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Health Section News

"For Professional Recognition of the Health Actuary"

An Actuarial Response to the Health Care Crisis

by Dan Wolak

Second of a two-part series

In the April 2004 issue of Health Section News, we attempted to give an actuarial perspective to two of four questions originally posed to a group of approximately 100 leaders in the health care industry in the June 23, 2003 issue of *Business Insurance*. The April issue addressed:

1. Who is responsible for cost increases?
2. What should be the government's role to ensure health care coverage and keep costs down?

In this issue, we will continue our examination of the reasons behind health care cost increases and explore potential solutions by answering the following questions:

1. What are the most important steps that can be taken to control costs?
2. How will health care plan design change in the future?

To have the final responses fit within the confines of this newsletter, some individual responses were shortened to only one or two paragraphs of the full response. If you would like to see the entire transcript, please go to the SOA Web site at http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/health/health-section-news/

Dan Wolak, FSA
Senior Vice President
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NOTE: These responses were solicited prior to the Medicare changes being finalized.

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1. What are the most important steps that can be taken to control costs?

Carl Desrochers, FSA

In today's era of technology, we need to create a central repository for medical records that is readily accessible to physicians. As patients are seeing more than one physician, many costs are incurred by requesting duplicate diagnostic tests. Automated Medical Records (AMR) would contain all the medical history of a patient and therefore, unnecessary tests could be avoided. Not to mention that every physician could see what the other physicians have prescribed, thus avoiding drug interactions that lead to additional medical problems.

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Chairperson's Corner

by Cindy S. Miller

As I prepared to write this edition of the "Chairperson's Corner," I took a few minutes to look back and review the columns written by some of my predecessors in past editions of the Health Section News. As I perused articles from 1995, (yes, I am a pack rat!) I was struck by how similar the issues faced today by health actuaries are to those we faced in years past. In particular, the general issues so eloquently stated by Joan Herman in her column of January 1995 are some of the very same issues that your current Health Section Council believes to be of paramount importance today.

In particular, the column of 1995 addressed the following as the opportunities and challenges facing health actuaries: pricing new products, such as POS products; evaluating the new managed care contracts with providers; valuing potential mergers and acquisitions; the surge of provider owned managed care organizations; and the ever present need to help shape and respond to proposed health care legislation and regulation. While certainly some of the specifics have changed, today we continue to respond to very similar challenges. These include new products such as consumer choice products, HSAs, Medicare PPOs and Medicare Part D drug coverage. Contracts with providers continuing to evolve—in 1995 it was global capitation and risk shares, today it's DRGs, per diems, and quality incentives to help further the effectiveness and safety of the American health care system. M&A activity continues today as many of the providers who started their own managed care organizations in the mid-1990s have now decided that strategy no longer works for them. And finally, health actuaries continue to be uniquely equipped to help develop and evaluate the numerous proposals aimed at increasing health care availability and affordability for all Americans.

However, some of the challenges we face today are new. In the wake of Enron, WorldCom and similar financial debacles, the scrutiny of the accuracy and integrity of the financial statements of the companies we support is more intense than ever before. While this scrutiny began with publicly traded companies, all managed care entities, public or not, will experience new requirements and disclosures under the NAIC version of Sarbanes-Oxley.

Technology, and the ability to amass and analyze new and more types of information are both more important today than ever before. Evaluating the effectiveness of advanced care management programs, supporting tiered network programs by determining which providers are the most effective and efficient, publishing information for health care consumers on the quality of the providers in our networks, and using our data to further the creation and adoption of medical protocols all represent ongoing opportunities for our analytical and technological skills. The emergence of Enterprise Risk Management represents an exciting opportunity for actuaries to apply our skills in a broader arena.

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Letter from the Editor

October 2004 Edition

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

Greetings! Welcome to my last edition as editor of Health Section News, at least for a while. I have now been editor for 13 editions, and the time has come for some fresh blood.

I'm delighted to introduce Gail Lawrence as my replacement. Gail is a good friend and an excellent health actuary. I have worked with Gail for two years now and watched her manage a significant block of Medicare supplement business to consistent profitability. She has a strong and diverse background in our industry, and her insight will be of value to all who read Health Section News.

I appreciate the opportunity to have been editor of this newsletter. We have a great profession, and our future is wide open. I hope to begin contributing more articles myself in the very near future. My thanks go out to all who have served on the Health Section Council during the past several years for your support.

When you take a step back and look at it, the health care financing is pervasive. Physicians and hospitals receive income when someone is sick and needs treatment to get back to health. Therefore, the sicker the population, the greater their income. There is no incentive to prevent disease and many incentives to just treat patients. In fact, acceptable ranges for certain test results (e.g. blood pressure) have changed. The result is including a larger portion of the population in the "at risk" categories.

Howard Bolnick, FSA

Theoretically, government can devise a reform consistent with our unique culture and politics that provides universal access to high-quality, cost-effective health care—with some sort of universal budget cap. For example, the UK National Health Insurance system has better population health outcomes at about one-half the cost of our system. Realistically, it is highly unlikely that our government will adopt any sort of sweeping reforms or cost-controlled system. I also do not believe that private sector solutions like managed care or consumer-driven health care plans will be effective in controlling costs. Our best hope rests in medical technology developing low-cost, less intensive, and more effective cures for diseases that are today very costly to treat. This is unlikely to occur in the next decade or two, but it is a real possibility in the next 50 years.

- Wolak: So, we are stuck with the high costs for, well, the rest of our careers, and thereafter?

- Bolnick: Well, when costs get high enough (which cannot be measured) then perhaps the U.S. health care system will change. But, it's hard to envision changes that will do much to actually lower costs. I guess I'm rather pessimistic about prospects for "solving" the problem of high and continuously escalating health care costs in the near or intermediate term.

John Cookson, FSA

I think we need to have an independent entity established to assess the quality and efficacy of treatments, reflecting evidence-based medicine. This would allow coverage to be structured in a tiered approach: a) with reimbursement at a high level, similar to current plan design, for proven effective, high-quality treatments, and b) progressively lower coverage (higher co-payments), or no insurance coverage for services determined to be ineffective or of low quality. Such organization could also establish protocols for funding unproven but promising treatments on an experimental basis. This would then become the process for new medical treatments moving up the quality and efficacy scale to more comprehensive insured reimbursement. This treatment information can be combined with provider-specific quality and cost assessments to make good information available to all consumers and insurers.

David R. Nelson, FSA

New models for managed care will be developed so that risk-adjusted data is used by providers to improve outcomes, and so that providers can steer patients to effective caregivers.

- Wolak: Why do we think that providers will use such data effectively? Do we have any points of reference?

- Nelson: Concern about the willingness of providers to change is a point well taken. Only time will tell if a new model for managed care can be built. Certainly there are forces which support a change:

  (1) Employers and government need cost relief, and
  (2) Physicians generally want to be good performers and they respond to data.

  But, change will be difficult given the large number of people who currently benefit from the current system.

Craig S. Kalman, FSA

Make the consumer—versus the employer's cost of health insurance—more responsible and responsive to its costs.

Dale Yamamoto, FSA

Make everyone better health care consumers.

Michael G. Sturm, FSA

It depends on who you are. Employers should review their plan annually to ensure they are getting the best discounts, providing competitive benefits (i.e., cost sharing and services), charging employees a competitive premium share, whether disease management makes sense, etc. Employers might also consider helping health plans monitor their employees' illnesses by making their health care contribution contingent on the employee submitting a quarterly health status report. This type of report would serve as a sentinel to the health plan's disease management staff, assist with pay for performance (and other cost-quality initiatives), and help the health plan appropriately rate various groups.

David V. Axene, FSA

It is one thing to control costs, it is something different to identify where unnecessary and wasted costs exist and to try to first eliminate these. I have published multiple papers and documents on the significant extent of medically unnecessary/ potentially avoidable/wasted health care resources. As soon as the public really understands how big this is, it is likely that they could be convinced that more can be done to not cut their benefits but help them to consume the system more wisely. Until the public understands the truth on this they will continue to harangue about the woes of "managing care" and despise those who have the solutions to stop the problems. So, initially we need to understand where savings can be made without hurting quality of care and without creating bad outcomes.

We need some way to help providers also understand this since many of them do not realize how much savings can occur. Unfortunately, their fee-for-service experience means that some will make less and get less. They don't like this.

A role of the government might be to establish some methodology to force this issue.

➢ Wolak: We currently have a pricing system that is very difficult to understand. What would happen if all services were provided as a percentage of the resource-based, relative value schedule (RBRVS), though not necessarily the same percent for all payers?

➢ Axene: I prefer that approach, since payers can be compared to each other and you can see what value you are getting. There is a problem with that approach since it doesn't encourage quality; it is a price-fixing system.

William F. Bluhm, FSA

What makes you think that costs can be controlled? The American public has clearly decided that health care costs are not yet too expensive, and are willing to at least partially socialize them through the tax system. The economic forces at play here are too big to be changed with the solutions being offered today. The number one impediment to lower costs is the sense of entitlement of the American public; entitlement to a seemingly unlimited level of care.

Van A. Jones, FSA

First, we have to recognize the contradictory and competing objectives of government in health care. Second, we have to recognize that the problems are huge and multi-faceted, such that the greatest potential for resolution lies in a successive process of good decisions followed by better decisions.

Some good first priorities would include the following:

(1) Equalizing tax policy for health costs between the employed and the self-employed.
(2) Educating the masses on the costs and decision processes in individual health care treatment.
(3) Extend Medicare retail charge limits to all markets.
(4) Extend coverage standardization, already instituted for Medicare Supplement, to all comprehensive health coverages.

Items 3 and 4 probably require some explanation. Currently, physicians who choose not to accept Medicare "assignment" by law cannot charge more than 115 percent of Medicare payment schedules to Medicare eligible patients. While I'm opposed to price controls and I'm uncomfortable with the current equity within the Medicare RBRVS payment schedule, this structure has provided a valuable reference point for comparing costs.

I suggest that government initially mandate that providers could not charge more than, say 200 percent of Medicare RBRVS, DRG or ACP reimbursement levels. Initially, a provider could exceed the maximum charge only if they clearly disclosed

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the percentage by which their charges exceed the maximums in advance of the procedures. Most current medical procedures would fall within this range and minimal administrative cost would be incurred. Logically, all providers would react by expressing their charges in terms of the government reimbursement schedules. Most consumers would not understand the government schedules, but they would understand that a provider charging 180 percent of the schedule costs a lot more than a provider charging 120 percent.

- *Wolak*: How should or could actuaries support such a change?

- *Jones*: Actuaries can add value to this process by assessing the financial impact of such limits and the range of responses from various provider segments. The short-term impact will be that many providers will simply produce a standardized disclosure statement that identifies that their charges are above the guidelines. Actuaries can help quantify reasonable expectations of this. If limits are properly set, the longer term impact is that providers who can provide care within defined guidelines will tout that occurrence, and those above will be readily recognized by the consumer. Actuaries can help structure the mechanisms that will measure and adjust guideline values and quantify the impacts of changes relative to the designed intent.

Chandler Lincoln, ASA

At this time, the most important step that can be taken effectively is to put consumers "at interest" for their own health care. This means allowing them the right to choose their own providers and the responsibility of sharing in the costs of those providers.

For consumers covered by employer medical plans, this means ensuring that employees have various plan options to choose from that include well-designed cost sharing features.

For consumers without employer medical plans, it means the right to participate in medical purchasing pools that allow them to reap the benefit of volume discounts from providers as well as the ability to choose various medical plans suited to their cost sharing abilities.

In concert with putting consumers "at interest" is the necessity of putting them "at ability to pay." This means giving them the ability to accumulate tax-free dollars to pay for future medical expenses (including medical insurance premiums and long-term care premiums). The HSA provisions coming out of the new Medicare bill are a start, but 401(k) and IRA type investments are needed.

Timothy K. Robinson, FSA

The most important step is implementation of effective disease management programs for chronic and catastrophic conditions. This may require a willingness on the part of early adapters to implement disease management strategies that intuitively (based upon common sense and early research) work, without waiting on "proof" of ROI that is probably a moving target at this point in the industry's development. The industry needs to move beyond its focus on cost shifting (provider risk sharing, network discounts, member cost sharing), to truly understanding and targeting what is driving utilization and cost. This will require investments in data and supporting structures that provide clinical insight, early identification of potential chronic and catastrophic cases, stratification of such cases into appropriate management programs, and accurate projections of claim costs.

- *Wolak:* What's stopping the market from implementing changes? Employers want to save money on their health care. Is there a fear that disease management (DM) can be another qualitative measure that would end up costing money? Is disease management viewed by the market as a catchall phrase, much like wellness programs?

- *Robinson:* On one hand you have the fundamental issue that you can't measure what didn't happen. This is essentially what any DM program tries to do, in estimating its ROI. How would cost and utilization for this member or group of members differ, had the DM program not been in place? This makes the sale more difficult right up front. It's much easier for a managed care organization to understand (and value) an additional 5 percent savings in their provider payments rates, or a 10 percent increase in member coinsurance. Another issue is probably the hesitance of managed care organizations to bring in a vendor to do something that in theory they are already doing (or responsible to do): manage the health of their sickest members. There are also access issues. It's currently difficult for smaller to medium-sized self-funded employers to access the larger DM companies that are targeting the

health plan and jumbo employer markets. Within this market there are probably also definitional issues, as you mention above the possibility that "disease management" is seen as a catchall phrase. Self-funded employers and/or their TPAs may feel that existing case management services or wellness programs offered through the TPA are the same thing as disease management, and do not appreciate the need for specialized chronic and catastrophic management offered by DM companies.

Cynthia S. Miller, FSA

Developing evidence-based protocols for the delivery of care, and then providing full disclosure to consumers regarding providers who follow those protocols and meet proscribed safety standards would reduce costs while improving the care provided, because care that is unnecessary and/or harmful would be reduced. Having benefit designs that give incentive to the patient to be engaged and knowledgeable about the care that they are receiving and the costs of that care would clearly help to control the escalation in health care costs. Moving our health care system to one focused on more holistic treatment, rather than specialized treatment of acute episodes, would increase the overall health status of Americans and thus reduce health care costs.

- 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 be expected?

- Miller: I believe that the medical profession truly wants to provide the best care possible to their patients. Many medical practitioners are very open to any information or tools that help them to keep up-to-date with the rapidly changing medical landscape and further the quality of the care provided to their patients.

Mark E. Litow, FSA

The most important steps that can be taken to control costs include: changing the tax code, followed by a total overhaul of Medicare and Medicaid so that we create personal responsibility; subsidies for those who need it; disclosure, education, restoration of actuarial risk classification principles; gradual elimination of most if not all mandated benefits and price controls; and restoration of the physician/patient relationship.

2. How will health care plans change in the future?

Mike Sturm

I predict cost sharing in the short-term will continue to increase with inflation and in the long-term will vary by condition and provider to encourage efficient consumer spending. For example, drugs available to treat specific conditions will have different copays based on drug efficacy, diagnosis and patient-specific characteristics. Health plans will differentiate patient cost sharing by service and provider. For example, expectant couples will select their delivering physician and hospital based on price as well as the usual factors (i.e., convenience, perceived quality, etc.). Facilities providing the most value (i.e., quality services relative to price) will have the lowest copays. Patients will have to pay more for higher-priced facilities. I believe this type of differentiation will lead to providers specializing in services they provide most efficiently and increased volume, both of which should increase quality.

Dave Tuomala

There is certainly increasing interest in consumer-driven plan designs in the employer market. I think we will see more new plan designs that include some form of consumerism element as an integral part of the plan design in the short term. This will include both the account-based plans currently being offered as well as other variations. As the consumer-driven plans mature, we may start to see less emphasis on plan design features as we currently know them (e.g., deductibles and coinsurance) and more designs with cost-sharing features based on specific treatment choices and their associated costs.

For the more traditional plans, I think we will continue to see increased employee cost sharing in the form of deductibles, copays and employee contributions as employer costs increase. As costs increase, we may see a shift in philosophy by employers to providing health coverage as catastrophic protection rather than as first-dollar benefits.

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Dave Axene:

A typical benefit of the future might start with a few questions:

- How much are you willing to pay each month (this will limit the choices to acceptable prices)?
- Which list of doctors or which list of providers do you want to access within your personalized network (this will help set a price point to define benefit levels)?
- What type of benefits do you want (i.e., copay levels, deductibles, coinsurance, etc.)

These three questions will define what a program might look like and various options around these choices will derive possible choices. The "efficiency" of the network selected will help get high benefits for the same price or lower prices for the same benefits. This is where true consumer choices will begin. Benefit administration will need to be very flexible, as benefit choices between employees will be different yet still covered by the same employer and health plan.

Howard Bolnick:

In the next five years, consumer-driven plans seem to be the next "solution" to "solve" our health care problems. I suspect that this "solution" will be even less effective than managed care and, perhaps, as controversial. What follows this latest "fad" is anyone's guess.

Dale Yamamoto:

We need more financial incentives to make people do the right thing. Managed care worked for a while to help the providers understand that they needed to be efficient, but we missed on the consumer side of things. We need higher up-front costs to make people aware of the little costs (generic versus brand drugs, the cost of an office visit isn't $10), more coinsurance to ensure that consumers stay aware of costs—maybe even to the point where the plan never pays 100 percent—maybe 95 percent—so that there is always financial incentive to not accept any and all treatment offered.

Bill Bluhm:

Ultimately, cost drivers will force the purchasers of insurance to limit coverage in some dimension. Those dimensions might be:

- Who's covered (increasing the uninsured)
- Increasing consumer deductibles/copays/reimbursement accounts/etc. (shifting increases to the insured)
- What services are covered (perhaps through tiered quality or access)
- What diseases or procedures are covered (a la Oregon, Canada or the UK)
- Which providers can provide covered services—such as through EPOs or closed panel HMOs, or a combination of these.

Van Jones:

Ultimately, two to four dominant health financial systems will evolve in each community and all employers will provide payroll deduction options for the employee's plan choice. Several, and in some communities all, of the community health financial systems will be the nationally recognized names. If the government "levels the playing field" in terms of standardizing benefits, then the competition within each community will exist based on the price and the perceived quality of care provided among the providers of each system. It is likely that a low-cost financial system will emerge in each community as the primary provider of care. The government-financed health plans would then be based on a moderate coverage level among the assortment of established benefit choices.

Chandler Lincoln:

Changes in health care plan design will emphasize higher payments by insureds. That means higher deductibles and copays, lower coinsurance and higher out-of-pocket limits. Three-tiered drug plans and separate drug deductibles will become more prevalent. These changes will occur more quickly in employer plans than in union or negotiated labor plans. At the same time there will be a decrease in employer contribution levels, which may also include lower contribution levels for dependents than for employees.

Medical savings accounts and consumer-driven health plans will become more popular and there will be increasing support for pension-type defined contribution health plans.

Tim Robinson:

Plan design changes will be focused on encouraging members with chronic or catastrophic conditions to participate in and comply with offered disease management programs. For exam-

ple, copayments might be reduced or waived when associated with lab procedures or prescription drugs necessary to control a chronic condition. Plan design considerations in today's insurance programs generally take the opposite approach, increasing cost sharing across the board in the hopes of reducing "unnecessary" utilization. An exception is prescription drug plan design, which has evolved to encourage cost-effective utilization. This approach should be expanded to other service categories, recognizing that incentives and barriers to cost-effective care differ according to the health status of the individual member.

Cindy Miller:

We already see the movement to benefit designs that require more cost sharing by the consumer, and I imagine that this will continue. Given the continued demand for more individual choice, and the desire of many employers to reduce or eliminate their role in purchasing health insurance for their employees, it is likely that we will see more movement to individual products and perhaps a blurring of the distinction between group and individual policies. Benefits and networks will emphasize quality and incent the patient to use providers that meet quality standards. While I'm not sure that this is likely, I would like to see benefit designs that reward individuals who choose healthy lifestyles. That is, provide richer benefits or reduced rates to individuals who don't smoke, who exercise, maintain a healthy weight, consistently take medications required to control chronic conditions, etc.

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Who Is to Blame for Cost Increases?

by Dinkar Koppikar

Almost all respondents blamed "we" for cost increases without defining "we." As many have correctly pointed out, we must expect cost increases as advances in medical technology conquer many illnesses and the population becomes older. If people live longer and healthier lives, the increasing proportion of health care cost in our per-capita income is nothing to complain about. In fact, enlightened public opinion will expect that to happen. However, certain anomalies in the way the costs are assessed aggravate the cost crisis and the appearances thereof. Unfortunately, neither pure market mechanisms nor pure governmental regulations would be sufficient to correct those.

Let me first point out the anomaly in group health insurance pricing that aggravates the crisis in health insurance pricing, as well as appearances thereof. Most elements in an employee benefit plan are of the deferred compensation type, in that the resources set aside are available for use by an employee only in the event of some future contingent event, when an employee has no income from employment. However, the resources earmarked for group health insurance are available while income from employment continues. Thus, group health insurance effectively supplements current income, that too on a pre-tax and partially or fully employer subsidized basis. As soon as he loses his job or retires, he receives a COBRA notice of his "right" to continue health insurance, at a premium rate several times what he used to pay during employment, at a time when he has little or no income, so any tax subsidies are meaningless. While employed, even if the employee and their family use health care services in a profligate manner, they rarely see big bills coming their way. Their health care problems may be minor. With unemployment, dormant health problems may upsurge. With big medical bills in the mailbox the perception of costly and unaffordable health care gets aggravated.

In short, the culprit "we" are the affluent sections of the society getting tax and employment subsidized health care (high income, self-employed can incorporate and get benefits as "employees"), who seduce health care providers to charge big bills for

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minor health care problems. Inevitably, retired, unemployed and poor get comparatively shoddy (or very costly for them) health care services, without any subsidy. Naturally, this creates resentment among those not so privileged who call for public subsidization of their health care services and gives rise to the unending spiral of subsidies and regulations.

Now, suppose health insurance was employer funded and/or tax subsidized only for providing resources when a person was unemployed, retired or otherwise with little or no income, with employed persons expected to pay health care bills out of earned income (with wages and salaries suitably adjusted initially). Since real health problems interfere with normal enjoyment of life, people will have incentive to lead healthier lifestyles to minimize health problems, shop around carefully for treatment when such problems do arise and seek cost-effective quality treatment (just as people may shop around carefully for groceries and other necessities). The health care habits formed thereby can be expected to be continued during unemployment (which is usually of short duration) or on retirement.

Insurance should provide resources during an exceptional situation that the insured has no incentive to cause and/or aggravate. The current practices essentially incite profligate use of health care services while employed and effectively withdraw resources when needed. Therefore, the insurance mechanism operates in a topsy-turvy manner.

In my letter to the January-February 2004 issue of *Contingencies*, under the caption "Health Insurance When You Really Need It," I had proposed that regulation should require that health insurance policies (including group health) continuously accrue minimum mandatory paid-up periods to be determined by a formula with a bias toward increasing the accrued paid-up periods the longer the insurance is in force, ultimately making it paid-up for life. This proposal was really a further evolution of the proposal I had made in my two articles in *Contingencies* in May-June 1998 and November-December 1999 with pricing examples from the 1998 issue of *Actuarial Research Clearing House* (ARCH) published by the Society of Actuaries.

The nomenclature "employer-subsidized" aggravates the problem because the "employer subsidy" is really part of compensation set aside for a dedicated use. I believe tax deductibility of employer "subsidy" without corresponding taxable income to employee has a lot to do with this. (One may note that this is exactly opposite of the tax treatment of employer-paid group life insurance in excess of $50,000, which generates taxable income to employees far exceeding actual premium cost to employers.) One actuary has blamed late President Roosevelt for this. Stringent wage and price controls had to be imposed during World War II for successful pursuit of war against totalitarian states who committed unspeakable crimes against people. Employers and their tax advisors discovered loopholes in tax codes to defeat wage controls. It is impossible for tax writers to divine the loopholes determined tax payers may discover in order to minimize taxation. In any case, in the 60 years since Roosevelt, Congress still hasn't dared to plug the loophole. It does not behoove an actuary to blame a president from 60 years ago for abuse committed by powerful taxpayers in defying his tax code, abuse which has been condoned by law ever since.

What should be the government's role in ensuring health care coverage and keeping costs down? By "government," I mean both federal and state governments. I am only proposing here what may be novel ideas. There is no point in repeating many other ideas that are already promoted or practiced with varying degrees of success.

If health insurance (group or individual) is required to accrue a paid-up period depending on the number of annual premiums paid, as proposed in the foregoing, it will enable people to remain covered while unemployed, as well as provide incentive to people to minimize temporary use of a paid-up period, so as to earn lifetime paid-up coverage sooner. It may be noted that while a life insurance paid-up period is a byproduct of all other actuarial elements, what is proposed here is a paid-up period to be prescribed by a regulatory formula with a premium schedule (revised from time to time depending on the deviation of actual experience from what is expected) as a resultant product.

Tax subsidization of health insurance premiums should be abolished (except for the element that builds up the paid-up period). It should be replaced by tax credits graded by age, sex and income groups. Such tax credits should be partly cumulative and partly non-cumulative for a limited period. Every year the average health care cost per person, graded by age group, income group and sex, should be determined. Tax credit should be a varying percentage of the health care cost depending on the income group (higher for lower income groups, reducing as income increases). A person may or may not fully claim credit in a given year. Unused tax credit should be accumulated in that person's account (and adjusted for changing age and average health care costs from year to year) available for use in later years. At younger ages people should be encouraged to accumulate health care credits. Non-cumulative (and cumulative for a limited period) health care credits should be made available at later ages to be used for preventive health care.

Apart from that, government should encourage a lifestyle of a healthy diet and exercise. All products and services should be subjected to graded health care excise tax or subsidy, depending on whether and/or how they promote or jeopardize health. Where moderate consumption of a product is healthy (or at least not unhealthy), but excessive consumption is not, a graded excise tax depending on the size of the packet sold or portion served might be a useful idea. The revenues from health care excise tax can be used to finance health care tax credits, with surplus revenues used to set up reserves for unused tax credits and invested in projects to promote healthy lifestyles.

To encourage couch potatoes to exercise, TV stations could be required to display pictures of people exercising from time to time (say 15 minutes every three hours) and encourage couch potatoes to do the same.

Patent regimes should be strengthened to prevent abuses. Research and development in drugs should be made truly international to minimize R&D and production costs with the federal government having the right to acquire patents if new drugs and treatments are proven to be breakthroughs.

To discourage excessive use of medical tests, laws should permit reimbursement of expenses incurred for such tests, based to some extent, on end results. The more negative the results of tests and/or less serious the problems, the lesser the percentage of reimbursement. This will provide incentive to insureds (and health care providers) not to go in for expensive tests unless they strongly suspect the presence of serious problems.

Dinkar B. Koppikar is a retired actuary. He can be reached at *DKactuary@msn.com.*

CONGRATULATIONS!

The following are newly-elected members of the Health Section Council. They will serve a three-year term, beginning in October, 2004.

Damian A. Birnstihl
MVP Health Care
Schenectady, NY

William R. Lane
Heartland Actuarial Consulting, LLC
Omaha, NE

Lisa F. Tourville
Reden & Anders, Ltd.
Eden Prairie, MN

What's New in Disease Management?

by Ian Duncan

Disease Management (DM) is a relatively new, but rapidly growing form of care management. As Jaan Sidorov, MD, chairman of the Disease Management Association of America (DMAA's) Quality and Research Committee reminded us during his presentation at the Anaheim Spring Meeting, managed care began by classifying reimbursement dollars into categories of providers (hospitals, physicians, durable medical equipment, etc.). DM changes the paradigm by aggregating these costs on an individual basis, classifying individuals according to their diagnostic categories, and then attempting to manage the care of the patient holistically.

This is turning out to be a big year for the growth and development of DM. The biggest endorsement ever for the industry came when DM was included in the Medicare Modernization Act. Medicare will be rolling out DM services to about 300,000 Medicare beneficiaries with heart failure, diabetes and chronic pulmonary diagnoses, beginning in April 2005. The proposed Chronic Care Improvement Program contains a significant risk element for those organizations that choose to respond, as they need to demonstrate savings equal to 5 percent of beneficiary claims in excess of their own management fees. The risk element of DM contracts, in turn, is attracting reinsurers back to the market. (DM reinsurance will be covered in the health reinsurance session at the Annual Meeting in New York.)

One issue that is occupying many of us in the industry is the appropriate evaluation and "certification" of DM outcomes. DM is a new industry, with developing protocols and methodologies. The most significant issue remains the credibility of its savings results. As described above, different bodies are attempting to advance the understanding of the industry in this area and gain consensus around a particular methodology. The efforts of DMAA and the Academy will advance our common understanding of validity and measurement issues. There are many professionals who have a potential role in this measurement process, and actuaries need to be represented and to argue forcefully for those things that we can contribute to the process: understanding of data and controls on data, understanding of equivalence and adjustments, and unequalled familiarity with trends. While we may never get to the point of being able to certify outcomes, actuaries should at least be able to be very comfortable with a set of outcomes.

Actuaries are being called on more frequently to assist in the pricing of DM programs and evaluation of outcomes. The Health Section of the SOA has sponsored well-attended sessions at each of the last three spring meetings. This year's session featured Dr. Sidorov, Rob Parke, a consulting actuary with Milliman in New York who is also chairman of the Academy's work group on DM, and myself. Our panel (whose session will be appearing shortly as a transcript in the "Record" at *http://library.soa.org/library-pdf/rsa04v30n1111of.pdf)* concentrated on the following research and development efforts of different organizations:

- DMAA has recently published a white paper on DM evaluations, available at www.dmaa.org. DMAA does not endorse a particular methodology, but instead discusses the principles of evaluation. DMAA will also be publishing (tentative publication date is October) a "Dictionary of DM Terminology." The dictionary

(which I am editing for the Association) grew out of concern that terms are not consistently defined and used by different players in the industry. DMAA is also developing a manual of practice regarding outcomes calculations. This is likely to be published at about the same time as the dictionary.

- DMAA collaborated with the Health Section of the SOA to present a highly successful seminar in April on risk adjustment and predictive modeling. Over 150 members of the two organizations attended. The collaboration continues around the Health Section's call for papers on issues of acute versus chronic care, and another joint seminar, possibly on quality measurement, is planned for next year.

- Rob Parke discussed a research paper that he recently published, entitled "Insight into Two Analytical Challenges for Disease Management." The two issues Rob discussed in detail are the thorny issues at the heart of measurement: regression to the mean and selection bias. Rob also gave participants an update on the work of the Academy's work group on DM. The first deliverable from this group will be a background paper on issues, expected to be completed later this year.

- My presentation covered some of the work that our firm is doing (sponsored by the Health Section) in a project entitled: "Actuarial Issues in Care Management Evaluations." This study, which began in 2003 and will probably take two years or more to complete, encompasses a number of different theoretical papers, including the history of intervention program development, a literature review, the economics of programs, and outcomes measurement methodologies and their implications for actuaries. In addition, we are conducting field testing of many of the principles developed in the theoretical papers in collaboration with Highmark. The theoretical papers have been through initial review with the Project Oversight Group of the Health Section and should be available on the SOA's Web site later this summer.

As all of our speakers showed in their presentations, this is both a very lively and very fast-evolving area for actuaries. Approximately 100 actuaries attended the session, in the last timeslot before the end of the Anaheim meeting, attesting to the fact that the profession continues to show the level of interest evidenced in sessions at previous spring meetings.

Ian Duncan, FSA, MAAA, is a partner at Lotter Actuarial Partners, Inc. in New York, N.Y. He can be reached at *lduncan@lotteract.com.*

Dresden Colloquium Update

by Howard J. Bolnick

Our Dresden Colloquium was clearly a huge success! More than 200 participants from 28 countries heard 42 excellent presentations. My thanks to all of you who helped to make this happen. For those of you who attended the colloquium, I hope that you were as thrilled and proud as I was when Luis Huerta rang the "official" bell to end the meeting. It really was one of the highlights of my professional career!

This very successful colloquium once again confirms the value to our members of Health Section activities. Let's use this success to continue building our membership and as strong encouragement to begin expanding our activities.

Howard Bolnick FSA, MAAA, is the chairman at InFocus Financial Group, Inc. He can be reached at *hbolnick@kellogg.northwestern.edu.*

Read. Think. Write.

The Statement of Actuarial Opinion for the Health Annual Statement

By Thomas D. Snook and Robert H. Dobson

There's more to signing the actuarial opinion on a health insurer's annual statement than simply running a few claim triangles and selecting an incurred-but-not-reported (IBNR) estimate. The actuary signing the opinion for a statutory statement must offer six—count 'em, six—opinions regarding each item in their actuarial opinion statement.

The purpose of this article is to review those six items, talk about what they mean in the real world, and offer some case studies. We focus on weaknesses—while most people do a good job, problem areas are more interesting and usually more informative to look at.

Read, Think, Write

If you are the actuary signing a formal Statement of Actuarial Opinion, you need to do three things (in addition to actually calculating the reserves):

Read—Read what the statement you are signing actually says. Read the applicable Actuarial Standards of Practice. Read other available guidance from the NAIC, the ASB, the AAA and the actuarial literature.

Think—Think about what you are signing. Can you really make those statements? Have you done the work to support the statements?

Write—Don't just sign the standard wording if that's not what you really believe to be true. Write what you actually think. Also, write down (not necessarily in the opinion statement itself) the work you did to support your opinion.

But before you can even sign the statement, you have to be qualified to do so. Many people seem to think they are qualified to do something just because they have been doing it for a long time. However, the Academy qualification standards are quite explicit, and have three components: basic education, experience and continuing education. You need all three. Some recent FSAs may not meet the basic education requirement; the Academy offers an excellent course to meet those requirements. Attending SOA meetings and reading articles, like this one, help meet the continuing education requirements. But remember to write down what you do to meet continuing education requirements—that's part of the requirement, too.

What Do We Opine On?

Typical items that the actuary opines on in his statement include: unpaid claim liability, unpaid claims adjustment expenses, accrued medical incentives, aggregate policy reserves, claim reserves and experience-rated refunds.

There is some difference of opinion among actuaries about what to do if you believe that no liability is necessary for one or several of these items. Do you state that the liability is zero, or do you leave it out of your opinion altogether? The authors believe that it is usually more appropriate to include a zero item in the opinion statement—it says that you've thought about the issue and that your professional opinion is that no liability need be booked. Other actuaries, also knowledgeable, disagree with us. (Of course, opining that a liability is zero requires that the actuary actually do sufficient investigation to determine that zero is, in fact, the right number).

Occasionally, especially in consulting situations, clients will ask us not to opine on a certain item. They want us just to look at certain items and leave the rest to someone else. We believe that requires a modification of the opinion statement: the omission cannot be ignored. In the statement, one of the things we're asked to say is that all liabilities that ought to be established have been; if you've been asked not to look at something, you can't make that statement. Modification of the wording is necessary.

Now, let's look at the six statements we are asked to make for each of the items we opine on.

The liabilities are in accordance with accepted actuarial standards...

The first item states, "The liabilities are in accordance with accepted actuarial standards consistently applied and are fairly stated in accordance with accepted actuarial principles." This really says three things: compliance with standards, consistent application of those standards, and following sound actuarial principles. Not only

do the liabilities have to meet standards, they have to be sound in principle as well. For areas where sound standards exist, this is easy. Where standards are absent, principle is the guide.

What is meant by 'consistently applied'? We're not talking about year-to-year consistency here, as that is addressed in a separate opinion item. We believe that this means consistent application (of standards and principles) amongst the various calculations you do to support the liabilities and reserves for the current year.

However, if there are sound reasons for using a different methodology, then you're not being inconsistent. For example, consider a claim liability calculation where you may be using a six-month average factor for one cell and a 12-month average factor in another. As long as there are sound actuarial reasons for that difference in approach, it passes the consistency test, and you do not need to change the wording in the opinion.

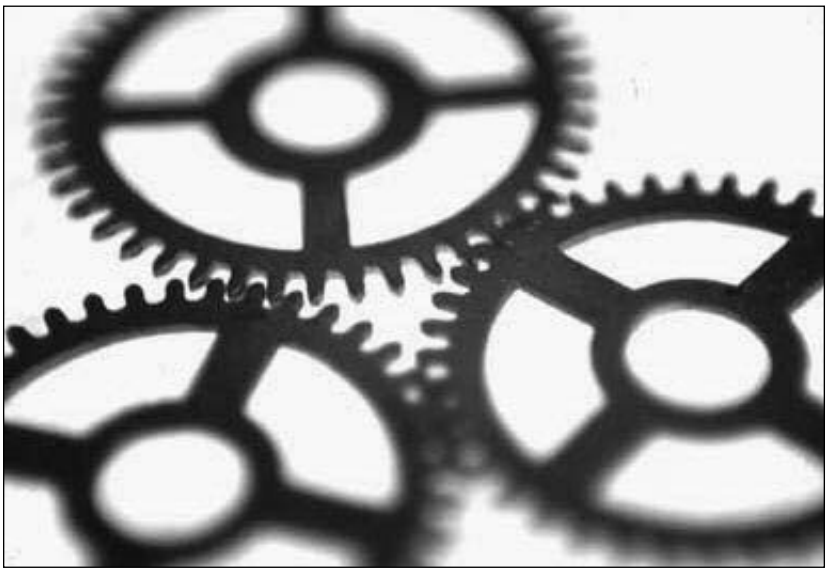
...are based on appropriate actuarial assumptions...

The second opinion we render is that the liabilities "are based on actuarial assumptions relevant to contract provisions and appropriate to the purpose for which the statement was prepared." Here, again, we're really saying three things: that the assumptions are appropriate, that they're consistent with the contract, and that they're appropriate for the purposes of the statement.

"Appropriate for the purposes of the statement" has traditionally been interpreted by actuaries to mean that (for a statutory statement) the liabilities are conservative. Think of a 'best estimate' as a 50/50 number—there is a 50 percent chance it is too high, and 50 percent chance that it is too low. An old, influential Jack Bragg paper in the *Transactions* suggests that for a statutory statement, a 75/25 number is appropriate, i.e., that there is a 75 percent chance that the booked number is ultimately sufficient. This is the rule of thumb actuaries have used for years.

... meet the requirements of the state...

The next opinion we make is that the liabilities "meet the requirements of the laws of the state (state of domicile), and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed." For group health liabilities, there's typically not much said in state law or regulations, and this may be a moot point.



It seems to be geared more to life or individual A&H policies.

Note that the newer valuation law, which has been adopted in a handful of states, also requires that we attest to meeting the laws of the state in which the statement is being filed, not just the state of domicile. If you have a plan that operates in a lot of states, you have some research to do about the laws in those states.

...make good and sufficient provision...

Of the six items upon which we opine, the good and sufficient provision is the one that gets the most attention. We state that the liabilities "make a good and sufficient provision for all unpaid claims and other actuarial liabilities of the organization under the terms of its contracts and agreements." The 'sufficient' part seems to be well-understood by most actuaries; it means that the reserve being booked is adequate to cover the liabilities. Traditionally, this has meant that some margin is there, so that the amount booked will be adequate to cover reasonably adverse deviation in experience.

What if a company is insisting on booking a number that's a best estimate—a "50/50" number? We can change the wording if we're not confident in the sufficiency statement. We might say that instead of the reserves being sufficient, they are reasonable.

(continued on page 16)

But what does it mean for reserves to be "good"? Historically for many actuaries this has meant that the reserves are not too high, that there's not too much margin in the reserves. So, if a liability has a 25 percent margin, and we think that's too much, we may not feel that it is a good provision, in which case we would drop that word out of the opinion statement and leave it with sufficient.

There is certainly disagreement amongst actuaries on the issue of overly sufficient reserves, including disagreement between the authors of this article! Bob believes large margins in reserves are fine and should be left to management's discretion—there's nothing wrong with having set too much money aside to cover future obligations. Tom thinks holding too much in liabilities can lead to implications in things like earnings reporting, rate increase filings and possibly the ongoing debate among regulators in some states regarding appropriate surplus levels for Blue Cross organizations. Bob would, of course, point out these issues to management, but leave the ultimate decision on margin level to them, modifying opinion wording as appropriate.

...consistent with the preceding year-end...

Here we opine that the liabilities "are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding year-end." This doesn't mean that changes in completion factors from one year to the next aren't okay, but if you're going to (for example) move from a loss ratio approach one year to a completion factor approach the next, you might mention it in your opinion.

This statement is frequently qualified for two reasons: if the actuary was not involved in the prior year's calculation and has no knowledge of how it was done, or, if it's a new item on the statement and did not exist in the prior year.

...provision for all items which ought to be established...

The final opinion we render is that the liabilities "include appropriate provision for all actuarial items that ought to be established." This requires that the actuary do some research. It requires that the opining actuary have knowledge or the ability to get knowledge about what's going on in the company. Interviewing management is appropriate: ask about new lines of business, ask about new reinsurance agreements or new types of contracts, etc.

Sometimes consultants, outside the day-to-day operations of the company, may not feel confident that they know everything that is going on. They will change the wording to say something like "according to management," and have in the data reliance letter a statement from management that the actuary has been told everything that's relevant.

A Hypothetical Case Study

Consider now two fictional, hypothetical companies: Deep Pockets Mutual and Shoestring Health Plan. Neither of these are actual companies, but we have seen the scenarios we present in actual practice (though not all at the same company).

Deep Pockets Mutual is booking a conservative unpaid claim liability—above the high end of our range, to which it has added a 20 percent margin. Its claim adjustment expense (CAE) reserve is very adequately funded at 10 percent. Further, they hold a conservative premium deficiency reserve on its individual business, calculated assuming no rate increases. DPM is also booking an unearned premium reserve of 50 percent of a month's premium on all its business, including on its group business, even though 90 percent or more of groups pay on the first of the month. (This may seem silly, but we've actually seen companies want to hold this type of unearned premium reserve on group business where everybody is paying on the first of the month.) Finally, they are also booking a liability for deferred compensation for officers.

Shoestring has established a claim liability within our range, but below our mid-point. To that it has added a margin of 2 percent. Moreover, it does not separately establish any unpaid CAEs; they assume it's covered in the margin. So, in reality there's no margin at all, and the 2 percent is inadequate to even fund the CAE. To top things off, Shoestring calculates its experience-rated refund liability assuming that it will recover 100 percent of experience rating deficits. (It's an optimistic management team.)

Now, these are two very extreme cases, at the two ends of the spectrum. But elements of these extremes come up from time to time. What can the actuary do?

One approach is to issue a qualified opinion. The actuary says what he thinks is true in his opinion statement, and the regulator can decide what to do about it. To qualify an opinion, be straightforward. Write a paragraph, right before the opinion state-

ment, which lays out the facts. Then in the lead to the opinion, the actuary can say, "Except for the matters mentioned in the previous paragraph, in my opinion, etc."

That would probably work in a less extreme case, but probably would not be appropriate for Shoestring: it would be like saying reserves are not adequate, but except for that, the reserves are good and sufficient. If a qualified opinion isn't going to work, what are your options? One is to convince management to book reserves that you can agree to. Maybe they just don't understand how aggressive they are being and can be educated. If this doesn't work, your next option is to tell management that you intend to sign an opinion that states that the reserves are inadequate. This may seem an obvious remedy, but is not one to be taken lightly. If you're a consultant and you don't sign a clean opinion, it means you are likely to lose a client; and if you're an employee it means you will probably lose your job. Such is the burden of the professional.

Let's now look at Deep Pockets, which is certainly a better problem to have. There may be concerns, as I mentioned earlier, about earnings implications and regulatory concern about "hiding money." We may modify our opinion so that we don't say "good and sufficient," and, instead, just say "sufficient." We're professionals; it's our name going on the bottom of the opinion statement. It's in our judgment to decide whether we want to say it's good and sufficient or not.

Other Concerns

There are four other issues the actuary may wish to consider:

ASOP 16. Actuarial Standard of Practice 16 says that the actuary should at a minimum disclose how much she knows about the financial status of provider entities that are capitated. The concern is that an insolvent provider group may leave the health plan at risk for claims for which an IBNR liability should be held. However, it's often difficult for the actuary to know the financial status of the capitated entity. Unless the provider group is publicly traded, financial statements aren't readily available. (You may know how that provider group is doing under your contract, but they may have multiple contracts with various health plans.) Often, the actuary may add a caveat or disclaimer to the opinion that she does not know the financial status of any capitated provider entities.

Data Reliance. Many actuaries will expand on the standard NAIC data reliance wording, stating explicitly that if the data relied upon is incorrect, the actuary's opinions may also be incorrect.

Asset Adequacy. Life & Health Insurance Company ("blue blank") opinions may require that an asset adequacy analysis be performed, but the health opinion does not. However, the actuary may include caveat language explicitly stating that he has not performed asset adequacy analysis, and that he has assumed that the assets backing the liabilities will be available.

Variability of Results. Many actuaries will include in their opinion a statement indicating that the actuarial amounts opined upon are based on projections and estimates, and that actual results will vary from these projections.

Summary

Read what you are signing; read all the appropriate standards; read relevant actuarial literature. **Think** when you sign that statement, you're making a professional commitment. Think about what you are committing to and whether or not it's actually true. **Write** appropriate qualifications or caveats, write what you think and document the thinking that supports your conclusions in your file.

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Reserving Challenges for Consumer-Directed Health Products

by Steve Kaczmarek

New health care products always come with new challenges for the actuaries responsible for their development and upkeep. The introduction of consumer-directed health plans (CDHPs) is no exception. Actuaries responsible for the pricing and reserving of health reimbursement arrangements (HRAs) and health savings accounts (HSAs) are faced with a new set of challenges and must continually evaluate the appropriateness of their methods and the reasonableness of their results in light of new information as it becomes available. Since very little has been written on this topic to date, this article provides some new perspectives to which other actuaries can react and respond. It outlines a number of considerations for developing appropriate reserve levels for CDHPs and explains a technique that can be used to develop one of the reserves that may need to be held by an insurer or by the plan sponsor of an ASO plan.

Reserve Types

There are three broad categories of reserves that could conceivably be held for a health product.

1) Claim reserves: CDHPs, like all health products, require a claim reserve. Claims incurred, but not paid as of a certain date, need to be recognized and a reserve calculated. An adjustment to traditional reserve approaches may be necessary to recognize the difference in how claims are likely to be paid for a CDHP product compared to more conventional health care coverage. In addition, aggregate reserve levels will likely fluctuate a bit more for high-deductible plans than other policies.

- The structure of an HRA may cause an additional layer of complexity for IBNR calculations when the policy covers both the fund (either an HRA or HSA fund) and the high deductible core medical coverage. Insurers that write such policies will have an initial liability for the fund involved, followed by a corridor of the consumer's responsibility for payment until the deductible is met, and finally the insurer is liable for most of the claims in excess of the deductible. As fund balances accumulate, insurers will be faced with changing liabilities from the different magnitudes in coverage and gaps in coverage. As CDHPs grow in popularity, it may be necessary to recognize and account for the durational mix of business since the typical size of the gap could vary significantly for the participants in a book of business based on the number of years that they have been participating in a CDHP benefit and accumulating a fund balance. There are at least two factors that will influence the typical gap (or distribution of gaps) between fund and core medical coverage. The number of new accounts (which will have relatively low fund balances) and the number of new participants within the groups covered (due to turnover or new elections at open enrollment) will both have an impact on the level of fund balances.

- The paid claim pattern is often different for high-deductible plans, which typically accompany HRAs, than for plans with first dollar coverage or small deductibles. Since incurred claims may not exceed the high deductible in the first few months of a policy year for many plan participants, the paid claim pattern will be different than other

plans. One important example of that difference is that the percentage of total claims paid in the second half of a policy year is likely to be greater than the first half of the policy year. As a result, valuation actuaries may need to recognize the policy year start date distribution for the book of business for which the reserves are being calculated. The claim reserve at year end will be greater for a block of business with a predominance of first-quarter effective dates than for a block with fourth-quarter effective dates. While this will not directly impact the reserve calculation, it may explain more volatile variations in total claim reserves from quarter to quarter than is normally otherwise observed.

2) Policy Reserves: HSAs vest immediately and are the property of the individual consumer who owns them, so a policy reserve would not be necessary. Policy reserves may be necessary for HRAs, however, if the product was priced to reflect the present value of the claims that eventually result from the current policy year's fund contribution. The need for such a reserve would apply to both an insurer or an employer that self-funds its employee benefits. For example, if an employer contributes $400 per employee per year to an HRA, the average employee is likely to use a portion of that fund in the first year. However, since the unused balance rolls over into the next policy year, one might view the $400 as being earned in the first year, which would require a reserve to reflect the accounting principal of revenue and liability matching (discounted appropriately for interest and withdrawal). A strong case can be made for this requirement if you consider a person close to retirement. Since HRA funds can be used after the employee retires, it makes sense to hold a liability to reflect that future obligation. An insurer's policy language will govern exactly how its product works, but even in the event that an employer switches back to a conventional plan after only one year in an HRA, the insurer may have a liability to pay out on fund balances for the employees that retire after one year in the fund.

If the insurer prices the product based on the expected claim cost, comprised of the portion of the fund used in the policy year as well as the claims from the high deductible plan, an insurer may be able to rationalize that a policy reserve is not needed (except, perhaps for the covered individual that retirees at the end of the year). In this case, however, the annual increase in the premium would be significantly higher than other plans and could cause persistency problems for an insurer. The significant premium increase results from larger total HRA fund payouts in the second and subsequent years from unused first-year rollovers.

3) Premium Reserves: An insurer may need to establish premium reserves, the same as any other product, depending on the premium payments received. However, the need for premium deficiency reserves is more likely for a new product with an unproven claim history. Premium deficiency reserves are fundamentally different from policy reserves. Policy reserves recognize a liability from a planned timing difference between premium receipt and benefit payment while premium deficiency reserves result from an unexpected claim development. As insurers assess their experience they may need to establish a premium deficiency reserve for their CDHP products if the payouts from the funds occur differently than planned.

Insurers cannot usually combine the results of their CDHP products with their PPO block of business based on requirements from the NAIC's Statement of Statutory Accounting Principles number 54. It states, "Contracts shall be grouped in a manner consistent with how policies are marketed, serviced and measured." Since CDHPs are marketed and tracked as a distinctly different product than PPOs, an insurer will need to perform premium deficiency tests for those policies as a separate block of business. A case could be made, however, to group all of a carrier's PPO business if the policy is written to provide PPO coverage only and the group self-funds the HRA fund. In addition, if the volume of HRAs is immaterial it may be permissible to combine the policies with other similar products.

New Policy Reserve Technique

Since sufficient claims experience may not exist to determine fund use patterns, it may be necessary to model how and when participants will use the funds that are deposited into HRAs so that policy reserves can be calculated. One well-suited approach to this problem uses claim distributions that are modified to reflect the characteristics and anticipated morbidity of the block of business. The group is stratified into a number of major categories that represent a variety of health care use

(continued on page 20)

patterns (e.g., people with chronic conditions, healthy people with occasional claims). The distributions are used to generate multiyear claims patterns including the impact of random high-dollar claim events (e.g., major traumas). The claim projections of the individuals are aggregated to reflect the composition of all enrollment tiers since the HRA funds are managed at the employee level and not the member level. Termination and retirement rates appropriate for the block are factored in and scenarios are generated to estimate fund balances at different durations. Projections should be performed for a sufficient period of time to assess the liability. The sensitivity of the underlying assumptions should also be tested to determine their impact on the resulting liability. The outcomes can be quite different in groups with different turnover rates.

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Future Challenges

New legislation continues to impact CDHP products and the variations of this type of medical benefit. Valuation actuaries will need to continue developing appropriate modeling techniques for new variations and refining their models as credible claims experience evolves. Sharing our successes with these techniques and models will benefit the profession and foster an environment that benefits the industry and promotes the image and reputation of our profession.

Meet The New Kids

The Younger Actuaries section got the nod of approval at the Board of Governors June 2004 meeting. The new section was created out of the need to establish a stronger link to recently qualified and future actuaries. Led primarily by younger actuaries, the section will work to advance the actuarial profession by addressing the needs of actuaries who are in the earlier part of their careers. Among other activities, the section will serve as a venue for identification and development of future SOA leaders, will educate its members about and give them a voice in SOA activities, increase the sense of belonging to the profession, and will develop various programs targeted at professional advancement of younger actuaries. There is no age or credential requirement to join the section. Senior members are encouraged to join to stay in touch with the ideas and needs of the next generation of actuaries and to serve as mentors to the younger actuaries. Candidates and those early in their career are encouraged to join to link to the profession and benefit from section programs and activities that will further their professional and personal development. In order to ratify the section, 200 SOA members must sign up. Please support this cause, sign up today at: *www.soa.org/ccm/cms-service/stream/asset/?asset_id=5179052&g11n*

For more information, please contact Valentina Isakina, SOA Finance Practice Area Actuary at (847) 706-3584 or *visakina@soa.org*

CHAIRPERSON'S CORNER | FROM PAGE 3

The Health Section continues to focus our efforts on activities to help our membership meet these opportunities and challenges. Two activities in particular come to mind. The first is continuing education. Through this newsletter, seminars, and health related sessions at the Spring and Annual SOA meetings, we strive to bring our members useful and timely information on topics relevant to their everyday work. A big thanks to Jeff Miller, Darrell Knapp, Karl Volkmar, and Catherine Liang for their leadership roles in continuing education. The second activity is the Health Section's sponsorship of relevant, practical and timely research. We currently have a number of active research projects on topics such as the Evaluation of Medical Management Interventions and Analysis of Claims by Policy Duration for Individual Major Medical Insurance. Several research RFPs are also underway, these include a general RFP for research relevant to practicing health actuaries as well as a targeted RFP on Stochastic Methods for Health Insurers.

We welcome your feedback and suggestions. Only you, our members, can tell us whether we are achieving our goal of identifying the issues most important to you, and better preparing you to address those issues.

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.*