# TRANSACTIONS OF SOCIETY OF ACTUARIES 1967 REPORTS

## II. GROUP COMPREHENSIVE MEDICAL EXPENSE BENEFITS INSURANCE

HIS is the fifth annual report on the study of the morbidity experience of Group Comprehensive Medical Expense insurance. Rules similar to those applicable to the group hospital and surgical studies were used to select the groups whose experience would be included in the report. In addition, groups which the contributing companies individually classify as substandard and groups with eligibility limited to only high-salaried employees are excluded from the study.

The tables in this report show the experience of all exposure size groups combined or for nonjumbo groups only. Nonjumbo groups are those with less than 5,000 insured employees. These size groups are shown in order to minimize the effect that jumbo groups might have upon the ratio of actual to tabular claims in any of the groupings shown. This report contains experience for policy years ending in 1962, 1963, 1964, 1965, and 1966. The central period of exposure for each policy year is approximately January 1 of that year. Actual claims are shown to the nearest \$1,000.

### Ratios of Actual to Tabular Claims

The results are presented in the form of ratios of actual to tabular claims. This report is based on an updated and expanded version of the 1960 Tabular, which was used for prior reports. The 1960 Nonmaternity Tabular was presented in the Pettengill-Burton paper, "Development of Expected Claim Costs for Comprehensive Medical Expense Benefits and Ratios of 1959 and 1960 Actual Experience Thereto" (TSA, Vol. XV); the 1960 Maternity Tabular was based upon Table 1 of Mr. Hoffman's discussion of that paper. The revised tabular endeavors to take into account claim cost variations exhibited in Intercompany experience. Nevertheless, like its predecessor, it involves a substantial amount of judgment. It is designed to produce ratios of actual to tabular claims of approximately 100 per cent for the policy year ending in 1965 and shall be referred to as the 1965 Comprehensive Tabular.

The 1965 Comprehensive Tabular shown in Appendix I of this report differs from the 1960 Tabular as follows:

1. The Step I basic tabular costs were increased an average of approximately 28 per cent, with variations ranging from 25 to 29 per cent. The percentage adjustments for area were converted from a scale of 8 to 4 per cent differences, with some upward and downward adjustments to reflect prior experience. The average area factor remains unchanged. Other tabular amounts and percentage adjustments were changed to reflect changing charge and utilization levels, except that no changes were made in the following factors:

- a) Coinsurance adjustment for 75 per cent reimbursement.
- b) Employee age factor, except for introducing factors for ages less than 30 and 30-39 instead of less than 40.
- c) Private-room limit extras.
- 2. Additional factors were included in the tabular for:
  - a) Plan V—this plan has no deductible for room-and-board expenses; the deductible applies to "other expenses" (experience for this plan is not yet submitted for study).
  - b) Deductible—accumulation period, benefit period, "each illness" versus "all cause"
  - c) Relative number of children.
  - d) Children from birth and past age 19.
  - e) Family limit on deductibles.
  - f) Variation in the tabular for coverage of one or more dependents by female per cent.
  - g) Maximum benefit.
  - h) Mental and nervous disorders.

In order to exhibit the experience by ranges of average salary, an average salary factor was calculated for each group, with salary data based on the following table. The tabular claims, however, do *not* include an adjustment on account of salary.

Annual Salary	Factor
Less than \$5,000	90%
\$ 5,000-\$ 7,500	100
\$ 7,500-\$10,000	
\$10,000-\$15,000	
\$15,000-\$20,000	165
\$20,000 or more	

Approximately 25 per cent of the experience in this study is based on plans which do not contain a co-ordination of benefits provision. No adjustment in the tabular is made on account of this feature since the amount of duplicate coverage, if any, on each group is unknown.

Because of the large number of variables affecting the claim level under these plans, actual claims often differ considerably from the tabular claims calculated for a group, particularly for groups of small or modest size, as illustrated in Table 15. In addition, some of the experience for certain plan features is concentrated in the contributions of only a few companies. The above limitations should be considered when interpreting the data contained in this report. Finally, caution should be used in comparing factors or ratios of actual to tabular claims of this report to those for the Supplementary Major Medical report, since the respective tabulars often contain different adjustments for the same cost factor.

## Contributing Companies

Ten companies have contributed to the investigation covered in this report. The results are the composite experience of variations in company practices and in underlying administration and claim procedures, as well as variations in experience among groups.

Aetna Life & Casualty
Connecticut General Life Insurance Company
Continental Assurance Company
Equitable Life Assurance Society
John Hancock Mutual Life Insurance Company
Metropolitan Life Insurance Company
New York Life Insurance Company
Occidental Life Insurance Company of California
Prudential Insurance Company of America
The Travelers Insurance Company

## Analysis of Experience

Table 1 summarizes the 1964-66 nonmaternity experience for broad groups of plans for all size groups. Table 2 contains nonmaternity and maternity ratios of actual to tabular by year of experience for nonjumbo groups only. Tables 15 and 16 set forth 1964-66 experience by size of experience unit and the distribution of experience units by size, for all size groups. The remaining tables are based upon the combined 1964-66 experience under all plans covering only nonjumbo groups.

Table 1 shows experience separately for "all cause" and "each illness" plans, a feature for which tabular adjustments have been made for the first time. The actual to tabular ratios are generally consistent for all plans, except that the ratios for "each illness" plans which require total disability are substantially below those of other plans. Contrary to prior reports, the ratios of actual to tabular claims for plans without full reimbursement of hospital expenses and no waiver of deductible are generally consistent with those of other plans. This can only be partially accounted for by a change in the relationship between tabular factors for these plans. A review of the experience for nonjumbo groups only indicates results similar to those shown in Table 1 for all size groups.

Table 2 summarizes the ratios of actual to tabular for years 1962–66 and indicates the trend of experience. Maternity ratios for all plans combined are included in this report for the first time. It should be noted that the maternity tabular is based solely upon the benefit provided for normal delivery.

# COMPREHENSIVE MEDICAL ALL SIZE GROUPS, NONMATERNITY EXPERIENCE BY PLAN COMBINED 1964-66 POLICY YEARS' EXPERIENCE

	EARS L		- 	
Plan	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular
		Empl	oyee	-
All-Cause plans: Without full reimbursement of hospital ex-				
penses: Deductible applied to all expenses Deductible waived for hospital expenses	1,279 116	191,950 40,560	11,539 2,047	103% 103
Deductible waived for hospital and surgical expenses	113	21,887	1,383	105
Total	1,508	254,397	14,969	103%
With full reimbursement of hospital expenses: Deductible applied to all expenses Deductible waived for hospital expenses.	350 1,517	127,693 247,897	7,242 15,860	97% 99
Deductible waived for hospital and surgical expenses.	718	117,164	7,717	101
Total	2,585	492,754	30,819	99%
Total, All-Cause plans	4,093	747,151	45,788	101%
Total, Each-Illness plans, total disability not required	602	109,050	6,658	101%
Total, Each-Illness plans, total disability required	232	31,065	1,446	86%
		Depe	ndent	
All-Cause plans: Without full reimbursement of hospital ex-				
penses: Deductible applied to all expenses Deductible waived for hospital expenses. Deductible waived for hospital and surgical	1,267 119	122,721 30,925	12,974 2,957	105% 101
expenses	94	12,953	1,495	102
Total	1,480	166,599	17,426	104%
With full reimbursement of hospital expenses:  Deductible applied to all expenses.  Deductible waived for hospital expenses.  Deductible waived for hospital and surgical	345 1,498	88,893 167,343	9,154 18,646	97% 95
expenses	679	70,475	8,465	102
Total	2,522	326,711	36,265	97%
Total, All-Cause plans	4,002	493,310	53,691	99%
Total, Each-Illness plans, total disability not required	557	64,412	6,882	101%
Total, Each-Illness plans, total disability required	227	20,140	1,716	86%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustment in Steps I, II, and III (see Appendix I).

## COMPREHENSIVE MEDICAL NONJUMBO GROUPS

# EXPERIENCE BY PLAN AND BY YEAR 1962-66 POLICY YEARS' EXPERIENCE

Plan	RATIO OF ACTUAL TO 1965 TABULAR FOR POLICY YEAR ENDING IN:				
	1962	1963	1964	1965	1966
			Employee		
Nonmaternity: All-Cause plans: Without full reimbursement of hospital expenses With full reimbursement of hospital expenses	84% 84	88% 87	100% 95	100% 100	110% 105
Total, All-Cause plans	84%	87%	96%	100%	107%
Total, Each-Illness plans, total dis- ability not required	82%	82%	98%	103%	103%
Total, Each-Illness plans, total dis- ability required	90%	82%	82%	88%	97%
Total, all plans	84%	87%	96%	100%	106%
Maternity: Total, all plans	114%	105%	108%	98%	83%
		······································	Dependent	<u>-</u>	
Nonmaternity: All-Cause plans: Without full reimbursement of hospital expenses	85%	87%	97%	103%	114%
pital expenses	82	87	92	100	102
Total, All-Cause plans	83%	87%	93%	101%	106%
Total, Each-Illness plans, total dis- ability not required	87%	82%	94%	98%	111%
Total, Each-Illness plans, total dis- ability required	84%	77%	87%	83%	101%
Total, all plans	83%	86%	93%	100%	106%
Maternity: Total, all plans	114%	103%	110%	102%	87%

### 174 COMMITTEE ON GROUP LIFE AND HEALTH INSURANCE

Table 3 contains the nonmaternity and maternity experience by average age factor. The average age factor is a measure of the age distribution of the employees and increases as the ages of the employees increase. The ratios of actual to tabular claims for nonmaternity experience are quite consistent by age grouping and appear to indicate that the 1965 Tabular

TABLE 3

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS

NONMATERNITY AND MATERNITY EXPERIENCE BY AVERAGE AGE FACTOR

COMBINED 1964-66 POLICY YEARS' EXPERIENCE

	Nonmaternit	MATERNITY EXPERIENCE			
No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Emp	loyce		
264 568 850 952 862 604 385 200 122 109	34,632 83,262 146,205 163,229 191,682 100,437 43,716 17,942 9,434 11,342	1,522 4,211 8,112 9,665 13,082 6,883 3,152 1,329 786 1,001	103% 100 102 100 103 100 95 95 101 93	73 140 186 243 196 108 22 12 4 2	94% 80 92 104 103 100 106‡ 94‡ 109‡ 79‡
	<del></del>	Depe	ndent		
251 554 832 928 840 578 376 193 119	19,659 51,195 94,380 111,144 124,812 64,363 25,328 12,184 6,102 6,566	1,831 5,442 9,969 12,116 14,417 7,087 2,961 1,393 700 733	100% 102 98 101 100 99 100 97 96 91	401 868 1,276 1,412 1,230 592 165 90 33 22	91% 99 97 101 101 111 100 121 99‡ 123‡
	No. Experience Units  264 568 850 952 862 604 385 200 122 109 4,916  251 554 832 928 840 578 376 193 119	No. Experience   Years of Exposure*	No. Experience   Years of   Claims   Claims   Exposure*   Actual   Claims   (000)	No. Experience   Years of Exposure*   Actual Claims	No. Experience   Years of Years of Exposure*   Actual Claims   Lo 1965   Tabular   No. Exposure*   Actual Claims   No. Exposure*   Actual Claims   No. Exposure*   Actual to 1965   Tabular   No. Exposure*   Actual to 1965   Tabular   No. Exposure*   No. Exposure*   No. Exposure*   Actual to 1965   Tabular   No. Exposure*   No. Expo

<sup>\*</sup> For dependents, exposure of employees with respect to their dependents.

<sup>†</sup> Tabular adjustments: nonmaternity, in Steps V and VII; maternity, in Steps VII and XV.

Less than \$50,000 of tabular claims,

TABLE 4
COMPREHENSIVE MEDICAL
NONJUMBO GROUPS

### NONMATERNITY AND MATERNITY EXPERIENCE BY FEMALE PER CENT COMBINED 1964-66 POLICY YEARS' EXPERIENCE

	1	Nonma ternit	Y Experienc	E	MATERNITY	Experience		
FEMALE PER CENT	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†	Actual Claims (000)	Ratio of Actual to 1965 Tabular†		
			Emp	loyee	· · · · · · · · · · · · · · · · · · ·			
<11%. 11-21. 21-31. 31-41. 41-51. 51-61. 61-71. 71-81. 81-91. 91-100.  <31% female. ≥31% female Total.	1,401 1,199 723 441 404 323 252 118 45 10 3,323 1,593	190,478 184,642 123,619 84,904 85,911 59,930 47,101 18,556 4,642 2,098 498,739 303,142 801,881	10,958 11,496 7,466 5,375 6,217 3,644 2,900 1,213 316 158 29,919 19,824 49,743	100% 104 99 105 104 96 92 89 91 100 101% 99	94 172 146 172 120 145 71 45 16 5 412 574	202%‡ 110 96 82 81 97 77 83 114‡ 83‡  116% 85		
		Dependent						
<11%	1,353 1,174 707 427 392 313 243 116 41 9	145,550 135,638 82,104 48,764 44,687 31,715 19,062 5,838 1,486 889	16,120 15,245 8,847 5,323 5,363 3,150 1,744 675 135 47	102% 101 98 100 98 95 87 107 87 49	1,794 1,859 987 643 356 267 137 43 2	107% 112 97 91 95 86 53 77 19‡ 20‡		
<31% female ≥31% female	3,234 1,541	363,292 152,441	40,212 16,437	101% 96	4,641 1,448	107% 84		
Total	4,775	515,733	56,649	99%	6,089	100%		

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustments: nonmaternity, Steps V and IX; maternity, Steps V, IX, and XV.

Less than \$50,000 of tabular claims.

age scale satisfactorily represents the pattern of nonmaternity claim costs by age.

The Table 3 ratios of actual to tabular claims for maternity experience are based upon a tabular which reflects the age and sex distribution of employee groups, but without regard to marital status, since the age and sex distribution of employees with dependents is not available. The results appear to indicate that the 1965 Tabular satisfactorily represents the pattern of maternity claim costs by age, although the employee ratios tend to be higher for older age groups.

Table 4 contains the nonmaternity and maternity experience by female per cent. The nonmaternity and maternity actual to tabular ratios generally exhibit a downward trend with increasing per cent female. The spouse portion of the dependent tabular is adjusted for the female content of the employee group. The lower ratios of actual to tabular for high female per cent groups may be a reflection of differing compositions of single and married female employees and dependent units, since these employee data cannot be reflected in the tabular because the marital status of employees and the female per cent content of employees with dependents are unknown. Experience by female per cent within age grouping generally exhibits the same pattern of actual to tabular ratios by age group as for all age groups combined.

Table 5 shows the nonmaternity experience by average salary factor for that portion of the experience for which contributing companies were able to submit an income distribution of covered employees. Experience indicates substantially increasing ratios of actual to tabular as the average earnings of the employees increase. Though adjustment to the tabular has not been made for salary, distributions provided in this report permit a comparison of exposure characteristics with experience by groupings of the salary factor to estimate the effect of a scale of income adjustment factors on ratios of actual to tabular claims shown in this table.

Table 6 presents the combined employee and dependent nonmaternity experience by metropolitan area, state, and region. The 1965 Tabular area factors are also shown in the table in order to facilitate comparisons with actual experience. In assigning metropolitan area codes to the data submitted, contributing companies used state the region codes in those instances where it was not known whether 75 per cent of the covered employees were in a given metropolitan area. Hence, the experience shown for states and regions may include a few cases where a substantial proportion of the employees are actually located in one of the metropolitan areas shown in the table. In general, the ratios of actual to tabular claims appear to indicate that the 1965 Tabular area factors satisfactorily represent area variations.

Table 7 summarizes the experience in Table 6 for 17 metropolitan areas and 31 states for which \$500,000 or more of actual claims were submitted. It provides a comparison of the relative level of experience for these areas, using Los Angeles as a base. The ratio to Los Angeles of 1964–66 experience was obtained by first determining for each area the 1965 Tabular area factor which would have produced the same ratio of actual to tabular as observed in Los Angeles and then reducing to a base 100 by dividing by the 1965 Tabular area factor for Los Angeles.

Table 8 shows nonmaternity experience for plans classified according to the type of restriction applicable to treatment of mental and nervous disorders. The tabular adjustments produce consistent results, for employee and dependent, except for dependent code 3, which appears to be a chance fluctuation.

TABLE 5

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS

NONMATERNITY EXPERIENCE BY AVERAGE SALARY FACTOR

COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Average Salary Factor	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†		
		Empl	oyee			
90- 99% 100-109 110-119 120-129 130 or more Unknown	1,737 1,653 565 165 93 703	284,939 319,045 106,533 11,820 8,330 71,214	17,245 20,050 6,820 856 610 4,162	97% 102 105 114 129 100		
	Dependent					
90- 99% 100-109 110-119 120-129 130 or more Unknown	557 164	158,942 221,486 77,274 8,050 5,106 44,875	16,195 24,770 9,077 1,063 672 4,872	95% 99 106 113 129 102		

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> No adjustment in tabular.

# Comprehensive Medical Nonjumbo Groups

NONMATERNITY EXPERIENCE BY REGION, STATE, AND METROPOLITAN AREA EMPLOYEE AND DEPENDENT COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Region,* State,† or Metropolitan Area	No. Experi- ence Units‡	Years of Exposure;	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
Total, all locations	4,916	801,881	106,392	100%	
New England States: Connecticut Bridgeport-Stamford-Norwalk. Hartford-New Britain-Bristol. New Haven-Waterbury	20 12 10 13	3,336 6,272 806 672	418 818 88 122	96% 93 79 113	96% 100 96 104
Total	55	11,086	1,446	94%	
Maine. ,	38	11,064	1,692	103%	92%
Massachusetts Boston Springfield-Holyoke	64 44	8,744 4,610	1,217 580	104% 85	104% 108 100
Total	108	13,354	1,797	97%	
New Hampshire	10	838	91	79%	92%
Rhode IslandProvidence				Š	104% 104
Vermont	11	2,567	266	89%	92%
Region	6	1,263	241	115%	100%
Region total	231	40,321	5,547	98%	
Middle Atlantic States: Delaware				§	92%
District of Columbia	42	11,425	1,634	110%	100%
New Jersey	48	8,049	893	103%	100%
New York Albany-Schenectady-Troy Buffalo New York Northeastern New	123 17 8	16,965 1,891 450	2,163 268 73	102% 97 120	96% 96 96
New York–Northeastern New Jersey Rochester Syracuse	290 5 22	45,117 886 7,187	5,936 117 1,009	101 90 95	108 96 96
Total	465	72,496	9,566	100%	
Pennsylvania Allentown-Bethlehem-Easton Philadelphia	\$8 t 45	17,250	1,894	99% § 92	80% 88 92
Pittsburgh Wilkes-Barre-Hazelton	10	5,510	1,057	115	100
Total	145	27,230	3,462	102%	
Region	8	1,264	160	97%	100%
Region total	709	120,686	15,744	102%	

<sup>\*</sup> Excludes groups coded for a specific state or metropolitan area.

<sup>†</sup> Excludes groups coded for a specific metropolitan area.

<sup>‡</sup> Employee only.

<sup>§</sup> Less than \$50,000 of tabular claims and less than ten experience units.

TABLE 6-Continued

Region,* State,† or Metropolitan Area	No. Experi- ence Units‡	Years of Exposure‡	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
North Central States: Illinois	245 318	30,693 49,758	3,844 6,146	105% 99	92% 100
Total	563	80,451	9,990	101%	
Indiana Indianapolis	86 39	15,953 8,664	1,968 1,087	108% 97	84% 84
Total	125	24,617	3,055	104%	
Kentucky Louisville	35 21	3,995 6,508	515 1,094	99% 107	92% 108
Total	56	10,503	1,609	104%	,
Michigan Detroit	91 33	11,396 5,181	1,483 830	100% 102	100% 116
Total	124	16,577	2,313	101%	
Ohio Akron Cincinnati Cleveland Columbus Dayton Toledo	7	14,579 2,056 2,773 2,679 3,723 594	1,735 240 214 346 386 84	99% 92 96 80 91 101 §	92% 96 92 104 92 92 92
Youngstown		26 (20	7.020	0.467	92
Total	120	26,639	3,029	94%	0007
West Virginia	51	3,944	514	106%	88% 92
Total	52	4,035	519	105%	
Wisconsin	64 45	20,694 5,033	2,749 726	104% 101	92% 100
Total	109	25,727	3,475	103%	,
Region	21	6,311	772	99%	96%
Region total	1,170	194,860	24,762	101%	
Plains States:	44	8,326	1,333	107%	100%
Kansas	17	2,388	323	110%	100%
Minnesota	27 43	4,179 6,600	662 868	110% 89	96% 108
Total	70	10,779	1,530	97%	
Missouri  Kansas City  St. Louis	35	3,233 3,032 4,755	445 438 504	107% 104 85	92% 100 100
Total	136	11,020	1,387	97%	

TAE	LE 6—	Continued**			
Region,* State,† or Metropolitan Area	No. Experience Units;	Years of Exposure;	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
Plains States— <i>Continued</i> Nebraska Omaha	11 11	353 1,277	33 208	88%   104	92% 100
Total	22	1,630	241	101%	
North Dakota	10	464	48	77%	92%
South Dakota	20	1,333	127	85%	88%
Region	7	661	101	92%	100%
Regional total	326	36,601	5,090	100%	
Mountain States:	12	3,043	520	113%	112%
Denver	21	3,428	475	101	120
Total	33	6,471	995	107%	
Idaho	35	1,800	259	100%	100%
Montana	30	2,385	273	91%	92%
Nevada	26	1,433	210	101%	120%
Utah	40	4,266	686	111%	96%
Wyoming	18	652	103	108%	96%
Region					104%
Region total	182	17,007	2,526	105%	
Pacific States: California Los Angeles San Diego San Francisco-Oakland	227 510 32 84	40,122 57,353 3,071 13,887	5,635 8,343 460 2,271	95% 98 109 100	124% 140 136 140
Total	853	114,433	16,709	97%	
Oregon	35 16	4,296 1,204	570 177	91% 101	100% 108
Total	51	5,500	747	94%	
WashingtonSeattle	29 29	4,324 2,252	659 292	109% 93	108% 116
Total	58	6,576	951	104%	
Region	10	4,031	641	100%	112%
Region total	972	130,540	19,048	98%	
Gulf States: Arizona	80	5,377	885	110%	116%
Arkansas	41	5,725	564	96%	84%
LouisianaNew Orleans	62 22	6,586 1,839	873 301	102% 100	100% 108
Total	84	8,425	1,174	102%	
New Mexico	42	2,626	338	102%	100%

Region,* State,† or Metropolitan Area	No. Experience Units‡	Years of Exposure;	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
Gulf States—Continued Oklahoma	35	2,461	407	113%	104%
Texas. Dallas. Fort Worth Houston San Antonio.	111 17 9 36 12	10,833 743 809 5,520 808	1,313 101 129 832 71	96% 105 104 93 73	108% 120 116 120 108
Total	185	18,713	2,446	95%	
Region	6	764	94	88%	100%
Region total	473	44,091	5,908	100%	
Southeastern States: Alabama Birmingham	40 25	5,162 1,985	840 260	103% 98	108% 108
Total	65	7,147	1,100	102%	
Florida Miami Tampa	77 27 21	9,744 1,794 2,601	1,074 276 338	98% 112 92	92% 116 104
Total	125	14,139	1,688	99%	
GeorgiaAtlanta	38 30	4,811 5,058	523 473	101% 94	88% 96
Total	68	9,869	996	98%	
MarylandBaltimore	28 27	4,009 3,035	491 379	98% 100	84% 92
Total	55	7,044	870	99%	
Mississippi	20	1,215	164	123%	100%
North Carolina	24	5,721	866	113%	96%
South Carolina	46	4,368	636	106%	88%
Tennessee Knoxville Memphis	32 6 31	4,203 735 5,683	496 117 803	102% 99 101	96% 104 108
Total	69	10,621	1,416	101%	
Virginia Norfolk-Portsmouth	70 11	11,507 608	1,187 72	98% 91	84% 92
Total	81	12,115	1,259	97%	
Region	15	4,243	481	102%	92%
Region total	568	76,482	9,476	101%	
Hawaii				#	100%
Alaska	25	1,523	268	97%	132%
Total, states and regions	4,663 253	662,331 139,550	88,424 17,968	100% 99%	

<sup>#</sup>Less than 75 per cent of employees in one region, state, or metropolitan area.

Table 9 shows the nonmaternity experience by amount of maximum benefit for plans with or without an automatic yearly restoration feature. The tabular uses a \$5,000 lifetime maximum benefit as a base and all adjustments are related to this base. The actual to tabular ratios show generally consistent results for groupings with significant volume, although the \$10,000 maximum benefit ratios are somewhat higher than the corresponding \$5,000 maximum benefit ratios. The tabular also ad-

TABLE 7

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS

NONMATERNITY EXPERIENCE BY STATE AND METROPOLITAN AREA
EMPLOYEE AND DEPENDENT COMBINED 1964-66 POLICY YEARS' EXPERIENCE

		O TO NGELES		Rati Los A	O TO NGELES
	1965 Tabular Area Factor	1964-66 Actual Experience		1965 Tabular Area Factor	1964-66 Actual Experi- ence
		politan rea		State (	Continued
Boston, Mass. Bridgeport, Conn. Chicago, Ill. Detroit, Mich. Houston, Tex. Indianapolis, Ind. Los Angeles, Calif. Louisville, Ky. Memphis, Tenn. Milwaukee, Wis. Minneapolis-St. Paul, Minn. New York, N.Y. Philadelphia, Pa. Pittsburgh, Pa. St. Louis, Mo. San Francisco-Oakland, Calif. Syracuse, N.Y.	77% 71 83 86 60 100 77 71 77 77 71 77 77 71 100 69	67% 67 72 86 82 59 100 84 79 73 70 79 62 83 62	Colorado. District of Columbia. Florida. Georgia. Illinois. Indiana. Iowa. Kentucky Louisiana. Maine. Massachusetts. Michigan. Minnesota. New Jersey New York. North Carolina. Ohio. Oregon. Pennsylvania. South Carolina.	80% 71 66 63 66 60 71 66 71 66 74 71 69 69 66 71 57 63	92% 80 66 65 71 66 77 67 74 69 78 72 77 75 72 79 67 66 58
AlabamaArizonaArkansasCalifornia.	77% 83 60 89	81% 93 59 86	Tennessee Texas Utah Virginia Washington West Virginia Wisconsin	69 77 69 60 77 63 66	72 75 78 60 85 68 70

justs for plans which have an automatic yearly restoration provision. The volume of experience under these plans is relatively small, but an examination of the raw data indicates results which appear to be consistent with that for all plans combined.

Table 10 shows the nonmaternity experience by deductible accumulation period. The actual to tabular ratios are consistent for groupings with substantial volume, except for the employee sixty-day deductible accumulation period.

Table 11 shows the nonmaternity experience according to the coinsurance provision of the plan. The ratios of actual to tabular claims for em-

TABLE 8 COMPREHENSIVE MEDICAL NONJUMBO GROUPS NONMATERNITY EXPERIENCE BY MENTAL AND NERVOUS RESTRICTION COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Cøde*	No. Experience Units	Employee Years of Exposure†	Actual Claims (000)	Ratio of Actual to 1965 Tabular‡			
		Emplo	уе <b>с</b>				
1 2 3 4	1,112 2,388 399 1,017 4,916	195,070 498,769 35,145 72,897 801,881	11,872 31,224 2,287 4,360 49,743	101% 101 102 98 101%			
	Dependent						
1 2 3 4	1,086 2,341 385 963 4,775	134,974 313,440 21,914 45,405 515,733	14,645 34,409 2,584 5,011	98% 100 93 100			

<sup>\*</sup> Mental and Nervous Restriction Code:

- 1. Covered for full plan benefits whether or not confined in a hospital.
- Covered for full plan benefits while confined in a hospital and reduced or limited benefits while not confined in a hospital.
   Covered for full plan benefits while confined in a hospital and no benefits while not confined in a hospital.
- 4. Covered for reduced or limited benefits whether or not confined in a hos-
- † For dependents, exposure of employees insured with respect to their dependents.
  - ‡ Tabular adjustment in Step XIII.

### COMPREHENSIVE MEDICAL NONJUMBO GROUPS

# NONMATERNITY EXPERIENCE BY MAXIMUM BENEFIT COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Maximum Benefit	No. Experi- ence Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Employe	e	
Lifetime maximum: \$2,500-\$4,999 \$5,000 \$5,001-\$9,999 \$10,000 \$10,001-\$19,999 \$20,000 or more	73 975 96 2,394 96 17	10,677 107,526 27,906 462,536 55,753 21,715	747 6,275 1,622 29,194 3,271 1,732	127% 98 99 100 101 119
Total	3,651	686,113	42,841	101%
No lifetime maximum, Each- Illness maximum: \$5,000. \$10,000. All other	458 759 48 1,265 4,916	32,437 70,791 12,540 115,768 801,881	1,687 4,449 766 6,902 49,743	93% 101 91 98% 101%
		Depen	dent	1
Lifetime maximum: \$2,500-\$4,999 \$5,000 \$5,001-\$9,999 \$10,000 \$10,001-\$19,999 \$20,000 or more	147 928 99 2,348 95 17	11,782 68,679 19,629 296,748 40,479 15,333	1,340 7,110 2,198 33,060 4,241 1,851	117% 97 104 99 98 103
Total	3,634	452,650	49,800	99%
No lifetime maximum, Each- Illness maximum: \$5,000 \$10,000	392 707	18,402 38,589	1,831 4,212	97% 98
All other	42	6,092	806	117%
Total	1,141	63,083	6,849	100%
Total	4,775	515,733	56,649	99%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustment in Step X.

ployee experience are reasonably consistent; the dependent ratios for 75 per cent coinsurance plans are, as in recent reports, lower than those for 80 per cent coinsurance plans but not by as wide a margin. It should be noted that the 75 per cent coinsurance plan exposure is quite small and decreasing relative to the total exposure.

The experience by deductible amount and for plans with and without a family limit on deductibles is shown in Table 12. For plans with a family limit on the deductible, combined experience for all deductibles is shown, and the experience has been combined for employees and dependents inasmuch as there can be differences in company practices in the assign-

TABLE 10

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS

NONMATERNITY EXPERIENCE BY DEDUCTIBLE ACCUMULATION PERIOD

COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Deductible Accumulation Period	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Emplo	yee	
Entire benefit period. 30 days or 1 month‡. 60 days or 2 months‡ 61-89 days‡. 90 days or 3 months‡ 120 days or 4 months‡ 121 days or more‡.  Total.	3,016 13 403 27 445 11 1,001	439,911 5,370 77,114 2,744 115,579 1,146 160,017	27,232 289 4,858 140 7,154 69 10,001 49,743	100% 97 106 91 100 105 99
		Depend	dent	1
Entire benefit period. 30 days or 1 month; 60 days or 2 months; 61-89 days; 90 days or 3 months; 120 days or 4 months; 121 days or more;	2,954 13 398 24 435 11 940	290,950 3,956 49,289 2,102 70,141 720 98,575	32,234 404 5,236 259 7,492 84 10,940	99% 101 101 111 101 116 99
Total	4,775	515,733	56,649	99%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustment in Step II.

<sup>‡</sup> But less than entire benefit period.

# COMPREHENSIVE MEDICAL

## NONJUMBO GROUPS

### NONMATERNITY EXPERIENCE BY COINSURANCE PERCENTAGE COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Coinsurance Percentage	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Emplo	yce	
75/25%: Without full reimbursement of hospital expenses	76	7,289	441	107%
With full reimbursement of hospital expenses	214	52,812	3,220	103
Total	290	60,101	3,661	1030
80/20%: Without full reimbursement of hospital expenses With full reimbursement of	1,841	280,598	16,855	1020 6
hospital expenses	2,785	461.182	29,227	99
Total	4,626	741,780	46,082	100%
Total	4,916	801,881	49,743	101%
		Depen	dent	
75/25%: Without full reimbursement of hospital expenses With full reimbursement of hospital expenses	71 221	4,241 35,721	377 3,706	103°7 96
Total	292	39,962	4,083	97%
80/20%: Without full reimbursement of hospital expenses With full reimbursement of hospital expenses	1,782 2,701	174,209 301,562	18,486 34,080	102% 98
Total	4,483	475,771	52,566	100%
Total	4,775	515,733	56,649	99%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustment in Step III.

ment of claims under such provisions to employee or dependent experience. The experience by deductible amount appears to indicate that the tabular for \$100 deductible plans could be increased, while the tabular for \$25 deductible plans could be decreased to produce more consistent actual to tabular ratios by deductible amount.

Table 13 shows experience classified according to the private-room

# TABLE 12 COMPREHENSIVE MEDICAL NONJUMBO GROUPS NONMATERNITY EXPERIENCE BY DEDUCTIBLE COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Deductible Amount per Individual	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Emplo	yee	
A. Plans without a family limit on deductible: \$25. \$50. \$75. \$100.	75 3,650 77 726 4,528	36,828 579,487 15,949 97,750 730,014	2,325 36,352 923 5,785 45,385	98% 101 101 105 101%
		Depen	dent	· · · · · · · · · · · · · · · · · · ·
\$25 \$50 \$75 \$100 Total	3,538 77 702 4,389	19,538 378,429 11,148 59,833 468,948	2,165 41,797 1,118 6,232 51,312	90% 99 110 105 99%
		Combined Employ	ee and Depende	nt‡
B. Plans with a family limit on deductible: 2× but less than 3×: All deductibles	67	19,429	2,690	102%
3× but less than 4×: All deductibles	321	52,438	7,005	97

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustments: amount, Step II; family limit on deductible, Step VIII.

<sup>‡</sup> Number of experience units and years of exposure for employees only.

limits of the plan. The tabular adjustments produce reasonably consistent results, though the experience is largely concentrated in one category, that of semiprivate.

Table 14 shows the dependent experience according to the definition in the contract with respect to eligibility of dependent children. The tabular adjustment made appears to have produced reasonably consistent results.

Table 15 indicates the actual to tabular ratios for groupings of case by size of the experience unit. The experience appears to indicate lower

TABLE 13

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS
NONMATERNITY EXPERIENCE BY PRIVATE-ROOM LIMIT
COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Private-Room Limit	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular †
		Emplo	yee	
Less than semiprivate.  Semiprivate. Semiprivate plus \$1-\$2. Semiprivate plus \$3. Semiprivate plus \$4. Semiprivate plus \$5. Semiprivate plus \$6. Semiprivate plus \$7 or more  Total	771 2,725 148 232 400 353 22 265	57,160 525,656 21,051 37,913 67,951 39,188 7,665 45,297	3,500 32,348 1,407 2,151 4,165 2,482 656 3,034 49,743	96% 100 113 96 103 102 124 102
		Depen	dent	
Less than Semiprivate	715 2,670 130 231 396 348 22 263 4,775	33,355 339,634 11,178 27,629 44,376 25,665 5,243 28,653 515,733	3,710 37,087 1,215 2,969 4,820 2,930 586 3,332	102% 98 105 100 98 106 94 104

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> Tabular adjustment in Step XI.

ratios of actual to tabular claims for the very large groups and higher than average ratios for the small groups.

Table 16 illustrates the number of employee experience units within selective ranges of ratios of actual to tabular claims; as is expected, the spread is greater the smaller the group. Separate A/T ratios for each year

TABLE 14

COMPREHENSIVE MEDICAL

NONJUMBO GROUPS

NONMATERNITY EXPERIENCE BY COVERAGE OF CHILDREN

FROM BIRTH AND PAST 19

COMBINED 1964-66 POLICY YEARS' EXPERIENCE

DEPENDENT

Coverage		No. Experience	Employee Years of	ACTUAL CLAIMS	RATIO OF ACTUAL
From Birth	Past 19	UNITS	Exposure*	(000)	TO 1965 TABULAR†
None	None Provided	728 415	82,468 63,207	8,714 7,392	95% 103
	Total	1,143	145,675	16,106	99%
Limited	None Provided	1,542 1,425	119,741 187,925	13,415 20,118	102% 97
	Total	2,967	307,666	33,533	99%
Full	None Provided	389 268	31,187 30,385	3,429 3,491	101% 104
	Total	657	61,572	6,920	103%
All plans	None Provided	2,659 2,108	233,396 281,517	25,558 31,001	99% 100
	Total	4,767	514,913	56,559	99%
Unknown		8	820	90	114
Total		4,775	515,733	56,649	99%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

are included for a particular experience unit, not the 1964-66 average A/T ratio for that experience unit.

Tables 17 through 20 show distributions of combined 1964-66 exposure by age, income, and dependent unit composition and were prepared to facilitate a comparison of the exposure characteristics with the claim experience shown in Tables 1-16.

<sup>†</sup> Tabular adjustment in Step VII.

Table 17 shows the percentage distributions of covered employees by age for groupings of the average age factor; Table 18 shows income distributions for groupings of the average salary factor; Table 19 shows the composition of dependent units by average age factor, and Table 20 shows this information by female percentage. In Tables 18–20 only a portion of

TABLE 15

COMPREHENSIVE MEDICAL
ALL SIZE GROUPS
NONMATERNITY EXPERIENCE BY SIZE OF EXPOSURE
COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Size	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
		Emp!o	Yeu	
<25 lives. 25-49 50-99 100-249 250-499 500-999 1,000-2,499 2,500-4,999  Total, <5,000 5,000 or more.	833 1,168 1,294 988 336 167 94 36 4,916 11	13,304 41,631 91,797 151,816 116,474 112,920 146,449 127,490 801,881 85,385	954 2,774 5,557 9,334 7,201 6,973 8,873 8,077 49,743 4,148	1177 107 96 100 101 104 102 95 101% 95
Total	4,927	887,266	53,891	100%
		Depend	dent	
<25 lives 25-49 50-99 100-249 250-499 500-999 1,000-2,499 2,500-4,999 Total, <5,000 5,000 or more	784 1,133 1,260 971 333 165 93 36 4,775	8,545 27,144 58,180 96,353 76,054 73,127 97,880 78,450 515,733 62,129	1,072 3,083 6,241 10,756 8,349 7,886 10,480 8,692 56,649 5,640	113% 103 97 101 101 102 95 98
Total	4,786	577,862	62,289	99%

<sup>\*</sup> For dependents, exposure of employees insured with respect to their dependents.

<sup>†</sup> No adjustment in tabular.

# COMPREHENSIVE MEDICAL

### ALL SIZE GROUPS

### Number of Employee Experience Units by Size of Exposure and Actual to Tabular Claims Ratio Combined 1964-66 Policy Years' Experience

			RA	ATIO OF A	CTUAL	то 1965	TABUI	LAR*		
Size	<20%	20- 49%	50- 79%	80- 119%	120- 149%	150- 199%	200- 299%	300 499%	500 % or <b>M</b> ore	Total
<25 lives	193 111 59	127 199 226	106 243 290	111 234 348	58 114 163	75 121 131	90 96 65	54 41 10	19 9 2	833 1,168 1,294
100-249 250-499 500-999	9 3 1	90	274 81 25	345 160 94	129 59 35	103 16 10	35 6 1	3		988 336 167
1,000-2,499 2,500-4,999 5,000 or more		1	17 5	53 28 9	20	1	2			94 36 11
Total	l	<u></u>	1,042	1,382	582	457	295	108	30	4,927

<sup>\*</sup> No adjustment in tabular.

### TABLE 17

# COMPREHENSIVE MEDICAL NONJUMBO GROUPS

## EMPLOYEE AGE DISTRIBUTION BY AVERAGE AGE FACTOR COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Average Age	No. Ex-	Employee		F	ERCEN	TAGE	Distr	IBUTIC	N BY	Age	
FACTOR	PERIENCE UNITS	YEARS OF EXPOSURE	<30	30- 39	40- 44	45 49	50- 54	55– 59	60 64	65 and Over	Total
55-79%	264	34,632	50%	31%	8%	5%	3%	2%	1%	0%	100%
80-89	568	83,262	37	33	12	9	5	3	1	0′	100
90-99	850	146,205	29	31	14	11	8	4	2	lil	100
100-109	952	163,229	23	29	14	12	10	7	4	1	100
110-119	862	191,682	21	25	14	13	11	9	5	2	100
120-129	604	100,437	16	23	14	13	13	11	7	3	100
130-139	385	43,716	14	20	13	14	14	12	8	5	100
140-149	200	17,942	10	18	13	13	14	14	12	6	100
150-159	122	9,434	10	17	12	13	12	13	12	11	100
160 or more	109	11,342	8	11	8	10	12	15	14	22	100
Allages	4,916	801,881	24%	27%	13%	12%	10%	7%	5%	2%	100%

## Comprehensive Medical

### NONTUMBO GROUPS

# EMPLOYEE INCOME DISTRIBUTION BY AVERAGE SALARY FACTOR COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Average Salary Factor	No. Ex- perience Units	Employee Years of Exposure	Less than \$5,000	\$5,000- \$7,500	\$7,500- \$10,000	\$10,000- \$15,000	\$15,000- \$20,000	\$20,000 or More	Total
90- 99% 100-109 110-119 120-129 130 or more	1,737 1,653 565 165 93	284,939 319,045 106,533 11,820 8,330	67% 31 16 13	22% 40 33 25 20	6% 19 25 20 12	3% 7 18 26 21	1% 2 5 8 15	1% 1 3 8 17	100% 100 100 100 100
Total	4,213	730,667	43%	31%	15%	7%	2%	2%	100%
Unknown	703	71,214		·	Distribut	ion Not A	vailable		

## TABLE 19

# COMPREHENSIVE MEDICAL NONJUMBO GROUPS

# DEPENDENT UNIT COMPOSITION BY AVERAGE AGE FACTOR COMBINED 1964-66 POLICY YEARS' EXPERIENCE

Average Age Factor	No. Experience Units	Dependent Units Years of Exposure*	Percentage of Dependent Units Containing:		
	UNITS	OF EXPOSURE.	Spouse	Children	
55- 79% 80- 89 90- 99 100-109 110-119 120-129 130-139 140-149 150-159 160 or more	75 158 210 282 264 168 110 40 38 30	5,431 19,528 31,246 41,971 54,334 26,676 11,151 6,242 3,811 4,275	91% 88 93 91 91 95 91 98 97	74% 79 76 76 76 70 72 68 64 63 62	
All ages	1,375	204,665	92%	73%	
			One De- pendent	Two or More De	
55- 79% 80- 89 90- 99 100-109 110-119 120-129 130-139 140-149 150-159 160 or more	13 33 70 92 69 50 34 18 11	2,837 5,343 16,932 17,755 15,641 6,729 2,030 1,348 345 1,149	25% 23 26 27 30 37 38 36 38 48	75% 77 74 73 70 63 62 64 62 52	
All ages	407	70,109	29%	71%	
Total	2,993	240,959	Distribu Availa	tion Not	

<sup>\*</sup> Exposure of employees insured with respect to their dependents.

the total exposure by income or dependent unit composition was distributed, since this information was not available for many groups.

# TABLE 20 COMPREHENSIVE MEDICAL NONJUMBO GROUPS DEPENDENT UNIT COMPOSITION BY FEMALE PER CENT COMBINED 1964-66 POLICY YEARS' EXPERIENCE

FEMALE PER CENT	No. Experience	DEPENDENT UNIT YEARS OF EXPOSURE*	PERCENTAGE OF DEPENDENT UNITS CONTAINING:		
	Units	OF EXPOSURE*	Spouse	Children	
<11%. 11-21 21-31 31-41 41-51 51 or more.	437 315 174 120 114 282	62,674 47,694 30,798 15,205 23,122 34,426	96% 95 94 90 89 81	73% 75 73 74 67 74	
Total	1,442	213,919	92%	73%	
i			One De- pendent	Two or More De- pendents	
<11% 11-21 21-31 31-41 41-51 51 or more	132 147 94 41 54 70	26,808 23,634 8,420 8,469 10,837 4,532	27% 26 31 31 31 34	73% 74 69 69 69 66	
Total	538	82,700	29%	71%	
Total	2,795	219,114	Distribu Availa	tion Not	

<sup>\*</sup> Exposure of employees insured with respect to their dependents.

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# 1965 TABULAR COSTS FOR COMPREHENSIVE MEDICAL EXPENSE PLANS

Tabular costs for "all cause" and "each illness" plans of Comprehensive Medical Expense Benefits are determined as set forth in the following paragraphs.

### STEP I: BASIC TABULAR COSTS

Basic annual claim costs for Plans I-V with a \$50 deductible, 80 per cent reimbursement, and a private-room limit equal to the hospital's average semi-private room-and-board charge are shown below for coverage of male employees and for coverage of one or more children.

	FOR COV	BULAR COSTS ERAGE OF:
	Male Employee	One or More Children
Plan I. Deductible applies to all expenses	\$48.25	\$41.01
Plan II. No deductible for hospital expenses; de- ductible applies to nonhospital expenses: Tabular cost for hospital expenses	27.83	28.22
Tabular cost for nonhospital expenses	21.87	17.30
Total	\$49.70	\$45.52
Ratio Plan II to Plan I Tabular	103%	111%
maximum deductible of \$50 for all expenses Ratio Plan III to Plan I Tabular	\$48.73 101%	\$41.83 102 <i>\square</i>
Plan IV. No deductible for hospital or surgical expenses; deductible applies to "other" expenses:		
Tabular cost for hospital expenses	\$27.83 8.87	\$28.22 11.68
Tabular cost for "other" expenses	14.45	8.90
Total	\$51.15 106%	$$48.80 \\ 119\%$
Plan V. No deductible for room and board expenses, deductible applies to "other" expenses:		
Tabular cost for room-and-board expenses Tabular cost for "other" expenses	\$13.58 34.91	\$13.25 28.17
Total	\$48.49 100.5%	\$41.42 101%

### STEP II: DEDUCTIBLE ADJUSTMENTS

The portion of the tabular costs of any given plan which represents the expenses subject to the deductible is multiplied by the product of the appropriate adjustment factors shown in a, b, c, and d, below. This adjusted tabular cost is then added to the tabular costs, if any, for expenses not subject to the application of the deductible.

### a) Deductible amount:

Plan I. Factor is applicable to total tabular cost:

	Adjustmen	T FACTOR
Deductible	Male Employee	Children
\$25	115%	130%
\$50	100	100 🗀
<b>\$</b> 75	93	87
\$100	87	77

Plan II Factor is applicable to nonhospital tabular cost:

	Adjustment Factor	
	Male	
DEDUCTIBLE	Employee	Children
\$25	130%	155%
\$50	100	100
\$75	86	77
\$100	75	61

Plan III. Factor is applicable to total tabular cost:

		ADJUSTMEN	T FACTOR
HOSPITAL	NONHOSPITAL	Male	
DEDUCTIBLE	DEDUCTIBLE	Employee	Children
<b>\$</b> 25	\$50	100%	100%
\$25 or \$50	\$75	94	88 ~~
\$25 or \$50	\$100	88	79

Plan IV. Factor is applicable only to tabular cost for "other" expenses:

	Adjustment	FACTOR
	Male	
DEDUCTIBLE.	Employee	Children
\$25	140%	180%
\$50	100	100
\$75	83	73
<b>\$</b> 100	69	55

Plan V. Factor is applicable only to tabular cost for "other" expenses:

	ADJUSTMEN	T FACTOR
	Male	
DEDUCTIBLE	Employee	Children
\$25	121%	143%
\$50	100	100
\$75	90	82
\$100	82	68

### b) Deductible accumulation period:

	ADJUSTMENT PACTOR			
	Male Employee and Children			
	Deductible			
	\$25	\$50	\$75	\$100
Entire benefit period	100%	100%	100%	100%
Less than entire benefit period and:				
30 days or one month	92	79	77	72
31-59 days	94	83	81	77
60 days or 2 months	96	87	84	81
61-89 days	98	91	88	85
90 days or 3 months	99	94	91	88
91–119 days	99	96	94	92
120 days or 4 months	100	97	96	94
121 days or more	100	99	98	97

## c) Benefit period:

	MALE EMPLOYEE AND CHILDREN Cut-Off Provision	
	Liberal or None	Conservative
Calendar or policy year:		
Carryover:		
60 days or more	100%	95℃
None, or less than 60 days	98	93
Variable:		
12 months	. 100	95
24 months		98
36 months		100

## d) Deductible applied against:

	Male Employee	Children
All Cause: Total disability required	. 87%	77%
Total disability not required Each Illness:	100	100
Total disability required	. 85	75
Total disability not required	. 98	93

### STEP III: COINSURANCE ADJUSTMENT

### a) Plans with or without 100 per cent payment feature:

No adjustment in the Step II tabular cost is necessary if the plan provides 80 per cent reimbursement. If the plan provides 75 per cent reimbursement, the total adjusted tabular cost from Step II is multiplied by 94 per cent.

### b) Plans with 100 per cent payment feature:

If the plan provides for a full payment feature on an area of total hospital, or hospital room-and-board expenses, and 80 per cent reimbursement of other expenses, the following additional tabular costs are added to the Step III, a, total tabular cost:

# Additional Annual Tabular Costs for Coverage of:

	Total Hospital		Room-and-Board	
	Expenses Reimbursed		Expenses Reimburse	
Area of Expenses	in Full		in Full	
REIMBURSED	Male		Male	
IN FULL	Employee	Children	Employee	Children
\$200*~\$299	\$3.62	\$5.08	\$2.31	\$2.65
\$300	4.17	5.64	2.44	2.78
\$301 -\$499	4.73	5.93	2.72	2.92
\$500	5.01	6.21	2.85	3.05
\$501 or more	5.84	6.49	3.12	3.18

<sup>\*</sup>Plans with hospital reimbursement features less than \$200 were not included in the study.

If the plan provides for a full payment feature on an area of total hospital or hospital room-and-board expenses and 75 per cent reimbursement of other expenses, the additional tabular costs shown above are multiplied by 125 per cent before being added to the Step III, a, tabular costs.

### STEP IV: AREA ADJUSTMENT

The tabular costs from Step III are multiplied by the area factor for the metropolitan area, state, or region in which employees are located. The metropolitan area factors are to be used whenever possible, then the state factors, and finally the region factors. The table of area factors is shown in Appendix II.

### STEP V: ADJUSTMENT FOR AGE AND FEMALE CONTENT (EMPLOYEE)

a) The average nonmaternity age factor for each group of employees is determined by multiplying the appropriate age factor shown in the following tabulation by the percentage of employees in the corresponding age group and summing the results:

Age Group	Nonmaternity Age Factor
Less than 30	55%
30-39	75
40-44	100
45-49	120
50-54	150
55–59	190
60-64	250
65 and over	320

If lives for ages less than 30 are not reported, multiply the per cent less than 40 by the factors below to estimate the per cent less than 30 and 30-39, and then proceed with the calculation of the average age factor:

	Adjustment	FOR
PER CENT OF EMPLOYEES	ESTIMATED PER	CENT
LESS THAN 40	Less than 30	30-39
Less than 30%	36%	64%
30-34	38	62
35-39	40	60
40-44		58
45-49	44	56
50-54		54
55-59	48	52
60-64		50
65-69	52	48
70-74		46
75-79		44
80% or more		42

- b) The female factor is obtained by multiplying the percentage female by 28 per cent, using 5 per cent as the percentage female for "less than 11 per cent," 15 per cent for "11-21 per cent," and so forth.
- c) The female factor is added to the age factor to obtain the age-female factor.
- d) The employee tabular cost adjusted for age and for iemale content is obtained by multiplying the Step IV male employee tabular cost by the age-female factor.

### STEP VI: DEPENDENT SPOUSE

The dependent spouse tabular cost is derived by adding 28 per cent of the Step IV tabular cost for a male employee to the age and female adjusted tabular cost for employee coverage from Step V, d.

### STEP VII: DEPENDENT CHILDREN

### a) 14 days to 19 years:

The average relative number of children factor for each group of employees is determined by multiplying the factors shown in the following tabulation by the per cent of employees in the corresponding age group and summing the results:

Age Group	Relative No. Children Factor
Less than 30	90%
30-39	150
40-44	140
45–49	95
50-54	65
55–59	35
60-64	15
65 and over	10

If lives for ages less than 30 are not reported, multiply the per cent less than 40 by the factors in Step V, a, to estimate the per cent less than 30

and 30-39, and then proceed with the calculation of the average family composition adjustment factor.

The children tabular cost adjusted for family composition is obtained by multiplying the Step IV children tabular by the average family composition factor.

### b) Children over age 19:

No adjustment is made for plans with children covered to age 19 years. If coverage is provided beyond the nineteenth birthday, the children tabular cost obtained from Step VII, a, is increased by  $1\frac{1}{4}$  per cent for each additional year of coverage.

## c) Children from birth:

No adjustment is made for plans with children covered from the fourteenth day of age. If coverage is provided from birth, an age-adjusted tabular cost is obtained as indicated below.

 An average maternity age adjustment factor for each group of employees is determined by using the following tabulation and the procedure described in Step V, a:

Age Group	Maternity Age Factor
Less than 30	240%
30-39	125
40-44	20
45-49	0
50-54	0
55–59	0
60-64	0
65 and over	0

2. The children from birth adjustment factor is determined by multiplying the average maternity age adjustment factor from 1 by the appropriate factor from the following tabulation, rounding the result to the nearest 0.1 per cent:

Children from Birth, Limited		Children fr	om Birth, Full
Deductible	All Plans	Plans I, III	Plans II, IV, V
\$25	0.5%	6.0%	6.0%
\$50	.4	3.5	6.5
<b>\$</b> 75	.3	1.0	7.0
\$100	0.2	0.3	7.5

The tabular cost for children from Step IV is multiplied by the adjustment factor for children from birth and the additional tabular cost so obtained is added to the dependent spouse tabular cost from Step VI.

### STEP VIII: FAMILY LIMIT ON DEDUCTIBLES

No adjustment is made for plans without a family limit on the deductible or a limit of  $4 \times$  or more. For plans with a family limit of less than  $4 \times$ , the children tabular cost from Step VII, b, is adjusted by the following factors:

ADJUSTA	EENT BY DE	DUCTIBLE	AMOUNTS
\$25	\$50	\$75	\$100
		107%	102% 100
	\$25 118%	\$25 \$50	118% 112% 107%

### STEP IX: COVERAGE OF ONE OR MORE DEPENDENTS

The tabular cost for coverage of one or more dependents is obtained by multiplying the dependent spouse tabular cost from Step VII, c, and the dependent children tabular cost from Step VIII by the following factors based upon the female per cent of employees and summing the results:

	ADJUSTMENT FACTOR	
FEMALE PER CENT	Spouse	Children
Less than 11%	97%	73%
11-21.	95	73
21-31	93	73
31–41	91	73
41–51	89	73
51-61	87	73
61-71	85	73
71–81	83	73
81–91	81	73
91–100	79	73

### STEP X: MAXIMUM BENEFIT ADJUSTMENT

No adjustment is made for plans with a \$5,000 lifetime maximum and no automatic yearly restoration. For other plans, the employee tabular cost from Step V, d, and the dependent tabular cost from Step IX are multiplied by the following percentage factors to obtain the employee and dependent tabular costs adjusted for maximum benefit:

	Maximum Adjustment		
	Without Automatic	With Automatic	
PLANS WITH A LIPETIME MAXIMUM OF:	Yearly Restoration	Yearly Restoration	
\$2,500 but less than \$5,000	95%	100%	
\$5,000	100	102	
\$5,000 but less than \$10,000	102	103	
<b>\$</b> 10,000	103	104	
\$10,000 but less than \$20,000	104	104	
\$20,000 or more (but not unlimited)	105	105	

For plans which place a limit on "each illness" but no lifetime limit on all illnesses combined, the maximum benefit adjustment is based upon the factors in the following tabulation:

	MAXIMUM ADJUSTMENT	
	Without Automatic	With Automatic
PLANS WITH AN "EACH ILLNESS" MAXIMUM OF:	Yearly Restoration	Yearly Restoration
\$2,500 but less than \$5,000	96%	101%
<b>\$5</b> ,000	101	103
\$5,000 but less than \$10,000	103	104
\$10,000	104	105
More than \$10,000	105	105

### STEP XI: PRIVATE-ROOM ADJUSTMENT

No adjustment is made for plans with a private-room limit equal to or less than the average semiprivate hospital room-and-board charge. If the plan has a private-room limit which is above the hospital's average semiprivate rate, for each one dollar of excess add \$0.20 employee and \$0.34 dependent to the Step X employee and dependent tabular costs.

### STEP XII: ADJUSTMENT FOR CALIFORNIA UCD HOSPITAL BENEFIT

For groups with insured employees in the state of California, a reduction in the Step XI employee tabular cost is made for the integration of the plan with the California UCD Hospital Benefit. No adjustment in the dependent tabular cost is necessary.

a) The basic reduction in the Step XI employee tabular cost is shown in the following tabulation for each plan of benefits. When the percentage of insured employees located in California is less than 100 per cent, the applicable reduction should be multiplied by the percentage of California employees.

		ANNUAL TABULAR COSTS	
		75/25%	80/20%
		Coinsurance	Coinsurance
(i)	Deductible applies to all expenses (Plan I):		
	\$ 25 or \$50 deductible	<b>\$</b> 6.73	<b>\$</b> 7.16
	<b>\$</b> 75 deductible	6.46	6.87
	\$100 deductible	6.26	6.66
(ii)	Deductible does not apply to hospital or hospital		
	and surgical expenses or a lower deductible applies		
	to hospital expenses (Plans II, III, IV, and V):		
	All plans regardless of deductible	6.73	7.16

b) The basic tabular reduction from the preceding tabulation is adjusted for the amount of full payment area for total hospital expenses or hospital room-and-board expenses only, in accordance with the following tabulation:

Area of Expenses	Total Hospital	Hospital Room
Reimbursed in Full	Expenses	and Board Expenses
None	100%	100%
\$200*-\$299	. 104	102
\$300	. 108	104
\$301-\$499	. 112	106
\$500	116	108
\$501 or more	. 117	109

<sup>\*</sup>Plans with hospital reimbursement features less than \$200 were not included in the study.

c) The adjusted tabular reduction from b above is multiplied by the agefemale factor from Step V, c. This final result is then subtracted from the Step XI employee tabular cost.

### STEP XIII: MENTAL AND NERVOUS DISORDERS ADJUSTMENT

No adjustment is made for plans which provide reimbursement at full plan benefits, for expenses incurred while confined in a hospital, and reduced benefits for expenses incurred while not confined. The mental and nervous adjustment is obtained by entering the following tabulation using the appropriate benefit code and multiplying the Step XII employee and dependent tabular costs by the percentage indicated.

		MENTAL AND NERVOUS		
		Disorders Ar	JUSTMENT	
	BENEFIT CODE*	Employee	Dependent	
1		101%	102%	
2		100	100	
3		99	99	
4		98	97	
5		97	95	

#### \* Benefit Code:

- 1. Covered for full plan benefits whether or not con-
- fined in a hospital.

  2. Covered for full plan benefits while confined in a hospital and reduced or limited benefits (such as 50 per cent coinsurance, limit on visits per year or per week, or dollar limits of \$1,000 or less) while not confined in a hospital.
- Covered for full plan benefits while confined in a hospital and no benefits while not confined in a hospital
- pital.
  4. Covered for reduced or limited benefits (such as 50 per cent coinsurance, limit on visits per year or per week, or dollar limits of \$1,000 or less) whether or not confined in a hospital.
- 5. Not covered in or out of hospital.

#### STEP XIV: TOTAL NONMATERNITY TABULAR CLAIMS

The final employee and dependent nonmaternity tabular costs from Step XIII are multiplied by the number of employees or dependent units insured under each plan to obtain the total aggregate dollars of nonmaternity tabular claims.

### STEP XV: TABULAR COSTS FOR MATERNITY BENEFITS

- a) The basic annual tabular costs for a \$100 maternity benefit (full reimbursement of all covered expenses without any deductible up to \$100 per pregnancy) are \$4.80 for coverage of a female employee and \$8.60 for coverage of a dependent wife. If the maximum maternity benefit is other than \$100, a proportionate adjustment is made.
- b) The employee and dependent tabular costs from a are multiplied by the average maternity age adjustment factor calculated in Step VII, c.
- c) The tabular maternity cost for employee coverage is obtained by multiplying the female employee maternity tabular cost from b by the percentage female.
- d) The tabular maternity cost for dependent coverage is obtained by multiplying the dependent wife maternity tabular cost from b by the spouse factors for coverage of one or more dependents as set forth in Step IX, using the appropriate employee percentage female.
- e) Aggregate tabular maternity claims for any plan are derived by multiplying the tabular maternity claims costs from c and d by the number of employees insured under the plan for employee coverage or by the number of dependent units for dependent coverage.

## APPENDIX II

## 1965 TABULAR AREA FACTORS BY REGION, STATE, AND METROPOLITAN AREA

Region, State, or Metropolitan Area	1965 Tabular Area Factors	Region, State, or Metropolitan Area	1965 Tabular Area Factors
Region—New England States.	100%	Missouri	92%
Connecticut	96	Kansas City	100
Bridgeport	100	St. Louis	100
Hartford-New Britain-	i	Nebraska	92
Bristol	96	Omaha	100
New Haven	104	North Dakota	92
Maine	92	South Dakota	88
Massachusetts	104	Region—Mountain States	104
Boston	108	Colorado	112
Springfield-Holyoke	100 92	Denver	120 100
New Hampshire	104	Idaho Montana	92
Providence	104	Nevada	120
Vermont	92	Utah	96
Region—Middle Atlantic		Wyoming	96
States	100	Region—Pacific States	112
Delaware	92	Čalifornia	124
District of Columbia	100	Los Angeles	140
New Jersey	100	San Diego	136
New York	96	San Francisco-Oakland	140
Albany-Schenectady-Troy	96	Oregon	100
Buffalo	96	Portland	108
New York-Northeastern	100	Washington	108
New Jersey	108 96	Seattle	116
Rochester	96 96	Region—Gulf States	100 116
Syracuse	80	Arizona	84
Allentown-Bethlehem-	00	Louisiana	100
Easton	88	New Orleans	108
Philadelphia	92	New Mexico	100
Pittsburgh	100	Oklahoma	104
Wilkes-Barre-Hazelton	88	Texas	108
Region-North Central States	96	Dallas	120
Illinois	92	Fort Worth	116
Chicago	100	Houston	120
Indiana	84	San Antonio	108
Indianapolis	84 92	Region—Southeastern States.	92 108
Kentucky	108	Alabama	108
Michigan	100	Florida.	92
Detroit	116	Miami	116
Ohio	92	Tampa	104
Akron	96	Georgia	88
Cincinnati	92	Atlanta	96
Cleveland	104	Maryland	84
Columbus	92	Baltimore	92
Dayton	92	Mississippi	100
Toledo	92	North Carolina	96
Youngstown	92	South Carolina	88 06
West Virginia	88 92	Knoxville	96 104
Wheeling	92 92	Memphis	104
Milwaukee	100	Virginia	84
Region—Plains States	100	Norfolk-Portsmouth	92
Iowa	100	Hawaii.	100
Kansas	100	Alaska	132
Minnesota	96	Nationwide	100
Minneapolis-St. Paul	108	(	