



SOCIETY OF ACTUARIES

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Actuaries...be careful!

by Jerrold G. Dolins

On January 1, 1986, a life insurance company began issuing whole life policies countrywide on a nonmedical issue basis. Each applicant was asked whether he was a smoker or a nonsmoker. In 1986 a total of 3,800 policies were issued to males aged 40-45. Following each of these policies through the first policy year indicated that 21 deaths occurred, for an overall first-year select mortality rate of 21/3,800.

The actuary desired to compare the smoker first-year select mortality rate with the nonsmoker mortality rate for these 3,800 policies. The company's files were kept in two separate locations: Nashville for policies issued east of the Mississippi and Los Angeles for policies issued west of the

Mississippi. Nashville issued 2,000 policies and processed 13 deaths; Los Angeles issued 1,800 policies and processed 8 deaths. Each office supplied smoker and nonsmoker data.

Nashville reported that smokers had a higher mortality rate than nonsmokers (6/900 > 7/1,100). Los Angeles reported the same conclusion (5/1,100 > 3/700). The actuary therefore concluded (since the entire population was considered) that the overall mortality rate for the 3,800 issued policies must be greater for smokers than nonsmokers. Right? Wrong! 11/2,000 < 10/1,800. What went wrong?

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Nonmedical, male, duration 1, issue ages 40-45						
Office	Smoker		Nonsmoker		Total	
	Deaths	Policies	Deaths	Policies	Deaths	Policies
Nashville	6	900	7	1,100	13	2,200
Los Angeles	5	1,100	3	700	8	1,800
Total	11	2,000	10	1,800	21	3,800

Task force analyzes financial implications of AIDS

by David J. Christianson

The Society of Actuaries Task Force on the Financial Implications of AIDS has been hard at work since last June. Much has been accomplished, and we plan to present our report in an open forum at the Vancouver meeting. The Canadian Institute of Actuaries will also present its findings, and the audience and panel will have a chance for dialogue on these reports. Actuaries will also have the chance to discuss actions their own companies have taken.

Because we needed to concentrate our efforts to produce a report in a reasonable time, we limited the scope of our research to individual life

insurance and individual disability insurance. These plans of insurance were selected because they are of great interest to the industry and have limited ability to respond to changes in experience.

The output of our research is clearly taking shape. We have settled on general population scenarios for AIDS deaths and have focused on the midrange scenario. From this population model we are developing mortality factors for the general population and are researching the correlation between population data and the insured population. We will suggest

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AFIR opens wider financial arena to actuaries

by Walter Rugland

Is there life for actuaries other than in insurance companies or with employee benefits?

For years the French have thought so, and this summer at the International Congress of Actuaries, the rest of the world agreed. The International Actuarial Association (IAA) established AFIR (Actuarial Approach for Financial Risks), a "division" within IAA that directs its research and discussion efforts to those financial areas other than insurance and benefits in which actuaries can make contributions.

Nearly 40% of the accredited actuaries in France work in major banks and other financial institutions that are not insurance or benefit oriented. They help those institutions analyze risks associated with different transactions and institutions both in terms of structure of the arrangements and quality.

AFIR gives actuaries worldwide the opportunity of sharing experiences with actuarial theory and operations in the wider financial arena. The focus is broad and different. But, the application of actuarial skills is not different, even though the language and the approaches are.

Led by an international committee, AFIR offers membership to actuaries throughout the world who are members of the International Actuarial Association. The initial focus of the group's activity will be an International Symposium to be held in Paris in 1990. Ideas for other activities are being presented and refined.

Members of the Society of Actuaries provided major impetus to the establishment of AFIR. Nearly coincidental to the charter granted AFIR was the establishment of the Investment Section within the Society. A broad view of the purpose of the Investment Section calls for extension of actuarial skills to the entire range of investment and financial affairs. Investment Section leadership endorsed the concept of AFIR and encouraged the Congress to adopt the recommendation that it be established.

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Dear Editor cont'd

between 175 and 200 including those waiting to join. Our membership goals are fellowship, service, and volunteerism.

Of our four officers at the top level, the three actuaries are currently president, first vice president and third vice president (George L. Hogeman, Karl M. Davies, and the undersigned). The second vice president (not an actuary) was a marketing officer of a major life insurance company. This shows where The Future of the Actuary and insurance experience can lead in retirement at the Retired Men's Association of Greenwich.

Howard H. Hennington

Lapse rates

The recently distributed 1984 Reports of the *Transactions* contains on pages 331 and 345 welcome data from LIMRA on lapse rates experienced in the United States and Canada between 1985 and 1986 anniversaries.

Each of these opens by encouraging discussions but fails to identify who is requesting them and to mention whether such comments will be relayed to the rest of us. I hope there will be many responses and that *The Actuary* will publish them.

The following is a comparison, for the first nine policy years, between the "Table S" (essentially median) lapse rates on permanent plans of insurance that appeared in 1960 (*TSA* 12, 553) and the experience shown in Table 5 of each country's current report:

Policy Year	Table S Experience 1949-1958	1985-1986 Experience	
		U.S.	Canada
1	12.50%	17.7%	12.1%
2	10.00	16.7	11.9
3	4.50	16.6	10.8
4	3.50	17.5	9.6
5	3.00	16.5	9.3
6-9	2.58*	16.1	10.6

Even though the current Canadian rates shown here represent averages rather than medians, I have chosen to list median values for the United States because they make a fairer comparison with the Table S values of three decades ago.

One appropriate topic for the requested discussion is the prospect that any sizeable part of the drastic deterioration evident from these figures is likely to be retrieved in the foreseeable future.

E. J. Moorhead

Caffeine or content?

I found the January issue of *The Actuary* unusually interesting. Maybe it's because I read it first thing in the morning – or could it be that four out of seven of the articles were written by non-Society members.

Whatever, congratulations to Mr. Vanderhoof.

Elinor V. Bowman

First intensive seminar scheduled

The SOA will offer the first Intensive Seminar in Applied Statistical Methods at the University of Wisconsin – Madison in August. There will be two sessions: August 14-18 and August 21-25. Enrollment will be limited to 25 students per session. The seminar was first announced in the January 1989 *Actuary*.

Only students who pass the Course 120 examination in November 1988 or May 1989 are eligible to attend the seminar. Students completing the seminar successfully will receive 10 elective credits toward the ASA designation.

The seminar will use a hands-on approach to help attendees apply the Course 120 statistical methods (Analysis of Variance, Regression Analysis, and Time Series Analysis). Lectures, case studies, and team projects will be used to expose attendees to uses of statistics in actuarial areas. Attendees will be examined on the portions of the seminar syllabus not covered in the Course 120 examination and will complete a class project. Minimum standards will be established for both the examination and the class project. It is anticipated that the percentage passing the seminar will be substantially higher than the percentage passing the Course 120 examination.

The faculty will consist of an academic instructor and a business instructor. Jed Frees, Ph.D., FSA, will be the academic instructor for the Intensive Seminar. Dr. Frees is an Associate Professor in the Department of Statistics and in the School of Business at the University of Wisconsin. He will take the lead in the development of course content and lectures

to be presented at the seminar. The business instructor will be a practicing FSA or FCAS who uses applied statistical methods on the job. This instructor will attend the Intensive Seminar for one day each session to present one or two case studies developed from actual experience. Both instructors will share equally in providing assistance to attendees during this day, and two graduate students from the University of Wisconsin will also be available to provide assistance.

The seminar fee will be \$500. Food, lodging, and study materials will cost approximately \$250. More information and registration materials have been mailed separately to potential attendees.

Task Force cont'd

factors to adjust population mortality rates to reflect the insured population and will also suggest adjustments at the individual company level. In particular, we have investigated whether geographical adjustments are appropriate in the insured population because death rates clearly vary in the general population. We have found that geographical adjustments are appropriate and will provide an analysis of various methods to reflect these adjustments.

The task force is also researching various ways to calculate the financial implications of AIDS and to provide funding (reserving) mechanisms to deal with the issue. Varying degrees of financial analyses and reserves may be appropriate, and we will provide suggestions as to the financial analysis and reserve implications at each level. For example, one type of analysis would be to determine the minimum response needed under statutory requirements. Another might be to analyze the financial impact if all current margins are to be preserved. Pros and cons of each level of analysis will be presented.

We believe our research will be very useful to the valuation actuary in forming an appropriate response to the financial implications of AIDS. I hope many of you will be able to attend our session in Vancouver to hear our report.

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