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YOU SHOULD LIVE SO LONG!

by Arthur Pedoe

It is stated that more than one thousand teams in the U. S. alone are doing research work concerning the span of human life and human vigour at the higher ages. It is a problem for actuaries to keep advised of the results of this work.

The *Gerontologist* is one learned periodical covering this field and recently three articles have appeared covering research by the Center for the Study of Aging and Human Development at Duke University, N. C., under Erdman B. Palmore, Ph.D., Associate Professor of Medical Sociology. (Vol. 8, No. 4; Vol. 9, Nos. 2 and 4). The initial article deals with the effects of aging on activities (physical and mental) and attitudes (satisfactions). Some striking conclusions are drawn from these three investigations, all of which will interest actuaries and some of which, in particular, actuaries will dispute.

Dr. Palmore suggests that life insurance companies could substantially improve the accuracy of their estimates of longevity of their applicants by using tests of "intelligence" and "work satisfaction" or a similar rating of social adjustment, which his researches indicate are important factors in predicting longevity. Of the 35 references given in his three papers not one refers to an actuarial investigation; yet actuaries and their medical associates have done considerable work over the last 70 years in evaluating the factors which appear to determine mortality. Of course, Dr. Palmore is mainly concerned with older lives, from ages 60 to 90, whereas actuarial investigations are mainly concerned with younger ages.

The Duke University researches indicate that there is no overall reduction in activities as people get older. Disability

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COMMITTEES

As the members of the Society know, the Committee on Professional Development under the Chairmanship of Paul A. Campbell submitted a comprehensive and detailed report to the Board of Governors. One of the recommendations was that the Society "inform all members of committee functions and opportunities and actively solicit participation."

The Board concurred in this recommendation and a series of articles on the operations of various committees will appear in *The Actuary*. The first of these is on the Committee on Investments. This has been prepared by Robert H. Hoskins who as Treasurer during 1968-71 was also *ex officio* chairman of that Committee.

The successful operation and growth of the Society depends to a large extent on the Committee structure. This series gives the members a chance to learn more about how the work of the Society is handled. Any member who believes that he can contribute to the work of any Committee is invited to communicate with the Chairman.

Robert J. Myers
President

Committee on Investments

by Robert H. Hoskins

As stated in the *Year Book*, "This Committee evaluates the investment policy of the Society and recommends changes to the Board of Governors. It also interprets investment policy and advises the Treasurer in the management of the Society's investments."

Investment Policy

When the Society of Actuaries was formed to succeed the Actuarial Society of America and the American Institute

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PROSPECTIVE MEDICINE

Lewis C. Robbins, M.D., M.P.H. and Jack H. Hall, A.B., M.D., *How To Practice Prospective Medicine*, Methodist Hospital of Indiana, Indianapolis 1970, \$7.50.

by Paul S. Entmacher, M.D.*

Drs. Robbins and Hall have taken an interesting approach to the appraisal of health and those factors that have an adverse effect on an individual's long-term prognosis.

There are many similarities between life insurance underwriting and health hazard appraisal and this point is made repeatedly by the authors. Life insurance statistics have been used whenever possible. The overall objective of health hazard appraisal is different, however, since it is an attempt to demonstrate to an individual in a numerical fashion his state of health and how it may be adversely affected by certain risk factors. It also tries to show how his state of health and presumably his life expectancy can be improved if those risk factors are modified or removed.

Briefly, the authors have presented tables that show the probability of dying from specific causes within a ten-year period. The data, based on the 1960 U.S. mortality experience and the population as defined in the 1960 census, are presented in five-year age groups by sex and race. Only the 10 to 15 leading causes of death are considered and there is a large "other causes" category. Thus the number of deaths per 100,000 population by cause for each age is tabulated, and these are then collated into tables that project for a ten-year period the chances of dying from a specific cause of death.

For example, a white male in the age

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Prospective Medicine

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group 40-44 has 1877 chances per 100,000 of dying from arteriosclerotic heart disease in 10 years. This cause of death comprises 33.8% of the total number of deaths. The same person has 285 chances per 100,000 (5.1%) of dying from a motor vehicle accident.

On the other hand, a black male in the age group 20-24 has 611 chances per 100,000 (19.5%) of dying from a motor vehicle accident in 10 years and only 49 chances per 100,000 (1.6%) of dying from arteriosclerotic heart disease.

For each cause of death various factors are listed and different numerical weights are assigned to each risk factor. The weights vary by age, sex, and race. Risk factors considered for arteriosclerotic heart disease are the usual ones: blood pressure, cholesterol, diabetes, exercise habits, family history, smoking habits, and weight. Those considered for motor vehicle accidents are: alcohol habits, drugs and medication, mileage per year, and seat belt use.

Several formulas are used to arrive at composite risk factors for each cause of death and the final result after consulting additional tables is a Health Appraisal Age. A 40-year-old may have a Health Appraisal Age of 35 or perhaps of 47. A Compliance Age is then calculated to indicate how much the Health Appraisal Age can be reduced if the risk factors are modified or eliminated.

I think Drs. Robbins and Hall are to be congratulated for attempting to make the practicing physicians more concerned with "prospective medicine." They have tried to devise a system where everyone has a score that depicts his state of health. If his score is high, he can set about trying to reduce it by working to eliminate some of his risk factors. If his score is low he can congratulate himself and work at keeping it low. In this sports-conscious nation, a score, or numerical depiction of one's state of health, might be quite appealing and psychologically may prove to be a strong motivating stimulus for altering one's way of living. Or it might focus on the necessity of early treatment for abnormalities such as elevated blood pressure or overweight.

On the debit side is a system that in my opinion is needlessly complex. Risk factors and their impact on health can be depicted in a much simpler fashion.

Actuarial Award

Drake University announces the establishment of an actuarial award to the Drake senior with the most outstanding record in completing the Society's examinations. The award is a gift of a Fellow of the Society, Milton J. Goldberg, in memory of his son, Barry Dresden Goldberg.

This personal encouragement of actuarial students complements the offering of scholarships and prizes by some of the actuarial clubs.

In addition, the basic assumption that average risk can be determined by calculating the total numbers of deaths by cause in the general population is open to criticism. It would seem that modification of the crude population data must be made and even then this retrospective-prospective approach can only be used in a relative way. It would be preferable in that regard not to give the final result as an "age," because comparisons with one's own age are inevitable.

Finally, the assignment of weights for the individual risk factors is quite tenuous in many instances. The authors acknowledge this, but once a number appears in print, especially as part of a complex table, it achieves a sanctity that is difficult to destroy (and who should know that better than the readers of *The Actuary*!). □

Social Security Note

Statistical Supplement to the Annual Report of the Railroad Retirement Board, April 1971.

This is a compendium of statistics on the benefit programs for railroad workers administered by the U.S. Railroad Retirement Board. The emphasis is on operations during fiscal 1969-70 but considerable space is devoted also to historical data. Some tables go back to the origin of the program under consideration and data are presented by single year. The publication is primarily tables arranged under the headings: (a) financial statistics, (b) retirement and survivor benefit statistics, (c) unemployment and sickness benefit statistics, and (d) employment, compensation, and coverage statistics.

Free copies may be obtained from the Railroad Retirement Board, Chicago, Ill. 60611.

SELECTION OF RISKS(?)

by Richard A. Engen

The Twin Cities Actuarial Club at its March 7 meeting heard a talk by Dr. Theodore Lindbom, Practicing Industrial Psychologist in the Twin Cities, on "Selection of Actuarial Personnel."

In his talk, Dr. Lindbom emphasized the importance of the interview in the selection process. He warned not to over-emphasize the "impression" a person makes in your hiring decision; the purpose of the interview is to draw facts that will allow you to make a proper selection.

The responsibilities of an interviewer are threefold. First, you are trying to find the best man to fill the job from the Company's standpoint. Second, you must be totally fair to the applicant; you owe it to him to not hire him for the wrong job. Finally, hire for yourself; it is indeed difficult to advance in your job without adequate back up.

Dr. Lindbom listed the techniques to be used in an interview:

(1) Establish some rapport before digging into the interview; break the ice with some small talk.

(2) Let him know that you are an important part of the selection process and not merely somebody trying to sell the company to him.

(3) Make sure your questions are understood.

(4) Ask questions you really want the answers to; these could include quite personal questions.

(5) Ask one question at a time—otherwise, he'll pick out only the questions he wants to answer.

(6) Phrase your questions so that you do not imply the answer.

(7) If a particular question doesn't seem to get answered, keep coming back to it. There could be an important reason why it's being avoided.

(8) Avoid questions that can be answered "yes" or "no."

(9) Frequently ask the questions "how" and "why."

(10) Perhaps most important of all, learn how to listen. You are not gaining any additional information while you are talking. □