GUIDEWIRE

Predictive Analytics for Claims

What Is Predictive Analytics for Claims?

Predictive analytics is a form of statistical analysis that brings a higher level of precision to decision-making.

This is accomplished through analyzing large volumes of data to identify interrelationships between various risk attributes.

Claims applications, which are rapidly expanding, involve identifying potential fraud, propensity to litigate, and claims most suitable for medical management.   *[Source: Celent]*

Three Ways Predictive Analytics Improves Claims Management

No matter how you look at it, Workers' Compensation and Bodily Injury claims management isn't going to get any easier. Rising medical and litigation costs, frivolous claims, increased appeals, opportunistic fraud, retiring Baby Boomer adjusters, budget cuts: The net effect is inarguable.

In this increasingly complex world, claims organizations can no longer rely simply on individual experience and professional judgment. We need more than that. In fact, tools to augment and accelerate business decision-making have become the new imperative. The best tool, predictive analytics, has the ability to analyze the past and apply it to the here and now—but without human bias and with consistency through front-line implementation.

Particularly in long-tail claims like Workers' Compensation and Bodily Injury, claims organizations can get started on reaping the benefits of predictive analytics in three major ways that will reduce re-work, reduce costs, and (for Workers' Compensation) get claimants back to work earlier.

1. Improving early-intervention decisions

No one argues that the judicious application of resources early can benefit both the claimant and the insurer by shortening time to settlement, reducing payout amounts, speeding up return to work, and improving health outcomes. But the early-intervention tools available to an experienced adjuster have costs, in both time and money. And not every claim requires the same level of intervention.

The trick is to use information available soon after First Report of Injury (FROI) to correctly flag claims that will benefit from early intervention and to flag claims for fast-tracking. That's where predictive analytics comes in. While it isn't a replacement for the judgment of claims adjusters in evaluating an individual claim, predictive analytics has been proven to increase the benefits from claims triage by matching resource skill with claim complexity.

GUIDEWIRE

2. Identifying high-severity and jumper claims

Experienced Workers' Compensation and Bodily Injury claims adjusters can identify many of the red flags that will signal a complex, costly, and/or jumper claim. Their experience is invaluable. And, as Baby Boomers retire in large numbers, experienced decision-making will retire with them. At the same time, our changing workplaces, health profiles, and social and economic factors are influencing claims in increasingly complex ways.

But even the most experienced adjusters can spot only a percentage of high-severity complex claims, because their rules consider at most a handful of the many variables at play. Modern sophisticated analytics exhausts all of the variables that are predictive and creates comprehensive rules to grade claims based on all available data. The rules are then encased into a predictive model that is applied at consistent times throughout a claim's life, bringing a new level of accuracy, consistency, and precision to claims management.

3. Fast-tracking low-dollar claims

Predictive analytics for claims is not only about high-severity identification and channeling complex claims to skilled adjusters. With sophisticated predictive analytics, low-dollar claims can be identified early with near 100% accuracy. This allows them to be fast-tracked to reduce the overall workload of the claims organization and to ease the burden on top adjusters.
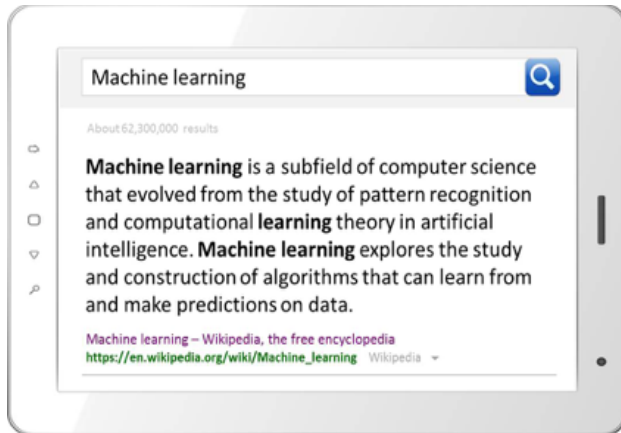
Any improvement to the volume of accurately fast-tracked claims is the quickest way to a positive ROI and full payback of an investment in predictive analytics.

Potential Savings with Predictive Analytics
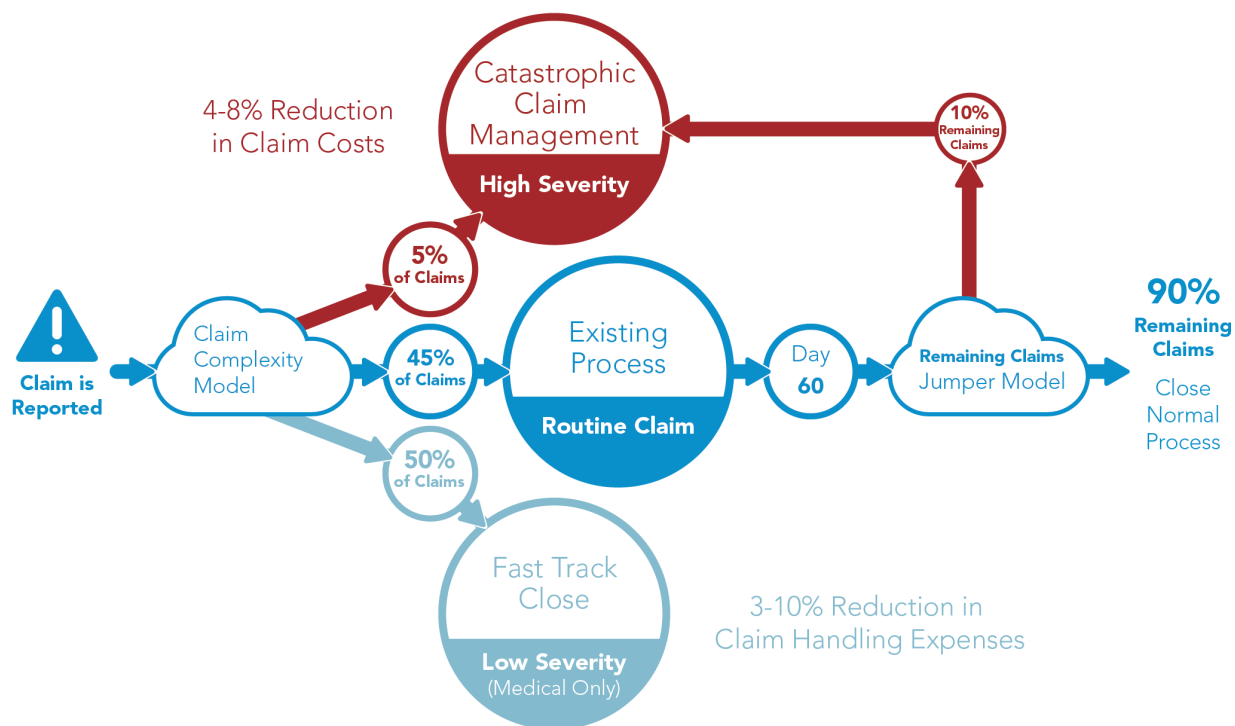
The Key to Claims Analytics Success

Insurance-Specific Machine Learning

In all three of the preceding scenarios, predictive analytics software utilizing insurance-specific machine learning was used to analyze claims data. Specialized machine-learning algorithms find and rank combinations of variables that impact the severity of a claim.

Each variable alone may have small or large, positive or negative impact. But in combination with all of the facts about a claim, machine learning can create predictive models with unrivaled accuracy.

Once we're armed with the knowledge of the variable combinations that will drive claims severity, it is then a simple automation task to score claims according to how closely they match these variable combinations. By integrating scoring with workflows, the scores then help channel the claims to the right adjuster.

Don't Let Data Daunt You

Getting the right data for claims analytics can seem more intimidating than for other analytics projects. Claims data is less structured, containing more free-format text than policy data, and changing it might not be a business priority now. But it's possible to start on a claims analytics initiative with almost any existing data set.

Most claims organizations have far more usable data than they think. In addition, text mining using the right tools can extract enormous amounts of usable data from unstructured text fields.

Other Claims Analytics Applications

We've shown you three different ways predictive analytics can help manage claims, all of them based on severity modeling. But that's only the beginning. Predictive analytics has limitless applications in claims, including identifying the following:

- Litigation potential

- Reserve accuracy

- Fraud potential

- Claims leakage

- Close-without-payment potential

GUIDEWIRE

Personal Lines Use Case

Large Property and Casualty Carrier Uses Guidewire Predictive Analytics to Jump Ahead of the Game

Challenge

A Tier 1 P/C carrier, which already had some of the best reserving, triage processes, and general claims management, wanted to make sure they had the capability to remain on the cutting edge and ahead of their competitors.

In addition, they were looking for ways to make their Bodily Injury (BI) claims unit even more efficient, reaching even further ahead in a competitive environment that was becoming more challenging every day.

Solution

The carrier applied the insurance-specific, machine-learning analytics tool Guidewire Predictive Analytics to five years of claims data to identify the drivers of severe claims.

The resulting severity model enabled the carrier to enhance the intelligence of its claims routing tools so that claims with the potential to become severe were routed to specialized adjusters earlier.

At the opposite end of the claims complexity spectrum, the new model allowed the carrier to effectively expedite a larger number of low-risk and/or low-severity claims.

Results

Overall, the scoring model identified a significantly larger proportion of severe claims than the carrier's existing processes could identify: At 30 days after FROI, the model identified 65% of severe BI claims, compared to just 12% that the carrier was able to identify using their existing process.

With the severity score applied by the model to each incoming claim, the carrier will be able to more accurately route the most severe claims to a high loss unit—and the least severe claims to an express unit. This process change is projected to improve cycle times by at least 5%, and over time is expected to produce a measurable impact on the customer experience.

The resulting improvements in reserve accuracy, as well as reduced re-work and handoffs, are projected to save the carrier nearly 5% on their third-party BI claims spending in the first year.

Identified by Carrier

12%

Identified by Predictive Analytics

65%

Large Losses Identified at 30 Days
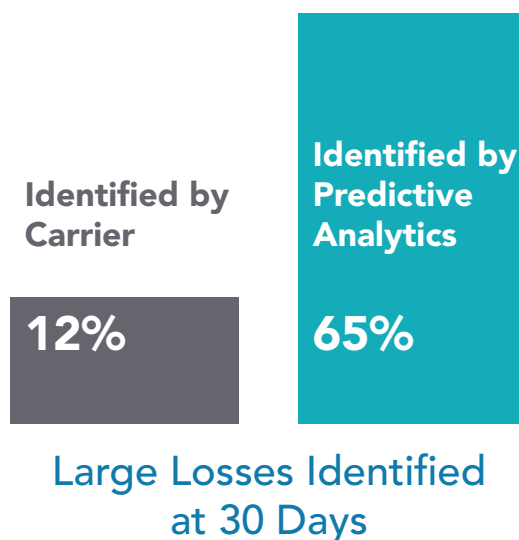
Workers' Compensation Use Case

Early Identification of Jumper Claims and Auto-Adjudication

Challenge

In any Workers' Compensation program, the prospect of jumper claims looms large. Jumper claims, also called "exploder" claims, go off track at unexpected times and take longer to settle, with settlements far exceeding reserves.

At the other end of the cost and severity spectrum, auto-adjudication of simple claims that don't vary from reserves presents opportunities for automation, so adjuster resources can be better allocated to the more complex claims.

The problem is, for most Workers' Compensation organizations, early identification of jumper claims is only accurate in 5-20% of cases. To make matters worse, auto-adjudication processes can miss opportunities and generate false positives resulting in re-work and re-routing.

Solution

This Workers' Compensation Fund created a predictive model that would score claims at each end of the severity spectrum, and everywhere in between. After data preparation the team used Predictive Analytics to create a severity model using existing claims with initial reserves under $10,000 that "jumped" to exceed $50,000.

The severity model identified 30 variables that significantly contributed to the severe claims outcomes, so that claims could be scored accordingly. The model was then run against existing claims with reserves less than $10,000 to identify those most likely to surpass $50,000.

Applying the severity model to all claims also revealed a significant segment that would settle quickly and simply, so that they could be auto-adjudicated.

Results

Jumper Claims: The new model has resulted in early identification of as many as 60% of jumper claims compared to 20% the organization had previously been able to predict. Having a model that can anticipate even a few more claims that might mushroom into large losses, then prevent that from happening, is a huge return on the investment.

Claims Triage Success

Carrier's Existing Models	With Predictive Analytics	Carrier's Existing Models	With Predictive Analytics
20%	60%	20%	50%
Jumper Claims Identified		Auto-Adjudication	

Auto-adjudication: Where the Fund was auto-adjudicating less than 20% of claims, the new model identified that more than 50% could be auto-adjudicated. In addition, applying auto-adjudication erroneously has reduced; where they had been re-adjudicating about 10% of claims, with the model in place they now re-adjudicate less than 5%.

GUIDEWIRE
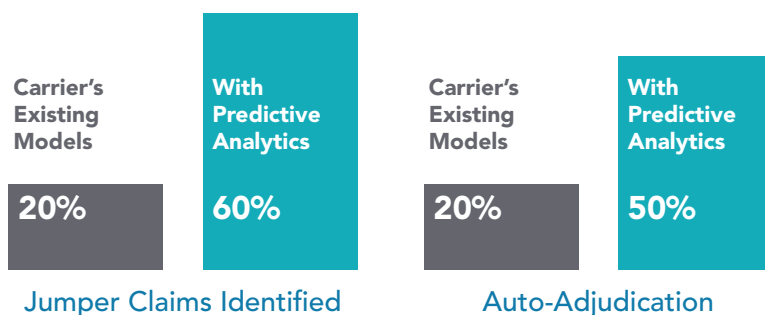
How to Get Started with Claims Analytics

You Can Get Up and Running Using Existing Data

Identify Goals and Assess Data

The two most common questions in claims analytics are "Where do I start?" and "What data do I need?" Our professional services team can guide which questions to predict first and advise what data is important. And with our extensive experience in data transfer, you can be sure that your data will be maintained with the utmost security and confidentiality.

Create a Predictive Analytics Data Set

Gathering the right data is critical, but setting it up properly for accurate predictions is just as important. The key is to re-construct snapshots of claims as they appeared at different points in time. The Guidewire Professional Services team has the skills and Guidewire Predictive Analytics has the flexibility to set up your data to facilitate building models that apply throughout the life of a claim.

Build the Predictive Model

The return on investment for claims analytics depends on the accuracy of the predictions. False positives are a reality in claims models, and each one is a missed opportunity to make a difference. The breakthrough algorithms of Guidewire Predictive Analytics do the hard work for you, building models that maximize the predictive power within your data and minimizing the false positives.

Apply Scores to Claims

Machine learning produces complex models. We have simplified this process by creating a scoring service that automatically encapsulates the rules of a predictive model and generates a simple score. It automatically scores pending claims in real time or at scheduled intervals, putting the models into action and returning the results in customized reports straight to the claims manager.

Implement Scoring into Claims Workflows

In addition to reporting on claims scores, we can help you operationalize a predictive analytics claims model. For example, by using the severity score as a workflow trigger at FROI, incoming claims can be routed automatically to the appropriate adjusters. Re-scoring at specific time intervals can also be integrated into workflows to flag claims for re-evaluation as they develop.

Visit guidewire.com to learn more.

About Guidewire

Guidewire delivers the software that Property/Casualty (P/C) insurers need to adapt and succeed in a time of rapid industry change. We combine three elements – core processing, data and analytics, and digital engagement – into a technology platform that enhances insurers' ability to engage and empower their customers and employees. More than 200 P/C insurers around the world have selected Guidewire. For more information, please visit www.guidewire.com and follow us on twitter: @Guidewire_PandC.