



ISSUE 66 MAY 2011

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Health Section!

## Navigating New Horizons ... An Interview with Julia Philips

By Sarah J. Hamblin

In general an actuary's mission is simple: help your employer price accurately to remain profitable. It's difficult work, and, as a result, actuaries are paid very well to do it. In fact, it's the lucrative salary potential that has attracted many a math wizard to this profession. On the other side of the coin there are actuaries such as Julia Philips, who has chosen to dedicate her skills to serving the public even at the expense of the additional funds she could earn working in the private sector.

Philips has been employed as the only health actuary for the Minnesota Department of Commerce since 1995. Her responsibilities include reviewing annuity, health and life insurance policies and rates for compliance with state statutes, reviewing the financial soundness of life and health insurers, and providing technical advice on health care issues to the Minnesota state legislature.

"I'm certainly not giving my time away, but if I wanted to live a more lavish lifestyle I could definitely go to the private sector and be a consultant," Philips said. "But I'm staying where I am partly because I feel like I'm serving the public and partly because this is what I really, really enjoy doing and there are a lot of people around me who are the same way."

Philips said before taking her current position she had no idea how many dedicated and talented people were lending their professional expertise to state issues.

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# Letter from the Editor

By Mary van der Heijde



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**W**e would like to wish the Health Section a happy 30<sup>th</sup> birthday!

While a lot has changed over the last 30 years, one thing which has remained constant has been the energy and focus of this council, and the support it provides to all of us members. We are better off from having the community provided by the Health Section, particularly during health care reform now, but also during many other times of challenge in the past.

As actuaries, part of our shared history is our individual paths through the exam process. I am pleased that we can include an article by Kristi Bohn and Andie Christopherson about how to improve your chances of passing the CSP and DP exams. Kristi and Andie are members of the exam writing and grading committees for Group Health, and I encourage you to read and pass along these tips to colleagues who are working to pass these challenging exams.

I think by now we have realized that health care reform is a marathon, not a sprint. As part of this reality, and with Medicare bid season now complete, I know many actuaries are taking time to regroup and take a step back to make sure we have a full command of the big picture of the challenges and opportunities we are facing between now and 2014.

This issue's "Chairperson's Corner" shares more with us about the section council's revised vision and mission statements, some of the research and communications projects planned for 2011 and the Health Actuarial Research Initiative (HARI). Jeff Allen provides more details about the upcoming HARI activities later in this issue. In "Soundbites from the Academy," Heather Jerbi and Tim Mahony share more information about the wide variety of activities the Academy's

Health Practice Council has had relating to health care reform.

For this issue's "Navigating New Horizons" feature we have included an interview with Julia Philips, an actuary with the Minnesota Department of Commerce, who has also served with the Actuarial Board for Counseling and Discipline (ABCD). Philips shares more with us about her legislative experience, her time with the ABCD and other volunteer activities.

Mark Whitford has shared with us information about investment strategies for health plans, and Sarah Legatt and Kristi Bohn have written an article about the differences in retiree versus active employee costs. Gerry Smedinghoff discusses the possibility of a no-fault insurance system as an alternative to current professional liability insurance. Michael Cook gives us tips about how to survive (and maybe even benefit from) the Medicare Advantage audit process.

We hope you find this issue interesting and relevant, and encourage you to contact us with your thoughts and opinions. ■

# Chairperson's Corner

By Judy Strachan

Over the past few months, the Health Section Council has continued the strategic focus it began last June. We expect to have a busy year, with more ideas for projects than the available resources and time will permit us to do. Our strategic work is designed to sharpen our focus as a section and help us identify the highest priority projects.

## Vision and Mission Statement

During the council's face-to-face meeting in December, we reviewed and revised the section's vision and mission statements and identified our priority projects for 2011. We sought to revise the vision statement to incorporate potential untapped opportunities for health actuaries. Our new vision and mission statements are:

### Vision Statement

Health actuaries are recognized as leaders in the health care and disability markets.

### Mission Statement

Prepare health actuaries for positions of leadership and promote the relevance of health actuaries in the marketplace by:

- Providing relevant educational opportunities and member communications
- Facilitating practical research, and
- Continually expanding the marketplace relevance of the health actuary brand.

## Research and Communication Projects Planned for 2011

As I mentioned above, this is looking to be a busy year! We have a number of exciting research and communication projects in process or planned for this year, including:

In process:

- A study of the relationship between health costs and some nontraditional variables for predicting health costs.
- A call for complexity models applied to a health care system.
- A go-to guide on credibility.

Projects in planning:

- A review of the literature on models estimating the return on wellness programs.
- A tool for reviewing the Health Care Cost Report Information Database (HCRIS).
- A go-to guide on statistical methods and their applications to our work.
- Contests for the best papers on pricing medical products in the new health care reform environment and the best papers on nontraditional applications of actuarial principles.
- Further research on risk analysis for health plans and other risk-bearing health organizations.
- An analysis of comparative effectiveness techniques and the results of comparative effectiveness studies.
- The possibility of joint research projects with a new university health policy and research institute is being explored. Some of the research projects we may decide to pursue jointly include:
  - Research on the effectiveness of wellness and disease management programs.
  - Research on the impact of up-coding.
  - Research projecting the impact of health reform on cost shifting.

## Health Actuarial Research Initiative (HARI)

This is a new research initiative sponsored and funded by the Society of Actuaries (SOA). Although this is independent of our section's research activities, I like to believe that the section's strategic process inspired



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# Health Watch

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This publication is free to section members. Current-year issues are available from the Communications Department. Back issues of section publications have been placed in the SOA library and on the SOA website: ([www.soa.org](http://www.soa.org)). Photocopies of back issues may be requested for a nominal fee.

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this research. HARI's mission is to develop actuarial research, in partnership with the SOA's research function, that uses the Affordable Care Act (ACA) as a launch point for studying change in the health care system in the United States and in other countries. The research is intended to inform the public and policymakers. See the article on page 7 for more details about HARI.

If you have ideas for or are interested in participating in Health Section Council research or communication activities, please reach out to Kristi Bohn, me or Sara Teppema. We welcome your ideas and your assistance! ■

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Navigating New Horizons | FROM PAGE 1



Julia Phillips

"I really did not realize how much goes on in state government that is just very important and how many people are here just because they want to make a difference," she said. "They come in and they put their heads down and they work on making things better. I am just very impressed."

### Early Career Path

Philips did not start out with a goal of eventually joining the public sector. As a child who was good at both language and math, her career could have easily gone in an entirely different direction. However, Philips said even from a young age she could recognize

that focusing on mathematics had more potential and would bring less competition from her fellow students.

Philips earned a bachelor's degree in mathematics from UCLA and it was during her time at this university that she learned of the actuarial profession. "I don't recall ever hearing of it until my sopho-

more year," she said. "A young man from Occidental Life Insurance Company came in and talked to math students about being an actuary. I had never heard of it and if I had heard of it, I probably would have said, 'That's way too boring for me.' But he made it sound interesting, so I started taking actuarial exams when I was in college."

Philips went on to earn a master's degree in mathematics, with a minor in statistics, from the University of Minnesota before taking her first job as an actuarial student with IDS Life Insurance Company of Minneapolis. In this position she was initially working in the area of group investment contracts and spent a lot of time writing to different investors. At the time, unemployment and inflation were both high, and these letters explained the benefits of sticking with their investment. She said she found this work interesting and quickly learned that she enjoyed this more personal aspect of actuarial work.

### Finding a Niche

After almost two years with IDS, Philips was offered and accepted an assistant actuary position with Western Life Insurance Company of Woodbury, Minn. This was her first foray into the area of health insurance.

“It was at the point where HMOs were just beginning to take off,” Philips said. “I moved there in 1982 and the St. Paul companies had an employee benefit plan. They had, at the time, something in the neighborhood of 10,000 employees and Western Life did the actuarial work for their employee benefits. So I got involved with doing the experience analysis and the financial projections and so on for the employee benefit plan and I found that very interesting.”

Philips said she liked the fact that she would get more immediate feedback on her work with health insurance as opposed to life insurance. “I definitely decided that health insurance was more my cup of tea than life insurance,” she said. “On life insurance you can set your claim assumptions and then, by golly, 30 years later you can find out if you were right or not. In health insurance you find out maybe a year later, give or take.”

Philips spent 10 years with Western Life before deciding to give consulting a try. In 1992 she joined Milliman Inc. and began a three-year stint as a consulting health insurance actuary. Philips said she was attracted to the position because she saw it as an opportunity to learn new things, but ultimately decided consulting was not for her. As a wife and mother of three, she said the balancing act just got to be too much.

“The variety of the work and the things that I learned and the opportunity to work with really, really sharp people was tremendous, but I would say I found the life of a consultant to be very difficult,” Philips said. “I was very torn during that time.”

## A New Opportunity

When Philips got word that the State of Minnesota would soon be looking for a new health actuary, she looked forward to applying. “My dream job opened up and I knew for sure that it was a move I would definitely want to make at this point in time,” she said. “I thought if I could get that job it would be the perfect fit for me.”

In 1995 she was offered the job and started in the position she has held for more than 15 years now.

Philips said the fact that she is able to have a hand in a lot of different projects keeps things interesting for her.

“The variety of things you can learn about is similar to consulting,” she said. “If you are the only health actuary, people are going to come to you for anything that the state does that involves health insurance. You’re not going to run everything, but you’re going to be at least involved in everything. So the variety of different things that I can be involved in at the state is very great and a lot of it is groundbreaking stuff.”

Philips said one example of a project she assisted with was when the state of Minnesota designed a new health plan for their employees that involved tiering, a fairly new concept at the time which uses “efficient” doctors who can provide the same care for less to a certain network. As a result, the clients in that network have a lower office visit copay and deductible.

“I was not in charge of that effort, but the human resources division of the state invited me to come to the meetings and talk about it because they knew that I had similar expertise and they were interested in my input,” she said. “So I find it wonderful to be sort of a consultant to a wide variety of different projects that relate to things I have experience with.”

Ultimately, Philips said the aspect of her work she feels most passionate about is consumer protection and helping people understand the nature of their insurance contracts. “I’m now in a position to actually make some impact in that area,” she said. “I find that to be something that’s pretty unique is the ability to use my technical skills and to feel like I’m really helping the ordinary Minnesotans get what they need from the health system and from the insurance system.”

## Legislative Work

One of Philips’ major focuses in the early days of working this job was the implementation of Minnesota’s health care reform. The state needed an expert to enforce the new laws, and Philips was tasked with making sure companies were follow-

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We tend to be willing and able to focus on the details longer than other people.

ing the rating restrictions on individual medical and small group policies. She also made sure new underwriting restrictions were met and that companies were following the rates for all kinds of health insurance. This ensured they were returning what was considered an adequate value to the consumers who were buying those products.

Philips said her actuarial expertise is often called upon by the legislature during hearings, particularly now that health care reform is once again in the spotlight. “When you get down into the details, it can get very complicated and I think that’s where actuaries can be of help,” she said. “We tend to be willing and able to focus on the details longer than other people.”

Philips spends a good portion of time sifting through government and actuarial studies. “I’ll look at the nuances and I’ll read the bills very, very carefully and I’ll compare it to other things,” she said. “Attorneys do that kind of thing—reading the fine print and looking at the consequences—and I’m doing the same thing, only on a technical side.”

## A Voluntary Spirit

Despite the long hours put into her full-time work, Philips has found the time to take part in a number of voluntary activities. She has been very active in the National Association of Insurance Commissioners, representing Minnesota’s commissioner on a variety of committees, task forces and working groups. She chaired the Accident & Health Working Group and the Health Risk-Based Capital Working Group for several years.

Philips also chairs the Editorial Advisory Board for *Contingencies*, the magazine of the actuarial profession. She is a former member of the Board of Governors of the Society of Actuaries (SOA) and also served as a member of the Actuarial Board for Counseling and Discipline (ABCD).

During her five years as a member of the ABCD, an independent entity that investigates possible violations of the Code of Professional Conduct and also provides advice and counseling, Philips said her major role was to assist people with questions.

“People would call me directly or they would call the staff attorney in Washington and be referred to me and they would ask questions about professional standards and complying with the code and complying with the standards of practice,” she said. “I would give them my best shot at a useful answer, and I would always say this is just my opinion and so on, but that was a big part of the ABCD.”

Philips was also part of the process when a formal complaint was filed with the board. After determining if the complaint is legitimate, it is the ABCD’s job to investigate and sometimes recommend that discipline be applied by an actuarial membership organization.

Philips said the volunteer opportunities have not only given her a chance to contribute and have fun, but also to learn new things and keep up-to-date with the latest in the actuarial field. “I find that it’s a lot more fun to get my continuing education by serving on a committee, maybe helping write a paper, than to go to a seminar or classroom,” she said. “Rather than sitting in a classroom and just hearing what other people do, I find I learn better by doing.”

## Looking to the Future

According to Philips, her learn-by-doing attitude has played a large part in helping her build a successful career at a job she truly enjoys.

“If you can figure out what you really want to do and if you can be patient and work at things that come up, eventually I think that we can all find a niche that really suits us,” she said. “For me I think I always had a sense that I wanted to do interesting things. I wanted to find out how things work, then I wanted to be of service.”

Philips said she thinks there will be plenty of opportunities in the near future for those who would seek a similar career path, particularly now that the government is focusing on trying to create more affordable health care.

“I think there is going to be a severe shortage of health care actuaries in the next five years,” she said. “I don’t know if I could predict after that, but my sense is that health actuarial work is going to be a booming field for awhile.” ■

# HARI Caray, HARI Krishna, the Mata HARI—What's up with HARI?

By Jeff Allen

Hopefully that question “What’s up with HARI?” will be answered during the course of the next two years, as the Society of Actuaries (SOA) takes on the Health Actuarial Research Initiative (HARI). This operational initiative has dedicated significant resources to health research, targeted at wide audiences, which could include the public, policymakers, the media and actuaries.

The HARI mission is to develop actuarial research, in partnership with the SOA’s research function, that uses the Affordable Care Act (ACA) as a launch point for studying changes in health care systems in the United States and in other countries. The research will serve to inform the public and policymakers, and achieve the short time frames necessitated by the rapidly approaching implementation dates of the ACA.

The first research project will focus on health risk adjustment, a key area in which health actuarial expertise can add value to the mechanics of any country’s health system, through elements such as health insurance exchanges, high risk pools and provider payment systems.

Topics for subsequent projects are still under discussion, but may include accountable care organizations (ACOs) or other provider payment reforms; or consumer-oriented benefit evaluations, such as plan designs, disease management or wellness programs. Areas of focus will be reevaluated as dictated by the needs and priorities of the ACA and other international areas of interest, in order to ensure optimal actuarial involvement.

Research timelines will necessarily be more aggressive than traditional SOA research projects, and the intent is to implement performance guarantees for Request for Proposal (RFP) recip-



ients for on-time milestone delivery. RFPs will clearly reflect this intent.

I am chairing a first-class team of actuaries and other health-related professionals, to support and oversee the HARI. Each project that we decide to sponsor will have its own project oversight group. If you have background in a related area, and are interested in possibly becoming involved, contact me or Sara Teppema, staff fellow at the SOA, at [steppema@soa.org](mailto:steppema@soa.org). ■



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# Soundbites

## from the American Academy of Actuaries' Health Practice Council Activities

By Heather Jerbi and Tim Mahony

### What's New

As challenges to the individual mandate in the Affordable Care Act (ACA) move through the courts, and efforts to repeal or modify the health reform law intensify on the Hill, implementation of the provisions in ACA continues to be a priority for the Academy's Health Practice Council (HPC). The council 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.

The HPC has been focused on those provisions that go into effect in 2010 and 2011, including medical loss ratio reporting and rebates, new rate review requirements, and the many near-term benefit and eligibility changes; however, the council is now beginning to turn its attention to those provisions that take effect in 2012 and beyond. These provisions include the various risk-sharing mechanisms, the individual mandate, the 2014 market reforms and the implementation of exchanges.

Several groups are already working on new projects including providing comments to HHS on the proposed rate review regulations, the temporary risk adjustment mechanism, actuarial value and health insurance cooperatives. While health reform implementation is a significant priority, HPC work groups continue to work on other relevant issues as well. Work groups 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.

### *Medical Loss Ratio Reporting and Rebates*

The Academy's Medical Loss Ratio Regulation (MLR) Work Group has been active since the enactment of ACA, providing input to both HHS and NAIC. In December 2010, HHS released interim final regulations (IFRs) to implement the MLR requirements under ACA. In response, the work group submitted comments<sup>1</sup> addressing technical aspects of the IFRs to improve clarity and internal consistency, including the definition of "multi-state blended rate," measurement date for earned premiums, definition of paid claims included in incurred claims, data used in multiyear calculations and the calculation of deductible factor for policies with dependents.

### *Premium Review*

Sec. 2794 of the Public Health Service Act (PHSA), which was created by the enactment of ACA, requires the HHS secretary to work with states to establish an annual review of unreasonable rate increases, to monitor premium increases, and to award grants to states to carry out their rate review processes. At the end of October, the work group provided HHS with an evaluation<sup>2</sup> of several potential methods for measuring "unreasonable" rate increases. Under proposed regulations<sup>3</sup> released by HHS at the end of December, 2011 rate increases that are 10 percent or higher will have to be publicly disclosed and reviewed to determine whether the increase in unreasonable.

The work group also sent a letter<sup>4</sup> to the NAIC's Health Insurance Managed Care (B) Committee regarding the draft rate filing disclosure form that is intended to facilitate the reporting of "unreasonable" rate increases to HHS. The amended rate filing disclosure form was adopted by the B Committee on Nov. 9.

### *NAIC and Other Academy Activities*

On Feb. 8, the Academy's Medicare RBC Subgroup sent a letter<sup>5</sup> to the NAIC's Health RBC Working

<sup>1</sup> [http://www.actuary.org/pdf/health/AAA\\_MLR\\_IFR\\_comment\\_013111\\_final.pdf](http://www.actuary.org/pdf/health/AAA_MLR_IFR_comment_013111_final.pdf).

<sup>2</sup> <http://www.actuary.org/issues/pdf/AAA%20on%20premium%20increases%20102910%20final.pdf>.

<sup>3</sup> <http://edocket.access.gpo.gov/2010/pdf/2010-32143.pdf>.

<sup>4</sup> <http://www.actuary.org/issues/pdf/AAA%20cmts%20on%20rate%20disc%20form%20110510%20final.pdf>.

<sup>5</sup> <http://www.actuary.org/pdf/health/American%20Academy%20of%20Actuaries%20Medicare%20Part%20D%20RBC%20SubGroup%20NAIC%20Survey.pdf>.



Group asking it to sponsor and administer a survey of carriers that write Medicare Part D business. The survey is designed to gather additional data that may support any needed changes to the formula.

On Jan. 31, the Academy's life, health and property/casualty RBC committees released a joint report<sup>6</sup> in response to the NAIC's request for assistance with the Solvency Modernization Initiative (SMI) project on the NAIC's risk-based capital (RBC) formulas. This report discusses the intended/expected safety levels for RBC and identifies risks that are missing from the RBC formulas.

On Jan. 21, the HPC submitted comments<sup>7</sup> to the Centers for Medicare & Medicaid Services (CMS) in response to its request for comments on the Medicare Advantage risk adjustment data validation payment error calculation methodology. The letter outlines concerns that the audit process as proposed would apply the risk-adjustment model in a way that is inconsistent with the way it was developed.

On Jan. 14, the Medicaid Work Group sent a letter<sup>8</sup> to CMS responding to a request for assistance in reviewing the Medicaid rate-setting checklist. This letter was the result of an ongoing dialogue between members of the Academy's Medicaid Work Group and CMS.

In January, the Academy's Health Practice Financial Reporting Committee published a new practice note<sup>9</sup> to help actuaries both understand and comply with new requirements for the NAIC Health Annual Statement that became effective on Dec. 31, 2010. The revised actuarial statement of opinion instructions were adopted in the NAIC's 2010 health actuarial opinion requirements. All practicing health actuaries need to be aware of the revised instructions in advance of the filing.

## 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 created a work group to address the list of Academy health-related practice notes that need updating.

**Medicare Steering Committee** (Ed Husted, chairperson)—The committee is developing a public statement related to the recent deficit reduction proposals and those provisions that affect Medicare.

**Academy/SOA Cancer Claims Cost Tables Work Group** (Brad Spenny, 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.

**Health Care Quality Work Group** (Michael Thompson, chairperson)—The work group is developing an issue brief on accountable care organizations (ACOs).

**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. The task force is finalized an article on risk adjustment that would be included in a future issue of *Contingencies*.

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<sup>6</sup> [http://www.actuary.org/pdf/life/American\\_Academy\\_of\\_Actuaries\\_SMI\\_RBC-Report.pdf](http://www.actuary.org/pdf/life/American_Academy_of_Actuaries_SMI_RBC-Report.pdf).

<sup>7</sup> [http://www.actuary.org/pdf/health/RADV\\_comment\\_letter\\_012111\\_final.pdf](http://www.actuary.org/pdf/health/RADV_comment_letter_012111_final.pdf).

<sup>8</sup> [http://www.actuary.org/pdf/health/American\\_Academy\\_of\\_Actuaries\\_Letter\\_on\\_Rate\\_Setting\\_Checklist\\_to\\_CMS.pdf](http://www.actuary.org/pdf/health/American_Academy_of_Actuaries_Letter_on_Rate_Setting_Checklist_to_CMS.pdf).

<sup>9</sup> [http://www.actuary.org/pdf/health/2010\\_Health\\_Actuarial\\_Opinion\\_Practice\\_Note.pdf](http://www.actuary.org/pdf/health/2010_Health_Actuarial_Opinion_Practice_Note.pdf).

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

**Long-Term Care Principles-Based Work Group** (Bob Yee, chairperson)—This work group has formed a joint Academy/SOA task force to develop and recommend valuation morbidity tables for long-term care insurance 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 to update 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 provided comments to CMS regarding the Medicaid rate setting checklist and how to improve it. The group also submit an application with the Actuarial Standards Board (ASB) to have the 2005 Medicaid Managed Care practice note developed into an actuarial standard of practice (ASOP).

**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 Health Actuarial Task Force. The NAIC is compiling a database of selected states for this project and will update the work group when it is finished.

**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 SMI. The first report was submitted on Jan. 31, with the second report due June 30.

**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 Health Practice Council, contact Heather Jerbi at [Jerbi@actuary.org](mailto:Jerbi@actuary.org) or Tim Mahony at [mahony@actuary.org](mailto:mahony@actuary.org). ■

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# Health Actuary CSP and DP Exams:

## How to Improve Your Chances of Passing

By Kristi Bohn and Andie Christopherson

In our experience, what issue do actuaries get most passionate about? Global warming? The uninsured in America? Quality health care? Starving children? No, no, no. Well, maybe starving children. But bring up actuarial exams and our eyes light up. So much universal pain, suffering and sacrifice—and so many opinions to share.

Now that we are on the other side, as two members of the exam writing/grading committees for Group Health, we sympathize with our colleagues who are still in the process. But let's get it straight: the view from this side is NOT pretty for the vast majority of students. During the last grading go-around, the vast majority of committee members expressed frustration with the seeming lack of communication with students on how to successfully prepare for and pass the exams. So the two of us decided to come up with a top 10 list of advice. No hate mail please.

### 1. Read the source material.

As exam question writers, we do not get those exam flash cards and study manuals (as they are not part of the syllabus). We actually read the material. Yes, indeed, the question we ask may not have been covered on your flash cards. We do not purposefully try to foul students up, but a student would be foolish to expect that memorizing fragmented lists is the only way to pass. It may have happened in the past, but it is a whole new world. You should read all of the material at least once and make sure that you understand and contemplate what you read. Once you've done that, working through an outline will jog your memory of the details you read and provide a more complete picture of the material overall.

### 2. Answer the question.

Repeat: ANSWER THE QUESTION! One of the biggest frustrations exam graders have is that students are not actually answering the question that was posed. Are students reading the question at all? We see “show up and throw up” constantly—a plethora of information splashing onto the page but no actual answer to the question posed.



On bigger point questions, it is admittedly easy to get lost in a segment of the answer. Before moving on to the next question, take a few seconds to reread the question and make sure you have answered all the parts.

### 3. Some lists will survive, but not many.

Students are expected to know more than just lists that show up on flash cards, yet oftentimes the only answers we get as graders are lists which don't demonstrate that the candidates know the material. Rather, the observation of several exam committees is that the candidates' performance on higher-cognitive-level questions is poor. Anecdotal evidence points to the possibility that some candidates are only studying from flash cards and may not be reading the source material. Studying only from flash cards will not prepare you for the higher-cognitive-level questions. Some memorized lists are helpful, as the lists

CONTINUED ON PAGE 20



will help you synthesize a topic or cover need-to-know material. For example, if we asked, “How did PPACA affect self-insured employers’ plan designs between 2010 and 2011?” a list would help you synthesize that topic. But going forward, make sure you are studying and responding to questions beyond the lists. When you see a question with words like “compare and contrast,” “calculate,” “recommend,” “rank order,” “defend” and error analysis questions, your expectation should be that the graders will be looking for more than just a list. And for these opinion questions, do not be afraid to share an opinion. Even “wrong” recommendations, thoughtfully defended, may score points.

#### **4. When reading the material, try to predict the cognitive questions.**

While reading the material, you should anticipate the really smart questions you would ask if you were drafting questions. You may be pleasantly surprised when a couple of those actually show up on the exam. Perhaps you should get together with other students (or create a blog) to make

100 potential questions that meet the cognitive level criteria.

#### **5. A small but noticeable group of students forget the basics of health insurance.**

There are some health insurance basics from the modules that students are implicitly expected to retain. Examples include the meaning and implications of deductibles, coinsurance, out-of-pocket maximums, lifetime maximums, co-pays, annual versus per member per month (PMPM) measures, etc. A small but noticeable number of students seem to not know how these basic tenets of insurance work. While we do not test this knowledge directly, these students reveal their lack of understanding in their essay responses. For example, an out-of-pocket maximum protects the member, not the plan sponsor. While we do not deduct points for these misstatements, these students waste a lot of time writing completely incorrect responses. We think that since the CSP and DP exams will be offered twice a year, it is helpful to take them in the recommended order.

#### **6. Know how much time you have.**

Take a look at the points for each question in relation to the entire exam and do some quick math. It might equate to something like: “I have about three minutes for each point.” A 10-point question means that the people who wrote the exam question thought it would take you 30 minutes to answer the question well. If you spend five minutes, you probably missed something. You can spend more time than allotted, but you will take away from other questions. Extra time spent on smaller point sections generally has diminishing returns.

#### **7. You do not need to write fully baked sentences.**

Do not waste time on grammatically perfect paragraphs. We are looking for you to convey your understanding of the material in relation to the question posed. First hit the major topics related

to the response, putting empty space between those major topics, and then add detail to those major topics as you have time. Time spent beyond an outline format will not earn more points, but will take up time better spent on other questions.

## 8. Answer the parts of the question that you can.

We give partial credit all over the place—so write down what you know! When reviewing candidates' responses, a grader references an outline of the possible correct responses—both main ideas and supporting details. We go through your answer, looking for these responses and giving points wherever appropriate. You don't need to include all possible information on the grading metric to pass. Any single idea may only earn you a few grading points, so it is important to build on your initial response. So write down what you know.

## 9. It often helps to consider the question from various perspectives.

One technique often employed by successful exam takers is to consider all of the stakeholders for the matter in question. This technique frequently helps you recall the reading material. Here is how the stakeholder method works: consider how to address the answer from the following perspectives: 1) plan sponsor, 2) member/employee, 3) community and 4) regulator. Some test takers also add these subcategories: a) cash flow, b) balance sheet/solvency/risk, c) income, d) tax and e) administrative burden.

## 10. Read and contemplate the case study before the test.

The case study is there so exam writers can reduce the length of the questions and consequently save you time in understanding the actual question (and reduce your stress as well). If you see something odd in the case study, it may be intentional in order to ask a higher-cognitive-level exam topic. Also think about the calculation questions that we might ask from the case

study. It is important to become comfortable with the case study well in advance of the exam, and particularly familiar with it the week before the exam.

Testing higher-level thinking skills is hitting all sorts of industries besides our own. Medical schools, law schools, high schools and colleges are all getting on board. It is a positive change for professions, so get on board. And good luck to all of you! ■



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# How to Survive (and Maybe Even Benefit from) Medicare Advantage and Prescription Drug Bid Reviews and Audits

By Michael Cook



Michael Cook, FSA, MAAA, is actuary at Milliman in Brookfield, Wisc. He can be reached at [michael.cook@milliman.com](mailto:michael.cook@milliman.com).

It is the middle of June, and you are slowly recovering from the long nights and weekends spent in product development and bid preparation for your Medicare Advantage (MA) and Prescription Drug plans. You return to your desk after a leisurely lunch, and there it is: an introductory email from a bid reviewer working for the Office of the Actuary (OACT) at the Centers for Medicare & Medicaid Services (CMS), complete with a dozen or more requests for additional information. All of the stress from the last few months rushes back to you as you dread what the next six weeks will bring.

While few would say that responding to MA bid reviews or audits is an enjoyable experience, it does not need to be entirely negative. It has the potential to be like working through a new exercise program: plenty of moments of pain, but the result, hopefully, will be a better product than you started with.

Since starting work on the introduction of MA in 2006, I have held consultant positions with different firms both preparing bids and reviewing and auditing bids under direction of OACT. I

have been on both sides of bid reviews and audits and have seen many misunderstandings about how the process should work and does work. This article discusses some of the strategies that plan sponsor actuaries and other Medicare team members can take before, during and after reviews and audits to make them as painless as possible while improving the reliability and supportability of bid results and business planning. But first, here is a little background on MA reviews and audits.

## Bid Review and Audit Background

While there are many similarities between MA bid reviews and audits, there are also important differences between the processes. At a high level, bid reviews take a broad view of all bids in the time span of a few weeks, while bid audits document the detailed development of a few bids over several months.

With the different approaches taken in bid reviews and audits, the questions asked and data requested will also vary. For bid auditors, the approach is simple: all parts of the bid development are evaluated. For bid reviewers, the direction is less predictable. Very soon after bid submission, OACT completes a statistical analysis of every Part C and Part D bid on hundreds of bid metrics. Reviewers investigate all metrics falling outside of set ranges and ask plan sponsors about anything not sufficiently addressed in the bid documentation. OACT gives guidance to reviewers to “pull the thread from the sweater until the end is found.” This means that reviewers will ask about any issue contributing to the outlier metrics and any other potential issues identified during the review of that metric.

Along with the similarities and differences in the bid review and audit processes, there are also similarities and differences in their goals.

### Similarities

Both processes seek to ensure that bids:

**FIGURE 1: BID REVIEWS AND BID AUDITS**

	Bid Reviews	Bid Audits
Timing	After bid submission—June to July	After bid acceptance—October to February
Number of bids impacted	All submitted bids are reviewed	Two or three bids from select plan sponsors are audited
Approach	Top-down approach—statistical analysis determines areas of focus	Bottom-up approach—bid development audited from start to finish
Pace of work	Very quick turnaround times	Work more spread out
Potential for bid revisions	Resubmissions may be required for bid acceptance	No, though financial remedies are possible in instances of egregious errors or misrepresentations
Outcome	Bid acceptance	Audit findings and observations that are addressed in subsequent submissions

- Reflect the plan sponsor’s true revenue requirement, including benefit costs, administrative costs and margin
- Are developed with technical accuracy and appropriate data and assumptions
- Are consistent with law, regulations, ASOPs, bid instructions and other CMS guidance.

**Differences**

In general, the goals of bid reviews focus on the development of appropriate calculations and the market environment for the upcoming contract year, while bid audits focus on identifying areas of improvement for future bid development.

**FIGURE 2: GOALS OF BID REVIEWS AND BID AUDITS**

Bid Review Goals	Bid Audit Goals
Consistent competitive landscape for plan sponsors	Education for plan sponsor and actuaries for future bid development
Nondiscriminatory plan designs for beneficiaries	Feedback for OACT on instructions and other guidance
Accurate results for use in development of Part D national average bid amount and other metrics contributing to plan sponsor payments	Identification of areas of improvement for bid review process

**Bid Review and Audit Best Practices**

Now that we have a framework for the structure and goals of bid reviews and audits, let us look at several suggestions about how to make them run as smoothly as possible. Treating preparation for bid reviews and audits as an integral part of the bid development process can help improve the accuracy and repeatability of your bid development, enhance the effectiveness of your organization’s business planning and reduce the time and stress spent responding to reviews.

**Prior to Bid Submission**

*1. Know bid requirements inside and out and follow them.*

Your actuarial team should be very familiar with the bid instructions, CMS online training (both general training and training specific to the upcoming contract year), actuarial technical user group calls and notes (starting each April), the February Advance Notice and April Rate Announcement and other guidance distributed to plan sponsors through the Health Plan Management System (HPMS). Most of this information is available online at <http://www.cms.gov/MedicareAdvtgSpecRateStats/>.

It will likely take a team of people to stay on top of all of the issues changing each year. This will not only improve the quality and compliance of the bids, but it will also improve your organization’s product development and business planning. If certain issues affecting bid development and product design are not identified until the bid desk review, your organization will have lost most of its opportunity to proactively respond to changes in the MA environment.

*2. Document everything.*

It is a CMS and ASOP requirement that documentation is created and available to reviewers, though not all is required to be submitted with the initial bid package. Closely follow documentation requirements from Appendix B of the bid instructions. Make the documentation clear and organized—this will make it easier for both you and the reviewer when issues arise. The documentation should demonstrate that data and assumptions were developed prior to the date of bid submission. The documentation and data should be sufficiently detailed to lead an auditor down the entire path of bid development.

*3. Special notes on non-actuarial aspects of bid development*

Some bid components such as membership projections, administrative costs and margin will often come from outside the actuarial department. These are often noted in a reliance state-

Treating preparation for bid reviews and audits as an integral part of the bid development process can help improve the accuracy and repeatability of your bid development.



CMS reviewers typically request a 48-hour turnaround time but will often be flexible if timing issues are raised proactively.

ment as part of the actuarial certification. While this is appropriate for issuing an actuarial opinion, it does not absolve the plan sponsor from complying with documentation responsibilities or other applicable requirements. Because the actuarial department and a product leader are often in charge of organizing the responses to reviewers, they can avoid problems during the review if the documentation for these bid components is compiled and reviewed prior to bid submission, rather than simply relying on and using the assumptions. Difficulties developing acceptable documentation are most commonly seen with sponsor administrative cost and margin requirements. It is required to compile and submit the acceptable documentation items for administrative costs and margin, as outlined in the bid instructions, as part of the bid documentation package.

#### **During the Review or Audit**

- 1. Respond to reviewers as quickly as possible, while still guaranteeing accuracy.*

Do what you can to keep your schedule flexible during the bid review season. CMS reviewers typically request a 48-hour turnaround time but will often be flexible if timing issues are raised proactively. Having a knowledgeable backup is a requirement to cover for you in situations when you are not available. Coordinate your responses well with any consulting actuaries involved in bid development. Combining responses from plan sponsors and consulting actuaries into a single set of reviewer questions is easier for reviewers to follow and track.

- 2. Be clear and give examples, where appropriate.*

A two-day turnaround time is not useful if the response is not clear and requires follow-up questions from the reviewer. When describing a set of calculations, it can be very helpful to include some or all of the actual numbers and formulas for one of the bids.

- 3. Be proactive in communication during bid audits.*

Follow up with auditors within a week or two after responding to questions if you have not received a response back from them. The fact that you are not hearing from a bid auditor is not necessarily good news. It could be that everything is going well, with no new issues identified, or it could be that the auditor is putting off reviewing your responses. If the latter, it has the possibility of generating a time crunch at the end of the audit process. While it is not strictly the responsibility of the plan sponsor to check in regularly with auditors, it may help keep the process moving forward with limited additional effort on your part.

- 4. Resolve issues with the reviewer quickly.*

If you have concerns about particular materials requested by the reviewer, communicate them to the reviewer. If the reviewer still insists on receiving the materials, contact your CMS point of contact. Do not drag your feet for days or weeks, hoping the reviewer will give up asking for the materials. Rather, it is more likely that OACT will be notified of your plan sponsor's noncooperation. Further, OACT could judge inadequate cooperation as grounds for including you and your plan sponsor in their new initiative on professional conduct that holds plan sponsors and actuaries more accountable for unprofessional actuarial behavior.

- 5. Try to not be frustrated with questions that seem obvious or frivolous to you.*

Many bid reviewers do not work on MA full-time, and none of them work for your plan sponsor. While OACT spends significant amounts of time developing and updating training materials for reviewers, it will never create detailed and complete knowledge as well as living and breathing bid development work over several months. Do your best to avoid "company-speak" in your responses and try to be cognizant of the learning curve the reviewer and OACT will have when looking into the details of a particular issue.

There are many reasons why a reviewer may be asking a certain question, not all of which indicate a lack of knowledge on the reviewer's part. In particular, resolution of every issue must be documented in writing. If it is not addressed in the bid documentation, the reviewer will not "guess" at the answer, no matter how obvious it seems.

6. *Maintain a positive relationship with your reviewer/auditor.*

It is much easier to work through difficult situations with someone you have a pleasant relationship with. Summer reviews, especially, are stressful for all parties involved—plan sponsors, reviewers and CMS. OACT, in particular, has a difficult assignment each summer with a small staff managing a very large process and coordinating bid reviews with the concurrent benefit reviews. Do not be afraid to speak with the reviewer over the phone. It is easier to avoid communicating an unintended negative tone in a phone call than in an email. For complex or technical issues, discussing them first over the phone is also often more effective than limiting responses to writing. In such cases, the reviewer will usually ask for written confirmation of his or her understanding of the discussion in order that all issues will be documented in writing.

7. *Keep thorough records of all communications with the reviewer and CMS and any additional work product generated.*

These items will be useful for responding to future reviews and audits and for planning improvements to the bid development process.

### **After the Review or Audit**

1. *Compile a list of process improvements required for next bid development.*

This is automatically performed as part of the bid audit report received in mid-spring, but it should be done internally after both reviews and audits.

2. *Debrief with the entire Medicare team.*

Spend time sharing what went well during bid development and the review or audit and what can be improved. It is good for team members not directly involved in the reviews or audits to get an appreciation for the level of detail and quality required to develop MA bids.

3. *Act on what has been learned.*

Take advantage of slower times in the year to improve bid development models and documentation templates based on results of the bid review and audit.

4. *Stay connected.*

CMS announces policies that may affect future bid preparations throughout the year. In addition, OACT has fall and winter user group calls to keep actuaries aware of current developments.

## **Conclusion**

With preparation and patience, you can limit the difficulty of bid reviews and audits. You might even improve the quality of bid development and business planning processes, hopefully, with less pain than that new exercise program. ■

# Retirees versus Active Workers: What is the Cost Difference?

By Sarah Legatt and Kristi Bohn

At the SOA's Retiree Boot Camp in November, one of the attendees asked a great question: everything held equal, how much more do retirees cost than active workers? We already know that the typical retiree age group costs much more than all others, but what about retirees versus non-retirees within that age group? The answer to this question has implications on how consulting actuaries would develop claims expectations for valuing retirement health care benefits. Further, this difference should play a role in how employers set premiums for retirement benefits. Finally, more savvy insurance companies could use this information to refine their insurance premiums.

## Methods

When looking at retiree costs, we calculated medical and pharmacy claims on a per member per month (PMPM) basis. We also felt that risk scores add a really excellent piece to the puzzle because risk scores help us understand what would be expected based upon the health of the members.

Because retirees are biased toward older ages, it was important that we review each age separately, rather than putting the experience into age brackets. That is, we did not want to attribute to "retirement" the factors that are actually and more simply attributable to older age.

## Data Sources

We used data from 68 employers who have both pharmacy and medical coverage with Blue Cross and Blue Shield of Minnesota. We excluded employers who did not separately group actives from retirees. Claims were pulled from Jan. 1, 2009 through Dec. 31, 2009 incurred dates and processed through June 30, 2010. Because of our book of business and state mandates, there is a high representation of schools and municipalities within the 68 employers we evaluated (see Exhibit A).

We explored ages 55 through 64 because the amount of retirees younger than age 55 is very small and less credible, and likewise for the amount of active workers over age 65. Further, Medicare coverage after age 65 makes comparisons more complex and was beyond the scope of this project. There were 8,567 retirees and 39,948 working actives included in the study.

We pulled our risk scores from Episode Risk Groups<sup>1</sup> (ERGs). This way of assessing risk takes into consideration "episodes of care." It groups each claim or prescription into underlying conditions or prognosis, rather than factoring each individual service provided. ERGs were introduced in the early 2000s and have been useful in understanding why some employers' costs are so different from others on the average. Using ERGs, we pulled the retrospective risk scores for those aged 55 through 64 for the time period Jan. 1, 2009 through Dec. 31, 2009.

## Findings

In this study, we expected early retirees to consistently cost more than the working population. Though

Study's Industry Composition

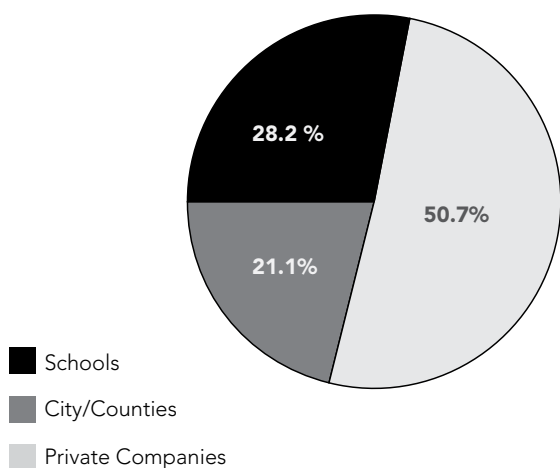


Exhibit A. 71.8% of BCBSMN employers with early retiree plans are schools and municipalities.

<sup>1</sup> Episode Risk Groups (ERGs™) were developed jointly by Integrated Healthcare Information Services (IHGIS), of Lexington, Mass. and Symmetry Health Data Systems of Phoenix, Ariz. and are being marketed exclusively by Symmetry. For more information, contact Symmetry at 602.840.1910.

our risk score analysis reflected this hypothesis, our claims data did not.

## Risk Scores

When comparing the overall 55-to-64 age band risk score to the rest of the employers' population, the members in the 55-to-64 age bracket are expected have costs that are 189 percent of an average individual's costs in these groups.

According to our risk scores, the early retirees are expected to cost 21.0 percent more than those working between ages 55 and 64, at least as a group. However, much of this overall conclusion is due to the heavy weighting of those in their mid-60s for early retirees as opposed to mid-to-late 50s for the working groups. When the banding of early retirees is dissolved and we look at each age individually, the majority of differences between the risk scores do not come close to the weighted average of 21.0 percent (see Exhibit B).

When a member ages, it is intuitive that their risk score also increases. With the ERG data, not only is this pattern shown but also suggests that the early retiree population's risk scores increase at a faster pace and that, at least on average, retirees' risks are similar to workers' risks that are generally two years older.

We noticed a sharp increase in risk scores for those working at age 64. This phenomenon could reflect a bias toward those on COBRA coverage as well as non-vested employees staying in their jobs even in bad health. Another possible factor could be that we are studying only 68 employers, and that this jump is a unique or temporary phenomenon for our book of business. These are only a few possible scenarios; there could be more.

## Claims Data

Given large enough populations, risk scores are normally very good indicators of where our two groups' claims should land relative to each other. We were expecting to show that retirees had higher costs than those working for each and every age. Aside from seeming sicker based on the risk scores,

Age	Working Risk*	Retiree Risk*	% Diff in Risk
55	0.84	0.92	10.0%
56	0.85	0.94	10.8%
57	0.88	1.06	20.4%
58	0.91	0.98	7.4%
59	0.96	1.13	17.2%
60	0.98	1.10	11.3%
61	1.06	1.16	9.4%
62	1.11	1.24	11.1%
63	1.14	1.28	12.4%
64	1.30	1.24	-4.8%
<b>Total</b>	<b>0.96</b>	<b>1.17</b>	<b>21.0%</b>

\*Adjusted by the average risk score of all 55-64 age members studied weighted equally

-Risk scores are calculated on a numerical scale from 0 to infinity.

~The average risk score is 1.00. If <1, lesser risk. If >1, greater risk than the study's 55-64 average.

-Average risk score of 55-64 aged members studied is 1.89 after normalization to the full 68 employers' average risk scores. ages 0 to 64.

there is a long-held belief in the actuarial field that early retirees go to the doctor more because they have more time on their hands. To study that theory more specifically, we broke out pharmacy claims from medical claims.

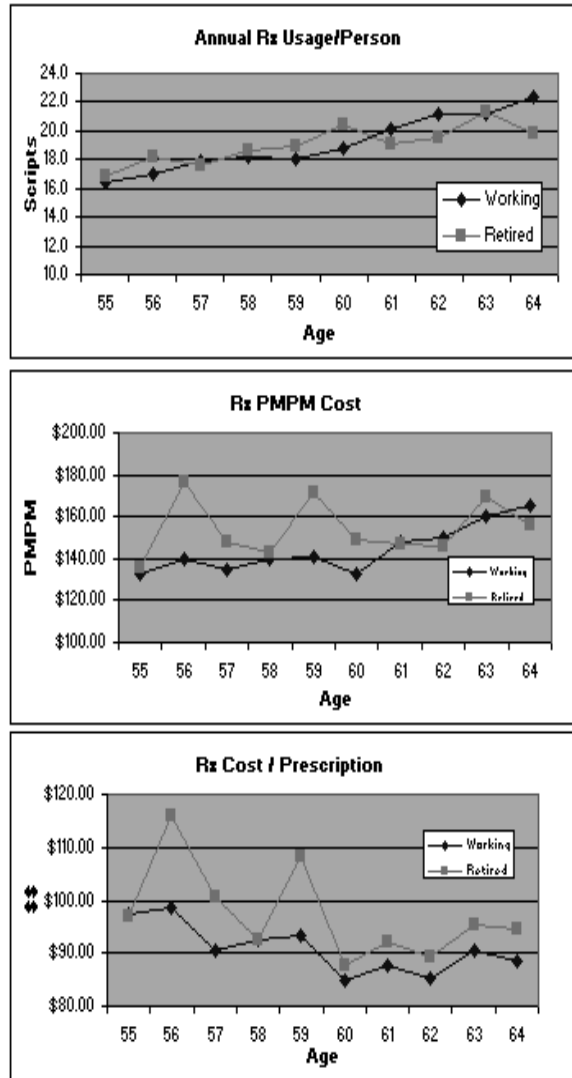
When comparing the two populations to one another, the early retirees purchase more prescriptions than workers, their drugs are more expensive, and their costs are higher. However, when examining the information age by age, the results are surprisingly different (see Exhibit C). The annual prescription use for workers versus retired members was very similar. Although prescription use is about the same, the cost per prescription and PMPM cost are nearly always (with one exception) more expensive for the retirees than the workers. Looking at information for pharmacy, we see that drugs are more expensive (per member and per prescription) for the retirees; there is a 7 percent (un-weighted) average difference between working and retirees. We see that the retirees' prescriptions are more expensive. However, when banded together such that the retirees' older age bias is reintroduced, there are differences in the retirees versus the working people ranging from 3 percent to 9 percent, much lower than we originally anticipated via risk scores differences.



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Exhibit C.



These graphs compare the working versus retiree information. As noted in the article, the drug usage for the two populations is similar, but there is great disparity in their costs.

Although retirees' pharmacy claims costs are almost always higher than the working, the medical claims do not follow this pattern. When breaking out each age interval, there is variation unlike anything we had anticipated (see Exhibit D). While the working population's costs increase in a semi-linear line, the claims for the retirees do not follow a definite pattern. We went into this study with the hypothesis that the costs of

retirees were going to be constantly higher than the non-retirees. Our experience does not support this hypothesis.

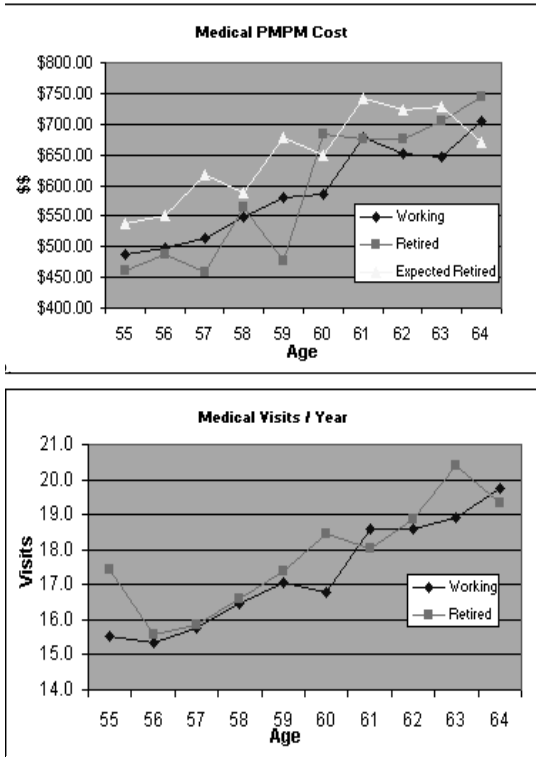
The expected claims for retirees indicated by the risk scores are much higher for the majority of the population than is actually experienced. In fact, the prediction is not close. Intrigued by these results, we took an arithmetic average of the differences in costs at each age and found the retirees to be on average only 0.24 percent more expensive than those working.

We expected the doctors' visits to be higher for retirees because they theoretically have more time on their hands, but as with drug data, the frequency of visits per year is very similar between the two populations. Because the cost data for the early retirees shows no distinguishable pattern, there is no evidence that our early retirees cost more than those working, at least when comparing similarly situated ages. Rather, early retirees cost more because of their bias toward older ages.

The theory that many people retire early because they are in poor health seems to be supported by the risk scores, but this did not translate to higher costs, at least for our population. Further, our findings show that this "free time" effect is not a likely cause of high costs. Using our risk scores as a benchmark to measure how much more we expect early retirees to cost, we find that the risk scores are predicting higher costs than are actually occurring. It is possible that early retirees are more diligent in shopping for medical care than their working counterparts. Thus, while their risk scores may indicate more utilization, their diligence in managing their own care might hold down the relative costs.

With our overall results, we find that by banding this age group together, there is a difference in PMPM of 12.5 percent, roughly \$90 PMPM in 2009, instead of the predicted 21.0 percent expected due to our risk scores. When changing our focus to an age-by-age study, our results do not support that retirement itself makes these members more expensive. The average cost increase from working to retired is only 1.7 percent higher and did not create a level of significant difference when tested through a p-value statistical

**Exhibit D.**



test. Rather, we conclude that it is simply the bias of early retirees toward older ages that causes this subset of members to be more expensive than their actively working counterparts.

## Conclusions

Consulting actuaries may find this information useful as they contemplate the experience and demographics of their active and retired population in order to set an expected level of claims for current and future retirees. That is, our study suggests that actuaries can aggregate the experience of similarly aged working employees when trying to predict health care costs for early retirees. Our findings also suggest that if the ages had been bracketed by wider bands, like five or 10 years, one would find many more cost differences between the two populations and might incorrectly attribute such difference to “retirement” rather than simple demographic bias. One way to get around the confusion is to not use age banding at all within retirement health valuations.

**Exhibit E.**

**Study's Employers' Risk Scores by Age Band**

Age Band	Average Risk Score	Cost Relativity
0 - 19	0.49	0.56
20 - 24	0.61	0.62
25 - 29	0.91	0.96
30 - 34	1.00	0.90
35 - 39	0.98	0.89
40 - 44	1.02	0.97
45 - 49	1.14	1.08
50 - 54	1.43	1.36
55 - 59	1.71	1.75
60 - 64	2.13	2.16
	1.00	1.00

As age increases, typically the average risk score and costs increase. For example, one would expect someone between the ages of 50 and 54 to cost 43% more than the average of this study, and the claims data reflects a 36% increase.

At the same time though, these findings suggest that insurers and employers should set premiums significantly higher for early retirees. These members have a bias toward the most expensive ages—not only of the age band itself which is expected to cost significantly more (see Exhibit E)—but even within the age band. This has particular significance in light of the current economies’ effect on delaying retirement now and in the future.

Please note that this data may be skewed by geographical and industry differences from what another employer or insurer might witness. For example, in our experience teachers tend to use more services and cost more than suggested by their risk scores. Our data could have overrepresentation of schools and municipalities and thus mask a phenomenon that may indeed exist. We would be interested in seeing whether other insurers’ experience mirrors our own. ■

# The U.S. Medical Malpractice System: Issues, Perspectives and Alternatives

By Gerry Smedinghoff



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The commonly accepted notion that “you can’t place a dollar value on a human life” has ironically resulted in multimillion-dollar medical malpractice judgments against doctors, driving many out of business and creating acute shortages in some areas of the United States, especially in high-risk specialties, such as obstetrics.

The current practice of obstetrics resembles a game of Russian roulette, with modest rewards, accompanied by the ever-present threat that the next pregnant woman in the delivery room holds the loaded chamber with a defective baby or high-risk delivery that endangers the mother’s life and the doctor’s career.

But if it’s true that “you can’t place a dollar value on a human life,” then shouldn’t doctors also be rewarded with similar multimillion-dollar bonuses for intervening and saving a life? How would the health care system work if the incentives for patients, doctors, lawyers and juries were reversed? Since patients contend—and juries eagerly agree—that one cannot place a dollar value on a human life and the burdens of pain and suffering are incalculable, should doctors be equally—and disproportionately—rewarded when they save a life or relieve physical pain and suffering?

If the incentives were reversed, obstetrics would be equivalent to a high-stakes lottery where doctors could buy as many tickets as they wanted, and be virtually assured of hitting a multimillion-dollar payoff at some point in their career, just as lawyers do today. These two extremes illustrate one of the great economic and legal mysteries of our age. Why does the U.S. legal system prevent patients and doctors from entering contracts to exchange money for vital goods and services?

## Actuarial and Economic Factors

From the actuarial and economic perspectives, there are multiple problems with the medi-

cal malpractice system in the United States, including:

- **Risk Assessment:** *estimating the inherent risk of the insured entity to determine the insurance premium.* Patients with complex and dangerous conditions that pose greater medical malpractice liability risk are not charged proportionally higher fees by doctors.
- **Insurable Interest:** *where insured parties have invested the equivalent of the economic value of the items they purchase insurance for.* Patients make no defined investment in their health (such as when they buy insurance for a house or car they own), nor do they place a predetermined value on their health (such as when they purchase life insurance to cover their financial obligations).
- **Morale Hazard:** *when insured parties lack incentives to take reasonable precautions to prevent losses they are insured for.* Patients are often noncompliant and exhibit self-destructive behaviors that undermine the best efforts of doctors to treat them.
- **Incompetent Decision Mechanism:** *when judges and juries make the wrong decisions because they are unable to assess the facts.* Jurors, who have been selected specifically for their lack of medical knowledge, decide innocence or guilt and award monetary damages.
- **Depreciation and Inevitable Failure:** *when the natural inevitable outcomes of disease and death are bundled with the potential man-made risks of medical malpractice.* While people recognize that some babies will be born with genetic defects and that everyone will die, the practice of medicine and the law often ignore these realities. Car owners rationally accept these facts when repair costs exceed the value of the vehicle. Aging,

disease and death are ultimately beyond the powers of medical science and inevitable for everyone. Emotionally, people don't think of human life this way, even if logically they know they should.

- **Moral Hazard:** when insured parties have an incentive to engage in malicious destructive behavior to profit from the proceeds of their insurance policies. The practice of medicine dictates that the best heart surgeon in town should attract the most difficult and severe cases. However, the medical malpractice system provides increasing pressure to avoid them and the additional malpractice risks they pose.

Notice that none of these insurance problems are solved by reversing the incentives in the mirror-image scenario, except that doctors—instead of lawyers—would be chasing ambulances. (Presumably, patients in ambulances have a more pressing need for a doctor than for a lawyer.)

## Dilemmas for Doctors

Dr. Shelby Wilbourn, an OB/GYN in Las Vegas, Nev., faced a doubling of his malpractice premiums, causing him to move across the country, where his premium dropped by more than 90 percent.<sup>1</sup> For the privilege of delivering 200 babies in 2002, his malpractice insurer charged him \$56,000, or \$280 per delivery, equating to a 20 percent surcharge. This would have jumped to \$108,000, \$540 per delivery, or a 40 percent surcharge in 2003.

Since patients never see malpractice premiums itemized on medical bills, to understand this from the customer's perspective, imagine paying \$25,000 for a new car, only to have the salesman say, "for an extra \$10,000, we'll guarantee that it works." Like having a baby, the cost of the warranty contract (malpractice insurance)

for a new car is included in the purchase price. However, few products or services have warranty costs that approach even 5 percent of the purchase price, let alone the 40 percent malpractice tax on having a baby in Las Vegas. In the auto industry, the standard three-year warranty comprises less than 1.5 percent of the cost of the vehicle for Japanese automakers, and about 3 percent for U.S. automakers.<sup>2</sup>

Dr. Wilbourn was sure his malpractice premium was grossly overpriced, but he didn't know what the market price should be. Even worse, actuaries responsible for calculating the cost of his malpractice premium don't know what that price should be either, because incompetent and unpredictable juries compound the risk assessment problem.

## Alternatives

The basic actuarial calculation for an insurance premium is the *odds of an event occurring* multiplied by the average *value of the loss*. The problem for actuaries is that both of these previously predictable variables have become unpredictable. First, when juries make the wrong decision by routinely assigning fault to the doctor—irrespective of the facts—actuaries are unable to calculate the true *odds of an event occurring* for the risks they are attempting to price. Second, when juries assess randomly large and unrealistic damages with their guilty verdicts, actuaries don't know what amount to use for the *value of the loss* for the second variable in their equation. Thus, a reasonably stable system of predictable outcomes is transformed into an unstable system of unpredictable outcomes.

Increasing the *odds of an event occurring*, or increasing the *value of the loss*, will naturally increase an insurance premium. This is exacerbated by another actuarial principle which holds that increased uncertainty further increases insur-

<sup>1</sup> "Fed-Up Obstetricians Look for a Way Out," by Rita Rubin, *USA Today*, June 30, 2002: <http://www.usatoday.com/news/health/healthcare/2002-07-01-malpractice.htm>.

<sup>2</sup> "Auto Warranty vs. Quality," *Warranty Week*, June 20, 2006: <http://www.warrantyweek.com/archive/ww20060620.html>.





ance premiums. The less certain an actuary is about either the odds of an event occurring or the value of the loss, the higher the premium should be. In other words, premiums for incompetent predictable injuries will be lower than premiums for incompetent unpredictable injuries.

One alternative to our current medical malpractice system frequently discussed is a no-fault, “bad outcomes” insurance policy purchased by the patient prior to surgery to protect her financially from an undesirable result. It exists today in the form of flight insurance, where the customer purchases a policy prior to traveling for a predetermined amount at risk. It appears to solve all six problems with the medical malpractice system by assigning values to the two primary insurance variables, which the patient consents to pay.

Travelers purchasing flight insurance assess their risks in advance when they buy the policy. They define their insurable interest, paying proportionally more for higher levels of coverage. There

is no morale hazard because airlines don’t know who purchased flight insurance. The incompetent decision mechanism is eliminated, because the question is no longer, “Who was at fault?” but rather, “Did the passengers arrive safely?” The inevitable failure of death is acknowledged and valued in advance, and the moral hazard is removed because travelers cannot affect the outcome of the flight, and thus contract disputes rarely result.

With no-fault bad-outcomes malpractice insurance, patients define in advance how dearly they value their life and health and how much a bad outcome is worth to them. Actuaries have ample statistics on maternal and infant mortality rates to calculate reasonably accurate and competitive premiums with a high degree of confidence. Insurers will charge arithmetically more for policies with a higher face value, and exponentially more for policies covering patients with high-risk pregnancies versus routine ones.

The cost of the risk of the patient’s condition is properly transferred from doctors, who cannot control it, to patients, who cannot escape it. Doctors can focus their efforts on achieving optimal outcomes for the patient, rather than on minimizing legal liability. In the event something goes wrong, the legal issue is no longer the difficult and subjective question of, “Who was at fault?” but instead the simpler and objective question, “What was the outcome?”

Warranty contracts for consumer products are routinely written with similar provisions, which limit the seller’s liability to the purchase price. For example, if someone buys a refrigerator for \$1,000, which becomes defective, he is legally entitled to a \$1,000 refund. However, the seller is not liable for the value of food that spoiled when the unit failed. But if a restaurant serves poultry products tainted with salmonella, customers can recover both the cost of their “defective” meal and monetary damages for the illnesses they suffer.

## Legal and Economic Barriers to Change in the Malpractice System

The restaurant example also illustrates four legal and economic barriers which prevent implementation of “no-fault” bad-outcomes medical malpractice contracts:

- **Inalienable rights.** People cannot waive their rights to their physical bodies.
- **Personal responsibility.** People cannot absolve themselves of responsibility for the consequences of their actions.
- **Unequal bargaining power.** Doctors have vastly more knowledge and experience of the risks involved with (a) the patient’s condition, (b) their recommended course of treatment and (c) their professional competence, than their patients.
- **Economic efficiency.** It’s more economically efficient and socially advantageous for the knowledgeable and responsible parties to bear the cost of the risks of routine implicit contracts of daily social intercourse.

The first problem with no-fault bad-outcomes medical malpractice insurance is that, while it defines in advance the exchange of money based on possible outcomes, it ignores the legal liability for bodily harm. While doctors and patients can agree to ignore this liability, the U.S. legal system will not. The laws of economics also make it inefficient to do this, as illustrated by the failures of no-fault auto insurance.

A fundamental principle of the U.S. legal system is that a citizen generally cannot waive or be denied his rights, which are deemed to be inalienable. For example, a person can agree to sell himself into slavery to a master, and even sign a contract to codify the terms. However, if the slave decides to quit and run away, and the master files a lawsuit against him for breach of contract, the courts will not enforce it.

The practical application to medical malpractice means that patients cannot waive their rights to sue their doctors for bodily harm. If a patient signs a contract with a surgeon that waives his right to sue, it is not enforceable in the courts. In cases of incompetence or negligence, the malpractice problem would not go away, because the insurer of the no-fault bad-outcome policy would then sue the doctor to recover its losses, just as an auto insurer might sue the driver of the car that hit one of its policyholders to recover its losses.

Another fundamental principle of the U.S. legal system is that a citizen—in most cases—cannot be absolved of the responsibility for the consequences of his actions. When parking lot owners post signs that read, “Not responsible for damaged or stolen vehicles,” this is generally valid because they are stating the contract terms are for providing a parking space, and not for security. However, a person cannot extend this legal principle by putting a bumper sticker on his car that reads, “Not Responsible for My Reckless Driving,” and then claim immunity for crashing into another vehicle because the other drivers on the road were properly informed of this in advance.

Third, doctors know a great deal more about the risks their patients face than the patients. Patients trust their doctors’ medical expertise and make decisions based on their doctors’ professional recommendations. When contractual disputes arise in cases of asymmetric knowledge of the parties involved, legal precedent holds that ambiguities and unforeseen circumstances are interpreted against the party with the superior knowledge, because it is in a much better situation to be aware of such potential outcomes, and is assumed to be able to take unfair advantage of the other party in such a contract.

Even if these legal barriers did not exist, the best argument against no-fault medical outcomes insurance is economic. The practical economic reality is that it’s much more efficient for *one* doctor—knowledgeable about the risks of medical conditions, treatment options and surgical procedures—to sign *one* contract for medical

Even if these legal barriers did not exist, the best argument against no-fault medical outcomes insurance is economic.

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malpractice at the optimum price, than for *many* patients—with little or no knowledge of the risks involved—to negotiate, pay for and sign *many* contracts at inflated prices because insurers were able to take advantage of their unfamiliarity with the situations they face.

All other forms of insurance operate on this principle. Drivers purchase a single insurance policy against the risk of a collision with anyone, not individual policies covering the risk of colliding with each other car. Similarly, building owners purchase liability insurance against the risks of structural failures, rather than everyone who enters a building negotiating and purchasing a separate insurance contract for the same risk.

When the Hyatt Hotel walkway in Kansas City collapsed in 1981, killing 114 people, none of the victims had thought to purchase insurance against such an unforeseen event. The property owner and architect were legally liable. It would be practically, legally and economically absurd for every person contemplating walking into a hotel lobby to consider negotiating and purchasing such insurance. And when someone doesn't think to, or bother to, purchase such insurance in advance, it does not mean either that (a) they place no value on their life, or (b) that injuring or killing them should not result in legal liability.

Reducing all this to one sentence: *The economics of the U.S. malpractice insurance market are efficient, but the U.S. legal system—as applied to medical malpractice—is not effective.* The proposal for no-fault bad-outcomes medical contracts attempts to sacrifice the economic efficiencies of medical malpractice insurance in exchange for the privilege of circumventing the ineffective U.S. medical malpractice legal system.

To illustrate why this is generally undesirable, consider the legal precedents that would be set—and the resulting social consequences—if people were able to avoid or severely restrict their liability for the consequences of their actions. Men would have incentive to coerce women they date—or even marry—to sign contracts stating they are not liable for child support should they get them pregnant. Projecting this scenario into other areas of routine social discourse will generate sufficient examples that would shake the foundation of our legal system and ultimately our civilization.

The lynchpin of the problem with the U.S. medical malpractice system is the defective decision mechanism. Fixing this problem will generally solve the others. Success will be measured when malpractice premiums are reduced to 2 percent to 3 percent of the costs of a doctor's practice, instead of the current 20 percent to 30 percent. ■

# Happy 30<sup>th</sup> Birthday, Health Section!

This year, the Health Section will be celebrating its 30th anniversary! The world sure has changed a lot in 30 years. Here is a quick comparison of then and now:

<b>Population of the US:</b>	<b>Per Capita spending on healthcare:</b>	<b>Number of practicing physicians:</b>
then: 229,250,000 <sup>1</sup>	then: \$1,281	then: 435,600 <sup>2</sup>
now: 311,250,000	now: \$8,684	now: 661,400 <sup>3</sup>

Some things have not changed much: gas prices spiked in 1981, and the inflation adjusted costs per gallon are quite similar.

#### **Cost of a gallon of gas:**

then: \$1.38 (\$3.39 when adjusted for inflation)  
now: \$3.55

Year	Gas Price	Adjusted for Inflation
1981	\$ 1.38	\$ 3.39
2011	\$ 3.55	\$ 3.55

The other constant throughout the years has been the high quality of the Health Section leadership. Members in leadership positions throughout the years have shared some of their memories and accomplishments.

*"The biggest challenge [to the actuarial profession] is to remain relevant. Actuarial exams imply there are rules to be followed. The real value of actuaries is to identify where there is an opportunity for new rules and then develop them."*

- Thomas Corcoran, 1997-1998

*"Perhaps the greatest outcome of my Health Section experience, and other subsequent actuarial leadership roles, has been my long-term friendships with colleagues I worked with at the SOA, the Academy, and International Actuarial Association. Many of these relationships have become warm and cherished parts of my life. "*

- Howard Bolnick, 1987-1988

*"The future of the discipline lies not in further specialization but in aggressively pursuing opportunities outside of our traditional employers. Market research performed by the SOA reveals numerous opportunities beyond payers including provider consulting, Accountable Care Organizations, pharmaceuticals, disease management, bio tech, device manufacturers, pharmacy benefit managers, think tanks and public health."*

- Jim Toole, 2007 – 2008

*"I think the sponsorship of the Health Watch publication has been an excellent ongoing accomplishment of the Health Section. The articles are varied, interesting, and generally well written. The publication provides a great opportunity for health section members to contribute their knowledge and thoughts to the membership and serves as another educational resource the SOA has to offer."*

- James O'Connor

<sup>1</sup> <http://www.census.gov/popest/archives/1990s/nat-total.txt>

<sup>2</sup> <http://bhpr.hrsa.gov/healthworkforce/reports/factbook02/FB102.htm>

<sup>3</sup> <http://www.bls.gov/oco/ocos074.htm>

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