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**DIGEST OF DISCUSSION OF SUBJECTS
OF SPECIAL INTEREST**

INDIVIDUAL UNDERWRITING

Underwriting Standards—Life Insurance

- A. Is there a trend toward broader or narrower underwriting classifications for preferred, standard, and higher mortality classes? Why? Does the breadth of the classification vary by age or plan? To what extent?
- B. What have been the relative trends of mortality experience under the different forms of term insurance as compared with permanent plans (1) with medical examination and (2) without medical examination?
- C. What has been the recent mortality and lapse experience on military risks? What underwriting precautions and rules are indicated by such experience?
- D. Are there factors outside of strict "insurability" which should be taken into account in underwriting, such as those that might affect persistency?

MR. COURTLAND C. SMITH: In recent years a number of companies have adopted a broadened definition of the standard mortality class, particularly at the younger issue ages, by issuing standard up to 150 per cent at ages below thirty but up to 120 per cent at ages over forty. This is apparently done to avoid charging an extra of less than about two dollars per thousand.

The financial effect of adverse experience at the younger ages is limited, except for issues at the larger amounts. In some experiences the mortality ratios for large term policies on young "standard" lives have remained unfavorable.

A broadening of underwriting class definition has also become apparent in the high substandard range. Many large companies now issue routinely up to 500 per cent mortality and some up to 1,000 per cent. The underwriting classes in the higher mortality range seem to be broader than those at lower ratings. Whereas 25-per-cent-wide rating classes are used at the lower ratings, up to 150-per-cent-wide rating classes may be used at the higher ratings.

The general approach of multiple table extra premiums may be inappropriate at ratings above 500 per cent. There seems to be a ground swell of opinion favoring the use of temporary extras in combination with reduced permanent ratings rather than simply a permanent rating for a permanent impairment. Persistency is undoubtedly the big factor in this

shift of opinion, since, once the temporary extras are paid, the more healthy substandard risk is less likely to rerate or replace his policy.

MR. RICHARD P. PETERSON: Mortality up to the level of 140 per cent of standard has a small effect on premiums at the young ages. The proportion of borderline risks would be less than 5 per cent of the total business considered, and actually most of these probably would have been considered under nonmedical rules at such ages. Fine distinctions are difficult to make without spending more than the cost of additional mortality in excess of an expected standard.

MR. ALF H. ANDERSON: We at Investors Syndicate Life have tended to be fairly conservative in our underwriting practices because of our newness in the business. We did not sell life insurance on any volume basis until 1959. We use the same underwriting practice for all kinds of insurance except that we are more liberal on decreasing term offered to purchasers of fixed dollar "face amount certificates." All applications are underwritten the same way without regard to plan. There is little reason in Investors Syndicate Life for a variation in underwriting, since our highest premium plan is ordinary life. For similar reasons, we have not attempted to vary our underwriting classification by age. We realize, however, that our underwriters tend to be slightly more liberal for the younger ages.

MR. FRANK G. WHITBREAD: I feel there has actually been very little change in underwriting classes. At the younger ages, where there has been some tendency to broaden the standard class, the changes affect premiums only by pennies. At very high mortality levels you are involved in infrequent transactions, so refinements are not to be expected.

MR. JOHN A. SCHUTZ: Studies of Continental Assurance's medically examined business show that mortality has been noticeably less for term plans than for permanent. With respect to the trend of this relationship, we can infer little, because the experience on our term issues in prior mortality studies was very limited. The most recent study of medically examined males covers issues of 1953 to 1961 observed from 1954 to 1962 anniversaries. The term portion includes 74,387 policy years of exposure and involves one hundred and fifty policies terminated by death. By plan, 37 per cent of this exposure was five-year renewable and convertible term, and the remainder was predominantly reducing term policies. By duration, 90 per cent of the exposure was within five years of issue. The ratio

of our term mortality to permanent mortality was 84 per cent by number of policies and 92 per cent by amount of insurance.

MR. ANDREW C. WEBSTER: I am surprised at the figures quoted by Mr. Schutz, since this is apparently the first time that the mortality on term insurance has been found to be better than the mortality on permanent plans, and I wonder whether there is anything in the composition of the data that could account for this.

MR. SCHUTZ: I found that our subdivisions of the data make the results a little questionable, because we have no more than one hundred and fifty deaths with which to start; but, separating our experience on five-year term insurance from our other term experience, we found that the ratios were almost identical. The ratio of our term mortality to permanent mortality was 86 per cent by number of policies and 94 per cent by amount of insurance for five-year term, whereas for other term plans these ratios were 82 per cent and 90 per cent, respectively. I also attempted to break down the experience by age and found that the ratios of term mortality to permanent mortality were considerably more favorable at the higher issue ages where our mortality on permanent insurance was relatively high.

MR. WHITBREAD: It has been clearly established that the accidental death rate of enlisted men and of all military men at the younger ages is high. Over-all mortality seems to be only slightly higher than that of civilian business. Lapse rates are high in the lower pay grades, among second lieutenants, and at younger ages.

Recent experience of Lincoln National has indicated that lapse rates at ages under 25 are high on military posts, regardless of rank and regardless of our attempts to underwrite for persistency.

On June 1, 1964, the Lincoln National revised its military and military aviation practices. We have provided for a reduced schedule of extra premiums for pilots flying subsonic bombers and for some other classes of flying risks.

Death rates in some classes of military aviation risks have continued relatively so favorable that it has not seemed feasible to defer some adjustments of rates. However, as planes are developed that can climb higher and fly faster, the death rates of pilots flying such planes can be expected to be high and provision should be made in the ratings for this most hazardous type of flying.

MR. RICHARD G. HORN: On an exposure of 1,131 policies at Surety Life, the first-year lapse rate was 14.9 per cent by number, and on an ex-

posure of 341 policies the second-year lapse rate was 8.5 per cent. The experience to date thus indicates a two-year persistency rate of 76.6 per cent.

We analyzed the first-year lapse rates by geographical area. This involved 405 policies identified by the country in which the application had been signed. Eighty-two per cent of these policies had been written in the United States (including Hawaii) and 18 per cent had been written outside the United States. The United States business produced a first-year lapse rate of 13.2 per cent, while the foreign business had a first-year lapse rate of 23.6 per cent. The number of policies exposed in any particular country was not large enough to yield reliable results, except for Korea, where an exposure of 43 policies produced a first-year lapse rate of 32.6 per cent. It is quite possible that differences in age and rank could account for these geographic variations. In addition, it is also possible that the quality characteristics of the writing agent involved can have an impact.

We reduce the commission otherwise payable by 20 per cent of premium when the insurance is on a member of the military in one of the lower four pay grades. This serves as a deterrent and also gives extra margins to offset high lapse rates anticipated. In addition, we feel that this practice allows us to maintain a more favorable relationship with our agents and with the military authorities than would the practice of restricting our sales to only officer personnel and the higher pay grades of enlisted personnel.

MR. WAYNE A. GILLIS: Military business presently accounts for 15 per cent or more of Midland National Life Insurance Company's new business and about 10 per cent of our insurance in force. Our over-all mortality is within the standard range but perhaps a bit higher than our usual standard business. About 85 per cent of our death claims on military personnel is the result of accidents, as compared with 65 per cent for males in the first five policy years in the age group 10-29 for Standard Non-Medical Issues, as shown on page 18 of the 1962 Reports.

Our thirteen-month lapse rate on 1962 military issues was 21.4 per cent. Our military business written in Europe is more persistent than the military business written in the United States.

We will request a stateside inspection only if the short form nonmedical questionnaire or MIB report reveals questionable data. We carefully screen applications on the lower three pay grades. While attempting to discourage writing business on the lower pay grades, we have, however, lowered our minimum government allotment premium from \$10.00 to \$7.50 for the lower pay grades.

The application form requires the date of discharge, and we discourage underwriting cases with less than one year of active duty remaining. Another technique used by one of our better agents is to draw double the premium with the excess deposited in a premium deposit account.

We have found that many of our lapses occur at the time of discharge or at the time of rotation to the continental United States. Hence, much of our effort is concentrated on new and different methods for conserving military business once it is written. We have a procedure set up for contacting the insured immediately prior to his discharge date. When lapses do occur, we contact both the insured and the beneficiary. In the letter to the beneficiary we ask that information be forwarded to the insured.

MR. BURTON D. JAY: During the last three or four years United Benefit of Omaha has placed much emphasis on serving the military market. The issued and paid for military business amounted to \$47 million in 1963 and we had approximately \$100 million in force at the end of 1963.

Our fifth-quarter persistency rate for military business (based on policies which had or would have completed their fifth quarter in 1963) was 76.3 per cent. Similar investigations by individual quarters have shown a very slight improvement trend. The most recent quarter (issues of third quarter, 1962) resulted in a persistency rate of 77.4 per cent for military business (the government allotment mode). The fifth-quarter persistency rate for military business is about $2\frac{1}{2}$ per cent poorer than that for our annual mode business but is better than for all other modes. When broken down by pay grade, there appears to be a definite breaking point between Grades E-4 and E-5. The fifth-quarter persistency for E-4's and below has been less than 70 per cent, while, for E-5's and above, it has been consistently 83 per cent and higher. About half of our military business is in each of the above groups.

The real problem appears to be in conserving business after policyholders complete their military service and begin paying premiums by other than government-allotment method. As a strong example, of fifty randomly selected cases leaving the military in June and July of 1963, only ten were still in force nine months later.

A file of release-from-active-duty dates is maintained in our life conservation department. Six to eight weeks prior to the date the serviceman's enlistment is to expire, he is contacted and asked to complete a reply card indicating whether he plans to return to civilian life or re-enlist. In 1963 the company wrote to about eight hundred men whose enlistments were about to expire and received replies from about half. Of these replies, about 50 per cent indicated that they were planning to re-

enlist. The figures for those not replying were combined with the figures for those who did reply by assuming that the re-enlistment rate indicated by the replying group applied to both groups. The persistency rate for the fifteen-month period following the inquiry for the group re-enlisting was 81 per cent, while for those leaving active duty, it was only 34 per cent or 47 per cent lower. Even though we had no way of determining the distribution by policy year, we estimated the average duration to be from one to two years, based on the average age of our total military business. Therefore, some of the low persistency for both the groups re-enlisting and leaving service was probably due to normal early-year high lapse rates. Besides the very high lapse rate for the group terminating service, the evidence strongly indicates that the rates are higher around re-enlistment dates, even if the serviceman stays on active duty. This might be due to the opportunity given the serviceman to review all his allotments at that time.

Results of this study were combined with figures from another investigation of four hundred policies that changed from the allotment mode. Eighty per cent of these policies was still in force a year after paying the first premium on the new mode. From the combined studies it appears that of every one hundred policyholders leaving active duty forty-three make at least one payment as a civilian and thirty-four persist beyond the first year.

It is becoming increasingly clear that our margin for contingencies and profit on military business will be substantially less than anticipated due to such extremely poor persistency.

MR. CHARLES H. BUELL: The experience of the Capitol Life Insurance Company in writing military personnel on American installations in Europe indicates a lapse rate in the lowest three enlisted men's pay grades of more than twice that in the higher pay grades. Applicants under age twenty-one lapse at twice the rate as those twenty-one or over. We have also recognized a different lapse rate between those above and below age thirty. Single persons are found to have a lapse rate more than double that of married men. It is believed that military personnel who are not career enlistees and who have less than one year remaining in their enlistment period will also exhibit a poor persistency.

Our company pays no financing and no advances for applications submitted on policies issued on pay grades E-1, E-2, and E-3. Normal financing will apply to pay grade E-4 and above.

Whenever the percentage of business submitted by any particular agent for the first three pay grades exceeds 6 per cent of the total, the agent is expected to take corrective measures.

MR. WILBUR M. BOLTON: At Standard Insurance Company we underwrite life insurance applications for persistency and for expense. Underwriting for persistency may assist the agent in learning the characteristics of persistent business. For example, the privilege of taking applications on a monthly premium basis may be limited to agents who have demonstrated good persistency.

Minimum requirements for amounts of insurance and premiums are established with the expense factor in view. The company may require an applicant for a very small policy to submit medical evidence, such as an EKG, at his own expense.

On policies which are issued as applied for and subsequently not taken, the agent is charged with the cost of medical examination and inspection. A minimum charge of \$3.00 is made in nonmedical cases.

Preliminary applications are required when a proposed insured has been declined previously, postponed, or offered a rated policy.

MR. PAUL T. ROTTER: At the Boston regional meeting there was expressed a difference of opinion as to whether "factors outside of strict insurability" should be taken into account in underwriting. Even so, I think it is likely that considerable agreement would be found with respect to the need for special rules for certain classes of business submitted to the underwriting department. For example, we require that premiums for at least three months be paid under government-allotment cases. Therefore, the ability to make persistency studies simply and cheaply can be very helpful. The following remarks outline such a procedure.

In the late 1950's Mutual Benefit, like many other life companies, experienced a drop in persistency. Even though we wanted to pinpoint the problem areas, we had no simple procedure established which made this possible. We could only refer to an annual study of the classical type which shows total company lapse rates by policy year and gives separate data for voluntary lapses. However, it was of limited value in isolating the categories of business primarily responsible for the over-all increase in lapse rates, and we, therefore, developed a streamlined procedure which has been quite helpful to us.

We wanted to be able to make studies which could be completed periodically, and as needed, using existing company records without greatly disturbing routine operations. A large number of codes were established so that the effect of the various factors affecting persistency could be evaluated.

We eventually decided on a rather simple method utilizing our tape records and the IBM 7070. The persistency measure which is calculated

is the percentage of a given year's production in force on a given date. Of course, voluntary and involuntary terminations cannot currently be separated, but since we are mainly interested in the early policy years in which involuntary terminations are almost insignificant when compared to the volume of voluntary terminations, this is not a serious drawback. Identifying codes were established so as to produce output data by face-amount group, mode of premium payment, type of soliciting agent's contract, and for individual agents and individual agencies, to list a few.

Many independent variables affect persistency and, ideally, the effect of each should be isolated. We have found this impossible to do, since the resulting cells contain insignificantly small amounts of data. The present compromise calls for no more than three simultaneous controls, one of which is usually face-amount groupings. Because of the calendar-year nature of the study, great care must be taken in comparing segments of business to allow for differences in the distribution of premium modes and in the distribution of anniversary months.

The results of these studies have been widely used in the home office, and, as is usually the case with large studies of this type, many of the uses were not foreseen. For example, four years ago we increased our minimum prepayment requirement for monthly government-allotment business in order to improve its persistency. An inspection of the premium mode section of these studies indicates a dramatic improvement in this block beginning with the 1960 issues.

We are now making very detailed studies of those few agencies with serious persistency problems in an attempt to identify any hidden problem areas which may be present.

In summary, the value in this type of study lies in its simplicity. The machine processing can be done on very short notice, and the program has been arranged to facilitate changes in controls so that almost any block of business may be studied in detail.

MR. PETERSON: Prior persistency experience on an individual should be a consideration in current underwriting of a new application. Replacement of other insurance certainly is a factor. Financial ability to handle a requested amount is a proper item for consideration. This may involve the element of speculation as well as persistency. Economic and social conditions have significant effects on results. The cost of securing additional evidence, which may or may not be of underwriting significance, and the delay in taking action are involved in underwriting judgment.

MR. FRED DE BARTOLO repeated the discussion which he had presented at the Chicago regional meeting.

Underwriting Expenses

- A. What studies have been made relating the cost of medical examinations and inspection reports and information from attending physicians to the resulting savings in mortality?
- B. What actuarial or other functional analyses have been made of underwriting processes in the home office or field from the point of view of expense and effectiveness?
- C. To what extent has automation been used in the underwriting process? What new problems are involved?
- D. What advantages have been found to result from simplifying the underwriting of small ordinary policies along the lines of industrial underwriting? What disadvantages?

MR. PAUL T. ROTTER: My comments cover a study made by Mutual Benefit during the summer of 1960, covering issues of the first three months of 1960. Every rated or declined policy was examined to see if the underwriting action had been affected by the inspection report, and an estimate was made of the savings in mortality resulting from these reports.

At that time our average cost for the reports, by type, was as follows: Type A, \$3.27; Type B, \$9.81; and Type C, \$27.00. Our rules called for inspections as follows:

\$5,000 and under—not required except on pension trust, nonmedical, juvenile, over age 55, and for applications requesting disability monthly income
 \$5,001–\$15,000—Type A
 \$15,001–\$39,999—Type B
 \$40,000 and over—Type C

Our total annual cost for inspections was then about \$250,000. The estimated mortality savings were almost \$500,000. On this basis, then, each dollar paid for an inspection report saved us \$2.00 in extra mortality costs. However, the savings varied widely by category. For example, inspection costs were considerably higher than the mortality savings for nonmedical business, juvenile business, and pension-trust business. Nevertheless, since the intangible benefits of the reports—primarily their “policing” value—could not be measured, we did not feel justified in eliminating the inspections in all the categories where their cost exceeded estimated savings. We did, however, make several changes which seemed justified on the basis of this analysis.

For policies of \$5,000 or less, we discontinued inspections on juvenile business and pension-trust business. We continued them for nonmedical business (primarily for their “police” value) and for all categories at issue

ages over 55. We also expanded the amount range for the Type B report. It had formerly been \$15,001 to \$39,999; it was changed to \$15,001 to \$50,000, so that the use of the Type C report began at \$50,001 instead of \$40,000, as had been the case. These changes resulted in an annual reduction in the cost of our inspection reports to \$45,000.

MR. RICHARD P. PETERSON: I question an inspection approach emphasizing savings in mortality, since the desired result of obtaining underwriting information is satisfactory mortality within the premium structure by proper classification of risk. It is not possible to cover selection costs by declinations or not takens; nor are there mortality savings on these, since there is no exposure on such. The approach should be one of proper evaluation of the risk. An important consideration involves inspection time, since it may be the controlling time element in a high percentage of cases. Bankers Life Company has utilized a memo-release system which does not require written reports on more than half the inspections made. This has reduced inspection time and money, as well as Home Office handling. Written reports are required in event of adverse information so that such can be judged by the underwriter.

There does not appear to be any doubt from an underwriting and medical standpoint of the value to all parties involved of information from an attending physician. This does cause significant time problems which are not within the control of the company or agent. There are some significant cost problems caused by some in the medical profession, but many are reasonable in this respect and follow sensible business practices. However, rarely does a quick response help to balance out the many long delays.

In connection with Part 3, it might be questioned whether the work of coding, punching, checking, and expensive machine handling of items of temporary underwriting significance is really more expedient than a quick visual review of the over-all picture by an experienced underwriter. Undoubtedly it requires a huge volume before an elaborate machine setup could be justified and, of course, the underwriter will be essential to consider the problem cases rejected by the machine and to tell the machine what to consider. It might be interesting to question whether the strict machine handling is better or worse than the personal judgment involved in underwriting people.

MR. FRANK G. WHITBREAD: I would like to express caution about accepting the findings of other companies on this question of inspection reports. A company with a well-established agency organization which

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sells among the better classes of risks may find that they do not need to get inspection reports for fair-sized amounts. In contrast, a company with a relatively inexperienced agency force with high turnover, or with underwriters that are not too experienced, or which is writing insurance among the borderline social-economic groups, should take a more conservative approach to inspection reports.

Underwriting Standards—Health Insurance

What underwriting factors apply to accident-only policies of various types?

MR. GARNETT E. CANNON: It has been some time since I was directly associated with the underwriting phase of our business, but I do notice that we are losing money on accident-only coverage. Is there any underwriting device that will help us decrease the claim rate and make this branch of business self-supporting?

MR. GEORGE P. STREATFEILD: Although this is really not my field, I can say that we do virtually no underwriting except for age.

MR. WAYNE A. GILLIS: About two years ago we began to write substandard loss of time policies. These policies are only issued, at present, when there is a life policy issued simultaneously. We use this only when the impairment cannot be waived. Our accident ratings follow closely the ratings that would be used in accident-death-benefit coverages. Sickness ratings are based on an empirical formula developed by our staff. The underwriting data are developed from the medical or nonmedical application and inspection used for the life policy.

MR. ROBERT C. TOOKEY: Occupation and age are the principal factors to be considered in underwriting accident-only policies. However, it is also possible to obtain information on traffic records from the motor vehicle department, which can have quite a bearing if a large accidental-death-benefit is to be provided. For example, if an applicant is asked only for his age and date of birth, a supplementary questionnaire can be sent to him if adverse information is developed through the regular checking procedures. Although some claims will be paid on persons with dangerous avocations, such as sky-diving, it is generally not feasible to underwrite this.

Major Medical and Comprehensive

- A. What policy provisions or underwriting techniques have been found helpful in minimizing the trend toward increasing claim costs under these forms of policies?
- B. How effective are deductibles, waiting periods for pre-existing diseases, and similar policy provisions in simplifying the underwriting of individual policies?

MR. E. PAUL BARNHART: I still believe very much in the use of inside limits as the best route to adequate control of claims under major medical policies. However, common sense must be used with inside limits in designing a major medical policy. One criticism of inside limits is that their use creates inflation of medical costs, because doctors tend to raise their fees up to the limit provided by the policy. A contradictory criticism is that inside limit policies provide coverage that is too restrictive or, in other words, simply inadequate. Although these criticisms are contradictory, I think that both of these disadvantages can occur when policies do not provide for reasonable flexibility of inside limit choices.

For example, a policy with a twenty-five dollar limit on room-and-board benefits and seven-hundred-and-fifty-dollar surgical schedule may provide benefits far higher than are reasonable for sections of the country where costs are relatively low. The result may well be that this produces an inflationary effect, because doctors may tend to upgrade their charges. In a high-cost section of the country, such as California, this same coverage may, on the other hand, be unduly restrictive. Where a proper range of choices is made available for various parts of the country, I think that these criticisms made by those who advocate unscheduled policies tend to disappear. By being sufficiently flexible, we can give adequate coverage to high-cost areas by making large limits available and at the same time keep the limits in line with the prevailing level of charges in low-cost areas. I think that the defects often pointed out with regard to inside limits are usually the result of inflexibility and an improper or incomplete use of the relative value principle within the design of the policy itself.

Some companies that have used inside limits have worked to offset the possibility of inadequate benefits by adjusting their co-insurance factor. The most common approach to this is to provide 100 per cent coverage of certain inside limit benefits, such as room and board and surgery, and 80 per cent coverage of unscheduled benefits.

Much of the debate concerning unscheduled v. scheduled major medical revolves around the question of adequate coverage, but premium

equity is an equally important matter. Some companies that sell un-scheduled plans across the nation charge exactly the same premium in, say, Kansas or North Carolina as they charge in California, whereas the room-and-board charges and surgical charges vary considerably among these different areas. It is difficult for me to understand how such a premium structure can be considered even remotely equitable if no use is made of geographical rate variation or some kind of flexible inside limits. Since the inequities can be extremely great in some of these cases, I believe it worthwhile to re-emphasize one of the cardinal actuarial principles of rate-making, namely, reasonable equity among the various classes of policyholders.

Turning to the question of the use of deductibles to simplify the underwriting of major medical policies, I would like to point out one possible problem. By way of example, we were once considering installation of an association franchise plan which would provide for guaranteed issue. Although we planned to underwrite the policy, we were going to guarantee the issue of a policy with the maximum deductible in cases of seriously impaired lives. However, since the premiums are far less for these very high deductible policies, if the nature of the risk is such that a very high claim is likely to result, these may still give a company a poor experience. In such instances, it might be much more sound to impose a reduced maximum instead of a high deductible.

MR. JOHN H. MILLER: As we are all aware, we face certain limitations in dealing with the problem of duplication of coverage or overinsurance in the major medical field. In case you are not all familiar with it, I should like to call your attention to an approach developed by one of the eastern companies. The deductible is defined as the larger of two items, one being a basic deductible, such as five hundred dollars, and the other being the actual amount paid under other coverages. This arrangement eliminates duplication of coverage or overinsurance that may arise where basic coverage and major medical are in force on the same life. One of the real values of this approach is that it may be expected to discourage overinsurance in the first place. If a man expects to collect one thousand dollars through his other coverage, he will probably choose a one thousand dollar deductible rather than a lesser amount.