

Actuaries, Rating Bureaus, and Workers' Compensation Data

BY RICHARD A. HOFMANN

To avert future workers' compensation political crises, regulators and legislators need to build better databases from which to manage costs and evaluate the performance of the workers' compensation system. The advent of competition to provide rating bureau services, along with recent data collection initiatives by the National Association of Insurance Commissioners (NAIC), International Association of Industrial Accident Boards and Commissions (IAIABC), and Workers' Compensation Research Institute (WCRI), indicates the desire for more and better data beyond that traditionally collected by rating bureaus. However, before these initiatives begin, certain guidelines should be followed. Actuaries should be involved in the design and development of these databases in order to yield meaningful management information for public policy-makers.

Crisis Mode

Each state's workers' compensation system is a mandatory benefit program enacted by state legislatures with input from business, labor, and other parties. It's a system designed to be the exclusive remedy for all occupational injuries and diseases incurred by most employees in that state. In return for giving up their right to sue employers, employees receive no-fault benefits as mandated by state statutes. Except in Alabama and Tennessee, each state has its own workers' compensation agency created to resolve disputes related to occupational injuries and to ensure workers access to benefits faster than through the civil justice system.

Actuaries have been involved in workers' compensation since the inception of these social insurance programs in 1911. Initially, most states created a single rating bureau to collect data from insurers and develop rates and rating plans that all insurers were required to use in determining workers' compensation premiums. Through time, the rating bureaus in many of the smaller states merged to form the National Council on Compensation Insurance (NCCI), which is today the rating bureau in 31 states and the statistical agent in eight others.

For most of the 20th century, workers' compensation benefits were low and this line of insurance was relatively noncontroversial. Because few states allowed price competition among



insurers, few actuaries outside the rating bureaus were involved in workers' compensation pricing issues. The insurance industry relied on the NCCI to represent its interests. Consequently, when the National Commission on State Workmen's Compensation Laws convened in 1972 and issued its 19 essential recommendations, only two actuaries were extensively involved in evaluating these reforms.

As a result of the National Commission's recommendations, however, many states began to increase benefits, and workers' compensation costs rose dramatically over the rest of the decade. Initial cost estimates proved to be too low because rating bureaus didn't anticipate increased benefit utilization resulting from higher benefit levels.

In response to the workers' compensation crisis of the 1970s, many states began replacing their "administered pricing" laws with "competitive rating" laws during the 1980s. In most states, these laws permitted insurers to deviate from bureau rates and/or required them to file their own rates for the first time.

After a prolonged period of rising costs and operating losses for the insurance industry in the latter half of the 1980s, the American Academy of Actuaries published a paper in 1993,



PREVENTION

The country's workers' compensation system has faced crises before. It's about to face another unless states reduce their dependence on rating bureaus and develop their own improved and more timely databases to provide early warning of changes in the cost cycle and to better manage future cost increases.

identifying factors contributing to the workers' compensation crisis of the 1980s. It called upon actuaries to become more involved, to re-evaluate the methods and assumptions used to determine rates, and to be more aggressive in assisting the NA-IC and the states in developing strategies for reform. It also called upon insurers to help "by maintaining and providing quality data for use in evaluating benefit changes and reform."

Starting in the early 1990s, workers' compensation costs began to fall, even in states that hadn't passed substantive reforms. This was due largely to the efforts of employers and insurers in preventing accidents and better managing the cost of workers' compensation claims. Fueled by a strong economy, this downward trend in costs continued through most of the rest of the decade. During the 1990s, the financial results of the insurance industry improved dramatically, partly due to the inability of most rating bureaus to respond quickly to a reversal in the cost trend, and partly to reform efforts to reduce benefits to injured workers.

Redundant bureau rates in the mid-1990s allowed insurers to offer huge rate credits and still realize sizable profits. By the end of the decade, however, rate decreases had reduced or eliminated the redundancy in bureau rates. Yet insurers continued to use competitive pricing tools, resulting in a new financial crisis for insurers.

The latest published combined ratios for the industry now rival those at the peak of the last crisis. So the workers' compensation crisis of the next decade has already begun. Should costs begin to rise again, many actuaries fear this crisis will be even worse than its predecessors unless states build better databases to predict and manage the cost increases of the future.

Past Data Collection Efforts

Actuaries employed by rating bureaus have historically developed systems of classification rates, experience rating plans, and other rating plans needed to determine premiums for individual employers. Initially, rating bureaus collected only individual employer data according to the "Unit Statistical Plan" (USP).

In the past, most rating bureaus would first develop a statewide rate indication by analyzing historical aggregate "policy-year" data (derived by combining the USP data for all policies with effective dates during the same year) and combining it with aggregations of insurer financial data reported on a "calendar-year" basis.

Next, the rating bureaus would analyze similar policy-year data aggregated by individual industrial classifications to develop rates for each class. The rating bureaus published these rates in manuals, and insurers multiplied these rates times the payrolls by class for each employer to determine its "manual premium." For all but the smallest employers, the rating bureaus then used three years of the latest USP data to calculate an "experience modifier," which the insurer multiplied times the manual premium to determine the employer's "standard premium."

Unfortunately, it still takes rating bureaus a significant amount of time to process USP data in preparation for a rate filing. Therefore, in the late 1970s, rating bureaus began using a new set of highly summarized "aggregate" experience calls (gleaned from insurance carrier financial data) to derive their overall statewide indications.

The NCCI first began using financial data collected by policy year, and later added data by calendar/accident year for its statewide indications. Today, practices vary by state in the use of policy year, calendar/accident year, or a combination of both, but PY97 and/or AY98 were the latest data used in establishing rate filings effective in 2000.

The Need for Better Workers' Compensation Benchmark Data

Historically, "lay actuaries" (those not employed by rating bureaus) have relied on information gathered by rating bureaus as the sole source of workers' compensation benchmark data. Some state workers' compensation agencies have collected data on policies written by insurers and first reports of injury (FRIs) from employers. But the quality of these data has been suspect, and, until recently, they haven't been received electronically or maintained in a database suitable for analysis. Actuaries practicing in workers' compensation need quality benchmark data to:

- determine appropriate benchmark loss development and trend factors used in estimating reserves and expected future losses for less than fully credible blocks of business or insurance entities;
- evaluate the effect of past and proposed legislative and regulatory reforms;
- estimate excess and reinsurance costs.

Consequently, actuaries have depended on rating bureaus to provide them with some of the basic tools of their jobs. Many of these assignments are performed on behalf of regulators, especially in evaluating the solvency of insurance entities. Rating bureaus seek the advice of actuaries through their actuarial committees, yet some rating bureaus permit only member-company actuaries to attend their meetings.

The quality of these data has been suspect, and, until recently, they haven't been received electronically or maintained in a database suitable for analysis.

Since 1980, the following changes have occurred in the workers' compensation system, the actuarial community, and the regulatory environment that have created a demand for more timely, detailed, and comprehensive workers' compensation data:

Advent of price competition. In the early 1980s, many states passed open competition and/or competitive rating laws that allowed insurers to compete on price for the first time. Open competition laws deregulated insurer pricing, and competitive rating laws allowed or required insurers to file their own manual rates or to "deviate" from bureau rates. Because bureau rates were modestly redundant at the time, insurers sought the assistance of actuaries to justify and file lower rates in order to remain competitive.

Upswing in the cost cycle. During the mid-1980s, costs generally began to soar, but rating bureau procedures were slow to respond. Bureau rates became inadequate and remained inadequate for the rest of the decade because eliminating the rate deficiency was politically unpalatable to regulators. Larger insurers with more sophisticated and timely reporting systems urged the rating bureaus to implement new procedures to recognize the cost increases sooner and file for larger rate increases.

Growth of residual markets. In the late 1980s, insurance regulators were reluctant to approve the double-digit rate increases needed to restore bureau rate adequacy and offset competitive pricing activities. Even in open competition states, where insurers were free to set their own rate levels, residual market rates were still subject to prior approval and acted as a ceiling on rates that insurers in the voluntary market could charge. Residual market mechanisms became a market of "first choice" and operated as insolvent insurance companies. Insurers were required to subsidize these operating losses, further decreasing the adequacy of voluntary market rates.

Growth of casualty actuarial consulting firms. The introduction of ERISA in the mid-1970s resulted in the rapid growth of actuarial consulting firms. Although insurance regulators began to retain consulting actuaries to review bureau rate filings and investigate the administration of residual market pools, the

Rapid advances in computer science

have now made it possible for insurance regulators to perform more detailed analyses.

demand for workers' compensation-related services from casualty actuarial consulting firms wasn't as pervasive. Self-insured employers weren't required to fund their accrued workers' compensation liabilities, and only a few states require actuarial opinions to determine appropriate security levels. Still, many group self-insurance pools were often required to have actuarial support for rating filings, dividend requests and financial reports.

Growth of alternative markets. During the late 1980s and early 1990s, many larger employers opted to self-insure in order to avoid increasing residual market subsidies. Many smaller employers fled the residual market pools altogether to form group self-insurance pools seeking better services and greater control over rapidly rising insurance costs. Many large employers that didn't self-insure opted to purchase large-deductible policies to minimize residual-market and other assessments. Therefore, the data used to support bureau rate filings represent 50 percent of the total in some states.

Consulting actuaries rely on bureau ratemaking data to supply the benchmark data needed to supplement the limited experience of their clients. For some classes that were heavily self-insured, however, rating bureau data now reflect only a small percentage of their actual experience.

NAIC Activities. In the late 1980s, the NAIC conducted a number of hearings to investigate rating bureau activities in 1989. In the early 1990s, the NAIC retained an actuarial consulting firm to conduct a multimillion-dollar audit of the NCCI. The same firm also audited the independent bureaus in New York and Pennsylvania.

Frustrated by the lack of data to understand why costs were going up, the NAIC developed a model data-reporting bill for workers' compensation. The NCCI responded by expanding its Detailed Claim Information (DCI) database to include all states. The NAIC also began the creation of its own workers' compensation statistical plan, modeled after the NCCI plan.

Downswing in the cost cycle. In most states, claim frequencies began plummeting in the early 1990s, initiating a downward trend in loss costs that persisted for most of the rest of the decade. Once again, rating bureau procedures were generally slow in responding to the change in cost trends, and the redundant rates that resulted produced very favorable results for insurers in most states. Although bureau rate redundancy generally dissipated during the latter half of the decade, it still persists in most states. Many actuaries today are concerned that the

cost cycle has turned or is about to turn again, but rating bureau data collection practices are largely unchanged. To keep insurance rates consistent with costs and avoid another insurance crisis, the demand for better and more timely data on workers' compensation cost trends is greater than ever today.

Return of price competition. During the mid-1990s, insurer profitability improved dramatically, triggering the return of competitive pricing, depopulation of the residual market pools, and the beginning of a persistent soft market. Emerging bureau rate redundancy was so great that many residual market pools produced additional profit for insurers. The number of states with mandatory competitive rating rose from 10 to 33 in the 1990s. Actuaries involved in workers' compensation sought better data to compete in a superheated underwriting environment, but very little data were available from rating bureaus.

NCCI initiatives. As bureau rates reached their maximum redundancy and the demand for competitive pricing data was at its greatest during the mid-1990s, the NCCI altered its funding basis and increased the fees paid by "nonaffiliates" for its data products. Entities that reported no data to the NCCI had to pay "subscriber" fees to "affiliate" and gain access to NCCI rates and rating plans. The new NCCI fee structure forced nonaffiliates (mostly consultants and researchers) to pay at least twice as much as member companies for access to NCCI data. To purchase a copy of four of its rate filings, the NCCI quoted nearly \$1 million to one consultant, who one year earlier had paid \$1,000 for the same data. The NCCI now demands that consultants pay a 20 percent royalty on all revenue generated through the use of its rate filings, and it's the only workers' compensation rating bureau to establish such a caste system.

Legislative, regulatory, and other research initiatives. In the late 1990s, several states legislated the creation of databases to better understand and manage workers' compensation cost trends. Rapid advances in computer science have now made it possible for insurance regulators to perform more detailed analyses. Therefore, they seek more data from statistical agents. In addition, many state workers' compensation agencies have begun collecting data electronically. Both the IAIABC and the WCRI have embarked on campaigns to build workers' compensation databases.

Rating Bureau Functions

In order to understand the issues surrounding the advent of multiple rating organizations (MROs), it's important to establish some new terms for the various functions historically performed by rating bureaus:

Compilation agent. An entity that collects data from statis-



tical agents according to authorized statistical plans and maintains a “data warehouse” of workers’ compensation information for insurance regulators. The data collected support the ratemaking process and help to allocate equitably the costs of the workers’ compensation system to employers in a manner that encourages workplace safety.

Statistical agent. An entity that collects and compiles data from insurance carriers and/or self-insurers (or their authorized agents) on behalf of regulators, according to authorized statistical plans. These entities would be experts on the various state reporting requirements and would assist insurers, especially smaller ones, in complying with requirements. Some large insurers may choose to report directly to compilation agents, while domestics, state funds, or self-insurers may want to have their own statistical agents.

Advisory organization. An actuarial firm that assists regulators, insurers, or self-insurers in estimating required reserves for historical periods, expected loss costs or rates for future periods, and individual employer costs. These firms rely on benchmark data obtained from the compilation agent to supplement their client’s own internal loss experience and expenses. These entities also perform benchmarking studies comparing their clients’ experience to industry averages and those of “peer companies.”

Rating bureau. A specialized form of advisory organization that assists its members in ratemaking activities. Usually, a rating bureau will also be the statistical agent for its members. Rating bureaus are typically owned and/or controlled by their member companies. They develop and file rates/loss costs, rating plans, manuals, forms, and endorsements on behalf of their members. They also typically calculate the experience rating modifications for insureds of their membership.

Residual market plan and pool administrators. After several antitrust suits and significant regulatory scrutiny, many states have replaced NCCI pools with state funds or independently administered plans. Pool administrators don’t need to be rating bureaus, but they still need to access data from the compilation agent and must be able to develop rates and rating plans for the plan.

With the emergence of alternative statistical agents and advisory organizations, some states are considering how multiple entities could perform each function. Some states may decide to permit competition in the delivery of services for each function and allow multiple entities to exist side by side. Others may opt to make the point of competition at the bid to provide services, and may implement a formal process in which multiple entities can submit bids but only one entity is selected.

Still others may decide to keep their existing rating bureau in place without opening up the rating bureau functions to competition. The American Academy of Actuaries Workers’ Compensation Work Group recently issued a set of guidelines for multiple statistical organizations, but took no position regarding which model works best. (The guidelines are available on


Actuarial principles of ratemaking transcend issues of single vs. multiple advisory organizations

the Academy’s Web site at www.actuary.org.) The work group also considered but didn’t release a set of guidelines for multiple advisory organizations. The following are my recommendations.

Multiple Advisory Organization Guidelines

Actuarial principles of ratemaking transcend issues of single versus multiple advisory organizations. In an administered pricing state, where insurers are not allowed to file rates independently, multiple advisory organizations make no sense. In competitive rating states, where insurance companies have been filing their own rates without any problem for two decades now, the introduction of multiple advisory organizations should be a simple matter. However, competing advisory organizations have not surfaced in these states because statutory provisions designate a single advisory organization and/or fail to grant competing firms equal access to the compilation agent’s data. I offer the following guiding principles to those states with competitive rating laws that are considering introducing multiple advisory organizations:

- Changes to the minimum standard class plan across multiple entities should be coordinated. Many states already have committees through which employers can appeal classification assignment and experience ratings that could be used for this purpose.
- States may wish to continue designating a single set of benchmark rates or loss costs as the “designated statistical reporting” (DSR) values to be used for reporting “DSR standard premiums” under aggregate financial data calls.
- Exclude expense constants and experience mods from the DSR premiums. Many actuaries



consider uniform and mandatory experience rating plans obsolete and actuarially inappropriate in a competitive rating environment, especially when rate multipliers include an adjustment for loss experience that's better or worse than anticipated by the benchmark rating values.

- There should be a direct relationship between the class loss costs underlying an insurer's manual rates and the experience rating plan values used to determine experience modifications for an insurer. State rating laws and/or regulations that mandate that a uniform experience rating plan be used by all insurers are incompatible with rating laws and/or regulations that allow insurers to deviate based on expected loss experience.
- States may want to preserve a benchmark experience rating plan so employers, especially contractors, can measure themselves against their peers.
- An advisory organization or insurer must still be selected for the residual market, but this organization need not be the compilation or statistical agent.

Workers' Compensation Data Collection Guidelines

Recent data collection efforts initiated by state legislatures, regulators, the NAIC, the IAIABC, and the WCRI all emphasize the need to collect more detailed information. Such initiatives should be subject to the following guidelines:

- All data collected should be subject to the Academy's guidelines discussed previously for compilation and statistical agents. If possible, the same compilation and statistical agents should be employed to reduce costs and improve the consistency of data reports.
- Before any new data elements are required for collection, specific management reports should first be designed that require their use.
- The value of creating new management reports should be weighed against the cost of obtaining the required data elements prior to requesting the data elements.
- Databases or statistical reports should comply with the Statement of Principles Regarding Property and Casualty Ratemaking of the Casualty Actuarial Society.
- Databases should be comprehensive and reconcile with data collected by other state and federal agencies, so long as the cost of adding additional data is outweighed by the benefits of collecting it.

Although the U.S. actuarial community disagrees about the desirability of, and the need for, systemwide actuarial databases, such databases exist in five states, every Canadian province, and most other countries of the world. In these jurisdictions, private insurers for workers' compensation benefits are not permitted. While I don't ad-

vocate the elimination of the private insurance marketplace in the United States, I also don't believe that the proprietary interests of insurers should preclude the collection of data needed to permit the effective management of this social insurance program.

The insurance industry is currently in the midst of a workers' compensation crisis for insurers that is already worse than the crisis of the late 1980s. As we enter into a new decade, the crisis will only get worse, possibly resulting in the return of double-digit rate increase requests, unless states develop improved and more timely databases to provide early warning of changes in the cost cycle. We should learn from history and not repeat the mistakes of the last two decades.

While all has been quiet on the workers' compensation front for the last several years due to falling costs, business, labor, and government leaders should reduce their dependence on insurance rating bureaus by building new databases now to establish a baseline from which to evaluate and address the inevitable cost increases of the future. ●

RICHARD A. HOFMANN IS PRESIDENT OF SIGMA CONSULTING GROUP, INC. IN CHESTERFIELD, MO., AND IS A MEMBER OF THE AMERICAN ACADEMY OF ACTUARIES WORKERS' COMPENSATION WORK GROUP.