

**TRANSACTIONS OF SOCIETY OF ACTUARIES
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INDIVIDUAL HEALTH INSURANCE

Individual and Family Major Medical Expense Insurance

- A. What morbidity experience has developed under individual and family major medical expense plans? In what respects does the experience differ from that under group major medical expense plans?
- B. To what extent have claim costs varied by income and residence or medical cost area of the insured? What steps have been taken to recognize these variations?
- C. Is there a trend toward "inside limits" in individual major medical expense policies for surgeons' fees, private duty nurses' fees, and for other charges? What other contract drafting problems have arisen?

MR. DON R. SKELTON: The Springfield-Monarch recently studied experience under individual and family major medical plans which have a \$500 deductible, \$10,000 maximum and 75% coinsurance, with no inside limits. The observation was from 1956 to September 30, 1960 on issues of 1956 and later. The variation in experience by residence was sufficient to be recognized in gross premiums. The average net claim cost for New York City and California agencies was 1.54 times the average of all agencies. Other agencies had an average claim cost of 79% of the average for all agencies. As a result, New York City and California agencies were designated high cost areas, and other agency territories were divided into medium or low cost areas. Three separate levels of gross premiums were developed to reflect the different cost areas.

MR. ROBERT P. COATES: The Equitable is currently engaged in a study of morbidity developed under individual and family major medical expense insurance. Some preliminary indications can be reported at this time, and we hope to make more details available at a later date. The policy involved is the one which was described in Morton Miller's paper in *TSA VII*. It involves a deductible of \$500, 75% coinsurance and a maximum of \$7,500. The deductible must be incurred within 60 days. Benefits are payable up to a year, with the benefit period extended during continuous hospital confinement. The study involved 24,000 policies issued in 1954-1959 and carried to the policy anniversary in 1960. Total exposure was approximately 110,000 life years on adults, divided about equally between men and women, and 30,000 years of exposure on units involving one or more children. Total claims amount to about \$2½ million.

Preliminary results indicate:

1. Claim costs at the young ages are similar to those shown in Mr. Miller's paper, but are considerably higher in the 50's and roughly double the figures shown in the 60's.
2. Female costs are distinctly higher than male at young ages, but costs appear to reach a similar level beyond age 50, with male costs running a bit over female at higher ages.
3. There is an indication that underwriting holds down early claim costs and establishes a select type of experience, although this effect is not present to the same degree as in individual life insurance.

MISS MARTINA E. DOYLE: We have recently completed a study of morbidity under individual and family major medical plans for 1956-1959, and find a substantial increase in claim levels over our previous study of 1952-1955.

A comparison of the two studies shows an annual increase in claim level of about 5%. A preliminary study of 1960 experience shows a further 7% increase and we expect that 1961 may run as much as 10% over the 1960 level. This will undoubtedly lead to a change in rates in the near future. A similar upward trend has also appeared in group major medical coverages.

Connecticut General first issued individual major medical insurance in 1952 with plans offering a deductible of either \$300 or \$500 with a \$5,000 maximum. Since 1957 the combinations of deductible and maxi-

Plan	Actual/Expected	State	Actual/Expected
\$ 300/\$ 5,000...	95%	California.....	98%
\$ 500/\$ 7,500...	107%	Connecticut....	107%
\$1,000/\$10,000...	95%	New York.....	135%
		All Other.....	89%
All Plans.....	103%	All States....	103%

ATTAINED AGE	ACTUAL/EXPECTED		
	Men	Women	Total
Under 30.....	206%	142%	169%
30-49.....	102%	109%	106%
50-65.....	165%	94%	124%
Children.....			62%
All Ages.....	132%	104%	103%

mum have been \$300/\$5,000, \$500/\$7,500 and \$1,000/\$10,000. All plans have had 75% coinsurance, no inside limits, and no rate variation because of area.

Using the claim costs in Mr. Miller's paper with adjustments for the coverages offered, as the basis for expected claims, the results shown in the tables on page D404 were obtained in the 1956-1959 study.

The high ratios at younger ages may be partially random variations due to limited exposures.

MR. HOWARD D. ALLEN: The John Hancock started offering individual and family major medical plans in May 1957. Individual policies make up about 40% of the major medical policies issued, and family policies the rest. By the end of 1960 the Company had experienced 24,000 life years of exposure, 7,000 on adult males, 7,000 on adult females, and 10,000 on children. The coverage was very nearly the same as mentioned by Mr. Coates. Each child was treated separately, rather than on a family basis, with an expected morbidity of \$5 per year. Using the expected claim costs presented by Mr. Miller in *TSA VII*, the following experience has developed:

POLICY YEAR	LIFE YEARS OF EXPOSURE	RATIO OF ACTUAL TO EXPECTED	
		Adults	Children
1.....	14,000	55%	50%
2.....	7,000	85%	40%
3.....	3,000	105%	40%

Assuming no further inflation, we would anticipate ultimate claim costs to level off at from 125% to 150% for adults and 50% to 75% for children. There was no significant variation between males and females, and there were not enough data to produce significant figures between ages.

One feature that has developed in all group experience, and probably would develop in individual experience if it were large enough to be significant, is an annual inflation in claim costs. Although in our original rate calculations we made no allowance for inflation, we are giving serious thought to introducing an inflation factor, perhaps 5% to 10% per year. It may be argued that persistency is so low in the individual A&S field that the small percentage of policyholders who remain after 7 to 10 years will never present a serious problem. However, we are not too happy about that approach in the major medical area because:

1. Our persistency in major medical is far higher than in either hospital or loss-of-time areas. We would anticipate that after 10 years about 40% of major medical policies would still be in force compared to 20% of medical and 25% of loss-of-time policies.
2. Although our policies are drafted to permit a premium increase, this may not be desirable from a public relations point of view and may not receive necessary Insurance Department approvals.
3. If premium increases were obtained after substantial losses had accrued, unduly large numbers of policyholders might thereafter lapse, leaving the group so small it could never overcome its loss, even without a further worsening of morbidity. This would mean that other A&S policyholders, and possibly other lines of insurance, would be covering major medical losses, similar to long-term loss-of-time losses in the 1930's. This is inequitable and should be avoided if possible.

MR. JOSEPH C. SIBIGTROTH: The review of major medical experience of the New York Life has not been completed but is far enough along to make some generalizations. We started in 1953 with a modified commercial type policy, and in 1956 put a guaranteed renewable policy into effect. This has a \$500 deductible, 75% coinsurance and no inside limits.

Over-all, the morbidity is substantially higher than that indicated by Miller's table. It is higher, particularly at the older ages, on males than it is on females. On children the experience has been very favorable. We also notice this pronounced trend in claim costs which indicates inflationary effects and evidently some selection in normal major medical experience.

MR. CHARLES N. WALKER: Lincoln National commenced writing major medical in 1955. Early loss ratios were unfavorable, but showed a tendency through 1958 to improve with expanded volume and improved underwriting. From 1958 on, loss ratios increased steadily about 2% a year, and this increase was from a point which could not be considered satisfactory in view of the immaturity of the business. During 1960 we studied 1955 and 1956 issues carried to 1957 anniversaries with claims followed to September 1958. The study involved 159 claims, many of which were incomplete because of the three year benefit period, but the inadequacy of the claim cost assumptions used in gross premiums was clearly confirmed.

Since 1955 we have had three combinations of deductible and maximum amount, each with a combination of two inside limits for hospital room and board. In 1957 new issues were changed from commercial to guaranteed renewable with no benefit change and a modest premium increase. Claim costs used were published in *TSA VII*, and our current

study indicates these were too low with too little increase with increasing age. We made no attempt to check the variation in experience by income. In grouping the experience in accord with the rating areas used for group major medical we found California claim costs substantially higher than other areas. The other five state groupings showed a tendency to vary in the same pattern as group major medical rates, but the experience was too sketchy to draw any definite conclusions except to segregate California for separate treatment.

Based on the \$500 deductible, \$7,500 maximum plan with a \$25 hospital limit, the 1960 study showed claim costs for males were 25% lower than assumed at age 25, about the same at 35, but 25% higher by age 55. Female costs were 30% lower at age 25 but increased to 10% higher than assumed by age 55, somewhat better than male experience, but again indicating assumptions too flat by age. California costs were 20% to 25% higher than other states with males only 5% lower than assumed at age 25, and 60% higher at age 55.

In May 1961 we revised policy forms to extend the expiry age from 65 to 70, and incorporated revised gross premiums which were 25% higher for males and 12% higher for females in states other than California. In California the premiums were 45% higher for males and 25% for females. In 1962 we will make a corresponding increase in renewal premiums of all in-force business, using special premiums which are slightly lower than new issue premiums.

On section C, the only significant problem in policy drafting was the renewal provision. Since the new premium would have different premiums in California and indications are that further geographical separation might become advisable in the future, we felt it important to retain the right of reclassification for future changes of this sort. We ultimately obtained Insurance Department approval with only minor changes in the proposed language.

MR. IRVING ROSENTHAL: The Guardian Life has had a substantial amount of experience with an individual and family major medical policy. This form was discontinued in 1959, and at the end of 1960 there were about 14,000 policies in force covering about 42,000 lives. The policy is a lifetime policy with a deductible varying by income at the time of the claim. There is no coinsurance provision, but inside limits include \$25 hospital room and board, \$1,000 for any surgical operation, and only 75% of registered nurses' fees are covered. In my opinion the experience can be interpreted as that on a \$300 deductible, no coinsurance contract.

Detailed study of claim experience is under way, but at present we can furnish information only on the secular trend of claim costs from 1955 to

1960 (see accompanying table). The most significant figures are those that show that between 1955 and 1960 the average annual claim cost per life has approximately doubled. I believe that this rising trend of claim costs is somewhat overstated, since the average claim shown involves the computation of reserves on open and unreported claims, and there is evidence that we understated the claim reserves in the early years of our experience. If all claim reserves are adjusted to an actual history basis, the trend of annual claim costs per life would run from about \$12 in 1955 to \$20 in 1960, an increase of two-thirds. Preliminary figures for 1961 indicate a sharp increase in the average annual claim cost to the neighborhood of \$25 per life. There is no sign of any leveling off in the upward trend.

Calendar Year	Claim Frequency per 1,000 Lives Exposed	Average Claim	Average Annual Claim Cost per Life Exposed
1955.....	20.5	\$503	\$10.31
1956.....	21.6	597	12.90
1957.....	19.7	653	12.86
1958.....	25.3	681	17.23
1959.....	25.8	753	19.43
1960.....	25.5	816	20.81

The apparent upward secular trend may have been exaggerated by the effects of initial selection. If it is true that there is a select period on individual major medical, much of the apparent secular rise in our experience is due to the reducing proportion of exposure in the select period. Assuming a one year select period, our 1955 experience is all select and the 1960 experience is all ultimate. If the ratio of select to ultimate experience should turn out to be of the order of two to three, the upward secular trend in costs is of the order of only 2% per year compounded, after adjusting for reserve understatement and the effects of selection.

MR. E. PAUL BARNHART: Although the Washington National has developed little experience, research into the subject of variation in medical costs by income and area led us to the conclusion that major medical claim costs will vary tremendously by geographical area. For example:

	1960 2-Bed Hospital Accommodations	Ratio to (1)	Estimated Claim Cost Male, Age 40	Ratio to (1)
(1) Charlotte, N.C.....	\$11.50	100%	\$ 7.80	100%
(2) Indianapolis, Ind.....	19.80	172%	16.20	208%
(3) San Francisco, Cal.....	26.50	230%	23.80	305%

The estimated claim cost is for a plan with 75% coinsurance, a \$500 deductible and \$10,000 maximum. Even when other charges are not assumed to vary as widely as room charges do, we get a claim cost variation which is larger than the wide room charge variation because the deductible is held constant. We believe this tremendous variation is much too large to ignore in setting premium schedules. Area rating is a possibility, but, with guaranteed renewable coverages, costs will shift as policyholders move, while the policy may guarantee the original rating classification. Income or area grading of benefits is another attempted solution. This is awkward and subject to even more difficulties than area rating. It is doubly complicated in combination with area rating.

Our solution has been to adopt a new approach which involves broadly flexible inside limits. Our main objective was to solve the income-area variation problem, and only secondarily to control our liability through inside scheduled limits. We now issue a plan which has inside limits on hospital room charges and all kinds of professional services—surgeon, physician and nurse. These limits are called “benefit units” to which we can assign any selected dollar value. The premium is proportionate to the dollar value.

The program not only licks the income-area problem, but also gives the agent the ability to program for a client the amount of coverage that he needs or can afford. A problem is that with relocation or cost increases the original limits may become inadequate. If the lives are insurable, the policyowner can apply for an increase in unit value at the attained age premium. The valuation reserve is computed much as though a second policy had been purchased. For future uninsurables, we have a partial solution in a guaranteed insurability option which can be purchased at issue.

Since we released this program, our major medical sales are 30 times the level for the previous form which had very little in the way of inside limits. We find inside limit major medical perfectly salable.

MR. ROBERT L. WHITNEY: Mutual of New York issued its first individual major medical policy in June 1961. We explored inside limits in developing this policy because of the advantages they offer, as a control against both current overcharging and future increases in medical costs. Initially we considered inside limits for daily hospital room and board, surgeons' fees, physicians' fees per day of calls and private nurses per day of service.

This did present contract drafting problems, since our policies are issued electronically with printing on page 3 of the policy and a window on page 1 to show policy specifications, and it would not be possible to

show all inside limits along with the usual policy information in the limited window area available. A more compelling reason for discarding some of the inside limits was a desire to limit the complexities of the contract. In our final version of the policy, covered charges fall into two categories:

1. Charges where 100% credit is given up to the inside limit, including hospital room and board and surgeons' fees up to the amount in the applicable surgical table.
2. Expenses where covered charges are defined as 75% of the actual expense. This category includes hospital miscellaneous expenses, physicians' fees except for surgery, private nurses' fees, and other supplies and services.

The deductible amount is subtracted from the sum of covered charges, and thus if expenses which fall into the 25% coinsurance category are incurred before a \$500 deductible is met, one will have to incur more than \$500 worth of expenses in order to collect benefits. A possible remedy for this would be to apply the 25% coinsurance only after the deductible has been met, but this would involve administrative problems in keeping track of the timing of various expenses. Another possibility would be to apply the 25% coinsurance on the room and board and surgical expense as well. Covered charges would include all room and board and surgical expenses up to the inside limits, as well as all other expenses, and the coinsurance would be applied only after the deductible amount had been subtracted from covered charges. This was not used because we believed the double limitations on room and board and surgical fees would be too severe a restriction and would not be competitive.

We have had reasonable success in combating a reluctance to accept the coinsurance before and after the deductible by meeting the issue head-on and explaining the provisions to the field force. We have also prepared a notice for our major medical policyholders which tells when a benefit period is established and suggests that the policyholder note the amount and percentage limits applicable to each type of expense. Despite doubts within the home office about the marketability of the final product, our field force has accepted it, and it is comprising the percentage share of new issues that we had hoped for.

MR. ALFRED L. BUCKMAN: The fact that policies without inside limits have shown nearly a 10% compounded increase in loss ratios for 8 or 10 years should be a fair warning that this type of increase is likely to continue for many years in the future, as the public, and primarily the doctors and owners of proprietary hospitals, become aware of these no-

inside-limit policies. Our policy with many inside limits was first issued in 1959. It did not produce the volume of business that we had hoped, but we think that as other companies become more mature in this field and also issue policies with inside limits we will get a fair share of the volume. Companies which are facing problems with their policies not containing inside limits will find a solution to their problems if they do include inside limits.