTW issues have significant personal and financial costs.
- Psychosocial and work environment factors are more important than physical factors in patients who have not RTW within 3 months.
- Fear of reinjury is an important obstacle to timely RTW.
- Rehabilitation with a focus on intensive exercise, psychological support and early reintroduction to work with the least restriction on activities may have the best outcome.