



P&C PERSPECTIVES

Current Issues in Property and Casualty

Actuaries: The key to success for third-party administrators?

First published on www.riskandinsurance.com.

Stephen R. DiCenso, FCAS, MAAA

With more and more corporations outsourcing claim handling to third-party administrators (TPAs), and with the market for TPA services becoming ever more competitive, it's time to consider the role of actuaries in helping TPAs provide quality service, deliver promised outcomes, and afford a sustained competitive advantage. Most TPAs do not have actuaries on staff, and yet actuaries offer a number of skills that can be important to the success of their businesses. Although TPAs do not assume insurance risk (the most traditional risk to which actuarial skills apply), their core businesses involve estimating claim counts and claim costs for clients. By providing skills that improve a TPA's ability to monitor historical performance and predict future trends in claim outcomes, actuaries can contribute significantly to the business's top and bottom lines, from pricing and marketing to profitability management.

TPA challenges: Actuaries to the aid

TPAs face numerous near-term challenges, both strategic and tactical. Consolidation in the industry, the influx of venture capital with its pressures for growth and earnings, greater financial disclosure and transparency requirements, market-driven changes in product pricing, medical cost inflation, and reforms in state workers' compensation laws are all affecting the profits of TPAs. In an increasingly technology-driven business, actuaries can lend their technical expertise to overcoming these and other challenges.

Take workers' compensation reforms, for example. Actuaries can analyze the data to show how a TPA is performing relative to expected and/or actual industry-average reform impacts within a given state. Regarding venture capital, actuaries are skilled in understanding valuation and can analyze the true economic value of a company. The pricing structure and resulting revenue streams for medical-bill-review services have changed dramatically in the last five years, and actuaries can quantify—and provide greater transparency regarding—the current-period and long-term financial effects on clients and management. Because they are able to organize and structure data in many useful ways, actuaries can

function as an intermediary between a TPA's operational, financial, and information technology (IT) departments.

One area of particular concern to TPAs is the current shortage of qualified talent in the employment pool. As an aging claim-proficient workforce moves toward retirement, many TPAs find themselves lacking strong training programs and career-development structures, and therefore facing a potential brain drain. Actuaries can help a TPA develop better staffing models based on future contingencies such as wage and hiring practices, demographic trends, medical inflation, and other dynamic market factors. Such models can also help make adjustments that allow for the most efficient allocation of resources to meet changes in business volume and mix.

Seeing in the crystal ball

The business of an insurance carrier involves making promises to settle claims for many years, sometimes well beyond a contract's expiration date—and often in return for revenue received up front. Traditionally, TPAs have not always had a clear picture of their clients' future obligations on contracts they have committed to. The reserve for future claim-handling expense is generally the biggest item on a TPA's balance sheet, and actuarial skills are well suited to formulate the analysis and integrate it into the other facets of the business.

Property/casualty actuaries prove their value by making loss projections for managing the risks of long-tailed insurance lines such as workers' compensation and medical malpractice liability—the risks, for example, that are inherent in claims that can develop complications over time: a back or neck injury that doesn't heal, a small surgical item mistakenly left inside a patient after suturing. The table in Figure 1 illustrates the triangulated model that actuaries use to predict future costs of past and current claim obligations. This type of structure is a perfect fit for TPA pricing and performance measurement.

FIGURE 1

**XYZ CORPORATION
INCURRED LOSS DEVELOPMENT 2002-2007**

AY	12 MONTHS	24 MONTHS	36 MONTHS	48 MONTHS	60 MONTHS	72 MONTHS
2002	\$387,000	\$503,000	\$533,000	\$544,000	\$550,000	\$550,000
2003	280,000	378,000	393,000	405,000	407,000	
2004	310,000	410,000	430,000	440,000		
2005	345,000	459,000	482,000			
2006	385,000	520,000				
2007	425,000					

Note: This table illustrates incurred-loss development for a fictional company's account over a six-year period. The vertical axis shows aggregate values for incurred losses per accident year (AY). The horizontal axis represents the maturity of claims reported. The more recent the year, the fewer values for incurred losses. Thus, AY 2002 claims have 72 months of maturity by the end of 2007, whereas AY 2007 claims have only 12 months.

Going beyond the traditional triangulated model, which deals with aggregate data, actuaries can help a TPA monitor its claim costs at a level of detail consistent with the way clients manage their business. By applying methods of predictive analytics, an emerging field that has begun to show its value to the industry, actuaries can analyze data on a more granular level, examining each individual claim and the transactions that constitute claim development over time. The result is an unveiling of outcomes formerly hidden by less sophisticated modeling techniques—hidden because the causal factors were buried within the individual settlement patterns of claims and the trends they indicated were so numerous and complex.

Predictive analytics is also useful for proactively identifying business trends. In a competitive market, clients of TPAs want to know how the services they purchase compare with those of other TPAs—not just this year, but into the foreseeable future. Predictive analytics enables actuaries to define performance benchmarks and develop models that can lead the way to greater competitiveness over the long term.

A closer look at what actuaries can do for TPAs

Actuarial models are, in fact, well suited for even more TPA functions than those briefly mentioned above. The actuarial toolkit is perfectly suited for pricing, performance measurement, profitability forecasting, revenue-recognition reserving, and other predictive applications.

The actuarial toolkit is perfectly suited for pricing, performance measurement, profitability forecasting, revenue-recognition reserving, and other predictive applications.

Pricing. For insurance companies, claim handling is just one element of their business expenses. Insurance companies and self-

insured entities outsource their claims to TPAs because either they don't have the capacity to handle claims in-house or they rely on a TPA to do the job more efficiently. For TPAs, claim handling is their business. That's why it is so crucial that, when it comes to handling claims, a TPA do the best job possible and price it appropriately.

Claim pricing involves quantifying cost drivers that affect the duration of claims, which varies according to many factors, such as:

- state
- industry
- line of business
- service type (claims fees, medical bills, nurse case management, etc.)
- type of claim (lost time vs. medical only)
- staffing levels (new claims intake and inventory)
- adjuster level required (depending on mix of claims)

This analysis should be robust enough so that an operations manager can see the effect on claim duration (and thus pricing) if a staffing change is made.

Performance measurement and benchmarking. There are many ways to analyze a TPA's performance. Key metrics might, for example, measure a given client's results and compare them with the average for all clients of the TPA—or, where data is available, the average for the industry. The data can be mined at many different levels (by lost time vs. medical only, by size, by injury type, by body part, etc.) to uncover trends that require management attention. The most important element is that the data be compared at common maturity levels (i.e., age); otherwise, the comparisons can be almost meaningless.

Actuaries can also look at data to measure return on investment (ROI) from risk-management initiatives (e.g., return-to-work programs), or the use of nurse case managers, provider networks, and other vendors such as medical-bill-review services or pharmacy-benefit managers, answering questions such as:

- Where, when, and why is the TPA spending more or less on losses over time?
- Is it closing the more recently reported claims at the expense of leaving open the older, potentially more costly claims?
- If nurse case managers are involved in settling claims, are the results better than, worse than, or no different from when the adjuster settles claims alone?
- Which states and/or client locations are better served with available managed-care networks?
- Are medical-bill-review service providers meeting expectations for savings generated and bills processed?

The performance measurement function can be very effective for marketing purposes when a submission can be benchmarked against the TPA's existing book and/or the industry and the potential incremental improvement in savings quantified in dollars and cents.

Planning and forecasting profitability. From the pricing analyses that take place at granular levels of detail, future revenue and expense flows can be projected and summarized for management reporting and strategic planning. Actuaries can model new business versus renewal business by policy year and develop expectations of calendar-month revenue and cost flows. Data used for pricing and benchmarking can be leveraged for use in profitability forecasting as well. The results are useful not only for strategic planning, but also in valuing the business for merger and acquisition purposes.

Revenue recognition reserving. TPAs are required to establish deferred revenue reserves on their balance sheets for the future expense of handling reported claims. This analysis is ideally performed at levels of detail similar to pricing and can be most informative when performed at an account level. Actuaries are especially skilled at modeling past and projected revenue and cost flows (i.e., claim handling vs. medical-bill processing), and can therefore be a huge help in supporting all financial statement preparation and budgeting.

Predictive modeling. As noted above, a relatively newer item in the actuary's toolkit is the ability to build statistical models that predict future outcomes. These models can be leveraged to address a variety of key operational issues, such as:

- Which characteristics of an injury best predict the likelihood that a claim will become a large loss?
- Which claims are better suited to immediate surgery than to non-surgical treatments—for example, is it better to perform surgery for a back injury or not, given that the long-term effects might be severe—and who makes that determination?

- Treatment plans in general: who structures them, and how can one determine the best treatment plan for a given case?

Actuaries mine prior data to understand how specific types of claims develop over time, and from that data they build models to predict future claim developments. This can have significant operational implications as TPAs look to leverage this knowledge by aligning staff and expertise around identified trends.

TPAs, clients, brokers, carriers and actuaries: working together

Not only the TPA, but also the clients, brokers, and carriers with whom a TPA works will benefit from the contributions that actuaries can provide.

Not only the TPA, but also the clients, brokers, and carriers with whom a TPA works will benefit from the contributions that actuaries can provide.

Creating a holistic process. Noninsurance organizations that actively manage their own insurance plans do not generally have actuaries on their staff, but they typically contract for external actuarial services to determine their reserve needs for property and casualty, healthcare, and other lines of coverage. When a TPA also engages an actuary, the TPA and its broker are better equipped to align the services of the TPA with the data and analysis that a client's actuary provides. The TPA's actuary can work to integrate the TPA's performance reviews with the client's actuarial review(s), creating a holistic process based on more data and thorough analysis that benefits both the TPA and the client. For example:

- Clients and their external actuaries need effective ways of evaluating the services of a TPA. When a TPA actuary reviews a TPA's performance in closing claims, case reserving, and other functions, it creates an opening for better communication with the TPA's clients via their actuaries—and possibly a quicker recognition on the part of clients of improved TPA practices. This can benefit the bottom line of both TPA and client.
- A TPA's actuary can integrate the costs of handling claims with the loss-cost payouts on the claims, thereby presenting a holistic "total cost of risk" to clients. This is the bottom line when it comes to displaying value to a client.

Helping self-insureds evaluate TPAs. Large self-insured entities, often with the help of brokers, make careful decisions when they choose a TPA in a competitive market. There's no better selling point for a TPA than to be able to demonstrate that its performance is superior to a competitor's. An actuary can help by developing benchmarking techniques and other evaluative processes that can succinctly and precisely summarize the performance of the TPA for prospective clients. Brokers will also benefit by being able to judge

TPA performance more objectively, thereby enhancing their ability to find the right TPA for their clients.

Market forces are driving increasing competitiveness regarding rates and returns, and TPAs need to have a sophisticated understanding of how to price their services competitively while still making a satisfactory profit.

By the same token, the role of an actuary working on behalf of a TPA can yield valuable information for a fronting carrier that is attempting to underwrite an alternative-risk program or a self-insurance program for a client. The carrier can gain more comfort with the TPA's pricing and claim-handling quality.

Conclusion

With their skill sets and experience, actuaries bring a value that TPAs are beginning to benefit from. Market forces are driving increasing competitiveness regarding rates and returns, and TPAs need to have a sophisticated understanding of how to price their services competitively while still making a satisfactory profit. Actuaries have a well-deserved reputation for being cautious and risk averse. They bring a needed level of discipline to the financial projections that can make or break a TPA in the current market environment. A TPA that makes wise use of actuarial services will position itself better within the market and raise the satisfaction level of its clients.

Stephen R. DiCenso is a consulting actuary with the Boston office of Milliman. Contact Steve at stephen.dicenso@milliman.com or at +1 860 687 0160.

P&C Perspectives is published by Milliman's P&C Editorial Committee as a service to our clients. Additional copies are available through any of our offices. Reproduction of any article appearing in this publication requires permission from the *P&C Perspectives* Editor and proper credit to the firm and the author.

Because the articles and commentary prepared by the professionals of our firm are often general in nature, we recommend that our readers seek the counsel of their attorney and actuary before taking action.

Inquiries may be directed to:

P&C Perspectives Editor
1301 Fifth Avenue, Suite 3800
Seattle, WA 98101-2605
(206) 624-7940
pnc.perspectives.editor@milliman.com