Celebrating 25 Years
THE SOA HEALTH SECTION

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Health **Watch**

"For Professional Recognition of the Health Actuary"

Navigating New Horizons ... An Interview with Early Members of the Health Section

by Susan Abraham

On October 19, 1981, the Society of Actuaries (SOA) officially inaugurated its first practice section—the Health Section. As the 25th Anniversary of the SOA Health Section is celebrated, insights can be gained from some of the early Health Section members by understanding how they and others paved new roads, which would positively influence the SOA in countless ways.

A pioneer is someone who goes first and leads the way, making sure to leave a trail behind them that others can follow. Given that the Health Section was the first specialized section, pioneer is an appropriate description of the individuals who were interviewed.

The commitment of these individuals is recognized, as well as the contributions of all other Health Section Founders who could not be interviewed. Those interviewed included a former SOA president, a former Health Section Chairperson, and some early Health Section Council (HSC) members. But more than these titles imply, these four individuals were leaders, both in thought and action, who succeeded in shaping the actuarial profession in many significant ways.

The interviewees were Bob Dobson (former HSC member, 1983-1986), Harry Sutton (on the first HSC from 1981-1982), Anna Rappaport (former SOA President, 1997-1998 and former HSC Member), and David Axene (former HSC Chair, 1990-1991). Most of these individuals are continuing their service to the profession with activity in current SOA committees such as Medicare Reform, Consumer Directed Health Plans, and Post-Retirement Needs and Risks.

The interviewees were asked everything from why the Health Section was originally created to what they think would be the driving force for the Health Section in the future. The answers were varied and insightful, but they all had a common theme: the SOA Health Section is a vital part of both the SOA as a whole and the career development of many health actuaries. As the 25 years have flown by, the Health Section's role has become even more critical as the actuarial profession has become more specialized, and as the importance and cost of health insurance has grown.

In 1981, all of the interviewees were working either as actuarial consultants or for one of the large insurance companies. Currently, all are working as consultants; some head up their own consulting practices and some are semi-retired.

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SOCIETY OF ACTUARIES

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Letter from the Editor ... Art Imitating Life with Health Insurance

by Gail M. Lawrence

I finally got around to watching the movie Crash the other day on DVD. As most of you already know, the movie contains multiple story lines about egregious acts of racism. And then there is one other story line about the evil HMO that is repeatedly denying treatment for one of the characters.

This is hardly the first time that Hollywood has taken some shots at the industry. There was also John Q and The Rainmaker. If art imitates life, I'd say that the health insurance industry is currently suffering from a poor reputation. While Hollywood does not always get its facts straight, it is echoing a frustration that consumers have with the industry.

It wasn't that long ago that everyone loved to hate the phone and cable companies and it wasn't too hard to figure out why. Customers did not have a choice in their providers and when service was bad, there wasn't a whole lot to do other than just get mad. Fortunately, technology (with a little help from Judge Harold Greene) changed the essence of the communications business and competition has done an amazing job of creating a staggering array of choices at relatively low costs.

When it comes to health insurance, the typical consumer does not get a lot of choices.

If the consumers are employed, the employer may give them a choice of several plans and those choices will reflect the values and budget of the employer. And most employers have been cutting back on benefits while costs have skyrocked.

If the consumers are unemployed, self-employed or work for an employer not offering health insurance, the consumer may be able to purchase coverage in the individual market. A significant portion of applicants will be declined, have premiums rated-up and/or have waivers attached to their policies denying benefits for named conditions. High-risk pools (with high-risk premium levels) may then become the choice of last resort for some consumers, assuming premiums are still affordable.

Limiting choice may be the industry's answer to anti-selection, but it can be a source of dissatisfaction for the typical consumer. The lack of options for consumers can intensify their frustrations with administrative headaches and high rate increases.

In the senior market it was refreshing to see the abundance of choices that consumers had with Medicare Part D plans. The large number of choices was sometimes criticized as "confusing" for seniors, but it would be an enviable problem for most non-seniors.

While consumer-directed health plans seem like a step in the right direction, like the communications industry, the government could very well change the rules on risk selection, swinging the doors wide open on more choices for consumers. I won't be surprised if this happens some day.

On another note, with this issue we are introducing a new interview feature called, "Navigating New Horizons—An Interview with …." It is our goal to introduce you to a few health actuaries who have stretched the boundaries of our profession in some positive and innovative ways.

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Gail M. Lawrence is a consulting actuary. She can be reached at 515-224-4380 or at *LawrenceConsulting@mchsi.com*.

In 1981, it was apparent that the actuarial profession was headed down a more specialized route. Axene remarked that at Milliman it became clear that actuaries performed better when they became more specialized; similar conversations were going on concurrently at the SOA. Existing health actuaries were an underserved population at the SOA, largely overshadowed by property and life insurance actuaries. The interviewees elaborated on what needs they saw the SOA Health Section satisfying at the time of its inception:

Sutton remarked that:

- Health actuaries wanted to learn more about aspects of healthcare in a group setting and to have a forum to talk about healthcare issues.
- Health actuaries needed more opportunities for health-specific continuing education.
- Basic health-specific actuarial education, as well as the representation of health content on educational exams, needed to be encouraged.
- There was a need for health-specific actuarial research. The health actuarial discipline was relatively new at the time, and it was, and still is, important to get state-of-the-art input into issues that health actuaries face in their work.

When asked why they personally decided to be a pioneer for the SOA Health Section, Dobson mentioned that the first actuary who hired him, Jarvis Farley, had impressed upon him the importance of giving back to the profession. He has carried this ideal throughout his career.

Others said that they saw it as an opportunity to influence positive change—whether it was to propel forward the HMO movement that was just building steam, to push the traditional boundaries and roles of the actuarial profession, or to encourage actuaries to focus more attention on their external environment rather than internal conditions.

When asked what they thought were some of the major milestones of the SOA Health Section over the last 25 years, the responses were:

- *Growth*. What started as a distribution list of 600-800 people has now grown to nearly 3,500 members.
- *The Health Section Newsletter*. The newsletter began in the early 1980s with multiple regional editors. It provides documentation of the progress of the Health Section.
- *Groundbreaking Section*. Serving as the first specialized section at the SOA, it blazed the trail for many other sections such as Pension and Life.
- *Specialized Continuing Education*. The Health Section has provided enormous opportunities for continuing education for health actuaries, including a Spring Meeting entirely devoted to health.
- *Research*. Innovative research has been supported by the Health Section, which is respected within the profession as well as in the healthcare industry at large.

When asked what advice they would give to either a current HSC Council Member or a novice health actuary, the interviewees had a great deal to say, including:

A Peek at Harry Sutton's Reading List

Are you interested in knowing what Harry Sutton, a founding member of the Health Section, has been reading lately? Here's a sampling of articles that you can easily find on the Internet by Googling the title in its entirety.

- "MarketWatch: Illness and Injury as Contributors to Bankruptcy." Published by *Health Affairs* on February 2, 2005.
- Kaiser Daily Health Policy Reports.
- "Top Ten Healthcare Trends of 2006," Forecasted by HealthLeaders-Interstudy. HealthLeaders-Interstudy is a company of Decision Resources, Inc.
- "Health Insurance Coverage in Minnesota from 2001 to 2004." *University of Minnesota Research Briefs*, March 2005.
- "The Effect of Population Aging on Future Hospital Demand. (A simulation of future spending finds that aging will not be the strongest influence on inpatient hospital use.)" Published by *Health Affairs* on March 28, 2006.
- "Who Is at Greatest Risk for Receiving Poor-Quality Healthcare?" *The New England Journal of Medicine*, March 2006.

- Rappaport said it is important to serve and make a contribution to the profession. There are a wide variety of ways to serve and one should try to match one's role with their interests.

- Axene remarked, "Be involved with anticipating the future about our profession and where it is going. [We] need thought leaders, and less traditional people who do not get too comfortable, to anticipate change and prepare for it."

- Sutton mentioned that it is important for the Health Section to pursue joint research projects with universities, healthcare organizations, etc. "SOA should use the research to drive their objectives toward producing an acceptable solution to [provide] long range universal heath care access."

- Dobson commented on the role of Health Section Council members in educating the public and leaders about healthcare issues from an actuarial perspective.

Finally, when asked what they thought would be the driving force, propelling the SOA Health Section into the future, there were inspiring responses.

- Dobson observed, "It is always easy for actuaries to find problems with a proposed solution: it would be nice if we could be involved in proposing solutions as well."

- Rappaport said, "The health system is in a huge state of flux; [the SOA Health Section] needs to balance meeting short-term needs of customers and trying to be players in the evaluation and improvement of the health system overall."

The founders interviewed knew early on what would drive their profession, which is why they played a pivotal role in founding and developing the Health Section. The next generation of health actuarial leaders is charged with continuing to anticipate the future needs of health actuaries, and tailoring the Health Section to meet those needs.

Susan Abraham s a student at Northwestern University and worked as an intern at the Society of Actuaries in the summer of 2006.

Highlights from the Past 25 Years of the Health Section

- **1981:** Birth of the Section
- **1982:** Health Section Membership = 815
- **1983:** Research and Data Committee Identified "Useful Sources"
- **1984:** Sponsored Call for Papers Contest
- **1985:** Developed Report of Subcommittee on "Interim Analysis of Rate Stabilization for Individual Health Insurance"
- **1986:** Produced Special Supplement on "A Statistical Select-Ultimate Model Built on Regression and Alienation"
- **1987:** Distributed Third Exposure Draft on Health Reserve Proposal
- **1988:** Submitted a Report on Valuation Standards for Health; Developed a Special Topic Issue on Long-Term Care Insurance
- **1989:** Commented on NAIC Life and Health Actuarial Task Force Proposal to Revise the Guidelines for Filing Premium Rates
- **1990:** Sponsored Best Research Paper Competition
- **1991:** Conducted Small Group Durational Study; Announced Research Paper Winners: "Natural Limitation of Healthcare Trend" and "Modeling Flexible Benefit Selection"
- **1992:** Disseminated Large Claim Study RFP as part of Health Database Project
- **1993:** Initiated the Health Data Base Project
- **1994:** Released Exposure Report of the LTCI Valuation Methods Task Force; Formed Joint AAA/SOA Healthcare Reform Communications Work Group
- **1995:** Released Mental Health Research Study RFP; Hill Memorial Prize awarded to Health Section Member, V. Young
- **1996:** Released Group Insurance Large Claims Data Base Collection and Analysis Study; Inaugurated Disability Special Interest Group Newsletter
- **1997:** Reviewed EBRI Data book on Employee Benefits
- **1998:** Developed Report on the Actuary's Role in Managed Care
- **1999:** Reprinted the Paper "Cumulative Antiselection Theory" in Celebration of the SOA's 50th Anniversary
- **2000:** Created Health Section Web page
- **2001:** Called for Research Projects on Information, Data or Tools Useful to Practicing Actuaries
- **2002:** Undertook Study on Claims-Based Methods for Health Risk Assessment
- **2003:** Evaluated Results of Care Management Interventions and Outcomes Measures
- **2004:** Estimated Impact of Medicare Part D on Retiree Prescription Drug Costs; Developed Statistical Tools RFP; Conducted Joint GUAA/SOA Seminar
- **2005:** Conducted Simulation Literature Review and Large Claims Study
- **2006:** Celebration of the Health Section's 25th Anniversary

Over the Counter Drugs, the New Tier Zero in Your Pharmacy Benefit Plan

by Steve Berna

With many pharmacy benefit plans now considering whether to add a 4th tier for high priced specialty drugs, review and discussion also needs to be given to the other end of the pharmacy cost spectrum to see how costs can be reduced by promoting lower cost over-the-counter (OTC) drugs.

The FDA has set a goal to increase by 50 percent the conversion of prescriptions to over the counter (OTC) medications. This trend presents a significant opportunity for employers, union groups, health plans and other payers of healthcare to reduce their pharmacy benefit costs.

Today, drugs that in recent years were among the top 10 drugs in pharmacy budgets are now available as an OTC product at a significantly reduced total cost. Promotion or even coverage of these OTC alternatives can save both members and payers on their pharmacy costs.

Examples with Costs and Alternatives

Examples of highly utilized medications that are now available without a prescription are Claritin, a non-sedating antihistamine used for allergies, and Prilosec, a proton pump inhibitor (PPI) used to treat gastrointestinal disorders. Prior to going OTC these drugs were both number one in their respective drug classes. Claritin (generic name loratadine) has been available as an OTC drug since late 2002. Prilosec (PrilosecOTC) was released to market in late 2003.

Claritin is marketed under many names; however, all contain the same active ingredient of loratadine (see chart below). Also of note is Clarinex, the follow-up drug made and marketed by the manufacturer of Claritin. Clarinex is a metabolic derivative of Claritin and, according to medical experts, when you take Claritin, Clarinex is produced. Some plans have questioned the value of covering Clarinex as a preferred brand drug as may be recommend by their PBM, or in some cases, the value of any coverage at all for the drug.

Plans that have put in cost control measures, such as placing all drugs in the non-sedating antihistamine class on the higher third tier copay to incent members to use OTC Claritin, need to be aware of more expensive alternatives and to monitor their utilization. For example Singulair, a drug originally prescribed for asthma, is now indicated for allergies. Based on the costs in Table 1 from drugstore.com (as of 3/8/06 unless otherwise noted) one can see that having members move from Clarinex to Singulair could have a negative effect on the plan.

Table 1

Market Name	Active Ingredient	Manufacturer	Monthly Cost	Prescription or OTC
Claritin	loratadine	Schering-Plough	$22.99	OTC
Alavert	loratadine	Wyeth	$15.99	OTC
Store Brand	loratadine	Various	as low as $2.50	OTC
Clarinex	desloratadine	Schering-Plough	$76.99	Prescription
Singulair	montelukast	Merck	$89.99	Prescription

Table 2

Market Name	Active Ingredient	Manufacturer	Monthly Cost	Prescription or OTC
Prilosec	omeprazole	Astra-Zeneca	$115.99	Prescription
Omeprazole	(prior to approx. 5/06)	Various	$93.99	Prescription
Omeprazole	(after 5/06)	Various	$22.99	Prescription
PrilosecOTC	omeprazole	P&G	$17.85	OTC
Nexium	esomeprazole	Astra-Zeneca	$129.99	Prescription

Prilosec (generic name omeprazole) is another example of a drug marketed under various forms and names (see Table 2). A generic omeprazole was released several years ago, but due to legal issues surrounding the brand's patent protection, the generic drug kept a higher price for a longer period than normal. The maker of Prilosec then released Nexium, a follow-up brand drug that has been very successfully marketed as a replacement for people on Prilosec. As with many follow-up drugs Nexium, which is closely related to Prilosec, is an isomeric derivative and according to medical sources when you dissolve one of these drugs you get the other.

A few plans took the approach of moving all branded drugs in Prilosec's class to the higher third tier copay. Concerns over the loss of rebate payments in this drug class can be a barrier to moving drugs to the third tier if a payer does not have a coordinated message to members and providers, as well as other incentives to take the lower cost drugs in this class. Some payers took a more customer friendly approach and covered PrilosecOTC as a generic drug to entice its use.

Future OTC Conversions and Strategies

Other drugs under consideration for future OTC conversions are: Xenical for weight loss; Flonase allergy spray; Prevacid, another proton pump inhibitor (PPI) drug in Prilosec's drug class; as well as Allegra and Zyrtec, additional non-sedating antihistamines (NSA) in Claritin's drug class.

Your Pharmacy Benefit Manager (PBM) partners and/or consultants should be helping you watch these pending OTC conversions for potential cost savings for your plan. The payer will need to look at the alternatives of whether they want to promote the continued use of these drugs when they become available as OTC, or consider covering the drugs like a generic drug with a low copay for members.

Promotions of these OTC drugs can take several forms. One method is to contact the manufacturer of the OTC drugs to see if it has a coupon program for sending coupons to your plan's membership who could benefit from consideration of these OTC alternatives. Many manufacturers of OTC products have programs where patients can receive a high value coupon that is not available to the general public. While this type of program is "member friendly," it is not available through all PBMs and does have the potential to jeopardize rebate payments.

Another steering method is to consider a cost control mechanism such as prior authorization or step therapy through the PBM where the member would be required to try the OTC drug prior to getting coverage of other higher cost prescription alternatives. Programs like this have higher member disruption as compared to coupon programs, higher potential for rebate loss, and are not available from all PBMs.

Case Studies

Promotion of these OTC alternatives is often left up to the payer or employer group to handle. Although some PBMs will recognize and continue

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How Do You Communicate Success?

by Glenda Maki

Editor's Note: The following article is reprinted with permission. It last ran in Volume 14, Issue No. 4, Winter 2005 issue of The Future Actuary *newsletter from the Society of Actuaries.*

Think about an office you may have worked in or currently work in. Chances are the owner, president, CEO, etc., isn't hunched over a computer in his or her office. Instead, leaders spend the majority of their time meeting people, making connections or selling the company's products or services. What do these people have that the average worker may not? They have excellent communication skills.

As with any field, there are two parts to a successful career—doing the actual work and then communicating the results. As an actuary, you may be doing a lot of analytical work, however, eventually that analytical work will need to be shared. Decisions will need to be made on what to say, how much to say and what not to say.

Becoming a Multi-Dimensional Actuary

If you're an excellent communicator, you will rise in the company faster than someone who isn't. Take a look at people like Donald Trump, Oprah Winfrey or Jack Welch. Like them or not, they all have business skills and the ability to communicate well to others. As Laurie Schloff, communication coach at The Speech Improvement Company, located in Boston, Mass., says, there are two sides to communication. "There's the business side of communicating—what you know about your field—and then there's the human side."

Schloff specializes in the "human side" of communication, emphasizing that there is a difference between having knowledge and being able to talk about that knowledge in a way that people can understand. To illustrate this, in a recent presentation to actuaries, she asked attendees to explain "nested stochastic analysis," with the goal of explaining it so an outsider would understand it. The person who explained it the most clearly received a prize.

The Communication 'Pie Chart'

Schloff visualizes communication as a pie chart. One-third of the pie is the actual content (i.e., the words you choose and how you organize your talk).

One-third of it is what you call your oral image, or how you sound. This includes your talking speed, volume, sound of your voice and how interesting you are to listen to (a big issue for people in technical fields).

The final one-third of the pie chart is your visual image, or how you look. Your look includes:

- Facial expression
- How you use your hands

Lauries' Top 5 Communication Tips

1. Think mind over mouth. Think of your goal and how you want to express it before you open your mouth.
2. Check your appearance. Is your nonverbal image expressing confidence and comfort?
3. Listen to your voice. Are you controlling speed, volume and the ability to hold the audience's interest?
4. Be pleasant and approachable. No matter how focused you are on the task always take the time to be personable.
5. Analyze how you did. Search for ways to keep improving.

- How you stand
- Where you look when you're talking to a group
- Your clothing—it's important to dress for the job you want, not the one you have.

Visual image also includes your visual aids—what your charts and diagrams look like.

She advises investing in some good communication courses "… and some great clothing. Let your visual image reflect confidence."

Practicing your Communication Skills

Now that you know you need to beef up your communication skills, how do you do it? Schloff offers a couple of simple exercises that you can practice on a regular basis. One is to try to explain certain concepts and ideas to people who aren't in your field. A good way to do this is to define the idea in 15 words or less, then follow the definition with an example.

Another way to practice is by leaving voice mail messages. In general, people prefer a voice mail message that is 15 seconds or under. Schloff calls this the "mind over mouth" technique. Ask yourself: "What's the main point I want to make? Write down a few notes. It may sound overdone, however it is important—especially if you're job hunting.

Communicating with Non-Actuaries

Another thing you can do when communicating with non-actuaries is to ask them how much they already know about your topic. You've probably seen a teacher or a public speaker use this technique.

Schloff offers an example. "You can ask your audience: 'Are red pens something you're familiar with, or would you like me to start with some of the basics about red pens?'" At that point, your audience will give you an idea of where they're at. Once you've gauged the audience's level of understanding, state the term or the concept, give a definition and an example.

Direct Communication

Depending on whom you're presenting to, the speaker can be either direct or indirect in his or her presentation. Schloff advises that direct communication works best when people already buy into your expertise.

For example, if you're the hired actuary, and an audience is looking for your opinion, there's no need to be indirect, you can come right out with your conclusion. In this case, you would first give the conclusion and then support the conclusion with three backup points.

Indirect Communication

If you're looking to persuade an audience, or if they're not familiar with the material you are presenting, indirect communication will work more effectively. When using indirect communication, you present your points or evidence first, then deliver the conclusion.

As with any field, there are two parts to a successful career—doing the actual work and then communicating the results.

Wrap-Up

If you get the opportunity, take advantage of classes or workshops that build communication skills. You can also join your local Toastmasters club, *http://www.toastmasters.org/*, which allows people to practice their public speaking skills. And if you're short on time, at least practice the exercises presented in this article. Make sure your hard work really pays off by becoming one of the next great communicators!

Special thanks go to Laurie Schloff for her contributions to this article. You can reach Laurie at 1-800-LETS-RAP in the United States at 617-739-3330 or at ***laurie@speechimprovement.com****.*

Laurie Schloff is a senior coaching partner at The Speech Improvement Company and conducts "Analysis and Presentation of Strategic Financial Information" workshops for the SOA. She trains and coaches in presentation skills, leadership training, fear of speaking, conference coaching and facilitation skills. She is also the author of two popular books: Smart Speaking *and* He and She Talk. *Laurie is a frequent guest expert on radio and TV. She has been a guest on Oprah and The Today Show and is also a contributor to* Cosmopolitan, Woman's Day *and* Ladies Home Journal.

ReFocus 2007

Hyatt Lake Las Vegas, Nevada

March 4-7, 2007

The Society of Actuaries, through the Reinsurance Section Council, is developing a new reinsurance industry meeting in conjunction with the ACLI. "ReFocus 2007" has the theme, "Challenges: Global And Local," and is targeted at senior reinsurance professionals. The event is scheduled for March 4-7, 2007 at Hyatt Lake, Las Vegas, Nevada.

This meeting will be different from a traditional Society of Actuaries meeting. The conference will bring together senior executives from multiple disciplines to share and discuss international reinsurance issues.

The seminar will encompass a broad array of speakers and topics for actuaries and non-actuaries, including underwriters, CEOs, CFOs, lawyers, accountants, auditors and regulators, rating agencies, banks and vendors in the industry.

The following outlines the sessions currently being planned:

1. Senior level presentations by CEOs from Life Insurance and Life Reinsurance companies
2. Impact of Global Standards development on reinsurance
3. Convergence of Reinsurance and Capital markets
4. Impact of Regulatory Environment changes on reinsurance
5. Global Demographics
6. Life, Health and Annuity Products and Reinsurance
7. Risk Transfer and Financial Reinsurance
8. Life and Health Underwriting challenges in a global underwriting environment
9. Data Standards and Reinsurance
10. Corporate Structure and Third Party Reinsurance – a tax perspective
11. Principles Based Reserving – Impact on Life writers and reinsurers
12. Long Term Care Market & Reinsurance
13. Interest Sensitive Products & Reinsurance
14. Risks of Reinsurance – a legal/treaty perspective
15. Risk Mitigation vs. Concentration of Risk
16. Accident & Health Reinsurance
17. Dispute Resolution & Reinsurance
18. Impact of consolidation in the Reinsurance marketplace
19. Impact of medical advances of the future of life, health & annuity marketplace
20. Impact on the insurance/reinsurance industry of potential collapse of public support systems (speaker: ACLI President Frank Keating)
21. Reinsurance Arbitration
22. Advances in Underwriting Technology

This event will also provide ample opportunity to network with your industry peers at receptions and also a fundraising opportunity for the Actuarial Foundation.

The Reinsurance Section Council is looking for volunteers to assist with further development of programs and recruiting of speakers. We are also looking for speakers interested in presenting any of the topics. The sessions are still tentative and subject to refinements by the speakers being recruited.

To volunteer, please contact Mark Troutman or Craig Baldwin at the following address and mark your calendars!

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to promote these former number one drugs in their respective drug classes that are now available OTC, many leave these drugs off the radar after they go OTC. The following are three case studies of various results from our clients.

Client A
This client did nothing additional for OTC loratadine and PrilosecOTC, and left all preferred brand alternatives on tier 2 in both drug classes. This resulted in a 40 percent decrease in the NSA utilization, which was reflective of changes in the national market. However, this apparent savings was offset by increased Singulair use. Singulair, an asthma drug now indicated for allergies, is now in this client's top-10 usage list, and has offset a significant portion of the 40 percent decrease for a net decrease of approximately 15 to 20 percent in total allergy-related expenditures. For the PPI drug class they saw no change.

Client B
This client performed continuous promotions of OTC loratadine and PrilosecOTC with letters and coupons. The NSA brand alternatives (and Singulair) moved from tier 2 to tier 3, but PPI brand alternatives stayed on tier 2. The NSA drug class experienced a 50 percent decrease in costs with a significant drop in utilization and movement to Singulair, mitigated by placement of that drug on tier 3.

PPI results were minimal with Nexium and other PPIs use still being significant. The major issue in this class is that cost for PrilosecOTC is greater than member cost of copays for some prescription alternatives.

Client C
This client decided to cover both OTC loratadine and PrilosecOTC at the generic copay. It also did heavy promotions to members and providers. All brand alternatives moved to tier 3, with additional step therapy on PPIs and lockouts on 'follow-up' brand alternatives. The results were rather impressive.

For the NSA drug class, OTC loratadine showed a market share of 11.8 percent versus the 6.0 percent national average. These results are probably understated because the cost of OTC loratadine is lower than the generic copay, so some OTC purchases are not submitted for reimbursement, bypassing the claims recording systems. Clarinex (follow up brand to Claritin) has a market share of 0.3 percent versus the 7.9 percent national average. Overall, this client has significantly less utilization at a slightly lower cost for an estimated combined decrease of 60 percent in the costs of its NSA class over a three-year period!

There have been many opportunities for OTC savings in the recent past and they are expected to continue in the near future.

In the PPI class the results were even better. PrilosecOTC is the top PPI in that drug class with PrilosecOTC at a market share of 65.4 percent versus the 5.7 percent national average. Nexium (follow-up brand to Prilosec) has a market share of only 4.9 percent versus the 29.5 percent national average. Despite a higher utilization of PPIs, this client's overall per unit cost is significantly lower with an estimated combined decrease of 49 percent in its costs over 4.5 years!

Conclusion

There have been many opportunities for OTC savings in the recent past and they are expected to continue in the near future. When a drug goes generic, both payers and members can benefit from significant savings, which occur as a natural consequence of the lower generic cost and the existing processes. However, when a drug goes OTC it is up to the payer and its pharmacy benefit partners to take action to capture the potential savings that can be realized.

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Medical Underwriting: Protective Value Study of MIB's Checking Service

by Jonathan Shreve

Abstract

Medical underwriting is the cornerstone in the evaluation of individual medical risks. However, one of the largest challenges an underwriter can face is insufficient information on health conditions provided by the applicant. Part 2 medical questionnaires can be inherently confusing to applicants; consequently, relevant medical information may go unmentioned. Some applicants may have poor recall or think that a condition is not worth mentioning since it is being medically treated. Worse yet, some may intentionally omit information in an attempt to receive a more favorable rating or increase their insurability. Ordering traditional underwriting requirements such as APSs can slow time service and add cost; rescission strategies based on fraudulent misstatements can pose considerable public relations challenges. Increasingly, health underwriters are utilizing an industrywide database of pooled medical information from prior insurance applications to help them verify applicant statements and uncover missing health information relevant to accurate risk selection.

MIB engaged Milliman to study the protective value of this service, comparing the cost of the service to the savings from either charging additional future premiums or avoiding unexpected claim costs. Milliman made every effort to develop the protective value estimates using objective and realistic methods. Historic prescription drug utilization provided by services such as IntelliScript (Milliman) and MedPoint (Ingenix) perform a similar function although in a different way. This article is intended to inform readers on the MIB Checking Service (checking service) as well as lay out a framework that can be used to quantify the protective value of other underwriting tools.

Milliman performed an analysis of 894 uses of the checking service on individual medical health insurance applications to gain a better understanding of its protective value. The results showed the carrier used for this analysis improved its loss ratio by approximately six percentage points as a result of having access to medical information from prior insurers. Additionally, we found the protective value accrued to the carrier in their health underwriting process was between $43 and $51 for each dollar it spent on MIB services including the internal costs associated with using the service.

The changes in loss ratio and the protective value may vary depending upon the additional sources of information available to a company for underwriting decisions, the underwriting actions and the efforts taken by a company to further develop information that it received from the service.

Data Gathering Approach

Milliman based the protective value analysis on 894 uses of the Checking Service by USHEALTH Group, Inc. The loss ratio analysis calculated projections of premiums and claims both with and without use of the checking service; the improvement represented by the difference.

We reviewed the statistical method used to select cases. Each case was reviewed to determine whether information from the checking service was returned, whether the information was useful and/or not otherwise available to the company, and the expected value of this information to the insurer. We then estimated the present value of savings the company realized as a result of its underwriting actions. Data and information for the analysis was supplied by MIB. This information included data on the number of cases where the checking service information was and was not found and the underwriting results for the cases where information was found. Policy data such as premiums, age, sex and other census data was sourced from the carrier. An underwriting consultant provided descriptions of the conditions uncovered by the checking service, the estimated usefulness of the results and the indirect costs associated with submitting a case to the checking service. The carrier provided information on profitability data for the product—expected loss ratios, lapse rates, commissions and other expense data as

well as the marginal underwriting costs associated with acting on information found by the checking service.

Study Sample

Selected cases for this investigation were from applications underwritten by the carrier during the period October 2004 to March 2005. This study was based on 894 uses of the MIB service by USHEALTH. Each use was reviewed to determine whether (a) information from MIB was returned, (b) whether the information was useful and/or not otherwise available to the company, and (c) the expected value of this information. MIB randomly sampled and accumulated 894 cases (stratified to match USHEALTH's age distribution) in order to find those 296 cases for use in this study. These 296 cases represent cases where MIB information was potentially available and useful. Of these 296 cases, 31 were eliminated because the applicant and the person for whom MIB returned the information did not match. Of the 265 remaining cases, 189 cases were eliminated because, in the underwriter's judgment, MIB provided no new information. The underwriting consultant concluded that there was full or partially new information provided in 76 cases. In these 76 cases, the carrier applied five possible underwriting decisions:

- 8 cases were issued as applied for;
- 51 cases were declined;
- 9 cases were issued with an exclusion rider;
- 5 cases were charged an additional premium; and
- 3 cases were filed incomplete, indicating clarifying medical information requested from the proposed insured was never returned and a policy was never issued.

Therefore, 68 cases (all except the eight that were issued as applied for) were considered to have received "useful" information from the checking service, which appeared to have changed the action taken by the insurer. Cases that were offered with an exclusion rider or a rated-up premium and then not taken were treated as declines. In 56 of these cases, the underwriting consultant concluded that the MIB information was entirely new information, and the case would have been issued as standard had that information not been available. In 12 cases, the underwriting consultant felt that the information was only partially new, and only half of the savings (the "exclusivity ratio") were considered in the study. If there was a question of exclusivity, the consultant indicated that she erred on the side of less exclusivity assigned.

Underwriting Analysis

With current underwriting information about height, weight, age, gender, tobacco use, medical tests, and medical conditions, the *Milliman Individual Medical Underwriting Guidelines* were used to estimate annual costs over the term of the analysis. The expected savings was calculated by using the *Guidelines* to retrospectively medically underwrite all of these 68 applicants and determine potential or actual claim costs.

Declined Applicants

Fifty-one applicants were declined coverage, after the insurer verified additional information from the checking service. For each of these 51 applicants, Milliman calculated the savings to the company as the present value of the additional excess costs above the expected premiums received for the person over a seven-year savings horizon. After seven years, our model showed very little present value savings because of lapses and discounting. The impact on the loss ratio calculations is to remove both the standard premium and the claim costs associated with these applicants.

Rated Up Applicants

For five applicants, the insurer decided to increase the premium charged to the applicant because of information verified from the checking service. For these cases, the value to the insurer of the additional information from the checking service was the present value of the amount of excess premium they received, net of commissions and premium taxes. Commissions and premium taxes were excluded, because they have no impact on whether MIB is used or not. The impact on the loss ratio calculations is to add the additional premium collected.

Rider Applied to Applicant

For nine applicants, the insurer decided to apply exclusionary riders to applicants after it learned of pre-existing conditions from the checking service and separately confirmed these conditions. These riders exclude a portion of coverage for these applicants. We used analysis from the development of the Guidelines, which calculates the expected value associated with various riders, to estimate the portion of costs that were now excluded, which they would have previously covered. The impact

(continued on page 14)

on the loss ratio calculation is to remove the excess claims covered by the rider.

Development of Cost Assumptions

The cost of the fee for providing the checking service was $2.42 per policy. The $2.42 is the actual cost per policy for the observed company. MIB fees are based on a mixture of fixed and variable costs. For a smaller company, the costs would be higher than stated. We would characterize USHEALTH as a medium-size client company for MIB. For policies that generated a return of information from MIB that was found to be useful and exclusive to any degree, we assumed (based on discussions with the company's chief underwriter) a $50 per policy cost for additional underwriting activities undertaken due to this information. For policies that generated a return of information from MIB that was not found to be useful, we similarly assumed a $10 per policy cost for the time taken to review the results.

Development of Loss Ratio Improvement and Protective Value

The improvement to the loss ratio (the ratio of expected claims to premium) can be measured by comparing the loss ratios with and without receiving additional information from the checking service. For simplicity, we used a 60 percent expected loss ratio when there was no assumed usage of the checking service, and did not include expenses, reserves, investment income, taxes or cost of capital. The most obvious cost associated with the screening service is the fee charged by the service. Other indirect costs occur when information is returned from the screening test, such as additional time spent processing the application, gathering further laboratory tests and obtaining APSs.

We assumed the same durational pattern as present in the Milliman *Medical Underwriting Guidelines*, which outlines the progressions of costs from time of diagnosis. Because acute medical costs often decrease in cost over time, and from the impact of discounting, 68 percent of cost savings were in the first three years (using a 12 percent discount rate).

The loss ratio calculation, without the checking service information is:

$$\text{Loss Ratio} = \frac{\text{Present Value (Claims)}}{\text{Present Value (Premium)}}$$

The loss ratio calculation, after the impact of the checking service information is:

$$\text{Loss Ratio} = \frac{\begin{array}{l}\text{Present Value (Claims) -}\\ \text{Present Value (Declined Claims)}\\ \text{- Present Value (Ridered Claims)}\end{array}}{\begin{array}{l}\text{Present Value (Premium) +}\\ \text{Present Value (Rated Up)}\\ \text{- Present Value (Declined}\\ \text{Premium)}\end{array}}$$

There are a number of assumptions required in order to calculate the present value of the future expected savings and changes in loss ratios. These assumptions include excess morbidity levels associated with the findings of the test, policy termination rates, medical trend rates, exclusivity ratios and the discount rates to use in the present value calculation. The policy termination rate assumptions were based on USHEALTH's overall lapse rates; however, it was assumed that substandard policies would have half that normal lapse rate, due to adverse selection. For policies that generated a return of information that was found to be useful and exclusive to any degree, a $50 per policy cost was assumed for additional underwriting activities undertaken due to this information. For policies that generated a return of information from the checking service that was found not to be useful or exclusive to any degree, a $10 per policy cost for the time taken to review the results are assumed.

Findings

Our calculations show that the checking service projects a reduction in the overall loss ratio by 6 percent at a 15 percent discount rate or 6.3 percent at a 6 percent discount rate. Other companies or other samples from this company would produce differing results. The projected loss ratios, with and without the checking service, are shown in Table 1 on page 15.

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The results of the protective value calculation for two discount rates are shown in Table 1 below. There is no one correct discount rate. The optimal discount rate would be one that is appropriate based on the desired hurdle rate, cost of capital and views about the potential variance of results. We believe the range of 6 percent to 15 percent for discount rates is appropriate for these results.

As shown in Table 2 in the right column, the per-policy protective value ranges from $367 at a 15 percent discount rate to $438 at a 6 percent discount rate. The savings/cost ratio ranges from $43 of savings for every $1 of cost at a 15 percent discount rate to $51 of savings for every $1 of cost at a 6 percent discount rate. As previously indicated, results will be expected to vary from company to company and even with different sample data for the same company.

While this average savings/cost ratio seems very high, it is also volatile because there were extremely large savings generated from a few policies that increases the overall average savings per policy. The level of savings will vary significantly based on the differences such as underwriting philosophy, level of rigor in initial underwriting application, the frequency of obtaining APSs and additional phone interviews.

Before using the checking service or enhancing your underwriting methods in any way, it is important to consider HIPAA compliance issues. As well, it is important to understand the impact that tightening your underwriting will have on your distribution channels and overall volume of business. Passing loss ratio savings onto your policyholders through reduced rates can potentially offset at least a portion of the negative impact tighter underwriting may have.

Table 1
Summary of Projected Loss Ratios

Projected Loss Ratio - without usage of Checking Service	Discount Rate	
	6.00%	15.00%
PV of Claims	$4,804,591	$3,885,976
PV of Premium	8,007,321	6,476,367
Projected Loss Ratio (without Checking Service)	**60.0%**	**60.0%**

Projected Loss Ratio - with usage of Checking Service	Discount Rate	
	6.00%	15.00%
PV of Claims	$4,804,591	$3,885,976
- PV of Declined Claims	(882,410)	(681,513)
- PV of Ridered Claims	(13,121)	(10,063)
PV of Net Claims	3,909,061	3,194,400
PV of Premium	8,007,321	6,476,367
+ PV of Rated Up Net Premium	30,570	23,467
- PV of Declined Premium	(754,851)	(579,451)
PV of Net Premium	7,283,040	5,920,383
Projected Loss Ratio (with Checking Service)	**53.7%**	**54.0%**

Table 2
Summary of Protective Value Results

	Present Value at 6.00%	Present Value at 15.00%
Savings	$399,656	$335,894
Costs	7,843	7,843
Protective Value	391,813	328,051
Policies Reviewed	894	894
Protective Value per Policy Reviewed	$438	$367
Savings/Cost Ratio	51.0	42.8

Health Section Announcements

2006 SOA Predictive Modeling and Risk Adjustment Webcast Series CD-Roms Now Available!

The SOA hosted its first six-part series of 90-minute Predictive Modeling and Risk Adjustment Web-casts in July and August 2006. This series built upon current SOA-sponsored research and prior successful seminars. The webcast format allowed acclaimed faculty to educate participants via lectures and case studies.

This information provided in this series is relevant to anyone who has a desire to increase their predictive and risk adjustment capabilities. The unique two-track design (basic and advanced) allowed participants to increase their understanding of the topic no matter their initial knowledge level.

These webcasts are now available for purchase separately or in bulk on CD-ROM. For more information about purchasing Predictive Modeling and Risk Adjustment Webcast Series CD-ROMs, visit *http://www.soa.org/ccm/content/research-publications/bookstore/cd-roms/.*

2006 Society of Actuaries Annual Meeting & Exhibit

Mark your calendars and plan to attend the 2006 SOA Annual Meeting and Exhibit, which will be held in Chicago, Ill. October 15-18, at the Sheraton Chicago Hotel & Towers. This year's theme, "The Power of Ideas," will inspire actuaries from around the world to envision the possibilities, discover the opportunities, create the solutions, connect to the business and communicate in a leadership voice. Come learn about the exciting challenges that await insurance, benefits and broader financial services sectors and how actuaries will be there to bring the future into focus.

At this year's meeting, the Health Section will sponsor a total of 14 sessions. Session topics will cover medical expense trends, rating agencies, individual medical insurance claims and preparing for extreme events. In addition, the section will be sponsoring a hot breakfast on Wednesday, October 18. Join us as we unveil a shared vision for the profession—a leadership vision powered by ideas.

The SOA Arms You With Knowledge to Attack Pandemic Influenza

The SOA's new multi-faceted pandemic initiative is actively providing resources to address the potential consequences of an avian influenza pandemic. Because actuarial science identifies and quantifies risks associated with extreme events, actuaries are being looked upon to provide guidance on mitigating the risks of widespread illness. The SOA's multi-part effort includes an expert round table and a commissioned study along with other mechanisms that underpin the important pandemic initiative.

ERM for Pandemics-Expert Roundtable

The June/July 2006 issue of *The Actuary* featured findings from a roundtable of leading enterprise risk management and influenza experts that was held on March 21, 2006. Participants said they "can't think of anything more serious than the economic and business disruption that would occur once the news of a pandemic has been announced." To read the entire transcript, visit: *http://www.soa.org/ccm/content/favorite-links/ pandemics/pandemic-roundtable/.*

SOA Pandemic Research Study

The SOA commissioned Jim Toole, FSA, managing director of MBA Actuaries, to study the consequences of a pandemic, with models that estimate the financial cost of a flu pandemic on the life and health insurance industry. One of the key steps in the research was his participation in a bird flu simulation exercise on April 1, 2006. The goal of the exercise was to evaluate the preparedness of governmental, public and private institutions for a pandemic while immersing participants in the complex issues that will arise during an emergency of this magnitude. To read about the Bird Flu Plex and learn more about the cost models and project status, see *http://www.soa.org/ccm/content/favorite-links/pandemics/pandemic-research/.*

Dedicated Pandemic Web Page

This plethora of information can be accessed via the SOA's dedicated pandemic Web page, "Pandemics: Are We Prepared?" containing the latest information and research on bird flu. The SOA has developed this Web page to help actuaries respond to senior management questions about their organization's readiness for a potential pandemic. To view the list of top 20 papers on avian flu, the Actuary's Corner with papers authored by SOA members, or links to other organizations, please go to the Web at: *http://www.soa.org/ccm/content/favorite-links/pandemics/pandemics/.*

Now Available—New Health Plan Provider Network Risk Research Report

The Health Section Research Team is pleased to make available the results of a recent research study and accompanying Excel model that provide a framework for estimating the financial impact of health plan provider network risk. The research was conducted by the Denver office of Milliman, Inc. The Excel workbook allows the user to assess cost implications of aspects of network risk under various assumptions.

To access both the report and Excel model, please see the following link: *http://www.soa.org/ccm/content/areas-of-practice/health/research/health-plan-prov-net-risk/.*

If you have any questions regarding this report or Excel workbook, please contact Steven Siegel, SOA research actuary at *ssiegel@soa.org*.

A Brief Introduction to Comparative Health Policy

by Howard J. Bolnick

Our U.S. healthcare system is unique among almost 200 healthcare systems across the world. Reflecting our individualistic mores and characteristics of our political system, private health insurance is far more widespread. And, our healthcare delivery system is less government managed and more entrepreneurial than those of other nations. Not surprisingly, our system also has its own unique problems and institutions. For example, no other developed country has a large group of uninsured citizens, and managed care is far more advanced here than in other countries. So, do we have anything to learn from studying other healthcare systems? The answer to me is a resounding "yes," which I hope to demonstrate through one very interesting graph.

The graph, entitled "Health (HALE) vs. Spending, 2002," relates population health outcomes to healthcare spending for the 191 member countries of the World Health Organization (WHO). WHO and its researchers have developed a large and very useful database (*www.who.org*) that is often used by health policy analysts. Our measures of population health and healthcare spending are data for 2002 from this source. Health Adjusted Life Expectancy (HALE) at birth is our population health measure and Total healthcare Expenditure Per Capita (THE), in U.S. dollars at purchasing power parity, is our measure of total public, private and out-of-pocket healthcare spending.

HALE is an actuarial calculation of expected years of life lived in good health. It can be thought of as life expectancy adjusted downwards for expected years in less than full good health, with the downward adjustments varying based on the degree of disability. For most countries, other than the poorest nations, HALE is broadly 85 percent to 90 percent of life expectancy.

The Graph

Not surprisingly, countries that spend more on healthcare have generally better population health outcomes. Our graph includes a trend line fitted to the data. The trend in HALE increases from about 30 years for the poorest nations to a bit more than 70 years for those nations that spend the most on healthcare. For the large number of Third World Countries (see graph in right column), a little spending goes a long way. As spending increases from a meager $11 per capita (Liberia) to about $800 per capita, HALE increases from around 30 years to 65 years. There is a second group of Developing Countries, whose healthcare spending ranges from as low as $500 to about $1,100 per capita. This very interesting group of 18 developing countries has population HALE of 65 years or more. Lastly, there are 28 Developed Countries, which include pre-expansion EU, North America, Japan, Australia and New Zealand, that spend at least $1,500 THE per capita and have HALE of around 70 years. These 28 countries set the world standard for what healthcare systems can deliver in terms of population health outcomes.

Developed Countries

One country outspends all others by a wide margin. This is none other than our United States. In 2002, we spent an average of $5,274 per person on healthcare, which exceeded the number two spender, Monaco ($4,258), by 24 percent and the number three spender, Switzerland ($3,446), by 53 percent. Our nearest large country rival is Germany at $2, 817. The full range of spending among these 28 developed countries ranges from a low of $1,547

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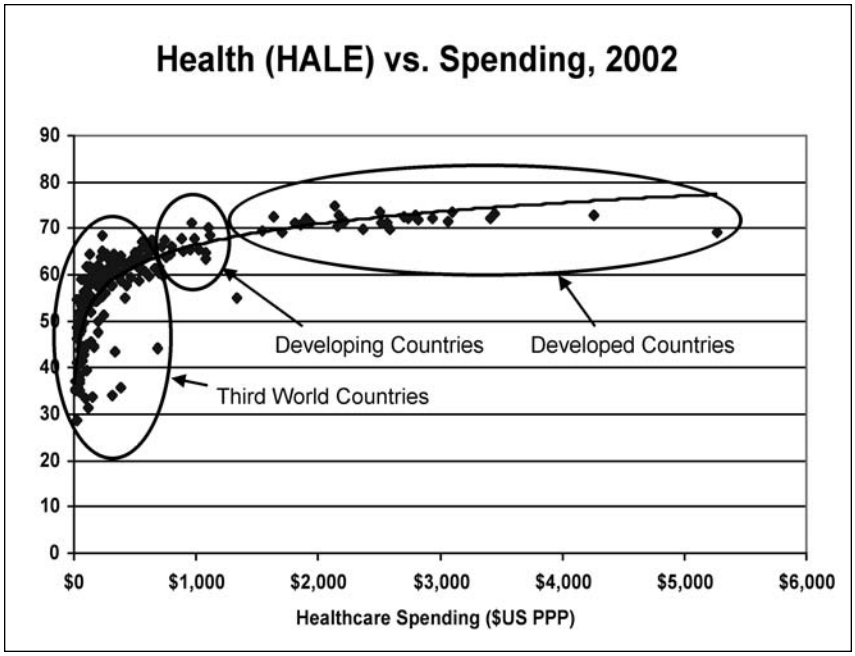

in Slovenia to the U.S. high-water mark, which is a range of 3.4:1. No other country is really in the running, The United States is the world's unrivaled healthcare spending champion.

We clearly spend huge amounts on healthcare, and we are quite proud about the technological miracles produced by our researchers and performed daily by our physicians. However, putting aside our pride and looking at objective statistics, our extra spending does not appear to buy us the most important outcome—better health. Among this group of countries, HALE ranges from a low of 69.2 in Portugal (THE of $1,702) to a high of 75.0 in Japan (THE of $2,133). The United States actually fairs very badly: Our population HALE, at 69.3, ranks 27th of the 28 countries in the group.

The United States is the world's unrivaled healthcare spending champion ... looking at objective statistics, our extra spending does not appear to buy us the most important outcome—better health.

Within this group, comparing the U.S. to the U.K. National Health Insurance system (NHI) is quite informative. NHI is a true "social insurance system." It is funded by taxes and healthcare is run by the government. We often read negative stories about the U.K. system and the "need" for U.K. citizens with adequate financial resources to buy Private Medical Insurance in order to jump lengthy queues and to avoid poor service and "rationing" in NHI. What we generally do not know, though, is the U.K. healthcare system costs only 41 percent of ours ($2,160 versus our $5,274) and yet, it produces population HALE of 70.6 versus our 69.3, which is actually better than ours with little variation across population segments measured by area and income. This "bad" U.K. healthcare system, then, performs quite well when objectively compared to ours!

An even more vivid analysis of the fact that our additional spending does not buy us better health was recently published in the *Journal of the American Medical Association*. The *JAMA* study assessed the relative health of representative samples of individuals between ages 40 and 70 in the United States and United Kingdom, with particular attention to differences by socioeconomic status. The research demonstrates that Americans of all level of socioeconomic status are in worse health than their U.K. counterparts, despite Americans having uniformly better lifestyle health risk characteristics. Differences between the two countries are large enough so that the richest third of the U.S. sample had medically measured health status equivalent to levels experienced by the lowest third of the U.K. population.

Our poor showing on HALE is the result of many reasons, including two obvious population characteristics. First, there are large numbers of uninsured Americans who do not have regular access to healthcare. And second, our lowest income citizens have relatively poor health and more limited access to healthcare resources. Both populations, therefore, suffer from relatively poor health outcomes.

Even taking these characteristics into account, it is very difficult to explain why we outspend other nations by so much. In trying to understand this problem, it is interesting to note that the United States often has fewer medical resources per capita (e.g., hospital beds, physicians, healthcare professionals, etc.) and we are often relatively more efficient in delivering much of our medical care (e.g., fewer hospital days per thousand) than other developed nations. Thank you, managed care! However, these relative resource efficiencies do not translate into lower costs.

Exploring reasons for our relatively poor results is beyond the scope of this brief article. But, this inquiry can be a very fruitful exercise to help us better understand our healthcare system and, potentially, to help us manage its evolution. Possible explanations for further exploration include: faster introduction and more widespread use of new, expensive technology; higher relative pay for healthcare professions than in other countries; a larger portion of the workforce employed in healthcare, particularly due to relatively inefficient administration; and a personal healthcare ethic that believes more healthcare is always better. Adding items to this list is relatively easy; identifying objective causative factors though, is much more difficult.

Developing Countries

The group of 18 developing countries that spend between $500 and $1,100 THE per capita and have population HALE of 65 years or more is very interesting to study, and shed further light on health and healthcare systems. Major nations in this group include Mexico (65.4 HALE and $550 THE),

Argentina (65.3 HALE and $956), South Korea (67.8 HALE and $982), and Poland (65.8 HALE and $657). Just below this level is another very interesting healthcare system, China's, which has 64.1 years of HALE and $201 THE.

From this group of healthcare systems, I am most familiar with those of Mexico and China. Both of these countries are characterized by a large population that is quite poor and living in margin conditions, and a small, and growing portion of the population with developed-country income levels and healthcare expectations. Countries with these population and income profiles are faced with an enormous healthcare financing problem. Public resources are not sufficient to fund more than minimal care for most citizens, and their richer citizens demand healthcare at levels familiar to us.

What is fascinating to consider is that despite meager healthcare resources aimed at the large percentage of poorer citizens, population HALE in these countries is not far from the 70-year level attained in developed countries. The lesson to us from these facts is that relatively rudimentary healthcare, including prenatal and postnatal care, appropriate vaccinations, prompt attention to communicable diseases and decent access to low-technology healthcare are sufficient to move a nation into this class of developing countries that are "almost as good as the best." This observation would seem to indicate that the health benefits of developed nations' enormous spending on high-technology healthcare, which is usually aimed at managing and sometimes curing chronic diseases of aging, are relatively small.

Third World Countries

Most countries fall into the group with low THE per capita and low population HALE. These countries have a burden of disease that is entirely different than in developing and developed countries. Their populations are rife with communicable and environmental disease. In general, people do not live long enough to develop the chronic diseases of aging that dominate the burden of disease in developed countries.

Research into the enormous healthcare problems faced by people living in third world countries has shown the public health measures we take for granted, such as clean water, safe food and minimal sanitation standards, combined with very rudimentary healthcare, can improve population health at very low cost. HALE can be improved to roughly 50 years for a cost of less than $50 per year.

While the burden of disease and extremely low levels of healthcare spending in third world countries is so far from our experience as to make their problems practically irrelevant to our healthcare systems, there is a lesson to be learned: Public health programs are needed to eliminate the worst health ravages of the environment. Public health is a low cost, integral part of every developed and developing country's healthcare system, and their importance to good health of these programs should never be overlooked.

In nations with solid traditional public health programs though, a new public health challenge is clearly emerging. Epidemiological studies increasingly demonstrate the strong relationship between good health and leading healthy lifestyles. Smoking, lack of exercise, poor diet, excessive use of alcohol, illegal drug use and lack of control of high blood pressure and high blood cholesterol are strong causative factors for a large proportion of chronic diseases of aging, which dominate the burden of disease in developed countries. Programs aimed at encouraging people to lead healthy lifestyles are a "new public health" direction for these countries.

Concluding Thoughts

Health and healthcare spending characteristics vary widely among countries. It is helpful to group differing systems into three classes: Developed Countries with world-class population health outcomes measured by HALE; Developing Countries that spend much less and attain population health results close to world standard levels; and Third World Countries that are struggling to remove themselves from the almost overwhelming burden of environmental and communicable disease. Our brief look at these different groups and some characteristics of their burden of disease and healthcare systems has provided us with a number of important observations that should be helpful to all of us who are interested in understanding the U.S. healthcare system and in doing our jobs as healthcare actuaries better. This brief introduction to comparative health policy can only hint at the wealth of insights available to actuaries and researchers interested in this most fascinating area of inquiry.

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A Road Map to MEPS—A Free Data Destination of the AHRQ

by Steven Siegel

Background—A Collaborative Meeting

The economist Milton Friedman made famous the expression "there is no such thing as a free lunch." Perhaps, Professor Friedman never crashed a wedding as exemplified in the recent Vince Vaughn/Owen Wilson film "Wedding Crashers," where not only could a free lunch be had, but free hors d'oeuvres, cocktails and other goodies as well. Although I might tongue-in-cheekly dispute the concept of no free lunch, a recent visit to the Association for Health and Quality Research (AHRQ) has, without a doubt, reassured me that the concept of free data does, indeed, still exist—namely, in the Medical Expenditure Panel Survey commonly referred to as MEPS.

In late May, John Cookson, chair of the Health Section's Research Team; Ian Duncan, chair of the Health Section's External Relations Team; Karen Fitzner, a consultant to the Health Section; and I visited with representatives from the AHRQ to discuss areas for potential future collaboration with the SOA. The impetus for our meeting was the attendance of Steve Cohen, head of the Agency's Center for Financing, Access and Cost Trends, at a seminar hosted by the External Relations team that was held during the 2005 SOA Annual Meeting in New York. Steve and members of his team provided us with a very informative overview of the current activities and future initiatives of the Agency. For those not familiar with AHRQ, it is a federal agency under the Department of Health and Human Services.

For AHRQ's benefit, we provided a summary of the key issues that the Health Section is currently tackling including our research projects, organizational outreach efforts and continuing education programs. In the course of the conversation, it became immediately apparent that there are a number of areas where our organizations can partner together to create synergy in the mission of advancing health knowledge and research. As a result, we are planning follow-up discussions to outline future joint efforts.

One outcome of our conversation that we felt would be immediately beneficial for health actuaries was to provide a greater awareness of their MEPS database, available free of charge, as mentioned earlier. The following is a brief primer on the database with much of the information gathered from their excellent Web site at: *www.meps.ahrq.gov*

A MEPS Primer

What is MEPS?

MEPS is a survey of the civilian population in communities across the United States. As a result of the survey, nationally representative statistics on healthcare expenses, including the type of medical services used, how frequently they are used, the cost of services, and how they are paid for, as well as health conditions and health insurance availability and coverage, are produced. MEPS also collects extensive information on employer-based health insurance plans.

MEPS provides policymakers, healthcare professionals, and others with timely information to use on the determinants of healthcare use, spending and insurance coverage.

What are the Components of the MEPS Database?

MEPS conducts three separate but related surveys: the Household Component (HC), Medical Provider Component (MPC) and Insurance Component (IC).

Household Component
This component consists of interviews from sampled households. It provides information on medical conditions, use of healthcare services, disabilities, private or public health insurance coverage, and demographic and related characteristics. It can link health services and insurance data to other population characteristics such as age, sex, race, employment status and income.

Medical Component
This component consists of interviews of a sample of hospitals, physicians, pharmacies and home health professionals supplying services to those in the household component.

It is used to supplement and replace reported data pertaining to households.

Insurance Component
This component consists of employer interviews. It is composed of two segments: (1) A representative sample of U.S. employers and (2) Employers of those sampled in the household component. Data on plan offerings, enrollments, premiums and employee contributions based on employer characteristics, such as firm size and industry, are produced as part of this component.

How is the Data Made Available?

Data can be obtained from the AHRQ Web site at www.meps.ahrq.gov. The Web site contains public use data files that can be downloaded in both ASCII and SAS formats. Household component and insurance component tables can also be accessed as .pdf or .html files. There is a collection of tools called MEPSnet that operate on both the household component and insurance component data. In addition, there are MEPS-related reports and copies of various survey instruments.

For How Long Has Data Been Collected and How Often is it Collected?

Data collection for all MEPS components began in 1996. Data collection schedules differ for each of the components.

Concluding Thoughts

The Health Section is committed to reaching out to other organizations that share our mission and to seek out mutually beneficial partnerships. We will be embarking on more such efforts in the near future. In the meantime, I would encourage you to visit the AHRQ Web site and explore all or portions of the MEPS database. I think you'll find a plethora of interesting information there. If you find the database particularly useful for one of your own needs, we would greatly appreciate hearing about it. By the same token, if you have suggestions for making it more useful for actuaries or other health professionals, that would also be of much interest. And if you know of an exceptionally tasty free lunch, just drop me a line.

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Got a Research Idea?

The Health Section Research Team is seeking new research ideas or proposals on a health-related topic for potential funding. The team has a dedicated annual budget to fund research projects that benefit health actuaries. You can submit a proposal or idea at any time through its open request for proposals (see link below).

Proposals are chosen from those submitted for funding based on their relevance to health actuaries and available budget. Examples of prior studies funded include the 2002 Comparison of Risk Adjusters Study (a follow-up of which is currently underway) and the Impact of Medicare Part D on Drug Costs study completed earlier this year. Here's an opportunity for you to advance the profession and potentially uncover new knowledge!!

For more details on how to submit a proposal and the selection process, please see the following link: ***http://www.soa.org/ccm/content/areas-of-practice/health/research/request-for-proposals-health-projects/***

If you have any questions, please contact Steven Siegel, SOA research actuary, at *ssiegel@soa.org*.

Actuarial Celebrities in Hollywood (Florida, that is!)

Highlights from the 2006 SOA Spring Meeting

by Mary van der Heijde and Chris Stehno

This year's Society of Actuaries Health Spring Meeting was held at the Westin Diplomat hotel on the beach in beautiful Hollywood, Florida on June 20-22. The conference was well attended by many who were looking forward to taking in equal shares of sunscreen, sand and fun along with underwriting, avian flu and risk management. Who says actuaries don't know how to have a good time!

The conference hotel was right on the beach, with plenty of opportunities to swim in the pools and the ocean as well as soak up the sun. Even with the beautiful beach beckoning to attendees, the sessions were very well attended. Perhaps this is a testament to the group of especially strong speakers for this year! The meeting ran full-days on Tuesday and Wednesday, and wrapped up by noon on Thursday. Each presentation time was 90-minutes long, offering five to eight different concurrent presentations from which attendees could choose one to attend. In addition to the concurrent presentations, there were also three excellent keynote speakers and an evening reception.

There were 65 different concurrent sessions offered, with about 140 member presenters including 38 guest presenters. Because there were so many sessions and just two of us reporting, we were only able to attend a sampling of all of the presentations offered. There were many excellent presentations we were unable to include in this article, yet you can get more information about these at *http://handouts.soa.org*. At this site, most presenters posted their PowerPoint presentations in their entirety.

Richard Anderson, the executive vice president of UnitedHealth Group, started off the conference with a keynote address comparing the similarities and differences between the airline industry and the healthcare industry. Some key points Richard made were that both hospitals and airlines have very complicated infrastructures, and rely on cross-subsidization between customers to be sustainable. The introduction of low cost airline carriers and specialty hospitals has significantly impacted the legacy of airlines and hospitals, respectively, by focusing on the most profitable routes and patients.

Don Fetterolf, MD, the corporate vice president of Health Intelligence at Matria Healthcare and Chairman of the DMAA Quality and Research Committee, spoke during Tuesday's general luncheon about different philosophies regarding measuring and improving effectiveness of disease management.

Dr. Michael Osterholm, director of the Center for Infection Disease Research and Policy (CIDRAP), gave a keynote address at the general luncheon on Wednesday about the impending threats from an influenza pandemic. Dr. Osterholm spoke about many of the lesser known impacts of a pandemic, such as an economic and social domino effect from an inability of many international systems to handle such a disruption. Many industries work on a "just-in-time" basis, where they rely heavily on shipments from previous links in a distribution chain. Dr. Osterholm advises actuaries and others involved in business to develop preparedness plans, which aim to better prepare for the financial and social impacts of a pandemic.

Steve Berna of Trivantage Pharmacy Solutions, Bill Crown of i3 Innovus and Cathy Gibson from WellPoint spoke about recent developments in Specialty Pharmaceutical (SRx), and the impact of these drugs on pricing and patient behavior. Just

about everything that could make the trend higher is happening within the specialty drug portion of pharmacy budgets. New drugs, new treatments and new indications for existing SRx drugs are putting utilization trends three to four times higher than non-SRx drugs. This puts the overall SRx drug trend in the low 20 percent range and shows that a portion of the pharmacy budget for SRx is currently 18 percent and is predicted to become 26 percent by 2008.

"Many employers and insurance companies are looking at their benefit structures that allow SRx drugs to be paid under both the pharmacy and the medical benefits, which set up potential inequities to members," said Steve. "Medical benefits were not designed with these new high tech SRx drugs in mind, and in most cases it is like trying to play a DVD in a VCR."

Bill Crown said that for traditional pharmaceuticals, it is often possible to offset the costs of prescription drugs from medical offsets in the form of a reduction in future medical costs. However, SRx are extremely expensive. So, even if they do reduce some future medical costs, it is unlikely that this reduction will offset their costs. Bill said, "A mix of traditional and specialty pharmacy treatments will often be most cost effective from the perspective of the payer. Health economic modeling, which combines efficacy data from clinical trials with real world cost data, is needed in order to provide payers with the information that they need to make coverage and benefit design decisions for specialty pharmacy."

Dr. William Vennart, the national medical director at CareAdvantage, presented about Predictive Modeling (PM) and provided a clinical perspective on how PM can be used to refine actuarial and underwriting practices, predict future risk, define underlying drivers of trend and evaluate care management initiatives. The presentation created a new perspective on the value of PM tools and why actuarial and underwriting departments should incorporate them into daily activities. In addition, the presentation illustrated other important factors aside from R-square when selecting a predictive model.

"All predictive models have inherent strengths and weaknesses. CareAdvantage elected to work with a categorical clinical model developed by 3M Health Information Systems due to the degree of case mix and severity adjustment, and its ability to predict non-cost events such as hospital admissions, ER visits and procedures," said Dr. Vennart. "These characteristics assist us in understanding underlying health risk and future resource consumption as well as (disease management) program performance. A categorical model also allows us to identify specific clinical parameters, such as early stage diabetics, to refine case identification, care management interventions, and the measurement of disease progression over time."

In the Healthcare and Information Technology session entitled "Looking Behind the Wizards Curtain," Steve Epstein with MEDai, Dan Dunn with IHCIS and Craig Johns with Milliman spoke about new data and methodologies that are soon to impact actuarial decision making. Epstein focused on artificial intelligence (AI) methodologies that are trained by data through programs that utilize human logic and knowledge. He discussed the pros and cons of such models and ended with an example where the nonlinear AI method made a significant difference in the estimate of PMPM.

On the other hand, Craig focused not on new methodologies, but on new data as a means of boosting predictive powers. His presentation looked at appending lifestyle-based consumer data to augment traditional medical predictive modeling. Craig stated the advantage that consumer-based lifestyle data brings to the table is that unlike medical data, which is generally available on 30 percent or less of the population, consumer data is available on more than 90 percent of the population. In addition, consumer-based lifestyle data does not have the problem with regression to the mean like medical data does in years two and beyond.

The session about comparing various nations' health systems gave great insight to the similarities and differences between many of the public and private healthcare systems around the world. One interesting conclusion was that no single country stands out as "best in class" as far as having an ideal healthcare system. Dr. Sadhna Paralkar of Reden and Anders, who is a licensed medical doctor trained in India and has worked in the managed care industry in the United States for more than 10 years now, pointed out that although India has very low spending as a percentage of GDP as compared to most other countries in the world, the private sector statistics for cost and care are much closer to those of more developed countries. "Low levels of spending on care in India are not a reflection of a poor healthcare delivery model, but is primarily due to an under-funded system," says Dr. Paralkar.

In a unique session, SOA Director Joel Albizo, Jacobson Group recruiter Margaret Resce Milkint and ex-actuary turned real-state entrepreneur Dave Duncan discussed the competitive threats to actuaries from non-actuaries. In an SOA survey, Joel stated that on the positive side, people see

(continued on page 27)

Insights from the Third SOA/DMAA Predictive Modeling Conference

by Ian G. Duncan

The SOA and the Disease Management Association of America (DMAA) co-sponsored their third annual predictive modeling conference in Chicago in April. It was a great success with more than 100 attendees, both actuaries and non-actuaries. The conference catered to the diverse audience with separate "tracks" featuring care management and underwriting (and other actuarial) topics. The attendance, range of speakers and topics, and high level of participation made this the conference for practitioners interested in new developments and uses of predictive modeling as well as an opportunity to network with peers.

As a lighthearted (but still thought-provoking) end to the conference, I assembled several of the speakers who had not yet left to catch flights for a brief panel discussion. I posed two questions: first, what was the one new or interesting insight that the participant gained from the conference? And second, if you were a young actuary interested in making a name for yourself in the profession, and specifically in predictive modeling, what topic would you tackle?

The speakers that afternoon were Dave Knutson, PhD of the Parke-Nicollette Institute (and co-author of the 2002 SOA review of Risk Adjusters); Francois Millard, FIA, vice president Risk Management at Destiny Health in Chicago; Keith Passwater, FSA, actuary responsible for eAnalytics at WellPoint; Julie Meek, DNS, founder and CEO of The Haelan Group, a company that uses self-reported health perception data for predicting future risk; and Rob Bachler, FSA, FCAS of American Re HealthCare. Here's what the panel said about the take-aways from the conference:

Knutson: I am impressed with further evidence that these tools are providing "information synergy" by providing common metrics that link the medical management side of managed care with the finance side, helping realize the original promise of managed care. I also am interested in the notable advances in research on differentiating future utilization/costs for high need individuals that are avoidable through interventions. Finally, the recent evaluations of tools under "real world" conditions are an encouraging trend.

Millard: The broadening scope and practical application of predictive models is encouraging and the focus on results will help business managers and decision makers to get better understanding of the relevance and value of such models. The migration of decision models from other insurance and financial fields based on lifestyle data is certainly gaining momentum and will likely become more prominent going forward.

Passwater: I intend to further investigate the new approaches to prospecting discussed at the conference. Automating condition scoring (Millard's technique) and automating with Rx databases (a concept described during the conference by Jim Minnich of Reden & Anders) both seem to have significant potential for reducing administrative cost, reducing turn-around time and ensuring consistent underwriting results.

Bachler: I plan on taking back the information regarding the added predictive power in prior claims for group underwriting when breaking the claims out into IP, OP and Rx.

Meek: Having been in the industry for a long time, I'm impressed with the degree of real-world experience sharing about what works and what doesn't

work, as well in terms of the various predictive models used to identify people for DM programs. I'm also encouraged by the groundswell of interest now in using survey-based data in predictive modeling and the emphasis on impactibility.

Turning to the second question, here is what the panel thought about interesting topics for our keen young actuaries:

Millard: The ability to create sophisticated models and understand the output is core to the actuarial profession. I see healthcare predictive modeling, in general, being more interesting than stochastic modeling in other insurance and financial fields, and should be at the center of a young healthcare actuary's fascination. At the very least, a healthcare actuary should be able to understand the pros and cons of using models and communicate results sensibly. I am not familiar with the FSA curriculum, but see predictive modeling as an essential part of a young healthcare actuary's training for them to be familiar with the techniques by the time they start to practice.

Bachler: Currently, most predictive models that are interested in future costs predict expected cost. If a young actuary could enhance these models (especially diagnosis-based models) to identify the variance of future costs, I believe that would have applicability in several areas. It could be used in pricing by defining individualized claim distributions. It also seems reasonable that individuals whose expected costs have a large variance would be good targets for medical management. Combining this information with current impactibility research could greatly improve our resource allocation.

Knutson: Focus on integrating risk prediction and care improvement. This convergence seems to be transforming at least parts of the health actuary field. This means learning how to predict risk in the traditional insurance arena and also how to evaluate the efficiency of components of the healthcare system. This focus aligns with the concerns of health economics and the goals for larger health system.

This focus on efficiency applies to both the technical efficiency of care at the clinical process and outcome level and also allocative efficiency at the population and healthcare budget level.

Passwater: I would suggest that young actuaries invest energy in two aspects.

a) Individual member level variance against condition-level morbidity values opens up interesting new areas of research. A young actuary would have lots of opportunities to make an impact by applying these variances to pricing (as Rob Bachler suggested), block level forecasting and capital allocation studies.

b) It would be very useful for a young actuary to develop expertise in advanced data mining techniques.

Millard: The migration of decision models from other insurance and financial fields based on lifestyle data is certainly gaining momentum and will likely become more prominent going forward.

Meek: I continue to think that the most exciting frontier is to focus more energy and research on more accurately finding the 10 percent of a population about ready to become 70 to 80 percent of current year cost. Care and disease management programs really suffer in terms of engagement percentages due to error in models used to predict this group.

It was a stimulating end to a good conference. Intrigued? If you didn't catch some of the same presentations and speakers on the Health Section Predictive Modeling Webcasts, which were broadcast between July 19 and August 23, you may wish to purchase a CD-ROM of programs through the SOA Web site.

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Given the Health Sections' silver anniversary, it seemed most fitting to begin this series by visiting with some early members of the Health Section. We expect our future interviewees will have some of the same characteristics as those exhibited by the health section founders.

* * *

Letter to the Editor

I read with a combination of curiosity, concern and amusement the piece by Chris Stehno on the value of Lifestyle Analytics in underwriting. This HSN article follows a related one published in the January/February 2006 *Contingencies*. It seems like yesterday that chronic disease diagnostic indicators in claim data were the sure underwriting future and would bring us into the 21st Century, but alas we are still in 1957. The promise of getting ahead (or at least not falling behind) has some allure for industry leaders and at the price of 10 cents per household, why not?

'Why not and why?' I pondered. I quickly became the devil's advocate (I hate him when he makes me do it) and these questions arose. How much garbage data do you get with the 10 cents? What is the cost to aggregate and parse the "significant amounts of consumer data tied to their addresses?" What if the person moves?

From the article, much of the consumer purchases of value in underwriting appeared to be related to diet and exercise (of course life insurance underwriters would be interested in my VISA purchases of skydiving trips, speedboats and small aircraft). Really I don't purchase much food because my wife does most of the shopping. Except for a bit of snow skiing, my exercise comes from running and a bit of hiking/backpacking, which I worry my VISA bill won't reflect. As for the food, the credit card is in her name but she took my surname and so I expect the analytic could link her to me, the subscriber. But what about the food she purchases for guests, in-laws or that the kids don't eat? Will the analytic process account for lunches and dinners on my corporate AmEx?

Surely use of cash for purchases, especially healthy carnival and sporting venue fare, or food consumed in office and church potlucks, will not be properly accounted for or allocated. Some will envy the unhealthy that shop at the local chain whose scan data is not in the set purchased by their employer's insurer or those participating in the charitable 'scrip' programs. Of course, the reliability of warehouse data quality is not as infamous as data warehouse security, but ponder that too.

The example Mr. Stehno gives of the desirable early identification of the pre-diabetic or new diabetic was presented in convincing language. But the devil at my ear said, 'wait a sec'.' Mr. Stehno said, "once diagnosed with diabetes, the first behavior change an individual makes is to start purchasing diet food." That means there was a diagnosis, presumably by a doctor, who presumably filed a claim. Granted Scantron data might be processed a bit faster than your claim department gets the claim paid, but how much fun (or efficient) is it to look for diet food purchases in a mountain of credit card grocery store data? I think looking for that diagnosis might be a bit easier too. Plus, you'll also catch the guy who gets his diagnosis and decides to go ahead and stay on the all Twinkie meal plan. Given the 12-18 months he'll be on your health plan, isn't he as likely to explode as a large claim as the guy buying diet food?

Yes, we should fear the Brave New World of lifestyle analytics in underwriting, but maybe not in 2007.

Wes Edwards, FSA, MAAA

Response from Chris Stehno:

I have found that the data aggregators do a good job sorting through many of the questions that Mr. Edwards raises. For example, they are always better than our clients at knowing about changes of address. And, the proof in the pudding is that the resulting data has a strong statistical fit with medical events.

actuaries as providers of essential technical services. However, on the negative side, actuaries are perceived to be poorly positioned to influence or become senior management. Joel went on to describe the SOA's Marketing and Market Development Plan that is focused on addressing these issues.

Margaret started off by painting a rosy picture of the growing demand for insurance related occupations now that the boomers are exiting the marketplace. However, she went on to point out that actuaries are facing increasing competition as they look to step outside of the traditional roles and are even facing new competition within their traditional roles. The competitors include MBAs, bio-statisticians, health economists, CFAs, CPAs, PhDs, financial engineers and risk managers. Margaret addressed some of the challenges that actuaries need to address, including poor communication skills, lack of knowledge depth and strategic outlook, and lack of P&L expertise.

Ian Duncan of Solucia Inc., Bradley Scott of Reden & Anders, Terri Bauer of Aetna and Alan Gard of Cigna had extremely good attendance for a presentation about new developments in trend analysis. Ian addressed the contribution of conditions and changes in their prevalence to overall trend as well as methods that we have used to adjust for these changes so that we can measure trend on a constant-risk basis. Brad discussed the success Reden & Anders has had incorporating macroeconomic modeling into its medical cost trend forecasting processes. This type of modeling provides meaningful insight into future directional changes of healthcare trends, particularly with respect to utilization. It must be used as a supplement to—and not a substitute for—detailed experience-based analysis and projections of key trend components, such as provider contracting changes, product mix, geographic mix, demographic mix, day content, etc.

Terri gave insight about a hot topic—the effects of Part D on pharmacy trends. There is a great deal of speculation right now on what the short- and long-term impacts of Part D might be on pharmacy trends, both for PDP plans themselves and for commercial offerings. However, at the moment, speculation is all that is available; Part D is still very new, just six months old, compared to Medicare at 40 years old. So, the jury is still out. Terri's presentation focused on things to think about and to be aware of as you ponder for yourself what the significance of Part D might be for pharmacy trend. To begin to anticipate what the impacts could be, an actuary will want to think about how Part D works, certain provisions of the Medicare Modernization Act, the pharmaceutical industry itself, and the political environment overall.

In spite of the fact that the session entitled "The Future of Benefit Design" was on the last day at the last time slot, it had one of the largest attendances throughout the whole conference. This can be attributed to one of two things: actuaries really care about the topics being discussed at the conferences, or mostly everyone spent the first few days of the conference at the beach and were scrambling on the last day to get all of their CE credits. Whatever the reason, the two presenters were appreciative of the large audience.

Both Michelle Baade with SimplyWell and Chris Stehno with Milliman's Denver office (one of the co-reporters for this article) agreed that the future of plan benefits lies in population health management. Chris started his presentation by identifying the largest barrier to health plans considering population health management—that being data. By historically focusing only on claims data, health plans know little to nothing about 70 percent or more of the covered population. Chris suggested using alternative data sources like application data, health-risk appraisals (HRAs), and consumer datasets to target, segment, uniquely communicate with and engage the entire population.

Michelle presented examples and results of an integrated model for population health management. SimplyWell's integrated model includes: HRAs, health screenings, individual action plans, education modules, healthy lifestyle coaching, and health appointments and trackers. Michelle also discussed a variety of incentive programs that SimplyWell uses to drive participation in the programs, involving: plan design benefits such as lower premiums, deductibles and copays; HSA deposits; Visa gift cards; company store rewards; and other company perks like parking spaces and free days off work.

We will end this report with these questions: Are we really ready for a plan that encourages participants to be healthy? What is the world coming to?

All in all, this year's conference was great fun and at a wonderful location with excellent speakers. We look forward to seeing you at the SOA's Annual Meeting in October!

Mary van der Heijde, ASA, MAAA, is an associate actuary at the Denver health practice of Milliman. She can be reached at 303-672-9081 or at *mary.vanderheijde@milliman.com*.

Chris Stehno, MBA, is a healthcare management consultant at the Denver health practice of Milliman. He can be reached at 303-672-9070 or at *chris.stehno@milliman.com*.

Sound Bites from the Academy's Health Practice Council

What's New

Two updated practice notes, on Medicare Supplement and Individual Disability Income Insurance, have been released. They can be found on the Academy's Web site at *http://www.actuary.org/pdf/practnotes/health_medsupp06.pdf* and *http://www.actuary.org/pdf/practnotes/health_disability06. pdf*.

The State Long-Term Care Principles-Based Work Group gave a presentation to the Accident and Health Working Group of the National Association of Insurance Commissioners' (NAIC) Summer Meeting, June 9, 2006. The presentation highlighted the work group's current project goals and received support from the NAIC Working Group. The presentation is available on the Academy's Web site at *http://www.actuary.org/pdf/health/ ltc_june06.pdf*.

The Medicare Steering Committee published the revised issue brief, "Medicare's Financial Condition: Beyond Actuarial Balance." The issue brief was updated with information from the 2006 Medicare Trustees' Report and it examines more closely the findings of that report. A Capitol Hill briefing that highlighted the financial conditions of both the Medicare and Social Security programs was held on May 12, 2006. The issue brief is available on the Web at *http://www.actuary.org/ pdf/medicare/trustees_may06.pdf*. Slides from the Capitol Hill briefing are also available on the Web at *http://www.actuary.org/briefings/solvency_may06.asp*.

On May 4, 2006, the Small Group Market Task Force, with input from the Individual Medical Market Task Force, sent a letter to Senate leaders on S. 1955, The Health Insurance Marketplace Modernization and Affordability Act. This legislation, introduced by Sen. Michael Enzi (R-WY), would allow small businesses to buy fully-insured health insurance through a small business health plan (SBHP) established by an association. The Academy letter compares the potential consequences and other concerns regarding SBHP legislation with those previously identified by the Academy regarding association health plans. It also outlines new issues for consideration pertinent to S. 1955. S. 1955 ultimately failed to garner enough votes to end the debate and move the bill forward. The comment letter is available on the Web at *http://www.actuary.org/pdf/ health/enzi_may06.pdf*.

The Joint Retiree Health Committee recently submitted a letter to the Financial Accounting Standards Board (FASB) regarding accounting rules for postretirement benefits other than pensions (OPEBs), which FASB is reviewing as part of an overall project "to improve retirement benefit accounting guidance." The Joint Retiree Health Committee expressed concern "that the FASB exposure draft chronology for the project has given priority to placing on corporate balance sheets the existing measure of accumulated postretirement benefit obligation (APBO) rather than the revision of the measurement process." This letter and a letter to FASB from the Pension Accounting Committee are available at *http://www.actuary.org/pdf/health/jtcmte_fasbed1_053106.pdf* and *http://www.actuary.org/pdf/pension/pac_fasbed1_053106.pdf*.

On April 17, the Joint Retiree Health Committee submitted a letter to the Governmental Accounting Standards Board (GASB) outlining some concerns with the proposed GASB technical bulletin, Accounting and Financial Reporting by Employers and OPEB Plans for Payments from the Federal Government Pursuant to the Provisions of Medicare Part D. The letter is available on the Web at *http://www.actuary.org/pdf/pension/gasb_041706.pdf*.

Ongoing Activities

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

Disease Management Work Group (Rob Parke, chairperson) – This work group is currently drafting a practice note in the area of disease management. It is expected that the note will be ready for public comment in the fall.

Healthcare Quality Work Group (Mike Thompson, chairperson) – This work group is developing a comprehensive outline to examine an actuarial perspective on the economics of healthcare quality.

Health Practice International Task Force (Mike Abroe, chairperson) – This task force continues to solicit volunteers who are interested in keeping abreast of international issues with potential health implications.

HPC Extreme Events Work Group (Jan Carstens, chairperson) – This work group is drafting a paper that examines healthcare issues associated with natural disasters and pandemics. They are looking at issues including the types of extreme events, types of risks and risk mitigators. They hope to publish a paper in the next few months.

Individual Medical Market Task Force (Mike Abroe, chairperson) – This task force is working on two papers related to how the current individual market operates. They are examining issues related to affordability and barriers in the individual medical insurance market. This task force is also monitoring health insurance legislation that would affect the individual medical market.

Long-Term Care Principles-Based Work Group (Bob Yee, chairperson) – This work group is discussing current principles-based methodology and the implications of the Academy's Life Practice Council's work on the area of long-term care.

Medicaid Work Group (Grady Catterall, chairperson) – This work group is working on a projection and analysis (i.e., development of an actuarial model) of Medicaid enrollment and costs over the long term (e.g., 25–30 years).

Medicare Finance Work Group (Dennis Hulet, chairperson) – This work group is looking at ways to address Medicare's financial problems.

Medicare Outreach Work Group (Mark Litow and Bob Shapiro, co-chairpersons) – Under the direction of the Medicare Steering Committee, this work group is developing messages to raise the visibility of issues related to the Medicare program such as Medicare's financial condition.

Premium Deficiency Reserves Work Group (Donna Novak, chairperson) – This work group is working on a white paper for actuaries and regulators on the topic of premium deficiency reserves. A future project includes a practice note on the area.

Small Group Market Task Force (Karen Bender, chairperson) – This task force is working on an issue brief on risk pooling in health insurance and monitoring health insurance legislation that would affect the small group market.

NAIC Projects

The Stop-Loss Work Group continues efforts to update its previous report on risk-based capital to the NAIC.

Other issues that we continue to monitor include LTC, retiree health, health insurance issues, Medicare Part D, principles-based methodologies, etc.

Upcoming Activities and Publications

A practice note on Group Long-Term Disability is expected to be finalized by summer's end.

The practice note on Disease Management that is currently under development by the Academy's Disease Management Work Group, is expected to have an expected initial exposure by fall.

The Consumer Driven Health Plans Work Group, led by Jim Murphy, is developing an issue brief that examines frequently asked questions related to health savings accounts. They expect to publish the paper this summer. A Capitol Hill Briefing will likely be held on this topic after the paper is released.

If you want to participate in any of these activities or would like more information about the work of the Academy's Health Practice Council, contact Holly Kwiatkowski at *Kwiatkowski@actuary.org* or Geralyn Trujillo at *Trujillo@actuary.org*.

HSAs and Account-Based Health Plans

An Overview of Preliminary Research

by the AHIP Center for Policy and Research

Editor's Note: This article contains excerpts from AHIP's June 2006 research report, "HSAs and Account-Based Health Plans," and is reprinted with permission of AHIP. The report is available in its entirety on the AHIP Web site at ***www.ahipresearch.org.***

Health savings accounts (HSAs) were authorized by the 2003 Medicare Modernization Act, and implementing regulations were issued in mid-2004. Consumers with high-deductible health plans (HDHPs)—defined as those with minimum deductibles of $1,050 for single coverage and $2,100 for family coverage—can deposit amounts equal to the deductible into a tax-preferred account on an annual basis. These accounts are used in conjunction with an HDHP and can be used for qualified medical expenses.[1] HSA plans and similar health reimbursement arrangement (HRA) plans generally make up the broad category of consumer-directed health plans (CDHPs). (Unlike HSAs, HRAs are held by employers and are not usually portable if an employee leaves the firm.) This report highlights preliminary research and statistics on the market for account-based health plans.

Enrollment

- Participation in HSA-qualified highdeductible health plans tripled from March 2005 to January 2006, with nearly 3.2 million individuals now enrolled **(see Figure 1).** *(AHIP HSA Census, January 2006)*

- The number of firms offering HSA-qualifiedplans is doubling annually, and growth is spread across firms of all sizes **(see Figure 2)**. *(Kaiser Family Foundation Employer Health Benefits 2005 Annual Survey)*

- Growth in HSA enrollment is particularly strong in the large-group market; 8 percent of companies with 10,000 to 19,999 workers offered HSA-qualified plans in 2005, compared with 1 percent in 2004. *(Mercer Health & Benefits, Mercer Human Resource Consulting)*

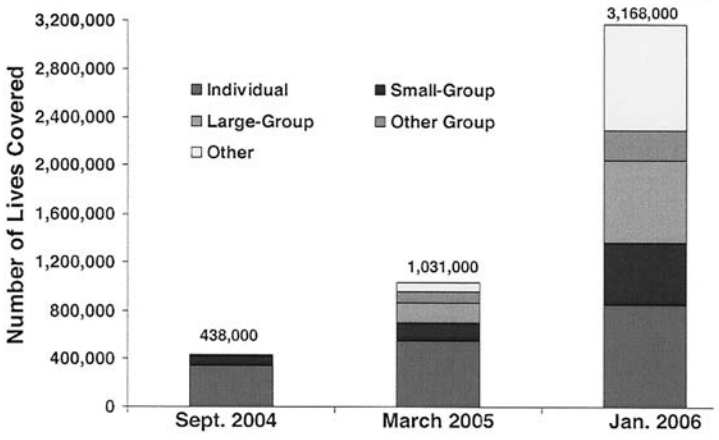
- Twenty-three percent of new health insurance purchases in the individual market were for HSA-qualified plans; 11 percent of new policies in the small-group market and 7 percent of new policies in the large-group market were HSA-qualified plans. *(AHIP HSA Census, January 2006)*

Health Status

- A recent study found that the self-reported health status of individuals with HSA-qualified plans parallels the health status of those with non-CDHP coverage:
  • 77 percent of individuals with HSA-qualified plan coverage and 77 percent of people with non-HSA plan coverage reported their health status as very good/good.
  • 11 percent of individuals with HSA-qualified plan coverage and 12 percent of people with non-HSA plan coverage reported their health status as fair/poor.
  (BlueCross BlueShield Association, September 2005)

Figure 1.

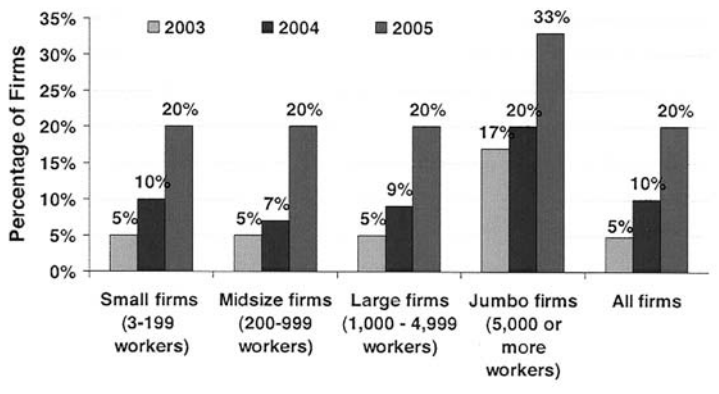
Growth of HSA/HDHP Enrollment from September 2004 to January 2006



Source: AHIP HSA Census, January 2006

Figure 2.

Percentage of Firms That Offer Employees a High-Deductible Health Plan, By Firm Size



Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2003-2005.

- Other surveys report similar findings:
  • A near equal number of individuals with non-HSA plan coverage (87 percent) and individuals with high-deductible health plan coverage (86 percent) reported their health status as very good/good.
- Similarly, a roughly equal number of individuals with non-HSA plan coverage (13 percent) and those with HDHPs (14 percent) reported their health status as fair/poor. *(Employee Benefit Research Institute (EBRI), December 2005)*

- Consumers with health reimbursement arrangement (HRA) plans appear to be more engaged in activities to improve their health than consumers with non-CDHP coverage. A recent study found that consumers in HRA plans were:
  • 25 percent more likely to engage in healthy behaviors, such as preventive care and wellness programs; and
  • 20 percent more likely to follow treatment regimens for chronic conditions very carefully. *(McKinsey & Company, June 2005)*

Premiums

- Average premiums for HSA-qualified plans are approximately 20-30 percent lower than average premiums in the overall employer market.
  • Average annual premiums for all employer group health plans as reported in a 2005 Kaiser Family Foundation Survey were $4,024 for single and $10,880 for family coverage **(see Figure 4).** By comparison, the Kaiser survey reported that average premiums for HSA plans were $2,700 for single coverage and $7,909 for family coverage.[4] *(Kaiser Family Foundation Employer Health Benefits 2005 Annual Survey)*

- The AHIP census on HSA-qualified plans in January 2006 reported average annual premiums of $2,772 for single coverage and $6,955 for family coverage in the small group market. *(AHIP HSA Census, January 2006)*

- A study by online health insurance broker Ehealthinsurance.com reported similar findings in the individual market, with average premiums for HSA-eligible family coverage costing 22 percent less than non-HSA coverage ($261 per month versus $334 per month) and individual premiums costing 21 percent less than non-HSA coverage ($114 per month versus $144 per month). *(Ehealthinsurance, May 2006)*

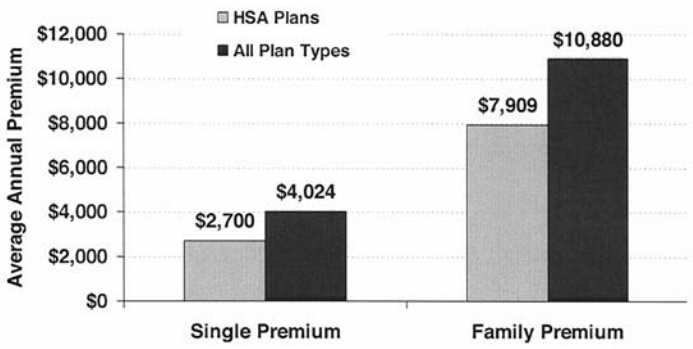
- A survey of 152 large companies found that costs for HRA and HSA plans grew by 2.8 percent in 2005, one-third the rate of increase for other plans.
  (Deloitte Consulting, 2006 Survey)

Account Information

- Data on HSA and HRA accounts are limited. A recent GAO overview of the CDHP market contains a rough estimate—based on industry sources and interviews—that between 50 and 60 percent of people with HSA-qualified plans had opened accounts. GAO notes that this range is consistent with IRS data on HSA deductions from 2004 tax returns.
  (Government Accountability Office, April 2006)

Figure 4.

Average Annual Premium for Employer-Sponsored Health Benefits, HSA Plans Compared to All Plan Types (2005)



Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2005.

- The 2005 Kaiser Family Foundation study of employer-based health benefits found that approximately two-thirds of employers that offered HSAs contributed to their employees' accounts, and that the average employer contribution was $553 for a single plan and $1,185 for family coverage. Average employee contributions to HSAs were $431 for single plans and $1,664 for family coverage. *(Kaiser Family Foundation Employer Health Benefits 2005 Annual Survey)*

- A survey of HSA plan administrators overseeing 431,000 HSA accounts reported a total of $585 million in deposits made between January 1, 2004 and December 31, 2005. As of December 2005, new HSA accounts were being created at a rate of 70,000 per month. *(HSA Directory and Resource Guide: 2006, Atlantic Information Services)*

AHIP is the national association representing nearly 1,300 member companies providing health insurance coverage to more than 200 million Americans. AHIP can be reached at 202-778-3200 or through their Web site at ***www.ahip.org****.*

Footnotes

[1] Funds not withdrawn for "qualifying" health expenses can remain in the account and be rolled over annually to build savings.

[4] Note that the Kaiser Survey included HSA-qualified plans in the average for all plans. Accordingly, the difference between the Kaiser overall average premium estimate and the estimate for HSA plans would have been somewhat larger if only premiums for non-HSA plans had been included in the Kaiser analysis.

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