

## TRANSACTIONS OF SOCIETY OF ACTUARIES 1963 REPORTS

### II. EXPERIENCE UNDER INDIVIDUAL MEDICAL EXPENSE POLICIES, 1960-61

**T**HIS is the Committee's first report on the experience under individual medical expense policies. The report is the result of plans formulated in 1961, in co-operation with the Health Insurance Association of America, to accumulate data on an annual basis for an intercompany study of hospital, surgical, maternity, and major medical benefits under individual health insurance policies. In planning for the study, it did not seem feasible to combine the experience of the various companies by kind of policy because of the wide variation in benefit levels and benefit combinations in individual policies offered by different companies. It was decided, therefore, to examine the basic components of the experience separately. Contributing companies were requested to submit data, in the subdivisions indicated below, on summary sheets designed by the Committee. Because of the large volume of claims anticipated, data on individual claims were not requested.

1. Frequency of hospitalization.
2. Average amount of claim per \$1 of daily hospital benefit.
3. Average amount of claim for each maximum amount of miscellaneous hospital expense benefit.
4. Frequency of surgery.
5. Average amount of claim per \$100 maximum surgical schedule (adjusted to a standard schedule).
6. Claim frequency of policies with a deductible.
7. Maternity claim frequency.
8. Claim frequency and average claim on major medical insurance.

#### GENERAL INFORMATION

The study covers the combined experience of the calendar years 1960 and 1961 on individually underwritten policies of all types with the exception of those noted below. The experience on lives covered under family and individual policies was combined. No differentiation was made by the types of renewal provision contained in the contracts or followed in their administration. Payments made to the end of the calendar year following the year in which a claim was incurred are included; estimates of future payments on claims pending at the end of this period are included only on major medical claims.

Policies without a deductible were analyzed separately from those

with a deductible, and as to the latter, account was taken of the amount of the deductible. Data on policies with a deductible were submitted only if the deductible applied to all benefits under the policy except the maternity benefit. Only data on claims which were in excess of the deductible are included; claim data reflect amounts of eligible medical expenses *before* the application of the deductible, except in the study of major medical benefits. The method of calculation of policy claim costs for a combination of benefits involving a deductible is outlined in the section on Deductible Amounts (p. 160).

Excluded from the investigation were:

1. Franchise and wholesale insurance.
2. Conversions from group insurance.
3. Policies issued with an extra premium unless such policies constituted a very small proportion of the contributing company's total business. (Policies issued with a medical impairment rider, but without an extra premium, were included in the study.)
4. Policies issued at senior ages on a mass enrollment basis, without evidence of insurability. (Tables 5 and 19 show comparisons of mass enrollment experience with the individually underwritten experience of this study.)

In the sections on frequency of hospitalization and average amount of hospital claim, only in-patient claims are included. The section on surgery, however, includes data on surgery performed both in and out of the hospital, and the section on major medical insurance includes data on services performed both in and out of the hospital.

Maternity claims were excluded except in the section dealing specifically with maternity expense benefits.

Unless otherwise indicated, data shown are for all durations combined. The duration is a calendar-year duration rather than a policy-year duration and is determined by subtracting the calendar year of issue from the calendar year of experience. Companies were requested not to submit data for duration 0 (the calendar year in which a policy was issued).

#### CONTRIBUTING COMPANIES

The following 22 companies contributed data to one or more sections of this report:

Beneficial Standard Life Insurance Company  
Connecticut General Life Insurance Company  
Continental Assurance Company  
Continental Casualty Company  
Equitable Life Assurance Society of the United States  
General American Life Insurance Company

Great American Reserve Insurance Company  
 Great-West Life Assurance Company  
 Life Insurance Company of Virginia  
 Lincoln National Life Insurance Company  
 Metropolitan Life Insurance Company  
 Mutual Life Insurance Company of New York  
 Mutual of Omaha Insurance Company  
 New York Life Insurance Company  
 Occidental Life Insurance Company of California  
 Provident Mutual Life Insurance Company of Philadelphia  
 Prudential Insurance Company of America  
 Security Mutual Life Insurance Company of New York  
 Standard Insurance Company of Oregon  
 Travelers Insurance Company  
 Union Mutual Life Insurance Company  
 Woodmen Accident and Life Company

#### HOSPITAL ROOM AND BOARD BENEFIT

Twenty companies contributed experience to this segment of the study. The distribution by maximum benefit period of claims in the study is as follows:

Maximum Benefit Period Number of Days	Daily Hospital Benefit In Force on Hospitalization Claims
28.....	\$ 13,830
31.....	204,167
35.....	644,510
45.....	29,334
50.....	16,681
60.....	28,771
70.....	109,465
90.....	204,082
100.....	665,157
120.....	280,534
150.....	144,252
365.....	725,552
500.....	1,378,595
Total.....	<u>\$4,444,930</u>

The annual frequency of nonmaternity hospitalization is based on the combined experience for all maximum benefit periods and was obtained

by dividing the amount of daily hospital benefit in force on hospitalization claims by the amount of daily hospital benefit exposed.

The average claim per \$1 of daily hospital benefit was obtained by dividing the amount paid for hospital room and board by the amount of daily hospital benefit in force on hospitalization claims. It was found to be impracticable to show the average claim for each of the various maximum benefit periods for which data were contributed, but it was felt desirable to include all the data and to show in some way the effect of limiting the length of the benefit period. This was done by converting the data for maximum benefit periods of 28 through 45 days to a 31-day period, that for 50 through 150-day periods to a 90-day period, and that for periods over 150 days to a 365-day period, using the conversion table shown below. This table was developed primarily from the data upon

FACTORS TO CONVERT AVERAGE CLAIM PER \$1 OF DAILY HOSPITAL BENEFIT  
FOR A GIVEN MAXIMUM BENEFIT PERIOD TO  
ANOTHER MAXIMUM BENEFIT PERIOD

MAXIMUM BENEFIT PERIOD	FACTORS TO CONVERT TO PERIOD SHOWN			FACTORS TO CONVERT TO 90-DAY MAXIMUM BENEFIT PERIOD		
	Male	Female	Child	Male	Female	Child
	31-Day Maximum Benefit Period					
28.....	1.016	1.012	1.006	1.159	1.111	1.049
31.....	1.000	1.000	1.000	1.141	1.099	1.043
35.....	.983	.988	.994	1.121	1.085	1.036
45.....	.948	.963	.983	1.082	1.058	1.025
	90-Day Maximum Benefit Period					
50.....	1.066	1.047	1.021	1.066	1.047	1.021
60.....	1.041	1.030	1.013	1.041	1.030	1.013
70.....	1.023	1.017	1.008	1.023	1.017	1.008
90.....	1.000	1.000	1.000	1.000	1.000	1.000
100.....	.992	.994	.997	.992	.994	.997
120.....	.978	.983	.991	.978	.983	.991
150.....	.964	.972	.985	.964	.972	.985
	365-Day Maximum Benefit Period					
365.....	1.000	1.000	1.000	.916	.934	.961
500.....	.984	.987	.992	.901	.922	.953

which Table C of the Bartleson-Olsen paper, "Reserves for Individual Hospital and Surgical Expense Insurance" (*TSA*, IX, 339), was based.

Annual claim costs were obtained by multiplying the frequencies of hospitalization by the corresponding average amounts of claim.

Table 1 shows, for policies without a deductible amount, ungraduated values reflecting the frequency of hospitalization and the adjusted average claim and average claim costs per \$1 of daily hospital benefit for maximum benefit periods of 31, 90, and 365 days. Because the data are not homogeneous, the values in Table 1 are not too smooth. In general, the claim cost increases as the maximum benefit period increases, and the claim cost for each maximum benefit period increases as the age increases. Below age 55 the claim cost for males is lower than for females, but above age 55 the relation is reversed.

Comparable ungraduated data are shown in Table 2 for policies with a \$25 or \$50 deductible as well as for policies without a deductible, but with all average claim and claim cost figures adjusted to a 90-day maximum benefit period by use of the conversion factors described above. If the data entering this table were homogeneous, the frequency of hospitalization should be smaller, the average claim larger, and the claim cost smaller on policies with a \$50 deductible than on policies with no deductible, and the experience on policies with a \$25 deductible should lie between the other two. In order to indicate what might be expected from homogeneous data, a comparison was made of the experience of one large company on policies without a deductible and on policies with a \$50 deductible. The results are shown in Table 3.

Table 4 compares the experience shown in Table 2 for policies without a deductible amount with the 1956 Intercompany Hospital Table. The current frequency rates do not differ greatly from those of the 1956 Table and for all ages combined are 96 per cent of the 1956 Table rates for males and 93 per cent for females. Average claim payments for all ages combined are 78 per cent of those in the 1956 Table for males and 82 per cent for females. Claim costs for both males and females are about 75 per cent of those in the 1956 Table. It should be noted, however, that the current experience is for all policy durations combined, whereas the 1956 Table is an ultimate table which was constructed to serve as a basis for reserves.

An analysis by duration was made of the experience (for males and females combined) on policies with no deductible. It shows that claim costs as related to costs for duration 3 and later were about 82 per cent for duration 1, about 90 per cent for duration 2, and about 94 per cent for all durations combined. The increase in hospital claim costs by

TABLE 1  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 FREQUENCY OF HOSPITALIZATION; AVERAGE CLAIM AND  
 CLAIM COST PER \$1 OF DAILY HOSPITAL BENEFIT  
 NO DEDUCTIBLE

ATTAINED AGE	FRE- QUENCY OF HOS- PITALIZA- TION	AVERAGE CLAIM FOR A MAXIMUM BENEFIT PERIOD OF			CLAIM COST FOR A MAXIMUM BENEFIT PERIOD OF		
		31 Days	90 Days	365 Days	31 Days	90 Days	365 Days
MALE							
15-19.....	.0691	\$ 5.59	\$ 4.94	\$ 6.23	\$ .386	\$ .341	\$ .430
20-24.....	.0687	5.72	6.27	6.56	.393	.431	.451
25-29.....	.0654	5.70	6.25	6.88	.373	.409	.450
30-34.....	.0697	5.96	6.47	6.85	.415	.451	.477
35-39.....	.0803	6.45	7.05	7.59	.518	.566	.609
40-44.....	.0891	7.28	7.73	7.97	.649	.689	.710
45-49.....	.1062	8.40	8.03	8.49	.892	.853	.902
50-54.....	.1197	9.22	9.48	9.68	1.104	1.135	1.159
55-59.....	.1336	9.84	10.80	10.81	1.315	1.443	1.444
60-64.....	.1444	10.62	11.17	12.41	1.534	1.613	1.792
65-69.....	.1520	11.43	10.56	12.09	1.737	1.605	1.838
70-74.....	.1702	12.22	11.47	13.00	2.080	1.952	2.213
75-79.....	.2144	11.73	15.47	15.22	2.515	3.317	3.263
FEMALE							
15-19.....	.0925	\$ 5.30	\$ 5.04	\$ 5.28	\$ .490	\$ .466	\$ .488
20-24.....	.0971	5.56	5.54	5.68	.540	.538	.552
25-29.....	.1069	6.13	6.57	6.17	.655	.702	.660
30-34.....	.1186	6.73	7.02	6.90	.798	.833	.818
35-39.....	.1339	7.01	7.61	7.42	.939	1.019	.994
40-44.....	.1399	7.94	8.15	8.16	1.111	1.140	1.142
45-49.....	.1480	8.28	8.58	8.59	1.225	1.270	1.271
50-54.....	.1421	8.74	9.04	9.24	1.242	1.285	1.313
55-59.....	.1343	9.44	10.38	10.13	1.268	1.394	1.360
60-64.....	.1363	10.20	11.07	11.24	1.390	1.509	1.532
65-69.....	.1382	10.75	11.45	12.38	1.486	1.582	1.711
70-74.....	.1517	12.06	11.33	14.25	1.830	1.719	2.162
75-79.....	.1806	12.89	15.05	17.84	2.328	2.718	3.222
CHILD							
All ages.....	.0860	\$ 4.07	\$ 4.48	\$ 4.24	\$ .350	\$ .385	\$ .365

TABLE 2  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 FREQUENCY OF HOSPITALIZATION; AVERAGE CLAIM AND  
 CLAIM COST PER \$1 OF DAILY HOSPITAL BENEFIT  
 ADJUSTED TO A MAXIMUM BENEFIT PERIOD OF 90 DAYS

ATTAINED AGE	NO DEDUCTIBLE			\$25 DEDUCTIBLE			\$50 DEDUCTIBLE		
	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost
MALE									
15-19	.0691	\$ 5.65	\$ .390	.1005	\$ 4.25	\$ .427	.0684	\$ 5.53	\$ .378
20-24	.0687	6.16	.423	.0560	6.15	.344	.0459	6.61	.303
25-29	.0654	6.30	.412	.0550	5.83	.321	.0453	6.46	.293
30-34	.0697	5.43	.448	.0675	6.12	.113	.0444	6.98	.310
35-39	.0803	7.05	.566	.0803	7.12	.572	.0496	7.20	.357
40-44	.0891	7.65	.682	.0806	7.80	.629	.0593	8.10	.480
45-49	.1062	8.13	.863	.0896	7.58	.679	.0683	9.45	.645
50-54	.1197	9.39	1.124	.1172	8.33	.976	.0792	9.94	.787
55-59	.1336	10.50	1.403	.1258	10.32	1.298	.0911	10.79	.983
60-64	.1444	11.51	1.662	.1403	11.53	1.618	.1012	12.02	1.216
65-69	.1520	11.62	1.766	.1541	12.66	1.951	.1200	12.91	1.549
70-74	.1702	12.51	2.129	.1534	14.28	2.191	.1372	14.07	1.930
75-79	.2144	14.04	3.010	.1744	13.55	2.363	.1816	15.24	2.768
FEMALE									
15-19	.0925	\$ 5.22	\$ .483	.0869	\$ 4.37	\$ .380	.0858	\$ 6.19	\$ .531
20-24	.0971	5.54	.538	.0902	5.93	.535	.0738	6.36	.469
25-29	.1069	6.23	.666	.0899	6.22	.559	.0810	6.64	.538
30-34	.1186	6.83	.810	.1185	6.16	.730	.0896	6.93	.621
35-39	.1339	7.33	.981	.1317	6.69	.881	.1006	7.47	.751
40-44	.1399	8.01	1.121	.1380	6.64	.916	.1108	8.25	.914
45-49	.1480	8.41	1.245	.1518	7.81	1.186	.1135	8.68	.985
50-54	.1421	8.93	1.269	.1402	8.12	1.138	.1111	9.51	1.057
55-59	.1343	9.92	1.332	.1342	9.85	1.322	.1037	9.99	1.036
60-64	.1363	10.82	1.475	.1284	11.48	1.474	.1067	11.97	1.277
65-69	.1382	11.60	1.603	.1469	13.38	1.966	.1113	12.50	1.391
70-74	.1517	13.17	1.998	.1552	12.44	1.931	.1049	13.79	1.447
75-79	.1806	16.04	2.897	.1725	14.76	2.546	.1169	15.26	1.784
CHILD									
All ages	.0860	\$ 4.28	\$ .368	.0692	\$ 4.07	\$ .282	.0575	\$ 4.55	\$ .262

Note.—For policies with a deductible, average claim and claim cost reflect eligible expenses before application of the deductible; frequency involves only claims where total policy expenses exceed the policy deductible.

TABLE 3

1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 FREQUENCY OF HOSPITALIZATION; AVERAGE CLAIM AND CLAIM COST  
 PER \$1 OF DAILY HOSPITAL BENEFIT—MAXIMUM BENEFIT PERIOD OF 90 DAYS  
 EXPERIENCE OF ONE LARGE COMPANY

ATTAINED AGE	POLICIES WITH NO DEDUCTIBLE			POLICIES WITH A \$50 DEDUCTIBLE		
	Frequency	Average Claim	Claim Cost	Frequency	Average Claim	Claim Cost
MALE						
15-19.....	.0648	\$ 5.84	\$ .38	.0500	\$ 7.49	\$ .37
20-24.....	.0613	6.30	.39	.0402	6.85	.28
25-29.....	.0600	6.35	.38	.0419	5.91	.25
30-34.....	.0611	6.90	.42	.0414	7.53	.31
35-39.....	.0689	7.21	.50	.0446	7.07	.32
40-44.....	.0753	7.67	.58	.0554	8.62	.48
45-49.....	.0883	8.55	.75	.0611	9.73	.59
50-54.....	.0996	10.00	1.00	.0761	10.21	.78
55-59.....	.1177	11.24	1.32	.0853	11.57	.99
60-64.....	.1235	12.02	1.48	.1004	12.93	1.30
65-69.....	.1368	13.17	1.80	.1145	13.71	1.57
70-74.....	.1493	13.60	2.03	.1363	14.50	1.98
75-79.....	.1742	13.37	2.33	.1570	15.20	2.39
FEMALE						
15-19.....	.0847	\$ 5.39	\$ .46	.0752	\$ 6.53	\$ .49
20-24.....	.0861	5.64	.49	.0654	6.44	.42
25-29.....	.0967	6.37	.62	.0732	6.79	.50
30-34.....	.1068	6.98	.75	.0798	7.51	.60
35-39.....	.1203	7.38	.89	.0906	7.76	.70
40-44.....	.1210	8.32	1.01	.1002	8.63	.86
45-49.....	.1315	8.88	1.17	.1085	8.91	.97
50-54.....	.1260	9.39	1.18	.0976	9.95	.97
55-59.....	.1219	10.34	1.26	.0944	10.31	.97
60-64.....	.1236	11.05	1.37	.0975	11.78	1.15
65-69.....	.1254	11.79	1.48	.1077	13.03	1.40
70-74.....	.1332	13.05	1.74	.1017	13.73	1.40
75-79.....	.1474	14.23	2.10	.1071	14.98	1.60
CHILD						
All ages...	.0855	\$ 4.19	\$ .36	.0579	\$ 4.47	\$ .26

NOTE.—For policies with a deductible, average claim and claim cost reflect eligible expenses before application of the deductible; frequency involves only claims where total policy expenses exceed the policy deductible.



TABLE 4

1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 COMPARISON WITH 1956 INTERCOMPANY HOSPITAL TABLE  
 FREQUENCY OF HOSPITALIZATION; AVERAGE CLAIM AND  
 CLAIM COST PER \$1 OF DAILY HOSPITAL BENEFIT  
 NO DEDUCTIBLE—MAXIMUM BENEFIT PERIOD OF 90 DAYS

ATTAINED AGE	1960-61 INTERCOMPANY EXPERIENCE			1956 INTERCOMPANY HOSPITAL TABLE			RATIO OF 1960-61 EXPERIENCE TO 1956 TABLE		
	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost
MALE									
15-19	.0691	\$ 5.65	\$ .390	.0783	\$ 7.45	\$ .583	.88	.76	.67
20-24	.0687	6.16	.423	.0779	7.46	.581	.88	.83	.73
25-29	.0654	6.30	.412	.0758	7.57	.574	.86	.83	.72
30-34	.0697	6.43	.448	.0747	8.02	.599	.93	.86	.75
35-39	.0803	7.05	.566	.0797	8.86	.706	1.01	.80	.80
40-44	.0891	7.65	.682	.0889	9.97	.886	1.00	.77	.77
45-49	.1062	8.13	.863	.1003	11.25	1.128	1.06	.72	.77
50-54	.1197	9.39	1.124	.1150	12.20	1.403	1.04	.77	.80
55-59	.1336	10.50	1.403	.1339	12.58	1.684	1.00	.83	.83
60-64	.1444	11.51	1.662	.1536	12.90	1.981	.94	.89	.84
65-69	.1520	11.62	1.766	.1665	13.78	2.295	.91	.84	.77
70-74	.1702	12.51	2.129	.1728	17.26	2.983	.98	.72	.71
75-79	.2144	14.04	3.010	.1751	23.34	4.087	1.22	.60	.74
FEMALE									
15-19	.0925	\$ 5.22	\$ .483	.0935	\$ 7.26	\$ .679	.99	.72	.71
20-24	.0971	5.54	.538	.0993	7.36	.731	.98	.75	.74
25-29	.1069	6.23	.666	.1116	7.73	.863	.96	.81	.77
30-34	.1186	6.83	.810	.1215	8.24	1.001	.98	.83	.81
35-39	.1339	7.33	.981	.1306	8.78	1.147	1.03	.83	.86
40-44	.1399	8.01	1.121	.1385	9.36	1.297	1.01	.86	.86
45-49	.1480	8.41	1.245	.1455	9.98	1.452	1.02	.84	.86
50-54	.1421	8.93	1.269	.1519	10.64	1.616	.94	.84	.79
55-59	.1343	9.92	1.332	.1577	11.40	1.798	.85	.87	.74
60-64	.1363	10.82	1.475	.1630	12.39	2.019	.84	.87	.73
65-69	.1382	11.60	1.603	.1682	13.67	2.299	.82	.85	.70
70-74	.1517	13.17	1.998	.1728	17.26	2.983	.88	.76	.67
75-79	.1806	16.04	2.897	.1751	23.34	4.087	1.03	.69	.71
CHILD									
All ages.....	.0860	\$ 4.28	\$ .368	Not available			Not applicable		

duration varies considerably by company. The experience of one large company indicated that claim costs for men at duration 1 were about 66 per cent, and at duration 2 about 87 per cent, of costs for durations 3 and later; corresponding figures for women were 74 per cent and 87 per cent (*TSA*, XIV, D417).

Table 5 shows a comparison of mass enrollment experience at the

TABLE 5  
COMPARISON OF MASS ENROLLMENT EXPERIENCE WITH 1960-61  
INDIVIDUALLY UNDERWRITTEN EXPERIENCE FREQUENCY  
OF HOSPITALIZATION; AVERAGE CLAIM AND CLAIM  
COST PER \$1 OF DAILY HOSPITAL BENEFIT  
1.0 DEDUCTIBLE—MAXIMUM BENEFIT PERIOD OF 90 DAYS

ATTAINED AGE	MASS ENROLLMENT*			RATIO OF MASS ENROLLMENT EXPERIENCE TO INDIVIDUALLY UNDERWRITTEN EXPERIENCE (PER TABLE 2)		
	Frequency	Average Claim	Claim Cost	Frequency	Average Claim	Claim Cost
	MALE					
65-69.....	.252	\$18.71	\$4.71	1.66	1.61	2.67
70-74.....	.333	18.82	6.27	1.96	1.50	2.95
75-79.....	.371	19.03	7.06	1.73	1.36	2.35
	FEMALE					
65-69.....	.226	\$19.23	\$4.35	1.64	1.66	2.71
70-74.....	.269	19.33	5.20	1.77	1.47	2.60
75-79.....	.297	21.13	6.28	1.64	1.32	2.17

\* SOURCE.—*TSA*, XIV, D417. Average claim and claim cost adjusted from 60- to 90-day maximum benefit period.

older ages with the corresponding individually underwritten experience included in Table 2. The mass enrollment data, which are based on the experience of one large company (*TSA*, XIV, D417), reflect experience on a plan with a maximum benefit period of 60 days but adjusted to a 90-day basis by the method described previously. Table 5 indicates that for mass enrollment business the frequency of hospitalization is about 175 per cent, the average duration about 150 per cent, and the claim cost about 260 per cent, of the corresponding items for individually underwritten business. It should be noted that the conversion factors

employed in adjusting to a 90-day maximum benefit period (1.041 for males and 1.030 for females) were developed from individually underwritten business for all ages combined. Larger factors might more appropriately have been used in this comparison of mass enrollment business at the higher ages and would have produced higher ratios.

A graduation of the crude data of Table 2 for policies without a deductible is shown in Table 6.

#### MISCELLANEOUS HOSPITAL EXPENSE BENEFIT

Twenty companies contributed experience to this section of the study. Although there were over 375,000 claims, the number of different maximum benefit amounts made it difficult to incorporate all the data into tables which would be meaningful and useful. It was, therefore, deemed necessary to build the study around the \$100 maximum benefit.

Table 7 shows the average amounts of claim for a \$100 maximum benefit on policies with no deductible. Graphically graduated claim amounts are also shown. These graduated values are used as a basis of comparison in subsequent tables and analyses.

Table 8 shows a comparison of the actual current experience for a \$100 maximum benefit on policies with no deductible with the 1956 Intercompany Hospital Table. The frequencies of hospitalization are the same as those shown in Table 4. For both males and females below age 50 average claims are similar to those of the 1956 Table, but above age 50 the ratio of actual experience to the 1956 Table generally decreases as the age increases. Current claim costs for males are about 90 per cent of the 1956 Table, being somewhat higher than this below age 55 and lower at ages 55 and over. For females, the ratios below age 50 are about 100 per cent, and at ages 55 and over are about 75 per cent.

Table 9 shows the relationship of claims on other maximum benefit amounts to those for the \$100 maximum amount. It also indicates to what extent even the large experience cells are dominated by the experience of a single company. The \$100 maximum benefit cell was the only cell with over 2,000 claims for which the largest single contribution constituted less than 90 per cent of the total.

Table 10 shows that the slope of average claim by age increases as the maximum benefit limit increases. The ratios in this table were derived from data obtained by truncating the claims of a single company (which had a \$1,225 maximum for this benefit) at \$100, \$150, \$200, \$250, and \$300.

Table 11 indicates the range in the level of average claims experienced under the \$100 maximum miscellaneous expense benefit among com-

TABLE 6  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY  
 UNDERWRITTEN POLICIES  
 GRADUATED FREQUENCY OF HOSPITALIZATION;  
 GRADUATED AVERAGE CLAIM AND CLAIM COST  
 PER \$1 OF DAILY HOSPITAL BENEFIT  
 NO DEDUCTIBLE—MAXIMUM BENEFIT  
 PERIOD OF 90 DAYS

Attained Age	Frequency	Average Claim	Claim Cost
MALE			
15-19 . . . . .	.0690	\$ 5.73	\$ .395
20-24 . . . . .	.0675	6.06	.409
25-29 . . . . .	.0667	6.28	.419
30-34 . . . . .	.0705	6.53	.460
35-39 . . . . .	.0792	7.00	.554
40-44 . . . . .	.0906	7.59	.688
45-49 . . . . .	.1053	8.31	.875
50-54 . . . . .	.1195	9.36	1.119
55-59 . . . . .	.1322	10.43	1.379
60-64 . . . . .	.1425	11.27	1.606
65-69 . . . . .	.1540	11.81	1.819
70-74 . . . . .	.1755	12.66	2.222
75-79 . . . . .	.2099	13.90	2.918
FEMALE			
15-19 . . . . .	.0916	\$ 5.10	\$ .467
20-24 . . . . .	.0982	5.62	.552
25-29 . . . . .	.1076	6.21	.668
30-34 . . . . .	.1196	6.80	.813
35-39 . . . . .	.1323	7.36	.974
40-44 . . . . .	.1409	7.92	1.116
45-49 . . . . .	.1451	8.42	1.222
50-54 . . . . .	.1417	9.02	1.278
55-59 . . . . .	.1362	9.83	1.339
60-64 . . . . .	.1353	10.70	1.448
65-69 . . . . .	.1400	11.74	1.644
70-74 . . . . .	.1544	13.42	2.072
75-79 . . . . .	.1776	15.80	2.806
CHILD			
All ages . . . . .	.0860	\$ 4.28	\$ .368

TABLE 7  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY  
 UNDERWRITTEN POLICIES  
 MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
 AVERAGE AMOUNT OF CLAIM  
 NO DEDUCTIBLE—\$100 MAXIMUM BENEFIT

ATTAINED AGE	NUMBER OF CLAIMS	AVERAGE AMOUNT OF CLAIM	
		Actual	Graduated
MALE			
15-19 . . . . .	342	\$58.59	\$58.53
20-24 . . . . .	1,096	63.85	63.88
25-29 . . . . .	650	67.78	67.75
30-34 . . . . .	531	70.17	70.28
35-39 . . . . .	532	70.51	71.79
40-44 . . . . .	581	71.69	73.15
45-49 . . . . .	672	76.05	74.37
50-54 . . . . .	884	75.36	75.44
55-59 . . . . .	944	74.79	76.36
60-64 . . . . .	480	79.24	77.13
65-69 . . . . .	709	78.16	77.76
70-74 . . . . .	515	79.52	78.24
75-79 . . . . .	165	75.19	78.57
FEMALE			
15-19 . . . . .	394	\$60.13	\$60.10
20-24 . . . . .	1,280	65.31	65.48
25-29 . . . . .	897	70.81	70.43
30-34 . . . . .	829	74.24	73.79
35-39 . . . . .	975	72.80	74.80
40-44 . . . . .	1,275	76.22	75.61
45-49 . . . . .	1,532	76.49	76.21
50-54 . . . . .	1,627	74.56	76.60
55-59 . . . . .	1,613	76.12	76.79
60-64 . . . . .	879	76.60	76.77
65-69 . . . . .	1,050	76.20	76.55
70-74 . . . . .	720	77.20	76.13
75-79 . . . . .	216	75.77	75.50
CHILD			
All ages . . . . .	4,803	\$53.21	\$53.21

TABLE 8

1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
 COMPARISON WITH 1956 INTERCOMPANY HOSPITAL TABLE  
 NO DEDUCTIBLE—\$100 MAXIMUM BENEFIT

ATTAINED AGE	1960-61 INTERCOM- PANY EXPERIENCE			1956 INTERCOMPANY HOSPITAL TABLE			RATIO OF 1960-61 EX- PERIENCE TO 1956 TABLE		
	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost	Fre- quency	Aver- age Claim	Claim Cost
MALE									
15-19.....	.0691	\$58.59	\$ 4.05	.0783	\$62.60	\$ 4.90	.88	.94	.83
20-24.....	.0687	63.85	4.39	.0779	63.88	4.98	.88	1.00	.88
25-29.....	.0654	67.78	4.43	.0758	67.08	5.08	.86	1.01	.87
30-34.....	.0697	70.17	4.89	.0747	70.28	5.25	.93	1.00	.93
35-39.....	.0803	70.51	5.66	.0797	73.48	5.86	1.01	.96	.97
40-44.....	.0891	71.69	6.39	.0889	76.68	6.82	1.00	.93	.94
45-49.....	.1062	76.05	8.08	.1003	79.88	8.01	1.06	.95	1.01
50-54.....	.1197	75.36	9.02	.1150	83.08	9.55	1.04	.91	.94
55-59.....	.1336	74.79	9.99	.1339	86.28	11.55	1.00	.87	.86
60-64.....	.1444	79.24	11.44	.1536	89.48	13.74	.94	.89	.83
65-69.....	.1520	78.16	11.88	.1665	92.68	15.43	.91	.84	.77
70-74.....	.1702	79.52	13.53	.1728	95.88	16.57	.98	.83	.82
75-79.....	.2144	75.19	16.12	.1751	99.08	17.35	1.22	.76	.93
FEMALE									
15-19.....	.0925	\$60.13	\$ 5.56	.0935	\$62.60	\$ 5.85	.99	.96	.95
20-24.....	.0971	65.31	6.34	.0993	63.88	6.34	.98	1.02	1.00
25-29.....	.1069	70.81	7.57	.1116	67.08	7.49	.96	1.06	1.01
30-34.....	.1186	74.24	8.80	.1215	70.28	8.54	.98	1.06	1.03
35-39.....	.1339	72.80	9.75	.1306	73.48	9.60	1.03	.99	1.02
40-44.....	.1399	76.22	10.66	.1385	76.68	10.62	1.01	.99	1.00
45-49.....	.1480	76.49	11.32	.1455	79.88	11.62	1.02	.96	.97
50-54.....	.1421	74.56	10.59	.1519	83.08	12.62	.94	.90	.84
55-59.....	.1343	76.12	10.22	.1577	86.28	13.61	.85	.88	.75
60-64.....	.1363	76.60	10.44	.1630	89.48	14.59	.84	.86	.72
65-69.....	.1382	76.20	10.53	.1682	92.68	15.59	.82	.82	.68
70-74.....	.1517	77.20	11.71	.1728	95.88	16.57	.88	.81	.71
75-79.....	.1806	75.77	13.68	.1751	99.08	17.35	1.03	.76	.79
CHILD									
All ages.....	.0860	\$53.21	\$ 4.58	Not available			Not applicable		

panies offering this maximum. The ratios of actual to tabular for males, females, and children generally rise or fall together for each company.

Tables 12 and 13 present experience showing variation in average claim by deductible amount. For the \$100 maximum benefit, only claims on policies with a \$25 deductible amount were in sufficient number to permit analysis. There were several maximum benefit amounts for which

TABLE 9  
1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
VARIATION IN AVERAGE CLAIM BY MAXIMUM BENEFIT AMOUNT  
NO DEDUCTIBLE

MAXIMUM BENEFIT AMOUNT	NUMBER OF CLAIMS			PROPORTION OF EXPERIENCE FROM LARGEST SINGLE CON- TRIBUTOR (PER CENT)	RATIO OF ACTUAL TO TABULAR*		
	Male	Female	Child		Male	Female	Child
\$ 50 . . . .	9,328	14,630	5,317	95.7	.521	.533	.720
60 . . . .	2,837	6,242	2,167	97.5	.711	.721	.915
75 . . . .	599	919	433	95.4	.705	.770	.847
80 . . . .	543	784	519	42.5	.815	.816	.825
90 . . . .	5,436	13,003	5,786	99.2	.996	1.004	1.135
100 . . . .	8,111	13,289	4,803	64.1	.999	.999	1.000
120 . . . .	4,349	9,516	3,741	92.9	1.257	1.266	1.285
125 . . . .	228	254	91	100.0	1.106	1.090	1.199
150 . . . .	5,647	9,885	3,128	90.0	1.236	1.218	1.082
160 . . . .	1,977	3,795	2,637	96.9	1.292	1.339	1.237
200 . . . .	5,165	9,228	2,967	96.8	1.337	1.319	1.107
240 . . . .	6,309	9,771	6,578	98.9	1.471	1.545	1.309
250 . . . .	4,977	8,971	2,855	100.0	1.407	1.313	1.106
300 . . . .	5,088	9,125	2,894	98.2	1.468	1.440	1.119
320 . . . .	4,474	4,963	3,033	100.0	1.730	1.790	1.504
400 . . . .	623	483	213	99.9	1.939	2.002	1.491
1,225 . . . .	4,975	8,969	2,853	100.0	1.676	1.573	1.141

\* Tabular based on graduated average amount of claim for \$100 maximum benefit shown in Table 7.

the \$0 and \$50 deductible amount cells contained enough experience to permit their analysis in Table 13. This experience is largely the contribution of one company. The average claim is larger on policies with the deductible amount, and the difference becomes greater as the maximum benefit amount increases.

Comparison of an unpublished mass enrollment experience at the older ages for a \$100 maximum benefit and no deductible with the corresponding individually underwritten experience shown in Table 8 reveals that the average claim under the mass enrollment experience is up to 10 per cent larger than the average claim under the individually under-

TABLE 10

1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
 VARIATION IN AVERAGE CLAIM BY MAXIMUM BENEFIT AMOUNT AND AGE  
 NO DEDUCTIBLE

(Based on One Company's Claims Truncated at \$100, \$150, \$200, \$250, and \$300)

ATTAINED AGE	NUMBER OF CLAIMS	RATIO OF ACTUAL TO TABULAR* FOR MAXIMUM BENEFIT AMOUNT				
		\$100	\$150	\$200	\$250	\$300
MALE						
15-19.....	120	1.04	1.15	1.21	1.25	1.28
20-24.....	675	1.03	1.16	1.22	1.25	1.28
25-29.....	426	1.04	1.21	1.30	1.34	1.37
30-34.....	311	1.03	1.18	1.25	1.29	1.32
35-39.....	296	1.01	1.19	1.27	1.31	1.35
40-44.....	336	1.02	1.23	1.34	1.40	1.44
45-49.....	424	.99	1.19	1.30	1.36	1.41
50-54.....	593	1.01	1.22	1.35	1.42	1.47
55-59.....	662	.98	1.20	1.33	1.43	1.51
60-64.....	202	1.05	1.29	1.46	1.57	1.65
65-69.....	471	1.02	1.27	1.44	1.56	1.65
70-74.....	348	1.03	1.29	1.47	1.61	1.71
75-79.....	111	.94	1.17	1.32	1.43	1.50
FEMALE						
15-19.....	172	1.04	1.15	1.21	1.23	1.24
20-24.....	841	.99	1.13	1.19	1.23	1.25
25-29.....	554	1.00	1.14	1.21	1.24	1.27
30-34.....	504	1.01	1.20	1.29	1.34	1.37
35-39.....	564	.98	1.19	1.30	1.37	1.41
40-44.....	812	1.01	1.23	1.34	1.41	1.45
45-49.....	1,052	1.00	1.21	1.33	1.40	1.44
50-54.....	1,185	.97	1.17	1.29	1.36	1.41
55-59.....	1,227	.99	1.20	1.31	1.39	1.44
60-64.....	466	1.01	1.25	1.39	1.49	1.55
65-69.....	821	.99	1.21	1.35	1.44	1.51
70-74.....	601	1.02	1.27	1.43	1.54	1.62
75-79.....	170	1.03	1.29	1.48	1.62	1.73
CHILD						
All ages...	2,853	.99	1.06	1.09	1.11	1.12

\* Tabular based on graduated average amount of claim for \$100 maximum benefit shown in Table 7.



written experience. However, when the much larger frequency of hospitalization under mass enrollment experience (as indicated by Table 5) is taken into account, it is evident that claim costs under the mass enrollment experience are much greater than under the currently published individually underwritten experience.

## SURGICAL EXPENSE BENEFIT

Nineteen companies contributed over \$20,000,000 of claims to this section of the study. The data sheets were designed to secure information

TABLE 11  
1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
VARIATION IN AVERAGE CLAIM BY CONTRIBUTING COMPANY  
NO DEDUCTIBLE—\$100 MAXIMUM BENEFIT

COMPANY	RATIO OF ACTUAL TO TABULAR*			NUMBER OF CLAIMS		
	Male	Female	Child	Male	Female	Child
A . . . . .	1.091	1.132	1.169	148	195	160
B . . . . .	.895	.943	.966	1,007	1,288	567
C . . . . .	.960	.998	.942	278	544	378
D . . . . .	1.014	.996	.991	4,975	8,969	2,853
E . . . . .	.901	.880	.807	264	342	195
F . . . . .	1.092	1.094	1.205	569	816	309
G . . . . .	.437			3		
H . . . . .	.989	.986	1.030	858	1,128	329
I . . . . .	1.209	1.248	1.240	9	7	12
All companies . . . . .	.999	.999	1.000	8,111	13,289	4,803

\* Tabular based on graduated average amount of claim for \$100 maximum benefit shown in Table 7.

concerning frequency of surgical claims and also the average amount of claim per \$100 maximum surgical benefit. The frequency of surgery for a particular age cell was obtained by dividing the amount of maximum surgical benefit on claims by the amount of maximum surgical benefit exposed.

In order to secure a meaningful figure for the average claim cost of a \$100 maximum surgical benefit, it was necessary to standardize the heterogeneous surgical schedules which generated the claim data submitted to the Committee. To accomplish this, each company was asked to complete an evaluation form for each surgical schedule involved in its contribution. The factors developed from the evaluation form were entered on the data sheets submitted by the contributing companies and

were used to adjust the actual claim amounts paid to a standard level which was based on the 1957 California Relative Value Schedule. These standardized claim payments were the basis of all average-size claims and claim costs in this section of the study, and they approximate the amounts that would have been paid had payments been made in accord-

TABLE 12  
1960-61 EXPERIENCE UNDER INDIVIDUALLY  
UNDERWRITTEN POLICIES  
MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
COMPARISON BY ATTAINED AGE OF AVERAGE CLAIMS  
FOR POLICIES WITH \$25 DEDUCTIBLE AND NO DEDUCTIBLE

ATTAINED AGE	\$100 MAXIMUM BENEFIT--\$25 DEDUCTIBLE			
	Males		Females	
	Ratio of Actual to Tabular*	Number of Claims	Ratio of Actual to Tabular*	Number of Claims
15-19.....	1.22	6	.97	12
20-24.....	.72	19	1.08	13
25-29.....	.95	9	1.06	14
30-34.....	.80	6	.86	18
35-39.....	1.04	5	.84	6
40-44.....	.64	6	1.12	8
45-49.....	.95	8	.88	14
50-54.....	.90	5	.98	13
55-59.....			.23	2
60-64.....	.96	34	1.06	68
65-69.....	1.04	107	1.04	193
70-74.....	1.08	68	1.00	121
75-79.....	1.05	41	1.03	73
All ages.....	1.01	314	1.02	555

\* Tabular based on graduated average amount of claim for \$100 maximum benefit shown in Table 7.

NOTE.—For policies with a deductible, average claim cost reflects eligible medical expenses before application of the deductible.

ance with the 1957 California Relative Value Schedule with \$100 maximum.

The form for standardizing surgical benefits is shown in Table 14, except that column (1) was left blank for entry by the contributing companies of values from their own surgical schedules. Shown in column (1a) of Table 14 are the amounts payable per \$100 of maximum surgical benefit under the 1957 California Relative Value Schedule for those procedures contributing most to cost. The weights shown on the form

were derived from the basic data used by Morton D. Miller in his paper "1957 Study of Group Surgical Expense Insurance Claims" (*TSA*, X, 359). The accumulation of the products of the amounts payable by the 1957 California Relative Value Schedule times the corresponding weights is in every instance equal to \$100, as shown in Table 14.

The average size claims and claim costs shown in the tables that

TABLE 13  
1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
MISCELLANEOUS HOSPITAL EXPENSE BENEFIT  
VARIATION IN AVERAGE CLAIM BY MAXIMUM  
BENEFIT AMOUNT, DEDUCTIBLE, AND AGE

ATTAINED AGE	RATIOS OF ACTUAL TO TABULAR*											
	Maximum Benefit Amount											
	\$60		\$90		\$120		\$160		\$240		\$320	
	Deductible		Deductible		Deductible		Deductible		Deductible		Deductible	
	\$0	\$50	\$0	\$50	\$0	\$50	\$0	\$50	\$0	\$50	\$0	\$50
	MALE											
20-24	.783	.704	1.105	1.227	1.290	1.420	1.239	1.608	1.429	1.748	1.644	2.116
25-29	.756	.843	1.010	1.045	1.226	1.337	1.232	1.419	1.388	1.638	1.650	1.891
30-34	.755	.814	.997	1.074	1.272	1.427	1.259	1.354	1.465	1.656	1.683	2.012
35-39	.735	.730	.990	.962	1.239	1.342	1.270	1.504	1.529	1.686	1.747	2.072
40-44	.724	.755	.994	1.007	1.235	1.309	1.299	1.592	1.539	1.839	1.862	1.969
45-49	.718	.712	1.011	1.051	1.274	1.430	1.349	1.440	1.525	1.919	1.888	1.898
50-54	.715	.683	.980	1.049	1.259	1.276	1.371	1.465	1.612	1.815	1.987	2.264
55-59	.693	.703	.976	1.090	1.293	1.341	1.494	1.624	1.744	1.716	2.083	2.264
60-64	.706	.714	.994	1.083	1.304	1.258						
65-69	.706	.734	.986	1.060	1.252	1.311						
70-74	.706	.730	.981	1.010	1.229	1.280						
75-79	.682	.730	.981	1.010	1.229	1.280						
	.677	.714	.961	1.064	1.219	1.321						
	FEMALE											
20-24	.807	.835	1.049	1.141	1.285	1.290	1.315	1.427	1.422	1.758	1.585	1.985
25-29	.747	.785	1.019	1.102	1.273	1.474	1.331	1.394	1.445	1.663	1.618	2.001
30-34	.734	.760	1.030	1.089	1.257	1.270	1.303	1.416	1.529	1.754	1.757	2.040
35-39	.730	.739	1.014	1.070	1.213	1.292	1.343	1.605	1.571	1.734	1.885	2.089
40-44	.727	.732	1.010	1.066	1.268	1.344	1.360	1.473	1.631	1.786	1.951	2.294
45-49	.691	.727	1.001	1.039	1.290	1.332	1.375	1.522	1.659	1.809	1.914	2.129
50-54	.702	.736	.989	1.055	1.264	1.263	1.374	1.398	1.667	1.866	1.929	2.155
55-59	.703	.714	.989	1.046	1.262	1.259	1.368	1.409	1.676	1.853	2.027	1.961
60-64	.709	.733	.984	1.028	1.274	1.255						
65-69	.713	.744	.979	1.015	1.277	1.306						
70-74	.722	.730	.991	.978	1.279	1.207						
75-79	.720	.721	.994	.985	1.322	1.281						
	CHILD											
All ages	.916	1.024	1.136	1.218	1.299	1.369	1.241	1.545	1.309	1.592	1.504	1.666

\* Tabular based on graduated average amount of claim for \$100 maximum benefit shown in Table 7.  
NOTE.—For policies with a deductible, average claim cost reflects eligible medical expenses before application of the deductible.

TABLE 14

## SCHEDULE FOR STANDARDIZING SURGICAL BENEFITS

PROCEDURE	AMOUNT PAYABLE PER \$100 MAXIMUM SURGICAL SCHEDULE		WEIGHT FOR AGE GROUP				
	1957 California Relative Value Schedule	1956 Inter-company Surgical Standard	Under 30	30-39	40-49	50-59	60 and Over
	(1a)	(1b)	(2a)	(2b)	(2c)	(2d)	(2e)
MALE							
1. Benign Tumor, superficial, excision.	\$ 3	\$ 5	1.178	1.448	1.312	1.002	.....
2. Sebaceous Cyst, excision	3	5	.834	.....	.....	.....	.....
3. Pilonidal Cyst, excision	20	25	.318	.....	.....	.....	.....
4. Accidental Laceration of Skin, suture	3	4	1.452	1.463	.808	.....	.....
5. Malignant Tumor of Face, Lip or Skin, excision	15	25	.....	.....	.....	.....	.194
6. Intervertebral Disc, excision, without fusion	70	75	.....	.102	.091	.....	.....
7. Nasal Septum, submucous resection	30	25	.263	.217	.116	.....	.....
8. Tonsillectomy	15	15	.962	.489	.....	.....	.....
9. Gastrectomy, subtotal	70	100	.....	.102	.164	.169	.103
10. Colon, partial resection	80	100	.....	.....	.....	.....	.038
11. Appendectomy	35	50	1.113	.714	.370	.231	.....
12. Hemorrhoidectomy, internal and external	25	25	.326	.674	.710	.497	.213
13. Cholecystectomy, with exploration of common duct	65	75	.....	.....	.241	.208	.158
14. Herniotomy, inguinal, unilateral	30	50	.344	.572	.646	.769	.494
15. Herniotomy, inguinal, bilateral	40	63	.....	.....	.164	.146	.108
16. Vasectomy	10	13	.349	.412	.....	.....	.....
17. Prostatectomy, suprapubic	70	75	.....	.....	.....	.062	.190
18. Prostatectomy, transurethral	70	50	.....	.....	.....	.146	.345
19. Eye, extraction of lens	70	75	.....	.....	.....	.110	.209
Accumulated Product— [(1)×(2)] 1957 CRVS	.....	.....	\$100	\$100	\$100	\$100	\$100
1956 Table	.....	.....	\$130	\$130	\$133	\$129	\$115
FEMALE							
1. Breast, excision of benign tumor or cyst	\$15	\$ 25	.....	.291	.279	.....	.....
2. Breast, radical mastectomy	60	75	.....	.....	.....	.079	.085
3. Fracture, femur, open reduction	60	75	.....	.....	.....	.....	.096
4. Intervertebral Disc, excision without fusion	70	75	.....	.....	.043	.....	.....
5. Tonsillectomy	15	15	.665	.....	.....	.....	.....
6. Appendectomy	35	50	.627	.203	.....	.....	.....
7. Hemorrhoidectomy, internal and external	25	25	.....	.273	.260	.314	.150
8. Cholecystectomy, with exploration of common duct	65	75	.187	.219	.270	.473	.561
9. Laparotomy, exploratory	35	50	.129	.....	.....	.093	.....
10. Herniotomy, inguinal, unilateral	30	50	.....	.....	.111	.147	.150
11. Cystocele and Rectocele, repair	40	50	.....	.....	.087	.169	.171
12. Salpingectomy or Salpingoplasty	40	50	.135	.....	.....	.....	.....
13. Salpingo-oophorectomy	40	50	.140	.117	.....	.....	.....
14. Oophorectomy or Oophoroplasty	40	50	.287	.135	.....	.....	.....
15. Hysterectomy, complete	60	75	.192	.660	.764	.431	.171
16. Hysterectomy, vaginal	60	75	.....	.....	.088	.119	.155
17. Uterus, dilation and curettage	10	13	.851	.726	.532	.322	.....
18. Uterus, with local excision of lesion	10	13	.....	.343	.....	.....	.....
19. Uterus, suspension of	40	50	.223	.....	.....	.....	.....
20. Thyroidectomy, subtotal	50	75	.....	.143	.111	.121	.091
21. Eye, extraction of lens	70	75	.....	.....	.....	.....	.192
Accumulated Product— [(1)×(2)] 1957 CRVS	.....	.....	\$100	\$100	\$100	\$100	\$100
1956 Table	.....	.....	\$127	\$127	\$126	\$124	\$121

TABLE 14—Continued

PROCEDURE	AMOUNT PAYABLE PER \$100 MAXIMUM SURGICAL SCHEDULE		WEIGHT FOR AGE GROUP				
	1957 California Relative Value Schedule	1956 Intercompany Surgical Standard	Under 30	30-39	40-49	50-59	60 and Over
	(1a)	(1b)	(2a)	(2b)	(2c)	(2d)	(2e)
CHILD							
1. Benign Tumor, superficial, excision	\$ 3		374				
2. Accidental Laceration of Skin, suture	3		2,197				
3. Fracture, clavicle, closed reduction	10		203				
4. Fracture, radius or ulna, closed reduction	10		269				
5. Fracture, radius and ulna, closed reduction	15		165				
6. Tonsillectomy	15		3,265				
7. Appendectomy	35		599				
8. Herniotomy, inguinal, unilateral	30		301				
9. Strabismus, unilateral	50		.082				
10. Strabismus, bilateral	60		.034				
Accumulated Product— [(1)X(2)] 1957 CRVS			\$100				

follow, which are based on the 1957 California Relative Value Schedule with \$100 maximum, may be converted to the levels produced by any other surgical schedule by evaluating that schedule and multiplying the average size claim and claim cost figures shown in the tables by the appropriate evaluation factors, i.e., the appropriate "accumulated products" divided by \$100.

It was felt desirable to compare the current experience with the 1956 Intercompany Surgical Table shown in "Reserves for Individual Hospital and Surgical Expense Insurance," by Bartleson and Olsen (*TSA*, IX, 377). The average-size claims and annual claim costs per \$100 of maximum surgical schedule of the 1956 Intercompany Surgical Table were accordingly adjusted in the manner described above, using the appropriate factors shown in Table 14, to make them comparable with figures in the current experience.

Table 15 compares the currently published experience with that of the standardized 1956 Intercompany Surgical Table. For every age group the current experience shows a higher frequency of surgery than the 1956 Table. Average claims by the current experience, however, range from

TABLE 15

1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 FREQUENCY OF SURGERY; AVERAGE CLAIM AND CLAIM COST  
 PER \$100 OF MAXIMUM SURGICAL BENEFIT  
 STANDARD SCHEDULE—NO DEDUCTIBLE

ATTAINED AGE	1960-61 INTER-COMPANY EXPERIENCE			1956 INTERCOMPANY SURGICAL TABLE*			RATIO OF 1960-61 EXPERIENCE TO 1956 TABLE		
	Fre-quency	Aver-age Claim	Claim Cost	Fre-quency	Aver-age Claim	Claim Cost	Fre-quency	Aver-age Claim	Claim Cost
MALE									
15-19.....	.0916	\$12.58	\$1.15	.0810	\$17.09	\$1.38	1.13	.74	.83
20-24.....	.0844	13.07	1.10	.0782	17.32	1.35	1.08	.75	.81
25-29.....	.0800	13.08	1.05	.0745	17.65	1.31	1.07	.74	.80
30-34.....	.0813	13.76	1.12	.0738	18.03	1.33	1.10	.76	.84
35-39.....	.0857	14.52	1.24	.0738	18.55	1.37	1.16	.78	.91
40-44.....	.0849	16.08	1.37	.0749	19.27	1.44	1.13	.83	.95
45-49.....	.0925	18.12	1.68	.0778	21.26	1.65	1.19	.85	1.02
50-54.....	.0947	21.57	2.04	.0828	24.16	2.00	1.14	.89	1.02
55-59.....	.0994	24.05	2.39	.0901	25.55	2.30	1.10	.94	1.04
60-64.....	.1018	30.74	3.13	.0971	29.10	2.83	1.05	1.06	1.11
65-69.....	.1119	33.90	3.79	.0983	29.46	2.90	1.14	1.15	1.31
70-74.....	.1123	36.18	4.06	.0983	29.46	2.90	1.14	1.23	1.40
75-79.....	.1235	37.38	4.62	.0983	29.46	2.90	1.26	1.27	1.59
FEMALE									
15-19.....	.0840	\$16.56	\$1.39	.0838	\$20.67	\$1.73	1.00	.80	.80
20-24.....	.0963	16.26	1.57	.0926	21.00	1.94	1.04	.77	.81
25-29.....	.1080	18.30	1.98	.1068	22.71	2.43	1.01	.81	.81
30-34.....	.1184	21.68	2.57	.1112	24.99	2.78	1.06	.87	.92
35-39.....	.1232	23.44	2.89	.1116	27.31	3.05	1.10	.86	.95
40-44.....	.1260	26.12	3.29	.1123	29.12	3.27	1.12	.90	1.01
45-49.....	.1234	26.47	3.27	.1098	28.98	3.18	1.12	.91	1.03
50-54.....	.1132	25.36	2.87	.1051	28.39	2.98	1.08	.89	.96
55-59.....	.1045	25.86	2.70	.1015	27.81	2.82	1.03	.93	.96
60-64.....	.1015	28.61	2.90	.0992	28.24	2.80	1.02	1.01	1.04
65-69.....	.1005	29.06	2.92	.0983	28.00	2.75	1.02	1.04	1.06
70-74.....	.0995	30.54	3.04	.0983	28.00	2.75	1.01	1.09	1.11
75-79.....	.1020	30.92	3.15	.0983	28.00	2.75	1.04	1.10	1.15
CHILD									
All ages.....	.1116	\$12.45	\$1.39	Not available			Not applicable		

\* Average claims and claim costs of the 1956 Intercompany Surgical Table have been adjusted as indicated in the text.

about 75 per cent of those by the standardized 1956 Table at the lowest ages to over 100 per cent at the highest ages, the rate of increase being quite steady by age, rising to about 125 per cent for males but to about only 110 per cent for females. Claim costs range from about 80 per cent of the standardized 1956 Table at the lowest ages to about 150 per cent for males and 115 per cent for females at the highest ages. Thus for both males and females the slope of the claim cost by age is steeper for the current experience than that of the standardized 1956 Table.

A graphic graduation of the crude data shown in Table 15 appears in Table 16.

Table 17 shows the surgical experience on policies with \$25 and \$50 deductibles. The relations that would normally be expected between claim frequencies, average-size claims, and claim costs of policies with and without a deductible have already been described on page 138. These relations are generally found to hold in the current surgical experience, but anomalies are present, and these are probably the result of heterogeneity of the data. An analysis of the separate experiences of those companies that issue policies with and without a deductible confirms that claim costs are lower on policies with a deductible. Table 18 shows for one large company a comparison of the experience on policies with no deductible and on policies with a \$50 deductible. The claim costs for policies with a \$50 deductible are somewhat less than for policies with no deductible.

For adults covered under policies with no deductible, surgical claim costs as related to costs for duration 3 and later are about 97 per cent for duration 1, about 102 per cent for duration 2, and about 100 per cent for all durations combined. For children the surgical claim costs as related to costs for duration 3 and later are 83 per cent for duration 1, 89 per cent for duration 2, and 93 per cent for all durations combined. Corresponding figures for one large company (*TSA, XIV, D418*) indicate that for males claim costs as related to costs for duration 3 and later are about 75 per cent for duration 1 and about 90 per cent for duration 2 and that for females the corresponding figures are about 90 per cent and 100 per cent.

A comparison at the older ages of the mass enrollment experience of a large company (*TSA, XIV, D418*) with the corresponding individually underwritten experience of Table 15 is shown in Table 19. The mass enrollment experience was based on a surgical schedule with a maximum of \$225, and the average amounts of claim and claim costs were adjusted to the 1957 California Relative Value Schedule basis with a maximum of \$100 used as standard in this study before entry in Table 19. The

TABLE 16  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY  
 UNDERWRITTEN POLICIES  
 GRADUATED FREQUENCY OF SURGERY;  
 GRADUATED AVERAGE CLAIM AND CLAIM COST  
 PER \$100 OF MAXIMUM SURGICAL BENEFIT  
 STANDARD SCHEDULE—NO DEDUCTIBLE

Attained Age	Frequency	Average Claim	Claim Cost
Male			
15-19 . . . . .	.0900	\$12.80	\$1.15
20-24 . . . . .	.0830	12.95	1.07
25-29 . . . . .	.0803	13.10	1.05
30-34 . . . . .	.0816	13.70	1.12
35-39 . . . . .	.0841	14.60	1.23
40-44 . . . . .	.0874	16.10	1.41
45-49 . . . . .	.0910	18.20	1.66
50-54 . . . . .	.0950	21.20	2.01
55-59 . . . . .	.0994	25.50	2.53
60-64 . . . . .	.1040	30.80	3.20
65-69 . . . . .	.1089	33.90	3.69
70-74 . . . . .	.1143	36.00	4.11
75-79 . . . . .	.1198	37.10	4.44
Female			
15-19 . . . . .	.0840	\$16.25	\$1.37
20-24 . . . . .	.0964	16.90	1.63
25-29 . . . . .	.1080	18.70	2.02
30-34 . . . . .	.1172	20.80	2.44
35-39 . . . . .	.1232	23.50	2.90
40-44 . . . . .	.1253	25.95	3.25
45-49 . . . . .	.1233	26.40	3.26
50-54 . . . . .	.1144	25.60	2.93
55-59 . . . . .	.1052	26.40	2.78
60-64 . . . . .	.1017	28.10	2.86
65-69 . . . . .	.1005	29.40	2.95
70-74 . . . . .	.1004	30.25	3.04
75-79 . . . . .	.1005	30.80	3.10
Child			
All ages . . . . .	.1116	\$12.45	\$1.39



**TABLE 17**  
**1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES**  
**FREQUENCY OF SURGERY; AVERAGE CLAIM AND CLAIM COST**  
**PER \$100 OF MAXIMUM SURGICAL BENEFIT—STANDARD SCHEDULE**

ATTAINED AGE	POLICIES WITH A \$25 DEDUCTIBLE			POLICIES WITH A \$50 DEDUCTIBLE		
	Frequency	Average Claim	Claim Cost	Frequency	Average Claim	Claim Cost
MALE						
15-19.....	.0455	\$25.37	\$1.15	.0359	\$20.72	\$ .74
20-24.....	.0325	19.96	.65	.0357	22.64	.81
25-29.....	.0306	22.36	.68	.0337	23.88	.80
30-34.....	.0346	22.80	.79	.0325	24.40	.79
35-39.....	.0359	22.92	.82	.0362	25.03	.91
40-44.....	.0420	22.12	.93	.0410	26.16	1.07
45-49.....	.0455	24.36	1.11	.0491	27.69	1.36
50-54.....	.0623	31.57	1.97	.0505	33.41	1.69
55-59.....	.0637	32.28	2.06	.0602	34.82	2.10
60-64.....	.0749	40.78	3.05	.0672	40.89	2.75
65-69.....	.0880	43.28	3.81	.0746	44.32	3.31
70-74.....	.0897	43.09	3.87	.0772	48.83	3.77
75-79.....	.0840	42.19	3.54	.0962	47.02	4.52
FEMALE						
15-19.....	.0426	\$22.07	\$ .94	.0800	\$24.76	\$1.98
20-24.....	.0527	23.71	1.25	.0609	24.93	1.52
25-29.....	.0587	26.05	1.53	.0685	27.81	1.90
30-34.....	.0721	30.12	2.17	.0804	30.65	2.46
35-39.....	.0838	31.70	2.66	.0890	31.69	2.82
40-44.....	.0778	35.49	2.76	.0989	34.36	3.40
45-49.....	.0864	36.70	3.17	.0903	36.13	3.26
50-54.....	.0794	36.57	2.90	.0868	33.24	2.89
55-59.....	.0813	35.98	2.93	.0770	33.96	2.61
60-64.....	.0737	40.71	3.00	.0804	35.96	2.89
65-69.....	.0770	48.01	3.70	.0694	40.41	2.80
70-74.....	.0850	45.06	3.83	.0657	39.87	2.62
75-79.....	.0712	48.84	3.48	.0596	35.31	2.10
CHILD						
All ages.....	.0481	\$17.59	\$ .85	.0473	\$19.61	\$ .93

NOTE.—For policies with a deductible, average claim and claim cost reflect eligible expenses before application of the deductible; frequency involves only claims where total policy expenses exceed the policy deductible.

TABLE 18  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 FREQUENCY OF SURGERY; AVERAGE CLAIM AND CLAIM COST  
 PER \$100 OF MAXIMUM SURGICAL BENEFIT—STANDARD SCHEDULE  
 EXPERIENCE OF ONE LARGE COMPANY

ATTAINED AGE	POLICIES WITH NO DEDUCTIBLE			POLICIES WITH A \$50 DEDUCTIBLE		
	Frequency	Average Claim	Claim Cost	Frequency	Average Claim	Claim Cost
MALE						
15-19.....	.0857	\$12.89	\$1.10	.0330	\$23.19	\$ .77
20-24.....	.0777	13.41	1.04	.0302	23.05	.70
25-29.....	.0760	13.46	1.02	.0310	23.63	.73
30-34.....	.0747	14.15	1.06	.0287	25.84	.74
35-39.....	.0778	15.25	1.19	.0297	25.75	.76
40-44.....	.0748	17.13	1.28	.0348	28.42	.99
45-49.....	.0795	19.10	1.52	.0387	29.60	1.15
50-54.....	.0821	22.37	1.84	.0481	33.84	1.63
55-59.....	.0892	26.06	2.32	.0508	35.53	1.80
60-64.....	.0888	31.97	2.84	.0599	40.49	2.43
65-69.....	.1005	34.59	3.48	.0704	44.99	3.17
70-74.....	.1027	36.56	3.75	.0792	48.95	3.88
75-79.....	.1100	35.91	3.95	.0953	47.63	4.54
FEMALE						
15-19.....	.0813	\$17.48	\$1.42	.0537	\$27.65	\$1.48
20-24.....	.0903	17.62	1.59	.0476	26.64	1.27
25-29.....	.1010	19.42	1.96	.0559	28.65	1.60
30-34.....	.1102	22.75	2.51	.0601	34.17	2.05
35-39.....	.1161	24.82	2.88	.0677	34.99	2.37
40-44.....	.1162	27.39	3.18	.0760	38.90	2.96
45-49.....	.1162	28.33	3.29	.0795	38.24	3.04
50-54.....	.1043	27.27	2.84	.0671	37.70	2.53
55-59.....	.0978	28.12	2.75	.0613	37.47	2.30
60-64.....	.0950	30.20	2.87	.0659	39.25	2.59
65-69.....	.0950	30.93	2.94	.0684	41.82	2.86
70-74.....	.0944	32.51	3.07	.0644	40.24	2.59
75-79.....	.0991	32.61	3.23	.0585	35.87	2.10
CHILD						
All ages...	.1076	\$12.13	\$1.31	.0447	\$20.30	\$ .91

NOTE.—For policies with a deductible, average claim and claim cost reflect eligible expenses before application of the deductible; frequency involves only claims where total policy expenses exceed the policy deductible.

surgical claim costs shown for mass enrollment are approximately 50 per cent greater than those for individually underwritten business.

## DEDUCTIBLE AMOUNTS

In hospital and surgical expense policies any deductible amount is generally subtracted from the sum of all benefits (except maternity) otherwise payable at the time of a claim. This has the effect of eliminating those claims for total amounts less than the deductible and of reducing larger claims to the extent of the deductible amount.

Annual claim frequencies were obtained by dividing the number of claims in excess of the deductible by the number of lives exposed. Claim frequencies corresponding to deductible amounts of \$25 and \$50 are shown in Table 20. For homogeneous data we would expect the policy claim frequencies to decrease as the deductible amount increases. Exceptions to this relation in Table 20 probably reflect statistical fluctuations and heterogeneous data.

TABLE 19  
COMPARISON OF MASS ENROLLMENT EXPERIENCE  
WITH 1960-61 INDIVIDUALLY UNDERWRITTEN EXPERIENCE  
FREQUENCY OF SURGERY; AVERAGE CLAIM AND CLAIM COST  
PER \$100 OF MAXIMUM SURGICAL BENEFIT  
STANDARD SCHEDULE—NO DEDUCTIBLE

ATTAINED AGE	MASS ENROLLMENT*			RATIO OF MASS ENROLLMENT EXPERIENCE TO INDIVIDUALLY UNDERWRITTEN EXPERIENCE (PER TABLE 16)		
	Frequency	Average Claim	Claim Cost	Frequency	Average Claim	Claim Cost
MALE						
65-69.....	.135	\$36.85	\$4.97	1.21	1.09	1.31
70-74.....	.176	36.45	6.42	1.57	1.01	1.58
75-79.....	.170	38.46	6.54	1.38	1.03	1.42
FEMALE						
65-69.....	.125	\$34.61	\$4.33	1.24	1.19	1.48
70-74.....	.135	35.27	4.76	1.36	1.15	1.57
75-79.....	.135	36.78	4.97	1.32	1.19	1.58

\* Source: T.S.1, XIV, D418. Average claim and claim cost adjusted to standard schedule basis.

Since it is easier to satisfy a given deductible under a policy providing large rather than small benefits, claim frequencies for a given deductible tend to vary with the amount of benefits provided. The frequencies shown in Table 20 are for all benefits combined. For homogeneous data we would expect such a claim frequency to exceed the corresponding frequency of hospitalization, because of claims which exceed the deductible by reason of surgical benefits where hospitalization is not involved and by reason of out-patient nonsurgical benefits. Exceptions to this relation between corresponding frequencies in Table 20 and Table 2 also probably reflect statistical fluctuations and heterogeneous data.

To obtain the claim cost for a particular combination of benefits involving a deductible, it is necessary to reflect the savings resulting from the deductible amount. This is indicated in the following example, for a female age  $x$  under a policy with no out-patient benefits:

Benefits:

\$ 10 daily hospital benefit for a maximum hospital confinement of 90 days.

\$100 maximum miscellaneous hospital expense benefit.

\$200 maximum surgical schedule-standard schedule.

\$100 maternity benefit.

\$ 50 deductible, but not applicable to maternity benefit.

Let  $r_x^h$  represent frequency of hospitalization under a \$50 deductible plan.

$h_x$  represent the average duration of hospitalization under a \$50 deductible plan with a 90-day maximum.

$m_x$  represent the average miscellaneous hospital expense benefit covered under a \$50 deductible plan with a \$100 maximum benefit.

$r_x^s$  represent the frequency of surgery under a \$50 deductible plan.

$s_x$  represent the average amount of surgical claim covered under a \$50 deductible plan, per \$100 maximum surgical schedule-standard schedule.

$r_x^m$  represent the maternity claim rate.

$r_x^d$  represent the claim frequency under a \$50 deductible plan, excluding maternity claims.

The claim cost for all of the benefits is given by the following expression:

$$(r_x^h)(10h_x + m_x) + 2(r_x^s)(s_x) - 50r_x^d + 100r_x^m .$$

#### MATERNITY EXPENSE BENEFIT

Fourteen companies contributed data on over 60,000 claims to this section of the study, which covers experience under basic hospital-surgical policies that provide benefits for childbirth or miscarriage. The policies included in the experience covered pregnancy which commenced after 30 days from date of issue or maternities which occurred after 10

TABLE 20  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY  
 UNDERWRITTEN POLICIES  
 CLAIM FREQUENCY OF POLICIES WITH A DEDUCTIBLE

ATTAINED AGE	\$25 DEDUCTIBLE		\$50 DEDUCTIBLE	
	Number of Claims	Claim Frequency	Number of Claims	Claim Frequency
MALE				
15-19	37	.084	19	.074
20-24	400	.054	42	.055
25-29	384	.051	45	.070
30-34	362	.063	40	.052
35-39	320	.073	57	.074
40-44	300	.078	66	.091
45-49	322	.085	71	.099
50-54	374	.113	66	.109
55-59	324	.122	60	.125
60-64	384	.142	48	.137
65-69	395	.158	28	.146
70-74	264	.157	13	.140
75-79	157	.175	6	.200
FEMALE				
15-19	52	.072	25	.078
20-24	668	.085	102	.125
25-29	528	.084	64	.096
30-34	480	.107	92	.119
35-39	555	.124	108	.123
40-44	597	.128	132	.142
45-49	732	.145	126	.130
50-54	630	.138	133	.145
55-59	556	.136	111	.149
60-64	616	.132	83	.135
65-69	661	.152	47	.130
70-74	437	.163	20	.144
75-79	209	.181	6	.146
CHILD				
All ages	2,633	.076	423	.069

NOTE.—These frequencies involve only claims where the total eligible medical expenses exceed the policy deductible.

months from date of issue. Maternity benefits provided by the policies varied considerably as shown by the following table:

## ANALYSIS OF DATA BY TYPE OF MATERNITY BENEFIT

Maternity Benefit Provided in Policy	Number of Claims in Study (All Durations)
10 times daily hospital benefit.....	19,146
5 times daily hospital benefit.....	16,658
10 times daily hospital benefit but not more than \$75.....	367
Flat \$50.....	2,191
Flat \$150 or \$200.....	5,908
10 times daily hospital benefit plus full hospital and surgical benefits after 9th day of hospitalization.....	3,839
Full hospital and surgical benefits.....	13,324
Total.....	61,433

Frequencies of maternity by attained age and duration are shown in Table 21. Most of the data were submitted with the first four durations shown separately, but some were submitted with only the first two durations shown separately. The experiences for these two kinds of data are shown separately as well as on a combined basis, and the maternity claim frequencies of the 1956 Intercompany Hospital Table are shown for comparative purposes. The frequencies for durations 5 and later are very close to those of the 1956 Table.

As expected, claim frequencies on the maternity benefit are highest in the second policy year, after which they consistently decrease by duration. The lower claim frequencies for duration 1 as compared with duration 2 can be attributed to the initial waiting period of 10 months following date of issue. On the assumption that issues are spread uniformly throughout the year, the effect of the 10-month waiting period on the frequencies for calendar year duration 1 can be approximately offset by multiplying the frequencies shown by 1.53.

## MAJOR MEDICAL EXPENSE BENEFITS

Eleven companies contributed data on over 7,500 claims to this section of the study. Most of the data were for policies providing a \$500 deductible amount and 75 per cent or 80 per cent coinsurance. All analyses in this section are limited to data from these policies, and except for one comparison involving policies with an inside room and board limit, data from policies with inside limits were excluded from the analyses. Claim data for policies providing 80 per cent coinsurance were converted to a 75 per cent coinsurance basis by multiplying the amounts paid by .9375.

Table 22 shows the experience on these policies for durations 3 and later. The small volume of data suggests that caution should be used in interpretation. Claim frequencies, average claims, and claim costs all increase with age. A graphic graduation of these functions is shown in Table 23. Below age 55 the graduated claim costs for males are less than those for females, but above this age the graduated male claim costs are much higher than those for females.

The frequencies and claim costs of Table 22 were used as a basis to calculate the expected number of claims and amounts paid in the corresponding experience of durations 1 and 2. The ratios of actual to expected claims are shown on page 167.

TABLE 21  
1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
MATERNITY CLAIM FREQUENCY

ATTAINED AGE	NUM-BER OF CLAIMS	FRE-QUENCY	NUM-BER OF CLAIMS	FRE-QUENCY	NUM-BER OF CLAIMS	FRE-QUENCY	NUM-BER OF CLAIMS	FRE-QUENCY	NUM-BER OF CLAIMS	FRE-QUENCY	1956 INTER-COMPANY HOSP. TABLE FRE-QUENCY
	Experience of Companies Which Submitted Data with the First Four Durations Shown Separately										
	Duration 1		Duration 2		Duration 3		Duration 4		Duration 5 and Later		
20-24.....	5,201	.351	3,988	.410	2,250	.386	1,028	.338	1,020	.262	.285
25-29.....	3,078	.260	3,091	.327	2,241	.302	1,502	.287	2,119	.199	.196
30-34.....	1,242	.138	1,301	.175	1,048	.163	791	.156	1,624	.121	.117
35-39.....	558	.070	559	.083	472	.080	361	.074	755	.052	.060
40-44.....	191	.026	197	.031	183	.031	139	.029	225	.015	.016
45-49.....	47	.007	61	.009	52	.008	33	.006	43	.003	.....
Experience of Companies Which Submitted Data with the First Two Durations Shown Separately											
	Duration 1		Duration 2		Duration 3 and Later						
20-24.....	5,330	.342	3,842	.465	2,585	.451	.....	.....	.....	.....	.285
25-29.....	1,835	.195	2,094	.289	3,023	.270	.....	.....	.....	.....	.196
30-34.....	779	.111	850	.156	1,412	.145	.....	.....	.....	.....	.117
35-39.....	314	.052	389	.077	571	.064	.....	.....	.....	.....	.060
40-44.....	89	.015	94	.019	170	.018	.....	.....	.....	.....	.016
45-49.....	.....	.....	.....	.....	1	.007	.....	.....	.....	.....	.....
Combined Experience of All Companies											
	Duration 1		Duration 2		Duration 3 and Later						
20-24.....	10,531	.347	7,830	.435	6,883	.372	.....	.....	.....	.....	.285
25-29.....	4,913	.231	5,185	.311	8,885	.257	.....	.....	.....	.....	.196
30-34.....	2,021	.126	2,151	.167	4,875	.141	.....	.....	.....	.....	.117
35-39.....	872	.062	948	.080	2,159	.063	.....	.....	.....	.....	.060
40-44.....	280	.021	291	.026	717	.021	.....	.....	.....	.....	.016
45-49.....	47	.007	61	.009	129	.003	.....	.....	.....	.....	.....

TABLE 22  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY UNDERWRITTEN POLICIES  
 MAJOR MEDICAL EXPENSE BENEFIT  
 \$500 DEDUCTIBLE AMOUNT—75 PER CENT COINSURANCE\*—  
 NO HOSPITAL ROOM AND BOARD LIMIT  
 DURATIONS 3 AND LATER

Attained Age	Number of Lives Exposed	Number of Claims	Amount Paid	Claim Frequency	Average Claim	Claim Cost
Male						
15-19.....	23	1	\$ 996	.0435	\$ 996.00	\$ 43.30
20-24.....	862	6	2,479	.0070	413.17	2.88
25-29.....	1,097	19	19,350	.0173	1,018.42	17.64
30-34.....	2,755	37	39,811	.0134	1,075.97	14.45
35-39.....	4,545	85	81,894	.0187	963.46	18.02
40-44.....	5,347	120	90,501	.0224	754.18	16.93
45-49.....	5,658	177	178,046	.0313	1,005.91	31.47
50-54.....	4,903	197	186,286	.0402	945.61	37.99
55-59.....	4,294	211	197,963	.0491	938.21	46.10
60-64.....	2,678	207	274,080	.0773	1,324.06	102.35
65-69.....	368	30	47,948	.0815	1,598.27	130.29
Female						
15-19.....	20	0	0	.0000	0	0
20-24.....	817	17	\$ 6,113	.0208	\$ 359.59	\$ 7.48
25-29.....	1,761	40	27,563	.0227	689.08	15.65
30-34.....	3,374	95	64,953	.0282	683.72	19.25
35-39.....	4,635	135	74,425	.0291	551.30	16.06
40-44.....	5,202	176	142,876	.0338	811.80	27.47
45-49.....	5,161	248	185,489	.0481	747.94	35.94
50-54.....	4,415	226	259,105	.0512	1,146.48	58.69
55-59.....	3,322	160	136,791	.0482	854.94	41.18
60-64.....	1,890	99	104,569	.0524	1,056.25	55.33
65-69.....	225	14	15,918	.0622	1,137.00	70.75
Child						
All ages.....	15,012	95	\$ 72,242	.0063	\$ 760.44	\$ 4.81

\* Includes plans with 80 per cent coinsurance, for which amounts paid have been multiplied by .9375.  
 NOTE.—Average claim and claim cost reflect eligible expenses after application of the deductible; frequency involves only claims where total policy expenses exceed the policy deductible.



TABLE 23  
 1960-61 EXPERIENCE UNDER INDIVIDUALLY  
 UNDERWRITTEN POLICIES  
 MAJOR MEDICAL EXPENSE BENEFIT  
 \$500 DEDUCTIBLE AMOUNT—75 PER CENT COINSURANCE—  
 NO HOSPITAL ROOM AND BOARD LIMIT  
 GRADUATED CLAIM FUNCTIONS

Attained Age	Claim Frequency	Average Claim	Claim Cost
Male			
15-19 .....	.0088	\$ 736	\$ 6.48
20-24 .....	.0103	737	7.59
25-29 .....	.0123	751	9.24
30-34 .....	.0149	778	11.59
35-39 .....	.0186	818	15.21
40-44 .....	.0234	871	20.38
45-49 .....	.0301	938	28.23
50-54 .....	.0394	1,017	40.07
55-59 .....	.0526	1,109	58.33
60-64 .....	.0715	1,215	86.87
65-69 .....	.0990	1,333	131.97
Female			
15-19 .....	.0133	\$ 663	\$ 8.82
20-24 .....	.0173	649	11.23
25-29 .....	.0247	652	16.10
30-34 .....	.0284	670	19.03
35-39 .....	.0288	704	20.28
40-44 .....	.0342	753	25.75
45-49 .....	.0469	819	38.41
50-54 .....	.0518	900	46.62
55-59 .....	.0492	998	49.10
60-64 .....	.0518	1,111	57.55
65-69 .....	.0577	1,240	71.55
Child			
All ages .....	.0036	\$ 754	\$ 2.71

RATIO OF ACTUAL TO EXPECTED CLAIMS BASED ON  
FREQUENCIES AND CLAIM COSTS FOR  
DURATIONS 3 AND LATER

	Duration 1 (Per Cent)	Duration 2 (Per Cent)
Number of claims . . . . .	80.1	89.4
Amount of claims paid . . . . .	76.3	83.8

The markedly lower morbidity during the first two durations appears to substantiate similar results found in individual company studies.

A comparison was made of the 1960 and 1961 experience of those companies that contributed data for both years. With the 1960 experience used as the standard, the 1961 ratio of actual to expected claims was 100.5 per cent by number and 109.7 per cent by amount. This ratio for the experience by amount, due largely to an increase in average claim payments from 1960 to 1961, probably reflects the inflationary nature of major medical costs.

A comparison was made between the experience on plans with a \$25 maximum hospital room and board benefit and on plans with no limit on this benefit. The average size claims for the plans with no limit were significantly higher than for the plans with the \$25 maximum. Differences in claim frequencies were not as significant.

Other major medical experience is shown in the paper (and discussions of the paper) by Lowell Dorn, entitled "New York Life Morbidity Experience under Individual and Family Major Medical Policies" (*TSA*, XV, 275).