

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1959 REPORTS**

**REPORT OF THE COMMITTEE ON ACCIDENT AND
SICKNESS EXPERIENCE IN PLANS INSURED
ON THE GROUP BASIS**

**GROUP WEEKLY INDEMNITY INSURANCE AND GROUP
HOSPITAL AND SURGICAL EXPENSE INSURANCE**

THIS is the twelfth annual report on the continuing study of the morbidity experience of Group Weekly Indemnity insurance and Group Employee and Dependent Hospital and Surgical Expense insurance.

In compiling these reports, the Committee includes the available experience of employer-employee groups regardless of size. The experience of insured groups outside of the continental United States, and of trusteeship and association cases insuring employees of the member employers, and of union cases, whether or not insurance depends on continued employment, is excluded. The data for Group Weekly Indemnity insurance exclude the experience of plans written under State Cash Sickness laws.

Data in the report for Weekly Indemnity insurance and Employee Hospital Expense insurance are based on the experience of groups in those industrial classifications which the contributing companies individually rate standard for premium purposes; tables covering these plans are headed "Nonrated Industries." Data for Surgical Expense insurance, Employee or Dependent, and for Dependent Hospital Expense insurance are based on the experience of groups regardless of industrial classification; tables covering these plans are headed "All Industries."

Annual Claim Costs

The basic results of the study are presented in the form of annual claim costs for each plan studied; in the case of employee plans, groups are kept separate by the percent of their total exposure on female lives. The experience for the three latest policy years, combined, is furnished. In each instance, the annual cost is derived by dividing incurred claims by exposure. These results are shown in Tables 1 and 3 through 6.

In the case of Weekly Indemnity insurance, the exposure unit is dollars of weekly benefit; in the case of Hospital Expense insurance, the unit is dollars of daily benefit. For Surgical Expense insurance, the exposure is in units of \$150 maximum benefit for plans based on the "Standard Schedule," or in units of \$200 maximum benefit for plans based on the "Select Schedule."

TABLE 1
 COMBINED 1956-58 POLICY YEARS' EXPERIENCE
 GROUP WEEKLY INDEMNITY INSURANCE
 WITH 6 WEEKS MATERNITY BENEFIT
 NONRATED INDUSTRIES

FEMALE PERCENT	NUMBER OF EXPERIENCE UNITS	WEEKLY INDEMNITY EXPOSED	CLAIMS	ANNUAL CLAIM COST*	NUMBER OF EXPERIENCE UNITS	WEEKLY INDEMNITY EXPOSED	CLAIMS	ANNUAL CLAIM COST*
13 WEEK PLANS								
1st Day Accident and 4th Day Sickness				4th Day Accident and 4th Day Sickness				
<11%	2,061	8,890,450	5,346,210	\$.60	207	1,489,840	890,096	\$.60
11-21	808	4,445,060	2,844,213	.64	113	2,312,840	1,089,189	.47
21-31	422	2,652,780	1,919,498	.72	19	55,050	38,124	.69
31-41	183	1,540,390	1,545,586	1.00	24	89,130	86,930	.98
41-51	86	199,600	180,402	.90	12	33,130	26,668	.80
51-61	61	896,230	801,038	.89	25	239,980	240,142	1.00
61-71	41	106,730	96,765	.91	12	30,050	29,476	.98
71-81	12	35,830	29,428	.82	4	26,890	25,712	.96
81-91	22	54,570	69,336	1.27	1	230	83	.36
91-100	4	7,220	7,948	1.10	0	0	0	.....
Total	3,700	18,828,860	12,840,424	.....	417	4,277,140	2,426,420	.....
1st Day Accident and 8th Day Sickness				8th Day Accident and 8th Day Sickness				
<11%	5,662	26,844,950	12,987,359	\$.48	653	5,421,540	3,087,626	\$.57
11-21	2,750	11,359,160	5,717,830	.50	346	5,146,470	2,800,738	.54
21-31	1,457	6,475,640	3,839,086	.59	192	3,215,550	2,030,170	.63
31-41	945	5,675,000	4,154,481	.73	180	1,954,000	1,320,910	.68
41-51	657	2,957,460	2,457,437	.83	124	1,356,110	1,238,793	.91
51-61	447	2,418,600	1,984,263	.82	82	671,330	528,672	.79
61-71	329	1,297,700	1,070,895	.83	50	280,960	226,741	.81
71-81	229	874,990	752,684	.86	58	308,650	211,819	.69
81-91	124	379,830	415,119	1.09	45	252,440	266,099	1.05
91-100	26	110,400	84,073	.76	12	66,980	70,586	1.05
Total	12,626	58,393,730	33,463,227	.....	1,742	18,674,030	11,782,154	.....
26 WEEK PLANS								
1st Day Accident and 8th Day Sickness				8th Day Accident and 8th Day Sickness				
<11%	1,787	24,866,340	17,844,301	\$.72	247	10,615,250	7,356,533	\$.69
11-21	615	12,064,840	9,631,524	.80	110	3,015,490	1,766,255	.59
21-31	354	6,024,920	4,943,522	.82	51	2,110,140	1,673,460	.79
31-41	175	1,607,650	1,523,053	.95	29	249,250	189,610	.76
41-51	109	1,759,690	1,777,802	1.01	19	371,660	287,346	.77
51-61	76	1,764,840	1,603,137	.91	12	60,790	76,235	1.25
61-71	37	154,520	165,539	1.07	3	52,740	59,797	1.13
71-81	11	78,290	73,021	.93	2	20,980	18,642	.89
81-91	5	27,210	45,392	1.67	1	11,410	5,456	.48
91-100	1	11,110	8,497	.76	0	0	0	.....
Total	3,170	48,359,410	37,615,788	.....	474	16,507,710	11,433,334	.....

* Per \$1.00 of exposure.

Trend of Experience

In order to analyze the trend underlying the experience under the plans studied, standardized morbidity ratios are presented in Tables 2 and 7 for each of the last seven policy years.

The standardized morbidity ratio is based on the level of experience of the current report, in this case 1956-1958. Thus, the levels of the ratios shown this year differ from those of previous reports, because of the different basis, but the resulting trends are consistent.

TABLE 2
GROUP WEEKLY INDEMNITY INSURANCE
NONRATED INDUSTRIES
SECULAR TREND
STANDARDIZED MORBIDITY RATIOS
Base: 1956-58 Policy Years' Experience

Policy Year Experience	1-4-13 and 4-4-13 Plans	1-8-13 and 8-8-13 Plans	1-8-26 and 8-8-26 Plans	All Plans
1952.....	103%	104%	98%	101%
1953.....	108	107	97	102
1954.....	106	105	98	102
1955.....	98	97	95	96
1956.....	99	99	100	99
1957.....	100	102	98	100
1958.....	101	99	100	100

It appears that the experience under the Group Weekly Indemnity insurance is continuing at the level of the last two years. However, the latest year's Employee Hospital and Surgical experience shows a substantial increase, while the Dependents is irregular in a generally upward trend.

Male and Female Costs

Male and female parameters have been derived for each employee plan, together with a parameter ratio (female parameter divided by male parameter), which are shown in Table 8. These parameters are the result of the composite experience of groups whose claim costs vary widely as a result of such influences as geographical location, industrial classification, age distribution, etc. The resulting lack of homogeneity produces possible variations and inconsistencies when male and female costs are derived or compared.

TABLE 3
COMBINED 1956-58 POLICY YEARS' EXPERIENCE
EMPLOYEE GROUP HOSPITAL EXPENSE INSURANCE
NONRATED INDUSTRIES

FEMALE PERCENT	NUMBER OF EXPERIENCE UNITS	DAILY BENEFIT EXPOSED	CLAIMS	ANNUAL CLAIM COST*	NUMBER OF EXPERIENCE UNITS	DAILY BENEFIT EXPOSED	CLAIMS	ANNUAL CLAIM COST*
10X REIMBURSEMENT PLANS								
31 Day, 10X Maternity Benefit				31 Day, 14+10X Maternity Benefit				
<11%	1,244	1,588,661	2,240,385	\$1.41	276	430,275	603,842	\$1.40
11-21	732	873,811	1,257,215	1.44	140	176,128	227,728	1.29
21-31	467	703,428	1,057,420	1.50	105	226,473	320,244	1.41
31-41	295	749,984	1,271,165	1.69	49	105,180	136,226	1.30
41-51	219	323,603	594,371	1.84	40	70,881	107,459	1.52
51-61	170	359,163	679,901	1.89	50	76,354	136,121	1.78
61-71	143	180,442	363,211	2.01	24	26,879	48,805	1.82
71-81	104	209,649	425,317	2.03	13	16,435	35,165	2.14
81-91	83	131,272	320,031	2.44	2	1,132	2,253	1.99
91-100	13	16,716	31,945	1.91	3	2,308	5,216	2.26
Total	3,470	5,136,729	8,240,961	.....	702	1,132,045	1,623,059	.....
70 Day, 10X Maternity Benefit								
<11%	179	263,480	399,065	\$1.51				
11-21	112	109,826	165,542	1.51				
21-31	93	108,033	161,106	1.49				
31-41	41	49,754	80,065	1.61				
41-51	36	105,574	191,522	1.81				
51-61	32	63,856	121,921	1.91				
61-71	16	28,691	67,936	2.37				
71-81	3	1,237	2,899	2.34				
81-91	3	1,025	2,931	2.86				
91-100	0	0	0	.....			
Total	515	731,476	1,192,987	.....			
20X REIMBURSEMENT PLANS								
31 Day, 10X Maternity Benefit				70 Day, 10X Maternity Benefit				
<11%	1,025	1,148,825	1,845,496	\$1.61	568	975,267	1,720,119	\$1.76
11-21	593	737,444	1,252,808	1.70	350	704,979	1,376,378	1.95
21-31	305	424,143	717,591	1.69	210	223,528	425,317	1.90
31-41	198	398,800	704,130	1.77	139	165,471	315,019	1.90
41-51	168	171,165	338,517	1.98	79	186,433	351,807	1.89
51-61	89	186,138	400,260	2.15	82	123,072	248,809	2.02
61-71	54	87,055	184,489	2.12	61	65,052	133,798	2.06
71-81	40	48,067	113,187	2.35	13	50,706	102,095	2.01
81-91	16	11,918	33,559	2.82	16	68,467	137,101	2.00
91-100	10	7,201	15,592	2.17	2	923	3,073	3.33
Total	2,498	3,220,756	5,605,629	.....	1,520	2,563,898	4,813,516	.....

* Per \$1.00 of exposure.

TABLE 3—Continued

FEMALE PERCENT	NUMBER OF EXPERIENCE UNITS	DAILY BENEFIT EXPOSED	CLAIMS	ANNUAL CLAIM COST*	NUMBER OF EXPERIENCE UNITS	DAILY BENEFIT EXPOSED	CLAIMS	ANNUAL CLAIM COST*
10× FIXED BENEFIT PLANS								
31 Day, 14+10× Maternity Benefit				70 Day, 14+10× Maternity Benefit				
<11%.....	724	953,008	1,583,371	\$1.66	239	285,723	508,105	\$1.78
11-21.....	466	541,694	757,713	1.40	115	153,765	269,201	1.75
21-31.....	256	504,197	827,725	1.64	81	110,491	183,848	1.66
31-41.....	189	228,108	390,083	1.71	62	73,754	113,329	1.54
41-51.....	126	161,341	281,756	1.75	29	57,244	113,581	1.98
51-61.....	114	151,364	294,707	1.95	21	19,321	45,363	2.35
61-71.....	84	229,502	403,153	1.76	11	16,351	28,918	1.77
71-81.....	84	131,761	277,993	2.11	16	5,835	15,746	2.70
81-91.....	22	33,246	72,833	2.19	7	5,300	17,400	3.28
91-100.....	1	133	56	.42	1	527	1,884	3.57
Total....	2,066	2,934,354	4,889,390	.....	582	728,311	1,297,375	.....
20× FIXED BENEFIT PLANS								
31 Day, 14+ 20× Maternity Benefit				70 Day, 14+ 20× Maternity Benefit				
<11%.....	149	300,238	508,145	\$1.69	101	89,617	163,623	\$1.83
11-21.....	77	141,379	297,453	2.10	68	203,415	428,233	2.11
21-31.....	50	100,883	211,589	2.10	37	33,255	72,327	2.17
31-41.....	20	45,764	100,625	2.20	28	64,714	136,880	2.12
41-51.....	13	30,921	52,541	1.70	6	4,757	10,055	2.11
51-61.....	10	12,039	26,421	2.19	8	13,116	32,869	2.51
61-71.....	4	15,485	44,511	2.87	6	5,639	15,095	2.68
71-81.....	8	16,806	37,161	2.21	2	3,016	10,157	3.37
81-91.....	2	1,051	4,169	3.97	4	1,038	1,712	1.65
91-100.....	0	0	0	.....	0	0	0	.....
Total....	333	664,566	1,282,615	.....	260	418,567	870,951	.....

* Per \$1.00 of exposure.

TABLE 4
 COMBINED 1956-58 POLICY YEARS' EXPERIENCE
 EMPLOYEE GROUP SURGICAL EXPENSE INSURANCE
 WITH OBSTETRICAL BENEFITS
 ALL INDUSTRIES

FEMALE PERCENT	\$150 SCHEDULE				\$200 SCHEDULE			
	Number of Experience Units	Maximum Indemnity Exposed per \$150 Basic Unit	Claims	Annual Claim Cost*	Number of Experience Units	Maximum Indemnity Exposed per \$200 Basic Unit	Claims	Annual Claim Cost*
<11% . . .	3,516	857,835	2,978,244	\$3.47	8,667	2,242,248	10,667,188	\$4.76
11-21 . . .	1,982	594,118	2,300,540	3.87	4,700	1,192,122	6,289,104	5.28
21-31 . . .	1,314	365,830	1,677,411	4.59	2,735	756,754	4,116,346	5.44
31-41 . . .	848	281,531	1,240,258	4.41	1,632	470,059	2,927,373	6.23
41-51 . . .	646	182,842	953,696	5.22	1,209	275,100	1,866,268	6.78
51-61 . . .	498	209,608	1,151,507	5.49	843	252,972	1,778,458	7.03
61-71 . . .	371	80,443	478,435	5.95	604	115,209	831,687	7.22
71-81 . . .	298	84,401	480,371	5.69	321	83,455	595,756	7.14
81-91 . . .	166	40,196	262,363	6.53	194	63,169	505,909	8.01
91-100 . . .	35	7,572	51,031	6.74	30	3,139	29,311	9.34
Total . . .	9,674	2,704,376	11,573,856	.....	20,935	5,454,227	29,607,400	.....

* Per basic unit exposed.

TABLE 5
 COMBINED 1956-58 POLICY YEARS' EXPERIENCE
 DEPENDENT GROUP HOSPITAL EXPENSE INSURANCE
 ALL INDUSTRIES

Plan Identification	Number of Experience Units	Daily Benefit Exposed	Claims	Annual Claim Costs*
Reimbursement Plan with No Maternity Benefit 31 Day, 10X	408	409,693	1,263,081	\$3.08
Reimbursement Plans with 9 Months Maternity Waiting Period and 10X Daily Benefit for Maternity				
31 Day, 10X	5,125	5,212,285	17,922,126	3.44
70 Day, 10X	780	731,163	2,566,780	3.51
31 Day, 20X	3,371	2,920,094	11,669,477	4.00
70 Day, 20X	1,727	2,152,401	8,671,538	4.03

* Per \$1.00 of exposure.

TABLE 6
 COMBINED 1956-58 POLICY YEARS' EXPERIENCE
 DEPENDENT GROUP SURGICAL EXPENSE INSURANCE
 ALL INDUSTRIES

PLAN	\$150 SCHEDULE				\$200 SCHEDULE			
	Number of Experience Units	Maximum Indemnity Exposed per \$150 Basic Unit	Claims	Annual Claim Cost*	Number of Experience Units	Maximum Indemnity Exposed per \$200 Basic Unit	Claims	Annual Claim Cost*
No Obstetrical Benefits.....	707	143,842	1,267,079	\$ 8.81	2,636	463,259	5,365,475	\$11.58
With Obstetrical Benefits 9 Months Waiting Period..	5,401	1,146,344	14,881,487	12.98	17,996	3,055,393	46,079,091	15.08

* Per basic unit exposed.

TABLE 7
 GROUP HOSPITAL AND SURGICAL EXPENSE INSURANCE
 SECULAR TREND
 STANDARDIZED MORBIDITY RATIOS
 Base: 1956-58 Policy Years' Experience

POLICY YEAR EXPERIENCE	EMPLOYEE HOSPITAL EXPENSE NONRATED INDUSTRIES			EMPLOYEE SURGICAL EXPENSE		
	All 10× Plans	All 20× Plans	All Plans	\$150 Schedule	\$200 Schedule	Both Schedules
1952.....	85%	89%	87%	94%	90%	91%
1953.....	90	92	91	99	93	95
1954.....	94	91	93	98	96	96
1955.....	93	93	93	100	96	97
1956.....	99	96	98	98	98	98
1957.....	99	99	99	99	101	100
1958.....	103	107	105	104	101	102

POLICY YEAR EXPERIENCE	DEPENDENT HOSPITAL EXPENSE			DEPENDENT SURGICAL EXPENSE		
	All 10× Plans	All 20× Plans	All Plans	\$150 Schedule	\$200 Schedule	Both Schedules
1952.....	92%	94%	93%	97%	93%	94%
1953.....	95	98	96	97	96	96
1954.....	95	95	95	98	96	97
1955.....	95	95	95	98	96	96
1956.....	98	96	97	104	97	99
1957.....	103	101	102	98	101	100
1958.....	99	103	101	97	102	101

NOTE.--Includes plans with or without maternity or obstetrical benefits.

TABLE 8
ANALYSIS OF MALE AND FEMALE EXPERIENCE
ALL EXPOSURE SIZES

PLAN	1956-58 POLICY YEARS' EXPERIENCE				1958 LEVEL OF CLAIM COSTS		PARAMETER RATIO
	Exposure Size Groupings				Male Parameter	Female Parameter	
	0-7		0-9				
	Amount Exposed	Female Percentage of Total Exposure	Female Percentage of Total Exposure				
Group Weekly Indemnity Insurance	<11%	6,426,790					
1-4-13.....	Σ	11,920,530	15%	17%	.580	1.361	235%
4-4-13.....	<11%	1,111,990					
	Σ	2,018,100	18	16	.478	1.143	239
1-8-13.....	<11%	16,595,510					
	Σ	40,203,630	21	20	.427	1.105	259
8-8-13.....	<11%	3,299,270					
	Σ	8,889,270	24	23	.607	.856	141
1-8-26.....	<11%	12,434,940					
	Σ	19,729,700	14	15	.692	1.261	182
8-8-26.....	<11%	1,386,330					
	Σ	3,628,550	18	12	.664	1.234	186
Employee Hospital Expense							
31 Day, 10X, 10X, Reimbursement.....	<11%	1,252,968					
	Σ	3,734,516	26	27	1.425	2.238	157
31 Day, 14+10X, 10X, Reimbursement.....	<11%	251,069					
	Σ	630,110	24	22	1.364	2.133	156
70 Day, 10X, 10X, Reimbursement.....	<11%	194,607					
	Σ	600,916	24	25	1.466	2.269	155
31 Day, 10X, 20X, Reimbursement.....	<11%	998,251					
	Σ	2,654,101	23	22	1.624	2.687	165
70 Day, 10X, 20X, Reimbursement.....	<11%	649,257					
	Σ	1,674,070	22	22	1.771	2.527	143
31 Day, 14+10X, 10X, Fixed Benefit.....	<11%	570,783					
	Σ	1,905,623	27	26	1.580	2.007	127
70 Day, 14+10X, 10X, Fixed Benefit.....	<11%	192,017					
	Σ	564,289	21	21	1.701	2.570	151
31 Day, 14+20X, 20X, Fixed Benefit.....	<11%	189,014					
	Σ	430,385	20	19	1.955	3.115	159
70 Day, 14+20X, 20X, Fixed Benefit.....	<11%	89,617					
	Σ	283,247	20	20	1.864	4.087	219
Employee Surgical Expense							
\$150 Schedule.....	<11%	583,686					
	Σ	1,709,389	26	25	3.487	8.448	242
\$200 Schedule.....	<11%	1,464,272					
	Σ	3,532,535	21	21	4.446	9.391	211

Contributing Companies

Nine companies have contributed to the investigation covered in this report. The results are the composite experience under variations in company practice in underwriting, administration and claim procedures, as well as variations in experience among groups. It must be recognized that many groups might have significantly different claim costs from the averages shown in this report.

For six of the nine contributing companies, the exposures and claims shown in the report have been based on the experience of the three policy years ending in the calendar years 1956 through 1958. For two companies, the experience of the three policy years ending during the period July 1, 1955 through June 30, 1958 has been used. One company has included experience of the policy years ending during the period July 1, 1955 through December 31, 1957; this accounts, to a large extent, for the decrease in the amount of data included in this report as compared to last year's report.

The following companies contributed experience for the investigation covered in this report:

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