Predictive modeling changes the way insurance carriers assess risk

Using sophisticated algorithms, predictive modeling is the application of statistics and probabilities to variable data to predict future outcomes. Insurance carriers have been using predictive modeling to stabilize underwriting cycles and take preventative steps to lower the cost of risk including initiatives to curb opioid abuse, reduce medical expenses and improve return-to-work outcomes.

A 2018 benchmark report, based on a survey of claims adjusters conducted by Chicago-based Rising Medical Solutions, called predictive modeling a "best practice," noting that the highest performing insurance carriers used predictive modeling eight times more often than less successful carriers. A.M. Best notes in a 2018 special report on predictive analytics, that those insurance carriers that have been slower to adapt, run the risk of being "adversely selected"— meaning they could become unevenly burdened by employers with the most risk, and therefore most need for insurance — driving up premiums for all of their insureds.

Human judgement is still critical

While predictive modeling can be tremendously helpful in keeping costs low, it is still just another tool in the adjuster's box. Insurance carriers that rely too heavily on data analysis without tempered judgment from experienced adjusters can inflate the cost of insurance. For example, if the data points to costly treatment in the future, but the employee is progressing along a different path, open reserves could be artificially inflated to accommodate the predicted expense. Inflated reserves drive up the employer's experience rating, which translates to higher premiums. The employer pays more for a predicted outcome that may not ever occur.

The past no longer predicts the future

Historically, insurance carriers have used an individual employer's past claims experience to assess the likelihood of future workers' compensation claims, and credit or debit the employer accordingly. Predictive modeling takes a broader view, looking at statistical data and employer practices to forecast ahead. Employers that previously relied on a low claims record now run the risk of a higher experience rating and premiums, or nonrenewal — not based on claims that have happened, but claims that could. Take the example of one Wisconsin employer that was recently non-renewed, despite not having a claim in the past five years. Due to the nature of the employer's industry and lack of a risk management plan, the insurance carrier determined this employer was one bad year away from disaster and decided not to take on the risk.

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Predictive modeling, when applied thoughtfully, can add tremendous value for employers, but when wielded without tempered human judgement, can put employers at risk of paying higher premiums or losing the coverage they need to stay in business. Carefully investing in a risk management program can help employers prepare for the changing tide.

For more information, contact us.

Associated
Benefits and Risk Consulting

Phone: **800-258-3190** | Email: **Info@AssociatedBRC.com**