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HMO'S

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III. *Group Insurance Rating Approach*: Under this approach, each of the services provided under the HMO "benefit package" would be analyzed and rated, using the age, sex, and income characteristics of an assumed enrolled population, following standard group health insurance techniques.

In theory, this may be a sound approach, but there are several types of HMO medical services for which insurance companies do not have experience data. In addition, the pattern of utilization of medical care services under an HMO may differ from utilization rates of similar services included in group insurance experience, and the costs of administration under the HMO may be considerably different.

IV. *Actuarial Approach*: Under this approach, the age-sex distribution of the subscriber group expected to be enrolled is determined and a utilization rate by age-sex group for each category of HMO medical service is developed. In addition, the price of each incidence of medical service utilization is determined. The combination of this data will result in the hospital and medical care component of the capitation. The table below shows the application of this technique to two types of health care service.

			Annual Rate per Subscriber		
Age Group	*Assumed Enrollment Male*	*Female*	*Hospital Days Male*	*Female*	*Physician Encounter (Non-Surgical)*
Under 30	500	400	.375	.600	4.100
30 - 39	350	350	.375	.560	4.400
40 - 49	150	150	.530	.720	5.300
50 - 54	120	120	.700	.900	6.100
55 - 59	100	100	.950	1.100	7.400
60 - 64	100	80	1.200	1.400	8.800
Average Rate of Utilization			.528	.728	5.114
Average Cost Per Use			$ 93	$ 102	$15.00
Monthly Capitation for Indicated Service			$4.09	$ 6.19	$6.39

The assumed hospital utilization rates in this table were developed starting with data from the Society of Actuaries 1969 *Reports* for group hospital experience, in conjunction with physician estimates of the degree to which hospital utilization could be controlled in a specific HMO environment. The rates of physician encounter were based on a study by the American Rehabilitation Foundation for a number of prepaid health care plans. The rates have been adjusted to reflect anticipated levels of utilization in a specific plan.

In addition to the services shown in the table, it is necessary to develop utilization rates and costs for surgical encounters, lab and x-ray procedures, outpatient hospital visits, maternity services, prescriptions, and several others depending on the plan. As with assumptions relating to hospital days and physician encounters, it is necessary to make adjustments based on a subjective evaluation of the components of a specific plan. When the evaluation of the cost of medical and hospital services is completed, the administration and other costs of the HMO can be added, being determined in a manner consistent with the *Integrated Budgeting* approach.

Of course, even if any one of the foregoing methods produced totally reliable results, the capitation rate thus produced is subjected to thorough review by physicians whose financial well-being depends on the adequacy of the rate and by the marketing staff for whom the rate must be reasonable in relation to the going cost of conventional health insurance plans.

In any event, it is anticipated that interest and involvement of insurance companies with operational HMO's will result in more valid data for actuaries to use in evaluating the value of HMO health care service benefits. □

TO BE CONTINUED

Deferred Taxes

by Robert L. Lindsay

A guide for auditing stock life insurance companies has been introduced by the AICPA which describes the adjustments which should be made to statutory financial accounting to produce reports which conform to generally accepted accounting principles (GAAP). Under GAAP, stock companies will recompute reserves, spread acquisition costs, etc.; the resulting gain from operations will differ from the statutory gain and from the gain reported in its federal income tax return.

Accounting Principles Board Opinion No. 11, "Accounting for Income Taxes," stipulates that provision for deferred tax is required where there are timing differences. That opinion says that "timing differences originate in one period and reverse or 'turn around' in one or more subsequent periods." This contrasts with permanent differences which arise "from transactions that, under applicable tax laws and regulations, will not be offset by compensating differences in other periods." The deferred tax provision must allow for "differences between the periods in which transactions affect taxable income and the periods in which they enter into the determination of pre-tax accounting income."

Appendix C of the August 1972 Exposure Draft describes how to account for deferred taxes. Those responsible for tax work should carefully read Appendix C and APB Opinion No. 11. They should also confer with their outside auditor for interpretation. Now that you've been properly warned, I'll briefly summarize the more important aspects of deferred tax accounting as it applies to life insurance companies.

(1) Taxable investment income in general will not be restated.

(2) Those companies which are currently taxed only on taxable investment income need not provide deferred taxes on timing differences affecting gain from operations if they can reasonably demonstrate that there will be no tax effect in the future (i.e. they will continue to be taxed only on taxable investment income). Hence, most mutuals and many large stock companies can ignore the problem.

(3) Deferred taxes need not be pro-

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Seminar Study Manual

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of study manuals for the actuarial exams. It appears to me, after examining the Part 7 manual, that candidates will not necessarily have to buy the manuals to stay in the competition to pass the exams. The manuals may, however, help students who are not sure how to approach the syllabus for a particular exam.

The Part 7 manual consists of outlines and practice exam materials. The outlines are generally good, although some are not as good as others. The outline of the "Expense Analysis" study note, for example, takes seven pages, hardly a helpful summary of only 18 pages in the original study note. On the other hand, the outline on dividends brings together at least four partially overlapping sources into a single outline, which is quite an achievement and very helpful.

The practice exam materials are of some value for review. Short answer quizzes are always helpful, as are practice multiple choice exams. Students cannot rely entirely on these particular materials, of course, since they will confront questions on the actual exam that differ materially from the emphasis and scope of the Study Manual.

The section which contains old exam questions and illustrative solutions is of questionable value. For one thing, old exam questions may have been based on study material that has since been revised. For another, the Society provides illustrative solutions for the last three exams already, and it should be easy to accumulate material for years prior to that by asking recent students of the particular exam. Finally, all old exam questions are printed in the Society's yearbooks, and it would appear most helpful for the student to take these questions and develop his own answers from the study material.

Outlines have their uses but the person who benefits most from outlines of this sort is the person who prepares them. The discipline of organizing material into outline form, with the need to identify primary and secondary points and their inter-relationships, serves to fix the material in the outliner's mind, in addition to providing him a summary of the material for his review. The warning in the preface of the Study Manual about the dangers of studying the outlines instead of the original readings might be extended to cover the dangers of relying on any outlines prepared by someone else.

The Northeastern outlines might be useful as auxiliary aids to the student's independent study. They provide a good model for the student who wants to undertake an outlining project. Also, the student who has prepared his own outlines can compare his outlines with the Northeastern outlines to locate areas where he (or Northeastern!) has missed important points. Thus the student who has strengthened his knowledge of the syllabus already by working through it for himself can make his grasp on the study notes even stronger by using these outlines wisely. The same result can be accomplished, of course, if two students work on outlines independently, and then compare the results.

Approaching the syllabus by attempting to answer questions drawn from it is especially valuable to the student who develops his own practice test materials. The method is to analyze a section, or a paragraph, by identifying the central points; to determine what questions might be asked to test those points; and to invent variations which might be added to the questions to see if the student really understands the central points or not. Students working together can write questions for each other, thus further testing their own understanding of the study material. If someone has the Northeastern study manual around, it will provide still more review questions, but the most helpful work to the student will be the work that he does in developing his own practice test material.

These outlines are no substitute for individual study and while they can be helpful the student should remember that they were developed for an intensive study course at Northeastern University. The successful examination record of Northeastern students may well owe more to the study habits than to the manuals.

The author is Education Vice-Chairman of the E & E Committee and was formerly Chairman for Part 7 of the examinations. This review represents only the author's personal opinions; it does not represent the official view of the E & E Committee. □

Actuarial Meetings

Feb. 21, Seattle Actuarial Club
Feb. 26, Chicago Actuarial Club
March 8, Baltimore Actuarial Club
March 19, Chicago Actuarial Club
March 21, Actuaries Club of Des Moines
March 22, Seattle Actuarial Club
March 27, Actuaries' Club of Hartford
April 5, Central Illinois Actuarial Club
April 9, Chicago Actuarial Club
April 12, Baltimore Actuaries Club
April 18, Actuaries Club of Des Moines

Deferred Taxes

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vided on policyholders' surplus unless payment of taxes on these amounts is imminent. Also, it will not be necessary to recalculate policyholder's surplus using GAAP amounts.

(4) Companies preparing financials on a GAAP basis for the first time will need to retroactively adjust for deferred taxes. As a result, as much as 48% of the one-shot increase in GAAP surplus could be set up as deferred taxes.

The approach to deferred tax account which has been adopted is more pragmatic than theoretical. For example, discounting for time of payment of taxes seem to be more consistent with the reserving for other future expenses and benefits. However, discounting for deferred taxes is presently prohibited by the APB. □

Tomorrow's Actuary

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rectly from basic probabilities so that risk analysis can be better understood by the many actuaries who are not comfortable with statistical theory. Implications for group insurance are obvious, but perhaps even asset shares can be jazzed up a bit by introducing a random element so that we will be talking about the range of profit, not just the expected value. "The Release from Risk Method" of adjusted earnings would get a boost from that.

If programming becomes as easy as driving an automobile, then tomorrow's actuary had better learn where the highways go. □