

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1977 REPORTS**

**II. EXPERIENCE UNDER INDIVIDUAL
LOSS-OF-TIME POLICIES, 1974-75**

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**SUMMARY OF EXPERIENCE UNDER INDIVIDUAL
LOSS-OF-TIME POLICIES, 1974-75**

The first part of the study covers experience in the first year of the benefit period. Results of data submitted by thirteen companies are presented for males in Occupation Groups I and II and for females in Occupation Group I. Annual claim rates, average claim durations, and

annual claim costs are shown for accident disability, sickness disability, and total sickness and accident disability. A further part of the first-year study examines the trends in the claim rates, durations, and costs for 0-day accident, 7-day sickness, and the combination of these two during 1968-69, 1970-71, 1972-73, 1974-75, and 1968-75. Overall evaluation of the results of the current study of the 1974-75 experience reveals an increase in annual claim costs for males and females for the combined 0-day accident, 7-day sickness benefit since the study of the 1972-73 experience. These annual claim costs generally have increased in each consecutive two-year period of study contained in this report.

The second part of the study involves experience in the second year of the benefit period. The study is confined to male claims under policies with 0-day accident and 7-day sickness elimination periods. Claim rates, durations, and costs are shown for 0-day accident, 7-day sickness, and the combination of these two. For the combination, the results generally reflect an increase in costs over prior experience.

A. EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD

THIS section of the report presents an analysis of morbidity experience under individual loss-of-time policies during calendar years 1974-75 and a comparison of this experience with results for the periods 1968-69, 1970-71, and 1972-73. The study is limited to experience in the first year of the benefit period. Policies with benefit periods of less than one year are excluded from the study. The reporting system used for this study is generally the same as that used for the previous studies. This system is described in detail in the *1959 Reports* (pp. 126-28). Previous studies appear in the *Reports* of odd-numbered years commencing in 1959.

The tables contain experience for males in Occupation Groups I and II and for females in Occupation Group I; for convenience these three groups are referred to hereafter in the text of this report as "Male I," "Male II," and "Female I." The amount of data on females in Occupation Group II was insufficient to warrant a study of this group.

Occupation Group I consists of occupations that involve little exposure to an accident hazard and do not require heavy physical activity. In addition to those occupations involving white-collar and professional workers, Group I also includes occupations of persons engaged in trades and service work whose duties are light and nonhazardous, persons superintending manufacturing and construction operations, and so forth.

Occupation Group II consists of occupations that involve a greater degree of exposure to accident hazards or in which the physical require-

ments of the job are reflected in longer periods of disability due either to sickness or to injury than in the Group I occupations. These generally include construction workers, drivers of heavy vehicles, mechanics, those engaged in skilled and semiskilled jobs in manufacturing industries, and the like. Persons whose work requires perfect, or nearly perfect, physical condition also would be in Group II, since such persons may be disabled by a relatively minor injury.

Policies issued to females usually included a reduction in indemnity for insureds not gainfully employed at the time of disability. The claim data submitted reflect the smaller amounts payable under the reduction provision, but to an unknown extent.

The presentation of data generally follows the format used in prior reports. The tables include (1) annual claim rates, (2) average claim durations in months, and (3) annual claim costs. Experience is shown separately for accident and sickness. Total disability experience is represented as the sum of the separate accident and sickness experience. The combined annual claim rates and annual claim costs for total disability consequently reflect experience on many different combinations of accident and sickness benefits.

Annual claim rates (or frequencies) have been calculated by dividing the amounts of monthly indemnity on claims by the corresponding exposures. The exposures are based on the amounts of monthly indemnity. Annual claim costs, per \$1 of monthly income benefit, have been calculated by dividing the aggregate benefits incurred on claims by the corresponding exposures. Durations of claims in months, measured from the end of the elimination period, have been calculated by dividing the annual claim costs by the annual claim rates.

1. VOLUME OF DATA

For the calendar-year period 1974-75, the Committee has compiled an aggregate exposure of 3,165,000 policy years during which 127,000 claims were incurred. The companies that contributed to the study are shown in Table 1, together with the volume of each company's data for each of the calendar years studied, measured by the number of claims reported.

Table 2 shows the distribution of the number of claims reported by type of coverage, sex, occupation group, and elimination period. Number of claims has been used as the basis for measuring the volume of data, since it is a good measure of the reliability of the statistical results. The analysis of the experience has been confined to those occupation groups and elimination periods where there is a significant amount of data.

TABLE 1
CONTRIBUTING COMPANIES AND NUMBER OF CLAIMS

COMPANY	YEAR OF EXPERIENCE		1974-75 COMBINED
	1974	1975	
Prudential.....	16,490	16,071	32,561
Mutual of Omaha.....	16,290	13,267	29,557
Metropolitan.....	8,788	8,390	17,178
New York Life.....	6,283	6,413	12,696
Monarch.....	0	8,222	8,222
Mutual of New York.....	3,923	3,912	7,835
Business Mens Assurance.....	2,760	2,588	5,348
Woodmen.....	1,692	1,614	3,306
Pacific Mutual.....	3,129	0	3,129
Loyal Protective.....	2,115	0	2,115
Guardian Life.....	1,037	1,058	2,095
Continental Assurance.....	981	971	1,952
Provident Mutual.....	390	436	826
Total.....	65,878	62,942	126,820

TABLE 2
NUMBER OF CLAIMS BY TYPE OF COVERAGE,
SEX, OCCUPATION GROUP, AND
ELIMINATION PERIOD
1974-75 EXPERIENCE COMBINED

ELIMINATION PERIOD (DAYS)	ACCIDENT				SICKNESS			
	Male		Female		Male		Female	
	Occ. Group I	Occ. Group II	Occ. Group I	Occ. Group II	Occ. Group I	Occ. Group II	Occ. Group I	Occ. Group II
0.....	6,391*	14,658*	1,267*	766	2,306*	1,145*	326*	56
3.....	62	178	57	4	384	649	241	23
7.....	2,215*	6,054*	612*	216	13,553*	25,941*	6,692*	2,655
14.....	1,642*	5,542*	449*	304	4,493*	7,794*	1,989*	1,023
21.....	0	0	0	0	0	0	0	0
30.....	1,344*	2,885*	334*	131	4,893*	4,599*	1,493*	461
60.....	26	10	5	0	89	38	44	1
90.....	68	72	11	3	440	145	35	6
Total.....	11,748	29,399	2,735	1,424	26,158	40,311	10,820	4,225

* Subsequent tables and discussions are based only on data indicated.

They are indicated by an asterisk in Table 2. In certain of the cells studied, virtually all the experience has been contributed by only one or two companies. The coverages for which a reasonable amount of data was contributed by all companies are the 0- and 7-day accident and the 0-, 7-, 14-, and 30-day sickness coverages. In interpreting results obtained from a small amount of data, caution should be exercised, and, in comparing current trends with those of the previous studies, it must be kept in mind that the proportion of the total experience for each company is different in the current and previous studies.

2. DISABILITY EXPERIENCE

Tables 3, 4, and 5, respectively, give summaries of the accident, sickness, and total disability experience compiled in this report. Each table shows the three elements of disability—annual claim rate, duration of claim in months, and annual claim cost—by the four variables studied—sex, occupation group, elimination period, and attained age. In order to give some idea of the credibility of the experience, the number of claims is shown.

Accident Disability (Table 3)

Table 3 shows accident disability data for four elimination periods. Comments, however, are restricted to male data for a 0-day elimination period because other data are rather limited or are contributed largely by one or two companies.

The significant points of interest brought out by this table follow:

Male I and Male II.—Annual claim rates decrease by attained age, whereas claim durations increase. The combined effect of these decreasing claim rates and increasing durations is to produce annual claim costs that decrease by attained age. The annual claim cost at the highest attained-age group (60–69) is about 60 percent of that at the lowest attained-age group (under age 30) for both Male I and Male II. Annual claim costs for Male II are about twice those for Male I at all attained ages except ages 40–49, where they are two and one-third times as high.

Sickness Disability (Table 4)

Table 4 shows sickness disability data for four elimination periods. Comments, however, are based primarily on data for the 7-day elimination period because other data are rather limited or are contributed largely by one or two companies.

Male I, Male II, and Female I.—Annual claim rates, claim durations, and annual claim costs generally increase by attained age. Male II annual claim costs are about 30–40 percent higher than Male I claim costs. Ratios of Female I to Male I annual claim costs are substantially higher than 100 percent at attained ages under 50 but trend down rapidly after age 50, with Female I costs going below Male I costs at ages 60–69.

TABLE 3

ACCIDENT DISABILITY LOSS-OF-TIME EXPERIENCE, 1974-75, LIMITED TO FIRST YEAR OF BENEFIT PERIOD

ATTAINED AGE	MALE OCC. GROUP I				MALE OCC. GROUP II				FEMALE OCC. GROUP I				RATIOS TO MALE OCC. GROUP I					
	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Male Occ. Group II			Female Occ. Group I		
													Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost
0-Day Elimination Period																		
Under 30	401	.053	1 58	.084	1,859	.115	1 41	.162	125	.027	1 32	.041	217%	89%	193%	51%	96%	49%
30-39	1,158	.047	1 72	.081	3,742	.093	1 71	.159	225	.028	1 64	.046	198	99	196	60	95	57
40-49	1,419	.034	1 71	.058	3,808	.068	1 99	.135	246	.027	1 78	.048	200	116	233	79	104	83
50-59	2,102	.029	1 90	.055	3,722	.051	2 22	.113	440	.032	1 97	.063	176	117	205	110	104	115
60-69	1,311	.025	1 92	.048	1,527	.044	2 27	.100	231	.033	2 15	.071	176	118	208	132	112	148
7-Day Elimination Period																		
Under 30	346	.050	2 18	.109	969	.072	1 85	.133	73	.024	2 04	.049	144%	85%	122%	48%	94%	45%
30-39	621	.043	2 37	.102	1,838	.068	2 35	.160	138	.028	2 57	.072	158	99	157	65	108	71
40-49	550	.031	2 58	.080	1,532	.054	2 35	.127	146	.025	2 76	.074	174	91	159	81	115	93
50-59	549	.024	2 33	.056	1,374	.043	2 47	.106	223	.029	2 59	.075	179	106	189	121	111	134
60-69	149	.024	2 33	.056	341	.038	3 11	.118	32	.036	1 42	.051	158	133	211	150	61	91
14-Day Elimination Period																		
Under 30	321	.023	2 17	.050	1,418	.046	2 46	.113	72	.014	3 00	.042	200%	113%	226%	61%	138%	84%
30-39	519	.020	2 35	.047	1,975	.045	2 82	.127	126	.021	2 76	.058	225	120	270	105	117	123
40-49	401	.017	2 24	.038	1,199	.038	2 92	.111	117	.019	3 00	.057	224	130	292	112	134	150
50-59	315	.014	2 71	.038	765	.034	2 82	.096	116	.017	2 76	.047	243	104	253	121	102	124
60-69	86	.015	2 33	.035	185	.030	2 90	.087	18	.014	1 50	.021	200	124	249	93	64	60
30-Day Elimination Period																		
Under 30	181	.006	2 50	.015	656	.022	2 41	.053	28	.005	2 60	.013	367%	96%	353%	83%	104%	87%
30-39	394	.005	3 00	.015	1,002	.020	3 00	.060	57	.005	2 40	.012	400	100	400	100	80	80
40-49	385	.005	2 60	.013	709	.018	3 44	.062	95	.008	3 00	.024	360	132	477	160	115	185
50-59	283	.006	3 17	.019	419	.016	3 38	.054	115	.009	2 67	.024	267	107	284	150	84	126
60-69	101	.008	3 50	.028	99	.013	3 38	.044	39	.015	2 07	.031	163	97	157	188	59	111

TABLE 4

SICKNESS DISABILITY LOSS-OF-TIME EXPERIENCE, 1974-75, LIMITED TO FIRST YEAR OF BENEFIT PERIOD

ATTAINED AGE	MALE OCC. GROUP I				MALE OCC. GROUP II				FEMALE OCC. GROUP I				RATIOS TO MALE OCC. GROUP I					
	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Male Occ. Group II			Female Occ. Group I		
													Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost
0-Day Elimination Period																		
Under 30.....	4	.002	1 50	.003	10	.001	1 00	.001	3	.002	.00	.000	50%	67%	33%	100%	0%	0%
30-39.....	21	.006	83	.005	54	.004	1 75	.007	12	.004	1 00	.004	67	211	140	67	120	80
40-49.....	158	.044	1 55	.068	217	.018	1 56	.028	57	.019	1 16	.022	41	101	41	43	75	32
50-59.....	1,228	.114	2 10	.239	482	.030	2 20	.066	146	.029	1 48	.043	26	105	28	25	70	18
60-69.....	895	.135	2 53	.342	382	.056	3 29	.184	108	.045	1 38	.062	41	130	54	33	55	18
7-Day Elimination Period																		
Under 30.....	637	.054	1 57	.085	1,521	.072	1 49	.107	583	.108	1 35	.146	133%	95%	126%	200%	86%	172%
30-39.....	1,896	.057	1 84	.105	4,124	.073	1 86	.136	1,250	.114	1 50	.171	128	101	130	200	82	163
40-49.....	2,938	.063	2 37	.149	6,338	.090	2 40	.216	1,810	.132	1 84	.243	143	101	145	210	78	161
50-59.....	5,347	.093	2 84	.264	9,538	.119	3 12	.371	2,295	.131	2 14	.280	128	110	141	141	75	106
60-69.....	2,735	.126	3 30	.416	4,420	.150	3 71	.557	754	.143	1 98	.283	119	112	134	113	60	68
14-Day Elimination Period																		
Under 30.....	376	.024	2 25	.054	1,047	.034	1 79	.061	253	.046	1 98	.091	142%	80%	113%	192%	88%	169%
30-39.....	776	.028	2 32	.065	1,885	.041	2 22	.091	523	.076	2 05	.156	146	96	140	271	88	240
40-49.....	1,137	.039	2 62	.102	1,994	.058	2 78	.161	559	.083	2 34	.194	149	106	158	213	89	190
50-59.....	1,474	.058	3 21	.186	2,097	.085	3 33	.283	525	.078	2 74	.214	147	104	152	134	85	115
60-69.....	730	.096	3 60	.346	771	.113	4 00	.452	129	.095	2 81	.267	118	111	131	99	78	77
30-Day Elimination Period																		
Under 30.....	225	.007	2 57	.018	465	.015	2 00	.030	95	.014	1 50	.021	214%	78%	167%	200%	58%	117%
30-39.....	759	.008	2 75	.022	968	.019	2 68	.051	284	.023	1 78	.041	238	97	232	288	65	186
40-49.....	1,316	.015	3 33	.050	1,277	.031	3 16	.098	453	.035	2 63	.092	207	95	196	233	79	184
50-59.....	1,725	.030	3 90	.117	1,355	.047	4 09	.192	535	.040	3 18	.127	157	105	164	133	82	109
60-69.....	868	.055	4 18	.230	534	.066	4 89	.323	126	.041	3 80	.156	120	117	140	75	91	68

TABLE 5

TOTAL DISABILITY LOSS-OF-TIME EXPERIENCE, 1974-75, LIMITED TO FIRST YEAR OF BENEFIT PERIOD

ATTAINED AGE	MALE OCC. GROUP I				MALE OCC. GROUP II				FEMALE OCC. GROUP I				RATIOS TO MALE OCC. GROUP I					
	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Male Occ. Group II			Female Occ. Group I		
													Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost
0-Day Elimination Period																		
Under 30	405	.055	1 58	.087	1,869	.116	1 41	163	128	.029	1 41	.041	211%	89%	187%	53%	89%	47%
30-39	1,179	.053	1 62	.086	3,796	.097	1 71	166	237	.032	1 56	.050	183	106	193	60	96	58
40-49	1,577	.078	1 62	.126	4,025	.086	1 90	163	303	.046	1 52	.070	110	117	129	59	94	56
50-59	3,330	.143	2 06	.294	4,204	.081	2 21	179	586	.061	1 74	.106	57	107	61	43	84	36
60-69	2,206	.160	2 44	.390	1,909	.100	2 84	284	339	.078	1 71	.133	63	116	73	49	70	34
7-Day Elimination Period																		
Under 30	983	.104	1 87	.194	2,490	.144	1 67	240	656	.132	1 48	.195	138%	89%	124%	127%	79%	101%
30-39	2,517	.100	2 07	.207	5,962	.141	2 10	296	1,388	.142	1 71	.243	141	101	143	142	83	117
40-49	3,488	.094	2 44	.229	7,870	.144	2 38	343	1,956	.157	2 02	.317	153	98	150	167	83	138
50-59	5,896	.117	2 74	.320	10,912	.162	2 94	477	2,518	.160	2 22	.355	138	107	149	137	81	111
60-69	2,884	.150	3 15	.472	4,761	.188	3 59	675	786	.179	1 87	.334	125	114	143	119	59	71
14-Day Elimination Period																		
Under 30	697	.047	2 21	.104	2,465	.080	2 18	174	325	.060	2 22	.133	170%	99%	167%	128%	100%	128%
30-39	1,295	.048	2 33	.112	3,860	.086	2 53	218	649	.097	2 21	.214	179	109	195	202	95	191
40-49	1,538	.056	2 50	.140	3,193	.096	2 83	272	676	.102	2 46	.251	171	113	194	182	98	179
50-59	1,789	.072	3 11	.224	2,862	.119	3 18	379	641	.095	2 75	.261	165	102	169	132	88	117
60-69	816	.111	3 43	.381	956	.143	3 77	539	147	.109	2 64	.288	129	110	141	98	77	76
30-Day Elimination Period																		
Under 30	406	.013	2 54	.033	1,121	.037	2 24	083	123	.019	1 79	.034	285%	88%	252%	146%	70%	103%
30-39	1,153	.013	2 85	.037	1,970	.039	2 85	111	341	.028	1 89	.053	300	100	300	215	66	143
40-49	1,701	.020	3 15	.063	1,986	.049	3 27	160	548	.043	2 70	.116	245	104	254	215	86	184
50-59	2,008	.036	3 78	.136	1,774	.063	3 90	246	650	.049	3 08	.151	175	103	181	136	81	111
60-69	969	.063	4 10	.258	633	.079	4 65	367	165	.056	3 34	.187	125	113	142	89	81	72

Total Disability (Table 5)

Total disability annual claim rates and annual claim costs as derived in this study are the sums of the annual claim rates and annual claim costs for accident disability and sickness disability. Since sickness disability annual claim rates and annual claim costs are generally much higher than corresponding rates and costs for accident disability, total disability annual claim rates and annual claim costs tend to follow the pattern of those for sickness disability. A graphic comparison of Male I, Male II, and Female I total disability annual claim costs is shown in Chart I.

Male II annual claim costs are higher than Male I annual claim costs for all elimination periods except at attained ages 50 and over for the 0-day elimination period. Female I annual claim costs generally are between those for Male I and Male II except for the 0-day elimination period, where female data are limited and are mostly on accident coverage.

Ratios of Accident Disability to Total Disability (Table 6)

The accident and sickness components of the total disability annual claim rates and annual claim costs are based on data that were contributed in different proportions by the various companies and came from a wide variety of accident and sickness benefit combinations. This could have a significant effect on the ratios and should be kept in mind in their interpretation. Table 6 is shown, however, so that some idea may be obtained of the relationship of accident disability to total disability rates. Only ratios based on data for 0- and 7-day elimination periods are shown because of the even greater limitations of data for the other elimination periods.

Male I, Male II, and Female I.—Ratios of accident disability to total disability annual claim rates, claim durations, and annual claim costs generally decrease by attained age for both the 0- and 7-day elimination periods. The principal exceptions to this pattern are the ratios of accident disability to total disability claim durations for Female I 0-day elimination period, which increase by attained age, and the ratios of accident disability to total disability annual claim rates for Female I 7-day elimination period, which tend to be level by attained age.

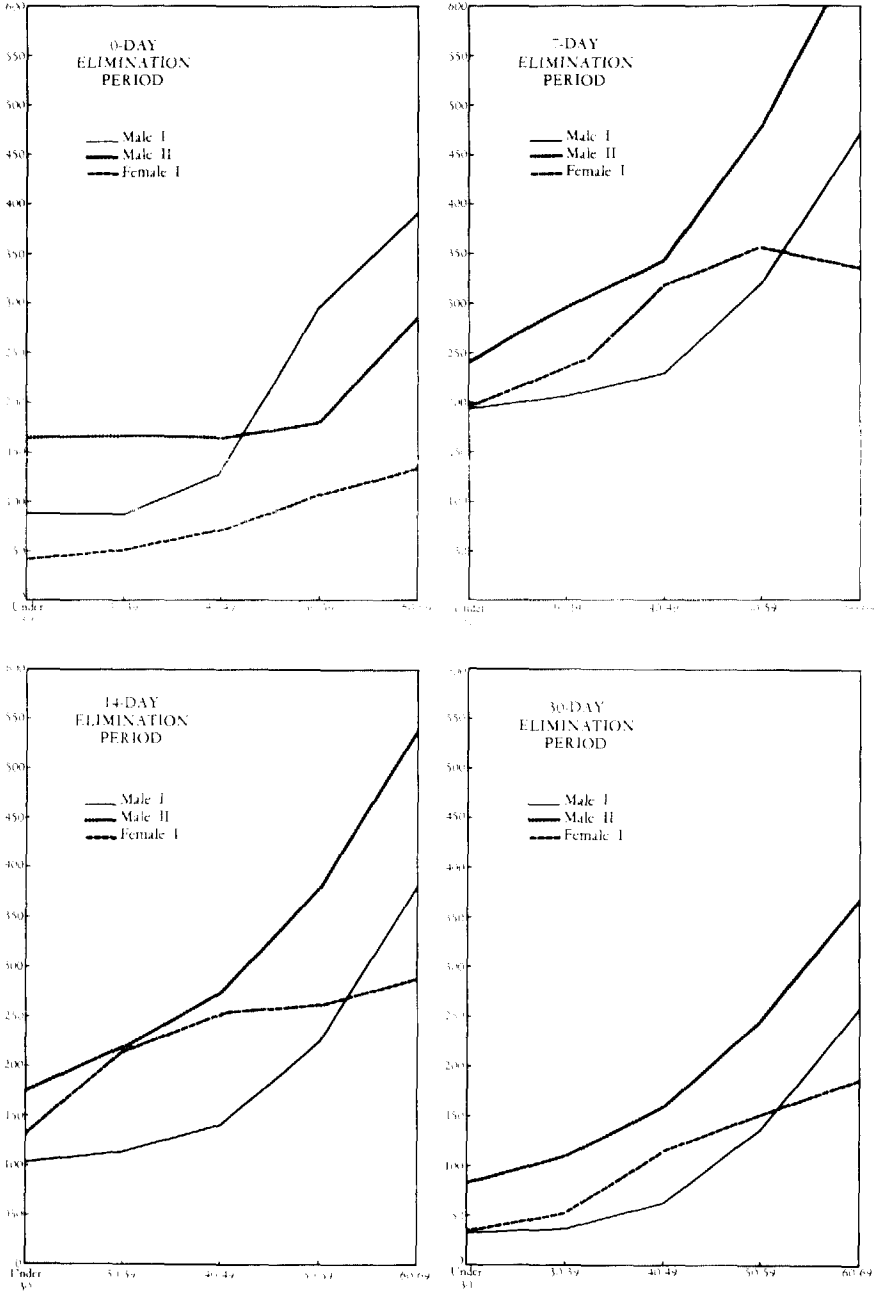
3. ANNUAL CLAIM COSTS BY DURATION SINCE DISABLEMENT

Table 7 shows annual claim costs by duration, measured from the date of disablement, for 0-day accident and 7-day sickness coverages. Corresponding tabular values from the 1964 Commissioners Disability Table are also shown for durations beyond the seventh day of disable-

CHART I

TOTAL DISABILITY LOSS-OF-TIME EXPERIENCE 1974-75 ANNUAL CLAIM COSTS*

(Limited to First Year of Benefit Period)



* Per \$1 of monthly income benefit.

ment. The tabular values that are shown for accident disability for the first seven days of disablement were developed to be consistent with values in the 1964 Commissioners Disability Table for the eighth and subsequent days of disablement.

In the comparison of crude annual claim costs with corresponding values from the 1964 Commissioners Table, a special situation exists at ages 60-69. Tabular values according to the Commissioners Table have been taken at the central age of each age group, so that the tabular value shown for age group 60-69 is the one that applies at age 65. However, because many disability policies terminate at age 65, the average age

TABLE 6
RATIOS OF ACCIDENT DISABILITY TO TOTAL DISABILITY
LOSS-OF-TIME EXPERIENCE
IN FIRST YEAR OF BENEFIT PERIOD
1974-75

ATTAINED AGE	0-DAY ELIMINATION PERIOD			7-DAY ELIMINATION PERIOD		
	Annual Claim Rate	Claim Duration (Months)	Annual Claim Costs	Annual Claim Rate	Claim Duration (Months)	Annual Claim Costs
Male I						
Under 30....	96%	100%	97%	48%	117%	56%
30-39.....	89	106	94	43	114	49
40-49.....	44	106	46	33	106	35
50-59.....	20	92	19	21	85	18
60-69.....	16	79	12	16	74	12
Male II						
Under 30....	99%	100%	99%	50%	111%	55%
30-39.....	96	100	96	48	112	54
40-49.....	79	105	83	38	99	37
50-59.....	63	100	63	27	84	22
60-69.....	44	80	35	20	87	17
Female I						
Under 30....	93%	108%	100%	18%	138%	25%
30-39.....	88	105	92	20	150	30
40-49.....	59	117	69	16	147	23
50-59.....	52	113	59	18	117	21
60-69.....	42	126	53	20	76	15

TABLE 7
 DISABILITY LOSS-OF-TIME EXPERIENCE, 1974-75
 ANNUAL CLAIM COSTS* BY DURATION MEASURED
 FROM DATE OF DISABLEMENT

ATTAINED AGE	DURATION SINCE DISABLEMENT (DAYS)																	
	1-7			8-14			15-21			22-30			31-365†			Total		
	Male I	Male II	1964 Comm. ‡	Male I	Male II	1964 Comm.	Male I	Male II	1964 Comm.	Male I	Male II	1964 Comm.	Male I	Male II	1964 Comm.	Male I	Male II	1964 Comm.
Accident Disability 0-Day Elimination Period																		
Under 30 .....	.012	.026	.015	.009	.020	.010	.007	.015	.007	.007	.014	.006	.049	.087	.023	.084	.162	.061
30-39 .....	.010	.021	.013	.009	.017	.009	.007	.014	.007	.008	.014	.006	.047	.093	.024	.081	.159	.059
40-49 .....	.008	.015	.011	.007	.013	.009	.005	.011	.007	.006	.012	.006	.032	.084	.030	.058	.135	.063
50-59 .....	.007	.012	.009	.006	.010	.007	.005	.008	.006	.005	.009	.006	.032	.074	.039	.055	.113	.067
60-69 .....	.006	.010	.008	.005	.009	.007	.004	.007	.006	.004	.008	.006	.029	.066	.062	.048	.100	.089
Sickness Disability 7-Day Elimination Period																		
Under 30 .....	.000	.000	.000	.012	.016	.011	.010	.013	.008	.010	.013	.007	.053	.065	.025	.085	.107	.051
30-39 .....	.000	.000	.000	.013	.016	.016	.011	.014	.011	.011	.015	.010	.070	.091	.040	.105	.136	.077
40-49 .....	.000	.000	.000	.014	.020	.021	.013	.018	.016	.014	.020	.016	.108	.158	.075	.149	.216	.128
50-59 .....	.000	.000	.000	.021	.027	.030	.019	.024	.024	.022	.027	.024	.202	.293	.158	.264	.371	.236
60-69 .....	.000	.000	.000	.029	.034	.040	.026	.031	.034	.030	.036	.037	.331	.456	.375	.416	.557	.486
Total of 0-Day Accident and 7-Day Sickness																		
Under 30 .....	.012	.026	.015	.021	.036	.021	.017	.028	.015	.017	.027	.013	.102	.152	.048	.169	.269	.112
30-39 .....	.010	.021	.013	.022	.033	.025	.018	.028	.018	.019	.029	.016	.117	.184	.064	.186	.295	.136
40-49 .....	.008	.015	.011	.021	.033	.030	.018	.029	.023	.020	.032	.022	.140	.242	.105	.207	.351	.191
50-59 .....	.007	.012	.009	.027	.037	.037	.024	.032	.030	.027	.036	.030	.234	.367	.197	.319	.484	.303
60-69 .....	.006	.010	.008	.034	.043	.047	.030	.038	.040	.034	.044	.043	.360	.522	.437	.464	.657	.575

* Per \$1 of monthly income benefit.

† Days 31-372 for 7-Day Sickness Coverage.

‡ These values were developed to be consistent with values in the 1964 Commissioners Disability Table for the eighth and subsequent days of disablement. Values shown for "under 30" are those for attained ages 20-29.

for this group is probably closer to age 63; consequently, the comparable Commissioners values should be somewhat lower than the values shown in Table 7. For the "Total" column in Table 7 the Commissioners Table value at age 63 for 0-day accident is 0.081, for 7-day sickness it is 0.418, and for accident and sickness it is 0.499.

It is also important to note that the Commissioners Table was intended to be a minimum reserve standard for policies providing loss-of-time benefits for disability due to accident or sickness. It was developed to provide net valuation premiums, which do not vary by occupational class or sex, rather than the type of net premiums that would be considered desirable in preparing gross premium rates.

For ages under 50 at longer durations, Male I 0-day accident annual claim costs are greater than corresponding costs from the Commissioners Table. At other ages, Male I 0-day accident annual claim costs are generally equal to or less than corresponding costs from the Commissioners Table. Male II 0-day accident costs are much higher than corresponding Commissioners costs.

Male I and Male II accident annual claim costs are level or decrease with advancing age. This is similar to the 1964 Commissioners costs for all durations until days 31-365, and in total, where the Commissioners costs increase with advancing age.

Male I 7-day sickness annual claim costs are generally equal to or less than corresponding Commissioners costs, except at days 31-372 and at ages under 30. Except at the longer durations, Male II 7-day sickness annual claim costs are slightly greater than the Commissioners costs at the younger ages and slightly less than the Commissioners costs at the older ages. At duration 31-372 days they are considerably higher than corresponding Commissioners costs at all ages.

Male I combined annual claim costs are generally less than corresponding Commissioners costs, except at days 31-372. Male II annual claim costs are generally slightly higher than corresponding Commissioners costs at the earlier durations and considerably higher than Commissioners costs at the longer durations. Except for Male I for ages 60-69, Male I and Male II costs are each higher than the Commissioners costs and show a flatter slope by age.

4. TRENDS IN EXPERIENCE

Tables 8, 9, and 10 show the accident experience with a 0-day elimination period and the sickness experience with a 7-day elimination period, and the total of these two for the four calendar-year periods 1968-69, 1970-71, 1972-73, and 1974-75, as well as the unweighted average of these four periods, which reflects the experience for 1968-75.

TABLE 8

ACCIDENT AND SICKNESS EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD
 ELIMINATION PERIOD OF 0 DAY FOR ACCIDENT AND 7 DAYS FOR SICKNESS
 EXPERIENCE DURING 1968-69, 1970-71, 1972-73, 1974-75, AND 1968-75
 ANNUAL CLAIM RATE

ATTAINED AGE	MALE OCC. GROUP I					MALE OCC. GROUP II					FEMALE OCC. GROUP I				
	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75
	0 Day Accident														
Under 30.....	.053	.057	.050	.053	.053	.111	.127	.139	.115	.123	.034	.035	.023	.027	.030
30-39.....	.048	.052	.048	.047	.049	.096	.103	.098	.093	.098	.030	.033	.029	.028	.030
40-49.....	.038	.038	.035	.035	.037	.075	.078	.072	.068	.073	.044	.038	.025	.027	.034
50-59.....	.035	.036	.031	.029	.033	.064	.064	.056	.051	.059	.041	.045	.034	.032	.038
60-69.....	.032	.030	.028	.026	.029	.059	.056	.050	.044	.052	.044	.045	.034	.033	.039
	7-Day Sickness														
Under 30.....	.043	.049	.043	.054	.047	.058	.062	.057	.072	.062	.084	.085	.081	.108	.090
30-39.....	.052	.051	.050	.057	.053	.067	.065	.063	.073	.067	.101	.113	.092	.114	.105
40-49.....	.063	.066	.062	.063	.064	.077	.082	.082	.090	.083	.124	.124	.124	.132	.126
50-59.....	.093	.096	.092	.093	.094	.110	.106	.109	.119	.111	.126	.118	.118	.131	.123
60-69.....	.117	.119	.123	.126	.121	.132	.131	.135	.150	.137	.121	.097	.116	.143	.119
	Total of 0-Day Accident and 7-Day Sickness														
Under 30.....	.096	.106	.093	.107	.100	.169	.189	.196	.187	.185	.118	.120	.104	.135	.120
30-39.....	.100	.103	.098	.104	.102	.163	.168	.161	.166	.165	.131	.146	.121	.142	.135
40-49.....	.101	.104	.097	.098	.101	.152	.160	.154	.158	.156	.168	.162	.149	.159	.160
50-59.....	.128	.132	.123	.122	.127	.174	.170	.165	.170	.170	.167	.163	.152	.163	.161
60-69.....	.149	.149	.151	.152	.150	.191	.187	.185	.194	.189	.165	.142	.150	.176	.158

TABLE 9

ACCIDENT AND SICKNESS EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD
 ELIMINATION PERIOD OF 0 DAY FOR ACCIDENT AND 7 DAYS FOR SICKNESS
 EXPERIENCE DURING 1968-69, 1970-71, 1972-73, 1974-75, AND 1968-75
 CLAIM DURATION IN MONTHS

ATTAINED AGE	MALE OCC. GROUP I					MALE OCC. GROUP II					FEMALE OCC. GROUP I				
	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75
0-Day Accident															
Under 30.....	1.04	1.21	1.36	1.58	1.30	1.26	1.23	1.32	1.41	1.30	1.00	1.23	1.17	1.52	1.20
30-39.....	1.21	1.37	1.46	1.72	1.43	1.35	1.50	1.52	1.71	1.51	1.67	1.61	1.48	1.64	1.60
40-49.....	1.29	1.42	1.57	1.66	1.46	1.45	1.60	1.71	1.99	1.68	1.39	1.68	1.56	1.78	1.56
50-59.....	1.40	1.47	1.68	1.90	1.58	1.58	1.69	1.80	2.22	1.80	1.63	1.51	1.62	1.97	1.66
60-69.....	1.59	1.70	1.82	1.92	1.76	1.90	1.86	2.08	2.27	2.02	1.43	1.76	1.68	2.15	1.74
7-Day Sickness															
Under 30.....	1.07	1.24	1.37	1.57	1.34	1.16	1.32	1.39	1.49	1.35	1.10	1.05	1.14	1.35	1.17
30-39.....	1.33	1.41	1.54	1.84	1.53	1.37	1.55	1.59	1.86	1.60	1.43	1.61	1.55	1.50	1.52
40-49.....	1.76	1.97	2.11	2.37	2.03	1.77	2.06	2.23	2.40	2.12	1.68	1.82	1.91	1.84	1.82
50-59.....	2.17	2.38	2.57	2.84	2.48	2.34	2.64	2.83	3.12	2.74	1.82	2.09	1.94	2.14	2.00
60-69.....	2.91	2.88	3.14	3.30	3.07	3.02	3.38	3.59	3.71	3.44	2.02	2.56	2.11	1.98	2.14
Total of 0-Day Accident and 7-Day Sickness															
Under 30.....	1.05	1.23	1.37	1.58	1.32	1.22	1.26	1.34	1.44	1.32	1.07	1.10	1.14	1.39	1.18
30-39.....	1.27	1.39	1.50	1.79	1.48	1.36	1.52	1.55	1.78	1.55	1.48	1.61	1.54	1.53	1.54
40-49.....	1.58	1.77	1.92	2.11	1.82	1.61	1.84	1.99	2.22	1.92	1.60	1.79	1.85	1.83	1.76
50-59.....	1.96	2.13	2.34	2.61	2.24	2.06	2.28	2.48	2.85	2.41	1.77	1.93	1.87	2.10	1.92
60-69.....	2.62	2.64	2.89	3.07	2.81	2.68	2.93	3.18	3.39	3.05	1.87	2.30	2.01	2.01	2.04

TABLE 10

ACCIDENT AND SICKNESS EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD
 ELIMINATION PERIOD OF 0 DAY FOR ACCIDENT AND 7 DAYS FOR SICKNESS
 EXPERIENCE DURING 1968-69, 1970-71, 1972-73, 1974-75, AND 1968-75
 ANNUAL CLAIM COST FOR \$1 OF MONTHLY INCOME BENEFIT

ATTAINED AGE	MALE Occ. GROUP I					MALE Occ. GROUP II					FEMALE Occ. GROUP I				
	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75	1968-69	1970-71	1972-73	1974-75	1968-75
	0-Day Accident														
Under 30.....	.055	.069	.068	.084	.069	.140	.156	.183	.162	.160	.034	.043	.027	.041	.036
30-39.....	.058	.071	.070	.081	.070	.130	.155	.149	.159	.148	.050	.053	.043	.046	.048
40-49.....	.049	.054	.055	.058	.054	.109	.125	.123	.135	.123	.061	.064	.039	.048	.053
50-59.....	.049	.053	.052	.055	.052	.101	.108	.101	.113	.106	.067	.068	.055	.063	.063
60-69.....	.051	.051	.051	.050	.051	.112	.104	.104	.100	.105	.063	.079	.057	.071	.068
	7-Day Sickness														
Under 30.....	.046	.061	.059	.085	.063	.067	.082	.079	.107	.084	.092	.089	.092	.146	.105
30-39.....	.069	.072	.077	.105	.081	.092	.101	.100	.136	.107	.144	.182	.143	.171	.160
40-49.....	.111	.130	.131	.149	.130	.136	.169	.183	.216	.176	.208	.226	.237	.243	.229
50-59.....	.202	.228	.236	.264	.233	.257	.280	.308	.371	.304	.229	.247	.229	.280	.246
60-69.....	.340	.343	.386	.416	.371	.399	.443	.484	.557	.471	.245	.248	.245	.283	.255
	Total of 0-Day Accident and 7 Day Sickness														
Under 30.....	.101	.130	.127	.169	.132	.207	.238	.262	.269	.244	.126	.132	.119	.187	.141
30-39.....	.127	.143	.147	.186	.151	.222	.256	.249	.295	.255	.194	.235	.186	.217	.208
40-49.....	.160	.184	.186	.207	.184	.245	.294	.306	.351	.299	.269	.290	.276	.291	.282
50-59.....	.251	.281	.288	.319	.285	.358	.388	.409	.484	.410	.296	.315	.284	.343	.309
60-69.....	.391	.394	.437	.466	.422	.511	.547	.588	.657	.576	.308	.327	.302	.354	.323

Annual Claim Rates (Table 8)

Accident experience claim rates for the period 1974-75 are generally lower than those for the period 1968-75, while sickness experience claim rates are generally higher, as are those for the total of accident and sickness experience.

Claim Durations in Months (Table 9)

Claim durations for Male I, Male II, and Female I in the 1974-75 experience continue to show a generally upward trend toward longer claim durations.

Annual Claim Costs per \$1 of Monthly Income Benefit (Table 10)

Annual claim costs for Male I, Male II, and Female I are generally higher for both accident and sickness than those for the 1972-73 experience period and those for the entire period 1968-75.

B. EXPERIENCE IN SECOND YEAR OF BENEFIT PERIOD

Eleven companies contributed to this part of the study. The study is based on the experience during the second year of the benefit period with respect to claims incurred during 1973 and 1974. Previous studies of the experience during the second year of the benefit period appear in the *Reports* of odd-numbered years commencing in 1967. Experience on policies having maximum benefit periods of less than two years is omitted. Annual claim rates have been calculated by dividing the amounts of monthly indemnity on claims that continued for twelve months from the end of the elimination period by the corresponding exposures. Annual claim costs have been calculated by dividing the aggregate benefits incurred on claims during the second year of the benefit period by the corresponding exposures.

Durations of claims in months, with respect to the second year of the benefit period, have been calculated by dividing the annual claim costs by the annual claim rates. Contributions to the accident portion of the study were limited to experience under policies with a 0-day accident elimination period, and contributions to the sickness portion were limited to experience under policies with a 7-day sickness elimination period. This study is confined to male experience, for which there were 2,075 claims incurred. There were only 94 female claims in Occupation Group I under which benefits were paid in the second year of the benefit period, and this number was insufficient to provide any significant data. Using Male I results as the expected, the ratio of actual to expected claim costs for these females on an overall basis was 100 percent.

In this study 39 percent of the experience was contributed by one company, while 73 percent of the experience studied was contributed by four companies. Because of the sparsity of data, second-year annual claim rates and annual claim costs developed from these data may prove to be unreliable.

Table 11 shows second-year Male I and Male II experience for 0-day accident, 7-day sickness, and the combined 0-day accident and 7-day sickness coverages. Corresponding annual claim costs for the 1964 Commissioners Disability Table are also shown. The Commissioners

TABLE 11
DISABILITY LOSS-OF-TIME EXPERIENCE IN
SECOND YEAR OF BENEFIT PERIOD
FOR CLAIMS INCURRED DURING 1973-74

ATTAINED AGE	MALE OCC. GROUP I				MALE OCC. GROUP II				1964 COMM. ANNUAL CLAIM COST*
	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost*	No. Claims	Annual Claim Rate	Claim Duration (Months)	Annual Claim Cost*	
0-Day Accident									
20-29	4	.00075	8.5	.0064	19	.00165	9.2	.0151	.0034
30-39	12	.00069	8.1	.0056	65	.00223	10.5	.0234	.0040
40-49	20	.00093	9.6	.0089	109	.00266	8.4	.0224	.0069
50-59	37	.00065	8.0	.0052	137	.00304	8.8	.0267	.0141
60-64	42	.00103	7.8	.0080	70	.00409	8.9	.0363	.0255
7-Day Sickness									
20-29	16	.00216	8.8	.0189	20	.00105	9.6	.0101	.0036
30-39	40	.00151	8.0	.0121	98	.00204	8.3	.0169	.0066
40-49	98	.00349	10.1	.0351	226	.00476	9.9	.0472	.0169
50-59	193	.00670	10.3	.0688	479	.01331	9.9	.1324	.0573
60-64	135	.01626	9.7	.1583	255	.02344	9.8	.2298	.1393
Total of 0-Day Accident and 7-Day Sickness									
20-29	20	.00291	8.7	.0253	39	.00270	9.3	.0252	.0070
30-39	52	.00220	8.0	.0177	163	.00427	9.4	.0403	.0106
40-49	118	.00442	10.0	.0440	335	.00742	9.4	.0696	.0238
50-59	230	.00735	10.1	.0740	616	.01635	9.7	.1591	.0714
60-64	177	.01729	9.6	.1663	325	.02753	9.7	.2661	.2661

* Per \$1 of monthly income benefit.

Disability Table provides a useful basis of comparison with second-year costs, even though it was developed to provide valuation net premiums and not to provide net premiums that might be considered appropriate in developing gross premiums.

The annual claim rates and annual claim costs for Male I 0-day accident follow a seesaw pattern by age. Male II 0-day accident annual claim rates and annual claim costs increase by age except for the high cost at ages 30-39. Male II annual claim costs are significantly higher than Male I annual claim costs.

Except for the drop that results in the annual claim rate and annual claim cost at ages 30-39 for Male I because of the very high rate and cost at ages 20-29, Male I and Male II 7-day sickness annual claim rates and annual claim costs for the second year of the benefit period increase with age, with sharp increases after age 39. Male II annual claim costs are generally higher than Male I annual claim costs.

For the combined 0-day accident and 7-day sickness coverage, the annual claim rates and annual claim costs increase with age, with the same exception described under the discussion of the 7-day sickness experience. The slope by age of the experience is similar to that of the sickness experience. The Male I and Male II costs are higher than the Commissioners claim costs except at ages 60-64.

Table 12 shows second-year experience for claims incurred in 1967-74 and for claims incurred in 1973-74. Male I and Male II annual claim costs for claims incurred in 1973-74 are considerably higher than for those incurred during the period 1967-74, primarily because of the increase in annual claim rates.

TABLE 12--DISABILITY LOSS-OF-TIME EXPERIENCE IN
SECOND YEAR OF BENEFIT PERIOD
FOR CLAIMS INCURRED DURING 1967-71 AND 1973-74

ATTAINED AGE	MALE OCC. GROUP I						MALE OCC. GROUP II					
	Annual Claim Rate		Claim Duration (Months)		Annual Claim Cost*		Annual Claim Rate		Claim Duration (Months)		Annual Claim Cost*	
	1967-74	1973-74	1967-74	1973-74	1967-74	1973-74	1967-74	1973-74	1967-74	1973-74	1967-74	1973-74
0-Day Accident:												
20-29 .....	.00047	.00075	8.1	8.5	.0038	.0064	.00151	.00165	7.2	9.2	.0108	.0151
30-39 .....	.00059	.00069	8.0	8.1	.0047	.0056	.00194	.00223	9.0	10.5	.0175	.0234
40-49 .....	.00055	.00093	9.3	9.6	.0051	.0089	.00177	.00266	8.7	8.4	.0154	.0224
50-59 .....	.00056	.00065	7.5	8.0	.0042	.0052	.00199	.00304	9.1	8.8	.0182	.0267
60-64 .....	.00088	.00103	7.5	7.8	.0066	.0080	.00255	.00409	9.0	8.9	.0229	.0363
7-Day Sickness:												
20-29 .....	.00083	.00216	8.1	8.8	.0067	.0189	.00093	.00105	8.5	9.6	.0079	.0101
30-39 .....	.00105	.00151	8.2	8.0	.0086	.0121	.00149	.00204	8.1	8.3	.0121	.0169
40-49 .....	.00263	.00349	9.3	10.1	.0244	.0351	.00362	.00476	9.4	9.9	.0340	.0472
50-59 .....	.00589	.00670	10.1	10.3	.0597	.0688	.00982	.01331	9.7	9.9	.0954	.1324
60-64 .....	.01419	.01626	9.9	9.7	.1404	.1583	.01996	.02344	9.9	9.8	.1973	.2298
Total of 0-Day Accident and 7-Day Sickness												
20-29 .....	.00130	.00291	8.1	8.7	.0105	.0253	.00244	.00270	7.7	9.3	.0187	.0252
30-39 .....	.00164	.00220	8.1	8.0	.0133	.0177	.00343	.00427	8.6	9.4	.0296	.0403
40-49 .....	.00318	.00442	9.3	10.0	.0295	.0440	.00539	.00742	9.2	9.4	.0494	.0696
50-59 .....	.00645	.00735	9.9	10.1	.0639	.0740	.01181	.01635	9.6	9.7	.1136	.1591
60-64 .....	.01507	.01729	9.8	9.6	.1470	.1663	.02251	.02753	9.8	9.7	.2202	.2661

* Per \$1 of monthly income benefit.