SOCIETY OF ACTUARIES Health Section

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Health Watch

An Interview with Rick Foster

By Mary van der Heijde and Doug Norris

After his keynote address at the Society of Actuaries (SOA) Health Meeting, we were fortunate to sit down with Rick Foster, the chief actuary at the Centers for Medicare & Medicaid Services (CMS). We have summarized some of the highlights of our conversation below.

Mary van der Heijde: Many of our members are not working day to day on public policy. Would you say that there are lessons you've learned that might particularly apply to somebody working in the corporate sector?

Rick Foster: In particular, actuaries have this very important responsibility to come up with objective technical information that is not biased, and not intended to provide the "right" answer, and to help advise—whether it's government policymakers or corporate leadership—about the financial implications and other aspects of the products and programs that they work with. And if you think about it, if we ever were inclined to tilt our analysis,

CONTINUED ON **PAGE 4**

Richard S. Foster, FSA, MAAA
Chief Actuary
Centers for Medicare & Medicaid Services

Letter from the Editor

By Mary van der Heijde

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As we're heading into the end of 2011, it's useful to stop and take stock of the remarkable changes, challenges and opportunities health actuaries have experienced this year. Regulatory changes that are relegated to the fine print this year would have been major news in a normal year. In this issue, we have included information about specific programs like accountable care organizations (ACOs), as well as focused on the ways the Society of Actuaries (SOA) and the American Academy of Actuaries (AAA) (and their members) have remained active in health care reform discussions.

In June 2011, the Health Section hosted the SOA health meeting, which despite our tough budgetary times had record attendance. Doug Norris has recapped for us some of the highlights of the conference. While at the conference, we were fortunate to be able to sit down one-on-one with both of the keynote presenters, Rick Foster and Susan Dentzer. Susan Dentzer, the editor-in-chief of *Health Affairs*, met with us for an interview and shared her thoughts about where health care and health policy are going for the next year, and how she sees actuaries best having an integral role within the context of health reform. Rick Foster is the chief actuary at the Centers for Medicare and Medicaid Services (CMS), and gave us an open and engaging interview that I encourage you to read. Rick received a standing ovation at the end of his keynote address, which is representative of both his excellent presentation and the significant and meaningful contributions he has made to our profession and to the current health care reform debate.

This issue's "Chairperson's Corner" shares information about the joint meeting with the Academy of Actuaries' Health Practice Council, the 2011 accomplishments within the context of untapped opportunities for actuaries, and the latest on the Health Actuarial Research Initiative (HARI). In "Soundbites from the Academy," Heather Jerbi and Tim Mahony share more information about the ongoing activity related to health care reform. Specifically, they discuss activity related to ACOs, risk-sharing mechanisms, actuarial value and several other current topics.

In 2010, the Health Section sponsored a two-phase research effort focused on disability income insurance. Steve Siegel has summarized for us key conclusions from the first phase of that completed research.

As an extension of the article in the January 2011 issue of Health Watch, Bob Cosway and Barbara Abbott have analyzed recent premium and benefit trends for large public sector plans renewing July 1, 2011. Bob Tate's article provides helpful background about ACOs, why actuaries should care, and why it's important that we get and stay involved in ACO evolution. Timothy Adams delves into Medicare Part D LICS and reinsurance provisions, and if they really are "risk free."

We hope you find this information interesting and useful, and welcome you to contact us with your thoughts and opinions. ■

Chairperson's Corner

By Judy Strachan

The 2011 SOA Health Meeting in Boston is now history. Boston was a great place for a meeting, and the roster of sessions was excellent, so the meeting broke all records for attendance. The Health Section Council coordinated over half of the sessions at this meeting. In addition, another Medical School for Actuaries, which received such positive reviews after the 2010 Boot Camp for Health Actuaries, was held at the end of the Boston meeting. A new smartphone meeting application was introduced for the meeting, putting access to maps, the meeting agenda and copies of the handouts at your fingertips. Another first for the meeting was a Twitter feed about events at the meeting.

Outside of activities related to the 2011 Health Meeting, the section council has continued to focus on the section's mission. We continue to have more ideas for projects than we have resources and time. Our mission statement has aided us to focus the highest priority projects. Our priority projects need to:

- Provide relevant educational opportunities and member communications,
- Facilitate practical research, and/or
- Expand the marketplace relevance of the health actuary brand.

Joint Meeting with the Academy of Actuaries' Health Practice Council

During this year's annual joint meeting with the Academy of Actuaries' Health Practice Council held in June, the practice council and the Health Section Council reviewed the action items identified during last year's strategy session. While much remains to be done, both groups had taken action to address the majority of last year's action items. The highest priority action item from last year's meeting was to develop the profession's resources for performing rapid health research. One of the major projects addressing this action item is the Health Actuarial Research Initiative discussed below. Increasing the visibility and improving the perception of the health actuary brand, another action item, was addressed by the Untapped Opportunities Task Force appointed by the SOA board of directors, also discussed below.

The major initiative identified by the group for the coming year is to identify and work on opportunities to increase the cooperation and coordination both between the Academy Health Practice Council and the Health Section Council and between health actuaries and other health professionals. The goal of the effort is to increase the visibility and the influence of the profession on health policy and health research.

Untapped Opportunities for Health Actuaries

In 2004, at the urging of the Health Section Council, the board established the Untapped Opportunities for Health Actuaries Task Force. The 2011 accomplishments for this task force include:

- A new resource of role profiles of nontraditional health actuaries, housed on the Untapped Opportunities Web page.
- A recruiter roundtable the evening before the health meeting, to learn from a focus group of non-actuarial health care recruiters.
- Provider payment reform activities, including attending conferences offered by other professional groups, offering webcasts on related topics and creating a new work group to address payment reform initiatives.
- Sponsoring the faculty for the June Medical School for Actuaries, with planning and oversight executed by the Health Section.
- The Massachusetts Connector Research Project, which was approved and committed in 2010 and results are expected later in 2011.

Because this initiative is now considered by the SOA board of directors to be operational rather than strategic, responsibility for continuing the work of this task force has been transferred to the Health Section Council as of July 2011. The

CONTINUED ON **PAGE 4**

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Health Section Council has identified the following list of tasks to pursue over the next year:

- Continue to explore the application of complexity science for improving the quality and usefulness of actuarial models of health care systems,
- Expand ideas for clinical training beyond boot camp material,
- Continue to review SOA health research assets for opportunities to leverage at conferences, for use in articles, to use as vehicles for networking with other organizations and to enhance the health actuary brand, and
- Continue to review SOA educational programs for gaps in education and exposure to emerging areas of practice.

Health Actuarial Research Initiative (HARI)

HARI, an initiative of the SOA board of directors, was inspired by the discussions between the SOA Health Section Council and the Academy Health Practice Council in June 2010. The Board has committed $300,000 per year for 2011 and 2012 for health research. The first project the oversight group identified is a study of risk adjustment as it pertains to the Patient Protection and Affordable Care Act (PPACA). The Request for Proposals (RFP) for the risk adjustment project was released on May 13 and is available on the SOA website. The oversight group has identified the next two HARI topics, a comparative study of health care trend drivers, and of accountable care organizations and risk; work has begun on defining these projects in greater detail with a goal of issuing RFPs this year for one of them and next year for the second.

Wrap-Up

My term as chair of the Health Section Council ends this month, and Kevin Law will take over the chair. My three years on the council have been busy and interesting, and the future for the Health Section Council promises more of the same for Kevin. ■

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or to skew it one way or another, to achieve some purpose, and not follow all of the objectivity and the requirements of the profession, then the result might be handy for one brief moment, but from then on our work would be useless, and would have no value whatsoever. I think that is exactly the same in the private sector as it is in the government.

MV: You talked about how technical neutrality, in some cases, can be seen as opposition to a particular viewpoint. Do you feel that we have any risk of becoming irrelevant, or that our voice would not be heard in the future because of that, or do you think that our obligation continues regardless?

RF: Well, our obligation continues without question, but I do have that concern—I'll be honest about that. In recent years, as we've seen the level of partisanship in the public sector go up, there's been less interest, it seems, in the technical aspects of the programs, and more interest in the political aspects. So I do worry about us being marginalized or no longer being useful for the very things that we're so good at, and the very things that should be paid attention to. Even though it seems that fewer and fewer public leaders and politicians tend to pay attention to the formality of the technical details which will make or break the success of any product or program in real life. So, I think we may be marginalized for a little while, but it may take only one or two spectacular failures before we're back in business the way we've always been, and the lessons learned.

MV: Tell us about the role that the media has played in this partisanship, and in your role in trying to provide technical information and unbiased information.

RF: The media is very interested in reporting all of this. They tend to focus a little more on the more sensational aspects, I'm afraid. Still, it's been a valuable voice on behalf of our work, and we try to assist the media behind the scenes in understanding

what they're reporting on. We don't need to be in the media so much, but we do like them to get the story straight.

MV: Do you receive calls frequently from the media, asking behind-the-scenes questions?

RF: Yes, all of the time.

MV: That's encouraging, because you made the point that attention to the sensational can sometimes cloud accurate reporting. It's good to know that you're quietly helping them to be accurate on technical issues.

What is your forecast for the future of Medicare policy changes, in the next few months, and then after the 2012 elections?

RF: There were many changes in the Affordable Care Act legislation affecting Medicare, and a number of provisions that will result in lower costs for the program and more revenue. So, it's sometimes a little hard to think of what more can be done right now on the heels of everything that's been done. But in the longer term, we're still facing the significant issue of the retirement of the baby boom generation, and the traditional cost pressure where health care costs—whether it's Medicare, Medicaid or private health insurance—all tend to grow faster than the economy, for a variety of reasons that actuaries well understand, but they're hard to fix. So, I expect that there will be continuing attention on Medicare and there will be the need for further legislation—if nothing else, to fix the problem of physician payments. I think we'll be very busy in that respect for years to come. I think actuaries in general, and health actuaries in particular, will continue to find that health insurance is a growth industry in this country.

MV: Do you think that the 2012 election will change that, in terms of budgets and the partisan makeup of Congress?

RF: Possibly. I'm always hesitant to forecast political events and that sort of thing. There is, of course, a lot of interest in repeal of the Affordable Care Act, in whole or in part, so if the presidency were to change hands, there would probably be more attention focused on that. I used the example of Senator Dole and Senator Moynihan, how they used to work together despite their different philosophical preferences, to come up with effective policy that they had for the country and for the public. I would love to see more of that. I view a world where our elected leaders have in mind first and foremost and always the interest of the public, which I think they do, but are willing to go the next step, which is to work together for the most effective solutions for the problems that we are facing.

MV: What do you think would be a tenable solution for Medicare funding, or what do you think are key considerations that actuaries need to be thinking about in terms of funding?

RF: It's a sweeping question, and there are lots of things that ought to be done, some things that could be done, and other things that you can at least think about, but it's a very open question whether they should or should not be done.

One thing that clearly ought to be done is the issue of fraud and abuse. We have way too much fraud and abuse in Medicare. It's become a favorite target for criminals, organized and disorganized. Congress has invested a lot more in program integrity in recent years, and that's having a good impact, but we should do more. If you look at the typical private health insurance company, these companies typically do monthly, or even sometimes weekly, reviews of the claims data as it comes in, looking for anomalies or anything strange or out of the ordinary, then acting on it very quickly. Too often, we find a bad trend only a year or two—or even three or four years—after it's already started, and after we've already spent a billion dollars on it. So our fast response needs to be improved; our automated capabilities, through predictive modeling and other techniques, need to be improved. We're just launching into a predictive modeling effort in this regard for program integrity, so I'm optimistic about that. That's one important step: quit paying the crooks, and quit paying people for services that are never performed.

CONTINUED ON **PAGE 6**

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In addition, if you think about the balance between traditional fee-for-service Medicare and Medicare Advantage, what we've seen typically is ideologically you either like Medicare Advantage, or you don't like Medicare Advantage and you like the opposite. That's led to changes in the program to promote it or to not so much promote it. What we ought to do is consider the inherent advantages that are available between fee-for-service and Medicare Advantage. For example, in many parts of the country, even though private smaller insurance plans have higher administrative costs, they can still do a better job of controlling costs compared to fee-for-service because of utilization management or preventing fraud and abuse. In the more rural parts, they don't really have much of an opportunity; it's hard to beat fee-for-service costs in Minnesota, or much of the Midwest, or Oregon or Washington. Even though some places have a heavy managed care presence, it's hard to beat the fee-for-service costs, because the practice of medicine is not so—I'll say "over the top"; that's too strong of an expression but you know what I mean: do every last test, every last check you can possibly do, and when in doubt put them in the hospital, and so forth. In areas where care is provided on a reasonable basis and does not reach extremes, it's really hard for the private plans to be very competitive against fee-for-service. So why not take advantage, and set up what amounts to a system of competition among the different formats including private plans and fee-for-service Medicare, across the country? Those plans that can achieve more efficiency while still being consistent with high quality, that translates into lower premiums for people who participate in this lower-cost form, whichever it is, fee-for-service or a private plan. Use competition in a way to get to a lower cost.

So far we haven't done anything about cost growth. Because it's one thing to get to the lowest cost you can get consistent with good quality, but the drivers of cost growth, to a large degree, tend to be technology. We all want the newest, latest, best care for ourselves and our loved ones. In some cases, the newest care isn't such a great deal. Some years back, there was a radioactive injectable dye that was used for heart scans and so forth. There was one on the market that had been around for a long time; it had an incredibly low incidence of adverse side effects, and it was very inexpensive. Then, a new one came along and took that incredibly low rate of adverse side effects, and lowered it like a third more. So, it was virtually indistinguishable, but it was better. Of course, everybody wanted the better one. And Medicare adopted it for use, as did all of the private plans. But it cost 10 times as much as the old one, even though the improvement was very, very small. We tend to adopt any new technology that is either better, even if it's just only a little bit, or even if somebody just can claim that it's better, even if it's not really any different. We all tend to adopt that, and it's not necessarily cost-efficient to do that. So, we could be a lot more prudent in the new technology that we adopt. Now, we would still adopt most of it, because we want the benefits of the new life-saving, life-enhancing treatments, devices and drugs, but we don't have to adopt everything that comes along.

Moreover, maybe there is a way to get the medical research and development community to focus less on cost-increasing technologies, which is what they've done through most of their history, and focus more on cost-reducing technologies, much the way that auto manufacturers and computer makers do. As one example of that, a few years ago implantable defibrillators came along, an excellent device that can prevent somebody's death in an emergency situation. Very, very expensive to build, and fairly expensive for the operation to implant it, but Medicare covered this, and it's a good thing. Somebody's now working on a one-time-use implantable defibrillator. Because the ones to date can be used over and over again, and for the most part they sit in there and do nothing. They sit there, and absolutely nothing happens until there's an emergency. Then it kicks in; it defibrillates your heart action. They rush you off to the hospital, and they give you drugs and other treatments, and it's not doing anything else. It sits there, but it's really expensive. Instead, if there was a much, much cheaper one-time-use device that saves your life in an emergency, and they rush you off to the hospital, and then they put another one in, that's going to be cheaper.

Down the road you have questions like: for health care generally—not just Medicare—should there be a single payer system? Should there be global budgeting? Representative Paul Ryan's plan is a lot like premium support of the type that I described earlier, this national competition, but it has an adjustment for the payments that is probably too low. He would adjust the payments year-to-year by the Consumer Price Index (CPI), and we know that health care premiums tend to go up because of the general CPI, excess medical-specific inflation, increases in utilization and increases in intensity. All of those outweigh the CPI. I'll give him credit; he's the only person who has seriously tried to tackle the long-range financial problems coming from Medicare and Medicaid. He's done it in a way that I wouldn't say has a high probability of working, but it is possible that the financial pressure that would be caused by his approach—or global budgeting, or even the productivity adjustments for Medicare—that the financial pressure caused by all of these could feed back to the research and development community, and they might conclude that they have to change the way they've been doing business, because they will not have an automatic market in the future for whatever they come up with, no matter how marginal the benefit, and no matter how high the cost. But that's a big if for all these approaches.

MV: How do you see the actuary's role in comparative effectiveness studies?

RF: That's a good example, and I know the SOA's doing a lot on this, and researchers are doing a lot. It's controversial—it starts off just fine; everything's great when it starts off. Using my example of the radioactive dye, if we had a more prudent adoption of technology, by Medicare and by the private sector, and we all said, "No, we're not going to do it, because it's not cost effective," then everybody would say, "Great." But the next step is: How would you do this more formally for Medicare? Because right now, we're not really doing that, except in a very, very minor way. And Tom Daschle, when he was slated to become the secretary for the Department of Health and Human Services (HHS), had a proposal for a comparative effectiveness board that would decide on behalf of the health care sector at large which treatments and devices and so forth were a good idea, and which ones were not. And that's not a bad idea, but the next step that usually comes up is: How do you decide if it's cost-effective? And in my example, it was easy—anybody could decide that probably wasn't cost-effective. In more difficult examples, before long it takes you to: "What is the value of a human life?" If you adopt this, you can save so many lives; if you don't adopt it, you won't save those lives. It costs so much to adopt it, and what are you saving? And while there's a lot of research on the value of human life, there's less research, or less bulletproof research, on what is the value of a better quality of life. But that's when you end up with these difficult questions, and that's when partisans tend to say "Death panels," or "You're throwing granny under the bus," or "You're going to ration care that I want." I think that men and women of goodwill can work their way through those issues, debate them, and come up with a solution that would work. But if it's going to be an opportunity for people to point fingers and make political charges, we'll never get there. So I'm a big believer in the potential for comparative effectiveness, particularly if you get to the point where you can have recommended treatment protocols for a given disease or given set of symptoms, and then you tie that in with electronic health records. Consider what happens when you go to your doctor, and if you see his or her office, you'll see a pile of books on the floor—a big pile. And maybe they're keeping up with it, maybe they're not, but it is really, really hard. It's hard for us as actuaries to keep up with all the studies, all the reports, all the evidence, all the data. It's even worse for doctors. But if what came out of comparative effectiveness were these treatment protocols, which were then built into the electronic system, so that not only could you call up your patient's health record, but you could also get advice for a given set of symptoms and so forth, test results, you could get advice on the optimal treatment. And you don't have to go off to your office and look through the middle book in the pile; it's right there for you, and there's science behind it. Good, demonstrable science that people have carefully developed. I think that would be good for all of us. So I think there's a lot of potential for comparative effectiveness, and

CONTINUED ON **PAGE 8**

"Our independence and our ability to give all policymakers the objective advice and information they need to develop sound programs is crucial"

we're just really at the tip of the iceberg in terms of exploring it.

MV: You shared with us many of the changes and challenges and progress that have defined much of your career. What would you say is your most significant accomplishment, or one thing that was defining for you?

RF: I'll confess that the first thing that jumps into my mind has nothing to do with actuarial work. Back before I became chief actuary for CMS, I worked at Social Security. We had the 1983 amendments which solved the program's financial problems for a long time to come, and there hasn't been any major legislation since for Social Security. So when I was deputy chief actuary, I had time. I could do what I felt like doing and we did a lot of good studies and good research. And in my private life, I went car racing, which I'd wanted to do all my life. I remember winning the Mid-Atlantic Road Racing series twice, and it was all very exciting.

Of course, ever since I became chief actuary at CMS, there's not much time for hobbies and things like that. Professionally, I think what I'm proudest of is less for what I've done as an actuary, the technical aspects and so forth, but more what I've helped to create. The Office of the Actuary at CMS, I believe, is the largest actuarial component in federal government. We have almost 100 people, not all of them actuaries—many are economists, some are statisticians, some are programmers, and so forth. But within CMS, we are considered the best place to work in the whole agency. Our employee evaluations, or the survey of employee satisfaction, we're number one every year. I didn't cause that to happen, but I like to think that I helped to encourage it at least a little bit; helped set in place the circumstances and conditions where people can prosper, where they can be excited about their jobs. Where they know that they can charge ahead with something, and if it succeeds brilliantly, that's going to get recognized, and if it falls apart completely, they're not going to be fired or chastised—they're going to be encouraged for having tried something. Then we figure out if we can do something to make it better. It's a really good office; it's a bunch of great folks, and that's the satisfaction I get day to day. The most important thing for me is watching these people thrive and work so well together and cooperate, share information, not stab each other in the back. That's what I'm proudest of.

I'm also proud of our efforts to restore the actuarial independence of the office; I hope that will continue to serve me and whoever succeeds me someday, for many more decades in the future. Our independence and our ability to give all policymakers the objective advice and information they need to develop sound programs is crucial (for the reasons we talked about before).

MV: Finally, do you have any recommendations for your fellow actuaries, of resources that you think are particularly useful or helpful, either for staying on top of changes within CMS or health care reform? What are your bookmarks, your favorite resources?

RF: There are a lot of things that come out—I don't have a good list of them all, but I'll mention a few. I'll put a plug in for the new publication by CMS—it used to be the Health Care Financing Review. It's now called something entirely different, and the first issue in the new format will come out in another month or two. So that's an in-house research publication, peer-reviewed. [Editor's note: the new publication is titled the "Medicare & Medicaid Research Review"].

Health Affairs – [Editor in Chief] Susan Dentzer's going to be here later on—is the premier health policy journal; it really does an outstanding job. Not only their journal, of course, but also the forums that they hold. I'll put in a plug for Milliman—the Milliman studies that they post periodically to the world at large are almost always really, really good. Once in a while we find something and ask, "Huh, how did they reach that conclusion?" but that's the exception by a wide margin. Particularly the series on the Affordable Care Act that's come out in the last year or so, and really before that—very valuable information.

There's something called the Social Science Research Network (SSRN)—it's an informal website, and one of its departments is for health. It has another for Social Security, another for poverty, another for workers' compensation, and so forth. The health one is like a clearing house of good studies and good information. Milliman studies

will show up there, and our articles will show up there from time to time, and it's very rare that I get an email from them that doesn't have at least one study that I really want to read. The Congressional Budget Office (CBO) puts out a ton of very good studies; I wish that we had their research staff and their research opportunities. What they do is almost always very well-thought-out and very well-expressed. Their periodic booklet on policy options for addressing budget deficits—an awful lot of what gets enacted comes out of that book. Another good Congressional source is the Congressional Research Service (CRS). Its reports are also uniformly first-rate, although you have to work to find them. The CRS reports are not directly available on its website. I'm leaving out a lot of important ones. The Employee Benefit Research Institute is very good. The reports from the National Bureau of Economic Research. The think tanks produce a number of studies on health issues, with the Urban Institute, Brookings Institution, Kaiser Family Foundation, RAND, National Health Policy Forum and American Enterprise Institute being particularly prolific. In addition to the SOA and AAA reports, the American Economic Association has a wealth of technical analyses. You can also check the Office of the Actuary page on the CMS website. You'll find the trustees' reports there, the National Health Expenditures articles and data, our separate memos such as for the financial estimates for the health reform legislation, all these things. If you go to the CMS website and search on "actuary" it will take you there. Of course, the well-known health publications are also quite valuable, such as the New England Journal of Medicine, Journal of the American Medical Association and others. Overall, it's a lot harder to keep up with all the excellent articles that are available than it is to find them!

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Accountable Care Organizations–

How Actuaries Can Get Involved

by Bob Tate

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In the first half of 2011, no topic got more buzz among health care providers than accountable care organizations (ACOs). Interest, excitement, anticipation, fear and disappointment all were part of that buzz in a short six-month time period.

At the beginning of 2011, many policy experts saw ACOs as a bright light that would start health care down the road to "bending the cost curve." Health care executives, already interested in improving their care models, were excited about the possibility of getting bonus payments from the Centers for Medicare & Medicaid Services (CMS) for those changes. Everyone eagerly anticipated the day that CMS defined ACOs by issuing regulations on provisions in the Affordable Care Act of 2010 that established ACOs as part of Medicare.

Proposed regulations were issued on March 31, 2011, and the formerly unknown was now defined, at least in Medicare. But by June, providers' initial poor reaction to the regulations was so widespread that ACOs were almost back where they were at the beginning of the year—a concept that sounded promising in theory, but still needed to be defined and implemented in the real world.

So if ACOs are still not significantly "more real" than they were at the beginning of 2011, why do actuaries care, and why is it important that they get involved?

Bending the Curve

Actuaries care because ACOs and their cousins, bundled payments and patient-centered medical homes, are today's leading examples of the kind of care model and payment model reforms that are essential to bending the cost curve. And because successfully bending the curve is essential to the success of ACOs, actuaries will be essential to the success of ACOs.

In our roles as actuaries for health plans or self-insured employers, health actuaries have been the professionals responsible for understanding and projecting total health costs for populations. We have analyzed costs and evaluated population risks, found drivers of cost increases, and projected future costs. When the CEO asks "How can we reduce medical trend?" the actuary often gets the first call.

So the knowledge and skills actuaries have accumulated over the years will be important as ACOs will require a new group—health care providers—to understand and manage total population health costs. Providers will need this knowledge, and actuaries are the best situated to provide it, whether as actuaries for payers entering into ACO partnerships with providers, or as actuaries directly helping providers.

What Are ACOs?

In theory ACOs can take many forms, based on the underlying principle that an ACO is an Organization (group) of providers that agrees to be Accountable for the cost and quality of Care for a group of patients. This group of providers will reorganize themselves and their care processes to reduce fragmentation of care and manage chronic diseases better, resulting in better care for individuals, better health for populations and slower growth in costs through improvements in care.[1]

In practice, this means that providers will group together, not necessarily under the same ownership structure but as part of a clinically integrated team, to accept responsibility for cost and quality of care for a group of patients. They will agree to be measured on quality outcomes for the population, and they will get paid based on their cost efficiency in driving these positive quality outcomes, not just based on the volume of services they perform.

[1]See Don Berwick, "Launching Accountable Care Organizations—The Proposed Rule for the Medicare Shared Savings Program," New England Journal of Medicine, March 31, 2011. http://healthpolicyandreform.nejm.org/?p=14106

They will be paid for this value through bonuses for reduced utilization and cost, in addition to their standard fee-for-service payments, or through global payments that are similar to capitation. These new payments will allow them to perform and get paid for new services, like care coordination, which are not currently reimbursed.

Examples of ACOs

Even with theoretical and practical descriptions of ACOs, the best way to understand ACOs is to learn how specific examples work. For further reading, you can visit the link below to read about commercial pilots such as the Brookings-Dartmouth ACO Learning Network (*http://www.acolearningnetwork.org/what-we-do/aco-pilot-sites*). Also, the end of this article is a detailed description of how ACOs would work under the proposed regulations for the Medicare Shared Savings Program.

Actuarial Knowledge That ACOs Need

The key to success for any ACO will be its ability to successfully manage the health of the population it's responsible for, across the continuum of care. To do this, it will need to use tools that actuaries are very familiar with, having used them for years in their roles with health plans or as consultants to self-insured employers.

Total Cost Analysis

Most providers, even large facilities or multi-specialty physician groups, only know a fraction of a patient's total medical history and cost—what happens to patients inside their organization. But in an ACO, they are accountable for the *total health cost* of a population. Since "you can't manage what you can't measure," they will need ways to collect cost and utilization data on their patients across the continuum of care, analyze that data, and budget for future costs.

Actuaries, of course, do all of these things today. ACOs need actuaries to directly translate the total cost and utilization summaries, cost driver analysis and cost projections we've done for health plans and self-insured populations to the populations they're responsible for managing.

Predictive Modeling

Over the last decade, actuaries have seen, and even participated in, the development of effective methods to manage a population's health, as health plans and health management companies have worked to provide these services to their clients. We know that these health management programs cost money. A key determinant of whether the program saves more medical cost than its own direct cost is the ability of the program to use predictive modeling tools to identify the patients who will benefit most from interventions.

It will be important for actuaries to help the new ACO organizations understand how to use predictive modeling to manage their populations' health. It will also be important for actuaries to continue to work with clinicians and others, as they have over the last decade or so, to improve predictive models to be even more powerful.

Practice Pattern Analysis

With more coordinated care in ACOs, providers will be able to communicate more easily and often, and learn from each other. This will enable providers to better understand and use the most effective and efficient care patterns when treating patients. An effective ACO can analyze care patterns of its physicians and find out, for example, if certain providers are using high-tech imaging for back pain earlier and more often than is indicated by evidence-based guidelines. It can then offer education and coaching to help the less-efficient providers improve.

Actuaries have been using episode grouper tools for years to analyze the practice patterns of providers in their networks. They've used these analyses to determine which providers should be in the high-performing narrow networks that all the major carriers have developed to offer more efficient care alternatives to their clients. They can help ACOs use these same tools to evaluate providers in their organization.

CONTINUED ON **PAGE 12**

"The key to success for any ACO will be its ability to successfully manage the health of the population it's responsible for, across the continuum of care."

"Actuaries need to be on the front lines of ACO formation, helping payers and providers make good financial agreements and analyze costs well."

Risk Analysis

To be successful, ACOs and providers will need to take on new financial risks that are borne today by payers. Taking on these risks will focus the attention of ACOs on providing the best care that patients need in a cost-efficient manner, rather than driving more procedure volume that may or may not improve health but will definitely bring revenues to the providers.

But even with focused attention on effectiveness and efficiency, the risks providers take on will be, well, risky. One or two unexpected million-dollar cases could change an ACO's income statement from a comfortable profit to a loss.

So to be successful, ACOs will need to understand the new risks that they're taking on, and they will need to develop methods to mitigate those risks so they don't take on more than they can handle. They will also need to be sure they get paid for taking on those risks.

Actuaries are risk specialists. Actuarial modeling can help ACOs understand the possible total cost variation of their populations, simply due to the random nature of adverse medical events. We can help them understand the probability that they will, due to bad or good luck, exceed their budget by X percent or beat it by Y percent. We can also help them use stop-loss insurance or risk corridors to protect themselves from fluctuations caused by large claims or bad luck.

Actuaries Need to Use Their Knowledge to Help ACOs Succeed

The concepts that will make ACOs successful—coordinating care, managing chronic illnesses, using the most cost-efficient evidence-based medicine—are not new. In various locations across the country, at least some providers have been successful with some or all of these, on their own or in cooperation with payers.

But combining many of these concepts together at once and having the provider group at risk financially for the total health cost of a population is new, at least for most of the provider groups that will be forming ACOs.

Actuaries need to be on the front lines of ACO formation, helping payers and providers make good financial agreements and analyze costs well. Without good cost analysis and projection, predictive modeling, practice pattern analysis and risk management—all the strong suits of actuaries—otherwise-successful ACOs are at risk of failure.

Get Involved

Your professional actuarial organizations are making sure that actuarial input is heard. The Society of Actuaries is a member of the Brookings/Dartmouth ACO Learning Network, and the American Academy of Actuaries has written an issue brief[2] and commented[3] on the proposed rule for the Medicare Shared Savings Program (MSSP). But professional organizations can't do the hard work to make sure that actuarial contributions are valued by ACOs. That's up to all of us, working on actual ACO projects and ensuring that they're actuarially sound.

Medicare Shared Savings Program ACOs

Section 3022 of the Affordable Care Act made ACOs part of Medicare by establishing the MSSP. Under this program, an ACO that holds costs for a population below benchmark cost targets, while also achieving quality-of-care benchmarks, can receive shared savings bonus payments from CMS. These bonus payments, along with the opportunity to take better care of their patients, are the motivators for provider groups to form Medicare ACOs.

Who Can Form an ACO?

A group of providers that would like to form an ACO to participate in the MSSP can be an existing integrated delivery system, or it can be independent providers who agree to form an organization for the

[2]http://www.actuary.org/pdf/ACO_issue_brief.pdf
[3]http://www.actuary.org/pdf/Acad_on_ACO_prop_regs_060711_final.pdf

purpose of creating an ACO. Under the law, the only hard and fast requirement is that the ACO must have enough primary care physicians (PCPs) to provide care for at least 5,000 beneficiaries.

Beyond the PCP requirement, many different permutations of doctor and hospital groups can form ACOs. The most integrated ACOs would have PCPs, specialists, outpatient facilities, hospitals and home health agencies. But in theory, an ACO could consist of only PCPs, if it could demonstrate the capabilities required of an ACO by the regulations.

If groups of independent providers form an ACO, they can remain independent for other purposes, and do not have to have common ownership. They simply need to form an organization that can carry out the functions of the ACO, and that organization needs to have its own governance structure.

This wide range of possible providers that can form an ACO exists because ACOs will have great flexibility in how they manage the health of their population. The key requirement is that they agree to be responsible for *total* health care costs and quality for the population, even though they do not provide all the care.

Capabilities of a Shared Savings Program ACO

To be accepted into the MSSP, an ACO must complete an application showing its capabilities to achieve the three goals of the Shared Savings Program: better care for individuals, better health for populations and slower growth in costs through improvements in care.[4] The application will require potential ACOs to demonstrate a number of capabilities with a fair amount of detail, but a good overall summary of the requirements is that the ACO must be:

- Patient-centered.
- Capable of coordinating care across multiple providers.
- Committed to a comprehensive physician-led quality program.
- Able to save money by effectively managing care and resources.

Population an ACO Will Be Accountable For

Medicare ACOs are defined in terms of the providers who participate in them. Medicare beneficiaries do not enroll in ACOs like they do in Medicare Advantage plans. They are "assigned" to an ACO for purposes of cost and quality measurement, after the year that is being measured has concluded. Since no one knows whether they are assigned to an ACO until after the year, patients are obviously not required to exclusively see providers in the ACO.

An ACO's assigned population for a year is simply the group of Medicare beneficiaries that receive their primary care during the year from PCPs who participate in that ACO. If patients receive more of their primary care (basically evaluation and

CONTINUED ON **PAGE 14**

[4]See Don Berwick, "Launching Accountable Care Organizations—The Proposed Rule for the Medicare Shared Savings Program," New England Journal of Medicine, March 31, 2011. http://healthpolicyandreform.nejm.org/?p=14106

Design Element	One-Sided Model (Yrs 1 & 2 Only)	Two-Sided Model
Shared Savings Percentage	Up to 50% of savings over 2% (some exceptions to 2% net), based on quality scoring, if Minimum Savings Rate exceeded	Up to 60% of all savings, based on quality scoring, if Minimum Savings Rate exceeded
Minimum Savings Rate	2.0% to 3.9%, based on population size	2.0%
Minimum Loss Rate	N/A	2.0%
Maximum Shared Savings	Payment capped at 7.5% of ACO's benchmark cost	Payment capped at 10.0% of ACO's benchmark cost
Shared Losses	N/A	Loss percentage times all losses. Loss percentage equals (1 minus Shared Savings Percentage). Losses capped at 5.0% of benchmark in Year 1, 7.5% in Year 2, 10.0% in Year 3.
Extra Shared Savings if FQHCs or RHCs participate in ACO	Up to 2.5%	Up to 5.0%

management (E&M) office visits) from a particular ACO's PCPs than any other provider, their statistics are assigned to that ACO for purposes of evaluating whether they've met their cost and quality targets. It does not matter whether these beneficiaries receive their specialty or facility care from ACO participants.

Shared Savings Payments

An ACO is eligible for shared savings payments if it holds actual costs for a year below targets established by CMS. These cost targets are based on historical fee-for-service costs for beneficiaries who would have been assigned to the ACO based on their PCP utilization in the three years before the ACO agreement with CMS begins. Those historical costs are adjusted for risk (using the hierarchical condition category (HCC) risk scoring method used for Medicare Advantage) and trended forward to the "agreement period" using actual (for historical periods) and projected (for the agreement period) Part A and Part B growth.

If costs come in below the shared savings targets by a large enough margin (2.0 percent to 3.9 percent, based on size), CMS can be confident they were not achieved by chance. CMS will then pay the shared savings payments, or bonuses, based on savings achieved. ACOs can choose either a one-sided model with only gain-sharing payments, or a two-sided model, where they are responsible for loss-sharing payments in addition to being eligible for gain-sharing payments. The gain-sharing calculations work as shown in the above chart.

Quality Scoring

The shared savings calculation above shows the maximum shared savings payment an ACO can receive. It receives this maximum payment if it achieves the maximum possible quality score across five quality domains with a total of 65 quality measures:

- Patient/Caregiver Experience
- Care Coordination
- Patient Safety
- Preventive Health
- At-Risk Population/Frail Elderly Health

The quality scoring will be based on an ACO's performance against a set of benchmarks that CMS will determine. According to the proposed rule, ACOs would generally achieve between 60 percent and 100 percent of the maximum quality score. ■

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Soundbites

from the American Academy of Actuaries' Health Practice Council Activities

By Heather Jerbi and Tim Mahony

What's New

Even as Congress faces the political quagmire of raising the debt limit and crafting a deficit reduction proposal that could achieve bipartisan support, work on the implementation of the Affordable Care Act (ACA) continues. Several significant regulations were released this spring and summer, including proposed rules on the implementation of the exchanges; the standards associated with the risk adjustment, reinsurance and risk corridor mechanisms; and the establishment of accountable care organizations (ACOs). The Health Practice Council (HPC) continues to task a number of work groups with providing input and responding to requests for information from the Department of Health and Human Services (HHS), the National Association of Insurance Commissioners (NAIC) and other interested parties, as well as commenting on proposed and final regulations issued on the various provisions of ACA.

In late February, the HPC and Federal Health Committee held their annual Capitol Hill visits. Twenty-three members visited 30 congressional offices, government agencies and external organizations over the course of a two-day period. During these visits, Academy members responded to questions on a wide variety of issues, primarily related to ACA: the Community Living Assistance Services and Supports (CLASS) Act, essential benefits and actuarial value, the large employer response to ACA, alternatives to the individual mandate, the effect of ACA on premiums, payment reform, Medicare and Medicaid. The information gleaned from these visits helps guide the council's priorities for the short and long term.

While health reform implementation remains a significant priority for the HPC, the council continues to work on other relevant issues, as well. Specifically, there has been an increased focus on Medicare's long-term sustainability in light of associated deficit-reduction proposals. Work groups also are working with the NAIC on various projects including the development of a long-term care valuation table, an update of the cancer cost tables and a review of the MedSupp refund formula.

Some of the more recent communications to HHS and the NAIC on several of the HPC's priority issues are highlighted below.

Medicare

In July, the Academy's HPC submitted written testimony[1] to the House Ways and Means Subcommittee on Health in response to a hearing on the 2011 Medicare Trustees Report.

On May 27, the Academy also hosted a Capitol Hill briefing on the trustees' report. Tom Wildsmith, the vice president of the Academy's HPC, and Cori Uccello, the Academy's senior health fellow, presented the findings of the trustees' report and offered an actuarial perspective on options to address Medicare's long-term sustainability. The briefing was held in conjunction with the release of the Medicare Steering Committee's annual issue brief[2] examining the findings from the annual report.

In May, the Academy's Medicare Steering Committee released a new issue brief[3] that summarizes the key cost, access and quality issues associated with some of the Medicare-related provisions in the various debt and deficit reduction proposals.

Accountable Care Organizations (ACOs)

On June 6, the Academy's Health Care Quality Work Group submitted comments[4] to the Centers for Medicare & Medicaid Services (CMS) on the proposed rule implementing the Medicare Shared Savings Program under the ACA.

The work group also released two new publications in June, also on the Medicare Shared Savings Program and ACOs in general:

A fact sheet[5] that provides an overview of the Medicare Shared Savings Program and how ACOs are addressed in the ACA.

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1 http://www.actuary.org/pdf/health/medicaretestimony_070511_final.pdf.
2 http://www.actuary.org/pdf/health/Medicare%20Financial%20IB%20Final%20052511.pdf.
3 http://www.actuary.org/pdf/Medicare_Financial_IB_Final_051211.pdf.
4 http://www.actuary.org/pdf/Acad_on_ACO_prop_regs_060711_final.pdf.
5 http://www.actuary.org/pdf/ACO_fact_sheet.pdf.
6 http://www.actuary.org/pdf/ACO_issue_brief.pdf.
7 http://www.actuary.org/pdf/Risk_Adjustment_IB_FINAL_060811.pdf.

A new issue brief,[6] An Actuarial Perspective on Accountable Care Organizations, which outlines a number of issues that stakeholders should evaluate as ACOs are created and implemented.

Risk-Sharing Mechanisms
In June, the Academy's Risk-Sharing Work Group released a new issue brief,[7] Risk Adjustment and Other Risk-Sharing Provisions in the Affordable Care Act. The brief provides an overview of the three risk-sharing mechanisms in the ACA—risk adjustment, reinsurance and risk corridors—and examines the risks each of the mechanisms can mitigate.

Actuarial Value
In a new issue brief,[8] Actuarial Value under the Affordable Care Act, the Academy's Actuarial Value Subgroup offers an overview of the concept of actuarial value and its calculation under ACA.

Medicaid
On June 16, three members of the Academy's Medicaid Work Group gave a presentation to staff at CMS on the Medicaid rate-setting process for Medicaid Managed Care programs. The presentation[9] was broadcast via video conference to all 10 CMS regional offices nationwide. It included a discussion about base data adjustments, base data sources, risk adjustment, risk-sharing arrangements and performance incentives.

CLASS Act—Congressional Testimony
On March 17, Al Schmitz provided testimony[10] on behalf of the Academy at a U.S. House Energy and Commerce Subcommittee on Health hearing on the CLASS Act. Schmitz testified that despite the inclusion of the requirement that the program be actuarially sound over a 75-year period, it would be difficult to achieve under the current program design.

In July, Steve Schoonveld, the co-chairperson of the Joint Academy/Society of Actuaries (SOA) CLASS Act Task Force, gave an update[11] on the CLASS program at the National Conference of Insurance Legislators (NCOIL) Summer Meeting.

Consumer Operated and Oriented Plans (CO-OPs)
On March 4, the Academy's CO-OP Subgroup submitted a letter[12] in response to the HHS request for comments on the planning and establishment of CO-OPs. The proposed rule on CO-OPs was released in July, with comments due in September.

Premium Review
On June 28, the Academy's Premium Review Work Group submitted comments[13] to the CMS in response to the revised preliminary justification and consumer disclosure forms for the purposes of rate review disclosure and reporting requirements under ACA. The comments reflected changes made to the initial set of forms and instructions, which the work group also submitted comments[14] on in May.

NAIC Activities
On Feb. 18, the Academy's Long-Term Care Practice Note Subgroup sent a letter to the NAIC's Long-Term Care Task Force and Health Actuarial Working Group informing them of the creation of the Academy's subgroup. The subgroup is charged with updating the Academy's 2003 practice note, Long-Term Care Insurance Compliance with the NAIC LTCI Model Regulation Relating to Rate Stability.

Ongoing Activities

The Academy's HPC has many ongoing activities. Below is a snapshot of some current projects.

Health Practice Financial Reporting Committee (Darrell Knapp, Chairperson)—The committee has reviewed the list of Academy health-related practice notes that need updating and will decide a process for moving forward as to the timeline for development.

Medicare Steering Committee (Ed Hustead, Chairperson)—The committee is developing a series of public statements related to specific Medicare-related provisions included in recent deficit reduction proposals.

CONTINUED ON **PAGE 18**

8 http://www.actuary.org/pdf/Risk_Adjustment_IB_FINAL_060811.pdf.
9 http://www.actuary.org/pdf/Risk_Adjustment_IB_FINAL_060811.pdf.
10 http://www.actuary.org/pdf/Allen%20Schmitz%20Acad%20CLASS%20testimony%20031511.pdf.
11 https://www.actuary.org/pdf/health/NCOIL%20CLASS%20Act%20Presentation%20Final.pdf.
12 http://www.actuary.org/pdf/health/AAA%20comments%20on%20co-op%20rfi%20030411%20final.pdf.
13 http://www.actuary.org/pdf/health/Acad_cmts_on_discl_forms_062811_final.pdf.
14 http://www.actuary.org/issues/pdf/Acad%20cmts%20on%20disclosure%20forms%20050211.pdf.

Academy/SOA Cancer Claims Cost Tables Work Group (Brad Spenney, Chairperson)—The work group has been charged with evaluating and updating the 1985 cancer claims cost tables. Last November, the work group submitted a survey to companies that write cancer insurance to get their opinions about the table. Not enough companies have submitted responses, so the work group is working with the SOA to come up with an alternative plan.

Disease Management Work Group (Ian Duncan, Chairperson)—This work group is in the final stages of developing a public statement on evaluating wellness programs.

Group Long-Term Disability Work Group (Darrell Knapp, Roger Martin, Co-chairpersons)—This work group has been charged with developing a valuation table for group long-term disability insurance. The work group expects to complete the table by the first quarter of 2012.

Health Practice International Task Force (April Choi, Chairperson)—A subgroup of the task force published articles in the September issue of *Contingencies* on the health care systems in Japan and Singapore as well as an article in the January issue of *Contingencies* on risk adjustment. The Task Force has created two subgroups, one focusing on long-term care systems in foreign countries and one on types of wellness initiatives in foreign countries.

Health Receivables Factors Work Group (Kevin Russell, Chairperson)—This work group is reviewing current health care receivables factors for the NAIC's Health RBC Working Group and providing guidance.

Long-Term Care Principles-Based Work Group (Al Schmitz, Chairperson)—This work group has formed a joint Academy/SOA task force to develop and recommend valuation morbidity tables for long-term care insurance (LTCI) at the request of the NAIC's Accident and Health Working Group. The group is working with a company to help solicit the data for and determine the structure of the morbidity tables. The project is expected to be completed by the third quarter of this year.

Long-Term Care Valuation Work Group (Bob Yee, Chair)—This group is developing valuation morbidity tables for LTCI. A company is currently analyzing the data and will report to the work group when it is ready.

Long-Term Care LTCI Practice Note Update (Warren Jones, Chairperson)—This work group has been formed with the goal of updating the Academy's 2003 LTCI practice note. The group expects to complete the practice note update by the end of the year.

Medicaid Work Group (Mike Nordstrom, Chairperson)—This work group conducted a presentation in June to CMS regarding the Medicaid rate-setting process. The Actuarial Standards Board (ASB) has approved the work group's request to have the 2005 Medicaid Managed Care practice note developed into an actuarial standard of practice (ASOP) and has formed a task force to complete this task.

Medicare Part D RBC Subgroup (Brian Collender, Chairperson)—This subgroup is recommending changes to Medicare Part D RBC formula and has asked the NAIC's Health RBC Working Group to assist with administering a survey of companies that write Medicare Part D business.

Medicare Supplement Work Group (Michael Carstens, Chairperson)—This work group has submitted recommended changes to the Medicare Supplement Refund Formula to the NAIC's Medicare Supplement Refund Formula Subgroup, of the Accident and Health Working Group. The NAIC is compiling a database of selected states for this project and will update the work group when it is finished.

Health Solvency Work Group (Donna Novak, Chairperson)—The work group continues to evaluate the current health RBC covariance calculation for potential changes to the calculation or methodology and the impact of health reform on the health RBC formula. The work group will be predominantly focused this year on the NAIC's Solvency Modernization Initiative (SMI). The report was submitted on Jan. 31.

Stop-Loss Work Group (Eric Smithback, Chairperson)—This work group is continuing to update a 1994 report to the NAIC on stop-loss factors, and is currently in discussions to have someone from the University of Connecticut transform the data results into a loss ratio variance model.

If you want to participate in any of these activities or if you want more information about the work of the Academy's HPC, contact Heather Jerbi at Jerbi@actuary.org or Tim Mahony at mahony@actuary.org. ■

Boston Actuaries Find That Health Care Reform is "More Than a Feeling"

By Doug Norris

The Health Section of the Society of Actuaries (SOA) celebrated its 30th anniversary this past June at the Westin Copley Place hotel in Boston. Created in 1981, the Health Section was the first section formed by the SOA. The "granddaddy" of SOA sections celebrated in style. Throughout the 2011 SOA Health Meeting, one uncovered many remembrances of actuaries present and past, revealing how the growth of the Health Section has paralleled their own growth. The sessions available in this year's edition numbered 89; as actuaries have spent most of their recent time on health care reform, and not on cloning technology, I was not able to attend each and every session. Regardless, I hope that this article gives a flavor of the meeting.

Donald Segal, the 62nd president of the SOA, opened the meeting on Monday, talking about the current research activities of the Health Section. These endeavors include the Health Actuarial Research Initiative, which has an annual $300,000 budget for 2011 and 2012. Segal discussed the SOA's efforts to create a joint disciplinary process with other prominent actuarial organizations, a process that aims to streamline discipline, create more consistent outcomes, and improve transparency and independence. Segal concluded by offering all of the new avenues for actuaries to communicate, including the SOA's Twitter account, the SOA group on LinkedIn, the SOA blog and the mobile application developed for the June meeting.

Health Meeting Program Chair Joan Barrett then introduced keynote speaker Rick Foster, the chief actuary at the Centers for Medicare & Medicaid Services (CMS). Foster presented on "Adding Actuarial Value in the Age of Partisanship," discussing the nature of actuarial work in a politically charged world. Foster's integrity and belief in the actuarial code of conduct nearly led to his firing in 2003 during the passage of the Medicare Modernization Act (MMA). Instructed to not reply directly to Congress on matters of actuarial analysis, Foster was told to report his findings through the CMS administrator. However, the only results being released by the administrator to Congress were those in support of the MMA. Foster had the initial thought to resign as chief actuary in order to raise awareness, but he decided instead to work within the system to effect change. The following February, the full actuarial estimates of the MMA's impact came out (as a part of the presidential budget), and it came to light that key information had been withheld from Congress (a charge that the former administrator denied). The end result of this ordeal is that there is now a reliable stream of actuarial information to Congress.

This has led to a new problem, the disregard (or misuse) of the technical information provided to policymakers. Foster gave several examples of this, including examples during the passage of the Community Living Assistance Services and Supports (CLASS) Act, and misstatements (intentional and otherwise) on both the presidential blog and from presidential candidates. The deep ideological divide in Congress is reflective of the deep divide in our nation, and with partisanship greater today than at any point in recent memory, overzealous advocates will twist facts to support their personal stances and beliefs. What can actuaries do in this situation? Foster suggested that we support leaders who will address problems in an open and nonpartisan fashion, follow the actuarial standards of practice (ASOPs) and Code of Professional Conduct, be vigilant and respond to distortions, provide the best technical information to policymakers, and hold policymakers accountable. Foster received a standing ovation from the more than 900 actuaries in attendance. (Foster was gracious enough to give us an interview after his talk. This can be found separately in this issue.)

Susan Dentzer was the featured speaker at Monday's lunch—as the editor-in-chief of *Health Affairs*, Dentzer spoke on the state of the Patient Protection and Affordable Care Act (PPACA) one year later, including the implications and opportunities available as a result. She outlined current CMS administrator Don Berwick's "Triple Aim" of better health, better health care, and greater value. Dentzer described research showing the sharply disparate rates of chronic disease by race, ethnicity and geography, and noted that many causes of death are preventable. She cited a RAND study, which revealed that patients received recommended care barely half

CONTINUED ON **PAGE 20**

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of the time, and that the quality of care received varied substantially by medical condition. Dentzer talked about the publication by *Health Affairs* of a recent Milliman study on the cost of medical errors, and discussed the quality chasm present in American health care today.

Dentzer discussed the National Quality Strategy, mandated under the PPACA and implemented this past March 21, and went over several innovations of the CMS and the Center for Medicare/Medicaid Innovation. Different flavors of accountable care organizations (ACOs) were outlined, as well as other payment innovations including the Multi-payer Advanced Primary Care Practice Demonstration, state demonstration projects to integrate care for dual eligibles; the Community-Based Care Transition Program, efforts to reduce avoidable readmissions; and bundled payment experiments. Virginia Mason's Marketplace Collaborative Model, Vermont's Blueprint for Health, Geisinger Health System's Proven Health Navigator program and Sutter Health's Advanced Illness Management (AIM) program, among others, were lauded for their role in transforming current health care practice. Dentzer concluded with an outline of recent political changes that may affect the PPACA, including the "known unknowns," and her best guess for what will happen through 2014. (We were also able to interview Dentzer at the conclusion of her speech, which can be found separately in this issue.)

Jennifer Gillespie moderated Session 16, "What Does the Future Hold for Underwriting?" where Tony Nista and Adam Southcott talked about underwriter options both in the next few years and post-2014. Some of the options cited by Nista included acting as a provider consultant (with the sometimes adversarial relationship between insurers and providers, providers like knowing how their opponents operate), working as a division of insurance auditor (underwriting experience is key in "knowing where the bodies are buried"), provider-employer organization plan management, and actuarial and employee benefits consulting. He suggested that underwriters should "hope for the best but prepare for the worst," keeping an open mind to new and exciting opportunities, and taking advantage of opportunities to self-promote. Southcott noted that whenever there is a contract to be entered into, ever after 2014, it must be underwritten in some fashion. Consequently, underwriters will always be needed. He talked about his health plan's experience in the state of New York, which has many of the same rating restrictions that will be implemented under the PPACA. His takeaways for today's underwriters are to look for opportunities to do underwriting activities that previously could not be done because of resource constraints, to take the opportunity to move risk management between underwriting activities and product design and pricing, to look for administrative cost savings, and to search for inter-department and intra-department cross-training opportunities.

Session 28, "Predictive Modeling under ACA," was a lively journey through consumer data, predictive modeling and the ramifications of the recent health care reform legislation. Moderator Ross Winkelman introduced Ksenia Draaghtel, who described what consumer data is (and what it is not), and how these data can enhance traditional predictive health care models. The PPACA may prohibit companies from varying rates based on health status, but consumer data still holds value for many applications. Two of these include improving the ability to find (and assist) members who are more likely to have certain conditions or characteristics, and the ability to increase their understanding of a plan's current membership through segmentation. Moreover, the PPACA's imperfect notion of risk adjustment leads to a company's need to find members (current and prospective) that result in a relative market advantage. Chris Stehno discussed how business analytics, including the use of consumer data, is gaining traction at the C-level, as well as key regulatory considerations and options for today's forward-thinking organizations. There are many uses of analytics beyond traditional business applications, including the use of neural network models to predict box office receipts based upon movie script variables, usage-based insurance, and models that predict the price of wine vintages based upon variables inherent to the growing season. Stehno enumerated the many efforts present in organizations to link analytics to high-impact areas, such as marketing, customer retention, wellness and product development. The biggest barrier to these developments is individuals' inherent resistance to change.

After a long Monday evening of networking, largely involving the support of Boston's finest hockey team, the SOA graciously granted us a later (9 a.m.) start on Tuesday. Randy Finn moderated Session 41, a panel discussion on the "Potential Impact of Health Insurance Exchanges on Product Sales and Distribution." Paul Stordahl led off the talk with an overview of the new health insurance exchanges, including the flexibility afforded to individual states, requirements for products sold inside and outside of exchanges, the impact of navigators, and the changing composition of markets that will likely result. Key issues include the extent to which employers will terminate coverage, how large businesses will use the exchange (with the potential for adverse selection), how exchanges will be self-supporting by 2015, how the risk adjustment process will work, and the role of brokers. Although he could not be live in Boston, Kevin Counihan gave an audio presentation on his experiences with health reform in Massachusetts. Here, 98 percent of individuals are currently insured and trends are reasonable, but the overall cost is quite high (with premiums approximately 33 percent higher than the national average). He sees Massachusetts as a model for national health reform, and gave several lessons that other states can learn from the Massachusetts experience. Mark Olson approached the arrival of 2014 from an employer's perspective, including the strategic decisions to play or pay (or both), and the impact of the excise tax. Employers will need to consider their options when it comes to pre-65 retiree medical coverage, the consistency of exchange and plan structures across states, adverse selection, and whether or not the exchanges are available on a timely basis.

Immediately prior to Tuesday's lunch, we saw Session 49, "To Thine Own Health Be True," an update on consumer-directed health plans (CDHPs). Myrene Santos began with a CDHP overview, and the dramatic growth of CDHPs (companies with a CDHP in place have increased from 2 percent in 2002 to 53 percent in 2011, with 66 percent projected for 2012). Santos talked about some of the research underlying CDHPs, noting that enrollees have experienced better preventive care utilization, more generic drug usage (although perhaps less compliance) and a large drop in repeat emergency room visits. Daniel Pribe walked us through a lesson in behavioral economics, a marriage of traditional economics and psychology that can help us to predict individual behaviors in a complex system (such as health care). Pribe described framing (the notion that a decision maker's actions are dependent upon the way a problem is presented) and heuristics (not necessarily rational rules of thumb that people often use to make decisions), and talked about how behavioral economics can be used to entice members to improve their own health. Jean-François Beaulé focused on how plans are advancing health ownership for their membership, and how the largest barriers to improving individual health are motivation and ability. Engagement is the key to improving health, and Beaulé gave us several lessons learned about how to effect positive outcomes. These include auto-enrollment, models that include both a "carrot" and a "stick," ongoing multimodal communications to all eligible participants, and socializing a program across all employees.

Tuesday's lunch featured Shawn Achor, a researcher on the subject of happiness in the workplace who presented his findings linking positivity with success. Achor began by leading the room in an experiment demonstrating the ripple effect and mirror neurons (when someone smiles—or yawns—at you, you are more likely to do the same). One of Achor's main findings is that only 10 percent of long-term happiness can be predicted by external factors. In other words, 90 percent of our happiness is within our own control. Achor presented evidence that happier people experience better success at securing and keeping jobs, are more resilient and suffer less burnout, and have superior productivity and greater sales. Achor mentioned the importance of a good social support network, and described the "Tetris Effect," where one's brain can be trained to create long-term cognitive changes. Five suggested habits to improve one's long-term happiness include:

- Gratitude training—listing three specific items each day that one is grateful for
- Journaling—identifying (and chronicling) one moment of meaning each day
- Exercise

CONTINUED ON **PAGE 22**

- Meditation
- Random acts of kindness—each day, emailing one person who has had a positive impact on one's life.

According to Achor, adopting these behaviors for a 21-day period will create long-term changes in one's outlook on life. He described the "twenty-second rule," which helps to change the activation energy for both positive (and negative) behaviors, and concluded with key conclusions from his research: happiness is a choice, happiness spreads to others, happiness is a work ethic, and happiness is an advantage. Achor's book, The Happiness Advantage, is available online, and he can be reached through his website, HappinessAdvantage.com.

Session 61, "Text Mining: Approaches and Applications," featured Paul Lewicki describing a society in which there is an abundance of valuable information available in electronic form, but this data is not easily digestible. Text mining is the process of extracting relevant (and actionable) information from large corpora of text without reading the text itself. Applications of text mining include sentiment analysis, the determination of the general sentiments and opinions from a body of text (such as the determination of whether or not a movie is good based upon online reviews). Lewicki outlined the general process of text mining, including singular value decomposition, and gave an example where the accuracy of a predictive model was improved using text mining. Jonathan Polon followed with a claim severity case study, using text mining in a workers' compensation setting to predict the likelihood that an individual would incur claims above a given threshold. Polon described one modeling approach from start to finish, looking for words that are predictive in this fashion, and key considerations to be made while implementing this approach.

Session 67, "Quality and Efficiency," featured Kevin Law as the facilitator of an expert panel including Carey Vinson, Jim Toole and Michael Thompson. Vinson discussed delivery activities from a health care insurer and payor perspective, and the variety of quality measures used by physicians and hospitals. He talked about challenges faced when looking at these indicators, including problems involved with comparing these measures across populations. Toole focused on quality initiatives sponsored by the government, including offerings from the U.S. Department of Health and Human Services (HHS), CMS, the Agency for Healthcare Research and Quality (AHRQ) and provider service organizations. The HHS is the largest of these organizations, devoting more grant money than all other federal agencies combined, and there are opportunities for research-minded actuaries to receive some of this funding. Toole also gave an overview of the innovations being sponsored by Medicare and Medicaid, both now and in the near future. Thompson wrapped up the session by discussing how quality and efficiency efforts will be affected by health care reform. Reforms in this area must begin with the current health system's dysfunction, where volume (not value) is rewarded, and delivery is cure-focused (not health-focused). Thompson described the potential impact of the PPACA, including value-based design, comparative effectiveness research, accountable care organizations, community health initiatives and health exchanges. Exchanges will likely fall along the spectrum defined currently by Massachusetts (more involvement and administration) and Utah (less involvement and administration). Finally, Thompson told us about the American Academy of Actuaries' Quality Initiatives Work Group.

Sara Teppema kicked off Wednesday's Health Section hot breakfast on the subject of the section's 30th anniversary, lauding Judy Strachan, Kevin Law and Kristi Bohn for their efforts, as well as the work of Joan Barrett and Dan Bailey, the organizers of this year's health meeting. Strachan followed with an overview of the Health Section's activities over the first six months of 2011, including: the Health Actuarial Research Initiative, the development of new mission and vision statements, the ongoing development of metrics to measure section performance and the creation of boot camp activities (the next of which will be in Nashville in November). Strachan discussed efforts to tackle health care reform issues, where the section has identified gaps in actuarial knowledge and will sponsor research

and develop materials. Finally, Strachan talked about the SOA's Untapped Opportunities Strategic Initiative, which has identified areas where actuaries are underutilized and opportunities exist.

The area of advanced business analytics is one of these untapped opportunities, and Lisa Tourville has been leading an SOA task force to address the concern that actuaries are getting passed by in the analytics world. Tourville spoke on the growth of advanced business analytics in many areas, including the world of sports, and described the nature of both descriptive analytics (the "what") and predictive and prescriptive analytics (the "so what"). Tourville discussed how forward-thinking companies are competing on analytics, and that the "best decision makers will be those who combine the science of quantitative analytics with the art of sound reasoning." One of the goals of the SOA task force is to break the perception that actuaries merely perform day-to-day "traditional" activities, and to publicize new roles that may attract the best and brightest to the profession. Not only will actuaries thrive in these roles, but actuarial ethics and rigor will be a benefit to employers in the area of predictive analytics.

Another area of untapped opportunity is in the field of complexity science, which Alan Mills introduced at last year's health meeting in Orlando. Over the past year Syed Mehmud has continued the charge, and he led Session 81, "Solving Actuarial Problems with Complexity Science." Mehmud defined complexity science and how it differs from traditional actuarial modeling—according to Mehmud, a complexity model is "one in which all prior states must be computed in order to observe a certain state." He catalogued the known literature on the actuarial applications of complexity techniques, ranging from portfolio analysis to policyholder behavior, and from the impact of catastrophes on reinsurers to the impact of rate changes on retention. Mehmud described three approaches for solving actuarial problems in this fashion, and gave guidance for the types of problems that are right for these techniques. He then demonstrated how one might set up a complexity model describing consumer behavior in a health care exchange.

Last (and not least), Jill Wilson moderated Session 84, "Reserving," which featured topics related to (you guessed it) reserving. Bill O'Brien enumerated the National Association of Insurance Commissioners' many changes over the past two years to statements of actuarial opinion, the duties of an appointed actuary, and how a company changes an appointed actuary. He discussed the new minimum medical loss ratio regulations, including the detailed changes required to both the numerator and denominator in the calculation, and outlined recent reserving issues such as: lower-than-expected claim trends, the use of excessive reserves to fund aggressive premiums, and considerations on what constitutes a best estimate. Shea Parkes described his team's analysis of robust time series reserving, including methods for estimating a range of likely outcomes, and dealing with data contamination and shock claims. Most reserve estimates include a provision for adverse deviation of between 5 percent and 10 percent, with these percentages based upon "actuarial judgment." Parkes' team explored the science behind reserve fluctuation, and whether or not these ranges could be considered appropriate, using the variance of lead time demand theory developed for the U.S. Navy. Parkes described the modeling of shock claims using a frequency-severity model, and gave examples of this work in practice.

As you can probably tell, there was a lot going on in Boston in mid-June (and this article does not even cover "Medical School for Actuaries," which immediately followed the meeting). With more than 900 actuaries present, this largest-ever Health Section meeting featured ample opportunity for camaraderie, networking and learning, and the three days flew by in an instant. If next year's health meeting is half as good as this one, then this one will have been twice as good, but that shouldn't stop you from joining us in beautiful New Orleans next June. See you there! ■

An Interview with Susan Dentzer

By Mary van der Heijde and Doug Norris

Susan Dentzer
Editor-in-Chief
Health Affairs

We were pleased to have the opportunity to sit down with Susan Dentzer, editor-in-chief of *Health Affairs*, after her excellent keynote address at the SOA Health Meeting in Boston. We have included here highlights of that discussion.

Mary van der Heijde: Directionally, where do you see health care and health policy going for the rest of this year?

Susan Dentzer: I think that we're going to see the status quo perpetuate for the rest of this year in the following sense: the Affordable Care Act is the law of the land, and it is intact, at least until we see a change of administration in the White House, if in fact that occurs. Now, there are some known unknowns. We don't know the outcome of some of the lawsuits that have challenged the constitutionality of the Affordable Care Act. Barring that, I think that we believe that most of the things that are playing out now, as the law is put into effect, will continue to play out. For example, there is a lot of emphasis now on delivery and payment system innovation, the experiments that are being set up now around accountable care organizations (ACOs), the pioneer program, and the Medicare shared savings program. We're going to see these processes continue to play out. We're also seeing a lot of energy in the private sector, as organizations get ready for these broader changes. We see a lot of ACO-type contracts forming now between private payers and health care delivery systems that will be the analog to the ACO contracts that are formed under Medicare and Medicaid. So I think we're beginning to see the system recognize the fact that the ground is shifting, and the law has changed. And of course, lots of people are focused on getting ready for 2014, when we'll have potentially 32 million more Americans coming into the coverage environment. Creating insurance exchanges, looking at the expansion of the Medicaid program, figuring out how we're going to pay for that, or how we're going to create models to accommodate the new people coming into the system. All of those things now become increasingly urgent matters for people to focus on and for the system to be more accountable.

MV: How do you think actuaries can best have an integral role in reducing health care expenses and ensuring the sustainability of Medicare?

SD: Of course, actuaries are usually sitting on a pile of claims data, and therefore have the ability to analyze what we're spending our money on now, and to put that together with what increasingly we understand to be the evidence basis of medicine, or of health care, or the lack thereof. When we get clear evidence, as we do at least in a number of situations, that dollars are not going directly to improve outcomes of care, that's where we know that we can potentially achieve some savings, or certainly some different patterns of spending—putting money more toward the things that really do achieve value in health care. Actuaries are sort of our "great white hope," among others, in understanding where our dollars are going currently. Over time, we develop even a better evidence base in terms of understanding the clinical outcomes of what we achieve—[how] we devote dollars to a particular area of health care. That's where we're going to have the ability to make a difference, and shift spending to the things that do produce value.

MV: What would you see as the primary role of actuaries within health care, and what should we be doing as members of the SOA to get involved?

SD: I showed one example of a piece that we ran, done by folks at Milliman, who are looking at the actuarial cost of preventable errors in hospitals, and identifying that those costs are $17 billion per year, judging from claims data. This is literally what the claims numbers are which are associated with these avoidable errors—$17 billion. It's not chicken feed. It's obviously money that we could use for more productive ends, and the claims data enabled them to go on to look at exactly what those dollars were traceable to. Some of the errors are things like pressure ulcers—well, we know how to avoid pressure ulcers. You have to have enough staff to turn the patients often enough, and do other things to keep them from developing [pressure ulcers], which can be very, very dangerous conditions, and have a lot of expense attached to them to boot. That's just a very useful metric, because it enables a health system to say, "Okay, there are large costs atten-

dant to this. As a hospital administrator, I get paid more if a patient if—in effect, not literally by salary terms, but the system earns more—somebody's in the hospital longer because they have a pressure ulcer." Not necessarily under Medicare, because of the diagnosis-related group (DRG) restriction, but certainly in terms of the private pay. Essentially, it's counterintuitive that the system actually could come out better because somebody is sicker.

Well, most people did not go into health care for those objectives. They went into health care generally because they want people to be healthier. So, if I'm a system administrator, and I understand that this is the cost that's being imposed on society because I'm not preventing the pressure ulcers in patients in my institution, I'm going to be more mobilized to do something about them. And if I'm not mobilized, the regulators and others are going to mobilize around me, because these things can be prevented. So helping us understand the pockets of excessive spending, the costs that are attendant, things that are in the system that we don't like anyway—that alone is an extremely useful function. I think as we go forward into new delivery models, we're going to have to be analyzing different things—where savings are coming from, where we can achieve, where we need to make greater investments. That's a very important point to make, too, because as important as it is to save money in health care, we also have to invest our dollars in the areas where we will achieve the greatest value, both in terms of the health of our population, and long-term sustainability in health care spending. Based on the evidence of what we see in terms of expenditures today, helping us decide where we'll get the greatest returns for that investment will also be a very important job that actuaries can perform.

MV: We've heard a lot about the challenges of independence and political pressures, and maintaining that independence in our role as an actuary. I know this must be a challenge that you face as editor of *Health Affairs*. How do you present information in a way that doesn't seem biased or skewed, and doesn't have a political lean? What have been your challenges with *Health Affairs*, and what advice might you have for us as actuaries?

SD: Well, it is a challenge, particularly in the current environment in Washington D.C., which is, as many people have noted, highly, highly partisan—probably more than anybody ever remembers in the lifetimes of those of us around today. I think that the truth is its own best defense, and you just have to keep focusing on the evidence and essentially focusing on what the numbers are showing you, or what the facts seem to be telling you. This morning, Rick Foster used the example of the CLASS [Community Living Assistance Services and Supports] Act portion of the law, which is widely agreed now is actuarially, among other things, a non-starter. It's simply financially not going to work as it is currently structured. The secretary of Health and Human Services recognizes that, and now there's an effort to try to figure out a way to make that program sustainable, and create a basis of long-term solvency for it. These kinds of things need to be said, where laws have been written hastily, and good, well-intentioned people have put together ideas that they think will make sense. And of course, what isn't sensible about trying to figure out a way to help Americans who face high potential long-term care expenditures? What isn't sensible about trying to structure a program to help them? The evidence shows that people aren't willing to buy as much private insurance coverage for long-term care insurance as they probably should, so is there a role of government solving that problem? Possibly so, but you can't just solve it any which way. You have to put in place a program that is strong and sensible, and is going to be solvent over time. So, the ability to sort of come in and say, "Look, folks, this is what the evidence shows, regardless of your political party or political persuasion." Just cueing to the facts, that's the best that any of us can do in this environment, and that's certainly what we try to do at *Health Affairs*.

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Disability Income Insurance Research: A Health Section Specialty!

By Steven Siegel

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As part of its mission, the Health Section has strived to advance the work of disability income insurance practitioners. Members who specialize in disability income insurance have been integral to the success of the well-attended and informative sessions at the Society of Actuaries' (SOA's) annual health meetings. As well, these members have been instrumental in launching and helping to oversee a number of important disability-related research efforts that have pushed the boundaries of actuarial practice. In this article, I wanted to highlight one such recent effort and solicit your ideas for new disability-related research projects. As always, your ideas are the key to delivering worthwhile and beneficial research material!

As an example of disability-related research, in 2010 the Health Section sponsored a two-phase research effort conducted by Robert Beal, of Milliman, Inc., that explored the offset of benefits for group long-term disability (LTD) plans. The first phase detailed data from a number of carriers on LTD claimants who are receiving disability benefits from other sources that offset their LTD benefits. The second phase presented the results of a survey focused on how LTD carriers reflect benefit offsets in the valuation of their reserves. Both phases were overseen by a group of LTD experts.

The following are key conclusions from the first phase relating to data on Social Security, workers' compensation and pension benefit offsets:

- The percentages of LTD claimants with primary Social Security benefit offsets increase by duration of disablement, exceeding 83 percent by the fifth year of disablement and ultimately reaching 90 percent.
- During each of the first eight years of disablement, the percentage of LTD claimants with primary Social Security benefit offsets generally increases with the age of disablement until age 65.
- The percentages of LTD claimants with primary Social Security benefit offsets do not vary materially by pre-disability annual income levels until annual income levels exceed $200,000.
- Percentages of LTD claimants with primary Social Security benefit offsets exhibit similar increasing patterns among many industries.
- There are material differences by diagnosis in the percentage of LTD claimants with primary Social Security benefit offsets during the first 60 months of disablement, with disabilities related to circulatory, the nervous system, respiratory, genitourinary, dementia and AIDS exhibiting the highest percentages. The differences tend to narrow among the various diagnoses for disabilities lasting longer than five years.
- Noticeable differences in the percentage of LTD claimants with primary Social Security benefit offsets by state occur in the durations in excess of 60 months. Florida, Michigan, North Carolina, Pennsylvania and Tennessee have high percentages in these later durations.
- The average ratio of primary Social Security benefits to pre-disability earned income for LTD claimants receiving Social Security benefits is 33 percent. There appear to be few material differences in this ratio among ages of disablement 35 and older, except there is considerable variation based on the amount of pre-disability earned income.
- Although only about 4 percent of LTD claimants receive workers' compensation benefits, the average workers' compensation benefit is approximately one-third higher than the average primary Social Security benefit relative to the pre-disability earned income.
- The percentage of LTD claimants with workers' compensation benefit offsets decreases after age 44 at most durations of disablement.
- Disabilities at the younger ages may be more likely due to injuries affecting the back or muscles. Disabilities due to cancer and circulatory, which are more likely to occur at the older ages, are less likely to be attributable to events at the worksite.
- There are wide variations in the incidence of workers' compensation claims by industry. Communications, public administration, and electric, gas & sanitary services industries exhibit some of the highest incidence of workers' compensation claims.
- There are significant differences in the percentages of LTD claimants with workers' compensation benefit offsets by state, reflecting differences in the distribution of industries and workers' compensation regulations and practices among the

states. New York, South Carolina and Washington have some of the highest incidence of workers' compensation claims among LTD claimants, while Tennessee, Illinois and Ohio have some of the lowest incidence.

- Certain diagnosis categories, such as Other Musculoskeletal, Back and Other Injury, have significantly higher percentages of LTD claimants with workers' compensation benefit offsets, while others such as Circulatory, Cancer and Genitourinary have very low percentages.
- The proportion of LTD claimants with pension benefit offsets is higher than the proportion with workers' compensation benefit offsets.
- The proportion of LTD claimants with pension benefit offsets increases sharply with the age at disablement.
- The average pension benefit as a percent of the pre-disability earned income is 0.304, which is close to the average primary Social Security benefit but lower than the average workers' compensation benefit.
- There is a very wide range of percentages of LTD claimants with pension benefit offsets by industry, reflecting the relative prevalence of pension plans among industries.

The following are takeaways from the second phase survey:

- All 12 participating companies reduce LTD reserves for known benefit offsets and estimated Social Security disability benefits. Only a few companies estimate other benefit offsets.
- All but one of the participating companies base estimated benefit offsets on their own company experience, rather than on other sources, such as industry or government statistics.
- Generally, companies estimate Social Security benefit offsets for claims that have not received approval up to the third or fourth year of disablement.
- All of the participating companies estimate Social Security disability benefit offsets using the probabilities of receiving approval and approximating the Social Security disability benefit amounts. Some of the companies also estimate the retroactive lump-sum payment and/or use separate end dates for the primary and dependent Social Security disability benefits.
- Most participating companies estimate the primary and dependent Social Security benefit offsets separately. However, three companies estimate the primary and dependent benefit offsets together, while two companies only estimate the primary benefit.
- Most companies reflect the estimated Social Security disability benefit offset in the LTD reserves by multiplying the estimated Social Security disability benefit by the probability of approval and then subtracting the product from the gross benefit.
- Three of the participating companies use different methods or assumptions for estimating the Social Security disability benefit offsets for statutory and GAAP reserves.
- One of the participating companies differentiates claim termination rates between claimants who have been approved for Social Security disability benefits and those who have not.
- There is a wide range of reserving practices among LTD companies with respect to reflecting the estimated future recovery of overpayments of LTD benefits due to the Social Security retroactive.

I would encourage you to read the full reports at: *http://www.soa.org/research/research-projects/disability/default.aspx.* A potential follow-up to this project is targeted for 2012.

And, as mentioned earlier, if you have ideas for new disability-related projects, we'd love to hear them. Please contact me at ssiegel@soa.org with any thoughts or comments. ■

I would encourage you to read the full reports at: http://www.soa.org/research/research-projects/disability/default.aspx.

Cost and Benefit Trends Observed in July 1, 2011 Renewals for State Employers

By Bob Cosway and Barbara Abbott

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State employer health plans face complex cost dynamics as they plan for the future. Our article "Cost and Benefit Trends Observed in Jan. 1, 2011 Renewals for State Employers" in the January 2011 issue of *Health Watch* examined these dynamics and the plan changes that the 27 state employers with Jan. 1 anniversary dates implemented as of Jan. 1, 2011.

Of the remaining states, 21 renew their employee health plans on July 1. One state renews on Sept. 1 and one on Oct. 1. The appendix shows the 21 states that renew their employee health plans on July 1. For each state we summarize its plan offerings and its observed premium trends and benefit changes implemented on July 1, 2011.

We observed lower benefit-adjusted premium trends for the July 1, 2011 renewal states than for the Jan. 1, 2011 renewal states. Some of this observed decrease could simply be due to differences between the two groups of states or to random variation. This article addresses several other possible explanations for the differences.

Comparing July 1 Renewal Trends to Jan. 1 Renewal Trends

Figure 1 summarizes the trend data for the states in the appendix, and estimates the impact of benefit changes on observed trends.

Figure 1: Premium Trend, State Employee Plans July 1, 2011 Renewals

Plan Type	July 1, 2011 Premium Trend	July 1, 2011 Benefit Change	July 1, 2011 Benefit-Adjusted Premium Trend
HMO	2.4%	-1.2%	3.6%
PPO	3.5%	0.2%	3.3%
HDHP	-0.7%	-1.1%	0.4%

Includes data for the following states: Alaska, Colorado, Delaware, Idaho, Illinois, Louisiana, Maine, Maryland, Massachusetts, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Rhode Island, South Dakota, Utah, Virginia, West Virginia.
Connecticut was excluded because it delayed this year's start date to October 2011, because of union negotiations.

The same information for the states with Jan. 1, 2011 renewal dates can be found in our earlier article in the January 2011 issue of *Health Watch.*

We looked at trend separately for three plan types: health maintenance organizations (HMOs), preferred provider organizations (PPOs) and high-deductible health plans (HDHPs). Because the differences between HMOs and PPOs are becoming less distinct, and point of service (POS) plans fall somewhere in between, we defined an HMO plan to be a plan with an in-network deductible of $100 or lower and an HDHP plan to be a plan with an in-network deductible of $1,500 or higher. The premiums for HDHP plans with employer-funded spending accounts included the cost of that funding. The Premium Trend values in Figure 1 are averages. We applied equal weight to each state, and did not weight plans within a state by their membership.

The Benefit Change values are the average amounts that the premiums were reduced because of benefit changes such as increases in deductibles and co-pays. For each plan, the percentage premium reduction was estimated by pricing both the prior and new benefits using the Milliman *Health Cost Guidelines*™.

The Benefit-Adjusted Premium Trend values are the estimated average premium trend rates that would have occurred if no benefit changes had occurred. These represent a better estimate of the underlying utilization and cost trends for these plans.

Observations on Premium Trends

Comparing the July 1, 2011 benefit-adjusted premium trends in Figure 1 to the Jan. 1, 2011 values in our earlier article shows a surprising decrease in observed trends. Specifically, the average Benefit-Adjusted Premium Trends for Jan. 1, 2011 renewals were 8.4 percent, 9.7 percent and 9.8 percent for HMO, PPO and HDHP, respectively. Some of this observed decrease could simply be due to differences between the two groups of states or to random variation. The following are additional possible explanations.

1. Experience-based rating and the impact of economy

For large groups, such as state employee plans, the new premium as of July 1, 2011 is based on the group's own experience for a recent 12-month period. Assuming the carrier calculates this rate in March 2011, this period might be the 12 months ending June 30, 2010. This historical cost is then adjusted for a variety of factors, most importantly the expected trend from the experience period to the premium period. This can be written as follows, where PY12 indicates the plan year starting July 1, 2011 and ending June 30, 2012:

PY12 PMPM Premium = (PY10 PMPM Experience) × (Expected Trend from PY10 to PY12)

The PY11 premium would have been calculated in March 2010 using a similar formula:

PY11 PMPM Premium = (PY09 PMPM Experience) × (Expected Trend from PY09 to PY11)

Using these two formulas, and breaking the expected trend factors into one-year factors, we see that the observed premium increase from PY11 to PY12 can be written as the product of three components:

The first component measures how well the carrier estimated PY10 costs, as an intermediate step when calculating the PY11 premium back in March 2010. The second component measures whether the carrier's expected trend from PY10 to PY11 has changed between March 2010 and March 2011. The third component is the carrier's expected trend from PY11 to PY12.

The second component is likely to be fairly close to 1.00, unless the carrier's expectation about provider contract increases from PY10 to PY11 changed significantly between March 2010 and March 2011. The third component, the carrier's expected trend from PY11 to PY12 as viewed in March 2011, is likely to be in the 7 percent to 10 percent range. Most surveys of carrier's future trend expectations are in this range.

Thus, the observed PY12 premium trends in the 4 percent range suggest that the first component would be in the range of -3 percent to -6 percent. In other words, actual PY10 experience was about 3 percent to 6 percent better than carriers expected when setting PY11 premiums. Given the economy during the period leading up to July 1, 2009, a downturn in health spending during the period of July 1, 2009 to June 30, 2010 is not surprising. Based only on our analysis of state plans, it appears that this downturn did not affect actual experience as much from Jan. 1, 2009 to Dec. 31, 2009, which is the experience period carriers probably used when setting Jan. 1, 2011 premiums.

CONTINUED ON **PAGE 30**

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$$\textit{PY12 Premium Trend} = \frac{\textit{PY12 PMPM Premium}}{\textit{PY11 PMPM Premium}} =$$

$$\frac{\textit{(PY10 PMPM Experience)}}{\textit{(PY09 PMPM Experience)} \times \textit{(Expected trend from PY09 to PY10 from PY11 calculation)}} \times \frac{\textit{(Expected trend from PY10 to PY11 from PY12 calculation)}}{\textit{(Expected trend from PY10 to PY11 from PY11 calculation)}} \times \textit{(Expected trend from PY11 to PY12 from PY12 calculation)}$$

2. Ability of states to smooth year-to-year premium trends

Several states mentioned in their employee communication that their July 1, 2011 premium increases were lower than theoretically needed to cover expected costs during the period, with the shortfalls covered by existing surpluses. Given that many state employees have not received salary increases recently, it is apparent that states are trying hard to keep health premiums down. If the above theory about favorable experience in 2009 and 2010 is correct, self-funded plans would have built up some surplus during this period.

Several states had no change in July 1, 2011 premiums for multiple options from different carriers. Because the actual required increase, or decrease, would have been different for each option, this suggests that states made a specific effort to negotiate a 0 percent increase from insured carriers, and made adjustments as needed to produce a 0 percent increase for self-funded options.

3. States dropping carriers/options with high trends

Some states dropped carriers and options effective July 1, 2011. To the extent they dropped the options that would have led to the highest premium increases, this may artificially dampen our reported average trends, because we only reflected trends for options that continued on July 1, 2011.

Given the large differences between the observed trends for Jan. 1, 2011 and July 1, 2011 renewals, it will be very interesting to monitor the trends when Jan. 1, 2012 state plan premiums and benefits are announced. In the meantime, a few states have announced future premiums that provide anecdotal guidance.

Texas announced its Sept. 1, 2011 renewal premiums and benefits, with benefit-adjusted premium trends averaging about 6 percent.

Michigan announced its Oct. 1, 2011 renewal premiums, with trends averaging about 4.5 percent.

Among the Jan. 1 states, California is usually the first to announce premiums. The California Public Employees' Retirement System (CalPERS) recently announced that rates in 2012 will rise by 7 percent and 3.5 percent for its two HMO options. It noted that the 3.5 percent increase "includes an offset as a result of favorable claims experience." California's rates for its PPO with highest membership will rise by about 2 percent. None of these premium increases were significantly dampened by benefit changes, because the only major benefit change is a $5 increase in the brand drug co-pay.

Observations on July 1, 2011 Benefit Changes

Delaware added a high-deductible option, and Nevada replaced its statewide PPO plan with a high-deductible option. Both feature a state-funded spending account. Other states have introduced high-deductible options in the past, although frequently without a state-funded spending account.

North Carolina moved a large portion of its members to the 70/30 Basic Plan by requiring that members who enroll in the 80/20 Standard Plan attest that they do not use tobacco and have a body mass index (BMI) less than 40, or are actively pursuing these targets.

There appears to be a trend toward states reducing the number of available options, and in making the benefits provisions more similar between options. For example, Ohio moved from five options to two options with the same plan design. Massachusetts modified benefits for several options so that all now have the same basic in-network cost-sharing structure.

Finally, states continue to make modest increases in co-pays, although many of the states made no changes to their cost-sharing provisions in 2011.

Summary

The forces affecting large public sector plans are similar to those facing all large employers. Analyzing the premium and benefit trends reported by states provides useful data for carriers and large employers.

In combination with our previous article, this article provides an overview of the premium trends observed by almost all 50 states during 2011, and provides details on the benefit-design changes they are making to manage health costs. This view into the details of public employer health plans has only recently become available, with the compilation of data from all states, but will become more useful to public and private employers as a market-based resource for ideas of how to manage their own health care costs.

Author's note: The information on plan designs and premiums summarized in these articles was obtained from public sources. All data is believed to be accurate, but we suggest that specific details be confirmed by the reader before acting on this information. This article is intended to be illustrative of the medical trend increases facing large employers, both public and nonpublic, around the United States, and the ways in which large public employers are responding to these trends.

Appendix: Details on State Health Plans Renewing July 1

These states represent a variety of plan types and geographic areas. They all share difficult budget situations and the need to minimize the growth of health costs. The premiums they negotiated and the program changes they initiated may be indicators of what to expect for the large group market in general.

The premium trends in the table in Figure A-1 are based on the total premiums as reported by the states, not just the portion of the premium paid by the employee. Also, these trends are based on the reported premiums, and are not adjusted to remove the impact of benefit changes. Earlier in this article we estimated the impact of benefit changes on the average reported trends for all of these states.

In Figure A-1 we do not identify changes in preventive services cost sharing. Most states removed this cost sharing this year, although some grandfathered plans did not. Also, some states already had $0 co-pays for preventive services. ■

Figure A-1: Premium and Benefit Trends

STATE	PLAN OFFERINGS	PREMIUM TRENDS FOR 2012 PLAN YEAR	BENEFIT CHANGES FOR 2012 PLAN YEAR
Alaska	Alaska offers four PPO options through the same carrier: one with a deductible of $500, and three with deductibles of $250.	Premium increases ranged from 9% to 16%.	There were no material changes to any of the plan provisions.
Colorado	Colorado offers an HMO plan and three HDHP plans.	Premium increases for the plans ranged from 4% to 8%.	There were no material changes to any of the plan provisions.
Connecticut	Although Connecticut traditionally has a July 1 effective date, delays in union negotiations have pushed back its effective date to Oct. 1, 2011.		
Delaware	In the 2011 plan year Delaware offered four options from two carriers: three $0 deductible plans and one $500 deductible plan. For 2012, two HDHP plans were added.	Premiums for the four existing plans were unchanged.	There were no material changes to the existing plans. The new HDHPs feature an employer- funded Health Reimbursement Arrangement (HRA).
Idaho	Idaho offers an HDHP, and two PPO plans with low deductibles. The plans are all offered through the same carrier.	Premiums were unchanged for all three options.	There were no material changes to any of the plan provisions.
Illinois	In the 2011 plan year Illinois offered seven HMOs and one PPO. Illinois went out to bid for FY2012 plans. It dropped two carriers, but retained one of them through Sept. 30, 2011, which is due to protest timing. There used to be a total of eight plans. Two existing carriers added new options.	Premiums decreased by 7% for the PPO and increased by 0% to 5% for the HMOs.	There were no material changes to any of the plan provisions.
Louisiana	In the 2011 plan year Louisiana offered one PPO, two HMOs and one HDHP. As of July 1, 2011, Louisiana added a new regional HMO.	Premiums increased about 6% for all plans. The new premiums, effective July 1, 2011, are for a short plan year, ending Dec. 31, 2011.	There were no material changes to any of the plan provisions.
Maine	Maine offers one plan with a $0 deductible.	Premiums were unchanged.	Maine raised specialist and emergency room co-pays, and introduced a 5% coinsurance rate for most other services.
Maryland	Maryland offers two PPO options, three exclusive provider organization (EPO) options and three POS options. The eight options are split between three carriers, but all have $0 deductibles, the same medical, and drug co-pays.	Premiums for the EPO options were unchanged. Premiums for the POS and PPO options increased 1% to 3%.	Drug co-pays increased from $5 to $10 for generics, from $15 to $25 for brands, and from $25 to $40 for non-preferred brands.
Massachusetts	Massachusetts offers 12 plans with a combination of low deductibles and co-pays. Only one plan also has coinsurance.	Premium increases ranged from 1% to 10%.	Plans with $400 deductibles reduced their deductibles so that now all plans offer a $250 deductible.
Nebraska	Nebraska offers one POS and three PPOs.	The PPO with the highest deductible, $1,000, had a 9% decrease in premiums. The other premium increases ranged from 0% to 6%.	The POS deductible and co-pays increased. Emergency room co-pays increased for some options so that all have the same $100 co-pay. One PPO decreased its generic drug co-pay.
Nevada	Previously, Nevada offered two regional HMOs and one statewide PPO. This year, it converted the PPO into an HDHP with a state-funded Health Savings Account (HSA) or HRA.	Premiums for the HDHP are similar overall to the 2011 PPO rates, although the rates for specific dependent tiers had large changes. For 2012, Nevada is using a composite premium for the two regional HMOs.	The PPO, formerly with an $800 deductible, 20% coinsurance and selected co-pays, moved to an HDHP with a $1,900 deductible and 25% coinsurance. The HDHP also has an annual state contribution to an HSA/HRA of $700 for the employee and $200 per dependent, with a maximum of $1,300. One of the HMOs previously had a deductible, which was dropped.
New Mexico	New Mexico offers four HMO options, with two different benefit designs.	Premiums were unchanged.	There were no material changes to any of the plan provisions.
North Carolina	North Carolina offers two PPO options from the same carrier.	Premiums were unchanged for both options.	There were no material changes to any of the plan provisions. A new restriction is in place for the 80/20 plan: members who enroll are required to attest that they do not use tobacco and have a BMI less than 40, or are actively pursuing these targets.
North Dakota	North Dakota offers one PPO.	Premiums for the PPO increased 16% (annualized) from its plan year 2010 rates.	There were no material changes to any of the plan provisions.
Ohio	Previously, Ohio had five plans with the same network benefits but differing provisions for non-network services. This year, it only offers one plan design, with two different carriers, based on region.	Because of the significant change in plans offered, it is difficult to determine a single trend increase.	The single plan design is a PPO, with no material changes to the in-network plan provisions.
Rhode Island	Rhode Island offers one HMO.	Premiums increased by 3%.	There were no material changes to any of the plan provisions.
South Dakota	South Dakota offers two PPOs and one HDHP.	Single premiums increased by 5%.	South Dakota dropped coverage for non-preferred prescription drugs for the two PPOs.
Utah	As of late June 2011, options for July 1, 2011, were not available.		
Virginia	Virginia offers two PPOs, one HDHP and one HMO.	The HMO premium increased by about 4%. All other premiums were unchanged.	The HMO specialist office visit co-pay increased from $10 to $20.
West Virginia	West Virginia offers five PPO options.	Premium increases ranged from 1% to 3%.	There were no material changes to any of the plan provisions.

LICS and Reinsurance—Are They Really Risk-Free?

By Timothy J. Adams

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The Medicare Prescription Drug, Improvement and Modernization Act of 2003 created a new tier within the Medicare insurance program specifically designed to provide for pharmaceutical expenses. This new benefit, often called Medicare Part D (or Med D), is provided by independent health plans, called pharmacy benefit plans (PBPs). These plans are supervised by the Centers for Medicare & Medicaid Services (CMS). While some entities that provide Med D insurance only offer one PBP, it is not uncommon for an entity to provide multiple PBPs. For purposes of this article, any type of entity that provides Med D insurance will be referred to as a plan.

Claims incurred under Medicare Part D progress through four zones over the course of one year. These zones, and their ranges, are:

- Zone 1, the front-end deductible, includes all covered claims up to a preset deductible.
- Zone 2, the initial coverage zone, starts when the deductible is met and comprises covered claims up to another preset amount, called the initial coverage limit.
- Zone 3, often called the donut hole, encompasses all covered claims in excess of the initial coverage limit up until the beneficiary incurs a preset amount of out-of-pocket expenses, which is called TROOP.
- Zone 4, the catastrophic zone, begins when a participant attains the maximum TROOP amount.

Four major classifications of pharmaceutical benefits were defined under Medicare Part D. The standard benefit provides coinsurance benefits in zone 2, along with a smaller coinsurance in zone 4. Most plans do not provide the exact standard benefit as defined in the regulations, but instead provide an actuarial equivalent benefit.

Benefits provided by the plans in excess of standard are often called supplemental benefits or non-covered plan payments (NPPs). CMS provides no assistance with these claims. Any supplemental premiums are paid by the beneficiary, and are strictly the responsibility of the plan to collect with no help from CMS. Likewise, supplemental claims are solely the responsibility of the plan, which assumes the entire risk for adverse experience.

A third type of benefit provided under Med D is the low-income cost subsidy, or LICS, claim. Participants with incomes beneath the low-income thresholds under Med D qualify for claims assistance that is provided indirectly by CMS through the participating plans. All LICS claims are applied to the beneficiary's TROOP.

The fourth and final type of prescription benefit provided under Med D occurs whenever a beneficiary reaches zone 4. From that point onward, the great majority of approved pharmacy claims paid will be classified as reinsurance claims. The funding for these claims is the same as LICS, with CMS providing the benefit indirectly through the participating plans.

In order to provide the LICS and reinsurance benefits to covered beneficiaries, each plan receives premiums from CMS. The rates for these premiums are submitted by the plans and are approved by CMS. The plan then pays LICS and reinsurance claims from its own funds, regardless of the adequacy of the premiums.

During the second half of the following year, CMS performs a settlement based upon the plan's experience. Unlike the standard benefit, which is settled using a type of coinsurance arrangement, the LICS and reinsurance benefits are settled at 100 percent of the difference between premiums and claims. If LICS and reinsurance premiums exceed claims, the plan remits the difference back to CMS. Likewise, if claims exceed premiums, CMS reimburses the plan for the difference.

While this arrangement suggests that CMS bears the entire risk for both LICS and reinsurance, both claim types actually entail substantive risks. For example, the cost of administering the two benefits is not considered in the settlement. This cost is implicitly embedded within the administrative factors that are a component of the standard benefit premium. To the extent that cost for administering these benefits comes out higher than assumed, it becomes a loss to the plan.

One of the more visible risks in writing LICS and reinsurance regards cash flow. If a plan pays out more in LICS and reinsurance claims than it collects in premiums, it must front the difference until it receives the settlement. This is not a particularly big risk if the plan has sufficient cash available to cover the entire shortfall, especially considering current interest rates. But this risk becomes much bigger if the plan does not have sufficient liquidity. At that point, it would be forced to sell assets or borrow money to cover the shortfall. The following table provides a good example:

Notice how the cash flow starts positive. This is because reinsurance claims are always light early in the year. Cash flow turns negative later in the year, caused by the sharply rising reinsurance claims late in the year. Had the settlement been performed right at year-end, the company's interest loss would have been relatively minor. But other considerations, such as lags, plan-to-plan (P2P) and retroactivity, render such early settlement impossible. The plan must therefore continue with this shortfall until the more likely time of settlement, either parting with whatever interest the cash shortfall would have earned during this time, or paying interest on money borrowed during this time to cover the shortfall.

It should also be noted that even though low reinsurance claims early in the year provide the plan with a chance to build up a cash reserve for later reinsurance claims, this advantage is offset by the fact that standard Part D claims typically exceed premiums early in the year, thereby negating much of the positive cash flow from reinsurance.

P2P claims present another risk. Frequently the Med D claims-paying process will cause plans to pay benefits on behalf of beneficiaries who are actually covered by other plans. Through the P2P process, CMS redirects such claims to the correct plan. With CMS as an intermediary, this plan then reimburses the plan that originally made the payment. While most P2P claims ultimately end up being paid by their correct plans, some P2P claims fall through the cracks. When a plan pays a P2P claim for which it is not reimbursed, the entire amount becomes a cost for the plan, as none of the amount will be credited back to it during the settlement process.

The settlement process raises risks as well. If CMS recognizes fewer LICS and reinsurance claims than the plan actually paid, then CMS only reimburses for the claims that it has recognized. Sometimes CMS rejects some of the claims paid by a plan, thereby reducing the claim amounts that CMS recognizes in the settlement. It also is possible that

	January	February	March	April	May	June	July
BOM balance	0	1,202,444	2,359,686	3,371,337	4,136,600	4,454,064	4,221,701
PREMIUMS/SETTLEMENTS							
LICS	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Reinsurance	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Net inflow	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
CLAIMS							
LICS	8,000,000	7,750,000	7,500,000	7,250,000	7,000,000	6,750,000	6,500,000
Reinsurance	800,000	1,100,000	1,500,000	2,000,000	2,700,000	3,500,000	4,300,000
Net outflow	8,800,000	8,850,000	9,000,000	9,250,000	9,700,000	10,250,000	10,800,000
Interest	2,444	7,242	11,651	15,263	17,464	17,637	15,570
Net cash flow	1,202,444	1,157,242	1,011,651	765,263	317,464	-232,363	-784,430
EOM balance	1,202,444	2,359,686	3,371,337	4,136,600	4,454,064	4,221,701	3,437,271

CONTINUED ON **PAGE 34**

	August	September	October	November	December	January+1	February+1
BOM balance	3,437,271	1,697,710	-1,301,484	-6,066,463	-14,107,475	-29,446,016	-29,565,982
PREMIUMS/SETTLEMENTS							
LICS	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	0	0
Reinsurance	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	0	0
Net inflow	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	0	0
CLAIMS							
LICS	6,250,000	6,000,000	5,750,000	5,500,000	5,250,000	0	0
Reinsurance	5,500,000	7,000,000	9,000,000	12,500,000	20,000,000	0	0
Net outflow	11,750,000	13,000,000	14,750,000	18,000,000	25,250,000	0	0
Interest	10,439	805	-14,978	-41,012	-88,541	-119,967	-120,455
Net cash flow	-1,739,561	-2,999,195	-4,764,978	-8,041,012	-15,338,541	-119,967	-120,455
EOM balance	1,697,710	-1,301,484	-6,066,463	-14,107,475	-29,446,016	-29,565,982	-29,686,438

some claims paid by the plan just do not show up in CMS records. Regardless of cause, the entire cost of these unrecognized claims ultimately falls back onto the plan.

Historically, pharmacy claims have experienced rapid runoff. It is not atypical for 99 percent of pharmacy claims to be paid during the fill month. Most of the lag is caused by prescriptions filled late in one month, with the corresponding claim being paid in early in the following month. Such has not been the case with Med D claims. Retroactivity is a major source of Med D claim lag. This occurs when a participant is assigned to a plan not just beginning at the first month on the plan's records, but also retroactive to earlier months. For example, CMS might assign a beneficiary to a plan in October, but make the coverage retroactive back to March. The plan would then become responsible for all of this beneficiary's claims for the entire past seven months.

Another source of claim lag results is caused by State Pharmacy Assistance Plans (SPAPs) and Medicare Secondary Payer Plans (MSPs). If either of these types of plans provides a benefit that is later discovered to have been covered by Med D, this benefit is then assigned to the plan in which the beneficiary is a member. Such claims might come many months after the original fill date.

Long-lag LICS and reinsurance claims are not a big difficulty if posted before the cutoff date for inclusion in the CMS settlement. This cutoff is typically six months after the close of the benefit year. If long-lag claims are posted in time and match CMS records, then the plan's only loss is the interest the claim amount would have earned between the payment date and the settlement date. But claims that are posted after the cutoff date are not likely to be included in the settlement. Unless CMS later reopens the settlement and allows claims that are posted after the cutoff date, the plan loses the entire cost of the claim.

Rebates introduce another potential risk. Pharmacy rebates, which are called "Direct and Indirect Remuneration" (DIR) in Med D terminology, do not affect LICS. But DIR is a significant component of reinsurance results. A portion of DIR is credited against reinsurance claims based upon the ratio of drug costs in excess of the catastrophic threshold to the total of all drug costs in the plan. This is called the DIR ratio. The amount of DIR applied against reinsurance claims is equal to 80 percent of the DIR ratio times the plan's DIR. The risk here involves the amount of DIR reported and the amount actually received. Med D regulations stipulate that all of the DIR reported be applied toward the risk corridor and reinsurance settlements. To the extent that a plan does not receive the entire amount of DIR reported, it absorbs the entire loss.

	March+1	April+1	May+1	June+1	July+1	August+1	September+1
BOM balance	-29,686,438	-29,807,384	-29,928,823	-30,050,757	-30,173,187	-30,296,117	-30,419,547
PREMIUMS/SETTLEMENTS							
LICS	0	0	0	0	0	0	19,500,000
Reinsurance	0	0	0	0	0	0	9,900,000
Net inflow	0	0	0	0	0	0	29,400,000
CLAIMS							
LICS	0	0	0	0	0	0	0
Reinsurance	0	0	0	0	0	0	0
Net outflow	0	0	0	0	0	0	0
Interest	-120,946	-121,439	-121,934	-122,431	-122,929	-123,430	-64,043
Net cash flow	-120,946	-121,439	-121,934	-122,431	-122,929	-123,430	29,335,957
EOM balance	-29,807,384	-29,928,823	-30,050,757	-30,173,187	-30,296,117	-30,419,547	-1,083,590

There are pragmatic ways of dealing with these risks. Cash flow risk can be mitigated with reliable claim projections that are accordingly reflected in the bids. Other risks can be reduced with judicious claims processing, careful monitoring and restraint of expenses, and diligent coordination of information with CMS and the pharmacies. While there is certainly money to be made writing Med D insurance, never should anyone write it in the belief that the LICS and reinsurance pieces are entirely risk-free. ■

The Sunday before the 2011 Society of Actuaries (SOA) Health Meeting, the Untapped Opportunities group sponsored a "Health Careers Networking Reception." This reception was very well-attended, and the SOA gave away five wonderful raffle prizes to the attendees. Congratulations to these winners:

- ***Fang Tian***—Gift certificate for either a career coaching session or digital library session.
- ***Sudha Shenoy***—$50 Amazon gift card.
- ***Ronald Poon Affat***—$50 Amazon gift card.
- ***Matt Elston***—Book: The Influential Actuary, by David C. Miller.
- ***Lee Parrott***—Book: The Influential Actuary, by David C. Miller.

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