

It's the Right Time for Right Pricing in Medical Malpractice Insurance

PRESIDENT BUSH'S JANUARY 2005 CALL FOR CONGRESS to impose strict limits on medical malpractice litigation has focused renewed attention on patient safety, the flip side of the malpractice issue. Patient safety is one of the most important matters facing the health care industry today. Yet, despite widely publicized statistics on preventable deaths due to medical errors in America's hospitals, there is little evidence that patient safety has improved since the 1999 publication of the Institute of Medicine (IOM) report, "To Err Is Human," according to Dr. Lucian Leape, leading safety expert and IOM report co-author.

Traditionally, the actuarial profession hasn't played an active role in developing patient safety initiatives. Rather, actuaries have spent the majority of their time focusing on quantifying the premium to charge a physician, based on macro categories such as geography and specialty, the amount of damages that must ultimately be paid to a victim, and the impact of various tort reform proposals on future malpractice insurance premiums.

This is important work, certainly, because it helps support the financial soundness of insurance companies. But this "after the injury" focus also propagates the view of news media and health care professionals that actuaries are premium-quantifying number crunchers who are only looking out the rearview mirror.

The time has come for the actuarial profession to join the patient safety battle, to focus energy on preventing injuries rather than just dealing with their aftermath. Whether actuaries help quantify the potential benefits of certain medical error prevention techniques, join patient safety organizations, build eminence through

articles and papers, or help develop more equitable and refined policy pricing, the profession should be playing an active, up-front role in shaping patient safety initiatives.

Patient Safety and Risk Management Goals

One way that actuaries can immediately put their analytical abilities to work on behalf of patient safety is to promote the adoption of "right pricing" for malpractice insurance premiums. Recent, dramatic premium increases have prompted physicians throughout the United States to curtail services, move to other states, or leave the profession.

Many feel they're paying more than their fair share. They're frustrated by the insurance industry's traditional one-price-fits-all approach to malpractice policy pricing in a world where risk profiles are routinely used to determine an individual's rates for auto, home, and life insurance.

Yet, insurance companies need to be able to reasonably determine a price for medical malpractice coverage, a process that is becoming increasingly difficult because of the growing number of malpractice suits and the propensity of juries in certain parts of the country to issue massive patient awards.

Ultimately, if premium rates aren't curtailed or apportioned more equitably, the best physicians will look at alternative risk-transfer options (e.g., captive insurance company formation) or worse, choose to go bare—without any insurance at all. Insurance companies will then be stuck with a pool of less-than-average risks for which no other alternatives exist, also known as adverse selection.

On the other hand, if insurance companies can find a better way to segment pricing at more granular levels and physicians (and patients) benefit, that's certainly fair. The goal is to move away from subsidizing individuals, particularly those with the most disparate insurance experience, and get to the right price for everyone, a process that should improve patient safety in the long run.

The use of predictive modeling tools and data mining techniques to drive changes in health care provid-

KEVIN M. BINGHAM is a senior manager at Deloitte Consulting LLP in Hartford, chairperson of the Medical Malpractice Subcommittee and an official spokesperson for the American Academy of Actuaries in Washington. **JOHN LUCKER** is a principal at Deloitte Consulting LLP in Hartford and national co-leader of Deloitte's Advanced Quantitative Services Practice (Data Mining & Predictive



CHART 1

Current Perception of Specialty Segmentation

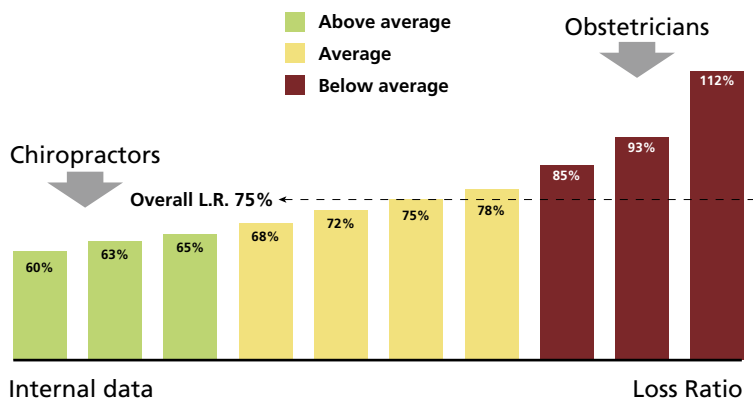
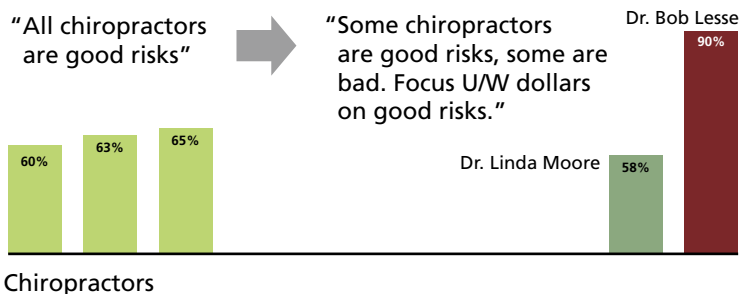


CHART 2

**Segmentation of the Future—
The Goal of Predictive Modeling**



ers' patient safety habits can help insurance companies price malpractice policies in a manner that promotes both patient safety and risk management goals. Predictive modeling helps make the premium pricing process less subjective, more consistent and transparent, and can transform today's perception of specialty segmentation ("All chiropractors are good risks; all OB/GYNs are bad risks.") into an improved, more realistic segmentation (see Chart 1) for the future. ("Some chiropractors are good risks, some are bad. We'll focus underwriting dollars on good risks.") (See Chart 2.)

The ideal is a right-pricing model that stratifies, for example, OB/GYNs into different buckets based on 40-50 predictive risk factors that affect each practitioner's medical malpractice premium rate. These factors could include years in practice, medical training, continuing education, quality of record keeping, informed consent procedures, patient satisfaction, credit score, monthly number of patients, number of employees, number of adverse actions per zip code/county, average claim amount per zip code/county, average prescription count per patient, risk management education, and others.

Sources of such information are numerous and include:

- Customer (physician) data—Area of specialty, location of practice, correspondence, billing/payment history, risk

management practices, practice biographics/demographics, practice satisfaction surveys, etc.

- Claims data—Losses, experience data, frequency, timing/patterns, loss control, fraud/lawsuit, etc.
- Agency information—Retention, profitability, audited premium ratio, new business volume, etc.
- Third-party databases—Motor vehicle reports, credit reports, Experian/Dun & Bradstreet business demographic, financial and credit information, AMA Physician Master File, aggregated pharmacy data, NPDB detail/state data, etc.

It's essential to include reason codes with the pricing information to show a physician or practice why a premium rate will be more or less in a given year. These reason codes will help foster pricing transparency by providing easy-to-understand explanations for how prices are determined rather than complex model scores or parameters. This gives the physician an opportunity to reduce problems and/or improve patient safety, which can potentially lower that rate. When a medical malpractice premium is \$250,000, there's a definite incentive for physicians to study the risk factors and determine what changes can be made to improve their overall scores and the resulting rates.

While the concept of using predictive modeling to "right price" property and casualty insurance isn't new, its potential application in the pricing of medical malpractice insurance policies is novel and could have enormous implications. Certain insurance companies and professional services consulting firms already possess the necessary predictive modeling tools and data mining techniques to make right pricing a reality.

The next step is to extend these capabilities to medical malpractice insurance pricing, which yields benefits for physicians that include an enhanced focus on patient safety, fewer medical malpractice claims, and lower insurance premiums driven by proper risk segmentation and physicians' patient safety action steps.

Insurance companies, in turn, can reduce costs, better segment physician specialties, and improve their risk management profile by attracting physicians with a lower propensity for large medical malpractice awards.

Actuaries working for insurance companies know that right pricing leads to better underwriting decisions. By leveraging reason codes and providing financial incentives for physicians to embrace patient safety initiatives, right pricing can also help the actuarial profession shift from looking out the rearview mirror to proactively reducing errors and improving patient safety. ●