TRANSACTIONS OF SOCIETY OF ACTUARIES
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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?
   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?

Boston Regional Meeting

MR. EDWARD A. LEW: In recent years a number of companies have liberalized their underwriting limits for standard insurance at the younger ages and some have also adopted broader classifications for higher mortality classes.

We, in the Metropolitan, have liberalized our underwriting limits for standard insurance as described in the following table because:

Metropolitan Life Upper Limit for Standard Tower Series				Effect of Rating on Standard Ordinary Net Whole Life Annual Premium		
Age at Issue	Before 1960	1960–62	1963	Age	+25	+50
15–29.....	+25	+40	+50	20.....	$0.65	$1.25
30–39.....	+25	+30	+35	35.....	1.20	2.30
40–49.....	+25	+25	+25	50.....	2.50	4.80
50 and over.	+25	+20	+20			

1. At current level of Standard Ordinary mortality at younger ages, the increase in net whole life premium is small (see table).
2. The inclusion of risks rated +30 to +50 does not materially affect the premium level because the proportion is small. At age 20 only 2 per cent of the standard issue is rated +30 to +50; at age 35 it is 5 per cent.

3. Both the 1951 Impairment Study and the 1959 Build and Blood Pressure Study indicated that there are virtually no impairments rated less than 100 that exhibit a sustained increase in percentage extra mortality by duration.
4. Fine distinctions under age 40 are difficult to make when the great bulk of the business is issued nonmedically.
5. A higher limit for standard at younger ages creates better public relations.

In 1960 our first substandard class covered a mortality range of 45 percentage points, the second about 75 percentage points, the third 100 points, the fourth 150 points, and the fifth 250 points (500 per cent to 750 per cent of standard). A review of our substandard experience on earlier issues made in 1962 showed very favorable mortality in the first three substandard classes and particularly low mortality in the fourth class. This experience and our realistic ratings for elevated blood pressures and for combinations of impairments led us to broaden our five substantial classifications, *without increasing substandard premium rates*, to cover mortality ranges of 50, 100, 150, 230, and about 340 percentage points, respectively. Our fifth substandard class thus became applicable to risks in the mortality range from about 660 per cent to 1,000 per cent of standard.

MR. CHARLES A. ORMSBY: I would like to point out that a limit for standard insurance which varies by age in the manner described by Mr. Lew can lead to underwriting problems in connection with evaluating eligibility for insurance of insurability (G.I.O.). For example, a risk aged 16, rated 150 per cent, but issued standard insurance would become eligible under the G.I.O. for standard insurance at age 40 even though the limit for standard insurance at that age is 125 per cent.

MR. ALTON P. MORTON: I am going to comment on a discussion I turned in prepared by an associate of mine, Frank David. May I make a comment first on the previous subject?

My company has not adopted quite the same solution to this problem, the dividing line between standard and substandard. Charlie Ormsby gave an example of one of the difficulties. We felt there were other difficulties so our approach was to set underwriting debits on the liberal side for certain impairments at the younger ages.

MR. FRANK H. DAVID: The Committee on Mortality Under Ordinary Insurance and Annuities recently completed a special study of mortality under term conversions in which 10 companies furnished data comparing their mortality on term and permanent plans. In 5 companies the ratio

of term to permanent mortality was less than 100 per cent, the lowest ratio being 83 per cent. In the remaining 5 companies the ratio ranged from 102 to 120 per cent. A similar pattern was found in each issue age group.

In the intercompany study of mortality on policies for large amounts, to which 19 companies contribute, term plans have generally shown higher mortality than permanent plans. In the last study period the over-all ratios of actual to expected deaths were 122 per cent on term plans and 89 per cent on permanent plans, giving a ratio of term to permanent mortality of 137 per cent. The corresponding term to permanent ratios for the preceding study periods were 102, 130, and 140 per cent. Thus there appears to be a greater degree of antiselection on term insurance for large amounts than on the smaller policies.

Prudential issues a 5-year Renewable and Convertible Term Policy. On this plan, mortality before renewal has been about 145 per cent of mortality on all standard issues. We analyze our mortality on policies with a decreasing term element; this category includes permanent policies with a decreasing term rider as well as pure decreasing term policies. Our mortality on such policies has been good at issue ages 20–39, where they are a logical form of coverage for young family men. At issue ages 50 and over, we have experienced some excess mortality—about 15–20 per cent —on policies with a decreasing term element compared to policies providing permanent level protection.

MR. RICHARD FITZPATRICK: We have studied the term experience of the Equitable Life from 1940 through 1961. The results are shown in the tables on the following page.

MR. DONALD J. VAN KEUREN: Metropolitan's underwriting of term insurance is the same as that of other plans, except that we are restrictive in refusing to issue renewable-convertible term policies to applicants in occupations subject to irregular employment or low income. We require a medical examination for all applicants for renewable-convertible term insurance; but other term plans, as permanent plans, are subject to the same nonmedical rules.

Mortality experience over the first fifteen policy years on renewable-convertible term plans has averaged between 5 and 10 per cent higher than on comparable standard ordinary issues. The excess tends to increase slightly by duration and, while there are few extra deaths at ages under 30, extra mortality develops as the age increases. The ratio of actual to expected claims averages more than 10 per cent above standard at ages 50 and older.

TABLE 1

STANDARD TERM INSURANCE MORTALITY
RELATIVE TO CONTEMPORANEOUS STANDARD MEDICALLY
EXAMINED BUSINESS MORTALITY BY AMOUNTS

PLAN	BY POLICIES				BY AMOUNTS			
	1940–45	1945–50	1950–55	1955–61	1940–45	1945–50	1950–55	1955–61
	Mortality Ratios							
Term 2	93%	99%	65%	58%	117%	151%	69%	50%
Term 5	109	84	118	134	113	91	107	149
5-Yr. Renewable Term	.....	.....	.....	91	.....	.....	.....	79
Term 10	98	99	100	95	101	97	94	103
Term 15 and 20	93	70	96	91	100	80	106	84
All	101%	88%	103%	96%	105%	93%	101%	93%
	Actual Claims				Amounts in Thousands			
Term 2	19	7	7	10	$ 93	$ 73	$ 70	$ 102
Term 5	181	84	128	69	780	597	1,009	772
5-Yr. Renewable Term	.....	.....	.....	101	.....	.....	.....	1,262
Term 10	193	161	131	110	875	853	986	1,124
Term 15 and 20	104	56	108	127	499	315	735	896
All	497	308	374	417	$2,247	$1,838	$2,300	$4,156

TABLE 2

RELATIVE MORTALITY OF ALL STANDARD TERM PLANS COMBINED
BY ISSUE AGE AND DURATION*

	BY POLICIES		BY AMOUNTS	
	1950–55	1955–61	1950–55	1955–61
Age at Issue:				
15–29	(99%)	(91%)	(83%)	(105%)
30–39	107	90	119	96
40–49	97	98	91	86
50 and over	112	99	104	101
All	103%	96%	101%	93%
Policy Years:				
1 and 2	120%	100%	106%	94%
3–5	109	95	102	90
6–10	93	92	91	100
11–15	78	93	78	81
16–20	(91)	107	(142)	107
All	103%	96%	101%	93%

* Ratios in parentheses are based on 10–24 claims.

Although we will currently issue renewable-convertible term insurance in our first four substandard classes, that is, up to about six times standard mortality, only in our first substandard class is there enough exposure to warrant conclusions as to the mortality. Furthermore, the bulk of the exposure covers the period prior to the realignment of the limits of the underwriting classes, which Mr. Lew has outlined earlier this morning.

In the higher classes the data are as yet too thin to support observations. In our first substandard class, the experience on renewable-convertible term insurance has been distinctly higher than on permanent plans in the same underwriting category. The experience over the first fifteen policy years has averaged about 180 per cent of standard lives as contrasted with closer to 140 per cent of standard for permanent plans. The disparity between term plans and permanent plans would thus appear to be greater for substandard than for standard classes.

The experience on Standard Ordinary Mortage Term and Uniformly Decreasing Term has been very close to 100 per cent of Standard Ordinary mortality. One can detect, however, the same tendency for mortality ratios to increase with advancing age and increasing duration, as is noted for renewable-convertible term plans.

The experience on mortgage term in the first substandard class also averages about the same as permanent plans in the same class. A review of the mortality percentages by age and duration tempts one to conclude that the pattern of increase with age and duration is also present here, but it is quite possible that this pattern will disappear as the experience builds up.

MR. WILLARD A. THOMPSON: Our last major review of military business was made in 1959 and included standard issues of 1950–56 exposed to 1957 anniversaries. War deads and those upon whom restricted amounts were paid were excluded. Expected deads were based on New York Life's total standard experience for about the same period. The over-all mortality ratio was 104 per cent. The ratio was 167 per cent for issue ages under 25 and 63 per cent for issue ages 35 and over.

The study was split into accidental and natural deaths, and these deaths were compared with expected accidental and natural deaths, respectively. As was to be expected for this class of risk, the ratio of actual to expected for accidental deaths was 156 per cent compared to 72 per cent for natural deaths. Accidental death ratios for enlisted men were about 50 per cent higher than those for officers, while natural death ratios for both enlisted men and officers were about the same.

First-year lapse rates for military issues of 1957–59 for all modes of

premium payment came to 22.1 per cent, slightly higher than the rate for total company issues. Second-year lapse rates were 9.1 per cent compared to 6.9 per cent for total company issues.

It was interesting to note that the first-year lapse rate for enlisted personnel was more than three times the rate for officers (28.6 per cent for enlisted men as compared with 8.6 per cent for officers). Also, the lapse rates for privates and recruits were about 30 per cent higher than for other enlisted men (32.4 per cent compared to 24.7 per cent).

As a result of unfavorable experience during the Korean War, in which substantial death losses were sustained on military business, the company froze the number of field underwriters allowed to write business on military installations. Since that time, mainly because our experience for this class of risk has been improving, these controls have been modified but we still continue to maintain a strict control of the number of field underwriters authorized to do business on military installations.

Because of our recent favorable military experience, other steps were also taken by the company. All special amount limits on military business have been removed so that amounts up to $1 million of new insurance or $1½ million of total insurance are now available to men in the service if their financial situations would justify such amounts. Also, the accidental death benefit is now available at standard rates at ages 30 and over for military risks. Prior to the recent liberalization, double the normal rate for the accidental death benefit was applicable at all ages. In addition, we liberalized our military aviation ratings in April of last year.

Over the years, one fact has consistently stood out and that is that enlisted men compared to officers have experienced poorer mortality and higher lapse rates. However, the entire military picture has continued to improve and new underwriting rules and precautions do not appear to be necessary at this time.

MR. LEW: For some years now we have made estimates of our experience on military risks in the first policy year. On issues of 1957 through 1962 exposed to June 30, 1963, our experience has been as shown in the accompanying tabulation.

	First Policy Year—1957-62	
	Mortality Ratio	Accidental Means Ratio
Enlisted men:		
First three pay grades (E1–E3)...	180% of Standard	220% of Standard
Highest six pay grades (E4–E9)..	130% "	110% "
Commissioned officers.....	115% "	140% "

Several years ago our lapse rate on military business payable by government allotment was double that on regular notice business, but it has lately improved to about one and a half times that on regular notice business. About half the lapses occur at time of discharge, but we estimate that currently the lapse rate at time of discharge probably does not exceed 15 per cent.

Since 1960 we have as a general rule limited enlisted men in the first three pay grades to not more than $5,000 of insurance if single, and to not more than $7,500 if married. Such insurance is issued to these enlisted men as a rule only on our Metropolitan Series of policies, where the premium rates charged cover the level of mortality and accidental deaths experienced. (From 1960 to 1963 these restrictions were also applicable to enlisted men in the fourth pay grade.) Noncommissioned officers, as well as commissioned and warrant officers, are currently eligible for standard Tower Series of policies but are rated 1½ for additional indemnity. We attribute part of the recent improvement in the lapse rate on our military business to the limitations imposed in 1960 on the amount of insurance issued to enlisted men in the lowest three pay grades.

MR. MYLES M. GRAY: We at United of Omaha are concerned about the persistency of government allotment business both (1) at the end of the first year and (2) immediately after separation from active service.

A recent study of our business showed that 79 per cent of regular annual mode and 76 per cent of military government allotment mode persisted beyond fifteen policy months. For Grades E4 and below, 70 per cent persisted; for Grades E5 and above, 85 per cent.

In 1963 we wrote to 787 men whose enlistment was about to expire and asked whether or not they planned to re-enlist. We then followed these policies and determined their status as of March 1, 1964. The results are summarized in the accompanying table.

	No. of Letters Sent	No. Still in Force as of March 1, 1964	Per Cent in Force
Total cases.....	787	465	59%
Number not replying.....	391	185	47
Number replying:			
(1) Re-enlisting.....	212	200	94
(2) Not re-enlisting.....	184	80	44

For the 391 that did not reply, we do not know how many re-enlisted and how many did not. However, of the 185 cases in force from this group, 141 are currently on the government allotment mode.

The above illustrates quite clearly that we have an extremely high termination rate upon separation from active service.

An additional study of cases that were separated but paid at least one premium on some other mode showed that after the change in mode this business experienced lapses comparable to new issues.

MR. JACK L. ROWLAND: To satisfy our need for more specific information regarding the cause of early terminations, we at the Mutual Benefit have turned to our IBM 7070-1401 systems and our tape library. Each year we prepare persistency rates for early policy years for any desired segments of our business. Typical controls are face amount group, mode of premium payment, type of soliciting agent's contract, agent, and general agency. The results of these studies are used throughout the home office and field. For example, the study revealed that the action taken four years ago increasing our minimum prepayment requirement for monthly government allotment has dramatically improved persistency in that area.

MR. BARTON S. PAULEY: It is our feeling that underwriting for persistency is best handled by our field management. This is especially true in the Prudential, where we aim to serve all markets. It is difficult to obtain adequate information to make an equitable judgment as to future persistency. Rejection is harsh treatment if it turns out to be a mistake.

Persistency is controlled by the mode of premium collection. Persistency is further controlled by agency contracts which, among other things, decrease remuneration for poor persistency.

MR. MAURICE E. COMFORT: In the London Life we freely decline business where potential persistency is poor, but we do have confidence in our agents and therefore very rarely decline without a full investigation. If we were to accept business in a group likely to give poor persistency, we would encourage the agent to prospect there thus rapidly multiplying our problems and working to the agent's detriment as well as our loss.

As a result, we feel it desirable to order inspections even for small policies in groups in which we anticipate poor persistency. These include certain selected occupations, marital status, applicants other than fathers, etc. In view of some current trends to ease up on ordering inspections I would like to stress one group which in our investigations has given an indication of being particularly bad, namely, small applications on adult males. Because of the type of individual frequently involved we feel that even for policies of $1,000 in this class an inspection is justified.

Refusals on persistency outlook alone may seem very difficult until you get used to it, but in the end they will be a boon to both the field force and ourselves.

Chicago Regional Meeting

MR. WILLIAM A. KELTIE: The standard underwriting classification is being broadened to include preferred risks. Out of 88 representative companies that offered preferred risk policies five years ago, one-third no longer do so. At the same time, some risks that were formerly offered rated insurance are now being written standard. These trends are due to improved mortality experience at the younger ages, gradation of premiums by policy size, improved knowledge as to the mortality of overweights, and competition for the borderline risk.

In 1955, we at the Great-West Life liberalized and broadened our substandard classes. Our first-rating class now covers the mortality range 135 to 155 per cent, the second 160 to 185 per cent, and so on. We chose these broader class intervals instead of reducing our extra premiums. At the higher ages at issue, these broader classes do create some problems with extra premiums.

We have also observed a trend to waiving extra premiums of $3.00 or less per thousand for occupation, certain medical impairments, and higher-priced insurance plans.

MESSRS. EDWARD A. LEW, DONALD J. VAN KEUREN, and FRANK DAVID repeated the discussions which they had presented at the Boston regional meeting.

MR. KARL M. DAVIES: We at the Equitable Life studied our term mortality experience and found that on standard issues our mortality averaged about 96 per cent by number of policies (93 per cent by amount), while on substandard issues up to 200 per cent, our experience averaged 84 per cent by amount (159 per cent by number).

MR. MYLES M. GRAY repeated the discussion which he had presented at the Boston regional meeting.

MR. ARDIAN GILL: We at the Mutual Life have found that the military not-taken rate can be reduced to 5 per cent if official assurance is secured that the allotment has been filed. In 1962 our not-taken rate was 24 per cent. This has been reduced to 13 per cent.

Allotments terminate in the first policy year on 23 per cent of our

military policies, and of these 71 per cent never resume payment. The result is a first-year lapse rate of 16 per cent for all ranks and 25 per cent for the first four pay grades.

As is commonly known, there is a higher mortality among servicemen, due primarily to a higher rate of accidental death. The major cause of accidental death is motor vehicle accidents.

MESSRS. EDWARD A. LEW and WILLARD A. THOMPSON repeated the discussions which they had presented at the Boston regional meeting.

MR. GEORGE W. CHALMERS: We in Canada have a practice of having our agents complete a persistency rating of the applicant. This rating may cause a company to decline an application. The rating is a blend of the salary of the applicant, his marital status, the type of plan being applied for, and the frequency of premium payment.

MR. FRED DE BARTOLO: We at the American United Life believe that persistency underwriting should be done by the field underwriter rather than the home office underwriter. We make use of the persistency rater (for new men), a persistency bonus (50¢ per thousand each quarter to our field representative on business of agent that qualifies), a home office persistency director, and emphasis on the need for persistent business at meetings with field and agency department.

Recently we studied all lapses during the first two policy years and found that 38 per cent occurred on orphaned business. It is doubtful whether our underwriting department could have underwritten these for persistency.

MR. NORMAN F. BUCK: We at the Lincoln National have been rating the persistency of our agents' business each year by use of the expected lapse rates shown in my 1960 paper (*TSA*, XII, 258).

MR. JOHN S. MOYSE: Ideally, underwriting for persistency should be done positively as a guide to agency management for the purpose of steering agents toward selecting the proper plan and amount for the proper type of prospects.

Care must be taken that underwriting for persistency is not out of step with marketing philosophy. For example, on a series of policies designed for the lower socio-economic market, a liberal attitude must be taken toward any underwriting for persistency, since poorer persistency should be assumed in setting premium rates, commission rates, and nonforfeiture values. Underwriting action should only be taken when persistency appears to be well below the average.

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?

Boston Regional Meeting

MR. GEORGE L. HOGEMAN: At Aetna we keep a 1 per cent sample of our applications to study the relationship between the cost of various requirements and the resulting savings in mortality. Our recent studies do indicate to us that inspection reports, attending physician's statements, electrocardiograms and X-rays are worth considerably more in terms of mortality savings than they cost. Occasionally they improve an offer or clear up a rated case. However, there is a time delay which may inconvenience the applicant and even lose the sale.

Recently we studied the experience in our 1 per cent sample for the years 1958–63. In each case where additional data was requested, we determined whether the additional data cause the rating to be increased. The results are shown in the accompanying tabulation.

Type of Information	Percentage of Applications Adversely Affected
Inspection reports	1¼%
Attending physician's reports	19
X-rays	17
EKG	33
Additional blood pressures	50

MR. KARL M. DAVIES: Four years ago we at Equitable established a continuing statistical system to measure the service results of our underwriting and issue operation. Our system not only produces routine statistics but also data to make special studies.

For the large group of smaller size life insurance applications (less than $25,000) it was decided that a 10 per cent sample (some 20,000 cases a

year) would be sufficient. For the larger cases, where the volume is not so great, we decided to use a 30 per cent sample (5,000 cases a year). Similarly, we use a 30 per cent sample of health insurance cases. For each sample case a rather complete set of underwriting and issue data is coded and punched on an IBM card.

Each periodic report covers the cases which were either issued or declined during that period. This routine report shows for the large cases and the small cases, and for the combined group:

A. The percentage of cases cleared in N working days.
B. The percentages of standard and substandard issues and declinations—with some additional detail on reasons for declination.
C. The proportion of the cases requiring additional information from a doctor or other source.
D. The ratio of the total number of requirements to the number of cases.
E. Data similar to C and D relating specifically to attending physician's statements.

The cost of this system is about $16,000 per year.

MR. CHARLES A. ORMSBY: We at the Hancock have been highly gratified with the progress we have made in the last five years in applying computer processes to underwriting and issue functions. Our system was applied to Weekly Debit, the Monthly Debit Ordinary and our Multiple Protection Ordinary where the fact amount is not in excess of $5,000. In the latter business, problems arise due to term riders carrying the coverage to $25,000.

In any event, at present 90 per cent of Weekly Debit and approximately 65 per cent of the Monthly Debit and Multiple Protection applications are being underwritten and issued by computer.

We believe that the potential of computers in this area of underwriting-issue has only partly been realized.

Chicago Regional Meeting

MESSRS. KARL M. DAVIES, CHARLES A. ORMSBY, and DOUGLAS S. CRAIG repeated the discussions which they had presented at the Boston regional meeting.

MR. DAVIES: With regard to the automation of underwriting, I feel that we should proceed cautiously. The complex case needs human review; the simple case can be underwritten by a human in less time than it takes to code and punch the record. As I see it, if the coding is valuable

for by-products, such as controls and mortality studies, then the machine underwriting can be justified.

MR. CRAIG: We at the Metropolitan believe that the use of less complicated underwriting procedures is but one phase of a more inclusive program for the handling of small ordinary policies, and in adopting such procedures it may be unwise not to carry out the other associated practices at the same time. So we use a very simple application form. This produces a saving not only at the time of issue but also when the policy subsequently becomes a claim. We find less exposure to error both in the field and in the home office.

With respect to underwriting, we are saying in effect that we will use less precise criteria and make less fine distinctions in assigning a risk to an underwriting category. Thus for small ordinary policies, we order fewer and cheaper mercantile reports, we order fewer and less complete medical examinations, we use M.I.B. for only subcategories of applications, and refer a case to our physician underwriters only on rare occasions. While we are using less precise aiming in assigning a risk to an underwriting category, we are also using a bigger target. For example, we have broadened the mortality range of our standard and substandard classes so that each covers the range of two other classes used for our larger policies.

MR. JOSEPH C. SIBIGTROTH: We at the New York Life recently studied 2,000 applications to help us evaluate various underwriting processes. Applications are first screened by basic underwriters who have approval authority for amounts of $25,000 and less on clean standard cases, or those moderately substandard for build, or those cases substandard because of occupation. The basic underwriters refer all other cases to the life underwriters and some of these cases also to the medical department. The distribution of cases and average time elapsed from receipt of application to issuance of policy was as shown in the accompanying tabulation.

Final Approval by	Per Cent of Applications			Average Time from Receipt of Application to Issuance
	Medical	Nonmedical	Total	
Basic underwriter	30%	75%	58%	2½ days
Life underwriter	45	24	32	6 days
Medical underwriter	25	1	10	10 days
Total	100%	100%	100%	

In those cases where an attending physician's statement was required, five working days were added. The attending physician's statement was required in 5 per cent of cases for amounts $10,000 and under, 15 per cent for amounts $10,001–$25,000, and 35 per cent for amounts over $25,000.

With regard to nonmedical, 7.7 per cent of applications were suspended for a medical examination in the home office.

Out of the entire 2,000 applications, only 3.3 per cent were declined because necessary additional requirements were never fulfilled.

Underwriting Standards—Health Insurance

A. On the basis of what kind of medical and other information are applications classified as standard or substandard?
B. Has experience indicated that the various classifications used were soundly based and worth the extra underwriting expense?
C. What statistics are maintained to establish future classifications?
D. What underwriting factors apply to accident-only policies of various types?

Boston Regional Meeting

MR. RICHARD H. MORSE: All the information pertaining to a risk which the underwriter is able to gather is the basis for classification. Primary sources are applications, inspection reports, medical statements and examinations, and Casualty Index reports; these may lead to other sources, such as heart charts or hospital reports.

Acceptable risks are classified standard or rated; the latter may require extra premiums or the exclusion or limitation of coverage for one or more specified impairments. Limitations may take the form of a shorter indemnity limit or a longer elimination period, or both. The underwriter's judgment is probably the most important factor in the classification process. The feasibility of a numerical rating system as for life insurance is questionable, as health insurance has many more ramifications.

Statistics must be maintained for the various classifications. Whether or not the original classifications are soundly based is unimportant. Emerging experience will show the justification of ratings and be a guide for any changes in benefits or rates. In the Monarch Life we maintain records by age, sex, occupation, occupational classification, and by impairment ratings.

Classification by occupation is not merely to reflect a different accident hazard but to provide a measure of the physical, environmental, social, moral, and economic risk factors present in the classification.

MR. JOHN M. SUTHERLAND, JR.: As to Section A, we at Paul Revere find attending physician's statements the most important source of physical information, closely followed by hospital and clinic reports and our own claim records. Medical examinations are used on only about 8–10 per cent of cases and so do not develop a large number of substandard cases. An application by a thorough and competent agent with the agent's comments often are entirely adequate for certain impairments.

Inspection reports are occasionally helpful on physical conditions and are the largest source of information on habits, morals, and finances.

With the possible exception of our original hospital classifications, our

answer to section B is "Yes." We originally had four occupational classes as with disability income; these were reduced to two, and then to one. Variations in currently emerging experience are acceptable. Apparently, the basic health factors are largely offset by frequency and cost factors among the various occupational classes.

We feel the same factors apply to accident-only policies as to sickness coverages—only the degree of importance of each factor differs. The fact of disability can be determined more readily and clearly and this changes the nature of the risk so that we can permit coverage of a higher proportion of earnings, offer lifetime benefits generally and, in some cases, offer accident-only to risks ineligible for sickness.

Occupation is relatively more important, while minor physical conditions can be ignored. Morals information is scrutinized closely. Criticisms of driving records or drinking assume additional importance.

MR. EDUARD H. MINOR: When Metropolitan first introduced its Comprehensive policy, an inspection was required on every application. We soon found these were ineffective in classifying applications as standard or substandard. With our Senior Citizen policy introduced in 1961, we started out with a very limited use of these reports. However, steadily increasing unfavorable claim experience led to a pilot program. We notified the inspecting companies that we would expand the program if the reports proved dependable. The reports have been of excellent quality. At the older ages, it is easier to develop significant information.

We do not offer an accident-only policy to the blue-collar occupations on a noncancelable basis. We have experimented with a policy provision limiting coverage in the case of accident disability covered by Workmen's Compensation. Complaints led to elimination of the clause, but we have indicated certain occupations that are acceptable only with exclusion of occupational accident or a 10 per cent increase in the total health premium.

Chicago Regional Meeting

MR. E. PAUL BARNHART: Relative to C, we at American National are setting up a statistical system for substandard issues. We plan to code impairment classifications and record the extra premium classifications. What success have other companies had in obtaining results from this—have you done this long enough to get sufficient volume to tell anything from specific impairment codes?

We have a practice of setting up substandard classifications following claims on policies which are standard as to issue classification and there-

fore premium. We want to classify all policies from the standpoint of claims, of whether they are now statistically substandard and then trace their subsequent histories. Have others done this and found it useful for substandard underwriting data?

We have found that information available is more limited, but we have some success in setting criteria for what claims are to be regarded as statistically substandard.

MR. EDUARD H. MINOR repeated the discussion which he had presented at the Boston regional meeting.

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. What percentage of insureds reach the various policy maximums after different specified years of coverage? Has an analysis of such claims indicated any clearly defined causes common to such cases?
C. How effective are deductibles, waiting periods for pre-existing diseases, and similar policy provisions in simplifying the underwriting of individual policies?
D. What underwriting safeguards are advisable or desirable to obtain a satisfactory persistency? What factors contribute toward lapsation?

Boston Regional Meeting

MR. WILLIAM A. FEENEY: Overinsurance is a factor that can contribute substantially to increasing major medical claim costs unless corrective measures are taken. Problems arise from duplication or overlapping between basic hospital and surgical policies and typical major medical coverage. When benefits exceed, or too closely approach, costs of care incentives to economize are removed and often lead to overutilization and other abuses. Also, doctors and hospitals are discouraged from keeping charges down when they realize from the number of claim forms that the patient may be making a profit on their services.

Equitable's policy co-ordinates the major medical benefits with other medical expense benefits so as to avoid duplication or overlapping. This is done by defining the deductible amount as the greater of a fixed amount basic deductible, as elected at issue, and the amount of benefits paid under other medical expense coverage. The claims administration of this provision has been satisfactory to date. Inside limits on hospital and surgical benefits have not been introduced, for we believe the insured's interest in controlling costs has been preserved by maintaining a 75 per cent coinsurance factor, as well as by making the policy supplementary to basic coverage.

MR. EDUARD H. MINOR: Financial experience on Metropolitan's Comprehensive policy of 1958 required a rate increase in November 1962. In analyzing the reason for the increasing claim costs, we found (1) there was substantial anti-selection with respect to our liberal maternity benefit, and (2) there were certain areas of the country which showed unusually high claim costs.

We corrected the geographical area situation either by withdrawal or use of an area extra premium. For the maternity benefit situation we

withdrew all our Family Hospital and Surgical policy forms with maternity benefits where either husband or wife is under age 25. Our studies indicated an excessive lapse rate in addition to the naturally high maternity rate at these ages. Many of these young families were buying solely to collect the maternity benefit even though they could not really afford the broad coverage provided. Our solution was a low-cost basic hospital insurance with no maternity benefit.

It seems clear at this date that sales efforts have diverted to older families with better incomes rather than to lower-priced policies, and there has been no very substantial decrease in total sales volume.

MR. ALBERT A. BINGHAM: I believe inside limits can be extremely valuable in the control of major medical claim costs and are more effective in the long run than coinsurance. The inside limits should not be so skimpy as to fail to provide coverage for a high percentage of reasonable charges. Several sets of limits should be available to meet the variation in medical care costs by area.

No dollar figure can be placed on the value of inside limits because much of the savings arise from the fact that the person who expects to have above-average fees will buy from a company that has no inside limits. The advantage of these limits will be reduced if all companies have similar limits but, in the meantime, I believe they will permit a company to maintain premium levels for a longer period than otherwise.

MR. FEENEY: The following tables relate to Section B. It should be noted under all our policies the maximum is a per cause maximum for the same or a related condition and not an aggregate for all causes.

MR. MINOR: The problem with deductibles, waiting periods, and special policy provisions is not to determine how effective they are but whether there is any simplification. The $50 deductible in our comprehensive policy simplifies nothing for the underwriter. The deductible is effectively overcome because it is the accumulative calendar year type and out-of-hospital expenses can be credited against it. Thus there is first dollar coverage for subsequent expenses from the same or different conditions.

Simple impairments must be ridered because the preventive treatments nullify the deductible, and every applicant must be checked to ascertain whether he has or is eligible for group insurance. Aside from overinsurance this has an important bearing on persistency.

A two-year incontestable period suggests a two-year exclusion for preexistence but the underwriter must ignore this. If a medical history is

TABLE 1

DISTRIBUTION OF MAXIMUM AMOUNT CLAIMS BY POLICY DURATION OF FINAL PAYMENT

Policy Duration	$2,500 Maximum*	$5,000 Maximum†	$7,500 Maximum‡§	All Maximum
1	3	2	2	7
2	6	3	7	16
3	5	6	4	15
4	6	6	5	17
5	2	2	7	11
6	1	4	5	10
7	4	4	3	11
8	6	6	11	23
9	5	5	5	15
10	15	9	3	27
11	7	6	1	14
12	4	9	1	14
13	3	.....	.....	3
All durations..	67	62	54	183
Total claims..	5,500	5,300	7,500	18,300

* Introduced in 1951—deductibles of $100, $300, or $500 and a $10 DHB limit.

† Same as * but with a $15 DHB limit.

‡ Introduced in 1954—deductible of $500, no inside limits.

§ A few maximum benefits were paid on policies transferred from the earlier series, and on these, duration is measured from the original issue date.

TABLE 2

DISTRIBUTION OF MAXIMUM AMOUNT CLAIMS BY CONDITION CAUSING CLAIM

Conditions	$2,500 Maximum	$5,000 Maximum	$7,500 Maximum	All Maximum
Cancer	26	25	18	69
Accidents	7	6	10	23
Heart diseases	4	6	5	15
Chronic inflammatory diseases of small or large bowel	3	1	3	7
Intestinal obstruction	3	3	0	6
Poliomyelitis	1	4	1	6
Cerebral circulatory disorders	1	2	2	5
Liver disease including cirrhosis	3	1	1	5
Diverticulitis	0	2	2	4
Lung disease	1	1	2	4
All others	18	11	10	39
Total	67	62	54	183

admitted, the two-year provision is waived, in effect, for the impairment; if we do not rider it, we will almost certainly be required to pay a claim.

A large deductible, such as $500, simplifies underwriting—just as in the case of a 180-day or 365-day elimination period under a disability policy.

MR. ALTON P. MORTON: A worthwhile portion of the public is moving in and out of employment with employers who have group basic and major medical benefits. Consequently, there is a greater risk of lapse for individual health policies than for life insurance. There is an equally serious duplication or overinsurance problem because these people have the option of continuing their individual coverages when they move into covered employment.

Chicago Regional Meeting

MR. EDUARD H. MINOR repeated the discussion which he had presented at the Boston regional meeting.

MR. KARL M. DAVIES: We feel that varying basic deductibles in major medical and elimination periods in disability income is very effective in permitting flexible underwriting. This adds an extra dimension in underwriting because, with the decision that an application must be rated for a given condition, the underwriters may then think about an alternative of a larger deductible or larger elimination period instead of the rating.

We have an impression that many applicants do not fully appreciate the value of larger deductibles and larger elimination periods. The applicants might prefer them, but the agents have not sold them, since they reduce premiums.