

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1968 REPORTS**

**IV. GROUP SUPPLEMENTARY MAJOR MEDICAL
EXPENSE BENEFITS INSURANCE**

THIS is the second annual report on the study of the morbidity experience of Group Supplementary Major Medical Expense insurance. This report is abbreviated because several companies were unable to contribute 1967 experience in time to be included, and the experience according to factors such as age and sex does not differ significantly from that indicated in the previous year's report. One of these companies has, in the past, contributed a substantial portion of the "each illness" experience, which accounts for the exclusion of "each illness" experience from Tables 1 and 2. Several companies, however, were able to increase the size of their contributions. The Committee hopes to obtain the missing 1967 experience and to include it in the *1969 Report*.

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 1963, 1964, 1965, 1966, and 1967. 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.

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 1965-67 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 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. The 1967 increases are probably caused by accelerated increases in medical care charges for hospital and physician services which began during the latter

TABLE 1
 SUPPLEMENTARY MAJOR MEDICAL
 ALL SIZE GROUPS
 EXPERIENCE BY PLAN
 COMBINED 1965-67 POLICY YEARS' EXPERIENCE

Plan	No. Ex- perience Units	Employee Years of Exposure*	Actual Claims (000)	Ratio of Actual to 1965 Tabular
	Employee			
All-Cause plans	4,886	880,371	14,748	114%
	Dependent			
All-Cause plans	4,780	604,407	15,710	114%

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

TABLE 2
 SUPPLEMENTARY MAJOR MEDICAL
 NONJUMBO GROUPS
 EXPERIENCE BY PLAN AND BY YEAR
 1963-67 POLICY YEARS' EXPERIENCE

PLAN	RATIO OF ACTUAL TO 1965 TABULAR FOR POLICY YEARS ENDING IN:				
	1963	1964	1965	1966	1967
	Employee				
All-Cause plans	89%	91%	99%	109%	134%
	Dependent				
All-Cause plans	86%	91%	96%	112%	134%

TABLE 3

SUPPLEMENTARY MAJOR MEDICAL
NONJUMBO GROUPS

EXPERIENCE BY REGION, STATE, AND METROPOLITAN AREA

EMPLOYEE AND DEPENDENT COMBINED 1965-67 POLICY YEARS' EXPERIENCE

Region,* State,† or Metropolitan Area	No. Ex- perience Units‡	Years of Exposure‡	Actual Claims (000)	Ratio of Actual to 1965 Tabular	1965 Tabular Area Factor
<i>Total, all locations</i>	8,518	1,212,530	39,753	111%	.....
New England States:					
Connecticut	52	12,261	437	117%	104%
Bridgeport-Stamford-Nor- walk	24	4,682	184	112	112
Hartford-New Britain- Bristol	42	5,470	210	120	104
New Haven-Waterbury	27	3,421	135	115	116
Total	145	25,834	966	116%	.....
Maine	27	3,795	95	74%	92%
Massachusetts	97	16,570	569	120%	104%
Boston	117	11,498	437	110	116
Springfield-Holyoke	39	6,460	185	118	104
Total	253	34,528	1,191	116%	.....
New Hampshire	37	6,396	173	111%	92%
Rhode Island				§	108%
Providence				§	108
Vermont	32	6,388	173	127%	92%
Region	13	1,618	35	69%	104%
<i>Region total</i>	512	78,702	2,646	113%	.....
Middle Atlantic States:					
Delaware				§	96%
District of Columbia	67	6,885	234	127%	108%
New Jersey	84	11,381	453	118%	108%
New York	230	21,666	802	122%	100%
Albany-Schenectady-Troy	19	1,152	29	129||	108
Buffalo	34	6,041	183	116	100
New York-Northeastern New Jersey	291	44,933	1,785	106	116
Rochester	11	776	13	61||	108
Syracuse	32	2,690	114	120	108
Total	617	77,258	2,926	111%	.....
Pennsylvania	316	46,869	1,362	117%	88%
Allentown-Bethlehem-Easton Philadelphia	97	8,697	339	§	92
Pittsburgh	58	5,797	179	142	96
Wilkes-Barre-Hazleton				112	100
Total				§	92
Total	481	62,071	1,899	120%	.....

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

† Excludes groups coded for a specific metropolitan area.

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

‡ Employee only.

|| 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	19	2,579	136	203%	104%
<i>Region total</i>	<i>1,271</i>	<i>160,291</i>	<i>5,651</i>	<i>116%</i>	.....
North Central States:					
Illinois	306	39,002	979	100%	92%
Chicago	400	41,670	1,594	115	112
Total	706	80,672	2,573	108%	.....
Indiana	205	39,671	1,010	110%	84%
Indianapolis	72	15,945	436	97	100
Total	277	55,616	1,446	106%	.....
Kentucky	40	3,993	91	113%	84%
Louisville	14	888	35	134||	92
Total	54	4,881	126	118%	.....
Michigan	279	34,625	746	103%	92%
Detroit	134	15,662	559	125	112
Total	413	50,287	1,305	111%	.....
Ohio	201	34,066	714	97%	88%
Akron	15	1,365	36	99||	100
Cincinnati	36	3,583	108	105	100
Cleveland	30	3,737	130	110	112
Columbus	16	2,416	60	113	92
Dayton	12	4,825	71	74	88
Toledo	28	3,314	116	131	100
Youngstown	17	1,993	40	87||	92
Total	355	55,299	1,275	100%	.....
West Virginia	82	11,258	279	117%	80%
Wheeling-Steubenville . . . . .	.....	.....	.....	§	84
Total	88	11,652	295	119%	.....
Wisconsin	154	27,171	707	115%	88%
Milwaukee	115	20,521	493	99	100
Total	269	47,692	1,200	108%	.....
Region	64	26,515	892	105%	104%
<i>Region total</i>	<i>2,226</i>	<i>332,614</i>	<i>9,112</i>	<i>107%</i>	.....
Plains States:					
Iowa	89	9,737	157	77%	84%
Kansas	117	18,198	656	141%	96%
Minnesota	80	9,413	220	90%	92%
Minneapolis-St. Paul	78	8,143	255	103	104
Total	158	17,556	475	96%	.....

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

† Excludes groups coded for a specific metropolitan area.

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

‡ Employee only.

|| 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.....	53	5,023	129	89%	88%
Kansas City.....	52	5,921	212	116	100
St. Louis.....	64	4,205	137	103	100
Total.....	169	15,149	478	104%	.....
Nebraska.....	34	3,008	74	101%	80%
Omaha.....	42	2,358	94	180	96
Total.....	76	5,366	168	134%	.....
North Dakota.....	19	1,377	43	142%||	88%
South Dakota.....	26	2,261	57	97%	84%
Region.....	19	12,946	417	89%	92%
<i>Region total</i>	<i>673</i>	<i>82,590</i>	<i>2,451</i>	<i>106%</i>	.....
Mountain States:					
Colorado.....	26	1,639	51	144%||	88%
Denver.....	24	1,886	52	119||	100
Total.....	50	3,525	103	130%	.....
Idaho.....	26	1,481	42	89%||	96%
Montana.....	19	649	19	79%||	96%
Nevada.....	32	3,312	142	137%	112%
Utah.....	58	4,796	117	99%	92%
Wyoming.....	19	2,053	51	90%	88%
Region.....				§	96%
<i>Region total</i>	<i>209</i>	<i>16,387</i>	<i>485</i>	<i>109%</i>	.....
Pacific States:					
California.....	331	34,381	1,733	126%	128%
Los Angeles.....	427	42,570	2,162	118	140
San Diego.....	47	3,221	164	105	136
San Francisco-Oakland.....	64	3,789	148	88	140
Total.....	869	83,961	4,207	119%	.....
Oregon.....	36	3,835	84	107%	100%
Portland.....				§	108
Total.....	41	4,079	92	106%	.....
Washington.....	30	2,489	81	101%	112%
Seattle.....	15	1,966	45	68	120
Total.....	45	4,455	126	86%	.....

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	19	10,013	286	74%	120%
<i>Region total</i>	<i>974</i>	<i>102,508</i>	<i>4,711</i>	<i>113%</i>	.....
Gulf States:					
Arizona.....	99	13,275	612	138%	116%
Arkansas.....	55	5,813	144	98%	84%
Louisiana.....	175	15,794	625	110%	92%
New Orleans.....	44	3,442	94	78	100
Total.....	219	19,236	719	105%	.....
New Mexico.....	51	4,792	176	122%	100%
Oklahoma.....	110	9,695	413	135%	96%
Texas.....	194	26,652	1,009	108%	96%
Dallas.....	62	9,350	392	124	108
Fort Worth.....	28	3,941	174	114	100
Houston.....	103	12,000	616	133	100
San Antonio.....	12	929	51	144	100
Total.....	399	52,872	2,242	118%	.....
Region.....	26	3,950	192	136%	100%
<i>Region total</i>	<i>959</i>	<i>109,633</i>	<i>4,498</i>	<i>119%</i>	.....
Southeastern States:					
Alabama.....	47	6,186	128	93%	84%
Birmingham.....	16	1,202	33	113	92
Total.....	63	7,388	161	96%	.....
Florida.....	228	30,050	1,039	108%	100%
Miami.....	96	8,379	405	114	120
Tampa.....	32	2,765	95	103	104
Total.....	356	41,194	1,539	109%	.....
Georgia.....	97	12,696	318	115%	80%
Atlanta.....	61	10,328	367	126	92
Total.....	158	23,024	685	121%	.....
Maryland.....	42	3,411	82	89%	96%
Baltimore.....	79	10,351	314	107	104
Total.....	121	13,762	396	103%	.....
Mississippi.....	92	8,240	211	103%	84%
North Carolina.....	149	21,854	466	106%	72%
South Carolina.....	43	6,970	162	101%	72%

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

† Excludes groups coded for a specific metropolitan area.

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

§ Employee only.

¶ 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.....	83	15,650	644	143%	92%
Knoxville.....				§	96
Memphis.....	13	1,683	53	111||	100
Total.....	104	18,339	733	136%	.....
Virginia.....	148	21,154	583	108%	84%
Norfolk-Portsmouth.....	39	2,084	70	138	92
Total.....	187	23,238	653	110%	.....
Region.....	52	12,615	381	97%	84%
Region total.....	1,325	176,624	5,387	115%	.....
Hawaii.....				§	104%
Alaska.....				§	136%
Total, states and regions.....	8,166	1,062,130	35,031	113%	.....
All other#.....	352	150,400	4,722	103%	100%

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

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 metropolitan area, state, and region. This table, as in prior reports, includes the reported experience under "each illness" plans. These plans include 27 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 the table. The actual to tabular ratios indicated in this table 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
SUPPLEMENTARY MAJOR MEDICAL
NONJUMBO GROUPS
EXPERIENCE BY LEVEL OF BASE PLAN BENEFITS
COMBINED 1965-67 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†
Employee				
<40%.....	47	16,031	365	82%
40-49.....	375	75,896	1,581	101
50-59.....	1,033	143,204	2,866	104
60-69.....	2,123	280,848	4,748	109
70-79.....	2,550	354,448	5,358	113
80-89.....	2,149	305,637	3,994	121
90 or more.....	241	36,466	436	146
Total.....	8,518	1,212,530	19,348	111%
Dependent				
<40%.....	64	8,412	370	102%
40-49.....	382	55,524	1,738	97
50-59.....	1,033	102,549	3,297	109
60-69.....	2,127	200,904	5,169	108
70-79.....	2,495	249,114	5,686	114
80-89.....	2,060	202,133	3,862	118
90 or more.....	203	19,411	283	122
Total.....	8,364	838,047	20,405	111%

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

† Tabular adjustment in Step III.

Table 4 summarizes experience by the level of base plan benefits. This table includes experience under both "all cause" and "each illness" plans. The results for 1965-67 show increasing actual to tabular ratios as the total reduction per cent increases, which is consistent with the previous year's report.