THE ERGONOMICS PROGRAM AT THE WORKERS' COMPENSATION BOARD (WCB) ALBERTA – THE SYSTEMS APPROACH IN ACTION

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Abstract

The WCB – Alberta applied the National Institute for Occupational Safety and Health Elements of Ergonomics Programs to implement a systems approach to reducing injuries. A pilot was conducted with two departments over six month period in 1999. The pilot team included employees, supervisors, human resources and health and safety representatives. The methodology included reviewing department staff claim files, two focus groups (n=12) were conducted to elicit staff concerns regarding potential injury. A questionnaire was distributed to 128 staff with a response rate of 61% (n=78) to determine prevalence of issues. Finally, 16 staff were videotaped at their workstation and interviewed. The findings were consolidated and resulted in six major recommendations: improved reporting of symptoms, increase task variety, identify skill competency, manage workload, improve workstation design and improve physical fitness. The pilot resulted in decreased injury rates of 80% and 71% for the two respective departments.

Introduction

The WCB-Alberta has undergone a re-organization in the last few years, which has seen our focus change from a reactive to a proactive organization. In 1999, new corporate initiatives were introduced, including becoming a centre of excellence in risk management by researching and developing best practices in accident prevention. During this year, there was a mandate from the organization to reduce injuries by 50% according to the Vice-President of Claimant and Health Care Services. In order to reduce the number of injuries, a pilot project was undertaken in the Call Centre (C.C.) and Claims Adjudication (C.A.) areas as these areas had significantly higher average number of Repetitive Strain Injuries (RSIs) as compared to other units doing somewhat similar work. The pilot project was conducted from May to November 1999 applying the National Institute for Occupational Safety and Health's (NIOSH) Elements of Ergonomics Programs, 1997.

Participants

The Call Centre is responsible for intercepting phone calls at the front-line of the organization. There were 29 employees in this area under one supervisor. The Claims Adjudication area is responsible for determining claims acceptance and claims management up to a sixty-day period. There were 99 employees in this area under 4 supervisors. There were a total of 128 front-line employees participating in the pilot process.

Method

There were four phases to acquiring information for injury reduction, including a file review, two focus groups, questionnaire and videotaping/interviewing employees.

Phase 1 – File Review

The file review for Claims Adjudication and the Call Centre included fifteen claims files for the periods of 1997 and 1998. The purpose of the file review was to determine trends and risk factors associated with RSIs.

Phase 2 – Focus Groups

The focus groups from the two chosen areas included ten employees, two supervisors, three members of Staff Health & Safety (manager, ergonomist and summer student) and a representative from Human Resources. The mandate of the group was to determine the reason for the high incidence of injury and assist in development and implementation of changes aimed at reducing injuries. An initial meeting was held with Staff Health & Safety, the Human Resources advisor and department manager and supervisors to appraise the group of its mandate. A decision was made to develop a working group comprised of Staff Health & Safety, Human Resources, supervisors and front-line employees. It was decided that the working group should meet bi-weekly in order to meet the needs of the group. The focus group brainstormed for causes of RSIs, and results were then categorized into various themes. Each theme was divided into specific sub-topics. The criteria for implementation of the sub-topics included the issue, implementation method, change agent and change date.

Phase 3 - Questionnaire

A questionnaire was initially developed utilizing examples provided by NIOSH's Elements of Ergonomics Programs but also included issues related to items brought forward by the focus groups. The Human Resources consultant provided feedback on structure of the question to minimize confusion. All surveys were completed during team meetings to provide ample time for completion. The completed surveys were considered confidential and were subject to review by Staff Health & Safety only due to health related information. The questionnaire included demographic and pain/discomfort information, job demands, a workstation checklist, work organization components and suggestions for job improvements.

Phase 4 – Videotaping/Interviewing Participants

Videotaping was performed on a volunteer basis including employees in the following categories: New injured, new-uninjured, experienced-injured and experienced-uninjured. There were a total of 16 individuals, two persons per category for both areas. NIOSH's Elements of Ergonomics Programs protocol for videotaping was used for standardized method of taping. Each participant was taped for one hour and each videotaped person was reviewed to determine work habits and to validate task content. Each person was also interviewed for one hour within a week of videotaping. Interview questions were developed to further validate questionnaire responses and the Human Resources advisor reviewed the questions. Interview questions included the following areas: job satisfaction, pain and discomfort, injury reporting, work productivity, job design, job variety, turnover rates, typing proficiency, computer software usage, training and other suggestions.

Results

Phase 1 – File Review

As a result of the file review, there were seven factors that were associated with RSIs. There was an improperly adjusted workstation in 100% of the cases. In 53% of the files, there was a positive correlation between the date of entry into the position (less than one year), change in workplace technology or work volume and date of first injury report. Contributing factors included poor orientation practices, poor employee work habits, inadequate skill to properly do the job and lack of physical readiness to complete the job. The time expired between first injury report and claim decision was long and may exacerbate injuries, however, there was a high degree of cooperation among all parties once the injury had been reported. This included customizing the workstation by the ergonomist, referral to Employee and Family Assistance Program by the Occupational Health Nurse, supervisors allowing time off to attend medical appointments and availability for sick leave or Short Term Disability through Human Resources. Work modification occurred in 47% of the files resulting in minimal lost work time. Workload stress and high customer service expectations were reported by 27% of the claimants. Employees are too passive about their own welfare, and often expect 'the system' to act to rectify the problems without substantial personal initiative. This was noted in 20% of the files. In 13% of the files, there is a 'silent injuries' factor incidence due to reticence to report an injury due to concern over the workload where the employees felt he/she could not take the time to complete the forms as soon as possible, concern over negative response from a supervisor, including career implications and an inability to recognize the problem until it was critical.

Phase 2 – Focus Groups

The focus group brainstormed for causes of RSIs and then grouped them into general themes. The themes included job design issues, workstation/environment, training and awareness, skill deficiency and stress in the workplace. Job design issues included lack of variety of job duties and increased emphasis on computer work, work volume included increased job demands and expectations, extra work volume discourages taking scheduled or mini-breaks and higher workloads causes person to work faster and complete more in a given period of time. Workstation issues included small computer screens, lack of headsets, non-adjustable chairs, and poorly set-up workstation including monitor height, having to overreach for the mouse and clutter on the desk. Training and Awareness issues included lack of training on keystrokes and lack of awareness to provide personal adjustments. Skill deficiency was deemed an issue, as employees did not know how to type proficiently although a majority of their work included keyboarding. Stress in the workplace was the fifth issue. Stress-related issues included job demands were too high, dealing with hostile clients and relaying adverse decisions.

Phase 3 - Questionnaire

The questionnaire was completed as part of a team meeting to allow ample time for completion. There was a 65% return rate for the survey. A sample of identified problem areas are as follows:

Question	C.A.	C.C.
Have not sought medical attention?	63%	47%
* If experiencing productivity loss, to what extent?	210%	152%
Keyboarding >50% of the day	72%	30%
Mouse use >50% of the day	14%	47%
Need further training in workstation adjustment?	16%	31%
Estimated unit turnover in past year	40%	38%
Not a touch typist	28%	26%
No task variety	36%	68%
Do not know keyboard commands	32%	47%
Do not use keyboard commands	61%	74%

- Accumulated productivity loss in the area(s).

Phase 4 – Videotaping/Interviewing Participants

Videotape review revealed nine work habits contributing to employee injuries. These included: regular sitting on the edge of the chair, leaning forward to write or complete data entry and leaning on armrests heavily or for extended periods of time adversely affecting body posture and contributing to symptoms. Reaching across the body or over-reaching for items leading to poor upper body posture, not organizing thoughts prior to typing leading to re-typing of items and not taking breaks leading to extended periods of computer work. Other poor work habits included placing hand on the mouse or hands on the keyboard when not accessing information leading to increased tension in the forearm, holding onto pen while completing non-writing tasks and holding the hand over the phone or mouse for extended periods affecting upper body posture. The interview results verified previous findings in the surveys and did not contribute new findings to the pilot project.

Discussion

The findings indicated a high level of satisfaction with the furniture and equipment, and the majority of employees had received office ergonomics training and were knowledgeable in the principles of good ergonomics and considered themselves competent in the adjustment of their workstations. Other positive findings included all Call Centre employees reported working within their capacity, taking mini-breaks, and finding their chair comfortable. However, it was found from the surveys that employees were engaged in a variety of high-risk activities. The high claims rate had been germinating for some time due to failure to report early, additional stresses of new technology and job uncertainty over the reorganization had triggered them. At the same time, the provision of direct access to no cost physical therapy and Staff Health & Safety's continuing promotion of early reporting of injuries is also a factor for this increase in numbers.

It was interesting to note that the percentage of those reporting dissatisfaction or engaging in at risk behaviour was relatively small, in that this may be less than 15% of the sample. However, the number of employees being injured is also less than 15%. This begs the questions that if the activities or habits of this portion of the population could be changed, would it impact the injury numbers. Some examples of this include: 16% reporting pain interfering with work, 17% of Claims Adjudication not taking mini-breaks, 14% of Claims

Adjudication working beyond their capacity, 28% and 26% for CA and CC are not competent typists respectively and 14% of CA find their chair uncomfortable.

Prevalent risk factors or activities were divided into six categories: Delayed reporting of symptoms, lack of task variety, skill competency, workload, improper posture and physical fitness. To resolve these issues, it was important to address all risk factors simultaneously rather than addressing factors alone.

The following recommendations were outlined to resolve the six categories of risk factors: Provision of a typing skill course, require touch-typing skills as a hiring criteria, enlarge keyboard trays to accommodate the keyboard and mouse, provide a template showing keystroke alternatives, make injury prompt reporting a performance expectation, encourage stretching exercises and use of fitness programs, provide new chairs for the sample reporting discomfort, continue dialogue with employees on addressing work process issues, maintain an Office Ergonomics training level of 100%, utilize the Ergonomic Workplace Inspection process on a monthly basis and set ergonomic goals, in particular ones focused on risk elimination.

In reviewing the claims rates for pre and post pilot project for year 1999 and year 2000 revealed an 80% injury decrease in Claims Adjudication (15 claims to 3 claims) and a 71% decrease in the Call Centre (7 claims to 2 claims). Further comparison revealed a 63% reduction in injuries in Claims Adjudication from 1998 to 2000 (8 claims to 3 claims) and a 67% reduction in injuries for the Call Centre for the same time period (6 claims to 2 claims). This systems approach would indicate a positive impact on reducing injuries.

Conclusions

As a result of the pilot project, the organization has taken steps to incorporate ergonomic principles into their daily operations. This includes health and safety issues are placed first on the agenda at every team meeting and periodic internal keyboarding classes are offered during normal work hours for those employees to improve their skills in high risk jobs. An organizational plan has been set in place for enlarging keyboard trays to accommodate for the mouse; keystroke alternatives are being implemented in new computer systems in conjunction with training for new systems. A new employee orientation session has been developed which includes partnered ergonomic training and stressing early reporting of injuries and an internal website for ergonomic support.

It can be concluded that the application of the systems approach can be useful as an intervention method for reducing RSIs.