Using Job Analyses
to Prevent Musculoskeletal Injuries

By Gilbert E. Smith

Employers that have physically demanding jobs or a high rate of musculoskeletal injuries and illnesses among their employees may be interested in conducting job analyses of selected jobs as a first step in maintaining or increasing job productivity and controlling workers' compensation and health care costs.

Human resource professionals are responsible for creating the policies that support using job analyses for employment testing and to provide safety and claims professionals with documentation of job demands for workers' compensation and disability management programs.

Job Description vs. Job Analysis

HR typically uses job descriptions to describe the essential functions of a job. The Americans with Disabilities Act of 1990 (ADA) uses the term "essential functions" to determine what a person must do in a specific job. For example, a machinist may need to lift 10 pounds and operate a specific machine, but he may not be required to carry a 10-pound load from the storage area to his workstation. Thus, lifting would be essential but carrying would not, even if employees currently carry materials out of convenience.

Job analysis, on the other hand, breaks down the essential functions into discrete, measureable tasks that describe specific weights, forces and frequencies and the environment in which the task is completed.

Using Job Analyses

Job analysis is the foundation for all injury prevention and injury management tools. Injury prevention tools include employee testing, where an employer can develop hiring policies for high-risk jobs that require applicants to perform a physical agility test (based on the job analysis) to determine if the candidate can meet the job requirements. This test is typically performed in combination with other employment selection tools, such as interviews and drug testing.

With large numbers of adults unemployed, some may be inclined to apply for jobs for which they are not well-suited. If a job requires strength, flexibility and stamina but can be done by someone without much training, many applicants may pass through the hiring process even when they are not really prepared for the demanding work. Perhaps not surprisingly, some employees are not entirely truthful on their applications or health histories; for example, some may have sustained previous serious injuries or may have chronic low back pain that is incompatible with performing the physical demands of the job for which they applied. Other injury prevention tools that use job analyses include ergonomic and safety assessments to reduce risks that are identified during the job analysis process.

Injury management includes use of the job analysis data by claims professionals to provide physicians with information about the job to determine the employee's ability to safely return to work and/or the work restrictions that should be imposed. Job analysis data are also used to develop structured work programs that employers can offer to restricted workers as real work options during their recovery from an illness or injury.

Forward-thinking employers are now using job analysis data to develop fit-for-duty tests that measure an employee's ability to do the job safely. When an employee has been off work for a period of time due to a personal disability or a work-related injury, the fit-for-duty test can be used to determine whether the employee can safely perform the physical requirements for return-to-work at their usual job. Sending a compromised employee back to the job prematurely risks re-injury, further disability or a new work-related injury.

Job analyses are frequently used to give health care providers a better idea of what the job entails. An employee may not present the job objectively if he has an ulterior motive (i.e., desires to stay off work when healed or return to work when still compromised). An objective job analysis will tell the health care provider just how strenuous the job is so that the provider understands how the job impacts the employee's health.

Another opportunity that comes from a good job analysis is a fresh look at jobs that may be putting employees at high risk for injury. When job tasks are broken down, it may be more obvious how the job can be modified to make it safer. For instance, three types of jobs were done by employees in one department. One job involved small hand tasks with repetitive motion. Another job required long periods of static posture reaching overhead. A third job required frequent heavy lifting. Each job put employees at risk for injuries because the tasks were done all day, every day. When the three jobs were combined and employees rotated among the tasks, spending no more than two to three hours on any one task, injuries declined. The job analyses helped convince the employer to try job rotation.

Selecting a Job Analysis Provider

Many companies throughout the United States conduct job analyses. Some companies have elaborate equipment that is used to conduct physical performance testing, and their job analysis system is based on the equipment they are trying to sell or use.

Any company that provides job analyses and pre-employment or fit-for-duty tests must be willing to defend their system in court, should charges of discrimination be raised. A company that is not willing to take that step may not have a service that will stand up to legal scrutiny. The ADA requires that the job is objectively defined, that physical requirements are objective and measurable, and that a test is designed based on the job analysis and not a specific testing system.

After job analyses have been completed, performance tests can be set up onsite at the company's location or offsite in a therapy clinic. Employers can designate someone in HR, safety or health services to be trained to conduct the tests, but in most cases the company that designed the test will also conduct the test. Use of this third-party approach helps ensure objectivity and keeps the hiring company free of biased, political or nonobjective decision-making. Results of testing should be "meets requirements" or "does not meet requirements." So if someone can safely lift the required 15 pounds but is unable to do that 20 times per hour as specified in the job analysis, he "does not meet requirements" of that particular job.

In some cases, an employer may be interested in hiring large numbers of workers in a short time period. Some companies that conduct job analyses and employment tests can also provide training for job applicants who would like to be able to do the job but did not meet the job's requirements. Getting job applicants in shape for a specific job requires understanding the job demands so that training is directed and not generalized. Training may include skills, such as safe lifting techniques, as well as conditioning, such as developing thigh strength to make it possible to lift safely. Some government-sponsored job-training programs provide conditioning exercises along with skills training so that job applicants are given the best opportunity for success.

Worker-Job Match

Job analyses and injury prevention and injury management programs that are based on job analyses create a "worker-job match." Ongoing injury prevention programs that include employee testing (pre-employment), ergonomic and safety programs, stretching and conditioning, and injury management rehabilitation for musculoskeletal injuries using onsite therapy, structured return-to-work programs and fit-for-duty testing provide a comprehensive approach to an employer interested in controlling workers' compensation and disability costs and increasing productivity.

Occupational injuries and employee disability can be very costly in terms of medical care and lost productivity. Job analyses that are legally defensible and job-specific can be used to develop HR

policies and claims management programs that will create worker job-matching at the time of employment and throughout an employee's tenure with a company.

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