

TRANSACTIONS OF SOCIETY OF ACTUARIES 1969 REPORTS

IV. GROUP SUPPLEMENTARY MAJOR MEDICAL EXPENSE BENEFITS INSURANCE

THIS is the third annual report of the study of morbidity experience of Group Supplementary Major Medical Expense insurance. The comments made in Section III with respect to Comprehensive Medical contributions are also applicable to the Supplementary Major Medical contributions, except that aggregate actual to tabular ratios for 1966 and 1967 were increased approximately 3 per cent as a result of the revisions for those years.

Plans supplementary to Blue Cross and/or Blue Shield or any other plan of basic benefits not underwritten by the company contributing to the Group Supplementary Major Medical Expense Benefits study are excluded.

The tables in this report show the experience either for all exposure size groups combined or for nonjumbo groups only. Nonjumbo groups are those with less than 5,000 insured employees. Experience for nonjumbo groups is shown in order to minimize the effect that jumbo groups might have upon the ratios of actual to tabular claims in any of the groupings shown. This report contains experience for policy years ending in 1964, 1965, 1966, 1967, and 1968. 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. The basis for the tabular claims is the 1965 Supplementary Major Medical Tabular set forth in the Mahder-Pettengill paper (*TSA*, XX, 85). The 1965 Supplementary Tabular makes adjustments for most of the factors which influence the cost of Supplementary Major Medical Expense Benefits, but no adjustment was made for the income distribution of the employee group.

The Committee wishes to point out that the tabular claim basis was developed by using only a limited amount of data under Group Supplementary Major Medical expense plans and that the tabulars are still experimental in nature. Caution should be used when interpreting the data contained in this report due to the effect on experience resulting from the COB provision, the advent of Medicare, and resulting hospital utilization trends as indicated in the Introduction to this report.

Any comparison between Supplementary Major Medical and Comprehensive Medical experience should recognize that the respective tabulars generally contain different adjustments for the same cost factor. Also, the tabulars are different in nature; the supplementary tabular is with respect to benefits supplemental to basic benefits and after a deductible, while the comprehensive tabular relates to plans with first-dollar benefits or to benefits payable after an initial deductible and is not supplemental to basic benefits.

TABLE 1
SUPPLEMENTARY MAJOR MEDICAL
ALL SIZE GROUPS
EXPERIENCE BY PLAN
COMBINED 1966-68 POLICY YEARS' EXPERIENCE

Plan	No. Experience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular
	Employee			
All-Cause plans	4,668	880,457	16,064	133%
	Dependent			
All-Cause plans	4,577	596,778	16,794	133%

* For dependents, exposure of employees insured with respect to their dependents.

Contributing Companies

The same companies that contributed to the Comprehensive Study in Section III also contributed to the Supplementary Major Medical Study. The results are the composite experience of variations in company practice and in underlying administrative and claim procedures, as well as of variations in experience among groups.

Analysis of Experience

Table 1 shows combined 1966-68 experience for "all cause" plans for all size groups. 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 changes in the ratio of actual to tabular claims from year to year. The results in Table 2 are extremely sensitive to the

annual rate of change in medical charge levels, and the rate at which base plan benefits are changed to reflect these increasing charges. The actual to tabular ratios in Table 2 are indicative of the annual increase in claim cost which applies with respect to the particular mix of Supplementary Major Medical Expense Benefits contributed to this study. The tabular has been designed to minimize any changes in ratios of actual to tabular if the level of base plan benefits is regularly increased to reflect increased charge levels. For plans with no changes in base plan benefits during the period of years in the study, the ratios of actual to tabular should increase substantially because of increased charges for medical services. The

TABLE 2
SUPPLEMENTARY MAJOR MEDICAL
NONJUMBO GROUPS
EXPERIENCE BY PLAN AND BY YEAR
1964-68 POLICY YEARS' EXPERIENCE

PLAN	RATIO OF ACTUAL TO 1965 TABULAR FOR POLICY YEARS ENDING IN:				
	1964	1965	1966	1967	1968
	Employee				
All-Cause plans.....	91%	99%	109%	134%	166%
	Dependent				
All-Cause plans.....	91%	96%	113%	133%	158%

ratios in Table 2 are a composite of plans with and without a change in the level of base plan benefits but do not include the experience of plans for which a significant change in the level of base plan benefits occurred during the policy year concerned, since such experience is not contributed to the study.

The ratios of actual to tabular increase from year to year, with a substantial increase indicated for policy years ending in 1967 and 1968. The 1967 and 1968 increases are probably caused by accelerated increases in medical care charges for hospital and physician services which began during the latter part of 1966, although the factors outlined in the Introduction to this report would also influence the results.

Table 3 contains the combined employee and dependent experience by

TABLE 3
 SUPPLEMENTARY MAJOR MEDICAL
 NONJUMBO GROUPS
 EXPERIENCE BY REGION, STATE, AND METROPOLITAN AREA
 EMPLOYEE AND DEPENDENT COMBINED 1966-68 POLICY YEARS' EXPERIENCE

Region,* State,† or Metropolitan Area	No. Experience Units‡	Years of Exposure‡	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
<i>Total, all locations</i>	7,059	1,088,263	39,688	133%	.....
New England States:					
Connecticut.....	42	12,697	428	117%	104%
Bridgeport-Stamford-Norwalk	28	6,328	269	126	112
Hartford-New Britain-Bristol	41	5,795	262	145	104
New Haven-Waterbury.....	23	3,137	153	145	106
Total.....	134	27,957	1,112	128%	.....
Maine.....	33	3,736	106	85%	92%
Massachusetts.....	103	12,153	475	145%	104%
Boston.....	100	10,639	420	116	116
Springfield-Holyoke.....	32	7,020	232	149	104
Total.....	235	29,812	1,127	133%	.....
New Hampshire.....	50	9,236	283	133%	92%
Rhode Island.....				§	108%
Providence.....				§	108
Vermont.....	33	8,850	256	137%	92%
Region.....	10	1,902	98	171%	104%
<i>Region total</i>	501	81,797	3,001	130%	.....
Middle Atlantic States:					
Delaware.....				§	96%
District of Columbia.....	53	4,272	178	145%	108%
New Jersey.....	65	7,155	261	138%	108%
New York.....	208	21,350	698	117%	100%
Albany-Schenectady-Troy.....	19	1,056	37	179||	108
Buffalo.....	31	4,216	156	152	100
New York-Northeastern New Jersey.....	236	30,135	1,548	152	116
Rochester.....	10	1,105	17	53||	108
Syracuse.....	39	3,230	153	144	108
Total.....	543	61,092	2,609	139%	.....
Pennsylvania.....	254	40,283	1,227	131%	88%
Allentown-Bethlehem-Easton.....				§	92
Philadelphia.....	72	8,903	416	183	96
Pittsburgh.....	37	2,545	101	144	100
Wilkes-Barre-Hazleton.....				§	92
Total.....	370	52,060	1,754	141%	.....

* Excludes groups coded for a specific state or metropolitan area.

† Excludes groups coded for a specific metropolitan area.

‡ Employee only.

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

|| Less than \$50,000 of tabular claims.

TABLE 3—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
Region.....	15	1,905	95	190%	104%
<i>Region total</i>	<i>1,048</i>	<i>127,453</i>	<i>4,918</i>	<i>141%</i>	.....
North Central States:					
Illinois.....	249	34,389	916	109%	92%
Chicago.....	402	59,558	2,413	138	112
Total.....	651	93,947	3,329	128%	.....
Indiana.....	158	24,672	697	139%	84%
Indianapolis.....	48	11,544	389	121	100
Total.....	206	36,216	1,086	132%	.....
Kentucky.....	40	4,522	119	134%	84%
Louisville.....	11	638	33	200	92
Total.....	51	5,160	152	144%	.....
Michigan.....	241	31,267	756	125%	92%
Detroit.....	109	12,188	561	154	112
Total.....	350	43,455	1,317	136%	.....
Ohio.....	195	34,563	835	110%	88%
Akron.....	11	1,135	34	124||	100
Cincinnati.....	27	1,804	49	94	100
Cleveland.....	16	1,739	41	81	112
Columbus.....	18	2,274	91	195||	92
Dayton.....	13	7,475	153	124	88
Toledo.....	21	3,212	120	162	100
Youngstown.....	18	2,399	65	139||	92
Total.....	319	54,601	1,388	118%	.....
West Virginia.....	83	13,936	412	148%	80%
Wheeling-Steubenville.....				§	84
Total.....	89	14,214	418	147%	.....
Wisconsin.....	146	28,023	833	135%	88%
Milwaukee.....	81	11,791	344	122	100
Total.....	227	39,814	1,177	131%	.....
Region.....	58	21,655	782	121%	104%
<i>Region total</i>	<i>1,951</i>	<i>309,062</i>	<i>9,649</i>	<i>129%</i>	.....
Plains States:					
Iowa.....	55	7,285	144	100%	84%
Kansas.....	92	25,160	997	182%	96%
Minnesota.....	74	5,676	176	124%	92%
Minneapolis-St. Paul.....	66	6,564	191	108	104
Total.....	140	12,240	367	115%	.....

* Excludes groups coded for a specific state or metropolitan area.

† Excludes groups coded for a specific metropolitan area.

‡ Employee only.

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

|| Less than \$50,000 of tabular claims.

TABLE 3—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
Missouri.....	58	6,548	196	115%	88%
Kansas City.....	52	5,454	199	136	100
St. Louis.....	48	4,073	163	142	100
Total.....	158	16,075	558	129%	
Nebraska.....	24	2,408	54	115%	80%
Omaha.....	31	1,760	74	202||	96
Total.....	55	4,168	128	154%	
North Dakota.....	11	1,176	43	181%||	88%
South Dakota.....	16	724	10	69%||	84%
Region.....	13	12,820	376	92%	92%
Region total.....	540	79,648	2,623	133%	
Mountain States:					
Colorado.....	18	916	43	234%||	88%
Denver.....	16	1,568	59	164%||	100
Total.....	34	2,484	102	188%	
Idaho.....	24	2,087	64	102%	98%
Montana.....				§	96%
Nevada.....	20	3,714	198	224%	112%
Utah.....	41	3,165	92	119%	92%
Wyoming.....	11	1,625	50	112%||	88%
Region.....				§	96%
Region total.....	140	14,160	539	152%	
Pacific States:					
California.....	236	26,798	1,604	160%	128%
Los Angeles.....	342	35,095	1,993	141	140
San Diego.....	42	3,017	201	139	136
San Francisco-Oakland.....	58	2,717	137	139	140
Total.....	678	67,627	3,935	148%	
Oregon.....	21	2,581	49	101%||	100%
Portland.....				§	108
Total.....	25	2,771	62	115%	
Washington.....	22	1,859	73	114%	112%
Seattle.....	14	2,950	93	111	120
Total.....	36	4,809	166	112%	

TABLE 3—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
Region	17	9,816	387	100%	120%
<i>Region total</i>	<i>756</i>	<i>85,023</i>	<i>4,550</i>	<i>140%</i>	
Gulf States:					
Arizona	80	13,696	622	147%	116%
Arkansas	45	5,169	151	121%	84%
Louisiana	129	10,524	376	116%	92%
New Orleans	33	2,535	85	95	100
Total	162	13,059	461	112%	
New Mexico	36	5,846	194	126%	100%
Oklahoma	73	8,714	391	160%	96%
Texas	153	17,080	837	139%	96%
Dallas	53	8,491	391	131	108
Fort Worth	20	3,409	177	135	100
Houston	82	8,437	495	149	100
San Antonio	13	1,278	57	172‡	100
Total	321	38,695	1,957	140%	
Region	32	4,968	263	153%	100%
<i>Region total</i>	<i>749</i>	<i>90,147</i>	<i>4,039</i>	<i>138%</i>	
Southeastern States:					
Alabama	27	4,157	103	137%	84%
Birmingham	12	926	38	179‡	92
Total	39	5,083	141	146%	
Florida	199	28,510	1,111	127%	100%
Miami	97	7,517	404	130	120
Tampa	31	3,460	124	113	104
Total	327	39,487	1,639	126%	
Georgia	75	11,395	348	134%	80%
Atlanta	54	23,386	842	149	92
Total	129	34,781	1,192	144%	
Maryland	46	3,819	115	132%	96%
Baltimore	56	6,733	227	118	104
Total	102	10,552	342	122%	
Mississippi	63	6,557	191	124%	84%
North Carolina	150	20,703	505	136%	72%
South Carolina	18	4,524	107	178%	72%

* Excludes groups coded for a specific state or metropolitan area.

† Excludes groups coded for a specific metropolitan area.

‡ Employee only.

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

¶ Less than \$50,000 of tabular claims.

TABLE 3—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
Tennessee.....	56	14,066	519	139%	92%
Knoxville.....	10	631	20	89||	96
Memphis.....	11	2,298	62	103	100
Total.....	77	16,995	601	132%	.....
Virginia.....	115	15,853	510	125%	84%
Norfolk-Portsmouth.....	31	1,521	76	188||	92
Total.....	146	17,374	586	131%	.....
Region.....	47	13,154	420	103%	84%
Region total.....	1,098	169,210	5,723	130%	.....
Hawaii.....				§	104%
Alaska.....				§	136%
Total states and regions.....	6,798	958,377	35,107	134%	.....
All other#.....	261	129,886	4,581	129%	100%

Less than 75 per cent of employees in one region, state, or metropolitan area.

metropolitan area, state, and region. This table, as in prior reports, includes the reported experience under "each illness" plans. These plans include 22 per cent of the total claims. The 1965 Supplementary Tabular area factors are also shown in the table to facilitate comparisons with actual experience.

In assigning metropolitan area codes to the data submitted, contributing companies used state and 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 portion of the employees are actually located in one of the metropolitan areas shown in Table 3. The actual to tabular ratios indicated in Table 3 are influenced by such things as the tabular area assigned, variations in the type and level of basic benefits provided, and variations in utilization of benefits. A 1 per cent change in the tabular area factor will produce approximately a 2 per cent change in the A/T ratio.

The ratios of actual to tabular claims indicate that the tabular area factors appear to be satisfactory for most areas with a substantial volume of experience. Caution should be used in interpreting the results by area

since experience under this coverage can fluctuate widely from year to year and from case to case, regardless of the size of the case.

Table 4 summarizes experience by the level of base plan benefits. This

TABLE 4
SUPPLEMENTARY MAJOR MEDICAL
NONJUMBO GROUPS
EXPERIENCE BY LEVEL OF BASE PLAN BENEFITS
COMBINED 1966-68 POLICY YEARS' EXPERIENCE

Base Plan Per Cent Total Reduction	No. Ex- perience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular†
<i>Employee</i>				
40%	19	7,160	150	75%
40-49	177	36,872	829	105
50-59	623	87,854	2,045	121
60-69	1,462	201,237	4,163	131
70-79	1,973	321,890	5,732	133
80-89	2,482	376,670	5,909	147
90 or more	323	56,580	709	156
Total	7,059	1,088,263	19,537	133%
<i>Dependent</i>				
40%	30	3,599	162	102%
40-49	183	23,901	861	112
50-59	632	63,989	2,337	122
60-69	1,461	142,948	4,448	128
70-79	1,942	219,843	6,116	138
80-89	2,397	249,542	5,619	140
90 or more	284	34,684	608	149
Total	6,929	738,506	20,151	133%

* For dependents, exposure of employees insured with respect to their dependents.

† Tabular adjustment in Step III.

table includes experience under both "all cause" and "each illness" plans. The results for 1966-68 show increasing actual to tabular ratios as the total reduction per cent increases, which is consistent with the previous year's report.