

Risk Management of Occupational Disabling Injuries: Beyond Ergonomics

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Overview

Risk management has typically focused on matters of insurance; however the basic principles can be applied to other areas of safety and health. Risk Management has been determined to be the process of making and determining decisions that will minimize the adverse effects of not only accidental losses on an organization but to also minimize the severity of the impact on an organization. Occupational injuries that result in lost time are the costliest types of claims that occur in the workplace.

Every organization, no matter how large or small, inherently possesses exposures to risks. A risk exposure is the possibility of a loss or injury because of some specific peril or cause of a loss. Musculoskeletal injuries (MSDs) are a type of peril that can result in workplace disabling injuries which can cost an organization hundreds of thousands of dollars. According to the Bureau of Labor Statistics (BLS, 2007), workplace injury rates have seen over the last 10 years a 21% decline, but despite these findings, the cost for most disabling workplace injuries increased nearly 4%. Furthermore, Liberty Mutual's Safety Index (2008), estimated that direct US workers compensation costs for most disabling injuries in 2005 were \$48.3 billion. In addition, most of these occupational disabling injuries are of the musculoskeletal variety. Typically solutions implemented by most organizations have been a reactive response to these types of claims and the focus has been primarily on addressing only ergonomic issues—but there are other organizational factors that should also be addressed.

Proper risk management can produce significant cost savings for a company and can reduce pain and suffering of affected employees. Risk management, by definition, is the management process of planning, organization, staffing, leading and controlling an organization's resources to minimize the possibility of loss or injury from various causes. Simply stated, risk management of workplace disabling injuries exposures is the process of identifying and controlling hazards that can impact an organization's financial, physical and human resources.

Objective and Goals of a Risk Management Occupational Injury Disability Prevention Program

Reducing the costs of lost time injuries is the primary objective of a risk management program focused on occupational disabling injury hazards. The cost of lost time injuries to an organization is the total value of all related costs and resources, both direct and indirect, including:

- Replacement value of the injured individual;
- Total claims expenditures, including legal expenditures;
- Costs of loss prevention and control measures;
- Costs of insurance premiums;
- Lost productivity; and
- Administrative and overhead costs.

Since reducing the cost of lost time disabling injuries is the primary objective of a risk management program focused on these types of losses, several specific goals support this primary objective:

- Assure individuals have the physical capability to do the job;
- Reduce the severity of accidents by having well-conditioned employees
- Provide a reasonably safety environment for employees; and
- Minimize interruptions of personnel in the workplace.

A well-planned and -executed risk management occupational disability management program requires a significant commitment of time and resources; however, the cost of this organizational commitment is fully mitigated by its benefits such as:

- Reduction in the severity of MSDs;
- Increased recovery rate;
- Reduction in claims expenditures;
- Reduction in the legal expenditures;
- Increased productivity; and
- Improved employee morale.

Risk Management of Occupational Disabilities

Risk management is a “process.” In essence, risk management is a progression or series of steps that are taken with the purpose of minimizing losses or the severity of those losses and injuries within an organization. There are five steps in the risk management process:

- Step 1: Identify and Analyze Risk/Loss Exposures
- Step 2: Examine and Assess Alternative Techniques
- Step 3: Select Appropriate Risk Management Technique
- Step 4: Implement the Chosen Technique
- Step 5: Monitor and Evaluate the Program.

Applying this to occupational disability exposures (see Figure 1):

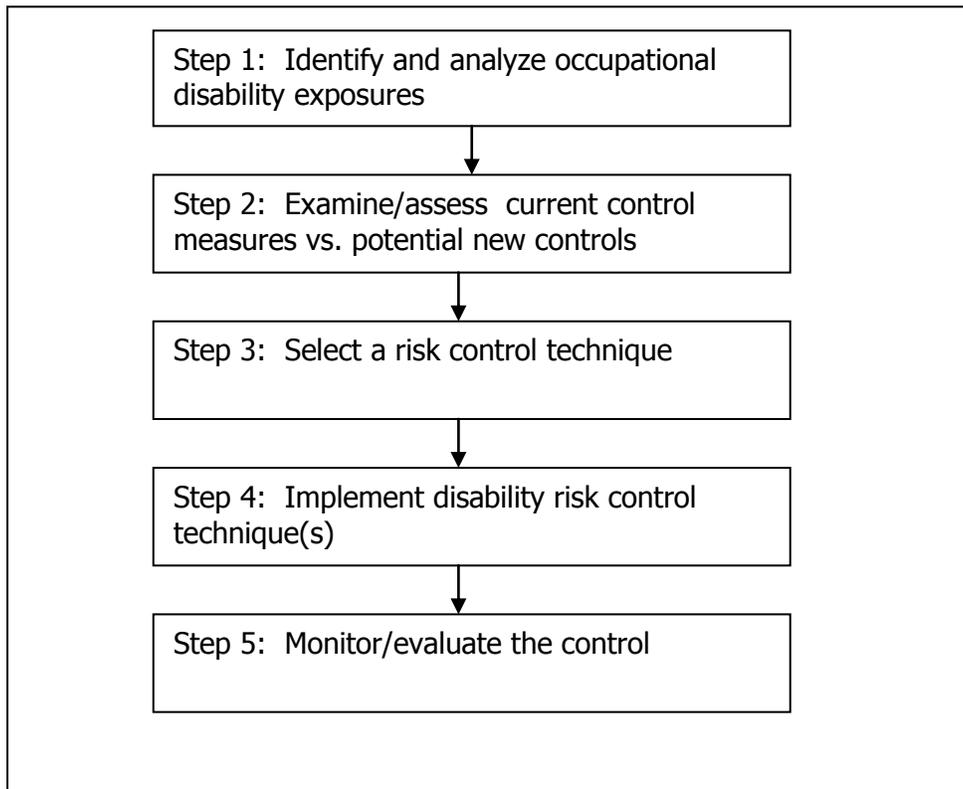


Figure 1. Five Steps in Risk Management Process for Disability Exposures

Identifying and Analyzing Occupational Disability Exposures

The most important step in the risk management process is the proper identification and analysis of occupational disability exposures in the workplace. All other steps in the risk management process flow from this initial step. It is, therefore, essential that the occupational disability exposures analysis is thorough and complete. If a poor job of identifying occupational disability exposures is done and not recognized, the entire risk management occupational disability management program will suffer.

The process of identifying occupational disability exposures is a continuous one. Most organizations are dynamic, and as a result, employees, programs and resources are in a state of constant change. Because of this, a single effort to identify occupational disability exposures simply provides a “snapshot” of the exposures at that point in time. Periodic updates of occupational disability exposure identification must be conducted.

Several methods are used to identify risk exposures. Some of the primary methods of identification are:

- Checklists
- Surveys/Questionnaires
- Loss histories

- Loss runs
- OSHA logs
- Flowcharts
- On-site inspections-observations
- Professional expertise

The purpose of the identifying occupational disability exposures is to then conduct analyses to determine trends (Figure 2). Analysis of occupational disability exposures is helpful in projecting future losses and selecting appropriate control measures. Analysis of occupational disability exposures entails determining information such as the loss frequency, type of losses, costs of losses, location of losses and severity of losses.

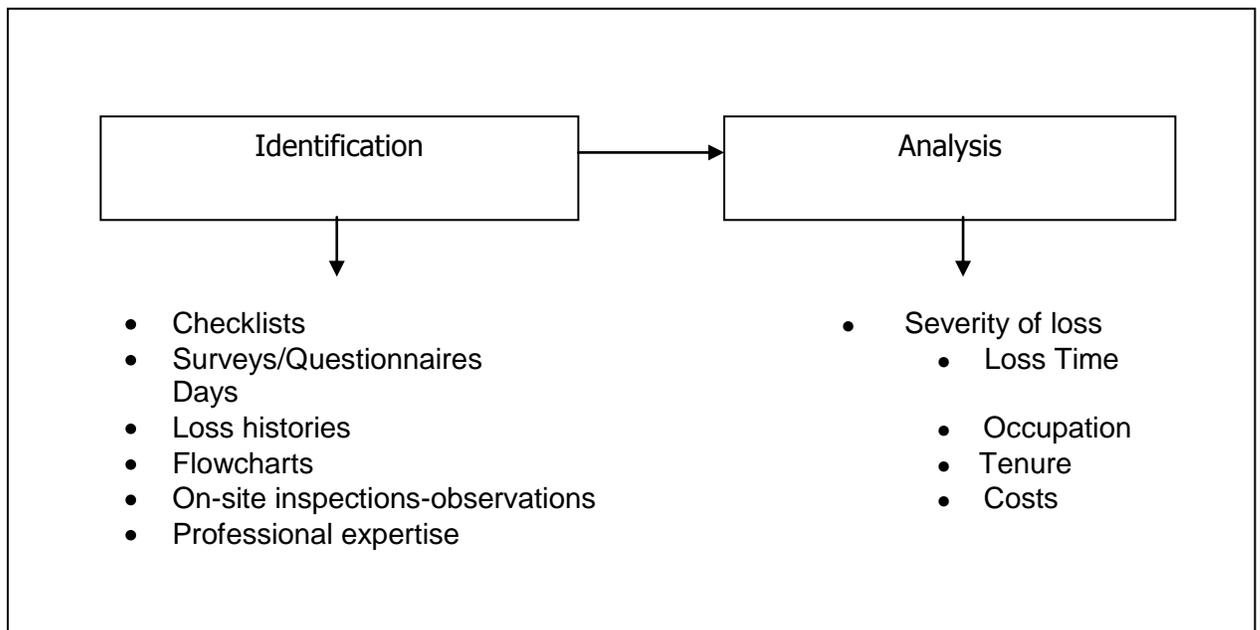


Figure 2. Identifying and Analyzing Occupational Disability Exposures

Examining and Assessing Alternative Occupational Disability Techniques

Once the occupational disability exposures have been identified and analyzed, an appropriate method(s) should be chosen to eliminate or minimize the impact that a loss could have on the organization. Examining and assessing alternative techniques is generally referred to as “risk control.” The purpose of risk control is to eliminate, reduce or control the impact of a loss time exposure. There are four techniques that are used in risk control of occupational disability exposures (Figure 3):

- Avoidance,
- Prevention,
- Reduction, and
- Transfer.

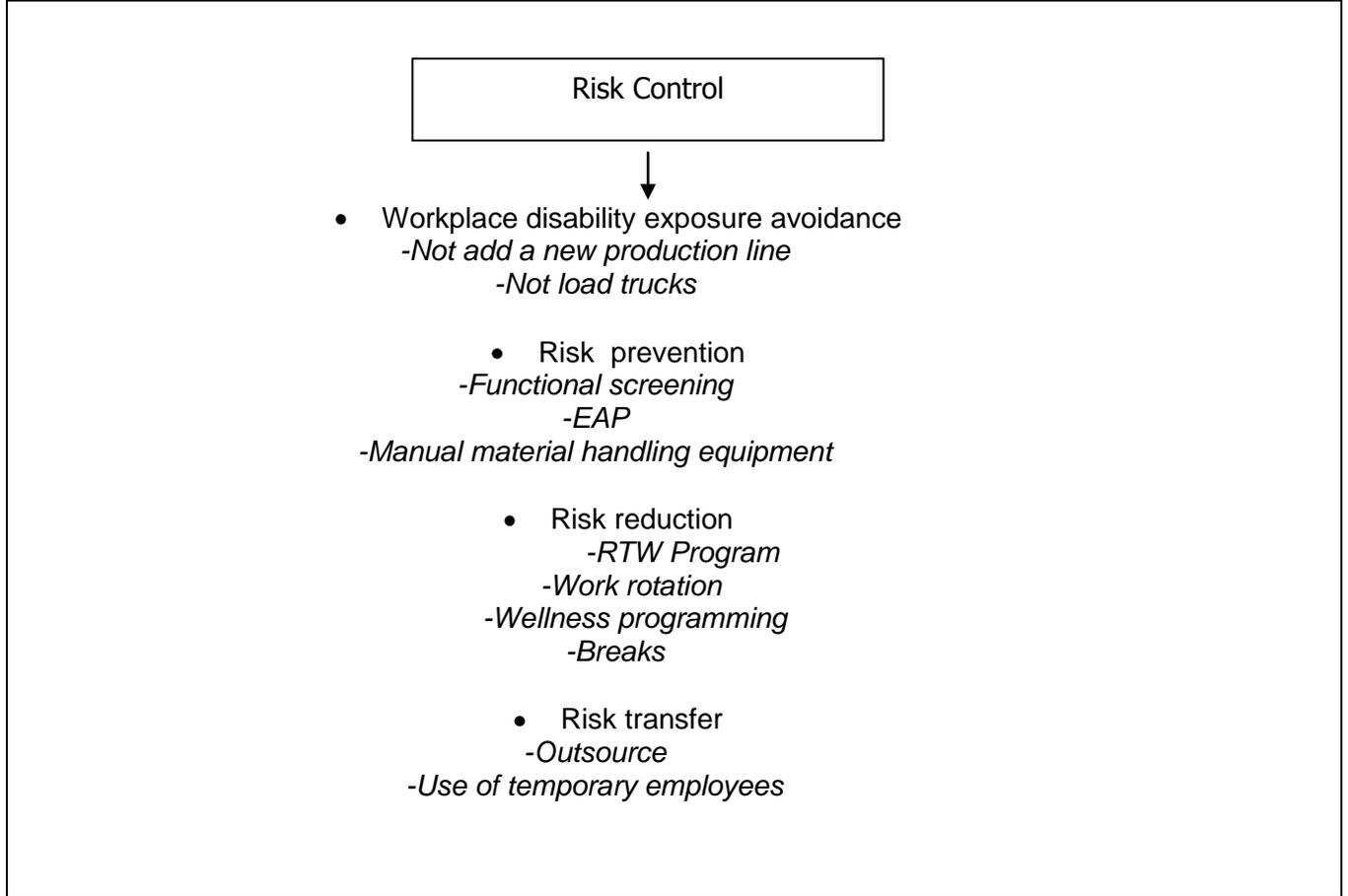


Figure 3. Techniques Used in Risk Control of Occupational Disability

Exposure avoidance is one of the most effective means of controlling risks. Avoidance simply means not undertaking an activity, action or process that could result in MSDs which is a primary type of injury that results in lost time. Unfortunately for many companies, avoiding certain risks is not always possible or practical.

Risk prevention involves using techniques that prevent MSDs from occurring that in turn can result in lost time. Occupational disability prevention measures focus on reducing the frequency of lost time injuries. In order for risk prevention to be effective, employees must change certain acts and practices that might result in an MSD. Such change may be effected by establishing engineering controls such as material-handling devices or pallet jacks. But there are administrative controls that also be addressed such as assuring that employees have the physical capability to perform the job as well as the mental capacity.

Reduction of risks assumes that “it is not possible” to eliminate or prevent an ergonomic exposure. Risk reduction techniques for occupational disability exposures are therefore focused on reducing the severity of a loss. For example, one manner of reducing the risk of potential loss time

claim would be the use of administrative controls, such as implementation of a wellness program or implementation of a RTW program. While these controls do not necessarily decrease the frequency of the occupational injury, they do assist in decreasing the severity of the loss that may flow from the risk.

Risk transfer is another technique used to minimize loss exposure. The transfer of risk involves the concept of shifting a risk away from the company to an outside organization. Such a transfer is usually accomplished through a contract. An example of transferring occupational disability exposures would be having a trucking company on-load or off-load trucks to minimize the company's warehouse employees' exposure to back strains/sprains.

Selecting Risk Management Ergonomic Techniques

Once exposures have been identified, analyzed and examined, the next step is to select a technique to implement (Table 3). Selecting the best risk management technique for occupational disability exposures involves a balancing of the costs to the organization of implementing the risk management ergonomic technique and effectiveness of the risk control technique. Overall, costs should never outweigh the benefits, and selected techniques should assist the organization in meeting its objectives.

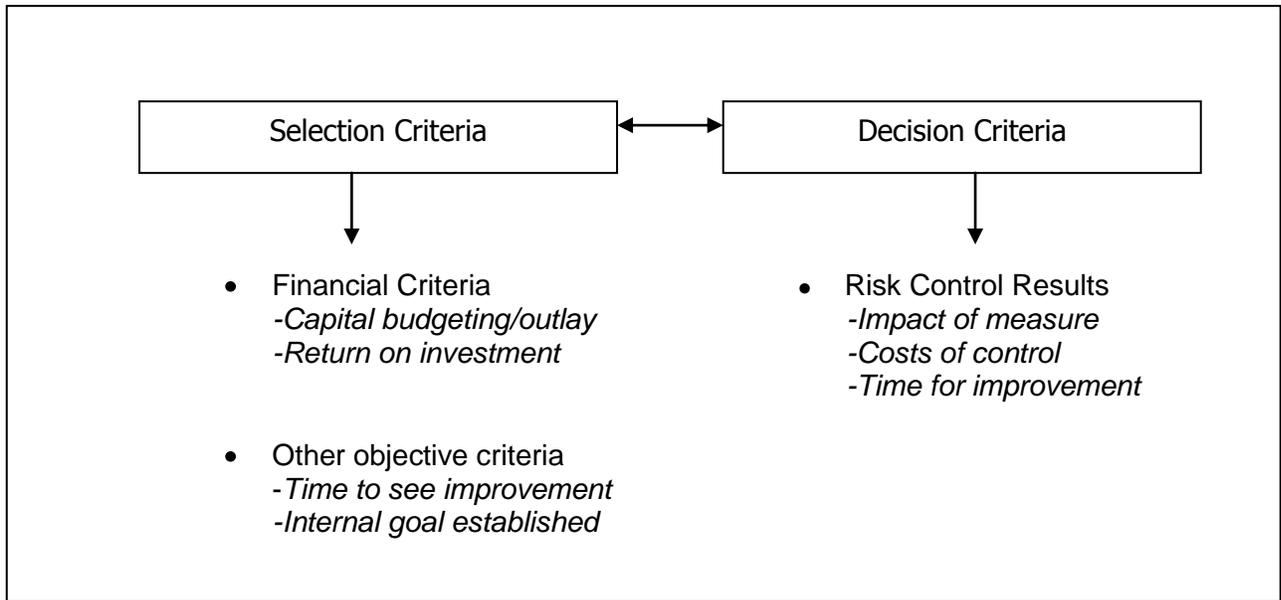


Table 3. Selection of Occupational Disability Control Techniques

The first step in selecting the best risk management technique for managing occupational disability exposures involves forecasting the results that the technique will have on the organization. There are typically three types of forecasting that can be done:

1. Forecasting the frequency and severity of the losses in the absence of any risk management technique;

2. Forecasting the impact that the risk control technique will have on the frequency and severity of losses; and
3. Forecasting the costs of the control measures.

Forecasting the frequency and severity of losses of occupational disability exposures can be accomplished by reviewing the historical trends over a period of several years, as well as determining the average annual cost to the organization. In addition, if the organization is predicting a certain percentage of growth, this should be figured into the forecasting numbers. Reviewing the impact of various risk control techniques on occupational disability exposures can be used to estimate the future frequency and/or severity of ergonomic losses. For example, determining that having individuals who have the physical capability to do the job will decrease the frequency of lost time injuries by 10% can be factored into the forecast of the frequency and severity of loss analysis.

Finally, most risk control measures for occupational disability exposures involve some costs, whether it is equipment purchased to perform a task or implementation of a RTW program to decrease severity. Once the costs are determined, this can be used to determine the net cash flow by assessing the cost of the risk control measure (outflow) versus the return on the investment (inflow).

Once the first step has been accomplished, the second step in determining the best occupational disability management technique is to determine the criteria that will measure how well the chosen technique is implemented. The criteria should be measurable and objective. Some examples of proper measurement criteria could be:

- Decrease in absenteeism;
- Decrease in frequency of lost time injuries
- Decrease in the severity of a specific type of loss;
- Increase in the quality of product;
- Increase in productivity; and
- Decrease in the costs of a specific type of loss.

It is important to remember that any occupational disability control technique must be able to be implemented and assessed for effectiveness in order to have a well-managed program.

Implementing the Selected Occupational Disability Control Technique

The fourth step in the risk management of occupational disability exposures is to implement the technique that has been chosen (Figure 4). In the implementation process, there are two areas that have to be addressed:

- Technical decisions; and
- Managerial decisions.

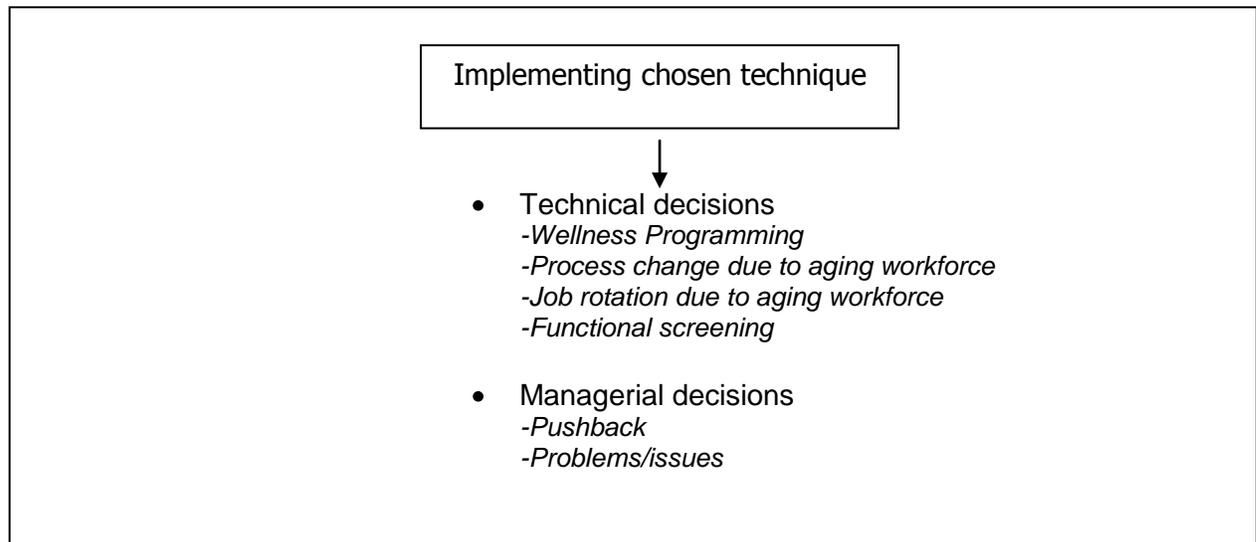


Figure 4. Implementing Occupational Disability Control Techniques

Once a decision has been made regarding the occupational disability control techniques to be implemented, the safety professional must use his or her technical expertise to communicate to managers and supervisors what needs to be done. For example, if the organization decided to decrease the frequency of back strains/sprains by incorporating a wellness program to improve the physical fitness of employees, this must be communicated to the managers and/or supervisors. If they are consulted early in the process (e.g., design phase), they could have a positive impact on the best programs to put in place and in turn they would be in a better position to communicate the process change to the employees. An important part of the technical implementation would be communicating to the supervisors and/or managers the goals of the technique to be implemented.

In addition to technical decisions, managerial decisions are part of the implementation process. Safety managers typically do not supervise line employees, but rather function in an advisory role to on-site managers and supervisors. Because most occupational disability control techniques involve a human element, such as performing work in a different manner, communication with managers about issues or observations is critical. Working cooperatively with others within the organization also requires that the safety professional be alert of issues or needs within the organization.

Monitoring and Evaluating Ergonomic Controls

In order to determine the effectiveness of an implemented control, or evaluating an improvement or change in an existing implemented control, there must be monitoring of the program (Figure 5).

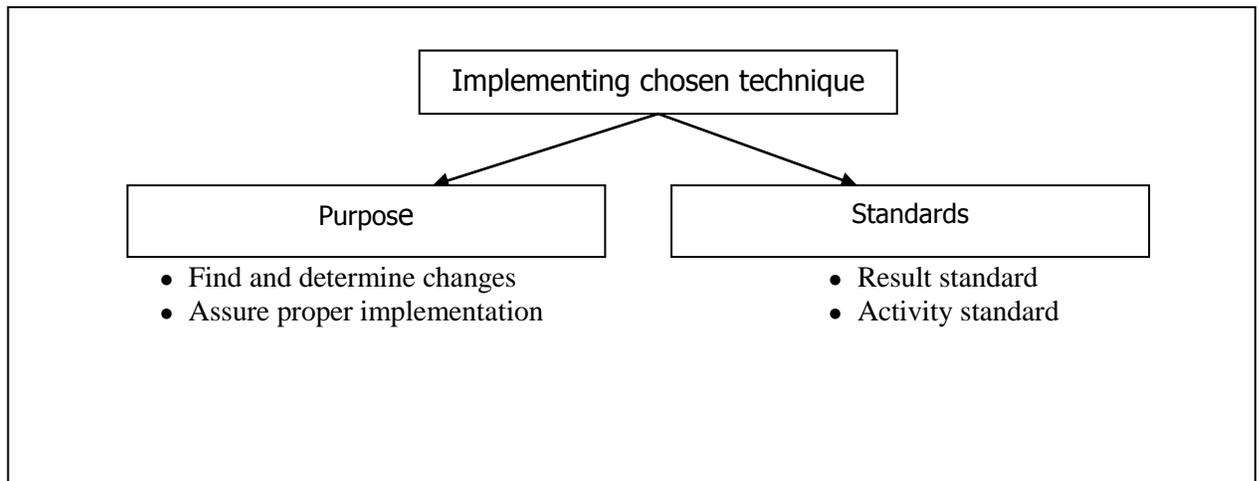


Figure 5. Monitor and Evaluate Occupational Disability Controls

A chosen technique must be monitored to assure that it is being, or has been, implemented properly. For example, if employees are now to use hand carts to move boxes, making sure that they are loading and unloading the carts properly and using them to transport boxes in appropriate areas is critical. In addition, an observation that the majority of times employees were not using the technique chosen (or using it improperly) would be important in determining the reason for such poor implementation and possibly lead to a reassessment of the situation.

Prior to adjusting a chosen technique or controlling the program, standards of acceptable performance must be determined. By determining the standards, the actual results can be compared and then, if necessary, corrections or revisions can be undertaken. There are two types of standards typically used:

- Results standards; and
- Activity standards.

Results standards focus on the technique achieving the goals regardless of the steps taken. For example, if the goal is to decrease the severity of back strains or sprains by 10% that result in lost time, it would not matter if the technique chosen (e.g. job accommodation) was used or not if at the end of the evaluation period the frequency reduction was achieved. Activity standards, on the other hand, focus on the steps undertaken to achieve the goal. For example, if an accommodation was made every time an employee had a back strain or sprain, this would be the focus rather than the 10% reduction.

Once the standard has been chosen and established, a comparison of the actual results to the standards is undertaken. At this time, the safety professional should determine a plan to address any substandard performance.

Conclusion

Risk management of occupational disability losses is the process of deciding what to do about the risk that exists. This process involves safety professionals looking at the available options to control the probability of workplace injury losses, the location of the loss, and the magnitude of the loss. In reviewing the risk control options, safety professionals should ask what we can do about the occupational disability exposures and what different techniques involve. By answering these questions and determining the benefits of the various control techniques, safety professionals, using the risk management process to handle occupational disability exposures, can aid in the prevention or reduction in the severity of work-related lost time injuries.

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