

# The Actuary

## Regulators, investors put viaticals under microscope

by Linda Heacox  
SOA Public Relations Specialist

In Latin, the root of the word "viaticus" means "voyage." In the Christian church, the viaticus is the sacrament of the Lord's Supper given for forgiveness of sins to a person in imminent danger of death. In the world of insurance, it might as well mean "controversy." In the past six years, the \$400-\$450 million viatical industry has attracted admirers as influential as TV newsmagazine *60 Minutes*, and has also come under scrutiny from regulators and consumers.

The industry is still very small. So far, only two major financial entities have pitched their tents in the viatical camp: CNA Financial Corporation, with its purchase of Viaticus, Inc.; and Transamerica Business Credit Association, as a financier for the capital intensive companies of the viatical industry. Quotes for shares in another viatical company, Dignity Partners, Inc., are now on NASDAQ. Another six or seven companies purchase life insurance policies in quantity. Banks have opened up to the industry and are making loans to the smaller companies, which industry executives hope have moved the speculative character the industry had when it first began.

### The humanitarian debate

A viatical settlement occurs when an insured sells his or her life insurance death benefit to a third party, a

situation almost always predicated by terminal illness. The insured receives cash, and the buyer pays the premiums until the seller dies, when the investor receives the payout. The return on some viaticals can be high — 15%-25% in some cases — provided the seller dies when expected or earlier. If he or she survives longer, returns diminish.

The moral issues of such settlements are well-known in the insurance industry, which has been debating its own accelerated death benefits issues for years. Because the decision to sell a death benefit is usually extremely emotional, brought about by dire financial straits in the final stages of life, consumer groups in all 50 states have called for regulation of the fledgling industry.

However, life insurance attorneys Edward Blakeslee and Patricia Jackson in their paper, "Viatical Settlements: A Primer," published in the *Association of Life Insurance Counsel Proceedings* (1995, Vol. XXXIII, pps. 187-204), wrote, "It seems that viatical settlements can and do fill a valid need. While medical advances and new treatments have prolonged the lives of the terminally ill, those same advances and treatments are likely to be expensive."

Pers Larson, a financial advisor and advocate for the terminally ill, told a 1995 House Ways and Means

Committee hearing on viaticals that they "permit the seriously ill to pay their bills while fighting their illness and maintaining their dignity and

(continued on page 4)

### Inside this issue

<b>Editorial: A new world</b> .....	2
<i>by Bob Shapiro</i>	
<b>Op-ed: What is an actuary</b> .....	3
<i>by Sam Gutterman</i>	
<b>Life Practice area issues</b> .....	5
<i>by John Palmer</i>	
<b>Technology and life distribution</b> .....	6
<i>by John Kleiman</i>	
<b>Blues sing actuaries' praises</b> .....	8
<i>by Robert J. Myers</i>	
<b>The Complete Actuary: Looking at change</b> .....	9
<i>by Angelica Michail</i>	
<b>On the lighters side: Pet insurance</b> .....	10
<i>by Linda Heacox</i>	
<b>James Baker to speak at annual meeting</b> .....	11
<b>New CD-ROM for research and education</b> .....	12
<i>by Arnold Shapiro, Edward Kleinman, Tiancheng Li</i>	
<b>Foundation grants for math education</b> .....	13
<b>Letters to editor</b> .....	14
<b>Actucroscopic</b> .....	16

# The Actuary

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## EDITORIAL

# A new world

by Robert Shapiro

This issue of *The Actuary* does not have a traditional theme, such as education, research, health care, pensions, or life insurance. Instead, it contains a group of articles and letters that illustrate the ever-widening playing field of the actuary. A number of these new areas of practice are still in their developmental stages, and some are controversial. Articles on viatical settlements and accelerated benefits, selling insurance products on the Internet, pet insurance, and even letters to the editor on a previous article on "actuarial counselling" compel us to look at new opportunities with an open mind.

Change brings new demands from our current employees and clients, as well as from new (nontraditional) employers, as they develop an awareness of the value of actuarial services. It is reassuring to see, as we prepare for a new and different future, that our current employers and clients are generally happy with our services. Bob Myers' article provides gratifying evidence here as he analyzes the increase in actuaries working in Blue Cross/Blue Shield plans.

Angelica Michail, in her "Complete Actuary" article, shares some change management techniques to help us overcome our natural fear of change and to actually become change agents. Actuaries becoming involved in new products and new distribution channels and filling new roles have the responsibility not only to blaze new trails, but also to illuminate those trails for other actuaries.

Even John Palmer's overview of strategic issues being considered in the Life Insurance Practice area, a traditional actuarial environment, takes a broad, big picture approach. He suggests some possible solutions to addressing the stagnation in North America's traditional life insurance business. I urge you to consider John's ideas and give his committee the feedback he requests.

The actuary's role is changing at all levels — in terms of businesses served, roles played, and perspectives applied. The articles you will read in this issue will give you a glimpse into the exciting new world that is unfolding for actuaries.

## Fiction contest winner announced

Jim Toole, editor of the Computer Science Section's newsletter *CompAct*, has announced the winners of the first Actuarial Speculative Fiction Contest, sponsored by the Section. Winners include:

- **Best All-around** and winner of a \$250 gift certificate and a one-year subscription to *Actuaries Online*: David Kroll for "The Actuary and Alfred Anderson"
- **Runners up**, who get a one-year subscription to *Actuaries Online*:

**Most Inventive:** Christopher J.

Fievoli for "The Last Actuary"

**Best Action/Adventure:** Marilyn

Dunstan for "An Actuarial Heist"

**Most Creative:** Amy Whinston for

"219"

**Most Humorous:** Timothy

Orcutt for "The 500th Anniversary

of the Ferengi Actuarial Institute"

• **Editor's Choice:** Ellen Torrance:

"Life Annuity"

Entries, except for the Editor's Choice, were judged by Dr. Bob Mielke, Northeast Missouri State University.

(continued on page 15)

## OPINION

# What is an actuary?

by Sam Gutterman

Over the first six months as president of the Society of Actuaries, a single question has come up more often than any other: "What is an actuary?" Although often asked by non-actuaries, it is significant that this question has also been asked by actuaries. It has arisen in the context of discussions about our basic education redesign proposal, efforts to expand the scope of the profession, actuarial skills that could be applied to non-traditional problems or jobs, the role of the actuary in public policy issues, and how to prepare the actuary to be in a position to be able to respond to Walt Rugland's "Ask an actuary" initiative.

Given the more than 150 years of our existence as a profession and more than 100 years in North America, the answer to "what is an actuary?" should be clearly defined and well understood. It doesn't seem to be. These are several definitions and common concepts raised over the years:

- A person who computes premium rates, dividend, risks, etc., according to probabilities based on statistical records (*The Random House Dictionary of the English Language*)
- The actuary substitutes facts for appearances and demonstrations for impressions (Ruskin — SOA motto)
- A future cost analyst. A financial futurist. Experts in evaluating the current and long-term financial implications of programs involving uncertain future events (Fred Kilbourne — 1983)
- A professional who assesses and manages strategic and financial implications of risk (input via Actuaries Online — 1995)
- The financial architect and potential manager of enterprises, both private and public, that are built on the intellectual core (the application of

experience analysis and risk evaluation to measure, communicate, and respond to the current financial implications of future contingent events) of the actuarial profession (*Actuary of the Future Task Force Report* — 1988)

- The core actuarial approach includes the application of probability, a long-term perspective, and the concept of the time value of money (Paul McCrossan — 1995)

I would like to add something I developed last year and identified as the current "Actuarial Paradigm," an elaboration of the above:

Actuaries identify and analyze the implications of future possibilities, especially with respect to risk. In conducting their analyses, actuaries develop one or more models to estimate the financial impact of future contingent events. The models may reflect the decision maker's objectives and risk tolerances and are applied to the particular situation, reflecting explicit assumptions based on:

- historical experience from similar types of exposures or related phenomena and
- in-depth knowledge of the environment in which the future experience will occur, which may differ from the environment from which data was obtained.

This knowledge enables actuaries to assess:

- the relevance, reliability, and credibility of available historical data, which is usually a sample of the underlying expected experience and
- the sensitivity of the models to changes in assumptions and model specifications, resulting in an assessment of a range of model results over single or multiple potential scenarios.

To enable the decision maker to effectively operate in an environment of risk and uncertainty, actuaries interpret the results of these models and develop possible alternative approaches to manage future outcomes. Because of the difficulty of predicting future contingent events and their consequences, these approaches are often dynamic; that is, they require a periodic evaluation of emerging experience and prospects for future change, to enable actuaries to appropriately modify their estimates or to more appropriately manage the risks undertaken.

I have heard several actuaries say, "I'm no longer working as an actuary." These actuaries may be senior managers of a firm; practice in investment, marketing or underwriting; or work for a non-traditional employer or a non-traditional practice area. Although their work may not match the above description, they most likely benefit from and apply the basic actuarial approach, knowledge, and skills gained during the route to their actuarial designations. Through their actuarial education, they have learned to objectively evaluate issues from different views in a rigorous manner, to reflect both a short-term and long-term perspective, and to identify, assess, and manage risk and uncertainty. Many "non-actuarial" positions can benefit from these skills, and I am confident that we can expand the fields in which actuaries can work. I believe that they can still call themselves actuaries and apply the fundamental approaches to problem solving taught by actuarial science.

I would be interested in further thoughts on this subject. Please contact me at my *Directory* address or at 73462.27@compuserve.com

## Regulators, investors put viaticals under microscope (continued from page 1)

former way of living," while reducing the need for government funds and charities to pay for their care.

Moreover, Larson said viaticals have created a new, tax-paying industry, thus benefiting society.

### Viaticals and accelerated benefits

The genesis of viaticals did indeed come about due to need. The anecdotal history is that the AIDS crisis created a cottage industry in viaticals. When investors heard of an investment yielding high returns and backed by the guarantee of a contract with an insurance company, enormous interest was aroused.

The viatical industry believes consumer need remains high, despite the fact that hundreds of U.S. and Canadian life insurers now offer accelerated benefits riders (ADB) with their policies. Upon proof that an insured is terminally ill (usually a 6- to 12-month life expectancy), the insurance company will offer to pay out a percentage of the death benefit, less a relatively small administrative cost. The insured receives a part of the benefit to use during his lifetime, and his beneficiaries are paid out the rest at the time of death. The insured and his beneficiaries, therefore, can recoup nearly all the face value of the policy. A typical viatical, by contrast, pays out between 50%-80% of the face value in a lump sum or annuity.

According to Bill Kelly, executive director of the Viatical Settlement Association of America, one of two trade associations for the industry, viatical companies believe that only 6% of all life insurance policies carry accelerated death benefit riders. Gary Chodes, president of Viaticus, estimates the potential market at \$17.3 billion annually. That figure is based on insurance figures (\$13 trillion currently in force), population, and terminal illness figures.

Marketing of viaticals is done largely through an education process of professionals, e.g., insurance agents, estate planners, employee benefits

departments, or "trusted intermediaries" like social workers. Often, accelerated death benefits can work in conjunction with viaticals. An insured can apply to his insurance company for an ADB and viaticate the remainder.

### Regulation

Viatical brokers and consultants of varying degrees of credibility seem to be everywhere, including the Internet, offering potential returns ranging from 15% to 60% on what they term a "humanitarian investment." Now, it appears the too-good-to-be-true factor may have kicked in.

Concerned with protecting both buyers and sellers, the National Association of Insurance Commissioners (NAIC) has produced models of a legislative act and regulations for states to consider when debating how or whether to regulate the viatical industry.

The NAIC models are based on the California Insurance Laws 10113.1-10113.4, enacted in 1990. They are three-pronged and include:

- Mandatory disclosure of important information about viatical settlements, including providing information on alternatives to viaticals, such as accelerated benefits
- Licensing by state insurance commissioners of viatical brokers and providers (fee amounts left up to states)
- Suggested minimum returns to the seller. Following are the suggested minimums:

If life expectancy is:	Suggested minimum % of face value:
Less than 6 mos.	80%
6-12 mos.	70%
12-18 mos.	65%
18-24 mos.	60%
24 mos. or more	50%

According to the NAIC, 14 states regulate the sale of viaticals. Seven adopted legislation last year, and seven already had statutes governing these

types of sales. So far, 13 states have some form of regulation:

- Previous statute — California, Kansas, Minnesota, New Mexico, North Carolina, Texas, Utah, Washington
  - Based on or similar to the NAIC model — Indiana, Louisiana, New York, North Dakota, Oregon
- Two more states, Pennsylvania and Vermont, have statutes pending passage that are based on the NAIC model.

On the federal level, interest in viaticals exists because of the tax implications for both buyers and sellers. Currently, the cash received by the sellers is treated as ordinary income to the extent the seller realizes gain on the transaction. Proceeds spent on medical expenses would, of course, be sheltered from taxation. Individual investors who buy viaticals pay capital gains on their profits if they use after tax dollars.

Legislation passed in March by the House of Representatives, H.R. 3103, *The Health Care Coverage and Affordability Act of 1995*, would change Internal Revenue Code 101 to treat amounts paid by a viatical company for any portion of a life insurance policy insuring a terminally ill person as an amount paid by reason of the death of an insured. No cap is proposed on amounts treatable as tax exempt. If the bill is enacted, it would apply to viatical proceeds received after December 31, 1995.

### Need for actuaries

Chodes and Bradley Rotter, chairman of Dignity Partners, Inc., both said they employ no staff actuaries. With the industry in its infancy, their firms are just starting to collect the body of data necessary for real analysis. Rotter said his firm has conducted about 2,000 transactions since 1993 on about \$100 million of policies.

Viaticus, however, relies on consultant actuarial firms and CNA's staff actuaries to help develop new products, do risk analysis, and analyze portfolios of policies. Chodes and Rotter said they

(continued on next page)

# Life Practice Area faces strategic issues

by John Palmer  
SOA Vice President

In the next few months, the leaders in the SOA Life Insurance Practice Area will be wrestling with some big picture issues that we believe are important in setting the strategic direction for our efforts. We are interested in your feedback on these issues, no matter which area you practice in.

## Experience studies

Experience studies are critical in helping our members fulfill their practice requirements. They also represent a key service the SOA performs for its publics, including insurance companies and regulators. Improving the timely and effective delivery of experience studies continues to be a challenge.

A committee headed by Esther Milnes conducted a survey in April on the value of experience studies among several SOA, American Academy of Actuaries, and Canadian Institute of Actuaries committees, as well as related industry groups. Results should be available by the end of May.

## Regulatory overload

The quickening pace of regulatory activity shows no sign of abating. We will be increasingly challenged to bring the necessary resources to bear for an appropriate and timely response. Specific challenges include:

- How can actuaries mesh sound

actuarial practice with public policy mandates (e.g., the Model Illustration Regulation)?

- How do actuaries take advantage of changes in the regulatory climate to apply appropriate actuarial principles (e.g., the nonforfeiture report)?
- How do we cope with regulatory overload: the sheer volume of changes and the array of local regulatory variations?

Please let me or anyone on the Life Practice Committee know your thoughts on these issues.

## Risk classification restrictions

The advent of genetic testing has triggered the discussion on the appropriateness of risk classification. The U.K.'s Institute of Actuaries is facing a parliamentary mandate to the British insurance industry to respond to this issue within one year.

The Society of Actuaries faces the challenge of separating its research from a political advocacy position. However, because appropriate risk classification is fundamental to our profession and to our business, the actuarial profession clearly has a role in this public policy debate. Where do you think the profession should stand on this issue and, more specifically, how should the SOA (distinct from

the Academy) respond?

## Viability of the actuarial profession

This issue is not unique to the Life Insurance Practice Area. It is being keenly felt by all SOA members. The stagnation of U.S. and Canadian traditional life insurance businesses and the shrinking number of employers have narrowed the scope for traditional employment. Some solutions may come from increased interrelationships with allied professions, such as economists and investment professionals, and from internationalization and improved visibility from publicity on the unique abilities of actuaries. On which initiatives do you believe we should concentrate our efforts?

Perhaps you're wondering if your opinion is really valued. Sometimes it only takes a handful of people speaking up with innovative and well-reasoned approaches to influence the leadership's directions. We want to hear from you. **John Palmer is senior vice president at Life Insurance Co. of Virginia in Richmond. He is the SOA vice president supervising the Life Insurance Practice Area and can be reached by e-mail at 72120.1105@compuserve.com**

## Regulators, investors (continued from page 4)

hope to continually improve the sophistication of the underwriting being done.

Currently, each company submits policies to scrutiny by a physician and underwriter or a team of underwriters. Chodes said, "As we get more sophisticated, we'll be able to apply more actuarial techniques and models to what we do. Certainly a critical component to success in this business is to get a handle on how long people

will live," said Chodes, whose company has entered into settlements with people who have as long as a seven-year life expectancy.

## Future of viaticals

Chodes expressed confidence in the industry's future, saying that the infusion of capital in his firm, through the purchase by CNA, and in Dignity Partners, through securitization, allows viatical companies to have stable access to capital and varied portfolios. By all

accounts, three-year-old San Francisco-based Dignity Partners astonished Wall Street with its aggressive securitization strategy a year ago, with \$35 million worth of policies followed by another \$15 million. In the process, it won the *Investment Dealer's Digest* "Deal of the Year Award." The firm went public in February 1996, with an initial public offering of \$21.7 million. Another securitization will probably take place within the year.

# Technology and changes in life distribution

by John B. Kleiman

**T**echnology is changing the way we live and the way we do business. The better-educated individual who is entering the wealth accumulation phase will be more comfortable with doing transactions by phone or the computer. For commodity products, he or she will need, and could even prefer, little or no personal contact. Some will even choose to do their own retirement planning, and there are a number of software programs available to help them do so. Mutual fund and brokerage houses are producing their own versions in order to establish a link between them and retirement planning by the individual. Thus, how people are reached will change.

## Consumers want convenience

Methods of distributing life and annuity products will continue to change as consumer needs shift. The shift in annuity sales from career agents to banks will continue and eventually will affect the independent agent. The fastest-growing distribution systems will be banks and financial planners, with career and independent agents taking on more of the characteristics of financial planners.

The long-term winners in the battle for control of distribution will be those systems that can meet the evolving needs of the consumer. This will require conveniences, such as being open or available in the evenings and on weekends when dual income couples have more free time, or offering on-line purchasing and account information. The life insurance industry will most likely follow the path of the mutual fund houses with 800 numbers and 24-hour automated information. It will also require the creation of systems appropriate for the specific

market, because no one system can cover all income and age levels.

## Sales on the Internet

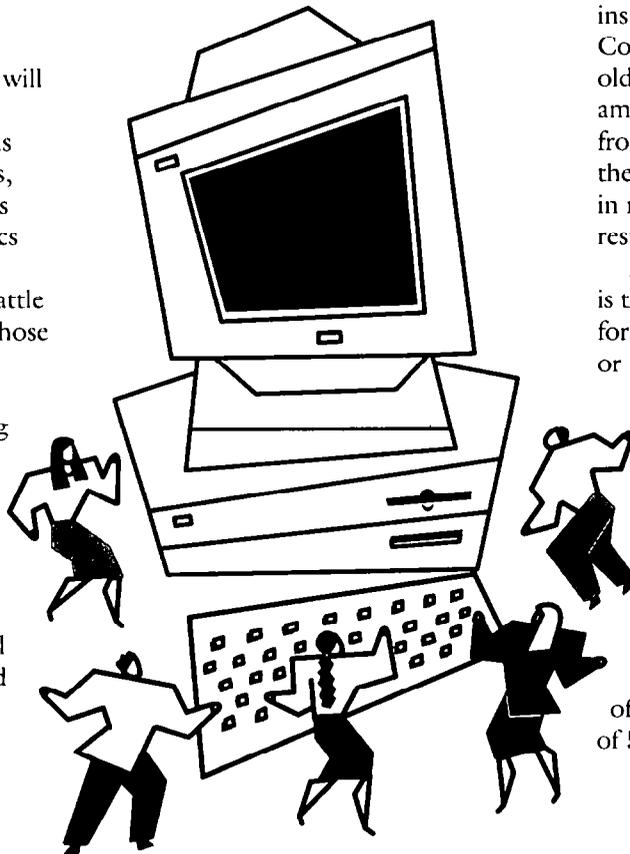
While the Internet may not have significant impact over the near term, insurers need to begin their planning for its eventual use as a medium for sales.

Results from a recent American Internet user survey indicated that 9.5 million people use the Internet. This group is young — average age 36 and 31% under age 30 — and affluent — average household income of \$62,000. This profile is not surprising, as younger people have a greater knowledge of and are more comfortable with computers. Many colleges and universities provide free or relatively inexpensive access to the Internet.

While this is an intriguing outlet for sales, there are many reasons why significant insurance sales are a few years away. According to the survey, half of the users signed on just last year. They are getting used to “surfing” the Internet, and it will take time for them to get comfortable. Also, currently, the system is not totally user-friendly. The effort required to navigate the maze of menus and options will keep many potential users away until the process is simplified. Until this situation changes, use of the Internet for purchase of insurance products will not reach its full potential. Offsetting these limitations is that it is accessible 24 hours a day, seven days a week.

While there are many users of the Internet, the younger generation has shown a declining propensity to buy life insurance. According to the American Council of Life Insurance, 18-34 year-olds purchased 37% of the total face amount of life sales in 1993, a decrease from 48% in 1983. This segment of the population will actually decline in numbers over the next ten years, resulting in even less opportunity.

A more promising segment to target is the affluent, who are good prospects for insurance. People earning \$75,000 or more purchased 35% of total face amount of life insurance in 1993, up from 15% in 1983. However, the affluent generally buy insurance as part of a financial plan, and there is a question as to whether the Internet can fulfill this need. Also, non-qualified annuities are generally purchased by pre-retirees or retirees, a group that tends to shy away from computers. Only 2% of annuity holders are under the age of 54.



## Samples of Companies on the Internet

### Separate Sites

Aetna  
AIG  
Allianz Life  
Allstate  
Arkwright  
CIGNA  
CNA  
Crum & Forster  
California State Auto Association  
GE Capital  
Great-West Life  
Hartford Steam Boiler  
ITT Hartford  
Kemper  
Liberty Mutual

Massachusetts Mutual  
Nationwide  
New England Mutual  
Northwestern Mutual Life  
Phoenix Home Life  
Principal Mutual  
Progressive  
Prudential  
Royal  
SAFECO  
Skandia  
State Farm  
Talegen  
USAA  
Zurich Insurance Group

### Common Site (InsWeb)

American Re  
CAMICO  
Commercial Life  
Coregis Group  
Employers First  
Great States  
Grocers Insurance Group  
Industrial Indemnity  
Kemper Life  
Norcal Mutual  
Pacific Specialty  
Westchester Specialty Group  
Workmen's Auto

Despite the negatives, insurers still need to pursue this medium, as the user base will expand and eventually encompass a more diverse population. As the population ages, the segment of computer-literate buyers will increase. Also, the Internet will become easier to use, and it will be convenient for consumers with access at any time of the day or week. A market will develop eventually, and insurers need to be ready to take advantage of it when it does.

### Companies on the Internet

The number of commercial hosts on the Internet expanded from about 800,000 to 1.8 million from July, 1994, to July, 1995—a growth rate of 7.3% per month. Activity from insurers has been limited, but growing. The following companies are among a sample of those that have their own web site or are part of a common site.

InsWeb, which has billed itself as the first centralized insurance marketplace on the Net, is a division of Strategic Concepts Corp. in Burlingame, California. In operation since November 1995, it will eventually provide quotes on health, auto, accident, life, and workers' compensation insurance.

### Potential for future

The potential for selling through the World Wide Web is still unknown, but it presents some intriguing possibilities. Because of the impersonal nature of the medium, commodity-type products such as fixed annuities or term life insurance should be easier to sell. Variable annuities or long-term care are more complicated, and the Internet could serve as a lead generator. A person could seek additional information or request a call by so noting while at a site.

Thus, the Internet provides the potential of reaching a large audience at a fairly low cost. Initially, it offers potential for making the agent more productive and could serve as a mechanism for interaction with the customer by allowing access to policy values and permitting address changes. But it will take time to establish it as a legitimate distribution channel.

Perhaps the biggest way in which technological advances such as the Internet will help to enhance the distribution of life insurance and annuities is through the beneficial impact it will have on agent productivity. More companies are designing systems and

software that make the agent's job easier by minimizing those tasks not directly related to the actual sales process, thus allowing them to concentrate more closely on opening and closing sales.

As more insurers try to get the most out of their agents, technological utilization is certain to expand. Thus, while use of the Internet as a direct, stand-alone distribution system is not likely to generate significant sales in the next few years, its use and other technological improvements will help improve agent productivity in the near term.

**John B. Kleiman is vice president, Conning & Company, Hartford. This article was excerpted from "The Rise of Multiple Life Distribution Channels," reprinted by permission from Conning & Company, 1996.**

## IN MEMORIAM

**Darl W. Brooks**  
ASA 1990, MAAA 1993

# The Blues sing praises for actuaries

by Robert J. Myers

**A** perusal of the "List of Actuaries by Business Connection" in the 1995 *Directory of Actuarial Memberships* surprised me because of the large number of actuaries with Blue Cross/Blue Shield plans. Twenty-five years or more ago, I knew of relatively few actuaries in this sector. It had always seemed to me that these plans felt little need for actuaries on their staffs, because they were only selling one-year term health insurance contracts.

So, I decided to make a study of the matter from data in the 1970, 1980, and 1990 yearbooks of the Society of Actuaries and the American Academy of Actuaries. Some diligence was required, because not all BC/BS plans have these words in their legal names or trade names along with their geographical location. For example, the Illinois plan is legally the Health Care Service Corporation, and the Philadelphia plan is Independence Blue Cross.

I have classified actuaries as being SOA members or being non-SOA Academy members. A few in the latter category are members of the Casualty Actuarial Society (CAS) or what is now the Conference of Consulting Actuaries (except in 1970, when 6 of the 11 such actuaries were members of the CAS).

The 1995 *Directory* listed 245 actuaries associated with 50 BC/BS plans, and there were only 17 plans that had none (Table 1). Although most of the plans with actuaries had 5 or less employed, 12 plans had 6 or more, and 5 plans had 10 or more (the maximum being 22).

In contrast, in 1970, only 12 plans had actuaries on their staff, in most cases, only one (Table 2). The number of plans and actuaries grew significantly by 1980, but not to high levels. Then, by 1990, an explosive growth occurred, and it continued to 1995.

The number of SOA members among the BC/BS actuaries was about 80% of the total in 1980-95, and about one-third of these in 1990 and 1995 were Fellows.

In summary, this analysis is a vivid demonstration of how BC/BS plans have come over the last 25 years to rely on actuaries to assist in the sound growth and operation of their significant sector of the health care insurance field.

**Robert J. Myers was chief actuary of the Social Security Administration during 1947-70 and was the 1971-72 president of the Society of Actuaries.**

**Table 1**  
**U.S. BC/BS PLANS, BY**  
**NUMBER OF ACTUARIES**  
**EMPLOYED, 1995**

<u>Number of Actuaries Employed</u>	<u>Number of Plans</u>
0	17
1	5
2	12
3	8
4	6
5	5
6	2
7	3
8	2
9	2
10 or more	5 <sup>a/</sup>
Total	67

<sup>a/</sup> One plan each with 11, 12, 15, 19, and 22 actuaries, respectively.

Note: *Blue Cross/Blue Shield Association (Chicago)* is considered as a "plan."

**Table 2**  
**U.S. BC/BS PLANS BY PRESENCE OF ACTUARIES, BY YEAR**

<u>Year</u>	<u>Number of Plans with Actuaries</u>	<u>Total</u>	<u>Number of Actuaries</u>	
			<u>SOA Members<sup>a/</sup></u>	<u>Percent SOA Member</u>
1970	12	15	4 (3)	27%
1980	15	27	23 (5)	85
1990	49	164	122 (49)	74
1995	50	245	206 (70)	84

<sup>a/</sup> Figures in parenthesis are the number of Fellows.

Note: *Blue Cross/Blue Shield Association (Chicago)* is considered as a "plan."

## THE COMPLETE ACTUARY

# Here's looking at...change

by Angelica Michail

**C**hange happens everytime, everywhere, and to everyone, and yet we continue to fear it, rather than embrace it.

Perhaps a better understanding of change management can lessen our apprehension. A recent MBA course I took on this subject made me realize that if I knew then what I know now, change would have caused me less stress and pain. I might even have been able to enjoy the experience.

Today, companies are reengineering, reorganizing, and innovating at a frantic pace. These activities cause changes that affect people, processes, and products.

How can we succeed as change agents? How can organizations make change a more positive experience?

This article outlines some change management principles that may help make the changes more palatable. Mary Poppins advised, "Just a spoonful of sugar helps the medicine go down," and I agree.

### Basic change concepts

*There are two kinds of changes — incremental and revolutionary.* People often feel threatened by change. Incremental change, made one step at a time, allows the individual or the organization more time to adjust to the change, making it more manageable. Too many changes in close succession can lead to change "indigestion," leading to reversals to lessen the discomfort. Every change involves cutting roots: beliefs, habits, relationships. Getting rid of too many anchor points can destabilize any person or organization. People need stability in some areas of their lives to cope with the instability in other areas. Revolutionary changes should be reserved for emergencies (e.g., when death is the alternative or a disaster is forthcoming).

*People will not change just because they are told it will make things better.* Think of all those who are still smokers even after decades of research and publicity show smoking to be unhealthy. People have to see the need for change and understand the consequences of changing and of not changing. They need to know, "What's in it for me?" They need to see that something of value — financial satisfaction, a worthwhile cause, excitement — will replace fear, discomfort, and threat. The leader who can paint a clear picture of the changed organization and can make that picture desirable, achievable, and valuable will go further in effecting the change than in dictating a long list of directives and implementation procedures.

*The people who are most affected by the change and are instrumental in bringing about the change should be involved at the beginning of the process, not after all strategic decisions are made.* This enables people to feel they are a valuable part of the solution, instead of part of the problem. They become facilitators, instead of resistors. If they are informed only at the implementation stage, their fears will increase. By then, the reasons and objectives of the change become difficult to grasp because of fear and stress.

Today, guaranteed lifetime employment is becoming extinct. The security of organizations and its people lies in the excellence and relevance of the goods and services they provide customers. It is time to treat employees as intelligent human beings who are aware of the new economy. If given the opportunity, employees often surprise senior management with innovative ideas for changes and how to make them.

### Steps in changing an organization's culture

It usually takes leaders about five to ten

years to change a company culture by implementing a few basic steps:

- Understand the culture: what employees know, do, feel, and want.
- Create an awareness of the need to change. Unless employees accept the need for change, there will be enormous resistance. Be aware of the factors that facilitate and resist change.
- Provide training in change management concepts and procedures.
- Set up pilot ad hoc teams to experiment with the change. It is easier to analyze potential problems and develop strategies to deal with them on a smaller scale. This gives the change on a larger scale a better chance for success.
- Involve all employees in the change process.

### How to be an effective change agent

Often, actuaries are in leadership positions that require or enable them to be change agents. Here are a few tips:

- Communicate, communicate, communicate — clearly, simply, and persuasively — through numbers, writing, and speaking.
- Be confident and persevering. There will always be obstacles, failures, and criticisms associated with changes — learn to deal with them confidently and wisely. Believe in yourself and in the change.
- Work through many groups — teams, coalitions, informal groups, and formal groups. When the groups accept and adopt the change, then it will happen.
- Use and provide the three power tools of change: information, support, and resources.
- Reward successful change activity. A reward gives a strong message; it demonstrates that a high value is placed on the change.

*(continued on page 13)*



## on the lighter side

### Pets R Us?

By Linda Heacox  
SOA Public Relations Specialist

**W**e love them. We baby them. We insure them? Yup, in increasing numbers. Pet health and accident insurance has arrived.

After pet cemeteries, pet therapists, and pet designer drinking water, could insurance firms for Fido and Fluffy be far behind? No, comes the answer from areas as diverse as southern California, Sweden, France, South Africa and, of course, the traditionally animal-mad England. The time may not be right yet for a real pet insurance boom, but many believe this dog will have its day, and soon. In the past two years, the major U.S. pet insurer has doubled the number of policies in force to 75,000, while many thousands of other cats and dogs are insured by regional HMOs formed by veterinarians.

#### Avoiding doggie downers

Advances in the technology used to treat animal maladies, longer pet life spans, and growing veterinary costs will make pet insurance attractive in coming years, according to proponents. "We are seeing much more interest and acceptance of pet insurance in the United States," said Dr. Jack L. Stephens, president of VPI (Veterinary Pet Insurance), Anaheim, Calif. Owners with policies can avoid unnecessary euthanasia or continued suffering for their pets.

Procedures such as laser cataract surgery, joint replacements, chemotherapy, and yes, pet orthodontia (that's animal braces, folks), make your cat or dog just like one of the

family. And, that is precisely how most pet owners feel about their quadruped friends. According to American Animal Hospital Association spokesperson Andrea Ashby, the organization's 1995 survey of American pet owners showed 70% thought of their pets as children.

"We've humanized our pets," she said. But, Ashby admitted that, for now at least, most pet owners surveyed said they wouldn't consider pet insurance. "Basically, they believe a pet's illness wouldn't cause financial ruin the way a human illness might. But, I think you'll see the trend turning toward more pet insurance in the next five years as veterinarian costs increase."

#### Getting that paw print on the dotted line

So far, VPI is the only national U.S. firm selling pet medical and accident insurance. The company, which is licensed by the insurance departments in each state where it operates, reported growth of 30% in 1994 and 27.19% in the first eight months of 1995. The largest of the pet insurance HMOs, Medical Management International, Portland, Ore., intends to branch into seven other states in the near future, according to a *Wall Street Journal* report. Neither firm employs actuaries.

#### Love for pets knows no borders

The success of U.S. insurers, though, doesn't match the popularity of pet insurance in other countries. In Sweden, nearly 20% of all pets are insured. In England, 14 different plans insure at least 700,000 pets and produce a premium volume of \$96 million annually.

Eight countries sent representatives to the Worldwide Conference of Pet Health Insurers in November in London. VPI was there, as well as England's Dog Breeders Insurance Company, founded in 1947, and Sweden's Agria, founded in 1955.

The attendees presented status reports, shared financial information and demographics, and participated in discussion groups on the problems facing their fledgling industry.

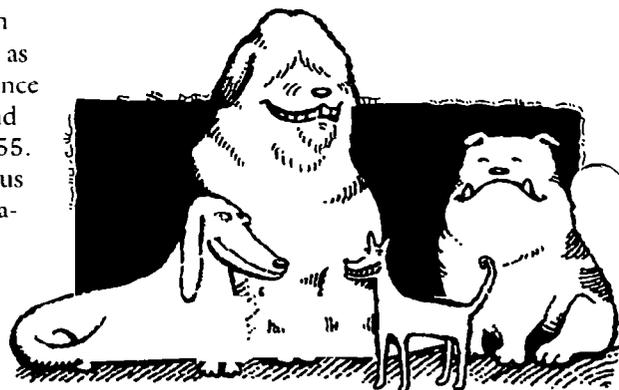
#### Animal actuary has to deal with nine lives

Only one actual pet actuary is known to exist, Sally Schreiber, FSA, of England's Pet Plan Group, Ltd. No morbidity tables for cats and dogs (or other members of the animal kingdom) exist, so firms offering this type of coverage rely on information from veterinary groups and organizations such as the American Kennel Club. As Schreiber recently told the *Wall Street Journal*, however, she is busy accumulating data on trends as she observes them.

#### Insuring mad cows and other catastrophes

Several U.S. firms sell insurance to farmers and breeders. Usually, if values are small, say between \$10,000 and \$20,000, farm owner's insurance covers catastrophes such as lightning striking a standing cow. For levels higher than that, farmers and breeders get their insurance from firms like American Livestock, Geneva, Ill. The firm writes policies for individual animals, such as thoroughbred horses and champion show dogs, including infertility coverage. Feed lot livestock — cattle in huge herds being fattened for slaughter — can also be covered. No actuaries are employed by livestock firms, so the data on life spans of breeds and other vital statistics have been accumulated over many decades and is simply applied by underwriters.

Meanwhile, animal owners who don't fall into the farmer or breeder categories will have to shop hard for the best deals for their individual pets, keeping in mind that deductibles and premiums can be high for insureds who chase cars and chew mail men.



## MEETING NEWS

## Richard Lamm to speak at spring meeting

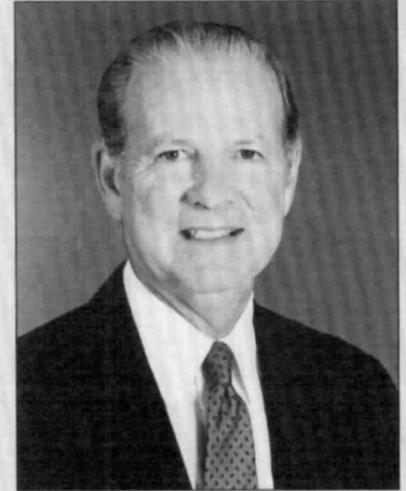


Richard D. Lamm

**R**ichard D. Lamm, the former three-term governor of Colorado (1975-87), will be the opening day speaker at the June 26-28 spring meeting in Colorado Springs. Lamm has been the director of the Center for Public Policy and Contemporary Issues at the University of Denver since 1987. His focus has been on health policy, with a special emphasis on health care systems reform and health care resources.

The Broadmoor Resort in Colorado Springs is the beautiful setting for this spring meeting focusing on health and pension issues. There, members will take advantage of unique learning and networking opportunities. A session-free afternoon is planned for Thursday, June 27, when members are encouraged to participate in a golf or tennis tournament, a hike, spa fair, a Pikes Peak railway tour, or a Cripple Creek gambling tour. End the day with a Rocky Mountain barbecue supper.

It's not too late to register. Call 847/706-3545 for information.



## Former secretary of state to speak at annual meeting

**J**ames A. Baker, III, will open this year's SOA annual meeting in Orlando, Fla., as keynote speaker on October 27. Baker served in senior governmental positions for three presidents, beginning in 1975 as President Ford's under secretary of commerce. Baker was White House chief of staff for President Reagan from 1981-85 and for President Bush from 1992-93. He also served the Bush Administration as the secretary of state from 1989-1992 and the Reagan Administration as secretary of the treasury from 1985-88.

Baker reflects on his experiences as Bush's secretary of state in his 1995 book, *The Politics of Diplomacy*, covering a time of unprecedented challenges and opportunities in the post-Cold War era. He currently is a senior partner in the law firm of Baker & Botts, Houston.

Start planning your trip to one of the nation's most popular family vacation spots. The Walt Disney World Swan and Dolphin Hotel is the site for three full days of professional sessions and networking October 27-30. Watch for more information in future issues of *The Actuary*.

### Society of Actuaries 1996 Summer Schedule

May 29-31	Spring Meeting (Financial Reporting/Product Development)	Island Resort, Marco Island Resort, Marco Island, Florida
June 6-7	Life Illustrations Seminar	Sheraton Hotel New York & Towers, New York
June 10-11	Product Development Bootcamp	JW Marriott, Washington, D.C.
	Social Security Seminar: Myth vs. Reality	Sheraton Washington Hotel, Washington, D.C.
June 26-28	Spring Meeting (Health & Pension)	The Broadmoor, Colorado Springs
July 14-17	Asset Liability Management	Wharton School, Philadelphia
August 15-17	31st Actuarial Research Conference	Ball State University, Muncie, Indiana

### May Board meeting open to all members

The May 31, 1996, Board of Governors meeting in Marco Island, Fla., is open to interested Society members. For more information or to request a copy of the minutes, call the Society office, 847/706-3500.

# What's new in actuarial education and research: Use interactive CD-ROM to find out

By Arnold F. Shapiro, Edward B. Kleinman, and Tiancheng Li

The first in a series of interactive CD-ROM modules titled, "What's New in Actuarial Education and Research," is being distributed to the subscribers of *ARCH*. Distribution is sponsored by *ARCH*, the Education and Research Section, the Committee on Knowledge Extension Research, and ACTEX Publications. The project was supported in part by the William Elliott Chair of Insurance.

The module focuses on the highlights of the 30th Actuarial Research Conference (ARC), at Penn State University, August 1995. Its theme was, "Communicating Educational Topics and Research Results."

This module will be demonstrated at both SOA spring meetings: Session 18 at Marco Island on May 29 and Session 21 at Colorado Springs on June 26.

## Purpose of module

ARCs can be an important source of new ideas for practicing actuaries, especially since they involve a free and unfettered exchange. Priorities being what they are, however, few practicing actuaries attend ARCs. This is unfortunate, because practitioners, even those who profess to get lost in actuarial theory, can come away with a good sense of what's new and who is doing it. Of course for some, it is sufficient that many of the papers presented at ARCs are contained in its proceedings. Many practitioners, however, particularly those who lack the relevant background, find it difficult to keep up with research papers.

The CD-ROM module was developed to fill the need for a summary of ARCs' highlights, with an emphasis on the focus of the presentation, communication, and easy access.

## Module format

All 37 presentations of the 30th ARC were videotaped, and the highlights of

each talk were digitized and recorded on CD-ROM. This CD-ROM was then used to develop a computer-based, user-friendly multimedia summary of conference highlights.

There are two ways to easily access the highlights of each presentation. The first, which is shown in Figure 1, gives access by clicking the computer mouse on the image of the presenter. Passing the mouse over the image displays the name of the presenter and the title of the presentation.

The second way is through one of the indexes shown in Figure 2. At the top of the screen, the presentations are indexed by research papers, education papers, presenters, and topics. The educators addressed such topics as on-line communication, current educational issues, and instructional design.

The general topics covered by the researchers include credibility, finance and investments, retirement issues, and statistical methods.

Figure 3 shows a typical presentation screen. In this instance, the presenter is discussing the output (left center) of an interactive computer game that simulates the management of an insurance company. When you enter the screen for each of the presentations, the presenter (right center) gives a short statement of the "bottom line" of the talk, and the abstract of the presentation



Figure 1



Figure 2

is shown. One can quickly peruse all the talks by staying on a presentation screen just long enough for the speaker to present his or her bottom line.

After being presented with the bottom line, the user can choose other highlights of the talk to review. In this case, there are two other options, "Objective" and "Annual Results."

## Equipment requirements

If your desktop or notepad computer is of recent vintage and IBM-compatible, with a CD-ROM player and speakers, you can probably run the module.

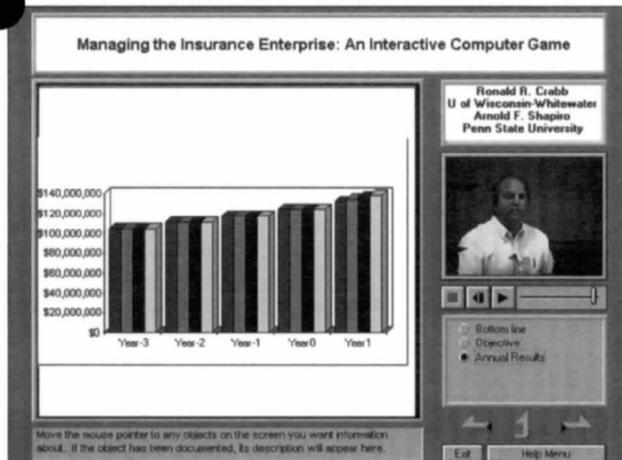


Figure 3

The equipment needed to run the software is readily available: Windows (3.1 or better), an IBM PC or compatible (486 DX2 66 MHZ or better), a CD-ROM player (2X or better), a super VGA monitor, and a sound card (Sound-Blaster Pro or compatible).

The underlying technology has been significantly improved since our first continuing education module in 1991, and ease of use

should make it more accessible. Of course, one test of the usefulness of the module will be the extent to which it helps improve communication between our researchers and our practitioners.

Arnold Shapiro, Edward Kleinman, and Tiancheng Li are with the Smeal College of Business at The Pennsylvania State University. Shapiro is professor of Actuarial Science and Insurance, Robert G. Schwartz Faculty Fellow, and director of the Risk Management Research Center. He also is a member of the SOA Board of Governors. Kleinman and Li are specialists in instructional design, using interactive multimedia.

## SOA Foundation solicits grants for math education

The Society of Actuaries Foundation has committed up to \$100,000 to fund the development of tutoring programs that involve actuaries as volunteers.

"Mathematics is a core topic critical to a student's future success," said Harry Panjer, Foundation director of research and education. "We should invest in ensuring the literacy and numeracy of our children, who are valued human capital in the future economy. By helping improve students' ability to learn mathematics, the Foundation can contribute to the overall quality of society. Actuaries are great volunteers and value the importance of the role of basic mathematics in shaping their lives."

The Foundation is soliciting grant applications from local groups to develop a network of math tutors in U.S. and Canadian public elementary schools. Grant applications and information will be sent to all actuarial club presidents and to charter investors of the Foundation. Collaboration and co-funding between school systems, actuarial clubs, businesses, and other

stakeholders in education are encouraged.

The grant proposals should outline network development, tutors' training, support from schools and key organizations, budget, and a reporting and evaluation plan. "We encourage applicants to be creative in designing and organizing their programs to suit local needs and resources," Panjer said.

Up to five projects will be funded for a two-year trial period. These pilot projects will involve actuaries and others in the local community who provide academic support, primarily through individual tutoring for students of all ability levels. The pilot projects will test the effectiveness of tutoring programs and, if successful, become organizational models for long-term programs in other locations.

The application deadline is August 1, 1996. For a brochure describing the objectives and application procedures, contact the SOA Foundation, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173. Telephone: 847/706-3600; fax: 847/706-3599, or e-mail: 102577.765@compuserve.com

The SOA Foundation fulfills its

mission to "contribute to the understanding and resolution of present and future social and economic problems by investing in innovative research, education, and communication initiatives," primarily through personal financial contributions from the actuarial profession.

### The Complete Actuary (continued from page 9)

Without change, there is no creativity, growth, progress, nor excitement. Without commitment to change, an organization lacks vision and a real mission. So, here's looking at change, with less fear and more creativity. **Angelica Michail is a consultant with National Actuarial Network. She is a member of the SOA Committee on Management and Personal Development and recently earned her Executive MBA from the Peter Drucker Management Center, Claremont Graduate School in Claremont, California.**

## DEAR EDITOR

### Actuarial counselling pros and cons

I was pleased to see Jack Bragg's name in print again (*The Actuary*, "Actuarial Counselling" February 1996). We caught up briefly at a Society meeting in Chicago from my distant days at Life of Georgia a few years back.

I thoroughly enjoyed the article.

Having spent many years in consulting before my change of professions, I see counselling as a natural extension of the work consultants already do. Many already are performing this work, simply without naming it. How necessary it is for it to be named.

**The Rev. Peter N. Campbell, Rector  
Holy Trinity Episcopal Church  
Skokie, Ill.**

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Bragg's article on actuarial counselling gives interesting background about numerous actuarial issues that are inherently imbedded in various personal financial decisions. I share his belief that there is a significant public need for services that help people with these decisions. I am less sure that there is a major role for actuaries. It is certainly true that many actuaries, and particularly those who have a background in pensions and employee benefits, may be well-positioned to consider moving into this field of endeavor. Most should not, however, without considerably more education and training in many related areas in which we have little formal training.

At the end of 1990, I decided to enter this field after about 20 years in benefits consulting and studied to become a Certified Financial Planner (CFP). While most of the educational material was familiar, and much of it quite basic, there were also many areas that I did not know enough about. I certainly should not have been giving expert advice without that additional training. While the actuarial training and experience is a wonderful background to bring to this field, we delude ourselves if we think we are

uniquely qualified. In fact, I expect that few are qualified, and there are some serious legal obstacles. My own experience has been considerably enriched by practitioners who come to the personal planning field with a different set of experiences and approaches to financial analysis.

Anyone who is thinking about pursuing this will do well to start by learning about the regulatory requirements for practitioners who want to offer financial advice to the public. For example, Massachusetts requires all personal financial advisers to register with the secretary of state and be a CFP, Chartered Financial Consultant (ChFC) or have passed some of the National Association of Security Dealers examinations. The Massachusetts Insurance Department also requires that insurance advisers be licensed. That license can be granted only after successfully completing a written examination covering life insurance products, estate planning, and other subjects.

Each state has its own requirements for advisers, which can create problems for those who have clients in more than one state. The federal government is also involved, requiring that investment advisers register with the Securities and Exchange Commission. These are all well-intentioned attempts to protect the public from unqualified advisers and charlatans. I do not share the regulators' expectations that the requirements do much good, but these are the rules of the game. Actuarial expertise does not give us an exemption.

Those who are interested in this field may wish to contact the Certified Financial Planner Board of Standards, 1600 Lincoln Street, Suite 3050, Denver, CO 80264-3001. It is a source for information about educational organizations that provide courses that prepare CFP candidates for the licensing exam. The Institute of Certified Financial Planners, a membership organization comparable

to the American Academy of Actuaries, provides educational programs through local societies, somewhat like our local actuarial clubs, in most major metropolitan areas. I highly recommend calling 303/751-7600 for information about visiting a group in your area to gain insights about the field and those who work in it.

My experience suggests that this is a field that many actuaries could find intellectually interesting, but most likely less profitable than traditional fields. Many groups, particularly the CFP organizations, have put much effort into becoming recognized by regulators as setting the standards for this field. I do not think our various actuarial organizations are prepared to do the same thing, nor do I think we should. It may be a good idea to consider developing curricula that would help EAs who work with small businesses to better understand related areas, such as estate planning, but maybe ASPA has already done this. I think that this could be an appropriate area for the Actuarial Standards Board to get involved, but the proper outcome of that would most likely be to heighten the awareness of actuaries that most of us have not been trained to deal with many tax and estate planning issues.

One thing that I think actuaries can do is to regularly and persistently object to non-actuaries misusing "actuarial" statistics. The most notable to me is financial writers who suggest self-annuitization of retirement balances over "life expectancy." Many people are surprised when I suggest that this strategy is doomed, because about one-half of the people will live longer. Unfortunately these writers do not know what the data means for individuals.

**Allan B. Keith**

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### Who investigates?

The article in the January *Actuary* on the discipline process puzzles me a little

(“Awareness of discipline process keeps actuaries out of trouble”). To quote, “When a complaint is made about a U.S. resident’s work in Canada, the CIA is the investigatory body, even if the actuary is not a member of the CIA.” The article later seems to indicate if the actuary is at fault, a whole series of sanctions could only be applied if the actuary were a member of the CIA. What happens here?

This made me wonder what would happen if, say, a Canadian actuary did some work for a country with no actuarial association. A few years after I retired (I am now in my 80s), I worked as a volunteer for Canadian Executive Services in Costa Rica, where I spent a very pleasant four months giving advice to the Actuarial Department of the Instituto Actuario de Seguros, a government-owned monopoly. I believe I did a good job. But, what if now, in similar circumstances, there was a complaint — who investigates?  
John C. Burns

\* \* \*

### Reply from Mo Chambers, chair of CIA Committee on Discipline

The Canadian Institute of Actuaries (CIA) has the responsibility to investigate a complaint about practice in Canada, because it is the body that

has developed and implemented the applicable code of conduct and standards of practice. It is in the best position to determine whether a breach has occurred. If the CIA, through its disciplinary procedures, determines that the accused individual is culpable, it can impose the appropriate sanctions if the guilty party is, or was at the time of the offense, a CIA member or student. If not, the CIA has no way to impose the sanction, because the individual never belonged to that organization. For example, it cannot suspend the membership of a nonmember. Consequently, through mutual reciprocity, the organization (s) to which the individual does belong has the responsibility to accept the guilty determination and to impose appropriate sanctions upon its member.

The issue of a Canadian or American actuary doing work in a country that has no actuarial association of its own is interesting. Despite considerable discussion, the question, in some respects, has not been completely resolved. In the absence of local standards, the Canadian actuary would be required to adhere to the CIA Rules of Professional Conduct. Where local standards of practice have been established, whether formally or informally, they should be followed. Complaints would be directed to the

CIA. An American actuary in the same situation would be expected to follow a comparable path.

The case of an actuary who is both FCIA and FSA or FCAS, and who is resident in a jurisdiction with neither local actuarial organization nor recognized standards of practice, is the issue that has not been completely resolved. In the early 1990s, the Canadian and U.S. actuarial organizations adopted common and non-conflicting codes of conduct. Consequently, it is not important which organization’s code of conduct is followed. It would, however, be inappropriate to regularly switch between them. One suggestion is that the actuary in this case be required to declare and formally document which code he or she will follow while practicing in that jurisdiction. The codes of conduct of the organizations require further that this declaration be part of any professional report prepared by that actuary.

The International Forum of Actuarial Associations has been established to promote, among other things, that actuarial organizations throughout the world adopt codes of conduct that are at least as responsible as those of the Groupe Consultatif in Europe.

## U. of Akron opening

The University of Akron, Akron, Ohio, has a tenure-track position for an assistant professor of statistics, effective fall 1996. Duties include teaching, statistical consulting, and research. Qualifications consist of a Ph.D. in statistics or mathematical sciences, with an emphasis in statistics and a desired interest in actuarial science and statistical consulting.

Send application letter, curriculum vitae, unofficial copy of graduate transcripts, and three letters of reference to Dr. Dale Borowiak, Statistical Search, Department of Mathematical Sciences, The University of Akron, Akron, Ohio 44325-4002. E-mail: dborowiak@uakron.edu

## Fiction contest winner (continued from page 2)

All 16 entries submitted by 15 actuaries and students are printed in a 162-page book, which is available at no charge from Sue Martz at 847/706-3543. Supplies are limited, and all Section members should have received their copies. In addition, two winners entries are in the General Library on Actuaries Online: “The Actuary and Alfred Anderson” (WINNER.ZIP) and “Life Annuity” (EDCHOICE.ZIP).

Contest Puzzle #2  
**ACTUCROSTIC**  
By Louise Thiessen

- A. Pre-electricity source of light (2 wds.)  
197 166 43 132 189 9 127 135 129  
212 25
- B. Brit. historian (1737 - 1794) (2 wds.)  
122 92 183 21 62 179 214 55 161  
218 33 150
- C. Disclosing without authorization  
54 108 217 138 195 52 158
- D. First American to win Nobel Prize for Literature (2 wds.)  
145 78 30 148 104 201 166 165 58  
181 118 11 1
- E. A shoe or a university  
160 24 168 112 94 35
- F. Horror, torment  
180 84 7 65 124 142 80 15 117
- G. 19th Cent. French mathematician Emile  
193 70 60 45 40 101 220
- H. Like land with no trees  
205 106 79 152 77 69 14 126
- I. 1992 remake of *Profumo di Donna* (4 wds.)  
20 209 29 216 131 184 4 68 87  
85 154 172 178
- J. Coax, wheedle  
134 213 207 47 159 10
- K. Location of a ball, perhaps  
51 102 114 198 211 73 88
- L. 1935 Best Picture with Charles Laughton (4 wds.)  
96 105 121 136 167 203 143 90 64  
156 208 82 199 2 12 56 39

- M. Canadian island named for English explorer in 1615  
206 177 34 93 5 22
- N. "In the \_\_\_\_ keep day and night together": T.S. Eliot (2 wds.)  
146 140 163 169 123 49 182 61
- O. People, commonly  
137 28 130 50 37 157 85 151 128
- P. Pallas is one  
103 53 173 133 109 164 19 113
- Q. Silk tree  
191 174 97 139 81 100
- R. Addition, supplement  
141 144 86 99 32 67 13 72 8  
120 175 200
- S. Unaccompanied medieval vocal music (2 wds.)  
42 170 23 76 111 119 147 153 6  
31 190 89 202 57
- T. Ungainly, maladroit  
149 187 186 110 75 27 107
- U. Graf was one  
38 83 116 46 74 219 188 16
- V. Man or Youth  
215 204 194 63
- W. Modern  
176 26 196 18 162 48 36 71
- X. Very unfriendly surroundings (2 wds.)  
17 41 59 171 98 155 91 44 185  
192 210 125 3 115

1D	2L	3X	4I	5M	6S	7F	8R	9A	10J	11D	12L	13R	14H	15F	16U	17X	18W	19P	20I	21B		
22M	23S	24E	25A	26W	27T	28O	29I	30D	31S	32R	33B	34M	35E	36W	37O	38U	39L	40G	41X	42S		
43A	44X	45G	46U	47J	48W	49N	50O	51K	52C	53P	54C	55B	56L	57S	58D	59X	60G	61N	62B	63V	64L	
65F	66A	67R	68I	69H	70G	71W	72R	73K	74U	75T	76S	77H	78D	79H	80F	81Q	82L	83U				
84F	85O	86R	87I	88K	89S	90L	91X	92B	93M	94E	95I	96L	97Q	98X	99R	100Q	101G	102K	103P	104D		
	105L	106H	107T	108C	109P	110T	111S	112E	113P	114K	115X	116U	117F	118D	119S	120R	121L	122B	123N	124F	125X	126H
127A	128O	129A	130O	131I	132A	133P	134J	135A	136L	137O	138C	139Q	140N	141R	142F	143L	144R	145D				
146N	147S	148D	149T	150B	151O	152H	153S	154I	155X	156L	157O	158C	159J	160E	161B	162W	163N	164P				
165D	166D	167L	168E	169N	170S	171X	172I	173P	174Q	175R	176W	177M	178I	179B	180F	181D	182N	183B	184I	185X	186T	
	187T	188U	189A	190S	191Q	192X	193G	194V	195C	196W	197A	198K	199L	200R	201D	202S	203L	204V	205H	206M		
		207J	208L	209I	210X	211K	212A	213J	214B	215V	216I	217C	218B	219U	220G							

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**March's Solution:** "Mathematics may be compared to a mill of exquisite workmanship, which grinds your stuff to any degree of fineness; but, nevertheless, what you get out depends on what you put in; and as the grandest mill in the world will not extract wheat flour from peascods, so pages of formulae will not get a definite result out of loose data." - Thomas Henry Huxley, *Geological Reform*

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