

TRANSACTIONS OF SOCIETY OF ACTUARIES 1970 REPORTS

I. GROUP WEEKLY INDEMNITY INSURANCE

THIS is the twenty-third annual report on the continuing study of the morbidity experience of Group Weekly Indemnity insurance. In compiling this report, the Committee has included the available experience of employer/employee groups and has excluded the experience of trusteeship and association cases insuring employees of the member employers and the experience of union cases, whether or not insurance depends upon continued employment. The experience of plans written under State Cash Sickness Laws and the experience of insured groups outside the United States and Canada have been excluded. The United States experience and the Canadian experience have been reported separately.

RATIO OF ACTUAL TO TABULAR CLAIMS

Throughout this report experience is presented in the form of ratios of actual to tabular claims, based on the 1947-49 weekly indemnity tabulars, as reported in the *1962 Reports*. Caution must be used in interpreting the data contained in this report because, among other reasons, the 1947-49 tabulars may not accurately reflect current claim patterns. The maternity tabulars do not reflect the substantial decline in birth rates in recent years, with the result that the actual to tabular ratios for maternity benefits are generally somewhere near 50 per cent, while the actual to tabular ratios for nonmaternity benefits are generally somewhere near 100 per cent; this wide difference is concealed and may create distortions when the experience for maternity and that for nonmaternity are combined. The tabulars also do not reflect certain factors, such as age distribution, industry classification, or size of case, which may have a relevant effect on the experience results.

CONTRIBUTING COMPANIES

The Committee wishes to express its gratitude to the companies that generously contributed data to this study. Data for policy years ending in 1969 were contributed by nine companies and data for earlier policy years were available for two additional companies. The results reflect the composite effect of variations in company practice in administration and claim procedures, as well as variations in experience among groups. It is possible that the omission of two companies' data from the most recent exposure year may have a minor effect on the comparisons among years.

This report contains experience for years labeled 1965, 1966, 1967, 1968, and 1969. The majority of the companies contribute exposures and claims based upon policy years ending in the calendar year designated. If the renewal dates for all cases included in the study were distributed uniformly over the year, then the central point of the exposure for each policy year would be approximately January 1 of that year. However, this assumption may not be very precise because of a concentration of policy renewals in January and July.

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
 The Mutual Life Assurance Company of Canada
 Occidental Life Insurance Company of California
 Prudential Insurance Company of America
 Sun Life Assurance Company of Canada
 The Travelers Insurance Company

ANALYSIS OF EXPERIENCE

Table 1 shows experience by plan for the three latest policy years combined, including all size groups. Only plans with a six-week maternity benefit are included. Table 2 shows comparable experience, excluding jumbo groups (those containing 1,000 or more insured employees); in addition, for those cases where separate experience is available, experience is also shown broken down into nonmaternity and maternity. Table 2 also shows separately the experience of plans with no maternity benefits. Table 3 displays the ratios of actual to tabular claims on nonjumbo groups for each of the last five years. Table 4 shows experience by size of case, and Table 5 is an industry analysis of the United States experience for the last five years combined.

According to Table 1, Canadian experience continues to be higher than comparable United States experience. However, ratios in Tables 2 and 3 show a great degree of similarity for experience excluding jumbo cases. From Table 4 and an examination of the industries included in the jumbo experience, the higher Canadian experience appears to result from a combination of size and industry.

From Table 1 it also appears that the experience on 26-week plans is

TABLE 1
GROUP WEEKLY INDEMNITY EXPERIENCE
WITH SIX WEEKS' MATERNITY BENEFIT
ALL SIZE GROUPS
COMBINED 1967-69 POLICY YEARS' EXPERIENCE, BY PLAN

Plan	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims Including Maternity (000)	Ratio of Actual to 1947-49 Weekly Indemnity Tabular
United States Experience				
1-4-13.....	1,158	6,398	4,530	96%
4-4-13.....	323	1,663	828	76
1-8-13.....	4,095	25,781	17,853	107
8-8-13.....	643	5,677	3,783	101
Total, 13-week plans.	6,219	39,519	26,994	103%
1-4-26.....	417	7,904	8,118	127%
4-4-26.....	59	1,160	1,251	138
1-8-26.....	2,282	32,177	30,725	125
8-8-26.....	306	12,376	7,992	89
Total, 26-week plans.	3,064	53,617	48,086	118%
Total, all plans.....	9,283	93,136	75,080	112%
Canadian Experience				
1-4-13.....	182	797	640	120%
4-4-13.....	25	80	60	107
1-8-13.....	1,335	1,988	1,246	104
8-8-13.....	44	120	74	107
Total, 13-week plans.	1,586	2,985	2,020	109%
1-4-26.....	176	1,105	1,011	115%
4-4-26.....	13	236	226	113
1-8-26.....	418	2,845	2,847	138
8-8-26.....	31	228	167	99
Total, 26-week plans.	638	4,414	4,251	129%
Total, all plans.....	2,224	7,399	6,271	121%

TABLE 2

GROUP WEEKLY INDEMNITY EXPERIENCE
GROUPS WITH LESS THAN 1,000 EMPLOYEES EXPOSED
1967-69 POLICY YEARS' EXPERIENCE, BY PLAN
UNITED STATES EXPERIENCE

PLAN	NONMATERNITY AND MATERNITY COMBINED EXPERIENCE*				NONMATERNITY AND MATERNITY SEPARATE EXPERIENCE*						
	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims (000)	Ratio of Actual to 1947-49 Weekly Indemnity Tabular	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims		Ratio of Actual to 1947-49 Weekly Indemnity Tabular		
							Non- maternity (000)	Maternity (000)	Non- maternity	Maternity	Combined
Plans with 6 Weeks' Maternity Benefit											
13-week:											
4th-day sickness	1,465	5,982	3,716	90%	1,164	4,630	2,960	98	100%	39%	95%
8th-day sickness	4,624	23,493	15,531	102%	3,183	16,229	10,283	666	111%	48%	103%
Total	6,089	29,475	19,247	99%	4,347	20,859	13,243	764	108%	47%	101%
26-week:											
4th-day sickness	439	5,296	4,661	108%	313	3,559	3,162	70	114%	45%	110%
8th-day sickness	2,445	20,980	17,890	113%	1,597	14,377	12,335	467	122%	51%	117%
Total	2,884	26,276	22,551	112%	1,910	17,936	15,497	537	121%	50%	115%
Plans with No Maternity Benefits											
13-week:											
4th-day sickness					487	2,953	1,836		96%		
8th-day sickness					6,077	25,594	15,193		102%		
Total					6,564	28,547	17,029		101%		
26-week:											
4th-day sickness					310	2,497	1,891		92%		
8th-day sickness					4,666	22,605	14,845		93%		
Total					4,976	25,102	16,736		93%		

* The separate experience exposure is less than the combined experience exposure because separate experience is not available for all groups.

TABLE 2—Continued
CANADIAN EXPERIENCE

PLAN	NONMATERNITY AND MATERNITY COMBINED EXPERIENCE*				NONMATERNITY AND MATERNITY SEPARATE EXPERIENCE*						
	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims (000)	Ratio of Actual to 1947-49 Weekly Indemnity Tabular	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims		Ratio of Actual to 1947-49 Weekly Indemnity Tabular		
							Non- maternity (000)	Maternity (000)	Non- maternity	Maternity	Combined
Plans with 6 Weeks' Maternity Benefit											
13-week:											
4th-day sickness...	203	675	490	107%	188	612	438	7	113%	24%†	107%
8th-day sickness...	1,378	2,071	1,285	103%	1,235	1,791	1,049	38	107%	36†	100%
Total	1,581	2,746	1,775	104%	1,423	2,403	1,487	45	109%	33%†	102%
26-week:											
4th-day sickness...	187	1,044	970	114%	162	808	721	12	116%	43%†	113%
8th-day sickness...	439	1,763	1,341	102%	351	1,045	684	23	94%	40†	90%
Total	626	2,807	2,311	107%	513	1,853	1,405	35	104%	41%†	101%
Plans with No Maternity Benefits											
13-week:											
4th-day sickness...					110	372	262		110%		
8th-day sickness...					938	2,134	1,220		101%		
Total					1,048	2,506	1,482		102%		
26-week:											
4th-day sickness...					109	292	233		103%		
8th-day sickness...					568	1,736	1,132		92%		
Total					677	2,028	1,365		94%		

* The separate experience exposure is less than the combined experience exposure because separate experience is not available for all groups.

† Less than \$50,000 of actual claims.

TABLE 3—GROUP WEEKLY INDEMNITY EXPERIENCE
 GROUPS WITH LESS THAN 1,000 EMPLOYEES EXPOSED
 1965-69 POLICY YEARS' EXPERIENCE, BY PLAN
 UNITED STATES

PLAN	RATIOS OF ACTUAL TO 1947-49 TABULAR FOR POLICY YEAR ENDING IN:				
	1965	1966	1967	1968	1969
Plans with 6 Weeks' Maternity Benefit					
Nonmaternity and maternity combined experience:					
13-week:					
4th-day sickness	88%	90%	84%	92%	97%
8th-day sickness	95	97	96	102	109
Total	94%	95%	93%	100%	106%
26-week:					
4th-day sickness	96%	101%	100%	112%	113%
8th-day sickness	104	106	107	110	121
Total	103%	105%	106%	111%	119%
Nonmaternity and maternity separate experience:*					
Nonmaternity:					
13-week:					
4th-day sickness	93%	94%	91%	102%	109%
8th-day sickness	103	106	104	110	120
Total	101%	103%	101%	108%	118%
26-week:					
4th-day sickness	105%	106%	106%	118%	118%
8th-day sickness	110	113	115	123	130
Total	109%	112%	113%	122%	127%
Maternity (all plans)	54%	54%	48%	51%	46%
Combined:					
13-week:					
4th-day sickness	91%	91%	87%	97%	104%
8th-day sickness	98	99	97	102	110
Total	96%	97%	94%	101%	109%
26-week:					
4th-day sickness	103%	103%	103%	115%	114%
8th-day sickness	106	109	110	117	123
Total	105%	108%	108%	117%	121%
Plans with No Maternity Benefits					
13-week:					
4th-day sickness	98%	102%	90%	99%	99%
8th-day sickness	96	96	98	102	105
Total	96%	96%	97%	102%	105%
26-week:					
4th-day sickness	90%	89%	84%	80%	103%
8th-day sickness	91	93	89	91	97
Total	91%	92%	88%	90%	98%

* The nonmaternity and maternity separate experience is also included in the nonmaternity and maternity combined experience.

TABLE 3—Continued

CANADA

PLAN	RATIO OF ACTUAL TO 1947-49 TABULAR FOR POLICY YEAR ENDING IN:				
	1965	1966	1967	1968	1969
Plans with 6 Weeks' Maternity Benefit					
Nonmaternity and maternity combined experience:					
13-week:					
4th-day sickness	96%	106%	120%	99%	103%
8th-day sickness	96	98	101	106	100
Total	96%	101%	106%	104%	101%
26-week:					
4th-day sickness	107%	123%	107%	111%	128%
8th-day sickness	94	97	116	91	103
Total	98%	106%	112%	100%	111%
Nonmaternity and maternity separate experience:*					
Nonmaternity:					
13-week:					
4th-day sickness	99%	113%	124%	105%	112%
8th-day sickness	98	101	100	111	109
Total	99%	105%	106%	109%	110%
26-week:					
4th-day sickness	131%	135%	108%	111%	132%
8th-day sickness	85	79	101	79	103
Total	98%	103%	104%	95%	115%
Maternity (all plans)	63%†	59%†	42%†	35%†	34%†
Combined:					
13-week:					
4th-day sickness	97%	110%	118%	99%	104%
8th-day sickness	95	97	94	104	102
Total	95%	101%	101%	102%	102%
26-week:					
4th-day sickness	127%	132%	107%	108%	127%
8th-day sickness	85	79	98	75	99
Total	97%	101%	102%	91%	109%
Plans with No Maternity Benefits					
13-week:					
4th-day sickness	103%	75%	113%	100%	122%
8th-day sickness	100	103	99	96	109
Total	100%	98%	101%	97%	111%
26-week:					
4th-day sickness	138%	109%	109%	101%	100%
8th-day sickness	87	90	85	84	105
Total	95%	94%	89%	87%	104%

† Less than \$50,000 of actual claims.

significantly poorer than that on 13-week plans. Even though Tables 2 and 3 confirm this pattern for plans with maternity, they show the opposite result on plans with no maternity. There is no immediate explanation for this phenomenon or for the consistently lower ratios for plans

TABLE 4
GROUP WEEKLY INDEMNITY EXPERIENCE
ALL SIZE GROUPS
COMBINED 1967-69 POLICY YEARS' EXPERIENCE, BY SIZE OF EXPERIENCE UNIT

SIZE	PLANS WITH SIX WEEKS' MATERNITY BENEFIT				PLANS WITH NO MATERNITY BENEFIT			
	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims Including Maternity (000)	Ratio of Actual to 1947-49 Weekly Indemnity Tabular	No. Experience Units	Weekly Indemnity Exposed (000)	Actual Claims (000)	Ratio of Actual to 1947-49 Weekly Indemnity Tabular
United States Experience								
< 50 lives	2,675	2,739	1,520	83%	4,695	6,182	3,414	87%
50-99	2,393	6,757	3,973	87	3,187	9,435	5,533	93
100-249	2,363	15,646	10,996	101	2,437	15,668	9,773	97
250-499	1,021	15,076	11,929	110	884	12,981	8,494	99
500-999	521	15,533	13,380	117	337	9,383	6,551	104
Total <1,000	8,973	55,751	41,798	106%	11,540	53,649	33,765	97%
1,000 or more	310	37,385	33,282	121	197	18,876	13,941	107
Grand total	9,283	93,136	75,080	112%	11,737	72,525	47,706	100%
Canadian Experience								
< 50 lives	1,567	1,162	579	79%	1,190	994	500	80%
50-99	300	823	517	93	288	813	473	92
100-249	217	1,402	1,088	112	160	940	649	106
250-499	89	1,211	1,063	126	50	770	504	103
500-999	34	955	839	110	37	1,017	721	111
Total <1,000	2,207	5,553	4,086	106%	1,725	4,534	2,847	98%
1,000 or more	17	1,846	2,185	168	22	14,590	10,902	116
Grand total	2,224	7,399	6,271	121%	1,747	19,124	13,749	112%

without maternity. These may merely reflect a variety of factors, such as size, age, and industry characteristics.

After a period of relative stability, the United States experience showed a sharp increase for the second year in a row. This is less evident in the Canadian experience of Table 3, but current experience is clearly higher than prior years.

Table 4 shows an unmistakable pattern of increasing ratios with increase in size, on both United States and Canadian experience and on

TABLE 5
COMBINED 1965, 1966, 1967, 1968, AND 1969 POLICY YEARS' EXPERIENCE
INDUSTRY ANALYSIS

IN- DUSTRY CODE	INDUSTRY DESCRIPTION	UNITED STATES GROUP WEEKLY INDEMNITY INSURANCE					
		Experience Units of All Size Groups All Plans, Combined Nonmaternity and Maternity Experience					Experience Units with Less than 1,000 Lives Exposed
		Number of Experience Units	Actual Weekly Indemnity Exposed for Industry (000)	Ratio of Exposure for Ind. to Total Exposure	Ratio of Actual to Tabular Claims	Ratio of Ind. A/T to Aggregate A/T	Ratio of Ind. A/T to Aggregate A/T*
Total	All industries	35,975	276,859	100.0%	105%	100%	100%
	<i>Agriculture, forestry, and fisheries:</i>						
01	Agricultural production	116	342	0.1%	73%	70%	73%
07	Agricultural services, hunting, trapping	95	381	0.1	65	62	65
08	Forestry	1	5		†	†	†
09	Fisheries	3			†	†	†
	<i>Mining:</i>						
10	Metal mining	118	1,121	0.4	91	87	99
11	Anthracite mining	83	2,227	0.8	141	134	100
12	Bituminous coal and lignite mining	107	944	0.3	168	160	125
13	Crude petroleum and natural gas	157	582	0.2	63	60	63
14	Mining and quarrying of nonmetallic minerals, except fuels	188	1,184	0.4	88	84	89
	<i>Contract construction:</i>						
15	Building construction—general contractors	219	1,482	0.5	79	75	78
16	Construction other than building construction—general contractors	285	1,120	0.4	71	68	64
17	Construction—special trade contractors	463	2,624	0.9	99	94	81
	<i>Manufacturing:</i>						
19	Ordinance and accessories	40	600	0.2	†	†	†
20	Food and kindred products	1,989	12,400	4.5	98	93	94
21	Tobacco manufactures	28	1,894	0.7	115	110	101
22	Textile mill products	957	7,086	2.6	115	110	115
23	Apparel and other finished products made from fabrics and similar materials	596	3,333	1.2	105	100	101
24	Lumber and wood products, except furniture	800	3,771	1.4	92	88	93
25	Furniture and fixtures	702	4,135	1.5	96	91	98
26	Paper and allied products	1,384	13,779	5.0	116	110	105
27	Printing, publishing, and allied industries	1,371	9,152	3.3	91	87	95
28	Chemicals and allied products	842	21,456	7.7	94	90	101
29	Petroleum refining and related industries	163	1,003	0.4	92	88	91
30	Rubber and miscellaneous plastics products	675	4,578	1.7	114	109	116
31	Leather and leather products	380	3,098	1.1	118	112	109
32	Stone, clay, glass, and concrete products	1,110	9,025	3.3	108	103	108
33	Primary metal industries	1,478	16,584	6.0	124	118	116
34	Fabricated metal products, except ordnance, machinery, and transportation equipment	3,129	22,095	8.0	110	105	113
35	Machinery, except electrical	3,294	33,799	12.2	112	107	101
36	Electrical machinery, equipment, and supplies	1,450	19,525	7.1	111	106	105
37	Transportation equipment	935	16,677	6.0	135	129	114
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	474	4,488	1.6	105	100	93
39	Miscellaneous manufacturing industries	654	5,037	1.8	105	100	102
	<i>Transportation, communication, electric, gas, and sanitary services:</i>						
40	Railroad transportation	22	168	0.1	†	†	†
41	Local and suburban transit and interurban passenger transportation	273	1,630	0.6	155	148	147
42	Motor freight transportation and warehousing	627	2,249	0.8	62	59	68

* The aggregate A/T for smaller size groups is 100 per cent.

† Less than 50 experience units and less than 0.3 per cent of total exposure.

TABLE 5—Continued

INDUSTRY CODE	INDUSTRY DESCRIPTION	UNITED STATES GROUP WEEKLY INDEMNITY INSURANCE					
		Experience Units of All Size Groups All Plans, Combined Nonmaternity and Maternity Experience					Experience Units with Less than 1,000 Lives Exposed
		Number of Experience Units	Actual Weekly Indemnity Exposed for Industry (000)	Ratio of Exposure for Ind. to Total Exposure	Ratio of Actual to Tabular Claims	Ratio of Ind. A/T to Aggre- gate A/T	Ratio of Ind. A/T to Aggre- gate A/T*
	<i>Transportation, communication, electric, gas, and sanitary services.—Continued:</i>						
44	Water transportation	92	495	0.2%	129%	123%	112%
45	Transportation by air	70	769	0.3	59	56	46
46	Pipeline transportation	2	169	0.1	†	†	†
47	Transportation services	82	550	0.2	98	93	98
48	Communication	139	462	0.2	46	44	46
49	Electric, gas, and sanitary services	253	3,544	1.3	97	92	85
	<i>Wholesale and retail trade:</i>						
50	Wholesale trade	3,218	11,751	4.2	78	74	78
52	Building materials, hardware, and farm- equipment dealers	335	665	0.2	75	71	75
53	Retail trade—general merchandise	409	4,546	1.6	95	90	90
54	Food stores	391	1,417	0.5	83	79	74
55	Automotive dealers and gasoline service stations	1,209	2,548	0.9	72	69	72
56	Apparel and accessory stores	272	1,423	0.5	90	86	94
57	Furniture, home furnishings, and equip- ment stores	210	662	0.2	76	72	76
58	Eating and drinking places	308	1,251	0.5	94	90	101
59	Miscellaneous retail stores	315	1,008	0.4	77	73	74
	<i>Finance, insurance, and real estate:</i>						
60	Banking	128	432	0.2	59	56	59
61	Credit agencies other than banks	57	179	0.1	39	37	39
62	Security and commodity brokers, dealers, exchanges, and services	30	172	0.1	†	†	†
63	Insurance carriers	110	1,063	0.4	87	83	84
64	Insurance agents, brokers, and service	63	153	0.1	59	56	59
65	Real estate	154	270	0.1	105	100	105
66	Combinations of real estate, insurance, loans, and law offices	19	18		†	†	†
67	Holding and other investment companies	49	490	0.2	†	†	†
	<i>Services:</i>						
70	Hotels, rooming houses, camps, and other lodging places	202	1,382	0.5	87	83	88
72	Personal services	365	870	0.3	90	86	94
73	Miscellaneous business services	391	1,805	0.7	75	71	73
75	Automobile repair, automobile services, and garages	96	183	0.1	68	65	68
76	Miscellaneous repair services	81	355	0.1	97	92	97
78	Motion pictures	47	238	0.1	†	†	†
79	Amusement and recreation services, ex- cept motion pictures	81	134		78	74	78
80	Medical and other health services	307	1,895	0.7	98	93	101
81	Legal services	19	41		†	†	†
82	Educational services	126	497	0.2	90	86	90
84	Museums, art galleries, botanical, and zo- ological gardens	7	41		†	†	†
86	Nonprofit membership organizations	188	1,460	0.5	82	78	78
88	Private households				†	†	†
89	Miscellaneous services	196	740	0.3	57	54	57
	<i>Government:</i>						
91	Federal government	29	119		†	†	†
92	State government	33	265	0.1	†	†	†
93	Local government	538	2,046	0.7	102	97	87
94	International government	1	1		†	†	†
Total	All industries listed above	35,830	275,683	99.6%	106%	101%	100%
	All other industries	145	1,176	0.4%	95%	90%	87%

* The aggregate A/T for smaller size groups is 100 per cent.

† Less than 50 experience units and less than 0.3 per cent of total exposure.

plans written with maternity benefits as well as on plans written without maternity benefits.

The split of exposure by industry in Table 5 is based on the first two digits of the Standard Industrial Classification (SIC) code number, so that the split will be slightly different from the last industry analysis, published in the *1965 Reports*. The full SIC code is given in the *Standard Industrial Classification Manual* published by the United States Bureau of the Budget. In submitting data, the contributing companies generally relied on the *Dun and Bradstreet Reference Book* for coding of industrial and manufacturing companies. The ratios of actual to tabular claims in Table 5 are shown only for industries with at least 50 experience units, or 0.3 per cent of the total exposure.

In examination of the industry analysis, it should be understood that the experience of any particular industry depends to a great extent on factors other than those directly related to working conditions. For example:

- a) There is a wide variation in the age distribution of workers engaged in different industries.
- b) Various social, economic, and geographic factors may underlie variations in the experience by industry.
- c) Some variations may be chance fluctuations resulting from an insufficient volume of experience.
- d) If other standards of underwriting selection were applied in accepting individual risks, substantially different results might be obtained for some industries.
- e) The tendency of some industries to concentrate on certain plans of benefits may distort the results shown in the industry table because the ratios of actual to tabular claims do vary by plan of benefits.
- f) Variation in the size of the experience units may affect the results for some industries.

The industrial classification itself is subject to some limitations. Up-to-date information is not always available for the assignment of each experience unit to its proper classification. Some experience units involve more than one industrial classification. Hence it is necessary to assign such units to the classification which contains the largest number of insured employees even though that classification might not contain a majority of such employees. This limitation probably affects the experience of relatively more of the units in the larger-exposure-size groupings than in the smaller-exposure-size groupings.