



Health Section News

"For Professional Recognition of the Health Actuary"

An Actuarial Response to the Health-Care Crisis

by Dan Wolak

First of a two-part series

The June 23, 2003 issue of Business Insurance asked four simple questions to a group of 100 individuals, including just one actuary, who are involved with health care. The questions were:

- 1. Who's to blame for cost increases?
- 2. What should be the government's role to ensure health care coverage and keep costs down?
- 3. What are the most important steps that can be taken to control costs?
- 4. How will health care plan design change in the future?

Kara Clark, staff fellow supporting the Health Practice area at the SOA, suggested that we present similar questions to a panel of health actuaries. I worked with Kara and Sue Martz of the SOA staff to do so. The results of our project follow.

The following manuscript includes the responses of approximately 20 actuaries who participated in this survey. Please note that these comments are individual opinions and do not reflect the opinions of the respondents' employers.

In some cases, I have presented the participant with a follow-up question based on their responses. To have the final responses fit within the confines of this newsletter, some individual responses were shortened to only one or two paragraphs. If you would like to see the entire transcript, please go to the SOA Web site at www.soa.org.

Responses to the first two questions are included in this issue. The last two will be addressed in a subsequent issue of Health Section News.

We hope that you find the following discussion interesting and thought-provoking. Thanks again to those who took the time to respond to the survey questions.

Dan Wolak, FSA
Senior Vice President
Gen Re LifeHealth

NOTE: These responses were solicited prior to the Medicare changes being finalized.



1. Who is responsible for the level of health care cost increases?

Howard Bolnick, FSA

ogy, the belief that illness can be "conquered" and the "right" of each of us to access virtually unrestricted medical care. As long as we believe in the value of and demand access to all the care we need and want, then health care costs will continue to increase faster than general inflation.

We all are! Our societal ethic strongly supports scientific research, medical technol-

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Chairperson's Corner

by Cindy S. Miller

These are interesting times to be a health actuary. The external environment and industries in which we work are facing tremendous challenges relative to such issues as health-care financing, variability and transparency, to name a but a few. These critical issues translate into both challenges and opportunities for health actuaries. The SOA's Health Section is dedicated to helping our members stay abreast of the issues in the marketplace and be better positioned to respond to those issues in their day-to-day work. Our goal is to support the awareness and responsiveness of you, our members, in a way that increases your value as a professional.

These are exciting times to be involved as a Health Section Council member. The SOA, at the direction of the Board of Governors, has recently undergone a governance audit. The audit highlighted the value that sections add to the organization, and suggested that the SOA look for opportunities to further leverage the strength, vitality and grass-roots connections of the sections to advance the strategic initiatives of the SOA. This means that the Health Section Council can look forward to involvement in initiatives designed to increase not only today's value of the individual professional, but also tomorrow's value of the profession as a whole.

One of the ways in which the SOA is strengthening the value of the profession is through initiatives designed to increase the external recognition and visibility of the profession. One such initiative was a meeting that was held recently with several external organizations. In concert with other SOA and Academy volunteers, representatives of the Health Section Council met with representatives of The Robert Wood Johnson Foundation, The Commonwealth Fund and the Greater New York Hospital Association. The meeting engaged the representatives from these organ-

izations in a dialogue about the key issues facing the health-care industry and how their organizations are addressing those issues. We discussed ways in which the actuarial profession can add value to the research and other initiatives undertaken by these groups. We were pleased to find that these organizations value and welcome the actuarial perspective. In fact, they encouraged us to help provide a "real-life" viewpoint to the research they undertake! Using our knowledge and expertise to assist these organizations will help increase the visibility and perceived value of the actuarial community, as well as increase the value of their research. As a profession, we need to be proactive in seeking and responding to such opportunities.

Becoming more involved in advancing the vision for the future of the profession doesn't mean that the Health Section Council is any less committed to delivering services and products of current value. Our members have told us, for example, that they look to this newsletter to provide them with current "how-to" articles, and would like to see even more of this type of article in the future. We want to meet our members' needs on this front as well. Because we are a grass-roots entity, this means that we need **your** help by writing articles based on your knowledge and experience.

We need your help in other ways, too. The SOA initiatives to further leverage section vitality offer us some great opportunities, and we want to be in a position to take advantage of them. We know that many of you have creative ideas about how we could better serve our members and the profession and would welcome the opportunity to be part of the organizational change. There is tremendous energy within our section. Please consider using some of your energy by running for the Health Section Council and giving back to this profession that has served us all well. 📧

Cindy S. Miller, FSA, MAAA, is vice president and chief actuary at Anthem Insurance Companies Inc. She is chairperson of the Health Section and can be reached at cindy.miller@anthem.com.

Letter from the Editor

Health Section News April 2004

by Jeffrey D. Miller

Greetings, and welcome to the April edition of Health Section News. I apologize for the long interval we have had between editions. I believe all health actuaries are working at full capacity right now and sometimes projects like this must be pushed to the back burner.

This newsletter has five articles, including one very large piece on an actuarial response to the health-care crisis. I hope you find them interesting, informative and possibly even entertaining!

Our spring health specialty meeting is coming up in Anaheim. These meetings are now a fixture

on my calendar. I depend on the sessions to help me keep up to date on the many developments in our profession. I hope to see you there.

This election year is certain to bring more public discourse on health care. However, our friend Alan Greenspan may have diverted some of the discussion to Social Security! Health actuaries have an extensive understanding of many aspects of the health-care challenge. I hope we can continue to bring rational thought to discussions that often move toward the irrational. 📧



Jeffrey D. Miller, FSA, MAAA, FCA, is a consulting actuary in Overland Park, Kan. He can be reached at jdmfsa@aol.com.

John Cookson, FSA

We all are. We have a system that was set up based on a fee-for-service reimbursement. The system has no requirements that treatments be effective or of high quality. Continuing reductions in the proportion of direct claims related out-of-pocket provider payments immunize the consumers against having to make choices based on quality, cost and effectiveness. Treatments and plans are so complicated, and billing for services is so complex that it is almost impossible for anyone to know the cost of a particular course of treatment in advance. And good information on quality and effectiveness of providers is generally not available.

Dale Yamamoto, FSA

Everyone is responsible for current levels of health care cost increases. The government is responsible for shifting more costs to private payers via lower reimbursements to public programs, employers for providing overly rich benefit plans, consultants for continually making changes to the system that few understand and consumers, for not paying attention to costs.

- Wolak: In regard to the “consultants” you are referring to, do these include actuarial consultants? If yes, where have they gone wrong? If not actuaries, how can actuaries help the situation?
- Yamamoto: Some of the consultants are actuaries, but many are not. However, most of the consultants were at least supported by actuaries in some fashion to help employers understand the costs of the programs. In many ways, the economics of health care are simple: you have a price for a service, and the final cost is driven by how much each service is used, but the types of services are constantly changing because of technology, consumer demand and other factors. The utilization of services changes depending on many factors, too (e.g., benefit design, consumer income, advertising). Actuaries can be blamed partly because we understand the cost influences on health care but have not been vocal in the larger health policy debate in making this market segment react similarly to other economic markets.

David V. Axene, FSA

No single party is to blame. This is a collective problem that needs a multi-faceted solution. Through all of this I often refer to the tension between FSI (financial self interest) and greed. This

is a little philosophical, but clearly applicable. I refer to a G-line (where financial self interest ends and greed begins). I am convinced that our real problems in the health care system begin when people cross the G-line (e.g., they want more benefits, compensation, profits, etc., than they deserve). When this happens we have problems, and we definitely have problems.

- Wolak: The easy (and likely, correct) answer is to say all are responsible. But if you have only one party, who is it?
- Axene: Well I assume you are saying, “If I am pinned to the wall and can only say one, even though I know it is not just one, I have to go with those paying for services (i.e., health plan or plan sponsor). They hold the keys. Behavior follows money, so I would go there. A close second would be the covered individuals.”

Van A. Jones, FSA

In the words of Walt Kelley, “We have met the enemy, and he is us!” Theoretically it is conceivable that an answer could be found to the question, “who is most responsible THIS MONTH for increasing the cost of health care?” In the end, the guilty party might accept guilt for the month, but justify it on the basis that their guilt was driven by the guilty party from the prior month.

Michael G. Sturm, FSA

Everyone. We all want the latest technology and “best” health care, but don’t want to pay for it. We complain about the costs, but continually vote down legislation that rations health care. I believe spending more on health care as our wealth increases is a natural phenomenon. There is, and has been for some time, a fundamental shift occurring in how we spend our money. The American public is (sub)consciously spending more on health care as we achieve satiety in non-health-care-related goods. We probably will still complain about health-care costs in 30 years when health-care spending will likely be closer to 25 percent of our gross domestic product (GDP) (vs. about 15 percent today). Until we conquer death, expect increasing premiums caused by an innate demand for “the cure de jour.”

William F. Bluhm, FSA

Franklin Roosevelt [is responsible] and his tax code that made employee benefits tax deductible.

Cynthia S. Miller, FSA

It is counterproductive to attempt to place blame for the level of health-care inflation. All constituents in the health-care system have played a role in the increases in U.S. health care consumption. However, I believe that one of the primary factors is the disintermediation of the health care consumer from the costs of the services that they receive.

Mark E. Litow, FSA

Everyone [is responsible], that means government, insurers, providers, suppliers, etc. What should be the government's role to ensure health-care coverage and keep costs down? They should set the laws, enforce them and provide subsidies to people in need for a transitional period if they are capable of helping themselves and provide subsidies permanently if they are not capable of helping themselves. They should not be a provider and only an insurer where no other alternative is available. Otherwise, they end up regulating themselves.

Craig S. Kalman, FSA

I'd like to answer this a little differently, but instead of asking "who" [is responsible] ask "what"... I also think the answers involve the question, "What is responsible for the level of health care costs (both in value and their increases vs. just the increases)?" The cause of this ties heavily to several facets:

- Access to health care is often tied to access to health insurance coverage (note: this includes self-funded even though it's not "insured").
- The costs for providing health insurance coverage are typically paid by a third party—such as an employer or Medicare. As a result of these, people don't have a perceived value of the real cost of their health care.
- Billings from health care providers are listed as an "original price" and don't necessarily reflect the final cost—such as discount arrangements via managed care or Medicare. Often the only one paying this "original price," is one who has no insurance coverage. There may be little relationship between the "negotiated price" for a given procedure and the "original price," and even then, there is little knowledge of the overall "average final price" to account for the variations in the "negotiated price" and varying levels of "cost shifting."
- With more and more people under managed care, there become less people to receive the "cost shifting."

David R. Nelson, FSA

In one sense, we are all responsible for the level of health care cost increases. When faced with a medical emergency, we all want the best health care possible for our loved ones, without regard to cost. And, it's not just Americans who view health care as a precious good. Every society spends more on health care, if they have the income to do so. There are, however, many factors that contribute to complicated and costly medical activity irrespective of health:

- Physicians practice medicine based on what they learned at medical school or on geographic preferences, as opposed to evidence-based medicine or best practice.
- Patients with first-dollar insurance coverage often take routine concerns to the emergency room or otherwise waste health-care resources.
- Hospitals compete with each other for physician referrals, and in the process, acquire redundant and costly medical technology.
- Pharmaceutical companies spend billions of dollars to promote the use of branded drugs that offer no clinical benefit over generics.
- Payers and providers employ computer systems that do not talk to each other.
- Government mandates coverage that does not contribute to health.
- Government allows litigation that necessitates the practice of defensive medicine and makes it difficult for providers to admit mistakes and discuss improvement efforts with their peers.

Finally, it should be noted that some health cost increases are very consistent with good practices. As the average age of our population increases, our costs increase. Moreover, good medicine keeps sick people alive. Therefore, there are more sick people in the population. This is particularly true because most medical technology improves quality of life, but does not cure those with chronic illnesses.

Carl Desrochers, FSA

The health-care industry is an extremely dynamic environment. There are a lot of market forces that drive the health-care cost increases. Two of them are:

(1) **Malpractice lawsuits:** The practice of medicine has become extremely litigious and costly in recent years. Numerous lawsuits have been filed and some of them have resulted in large non-economic damage awards. The non-economic part of a lawsuit settlement has become a "lottery" award. According to the *Jury Verdict Research, Current*

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Awards Trends in Personal Injury: 2002 ed., the median medical liability cases jumped 176 percent from 1994 to 2001, topping \$1,000,000, while the average award reached \$3,900,000 in 2001.

The effects that those large settlements have on health-care costs are pervasive. One effect is that physicians will be charged much higher malpractice liability insurance which will be passed on to the health care user or they will simply exit the profession because of the high risk of litigation, which will reduce the supply of physicians. Another effect is that liability and risk of lawsuits are forcing the physicians to perform “defensive medicine.” They are forced to order more diagnostic tests to document that they made the right diagnosis and didn’t overlook anything.

- Wolak: Are you suggesting two aspects of cost, one being the cost for malpractice insurance, the second being additional tests? Does this also force doctors to follow a certain protocol?
- Desrochers: In summary, I believe each doctor is following a certain protocol, but the protocol is not standardized nor is it cost conscious, which drives up the costs of health care. To determine the appropriate protocol, one would need a large study to gain statistical credibility. Since the health-care environment is extremely dynamic, a new technology and/or research will be available by the time the protocol has been studied.

(2) **Medicare/Medicaid:** The federal programs—Medicare and Medicaid—cover a large proportion of the population. Their reimbursement schedules through Resource-Based Relative Value Schedule (RBRVS) are generating payments that are not in line with the amounts the providers deem necessary to meet their income needs. The providers must then recoup the lost income from the Medicare/Medicaid reimbursements by charging higher amounts to their other clients. This phenomenon is called “cost shifting.” As the baby-boomer generation will reach the Medicare age in the next 15 years, the cost-shifting problem will only intensify.

Chandler Lincoln, ASA

We are all responsible for the level of health care cost increases.

The ultimate driver of health-care costs is health-care claims, and we all contribute to those claims. Most claims are unavoidable and uncontrollable, but as a free people we sometimes don’t do all we can to avoid costs. With all the cigarettes we smoke, with all the greasy french fries we eat, with all the alcohol we consume and with all the risks we take, we add to those unavoidable

claim costs, and as we age, those costs increase.

As consumers we have demanded the right to have greater access to providers within our health plans. In response, health plans have offered greater access, thereby reducing their control and allowing providers (hospitals and physicians) to require a greater reimbursement for their services.

Partially responsible for the increase is the consolidation of health plans. This has resulted in less competition and a higher price for the plans that have survived. Also, because of a fear of returning to the unprofitable period of the late ‘90s there has been less new competition since health plans have been unwilling to reduce prices to achieve market share.

Timothy K. Robinson, FSA

Insurance programs have generally not been designed to encourage effective identification and management of key health care cost drivers (e.g. chronic and catastrophic disease). With a focus on claims payment and cost shifting, cost control has been equated with transfer of risk (and/or reduction in payment rates) to medical providers, and member cost sharing as the key component of plan design. Providers have rarely been given the support necessary to understand and manage their risk in the forms of relevant and timely data, complementary and efficient case management expertise, and risk-adjusted payment rates. Insurance programs have tracked basic preventive measures and assigned generalist case managers to complex chronic and catastrophic cases, rather than developing effective medical management programs. Disease management companies are now stepping in to fill this void, but insurance programs are hesitant pending savings that can somehow be “proven.”

- Wolak: As actuaries, we can be frustrated that the medical profession has not followed consistent protocols. Do the medical providers really want to be given support to manage the risk? Is it something that can really be expected?
- Robinson: A problem is that the expectations of the medical providers have probably been set too low by the health plans in terms of the quality and utility of the data that is typically provided. Medical providers probably don’t want more of the same—retrospective summaries of actual claim costs versus capitation payments, or stacks of “canned” reports with no explanation – because they provide no information as to what worked or didn’t work, or the patients on which to focus in the future, etc. When health plans start taking advantage of diagnosis-based predictive modeling technology and develop

reports for their providers (as well as their actuaries and underwriters) that detail expected resource utilization at the patient level (sorted by disease state and severity level), they can offer information that is truly useful to the providers as well as various case management personnel or vendors. This can be expected because the technology already exists, and I believe providers would want the support as long as it was properly demonstrated.

David M. Tuomala, FSA

Clearly all participants in the health-care system play a role in the level of cost increases: patients, providers, and third-party payers (both public and private). However, I believe that the nature of the system itself is one of the key reasons that health-care costs continue to increase at a faster rate than other parts of the economy. It should not be surprising that a third party payment system where both the end-user (patient) and the supplier (provider) are insulated from the economic ramifications of their decisions, leads to an inflationary outcome. That form of payment system is likely to lead to both oversupply and overdemand for services since neither side has a strong incentive to reduce the amount of services received or provided.

Health care includes many noneconomic checks and balances on both supply and demand that help to mask these purely economic considerations. Most patients would probably prefer not to receive unnecessary services, and most providers would probably not intentionally supply them. There are also time, convenience, potential discomfort and other considerations involved. However, there are certainly many gray areas in medical practice that leave considerable room for overdemand by patients or oversupply by providers. The recent rapid growth in prescription drug spending is an example of where these natural barriers may be lower than for other types of services.

The prevalence of the third-party payment system in health care may also constrain potential innovations in care delivery. In most industries, technological advances and other forms of increased efficiency tend to produce downward pressure on prices over time. In health care, competitive forces do not operate in the same way because the providers are typically paid the same amount for a given service regardless of how efficient they are. This creates an incentive to provide more services, rather than provide the same services more cheaply or more efficiently. Because unit costs stay the same or increase over time, this further adds to the inflationary pressure in health care.

While other external factors, such as population demographics, technology, etc., also play a key role in health care cost increases, I believe the effect of the third-party payment system itself is often overlooked.



2. What should be the government's role to ensure health-care coverage and keep costs down?

Howard Bolnick:

Over the years I have developed a strong belief that government does have a significant role to play in assuring access to health care to all citizens and also to help control costs. However, our social norms, political ideology and political system make it virtually impossible for the U.S. government to adequately do what it could and should to solve these problems. Without sweeping reform, government can only nip away at the fringes of our serious problems of access and cost.

- Wolak: When you say the norms, ideology, and system of the U.S. government makes it virtually impossible, are you referring to the United States per se, or is this an issue for all governments?
- Bolnick: Social norms and political ideology are not government attributes, they're characteristics of the people who live and work in the United States. Every country has its own unique set of social norms, political ideology and political system, which results in a unique health-care system with its own unique problems.

John Cookson:

I believe the most effective role that the government can play right now is to foster the development of information on the cost, quality and efficacy of specific treatments and individual providers. This could allow carriers to design plans that reflect these factors and compete in an environment of enhanced knowledge. Data quality, access and ability to pool information would all be important ingredients.

Dale Yamamoto:

I don't think we want a nationalized system like almost everyone else in the world. However, I do think it will take government intervention to allow the price transparency and quality efforts that everyone is searching for to actually happen. We

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need some big push to make hospitals and physicians report the data, and we probably need a national warehouse to store it so that everyone has access to the same data. If we rely on private companies to do it, the data will by necessity be split up because of competition and it won't benefit any of us. Given that this data must be uniform across the country, it has to be a federal effort and not pushed down to the states.

David Axene:

The government's role should be no more than overseer of the system. No government-sponsored system in any of the developed countries has been able to accomplish what we expect (low cost, wide access, high quality, etc.). Medicare has resulted in inefficient care even though there are discounts. Medicaid has also resulted in this with even greater discounts. These two approaches show that cutting prices per service doesn't automatically result in lower overall prices, so price controls will likely not work well. The Canadian system has deep discounts and it is struggling with its cost effectiveness and trends as are many other national systems.

Van Jones:

The federal government's role should include maintaining a level playing field for supply-and-demand economics. Consistent with this role are the roles of encouraging and rewarding individual responsibility and the freedom of choice. Inconsistent with those roles but equally important is the need to provide a safety net for the needy and to safeguard the security and financial well being of the masses. Two additional conflicting objectives include minimizing the government's role as a market competitor and minimizing transfer payments that tax the higher economic entities in order to support the lower economic entities.

For discussion purposes, I would suggest that a hospital may find that its economic cost of providing care might be 50 percent of its billed charge. For Medicaid patients, the hospital may receive 30 percent of billed charges and 40 percent of billed charges for Medicare patients. Local large employers may have negotiated a rate of 60 percent of the billed charges, while other managed care plans may have contracted to pay 70 percent of billed charges. The remaining "private pay" patients will be asked to pay the billed charges. Although since many "private pay" patients are the uninsured poor, the hospital's collection rate may be half the amount billed.

This sample hospital may find that 10 percent of

its patients have Medicaid, 40 percent have Medicare, 10 percent are from the local large employer, 30 percent are with managed care plans and 10 percent are private pay (half with no financial resources). On the average, the hospital is collecting 51 percent of billed charges. Collecting 51 percent when their cost is 50 percent leaves the hospital with a small profit. This hospital is financially viable as long as this mix and payment structure remains constant. However, no one above is paying a price equal to the 51 percent value of the services provided. This current system as a whole is fraught with inequities.

David Nelson:

Without cost control, there will be no way for employers to provide health insurance or for government to pay for safety-net care. To lower costs, one approach the government should consider is severely limiting direct-to-consumer advertising of medical services and branded drugs.

➤ Wolak: On the other hand, this is restraint of competition, something that may not be wise. Comments?

➤ Nelson: Restraint of true competition would be a problem, but we don't have true competition in health care. In a normal free market the person who uses the service pays for it. In health care, patients and providers use the service for which employers and the government pay. Direct-to-consumer advertising, along with third party payment, can create demand for service that is not cost effective. For example, after seeing an advertisement, a patient may ask for a branded drug rather than the chemically equivalent generic drug. The doctor writes the prescriptions for fear of losing the patient. There are two solutions to this problem: either we make the patient responsible for the cost of the more expensive drug, or we limit direct-to-consumer advertising.

Mike Sturm:

To ensure health care coverage, we (i.e., the government) should provide a graded scale of tax credits for purchase of health care insurance to deserving individuals. Some might argue that all Americans can get health care (since laws and ethics prevent providers from turning away the poor). However, it is my opinion that people without insurance get significantly less access to quality health care than those with insurance, and society should provide these people with the same health care as the rest of us.

➤ Wolak: But isn't this still true in countries where

there is national health care? Doesn't a two-tier system develop?

- Sturm: I am not proposing a national health-care system. I am proposing we help poor people purchase individual health insurance (through a reallocation of government spending or increased taxes). I believe our nation is sufficiently wealthy to ensure all its population has equal access to health care.

Carl Desrochers:

The "single-payer" approach is growing in popularity but should not be considered by the government. The health care system from Canada should teach us lessons regarding the single-payer system.

The Canadian system, which has much social and political appeal, is providing universal coverage to Canadian citizens. However, the physicians have a procedure book and the specific reimbursement for each procedure is determined by the government. In order to remain within their budget, the Canadian government also imposes caps on the physician's total annual compensation. This leads to accessibility problems as physicians that have reached their maximum compensation for the year will not practice medicine until the following calendar year, when they will start getting compensation for their services. Tight budgets in hospitals also lead to lack of technology (MRI machines are few and far between).

- Wolak: Isn't the procedure book in Canada just a set of clear operating practices and standards?
- Desrochers: I was talking more about a procedure book like the CPT, a "catalog" of the procedures and their associated payment from the government. (Note that I'm talking specifically about the health-care system in the province of Quebec to which I was exposed earlier in my career, but I believe the rest of the Canadian system works the same way.) I don't believe there's anything that prevents doctors from running tests as everything is covered. There's no book with a set of rules or steps to follow. The limits are set by the government's annual budget (which is always busted), physician's income cap and other limited resources of the Canadian health-care system rather than by a given procedure book.

Craig Kalman:

- Various regulations have assisted in allowing people who have insurance coverage keep it (e.g., COBRA and HIPAA).

- Regulations that prohibit the use of "non-duplication of benefits" in favor of "coordination of benefits" adds to the problem by removing cost sharing when there are multiple coverages (e.g. both spouses or both parents).
- Improvement in the way employers cover part-time employees (e.g. if one works a x percent work week, let that person get x percent of the employer's contribution for full-time employees).
- Give incentives for people who are "in the system" to stay "in the system" and make it more cost prohibitive for someone to get into the system at a later time (while allowing a one-time "get in" for those not in the system).
- The current government systems—Medicare and Medicaid—already contribute heavily to the cost shifting.
- The Medicare system offers only partial coverage, which means that those covered under Medicare have to supplement their coverage (either on their own or via retiree medical from an employer) to cover those gaps, or bear more claims themselves.
- In the late 1980s under the Medicare Catastrophic Coverage Act, it created a more expansive coverage under Medicare. Instead of it being covered via the Medicare payroll tax, its costs were borne over the Medicare population on an income tax basis. While the actual average per person cost was reasonable, with more of the costs being borne by higher income elderly, there was a quick repeal of this Act.
- There is not perfect timing between the increases in the cost of health care and the increases in the costs of health insurance. There are also marketing-underwriting cycles for insurance.

Bill Bluhm:

What "should" the government do? One of my favorite folk singers (David Roth) has a song entitled, "Don't should on me and I won't should on you." This question is a personal one, requiring me to provide a personal value judgment, not a professional one. This is often misunderstood. I don't choose to answer it; my opinion should have no more validity than that of any other knowledgeable citizen.

Cindy Miller:

As an actuary for a health benefits company, I'm sure that I'm biased in my response. However, just as our free-market model works in providing the very basics of life—food, shelter, clothing – to Americans, so too I believe that it is appropriate

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and can work for health care. Thus, just as it does for food and shelter, the government should provide regulation to ensure that quality care is provided, and act as a backstop for Americans who cannot otherwise afford to purchase health insurance or pay for care. Moving to a national health-care system where the government pays for all services does not solve the problem of health-care inflation, not without price controls and/or rationing of care, both of which pose a large risk of eroding the quality of care currently delivered in the United States.



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David Tuomala:

I believe that government should primarily seek to facilitate a competitive marketplace across the whole spectrum of health-care participants. Purchasers of health-care services should be able to choose from competing plans and competing providers based on cost and quality considerations like they do elsewhere in the economy. Without healthy competition among market participants we are unlikely to see significant innovations in either the financing or delivery of care over the long term.

I would prefer to see the market compete to provide the best choices for each individual purchaser rather than for the government to try to mandate a "one-size-fits-all" approach for everybody.

➤ Wolak: On the other hand, the government is also the largest purchaser of health-care services, which include Medicare, Medicaid and the military and government employee health-care

plans. Given this fact, can it be argued that the government is more concerned about its own ability to control cost at the expense of the private market?

➤ Tuomala: My initial response was in terms of what I think the government should do rather than what they actually do today. Government is clearly the single-largest purchaser of health-care services, so it obviously exerts a great deal of influence on the system. Unfortunately, the current approach to cost control in most public health-care programs is to effectively mandate a limited increase (sometimes even a decrease) in the cost per unit of health care. At best, this approach merely controls the cost to the government at the expense of the private market as you suggest.

Besides the potential for cost shifting from the public to private market, there are other possible undesirable effects of this approach that may be overlooked. Because government is the biggest payer, most health care business models need to generate revenue based on the number and type of services provided rather than on quality or efficiency. This carries over into private-sector financing models as well. I think this has a detrimental impact on investment and innovation in health care delivery systems. More efficient systems that result in fewer or less costly services may actually be less attractive for investment than more inefficient systems that actually generate more revenue. This probably leads to less investment in health-care innovation than in other industries. 📧

Moneyball and the Actuarial Profession

by Kurt J. Wrobel

After recently reading the book, *Moneyball: The Art of Winning an Unfair Game*, I became interested in how the book could be applied outside of baseball. After considering several creative ideas, I finally came to consider its application to the actuarial profession. Although a book written on baseball may appear to be an unusual source for ideas to change our business, the fundamental premise of the book—the systematic use of data to identify and then exploit market inefficiencies—has a very clear application to our profession.

A Summary of Moneyball

In writing this book, Michael Lewis attempted to answer a basic question:

How do the Oakland Athletics consistently outperform other baseball teams while having one of the lowest payrolls in the league?

As addressed throughout the book, Billy Bean, the general manager for the Oakland Athletics, has exploited a market for baseball players that incorrectly values their skills. In order to uncover these market inefficiencies, Billy has ignored the traditional views of scouts and long-time baseball

insiders, and, instead, has chosen to focus on evaluating players through an in-depth data analysis. His analysis focuses on the most important elements in baseball—scoring runs on offense and preventing runs on defense. Using this strategy, Billy developed a list of statistics and attributes that are either overvalued or undervalued in the baseball player marketplace. These statistics and attributes are outlined on the next page.

Billy used his sophisticated data models to either draft or trade for players with undervalued attributes and trade or avoid drafting players with overvalued attributes. The resulting strategy has allowed the A’s to become one of the most successful baseball franchises, while many small market teams continue to struggle and complain about the inequities of a system that allow wealthier teams to sign players with the best perceived skills.

In highlighting Billy’s strategies, the author describes a number of players who best exemplify his strategy for identifying overvalued and undervalued players.

- Jeremy Brown was an overweight catcher from the University of Alabama with a long statistical history of earning walks and hitting well in a competitive college environment. In addition, Jeremy was also considered to have a substandard throwing arm. By virtue of his less-than-appealing physique (one scout even said that he wore “a large pair of underwear”) and poor throwing arm, the traditional view among

scouts was that he would never be a major leaguer and should probably not even be drafted. Because of his excellent hitting record, Billy decided to make Brown a second round draft pick, but only if he agreed prior to the draft to a contract that was well below other second round draft picks. In contrast, the other major league teams used many of their first and second round draft picks to draft unproven high school players with insufficient data to adequately measure their baseball talent.

- Dave Justice represented a new approach for Billy. If he’d been in his prime career years, the A’s never could have afforded a player like Justice. In his prime, Justice hit for power, walked frequently, had an excellent throwing arm, and an excellent physique, but at age 36, Justice’s market value had fallen so much that Billy felt he had become a bargain worth signing.
- Scott Hatteberg had recently ruptured a nerve in his elbow that prevented him from continuing in his career as a catcher. Because the market for ballplayers puts significant importance on defensive ability, this injury significantly lowered his perceived market value and allowed him to become available to the A’s. In allowing the A’s to sign Hatteberg for a relatively small amount, the other major league teams had not put sufficient importance on his undervalued offensive attributes. In particular, Hatteberg was a very

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<i>Overvalued Statistics and Attributes</i>	<i>Undervalued Statistics and Attributes</i>
Batting Average	On base percentage
Runs Batted In	Slugging percentage
Earned Run Average	Factors controllable by the pitcher (Home runs allowed, walks, strikeouts)
Win-loss percentage for pitchers	Ground ball to fly-out ratio
Relievers that are considered closers	Pitches per plate appearance
High school players with insufficient data to adequately measure their ability	College players with significant data to measure their performance



baseball insiders have become enamored with certain attributes that are not supported by statistical evidence. In many cases, these insiders, instead, will rely on a vague notion of past experience or loosely constructed arguments that ignore hard data. They will also look for qualitative evidence that supports their position without adequately developing a statistical case for their position. Invariably, the scouts also put an inordinate amount of credibility on a player's most recent performance. In addition, because the most over-valued characteristics have become so ingrained in baseball, many of these insiders simply can not change their thinking about evaluating baseball players. In summary, this market inefficiency is caused by "sloppy data analysis" and an unwillingness to change one's preconceived notion of market value.

Application to the Actuarial Profession

As the chief data analysts for health plans and employer groups, we have a duty to conduct a similar in-depth statistical review as Billy Beane has done for the Oakland A's. In this capacity, we need to guard against practices within our organizations that use misguided, qualitative judgement to make important business decisions. Instead, we need to ensure that our business decisions are based on a well-reasoned examination of all available information using sophisticated data analysis. We should also attempt to instill a mindset within our organizations that puts greater reliance on data and statistical analysis and less on "gut feelings" and long-held opinions of financial risk.

Although baseball may have been somewhat backward in its statistical analysis, health care organizations and employers certainly have room to make better-informed decisions based on a more detailed examination of information. Who knows? Maybe we'll even find room for actuaries in baseball. 📊

disciplined hitter (he was third in the league for pitches seen per at bat) who rarely struck out and had an excellent on-base percentage.

- Chad Bradford was another player who didn't have the attributes that appealed to the scouts. Bradford had an awkward pitching delivery and below-average velocity on his fastball. Despite this, Bradford consistently pitched well in the minor leagues by using the movement on his fastball to induce outs, particularly ground-ball outs from hitters. Unfortunately for Bradford, his major league team put far too much emphasis on less important attributes (fastball velocity, pitching delivery) and insufficient value on important attributes (fastball movement, ground ball to fly out ratio). Billy acted on this market inefficiency by trading for Bradford.



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The next obvious question one must ask is:

How can the A's continue to systematically exploit these market inefficiencies in drafting and signing baseball players?

As highlighted in the book, scouts and other

Welcome New IAA Health Section Members

by Howard Bolnick

Thanks to all who have recently accepted the invitation to join the new IAA Health Section committee. Approximately 200 members from more than 30 countries have signed up, with about 60 of these being U.S. actuaries. The Health Section Committee's membership goal is to reach a minimum of 400 members by the end of 2004, so please try to recruit at least one new member from among your colleagues. Ask them to join by simply going to www.actuaries.org/public/en/IAAHS/join_letter.cfm and filling out the enrollment form.

The IAA Health Section is already actively engaged in providing services to its membership. Its next major event is a second International Health Colloquium being held **April 27-29, 2004, in Dresden, Germany**. The Colloquium Organizing Committee, headed by Rainer Fuerhaupter (Germany), has planned a very interesting program featuring well-known speakers on current health policy and health insurance topics. In addition, there will be sessions on private health insurance (medical expense, personal income, long-term care, and critical illness) product practices. These interactive sessions are an international forum for the section's members to share their diverse experiences with these universally popular health insurance products. Complete information on the program, speakers, social events, and enrollment can be found on the Colloquium Web site at www.iaahs2004.de.

We would like to have strong presence from U.S. health actuaries at the Colloquium. We have a great deal of experience to share with our international colleagues and they have very interesting and relevant information to give to us in return. Please take this opportunity to interact with our colleagues from around the world in a very rewarding professional and social experience. 📧



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Predictive Modeling: Considerations for Care Management Applications

by Keith Passwater and Brent Seiler

In recent years considerable interest has developed within the actuarial ranks in applying formal, predictive modeling techniques to a variety of health insurer activities. The Society of Actuaries and its members have produced a number of valuable predictive-modeling seminars, articles and reports. Most notable among these contributions are the Health Section report, "A Comparative Analysis of Claims-based Risk Assessment Methods and Risk Assessment for Commercial Populations" (Cumming, et. al) and the Health Section seminar "Risk Assessment of Non-Medicare Populations."

Health actuaries have been pursuing the value of predictive modeling, but application of these techniques, like a lot of new ideas, has not been simple. We will discuss considerations that may be

of interest to health actuaries and other professionals applying predictive modeling to health care management.

Health-Care Management Perspective

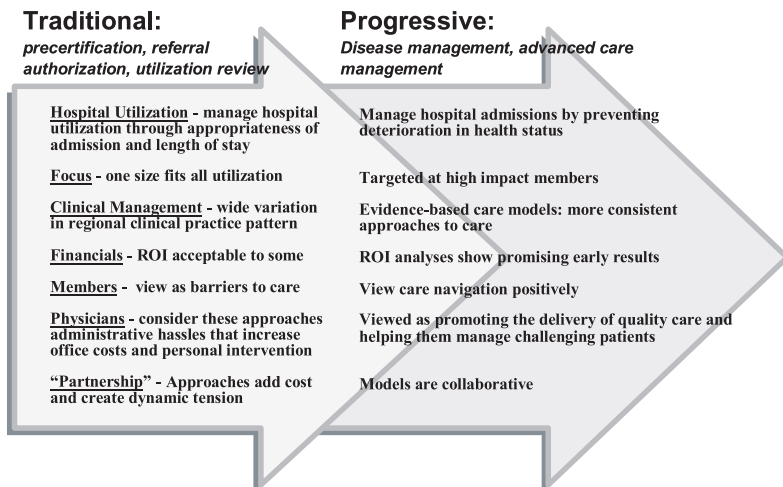
It is necessary to understand the different perspectives in predictive modeling before considering care management applications. More actuarial attention in predictive modeling has been devoted to pricing uses rather than health care management applications. Predictive modeling in pricing must recognize the differences in cost between different people and groups to price those appropriately. In care management, the primary concern is the use of resources or the intensity of different conditions

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within a population—cost is not as important an aspect when comparing people with similar risk characteristics. The second consideration is that pricing must take into account the whole population. In predictive modeling for care management, the target population is a smaller segment of the whole population for which clinical intervention can improve health. The overall objective for care management is improving health, while the goal of pricing is to price the business correctly. Understanding the care management perspective is important in applying a predictive model.

Care Management Climate

Most health care managers' (health insurers, medical management outsource firms, etc.) care management objectives are to improve the health of covered members and to optimize health care cost. A variety of traditional techniques, such as pre-certification, referral authorization and utilization management, have been used over the years to achieve those objectives with mixed results. Along the way, effort has been applied to develop more comprehensive disease management and advanced care approaches. These progressive efforts have been reinforced by consumer demand for more choice and less bureaucracy. Today, most health care managers (HCMs) have begun to apply progressive care management that includes a stronger patient counseling and advocacy component. However, few HCMs have completed the transition. The graphic below depicts the characteristics of the traditional and progressive approaches to care management.



Graphic courtesy Sam Nussbaum, M.D., Chief Medical Officer of Anthem Blue Cross Blue Shield

For reasons that will be discussed in the next section, an HCM who has not made significant progress in transitioning to progressive care management will likely find it better to wait before attempting to implement predictive modeling in care management.

Critical Components

Progressive care management assumes that creating interaction between patients and HCM clinicians (intervention) will be effective. Some of the critical components to making that a reality are:

- 1) Programs must be available to guide HCMs' interventions into patients' health issues. Considerable work has been done to develop care management programs around particular disease and condition areas, such as diabetes and hypertension. These programs are showing signs of being effective at improving quality and cost efficiency.
- 2) Patients' care issues must have significant associated cost and quality opportunities to justify the resource requirements of an effective intervention program. Quality and cost opportunities are difficult to define. However, significant progress is being made on the cost opportunity side through the use of predictive modeling.
- 3) Furthermore, such patients must be somehow culled from the entirety of the population so that they can become part of the program.
- 4) Data on the patients fitting the criteria and the associated programs must be deployed in some way to intervening clinicians. This data must be timely and actionable. Additionally, patient privacy must be protected.
- 5) Once the data and the predictive model form a basis for targeted intervention, the HCM clinicians must have the tools, the training and the materials to effectively intervene with patients.

Ultimately, it becomes obvious that an automated approach to identifying these patients and delivering the data to the clinicians will be necessary to make the program a success. How they use that information is equally important.

In this chain, predictive modeling presents a potentially better way to identify patients for care management programs and earlier intervention.

Convincing Claims

As mentioned above, predictive modeling techniques provide a critical tool in identifying cost opportunities. Historically, cost opportunities were identified most commonly by reviewing high-claim-cost patients from prior periods. In many cases, however, these patients no longer presented opportunities once they had progressed to the high claim level. The developing health issue had, by that point, already matured to a catastrophic situation. Furthermore, very expensive care had already been delivered and could not be retrospectively influenced.

Predictive modeling, in contrast, promises the benefit of identifying patients that will be high-cost patients. It would be ideal to know in advance which patients will develop catastrophic health conditions, and to know at a point that the catastrophe can be averted or at least mitigated. In fact, predictive modeling vendors offer compelling evidence that their models perform better at identifying future high-cost patients than claim-cost techniques.

- 1) One vendor is known to quote R²s in the 80-90 percent range.
- 2) At least two vendors included in the recent SOA report (Cumming) cite the report as evidence that their predictor is the best.
- 3) Some vendors combine the prediction methodology with an outsourced care-management function and are willing to guarantee reduced claim cost at equal or greater quality.

As you might expect, each of these is at least partly true. However, we offer the following caveats when interpreting claims such as these.

- 1) We have found that reports of R²s above 40 percent are usually reported on very narrow, very predictable disease states, such as only patients previously diagnosed with chronic renal failure. The conditions in these patients are unlikely to change significantly from year-to-year and are, therefore, much easier to predict using virtually any method.
- 2) The Cumming report is quite thorough and includes many analyses. The key to interpreting vendor claims as they relate to the report is to understand the various analyses and determine which relates best to the intended application for predictive modeling. It's also worth noting that there wasn't substantial differentiation among the better vendors on some of the analysis. In other words, the second-best result may be so close to the best that it's not a meaningful difference when considering differentiators between two vendors (e.g. customer service levels).
- 3) Progression to the mean occurs in the claims

pattern for sets of high-cost patients—the cost for these patients in subsequent years tends to decline from very high levels during acute phases. This phenomenon is the result of a combination of forces. For instance, treatment in many cases does improve the individual's health.

Given that this occurs, it is important to assess to what degree predictive modeling and associated care management influences the cost and quality outcome versus what would have been observed in the absence of predictive modeling. In other words, a control group or some other mechanism is necessary to determine the contribution of outsourced care management solutions.

Therefore, the selection and implementation of predictive modeling for care management requires thorough analysis and a comprehensive review of the operational requirements.

Key Questions

This article has touched on several considerations an HCM should make when pursuing the use of predictive modeling in care management. Those considerations can be assembled in the form of questions as follows:

- 1) Has the HCM made significant progress in transitioning to progressive care management?
- 2) Are care management programs available and in place that will allow the HCM to manage patients identified for intervention?
- 3) Is there a system in place to deploy lists of identified patients to the care management staff, along with patient clinical data and required collateral information?
- 4) Which prediction mechanism most appropriately fits the HCM's objectives?
- 5) How will the HCM measure the effectiveness of the results? What would the costs have been in the absence of the program?

The answers to the questions above will determine whether the HCM is ready to pursue an implementation of predictive modeling in care management, and, if ready, what steps must be taken to achieve a successful implementation. 📌

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The Future of Health Actuaries

by Kara Clark

What do you want to be doing in five or 10 years? Some people have tired of hearing and answering that question, but it's a critical one to ask as we consider the professional outlook for health actuaries. To that end, the members of the SOA's Health Benefit Systems Practice Advancement Committee and Health Section Council have recently been exchanging thoughts around a series of questions related to the roles health actuaries should be able to assume in the future. A summary of that discussion follows.

Health actuaries should be able to maintain positions in more traditional roles, including plan and product design, pricing, valuation and financial management for insurance companies, managed care organizations and employee benefit plans. We should also be able to expand our position into areas of management and strategy, including long range planning and modeling.

Integrating our expertise with those from clinical backgrounds will be critical in expanding our roles to include data mining and analysis to understand patterns of care and to demonstrate how and why health care is delivered differently in different areas and under various circumstances. Health actuaries cannot and should not replace the professional judgment of those actually providing health care, but we can provide an understanding of how financial issues and risk (including risk related to access and quality) are impacted by treatment patterns. We can work alongside other professionals in designing reimbursement programs that appropriately complement medical management processes and therefore serve to benefit a collective group of stakeholders.

Health actuaries should also be looking to assume a greater role not only in the technical aspect of risk measurement, but also as business managers and advisors in the areas of risk identification, evaluation and management. Our approach needs to become more proactive and our viewpoint more holistic, so we can add value to our clients not only through our skills in risk management and mitigation but also in risk capi-

talization. There are opportunities for us under the umbrella of enterprise risk management, including roles as chief risk officers.

We should also be able to expand our roles in many of these areas relative to the clients we serve—moving from the more traditional “payer” or “sponsor” side to include providers, patients, research organizations and communities as well. Our ability to translate risk theories into practical applications should also position us to be able to assume a greater strategic role in the policy community, by working with other disciplines to develop policy rather than limiting ourselves to evaluating the policy proposals others have defined. We can also play a role in evaluating the long-term implications of “environmental influences” and in modeling the uncertain impact of these influences on our society and its economy.

To create these roles, we will need to consider potential partners as well as our competition, how we want to position actuaries in the marketplace, and what specific tactics we need to undertake to move us in the right direction. Your perspective on any of these issues is valuable and we encourage you to share it via a Health Section listserv, with a member of the Health Section Council or Health Benefit Systems Practice Advancement Committee (rosters can be found on the SOA Web site), or with Kara Clark, SOA health staff fellow. 📧



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Getting Published

by Cori E. Uccello

At a recent joint meeting of the SOA's Health Benefit Systems Practice Advancement Committee (HBSPAC) and the Academy's Health Practice Council (HPC), a discussion ensued regarding actuaries publishing articles in peer-reviewed journals. Because I have published papers in peer-reviewed journals and have also served as a peer reviewer for several journals, I was asked to share my thoughts on the subject.

A primary reason for publishing in peer-reviewed journals is that it gives an article and its author(s) an extra aura of credibility and respect. In addition, journals can provide a permanent record and, as such, can have a longer shelf life than articles disseminated through other means.

That said, many researchers, if not most, publish in peer-reviewed journals because it is part of the job—career advancement often hinges on a researcher's publication record. In addition, when awarding contracts and grants, government agencies and private foundations often use a researcher's publication record as one means of evaluating a proposal. This makes the long and arduous process of turning a research report into a journal article worth undertaking. Only a fraction of articles submitted to journals ultimately get accepted, and that can be after a year or more of revisions and resubmissions. Even after an article is accepted, it can be a year or more for the article to appear in print, as many journals have very long backlogs.

The publishing process

For most actuaries other than those working in academia or in other research organizations, publishing articles is probably not high on their priority list. Nevertheless, it is important and desirable for some actuaries to publish, so it's probably a good idea to understand the process. The first step toward getting a paper published is to find the most appropriate journal to submit it to. Journals vary considerably with respect to their subject matter, the level of analytical rigor or theory required, whether the audience is multi-disciplinary or primarily of a particular discipline, the degree of public policy focus, and whether the journal includes mostly quantitative empirical papers or qualitative papers. Also, note that some journals publish a variety of papers.

A good way to determine the most appropriate journal for a given paper is to look at an entire jour-

nal volume to see the types of papers it publishes. This approach is typically better than looking at only one or two papers, because those papers might not be representative. In addition, most journals provide information regarding their editorial policy and submission guidelines in the journals themselves and/or on the journal's Web site.

I've compiled a fairly comprehensive list of journals that might be appropriate for publishing the work of health actuaries (I'm sure there are others). These include:

- *Health Affairs*
- *Inquiry*
- *Milbank Quarterly*
- *Health Care Financing Review*
- *Health Services Research*
- *Journal of Risk and Insurance*
- *Journal of Human Resources*
- *Gerontologist*
- *Journals of Gerontology*
- *Demography*
- *Journal of Health Politics, Policy and Law*
- *Journal of Health Economics*
- *Medical Care*
- *Health Policy*
- *Journal of the American Statistical Association*
- *Journal of Policy Analysis and Management*
- *Health Policy and Planning*
- *American Journal of Public Health*
- *Journal of Health and Social Policy*
- *Industrial and Labor Relations Review*
- *Industrial Relations*
- *North American Actuarial Journal*

The keys to success

I've heard some express concern that journals are only interested in publishing work from those holding doctorate degrees. I don't think that is the case. There are several keys to a successful journal submission. The article should be on target for the particular journal, address a relevant issue or question, use appropriately rigorous methods and have conclusions that follow from the results and be well written. (Note that reviewers are not notified of a paper's author(s), so they do not know whether they have doctorate degrees or not. That said, some researchers have very good reputations and/or connections to a particular journal's editor, which can ease the path toward publication.)

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Understanding how the article will be judged can be useful. Typical questions that a peer reviewer must address when evaluating a journal submission include:

- Is the manuscript substantively accurate?
- Does it contribute not just original information but also original and relevant ideas to the body of literature?
- Is the manuscript well organized and the presentation clear?
- Is the study design appropriate and the statistical analysis suitably rigorous?
- Is it timely?

Often, a manuscript will be returned with a recommendation to revise and resubmit according to the reviewers' suggestions and, at times, the required revisions can be quite extensive. It is important to be sure to address each reviewer's specific comments. When resubmitting the manuscript, it is helpful to enumerate each of the comments and actions taken to address the comment/suggestion. Note that the authors do not necessarily have to incorporate every one of the reviewers' suggestions; some suggestions are off target and others may require additional work that is beyond the scope of the paper. However, reasons should be given when not incorporating specific comments.

Other dissemination strategies

Publishing in journals is not the only way to get a paper in the public domain. Indeed, because it takes so long to get a paper published, other dissemination efforts can actually be more effective. In my experience, the papers that have received the most attention, both from researchers and the press, have been disseminated not as journal articles but through other means. Other research dissemination strategies actuaries may find worth exploring include:

- **Peer-reviewed papers**
Several foundations publish papers produced from research that they fund (e.g., Kaiser Family Foundation (KFF), AARP, the Commonwealth Fund). Prior to publication, the foundations typically send the draft reports out for peer review and the authors make any necessary revisions. (This would be somewhat similar to the SOA's Project Oversight Group (POG) system.) Research organizations often have a formal discussion paper series, and these papers are typically peer reviewed.

- **Fact sheets/bottom lines**

These are one- to two-page highly condensed pieces used to either summarize a paper's findings or highlight a few key facts or points.

- **Issue briefs**

Issue briefs are typically written for a more general audience (including policymakers and the media), and can either summarize longer research reports or can be end-products themselves. Issue briefs that simply summarize longer reports for a more general audience typically do not go through a formal peer review process, although they would go through internal review and editing. Issue briefs that present original work would be more likely to go through a more formal peer review process, although probably less so than full research reports. Many foundations and research organizations publish issue briefs (e.g., the Commonwealth Fund, Boston College Center for Retirement Research, the Urban Institute, the Heritage Foundation).

- **Working papers**

Working papers are a quick way to put out reports. They are typically not peer reviewed, but researchers will often try to get their working papers published in peer-reviewed journals or in other venues.

- **Conference volumes**

When conferences are held around a particular topic, edited volumes of the papers presented can be created. The papers could be peer reviewed or, if discussants are included in the conference, short write-ups of their comments could be included.

- **Publicly available data**

Another way that the actuarial profession can increase its exposure and standing among the research and policy community is to make the data it collects available for outside use. Economists and policy researchers would probably be very interested in obtaining access to some of the data that the SOA and private firms collect. I realize that often data is considered proprietary, but perhaps there are opportunities for collaboration between actuaries/firms with data and other researchers.

One final note

I've noticed that although actuarial consulting firms often produce papers and research reports, they are not always available to the public and,



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when they are, they can sometimes be quite expensive to obtain. Making reports more accessible to the public will increase exposure. Of course, this needs to be balanced against a firm's need to recoup costs. In addition, I've noticed that some actuarial reports leave many details out, especially regarding the methods and assumptions used in the analysis. Not only is it important to disclose what assumptions were used, it is also important to include information on why those assumptions are appropriate. This type of information can help

increase a paper's credibility and, therefore, increase its chances of being taken seriously and cited by others.

In the end, I think we should encourage wider dissemination of actuarial work and research with the goal of gaining increased recognition from other disciplines, the public, the media and actuaries themselves. It is important, however, to develop a dissemination strategy that is most appropriate for the particular case in question. 📧

Prescription Drug Issues Explored

"A Multi-Disciplinary Exploration of Prescription Drug Issues" symposium will be presented by the SOA's Health Practice Area on the afternoon of May 21 at the SOA's Spring Meeting in Anaheim, Calif. The half-day session is intended to take a fresh look at the actuarial, economic and demographic issues related to the supply and demand for prescription drug benefits and to encourage a deeper exploration of this topic from a multidisciplinary perspective. The symposium is based on papers received in response to a pharmacy benefits call for papers. Presented papers will address issues such as prescription drug utilization and expenditure patterns, and product design strategy, in either a broad or narrow concentration.

Papers being presented during this session include:

- "Determinants of Growth in Prescription Drug Utilization and Expenditures"
Paper Presenter: Marjorie Rosenberg, Ph.D., FSA
- "Managing Pharmacy Trends"
Paper Presenter: Bela Gorman, ASA, MAAA
- "Impact of Three-Tier Pharmacy Benefit Design on Drug Expenditures and Utilization"
Paper Presenter: Pamela B. Landsman, PMPH, DrPH
- "Value for Money from the Top Twenty?: A Critical Examination of Therapeutic Impact and Value of Top-Selling Drug Products against Their Competitors"
Paper Presenter: Alan Cassels, MPA
- "The Formulary Decision Process: What are they Doing in There and Can We Help?"
Paper Presenters: Jill Van Den Bos, MA; Jon Shreve, FSA; John Watkins, R.Ph., MPH
- "Prescription Drug Utilization in a Pediatric Population"
Paper Presenter: Louise Anderson, FSA, MS

- "State of Utah CHIP Pharmacy Analysis"
Paper Presenter: Dennis Kunimura

This half-day afternoon session will be preceded by two morning sessions sponsored by the Health Section also related to prescription drug issues. During the **Prescription Drug Update** session (Session 96 PD), panelists with close ties to the prescription drug benefit programs will provide updates on topics, including: anticipating the future pace of drug cost and utilization, developments in benefit design; managing the costs of drugs embedded in hospital/physician procedures; and the future evolution of pharmaceutical benefit managers.

Panelists at the Medicare Prescription Drugs session (Session 106 PD, moderated by Janet M. Carstens) will review the history of why Medicare has lacked prescription drug coverage and why some of the previous proposals to include prescription drug coverage in Medicare have failed. Also discussed are the drug benefit designs permitted under the Medicare reform legislation, the projected costs of these and alternate plan designs, and the potential impact of Medicare prescription drug coverage on related coverage, including retiree medical and Medicare Supplement.

Expand your professional contacts, show your insights and challenge your thinking on these hot topics by attending. For more information, visit the SOA Web site at http://www.soa.org/conted/bro018_04.html. 📧

ERM Symposium Offers Sessions for Health Actuaries

A *health Enterprise Risk Management (ERM) Overview* and sessions entitled "Health Models and Modeling and Health ERM and Workers Comp" will highlight the offerings for health actuaries at the upcoming Casualty Actuarial Society (CAS) and Society of Actuaries (SOA) 2004 Enterprise Risk Management Symposium, April 26-27 at the Renaissance Chicago Hotel in downtown Chicago. Formal presentations, case studies and a roundtable discussion will also explore health entity risks, capital management, financial reporting and other issues surrounding health risk management.

Building on the success of last year's event, the CAS and the SOA are again jointly sponsoring the educational symposium focusing on developing ERM issues. The symposium will provide an ideal learning opportunity for those interested in information about emerging risk-management techniques, trends and practices both within the insurance industry and beyond. General and concurrent sessions will provide property/casualty, life, pensions, health and other financial services industry perspectives. Sessions will also address the potential actuarial involvement in the ERM area regarding the broader non-financial services industries.

For more information on the symposium or to view a full program (available soon) visit the CAS Web site at <http://www.casact.org>.

Risk Management: It's Not Just for Life Insurers!

Two sessions at the SOA's Health, Long-Term Care and Pension Spring Meeting in Anaheim, Calif. (May 19-21) will explore risk management for health insurance. While the risks and the management practices and procedures associated with life insurance have been widely explored, there are specific risks and approaches to risk management that are unique to the health insurance industry.

During the Risk Management for Health Insurance session (moderated by Thomas R. Corcoran), industry panelists will discuss the best practices for risk management of health insurance business, challenges companies face in implementing these programs and rating agencies' perspectives.

Panelists at the Risk Measurement and Management for Health Insurance session (moderated by John W. C. Stark) will discuss risk measurement and management for health insurance, with particular focus on: identifying health insurance risks and how they differ from life insurance risks, the importance of operational risk in the health insurance context, traditional risk management approaches, reinsurance approaches, cutting-edge approaches and what to do about the risks you can't measure.

Watch for the Spring Meeting program's release for more information on these sessions and plan to attend!