

Workers' Compensation Data Analytics: Using Data to Develop Risk Control Strategies

Executive Briefing

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***PMA Executive Briefings** explore strategies necessary to effectively manage workers' compensation costs.*

In this **PMA Executive Briefing**, we begin examining data analytics in workers' compensation programs and their role in reducing employers' total cost of risk and optimizing program outcomes.

Today, an important part of achieving optimal outcomes is the ability to leverage workers' compensation data analytics to better understand a business, industry strengths and opportunities for improvement.

In workers' compensation, data analytics can be used to reduce your total cost of risk pre-loss, by preventing claims and keeping your workplace safe, and post-loss, to intervene and impact the trajectory of claims.

In this issue, the focus is pre-loss—the workplace indicators that point to the likelihood of injuries and claims. We'll look at how data can be analyzed and used to develop long-term risk control strategies, and reduce both the frequency and severity of loss.

Analysis is Key

Risk management professionals have more data related to workers' compensation injuries than ever before. From claims frequency and severity to injury types and locations, the more data an employer has, the better they can identify their loss potential and opportunities for improvement. This is especially important as employers are looking to reduce their workers' compensation total cost of risk.

But data alone is not enough. What's most important is how data is analyzed and correlated with an employer's specific operations. A simple data dump provides only anecdotal evidence in understanding the relationship between losses and risk factors. Expertise in analyzing and interpreting data is crucial to preventing claims and improving claims performance.

Data can be examined and analyzed in the context of organizational processes and outcomes. The goal is to make the data actionable— isolate factors that impact a business and convey the information to the leadership team, facilitating informed decision making.

Insurance companies and Third Party Administrators (TPAs) should work with employers to determine the most effective cost-avoidance strategies for their workers' compensation programs. Data analytics can help with the following objectives:

- identifying the greatest opportunities for improvement
- establishing long-term goals
- providing reporting, including simplifying complex workers' compensation data analytics into compelling visual information

Key Indicators

Within each industry, there are key indicators, or attributes, where data can be analyzed to develop loss-prevention strategies. The availability of new data indicators is growing rapidly, and new insights have emerged from evaluating key areas, including the following:

- hiring practices and staffing
- level of management commitment to health and safety
- stay-at-work and return-to-work strategies
- levels of control over common exposures such as slip and falls

For example, it's possible to compile data on who is responsible for safety, how potential employees are screened and selected, and how training relates to exposures. An insurance company/TPA can match this information with loss data to see if there are any correlations that demonstrate how risk control strategies can prevent future losses.

Pre-Loss: Improvement Opportunity Analysis Generates \$5 Million in Savings

Expert data analysis can effectively identify areas of an employer's operation with the greatest—and least—opportunities for improvement from a loss mitigation perspective.

The goal is to apply risk control efforts strategically to operations/locations that need improvement, instead of a “blanket approach” (i.e., applying similar risk control efforts at all locations regardless of need). An improvement opportunity analysis approach can improve the effectiveness of an employer's loss mitigation efforts and save both time and money.

For example, a large healthcare organization applied this strategic approach over several years, yielding direct cost savings in excess of \$5 million from reduction in claims frequency and claims reported. Previously, the employer had applied the same loss mitigation efforts to all their operations. This new strategy accurately identified the operations causing loss issues and resources were re-directed to these locations.

An analysis of these attributes within the context of a specific industry and workplace tells a story of how data points can indicate the likelihood of a workplace injury. This analysis then leads to conclusions that help employers make better business decisions.

Accurate Results

When conducting an analysis, critical elements include a complete review of claims data. This

encompasses a *frequency-rate analysis* in relation to total claims reported for both lost-time and medical-only rates, and a *loss-leader analysis* to show claims by type of injury, with both severity and frequency results. Without correlating all these factors, a true loss control picture cannot be seen.

Departmental results should also be analyzed by severity and frequency, as well as in context of staffing and other key indicators. For example, if an analysis of an organization with multiple departments focuses on the performance of the department with the most claims activity, the analysis should not be limited to claims activity. That data must be balanced with the specific exposures of that department, the number of employees and other factors to reach a useful conclusion.

Industry comparisons are also essential, providing valuable perspective on claims performance. An employer's results should be compared to their industry in general and to a select peer group. Here, as in other areas, an analysis must be done using the correct metrics and in the context of key indicators. If not, the analysis can lead the employer down the wrong path.

About the Author



Jack Aspen, Vice President, Risk Control Services, PMA Companies, leads the risk control operations in PMA's headquarters in Blue Bell, Pennsylvania, while providing loss prevention guidance and expertise to its field risk control, underwriting, and claims service areas.

With 29 years of experience in the loss prevention field, Mr. Aspen has a Bachelor of Science degree in Mechanical Engineering and a Master of Engineering degree in Industrial Engineering from Pennsylvania State University. He holds Certified Safety Professional (CSP) and Associate in Risk Management (ARM) designations.

Why Pre-Loss Analytics for Risk Control Programs?

To help employers realize several objectives with their programs, including:

- 1 Identifying the greatest opportunities for improvement
- 2 Establishing long-term goals
- 3 Providing reporting—simplifying complex workers' compensation data analytics into compelling visual information

The most effective workers' compensation data analytics tell a story of exactly where and why claims are occurring, and provide useful information and strategies to improve performance. Among these strategies is a long-term risk control plan designed to reduce both the frequency and severity of workers' compensation losses.

In upcoming **PMA Executive Briefings**, we'll continue to examine the role of data analytics in optimizing workers' compensation performance.