

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1952 VOL. 4 NO. 10**

**SPECIAL INVESTIGATION OF GROUP HOSPITAL
EXPENSE INSURANCE EXPERIENCE**

STANLEY W. GINGERY

SEE PAGE 44 OF THIS VOLUME

JOHN C. MAYNARD:

The tables of Section III show a range of figures for the ratio of total benefits paid to the total expenses charged. From these figures some idea of the adequacy of group hospital expense insurance can be obtained. The author points out that since the ratios vary considerably by plan and by daily benefit rate chosen, the adequacy of the insurance may be partly controlled by the policyholder. However, Tables III-7, 8 and 9 show that for all common plans the ratio decreases steadily with duration of claim, the reason being that the maximum reimbursement for miscellaneous services under common plans is a constant amount which is independent of duration of claim. There is therefore no choice open to the policyholder by which he may obtain a common plan which provides an adequacy which is level by duration of claim. Stated in other words, the common plans require a coinsurance factor which increases with duration of claim.

The desirable form of insurance should have the opposite characteristic: the coinsurance factor should decrease or remain steady as the total amount of claim increases. This suggests that the maximum reimbursement benefit for miscellaneous services should be defined partly in terms of duration of claim. It was found that the actual miscellaneous charges by duration of claim in the 1951 sample, column (3) of Table IV-1, could be expressed reasonably well by the formula \$23.00 plus \$6.90 per day of confinement. If a plan is desired which produces a coinsurance factor level by duration, a reduced benefit formula of this kind for miscellaneous services could be chosen so that the expected adequacy for the miscellaneous services benefit would be equal to the expected adequacy for the daily board benefit. If a decreasing coinsurance factor is desired, the first constant in the benefit formula could be decreased and the second increased.

(AUTHOR'S REVIEW OF DISCUSSION)

STANLEY W. GINGERY:

I want to thank Mr. Maynard for his thoughtful discussion. His point regarding coinsurance by duration is quite interesting. While there seems

to be no current tendency on the part of Group writing carriers to underwrite the type of benefit suggested by Mr. Maynard, there has been some tendency toward it in individual policies. As an example of this, my company (The Prudential), which entered the Individual Sickness and Accident field during 1952, provides the following benefit in its ordinary policies (and a very similar benefit in its debit policies):

Total Number of Days of Hospital Confinement	Maximum Benefit for Hospital Expenses Other Than Room and Board
1.....	6 times the Daily Hospital Benefit
2.....	7 times the Daily Hospital Benefit
3.....	8 times the Daily Hospital Benefit
4.....	9 times the Daily Hospital Benefit
5.....	10 times the Daily Hospital Benefit
6-10.....	11 times the Daily Hospital Benefit
11-15.....	12 times the Daily Hospital Benefit
16-20.....	13 times the Daily Hospital Benefit
21-25.....	14 times the Daily Hospital Benefit
26-30.....	15 times the Daily Hospital Benefit
31-35.....	16 times the Daily Hospital Benefit
36-40.....	17 times the Daily Hospital Benefit
41-45.....	18 times the Daily Hospital Benefit
46-50.....	19 times the Daily Hospital Benefit
51 or more.....	20 times the Daily Hospital Benefit

As mentioned on page 104 of my paper, the sparsity of data concerning hospital confinements in excess of 31 days made the values shown in the 1950 Basic Group Hospitalization Table for durations beyond 31 days highly questionable. Accordingly, a supplementary study intended to produce more reliable results for lengthy confinements was undertaken. The study was based on data contributed by seven companies: Aetna, Connecticut General, John Hancock, Metropolitan, Occidental, Prudential and Travelers. That supplementary study produced the following data:

Category of Claimant	Total Number of Claims	Number of Claims in Excess of 31 Days	Average Duration Truncated at 31 Days	Average Duration Truncated at 70 Days
Male Employees.....	19,410	905	7.8 Days	8.7 Days
Female Employees.....	6,763	168	7.0	7.5
Spouses.....	16,796	516	7.5	8.1
Children.....	20,047	254	3.8	4.1

The crude continuation data produced by the supplementary study for durations in excess of 31 days were graduated to grade smoothly into the results shown in Tables VII-2, 3, 4a and 4b of my paper. An extrapolation beyond 70 days was obtained by reference to the graduated data for 32 to 70 days, inclusive.

DAYS OF HOSPITALI- ZATION	MALES		FEMALES		SPOUSES		CHILDREN	
	l_t	R_t	l_t	R_t	l_t	R_t	l_t	R_t
31.....	388	1.0000	231	1.0000	267	1.0000	97	1.0000
40.....	302	1.0369	178	1.0235	200	1.0264	74	1.0204
50.....	240	1.0699	147	1.0450	156	1.0494	59	1.0387
60.....	184	1.0957	117	1.0625	118	1.0670	46	1.0532
70.....	133	1.1150	91	1.0762	88	1.0803	35	1.0643
90.....	86	1.1409	63	1.0962	58	1.0988	24	1.0800
120.....	56	1.1662	43	1.1169	39	1.1172	16	1.0960
180.....	33	1.1975	26	1.1437	23	1.1404	10	1.1164
270.....	20	1.2259	17	1.1688	14	1.1617	6	1.1353
360.....	15	1.2451	12	1.1859	10	1.1761	4	1.1481

In the above table, l_t is the number of persons confined for t or more days, and R_t is the ratio of room and board claim cost for first t days to cost for first 31 days.

The above results differ significantly from those shown in Tables VII-2, 3, 4a and 4b of the paper for only the male category of claimants. Accordingly, the work of completely revising the 1950 Basic Group Hospitalization Tables did not seem worth while since that adjustment can readily be made on a satisfactory practical basis by anyone wishing to apply those tables, along with the adjustment necessary to reflect the secular trend toward rising claim costs. That upward trend, which was pointed out in the concluding section of the paper, has since been sustained by the 1951 policy year experience contained in the 1952 Report of the Group Morbidity Committee.