

**TRANSACTIONS OF SOCIETY OF ACTUARIES  
1975 REPORTS**

**REPORT OF THE COMMITTEE ON EXPERIENCE  
UNDER INDIVIDUAL HEALTH INSURANCE**

**EXPERIENCE UNDER INDIVIDUAL  
LOSS-OF-TIME POLICIES, 1972-73**

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**SUMMARY OF EXPERIENCE UNDER INDIVIDUAL  
LOSS-OF-TIME POLICIES, 1972-73**

The first part of the study covers experience in the first year of the benefit period. Results of data submitted by fourteen companies are pre-

sented 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 1966-67, 1968-69, 1970-71, 1972-73, and 1966-73. Overall evaluation of the results of the current study of the 1972-73 experience reveals an increase in annual claim costs for males for the combined 0-day accident, 7-day sickness benefit since the study of the 1970-71 experience. These annual claim costs have increased in each subsequent 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 latter, the results generally reflect an increase in costs over prior experience.

#### A. EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD

**T**HIS section of the report presents an analysis of morbidity experience under individual loss-of-time policies during calendar years 1972-73 and a comparison of this experience with results for the periods 1966-67, 1968-69, and 1970-71. 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 *1959, 1961, 1963, 1965, 1967, 1969, 1971, and 1973 Reports*.

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 requirements 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 would also 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. However, the effect of this provision is not known.

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. Accident and sickness disability experience is shown separately. 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 1972-73, the Committee has compiled an aggregate exposure of 3,341,000 policy years during which 144,000 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. 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

TABLE 1  
CONTRIBUTING COMPANIES AND NUMBER OF CLAIMS

| COMPANY                 | YEAR OF EXPERIENCE |        | 1972-73<br>COMBINED |
|-------------------------|--------------------|--------|---------------------|
|                         | 1972               | 1973   |                     |
| Prudential              | 16,409             | 16,325 | 32,734              |
| Metropolitan            | 10,202             | 9,556  | 19,758              |
| Mutual of Omaha         | 9,035              | 8,376  | 17,411              |
| Monarch                 | 8,733              | 8,408  | 17,141              |
| New York Life           | 5,885              | 5,683  | 11,568              |
| Mutual of New York      | 4,488              | 4,290  | 8,778               |
| John Hancock            | 4,305              | 4,183  | 8,488               |
| Pacific Mutual          | 3,826              | 3,410  | 7,236               |
| Business Mens Assurance | 3,244              | 2,986  | 6,230               |
| Loyal Protective        | 2,905              | 2,529  | 5,434               |
| Woodmen                 | 2,033              | 1,837  | 3,870               |
| Guardian Life           | 1,104              | 1,052  | 2,156               |
| Continental Assurance   | 1,050              | 1,062  | 2,112               |
| Provident Mutual        | 328                | 317    | 645                 |
| Total                   | 73,547             | 70,014 | 143,561             |

that the proportion of the total experience for each company is different in the current and previous studies. It should also be noted that, except for the part of the study dealing with the second benefit year, the former age 20-29 category has been expanded to include the small volume of experience below age 20.

## 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 company.

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

*Male I and Male II.*—Annual claim rates decrease with age, whereas claim durations increase by age. The combined effect of these decreasing claim rates and increasing durations produces annual claim costs which are more than 30 per cent higher below age 40 than those above age 40. For the 0-day elimination period, ratios of Male II to Male I annual claim rates generally decrease with age, being 278 per cent at ages under 30 and 179 per cent at ages 60–69. Male II annual claim costs (as a per cent of Male I annual claim costs) do not decrease as rapidly. In general, annual claim costs have not changed significantly since the prior study.

*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 company.

TABLE 2  
NUMBER OF CLAIMS BY TYPE OF COVERAGE,  
SEX, OCCUPATION GROUP, AND  
ELIMINATION PERIOD  
1972-73 EXPERIENCE COMBINED

| ELIMINATION<br>PERIOD<br>(DAYS) | ACCIDENT           |                     |                    |                     | SICKNESS           |                     |                    |                     |
|---------------------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|
|                                 | Male               |                     | Female             |                     | Male               |                     | Female             |                     |
|                                 | Occ.<br>Group<br>I | Occ.<br>Group<br>II | Occ.<br>Group<br>I | Occ.<br>Group<br>II | Occ.<br>Group<br>I | Occ.<br>Group<br>II | Occ.<br>Group<br>I | Occ.<br>Group<br>II |
| 0.....                          | 9,436*             | 20,684*             | 1,318*             | 465                 | 4,761*             | 1,797*              | 461*               | 48                  |
| 3.....                          | 76                 | 221                 | 60                 | 6                   | 651                | 995                 | 374                | 38                  |
| 7.....                          | 2,330*             | 7,058*              | 715*               | 290                 | 17,134*            | 31,729*             | 7,037*             | 2,077               |
| 14.....                         | 1,579*             | 4,091*              | 287*               | 110                 | 4,939*             | 6,520*              | 1,372*             | 426                 |
| 21.....                         | 0                  | 0                   | 0                  | 0                   | 4                  | 0                   | 0                  | 0                   |
| 30.....                         | 1,276*             | 1,789*              | 248*               | 47                  | 5,077*             | 3,315*              | 1,306*             | 212                 |
| 60.....                         | 20                 | 15                  | 6                  | 1                   | 108                | 20                  | 41                 | 2                   |
| 90.....                         | 124                | 53                  | 13                 | 1                   | 600                | 149                 | 49                 | 0                   |
| Total                           | 14,841             | 33,911              | 2,647              | 920                 | 33,274             | 44,525              | 10,640             | 2,803               |

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

TABLE 3

## ACCIDENT DISABILITY LOSS-OF-TIME EXPERIENCE, 1972-73, 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                  | 625               | .050              | 1.36                    | .068              | 3,039              | 139               | 1.32                    | .183              | 121                 | .023              | 1.17                    | .027              | 278%                        | 97%                     | 269%              | 46%                 | 86%                     | 40%               |
| 30-39                     | 1,643             | .048              | 1.46                    | .070              | 5,318              | 098               | 1.52                    | .149              | 219                 | .029              | 1.48                    | .043              | 204                         | 104                     | 213               | 60                  | 101                     | 61                |
| 40-49                     | 2,112             | .035              | 1.57                    | .055              | 5,499              | 072               | 1.71                    | .123              | 260                 | .025              | 1.56                    | .039              | 206                         | 109                     | 224               | 71                  | 99                      | 71                |
| 50-59                     | 2,859             | .031              | 1.68                    | .052              | 4,960              | 056               | 1.80                    | .101              | 177                 | .024              | 1.62                    | .055              | 181                         | 107                     | 194               | 110                 | 96                      | 106               |
| 60-69                     | 2,197             | .028              | 1.82                    | .051              | 1,868              | 050               | 2.08                    | .104              | 241                 | .031              | 1.68                    | .057              | 179                         | 114                     | 204               | 121                 | 92                      | 112               |
| 7-Day Elimination Period  |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 467               | .042              | 1.90                    | .080              | 1,256              | 067               | 1.61                    | .108              | 102                 | .028              | 1.82                    | .051              | 160%                        | 85%                     | 135%              | 67%                 | 96%                     | 64%               |
| 30-39                     | 518               | .029              | 1.69                    | .049              | 2,099              | 064               | 1.89                    | .121              | 146                 | .028              | 1.44                    | .088              | 221                         | 112                     | 247               | 97                  | 186                     | 180               |
| 40-49                     | 601               | .027              | 2.15                    | .058              | 1,854              | 050               | 2.20                    | .110              | 183                 | .026              | 1.92                    | .050              | 185                         | 102                     | 190               | 96                  | 89                      | 86                |
| 50-59                     | 609               | .023              | 2.22                    | .051              | 1,487              | 039               | 2.15                    | .084              | 246                 | .028              | 2.32                    | .065              | 170                         | 97                      | 165               | 122                 | 105                     | 127               |
| 60-69                     | 235               | .027              | 1.52                    | .041              | 362                | 035               | 2.00                    | .070              | 38                  | .039              | 1.95                    | .076              | 130                         | 132                     | 171               | 144                 | 128                     | 185               |
| 14-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 241               | .018              | 1.94                    | .035              | 908                | 040               | 2.15                    | .086              | 43                  | .011              | 1.78                    | .035              | 222%                        | 111%                    | 246%              | 61%                 | 164%                    | 100%              |
| 30-39                     | 386               | .014              | 2.29                    | .032              | 1,334              | 038               | 2.29                    | .087              | 60                  | .014              | 2.11                    | .031              | 271                         | 100                     | 272               | 100                 | 106                     | 106               |
| 40-49                     | 488               | .015              | 2.07                    | .031              | 1,012              | 031               | 2.62                    | .089              | 80                  | .016              | 2.38                    | .038              | 227                         | 127                     | 287               | 107                 | 115                     | 123               |
| 50-59                     | 358               | .014              | 2.29                    | .032              | 689                | 033               | 2.61                    | .086              | 91                  | .020              | 2.35                    | .063              | 236                         | 114                     | 269               | 143                 | 138                     | 197               |
| 60-69                     | 106               | .015              | 2.60                    | .039              | 148                | 030               | 2.83                    | .085              | 13                  | .019              | 2.26                    | .043              | 200                         | 109                     | 218               | 127                 | 87                      | 110               |
| 30-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 146               | .005              | 2.40                    | .012              | 348                | 018               | 2.56                    | .046              | 17                  | .003              | 2.33                    | .007              | 360%                        | 107%                    | 383%              | 60%                 | 97%                     | 58%               |
| 30-39                     | 364               | .005              | 2.40                    | .012              | 633                | 016               | 2.94                    | .047              | 46                  | .004              | 2.75                    | .011              | 320                         | 123                     | 392               | 80                  | 115                     | 92                |
| 40-49                     | 430               | .005              | 3.20                    | .016              | 473                | 015               | 2.73                    | .041              | 73                  | .006              | 2.83                    | .017              | 309                         | 85                      | 256               | 120                 | 88                      | 106               |
| 50-59                     | 256               | .005              | 2.80                    | .014              | 285                | 013               | 2.80                    | .042              | 82                  | .007              | 2.71                    | .019              | 300                         | 100                     | 300               | 140                 | 97                      | 136               |
| 60-69                     | 80                | .008              | 2.75                    | .022              | 50                 | 010               | 3.70                    | .037              | 30                  | .015              | 2.80                    | .042              | 125                         | 135                     | 168               | 188                 | 102                     | 191               |

TABLE 4  
SICKNESS DISABILITY LOSS-OF-TIME EXPERIENCE, 1972-73, 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                  | 0                 |                   |                         |                   | 6                  | .079              | 0.39                    | .031              | 0                   |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| 30-39                     | 54                | .131              | 0.92                    | 121               | 64                 | .104              | 0.81                    | .084              | 11                  | .139              | 1.14                    | .158              | 79%                         | 88%                     | 93                | 69%                 | 106%                    |                   |
| 40-49                     | 428               | .098              | 1.55                    | 152               | 366                | .133              | 1.44                    | .191              | 57                  | 153               | 1.50                    | 230               | 136                         | 93                      | 126               | 156                 | 124%                    |                   |
| 50-59                     | 2,316             | .142              | 2.06                    | 292               | 772                | .142              | 2.12                    | .301              | 223                 | 187               | 1.35                    | 253               | 100                         | 103                     | 103               | 132                 | 66                      |                   |
| 60-69                     | 1,963             | .173              | 2.46                    | 425               | 589                | .195              | 2.99                    | .583              | 170                 | 186               | 2.01                    | 373               | 113                         | 122                     | 137               | 108                 | 82                      |                   |
| 7-Day Elimination Period  |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 856               | .043              | 1.37                    | 059               | 2,267              | .057              | 1.39                    | .079              | 672                 | 081               | 1.14                    | 092               | 133%                        | 101%                    | 134%              | 188%                | 83%                     |                   |
| 30-39                     | 2,360             | .050              | 1.54                    | 077               | 5,317              | .063              | 1.59                    | .100              | 1,216               | 092               | 1.55                    | 143               | 126                         | 103                     | 130               | 184                 | 101                     |                   |
| 40-49                     | 3,987             | .062              | 2.11                    | 131               | 8,354              | .082              | 2.23                    | .183              | 2,030               | 124               | 1.91                    | 237               | 132                         | 106                     | 140               | 200                 | 91                      |                   |
| 50-59                     | 6,548             | .092              | 2.57                    | 236               | 11,111             | .109              | 2.83                    | .308              | 2,429               | 118               | 1.94                    | 229               | 118                         | 110                     | 131               | 128                 | 75                      |                   |
| 60-69                     | 3,383             | .123              | 3.14                    | 386               | 4,680              | .135              | 3.59                    | .484              | 690                 | 116               | 2.11                    | 245               | 110                         | 114                     | 125               | 94                  | 67                      |                   |
| 14-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 276               | .017              | 1.29                    | 022               | 704                | .029              | 1.72                    | .050              | 171                 | 045               | 1.60                    | 072               | 171%                        | 133%                    | 227%              | 265%                | 124%                    |                   |
| 30-39                     | 734               | .024              | 1.92                    | 046               | 1,393              | .037              | 2.11                    | .078              | 303                 | 065               | 2.14                    | 139               | 154                         | 110                     | 170               | 271                 | 111                     |                   |
| 40-49                     | 1,415             | .040              | 2.55                    | 102               | 1,833              | .056              | 2.68                    | .150              | 451                 | 090               | 2.53                    | 228               | 140                         | 105                     | 147               | 225                 | 99                      |                   |
| 50-59                     | 1,782             | .064              | 2.86                    | 183               | 1,947              | .083              | 3.40                    | .282              | 370                 | 079               | 2.65                    | 209               | 130                         | 119                     | 154               | 123                 | 93                      |                   |
| 60-69                     | 732               | .094              | 3.36                    | 316               | 643                | .111              | 4.45                    | .494              | 77                  | 088               | 3.92                    | 345               | 138                         | 132                     | 156               | 94                  | 117                     |                   |
| 30-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 209               | .007              | 2.14                    | 015               | 256                | .012              | 2.00                    | .024              | 75                  | 011               | 1.73                    | 019               | 171%                        | 93%                     | 160%              | 157%                | 81%                     |                   |
| 30-39                     | 743               | .009              | 2.44                    | 022               | 733                | .017              | 2.35                    | .040              | 238                 | .022              | 2.45                    | 054               | 189                         | 96                      | 182               | 244                 | 100                     |                   |
| 40-49                     | 1,504             | .017              | 2.76                    | 047               | 1,003              | .029              | 3.14                    | .091              | 418                 | 036               | 2.61                    | 094               | 171                         | 114                     | 194               | 212                 | 95                      |                   |
| 50-59                     | 1,881             | .034              | 3.53                    | 120               | 1,008              | .049              | 3.63                    | .178              | 460                 | 039               | 3.26                    | 127               | 144                         | 103                     | 148               | 115                 | 92                      |                   |
| 60-69                     | 740               | .057              | 4.12                    | 235               | 315                | .070              | 4.03                    | .282              | 115                 | 049               | 3.86                    | 189               | 123                         | 98                      | 120               | 86                  | 94                      |                   |

*Male I and Male II.*—Annual claim rates, claim durations, and annual claim costs generally increase with age. For the 7-day elimination period, ratios of Male II to Male I annual claim rates generally decrease with age, from 133 per cent at ages under 30 to 110 per cent at ages 60-69. The ratio of Male II to Male I annual claim costs is fairly constant by age.

*Female I.*—For the 7-day elimination period, Female I annual claim rates are about twice Male I claim rates below age 50. They then decrease sharply to somewhat less than the male rate at ages 60-69. Ratios of Female I to Male I annual claim costs generally follow the pattern set by the ratios of annual claim rates.

#### *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 the four elimination periods at all ages. Female I costs generally lie between Male I and Male II costs.

#### *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 and Male II.*—Ratios of accident disability to total disability experience generally decrease by age. The ratios by age of annual claim costs for the 0-day elimination period are similar to the ratios for the 7-day elimination period costs. The ratios of accident to total disability with respect to annual claim rates and annual claim costs for Male II are approximately one-third higher than those for Male I.

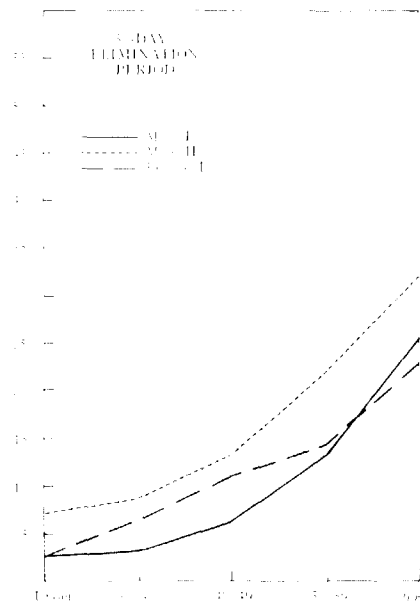
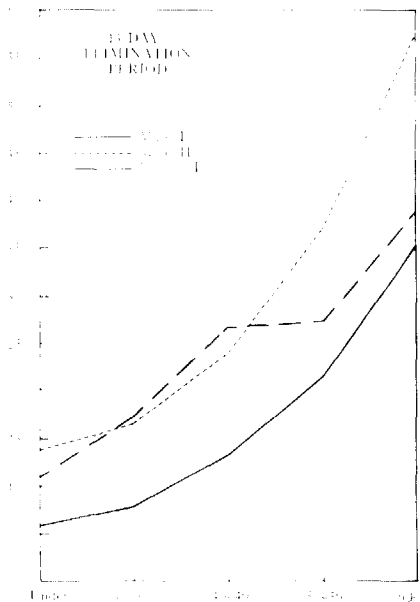
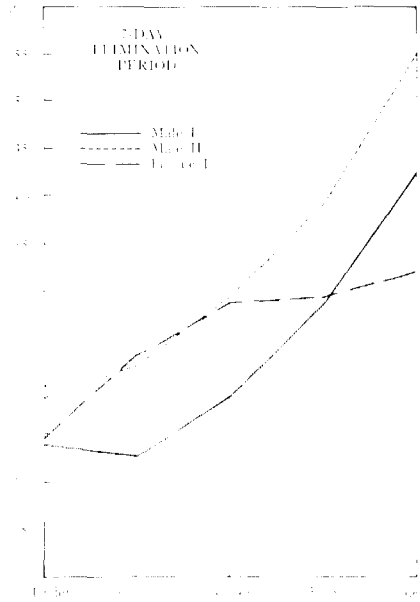
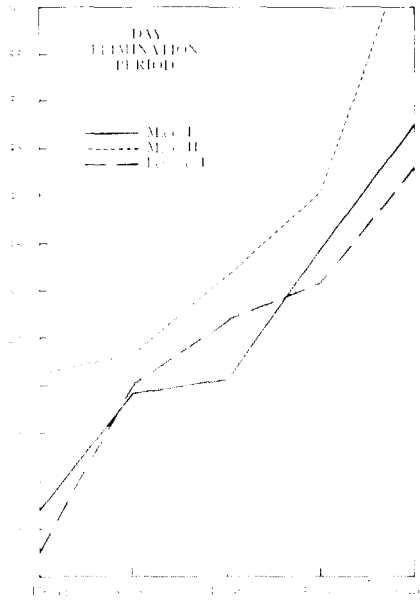
*Female I.*—The ratios of accident disability annual claim costs to total disability annual claim costs tend to be flat after age 40, unlike the decreasing trend of similar males ratios.



TABLE 5  
TOTAL DISABILITY LOSS-OF-TIME EXPERIENCE, 1972-73, 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 |                         |                   |                     |                         |                   |
|---------------------------|-------------------|-------------------|-------------------------|-------------------|--------------------|-------------------|-------------------------|-------------------|---------------------|-------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|---------------------|-------------------------|-------------------|
|                           |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   | Male Occ. Group II          |                         |                   | Female 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 | Annual Claim Rate           | Claim Duration (Months) | Annual Claim Cost | Annual Claim Rate   | Claim Duration (Months) | Annual Claim Cost |
| 0-Day Elimination Period  |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 625               | .050              | 1.36                    | .068              | 3,045              | .218              | 0.98                    | .214              | 121                 | .023              | 1.17                    | .027              | 436%                        | 72%                     | 315%              | 46%                 | 86%                     | 40%               |
| 30-39                     | 1,697             | .179              | 1.07                    | .191              | 5,382              | .202              | 1.15                    | .233              | 230                 | .168              | 1.20                    | .201              | 113                         | 107                     | 122               | 94                  | 112                     | 105               |
| 40-49                     | 2,540             | .133              | 1.56                    | .207              | 5,865              | .205              | 1.53                    | .314              | 317                 | .178              | 1.51                    | .269              | 154                         | 98                      | 152               | 134                 | 97                      | 130               |
| 50-59                     | 5,175             | .173              | 1.99                    | .344              | 5,732              | .198              | 2.03                    | .402              | 700                 | .221              | 1.39                    | .308              | 114                         | 102                     | 117               | 128                 | 70                      | 90                |
| 60-69                     | 4,160             | .201              | 2.37                    | .476              | 2,457              | .245              | 2.80                    | .687              | 411                 | .220              | 1.95                    | .430              | 122                         | 118                     | 144               | 109                 | 82                      | 90                |
| 7-Day Elimination Period  |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 1,223             | .085              | 1.64                    | .139              | 3,523              | .124              | 1.51                    | .187              | 774                 | .109              | 1.31                    | .143              | 146%                        | 92%                     | 135%              | 128%                | 80%                     | 103%              |
| 30-39                     | 2,878             | .079              | 1.59                    | .126              | 7,416              | .127              | 1.74                    | .221              | 1,362               | .120              | 1.93                    | .231              | 161                         | 109                     | 175               | 152                 | 121                     | 183               |
| 40-49                     | 4,888             | .089              | 2.12                    | .189              | 10,208             | .132              | 2.22                    | .293              | 2,213               | .150              | 1.91                    | .287              | 148                         | 105                     | 155               | 169                 | 90                      | 152               |
| 50-59                     | 7,157             | .115              | 2.50                    | .287              | 12,598             | .148              | 2.65                    | .392              | 2,675               | .146              | 2.01                    | .294              | 129                         | 106                     | 137               | 127                 | 80                      | 102               |
| 60-69                     | 3,618             | .150              | 2.85                    | .427              | 5,042              | .170              | 3.26                    | .554              | 728                 | .155              | 2.07                    | .321              | 113                         | 114                     | 130               | 103                 | 73                      | 75                |
| 14-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 517               | .035              | 1.63                    | .057              | 1,612              | .069              | 1.97                    | .136              | 214                 | .056              | 1.91                    | .107              | 197%                        | 121%                    | 239%              | 160%                | 117%                    | 188%              |
| 30-39                     | 1,120             | .038              | 2.05                    | .078              | 2,727              | .075              | 2.20                    | .165              | 363                 | .079              | 2.19                    | .173              | 197                         | 107                     | 212               | 208                 | 107                     | 222               |
| 40-49                     | 1,903             | .055              | 2.42                    | .133              | 2,845              | .090              | 2.66                    | .239              | 531                 | .106              | 2.51                    | .266              | 164                         | 110                     | 180               | 193                 | 104                     | 200               |
| 50-59                     | 2,140             | .078              | 2.76                    | .215              | 2,636              | .116              | 3.17                    | .368              | 461                 | .099              | 2.75                    | .272              | 149                         | 115                     | 171               | 127                 | 100                     | 127               |
| 60-69                     | 838               | .109              | 3.26                    | .355              | 791                | .141              | 4.11                    | .579              | 90                  | .107              | 3.63                    | .388              | 129                         | 126                     | 163               | 98                  | 111                     | 109               |
| 30-Day Elimination Period |                   |                   |                         |                   |                    |                   |                         |                   |                     |                   |                         |                   |                             |                         |                   |                     |                         |                   |
| Under 30                  | 355               | .012              | 2.25                    | .027              | 604                | .030              | 2.33                    | .070              | 92                  | .014              | 1.86                    | .026              | 250%                        | 104%                    | 259%              | 117%                | 83%                     | 96%               |
| 30-39                     | 1,107             | .014              | 2.43                    | .034              | 1,366              | .033              | 2.64                    | .087              | 284                 | .026              | 2.50                    | .065              | 236                         | 109                     | 256               | 186                 | 103                     | 191               |
| 40-49                     | 1,934             | .022              | 2.86                    | .063              | 1,476              | .044              | 3.00                    | .132              | 491                 | .042              | 2.64                    | .111              | 200                         | 105                     | 210               | 191                 | 92                      | 176               |
| 50-59                     | 2,137             | .039              | 3.44                    | .134              | 1,293              | .064              | 3.44                    | .220              | 542                 | .046              | 3.17                    | .146              | 164                         | 100                     | 164               | 118                 | 92                      | 109               |
| 60-69                     | 820               | .065              | 3.95                    | .257              | 365                | .080              | 3.99                    | .319              | 145                 | .064              | 3.61                    | .231              | 123                         | 101                     | 124               | 98                  | 91                      | 90                |

**CHART I**  
**TOTAL DISABILITY LOSS-OF-TIME EXPERIENCE**  
**1972-73 ANNUAL CLAIM COSTS\***  
**(Limited to First Year at Benefit Period)**



\* Per \$1 of monthly income benefit.

## 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 disablement. 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

TABLE 6  
RATIOS OF ACCIDENT DISABILITY TO TOTAL DISABILITY  
LOSS-OF-TIME EXPERIENCE  
IN FIRST YEAR OF BENEFIT PERIOD  
1972-73

| 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...  | 100%*                    | 100%*                   | 100%*              | 49%                      | 116%                    | 58%                |
| 30-39.....   | 27                       | 136                     | 37                 | 37                       | 106                     | 39                 |
| 40-49.....   | 26                       | 101                     | 27                 | 30                       | 101                     | 31                 |
| 50-59.....   | 18                       | 84                      | 15                 | 20                       | 89                      | 18                 |
| 60-69.....   | 14                       | 77                      | 11                 | 18                       | 53                      | 10                 |
| Male II      |                          |                         |                    |                          |                         |                    |
| Under 30...  | 64%                      | 135%                    | 86%                | 54%                      | 107%                    | 58%                |
| 30-39.....   | 49                       | 132                     | 64                 | 50                       | 109                     | 55                 |
| 40-49.....   | 35                       | 112                     | 39                 | 38                       | 99                      | 38                 |
| 50-59.....   | 28                       | 89                      | 25                 | 26                       | 81                      | 21                 |
| 60-69.....   | 20                       | 74                      | 15                 | 21                       | 61                      | 13                 |
| Female I     |                          |                         |                    |                          |                         |                    |
| Under 30...  | 100%*                    | 100%*                   | 100%*              | 26%                      | 139%                    | 36%                |
| 30-39.....   | 17                       | 123                     | 21                 | 23                       | 163                     | 38                 |
| 40-49.....   | 14                       | 103                     | 14                 | 17                       | 101                     | 17                 |
| 50-59.....   | 15                       | 117                     | 18                 | 19                       | 115                     | 22                 |
| 60-69.....   | 15                       | 86                      | 13                 | 25                       | 94                      | 24                 |

\* No sickness disability claims.

TABLE 7  
 DISABILITY LOSS-OF-TIME EXPERIENCE, 1972-73  
 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                                     | .011                              | .031    | .015        | .009   | .024    | .010       | .007   | .018    | .007       | .007   | .018    | .006       | .034    | .092    | .023       | .068   | .183    | .061       |
| 30-39  | .011                              | .022    | .013        | .009   | .018    | .009       | .007   | .014    | .007       | .007   | .014    | .006       | .036    | .081    | .024       | .070   | .149    | .059       |
| 40-49  | .008                              | .016    | .011        | .007   | .014    | .009       | .005   | .011    | .007       | .005   | .012    | .006       | .030    | .070    | .030       | .055   | .123    | .063       |
| 50-59  | .007                              | .013    | .009        | .006   | .011    | .007       | .005   | .009    | .006       | .005   | .009    | .006       | .029    | .059    | .039       | .052   | .101    | .067       |
| 60-69  | .006                              | .011    | .008        | .005   | .010    | .007       | .004   | .008    | .006       | .005   | .008    | .006       | .031    | .067    | .062       | .051   | .104    | .089       |
| Sickness Disability 7-Day Elimination Period |                                   |         |             |        |         |            |        |         |            |        |         |            |         |         |            |        |         |            |
| Under 30                                     |                                   |         |             | .010   | .013    | .011       | .007   | .010    | .008       | .007   | .010    | .007       | .035    | .046    | .025       | .059   | .079    | .051       |
| 30-39  |                                   |         |             | .011   | .014    | .016       | .010   | .012    | .011       | .010   | .012    | .010       | .046    | .062    | .040       | .077   | .100    | .077       |
| 40-49  |                                   |         |             | .014   | .019    | .021       | .012   | .016    | .016       | .013   | .018    | .016       | .092    | .130    | .075       | .131   | .183    | .128       |
| 50-59  |                                   |         |             | .021   | .025    | .030       | .019   | .022    | .024       | .021   | .024    | .024       | .175    | .237    | .158       | .236   | .308    | .236       |
| 60-69  |                                   |         |             | .028   | .031    | .040       | .026   | .028    | .034       | .029   | .032    | .037       | .303    | .393    | .375       | .386   | .484    | .486       |
| Total of 0-Day Accident and 7-Day Sickness   |                                   |         |             |        |         |            |        |         |            |        |         |            |         |         |            |        |         |            |
| Under 30                                     | .011                              | .031    | .015        | .019   | .037    | .021       | .014   | .028    | .015       | .014   | .028    | .013       | .069    | .138    | .048       | .127   | .262    | .112       |
| 30-39  | .011                              | .022    | .013        | .020   | .032    | .025       | .017   | .026    | .018       | .017   | .026    | .016       | .082    | .143    | .064       | .147   | .249    | .136       |
| 40-49  | .008                              | .016    | .011        | .021   | .033    | .030       | .017   | .027    | .023       | .018   | .030    | .022       | .122    | .200    | .105       | .186   | .306    | .191       |
| 50-59  | .007                              | .013    | .009        | .027   | .036    | .037       | .024   | .031    | .030       | .026   | .033    | .030       | .204    | .296    | .197       | .288   | .409    | .303       |
| 60-69  | .006                              | .011    | .008        | .033   | .041    | .047       | .030   | .036    | .040       | .034   | .040    | .043       | .334    | .460    | .437       | .437   | .588    | .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.

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 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 which would be considered desirable in preparing gross premium rates.

For ages under 40 at longer durations, Male I 0-day accident annual claim costs are equal to or 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 less than corresponding Commissioners costs, except at days 31-372. Male II 7-day sickness annual claim costs are close to corresponding Commissioners costs for earlier durations, but they are generally considerably higher than Commissioners costs at days 31-372.

Male I combined annual claim costs are generally less than corresponding Commissioners costs, except at days 31-372. Male II annual claim costs are close to corresponding Commissioners costs for earlier durations but are considerably higher than Commissioners costs at days 31-372. Except for ages 60-69, the unweighted average of Male I and Male II costs are somewhat higher than the Commissioners costs.

#### 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 1966-67,

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 1966-67, 1968-69, 1970-71, 1972-73, AND 1966 73  
 ANNUAL CLAIM RATE

| ATTAINED AGE                               | MALE OCC. GROUP I |         |         |         |         | MALE OCC. GROUP II |         |         |         |         | FEMALE OCC. GROUP I |         |         |         |         |
|--|-------------------|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|---------------------|---------|---------|---------|---------|
|  | 1966-67           | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67            | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67             | 1968-69 | 1970-71 | 1972-73 | 1966-73 |
| 0-Day Accident                             |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...                                | .051              | .053    | .057    | .050    | .053    | .107               | .111    | .127    | .139    | .121    | .041                | .034    | .035    | .023    | .033    |
| 30-39.....                                 | .045              | .048    | .052    | .048    | .048    | .097               | .096    | .103    | .098    | .099    | .032                | .030    | .033    | .029    | .031    |
| 40-49.....                                 | .038              | .038    | .038    | .035    | .037    | .076               | .075    | .078    | .072    | .075    | .038                | .044    | .038    | .025    | .036    |
| 50-59.....                                 | .036              | .035    | .036    | .031    | .035    | .066               | .064    | .064    | .056    | .063    | .041                | .041    | .045    | .034    | .040    |
| 60-69.....                                 | .033              | .032    | .030    | .028    | .031    | .057               | .059    | .056    | .050    | .056    | .037                | .044    | .045    | .034    | .040    |
| 7-Day Sickness                             |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...                                | .048              | .043    | .049    | .043    | .046    | .058               | .058    | .062    | .057    | .059    | .082                | .084    | .085    | .081    | .083    |
| 30-39.....                                 | .053              | .052    | .051    | .050    | .052    | .065               | .067    | .065    | .063    | .065    | .102                | .101    | .113    | .092    | .102    |
| 40-49.....                                 | .068              | .063    | .066    | .062    | .065    | .083               | .077    | .082    | .082    | .081    | .122                | .124    | .124    | .124    | .124    |
| 50-59.....                                 | .099              | .093    | .096    | .092    | .095    | .113               | .110    | .106    | .109    | .110    | .125                | .126    | .118    | .118    | .122    |
| 60-69.....                                 | .127              | .117    | .119    | .123    | .122    | .141               | .132    | .131    | .135    | .135    | .132                | .121    | .097    | .116    | .117    |
| Total of 0 Day Accident and 7 Day Sickness |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...                                | .099              | .096    | .106    | .093    | .099    | .165               | .169    | .189    | .196    | .180    | .123                | .118    | .120    | .104    | .116    |
| 30-39.....                                 | .098              | .100    | .103    | .098    | .100    | .162               | .163    | .168    | .161    | .164    | .134                | .131    | .146    | .121    | .133    |
| 40-49.....                                 | .106              | .101    | .104    | .097    | .102    | .159               | .152    | .160    | .154    | .156    | .160                | .168    | .162    | .149    | .160    |
| 50-59.....                                 | .135              | .128    | .132    | .123    | .130    | .179               | .174    | .170    | .165    | .173    | .166                | .167    | .163    | .152    | .162    |
| 60-69.....                                 | .160              | .149    | .149    | .151    | .153    | .198               | .191    | .187    | .185    | .191    | .169                | .165    | .142    | .150    | .157    |

TABLE 9

ACCIDENT AND SICKNESS EXPERIENCE IN FIRST YEAR OF BENEFIT PERIOD  
 ELIMINATION PERIOD OF 0 DAY FOR ACCIDENTS AND 7 DAYS FOR SICKNESS  
 EXPERIENCE DURING 1966-67, 1968-69, 1970-71, 1972-73, AND 1966-73  
 CLAIM DURATION IN MONTHS

| ATTAINED AGE | MALE Occ. Group I                          |         |         |         |         | MALE Occ. Group II |         |         |         |         | Female Occ. Group I |         |         |         |         |
|--------------|--|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|---------------------|---------|---------|---------|---------|
|              | 1966-67                                    | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67            | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67             | 1968-69 | 1970-71 | 1972-73 | 1966-73 |
|              | 0-Day Accident                             |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...  | 1.20                                       | 1.04    | 1.21    | 1.36    | 1.19    | 1.12               | 1.26    | 1.23    | 1.32    | 1.24    | 0.83                | 1.00    | 1.23    | 1.17    | 1.06    |
| 30-39.....   | 1.22                                       | 1.21    | 1.37    | 1.46    | 1.33    | 1.27               | 1.35    | 1.50    | 1.52    | 1.40    | 1.50                | 1.67    | 1.61    | 1.48    | 1.58    |
| 40-49.....   | 1.18                                       | 1.29    | 1.42    | 1.57    | 1.38    | 1.37               | 1.45    | 1.60    | 1.71    | 1.53    | 1.63                | 1.39    | 1.68    | 1.56    | 1.58    |
| 50-59.....   | 1.25                                       | 1.40    | 1.47    | 1.68    | 1.43    | 1.52               | 1.58    | 1.69    | 1.80    | 1.63    | 1.46                | 1.63    | 1.51    | 1.62    | 1.58    |
| 60-69.....   | 1.45                                       | 1.59    | 1.70    | 1.82    | 1.61    | 1.74               | 1.90    | 1.86    | 2.08    | 1.88    | 1.62                | 1.43    | 1.76    | 1.68    | 1.63    |
|              | 7-Day Sickness                             |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...  | 0.98                                       | 1.07    | 1.24    | 1.37    | 1.15    | 1.19               | 1.16    | 1.32    | 1.39    | 1.25    | 1.17                | 1.10    | 1.05    | 1.14    | 1.11    |
| 30-39.....   | 1.26                                       | 1.33    | 1.41    | 1.54    | 1.37    | 1.40               | 1.37    | 1.55    | 1.59    | 1.48    | 1.73                | 1.43    | 1.61    | 1.55    | 1.58    |
| 40-49.....   | 1.66                                       | 1.76    | 1.97    | 2.11    | 1.86    | 1.82               | 1.77    | 2.06    | 2.23    | 1.98    | 1.85                | 1.68    | 1.82    | 1.91    | 1.81    |
| 50-59.....   | 2.07                                       | 2.17    | 2.38    | 2.57    | 2.29    | 2.34               | 2.34    | 2.64    | 2.83    | 2.52    | 1.89                | 1.82    | 2.09    | 1.94    | 1.93    |
| 60-69.....   | 2.70                                       | 2.91    | 2.88    | 3.14    | 2.89    | 3.10               | 3.02    | 3.38    | 3.59    | 3.27    | 2.11                | 2.02    | 2.56    | 2.11    | 2.17    |
|              | Total of 0-Day Accident and 7-Day Sickness |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30...  | 1.09                                       | 1.05    | 1.23    | 1.37    | 1.17    | 1.15               | 1.22    | 1.26    | 1.34    | 1.24    | 1.06                | 1.07    | 1.10    | 1.14    | 1.09    |
| 30-39.....   | 1.24                                       | 1.27    | 1.39    | 1.50    | 1.35    | 1.32               | 1.36    | 1.52    | 1.55    | 1.43    | 1.67                | 1.48    | 1.61    | 1.54    | 1.58    |
| 40-49.....   | 1.49                                       | 1.58    | 1.77    | 1.92    | 1.69    | 1.60               | 1.61    | 1.84    | 1.99    | 1.76    | 1.80                | 1.60    | 1.79    | 1.85    | 1.76    |
| 50-59.....   | 1.85                                       | 1.96    | 2.13    | 2.34    | 2.06    | 2.03               | 2.06    | 2.28    | 2.48    | 2.20    | 1.78                | 1.77    | 1.93    | 1.87    | 1.84    |
| 60-69.....   | 2.44                                       | 2.62    | 2.64    | 2.89    | 2.63    | 2.71               | 2.68    | 2.93    | 3.18    | 2.86    | 2.00                | 1.87    | 2.30    | 2.01    | 2.03    |

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 1966-67, 1968-69, 1970-71, 1972-73, AND 1966-73  
 ANNUAL CLAIM COSTS FOR \$1 OF MONTHLY INCOME BENEFIT

| ATTAINED AGE                                      | MALE OCC. GROUP I |         |         |         |         | MALE OCC. GROUP II |         |         |         |         | FEMALE OCC. GROUP I |         |         |         |         |
|---|-------------------|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|---------------------|---------|---------|---------|---------|
|   | 1966-67           | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67            | 1968-69 | 1970-71 | 1972-73 | 1966-73 | 1966-67             | 1968-69 | 1970-71 | 1972-73 | 1966-73 |
| <i>0 Day Accident</i>                             |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30  | .061              | .055    | .069    | .068    | .063    | .120               | .140    | .156    | .183    | .150    | .034                | .034    | .043    | .027    | .035    |
| 30-39   | .055              | .058    | .071    | .070    | .064    | .123               | .130    | .155    | .149    | .139    | .048                | .050    | .053    | .043    | .049    |
| 40-49   | .045              | .049    | .054    | .055    | .051    | .104               | .109    | .125    | .123    | .115    | .062                | .061    | .064    | .039    | .057    |
| 50-59   | .045              | .049    | .053    | .052    | .050    | .100               | .101    | .108    | .101    | .103    | .060                | .067    | .068    | .055    | .063    |
| 60-69   | .048              | .051    | .051    | .051    | .050    | .099               | .112    | .104    | .104    | .105    | .060                | .063    | .079    | .057    | .065    |
| <i>7-Day Sickness</i>                             |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30  | .047              | .046    | .061    | .059    | .053    | .069               | .067    | .082    | .079    | .074    | .096                | .092    | .089    | .092    | .092    |
| 30-39   | .067              | .069    | .072    | .077    | .071    | .091               | .092    | .101    | .100    | .096    | .176                | .144    | .182    | .143    | .161    |
| 40-49   | .113              | .111    | .130    | .131    | .121    | .151               | .136    | .169    | .183    | .160    | .226                | .208    | .226    | .237    | .224    |
| 50-59   | .205              | .202    | .228    | .236    | .218    | .264               | .257    | .280    | .308    | .277    | .236                | .229    | .247    | .229    | .235    |
| 60-69   | .343              | .340    | .343    | .386    | .353    | .437               | .399    | .443    | .484    | .441    | .278                | .245    | .248    | .245    | .254    |
| <i>Total of 0 Day Accident and 7 Day Sickness</i> |                   |         |         |         |         |                    |         |         |         |         |                     |         |         |         |         |
| Under 30  | .108              | .101    | .130    | .127    | .116    | .189               | .207    | .238    | .262    | .224    | .130                | .126    | .132    | .119    | .127    |
| 30-39   | .122              | .127    | .143    | .147    | .135    | .214               | .222    | .256    | .249    | .235    | .224                | .194    | .235    | .186    | .210    |
| 40-49   | .158              | .160    | .184    | .186    | .172    | .255               | .245    | .294    | .306    | .275    | .288                | .269    | .290    | .276    | .281    |
| 50-59   | .250              | .251    | .281    | .288    | .268    | .364               | .358    | .388    | .409    | .380    | .296                | .296    | .315    | .284    | .298    |
| 60-69   | .391              | .391    | .394    | .437    | .403    | .536               | .511    | .547    | .588    | .546    | .338                | .308    | .327    | .302    | .319    |

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1968-69, 1970-71, and 1972-73, as well as the unweighted average of these four periods, which reflects the experience for 1966-73.

*Annual Claim Rates (Table 8)*

In general, claim rates for the period 1972-73 are slightly lower than those for the period 1966-73.

*Claim Durations in Months (Table 9)*

At almost every age, claim durations for Male I and Male II are greater in the 1972-73 experience than in any previous period shown. This represents a continuation of the trend to longer claim durations. The trend to longer claim durations does not appear in the female experience.

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

Both accident and sickness Male I and Male II annual claim costs for the current experience are generally higher than corresponding costs for the entire period 1966-73. Additionally, to a lesser degree than the claim duration, annual claim costs reflect consistently higher values for each subsequent two-year period of study. The deteriorating trend of annual claim costs does not appear in the female experience.

B. EXPERIENCE IN SECOND YEAR OF BENEFIT PERIOD

Twelve 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 1971 and 1972. Previous studies of the experience during the second year of the benefit period appear in the *1967, 1969, 1971, and 1973 Reports*. Experience on policies having maximum benefit periods of less than two years is omitted. Annual claim rates were 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 were 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, were 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 1,766 claims incurred. There were only 59 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 115 per cent.

In this study 54 per cent of the experience was contributed by one company, while 81 per cent 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

TABLE 11  
DISABILITY LOSS-OF-TIME EXPERIENCE IN  
SECOND YEAR OF BENEFIT PERIOD  
FOR CLAIMS INCURRED DURING 1971-72

| ATTAINED AGE                               | MALE OCC. GROUP I |                    |                         |                    | MALE OCC. GROUP II |                   |                         |                    | 1964                     |
|--|-------------------|--------------------|-------------------------|--------------------|--------------------|-------------------|-------------------------|--------------------|--------------------------|
|  | No. Claims        | Annual Claims Rate | Claim Duration (Months) | Annual Claim Cost* | No. Claims         | Annual Claim Rate | Claim Duration (Months) | Annual Claim Cost* | COMM. ANNUAL CLAIM COST* |
| 0-Day Accident                             |                   |                    |                         |                    |                    |                   |                         |                    |                          |
| 20-29.....                                 | 6                 | .00056             | 8.4                     | .0047              | 21                 | .00175            | 4.8                     | .0084              | .0034                    |
| 30-39.....                                 | 14                | .00049             | 5.7                     | .0028              | 84                 | .00234            | 8.3                     | .0194              | .0040                    |
| 40-49.....                                 | 26                | .00070             | 9.4                     | .0066              | 102                | .00191            | 9.0                     | .0171              | .0069                    |
| 50-59.....                                 | 33                | .00048             | 7.9                     | .0038              | 114                | .00209            | 10.1                    | .0211              | .0141                    |
| 60-64.....                                 | 47                | .00094             | 7.8                     | .0073              | 43                 | .00220            | 8.3                     | .0182              | .0255                    |
| 7-Day Sickness                             |                   |                    |                         |                    |                    |                   |                         |                    |                          |
| 20-29.....                                 | 12                | .00082             | 7.1                     | .0058              | 19                 | .00088            | 8.2                     | .0072              | .0036                    |
| 30-39.....                                 | 37                | .00099             | 8.2                     | .0081              | 84                 | .00160            | 8.4                     | .0134              | .0066                    |
| 40-49.....                                 | 113               | .00291             | 9.2                     | .0268              | 198                | .00413            | 8.5                     | .0352              | .0169                    |
| 50-59.....                                 | 184               | .00684             | 10.0                    | .0686              | 345                | .00990            | 9.9                     | .0977              | .0573                    |
| 60-64.....                                 | 121               | .01643             | 9.7                     | .1595              | 163                | .02098            | 10.6                    | .2215              | .1393                    |
| Total of 0-Day Accident and 7-Day Sickness |                   |                    |                         |                    |                    |                   |                         |                    |                          |
| 20-29.....                                 | 18                | .00138             | 7.6                     | .0105              | 40                 | .00263            | 5.9                     | .0156              | .0070                    |
| 30-39.....                                 | 51                | .00148             | 7.4                     | .0109              | 168                | .00394            | 8.3                     | .0328              | .0106                    |
| 40-49.....                                 | 139               | .00361             | 9.3                     | .0334              | 300                | .00604            | 8.7                     | .0523              | .0238                    |
| 50-59.....                                 | 217               | .00732             | 9.9                     | .0724              | 459                | .01199            | 9.9                     | .1188              | .0714                    |
| 60-64.....                                 | 168               | .01737             | 9.6                     | .1668              | 206                | .02318            | 10.3                    | .2397              | .1648                    |

\* Per \$1 of monthly income benefit.

TABLE 12--DISABILITY LOSS-OF-TIME EXPERIENCE IN  
SECOND YEAR OF BENEFIT PERIOD  
FOR CLAIMS INCURRED DURING 1967-72 AND 1971-72

| 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* |         |
|  | 1967-72           | 1971-72 | 1967-72                 | 1971-72 | 1967-72            | 1971-72 | 1967-72            | 1971-72 | 1967-72                 | 1971-72 | 1967-72            | 1971-72 |
| 0-Day Accident                             |                   |         |                         |         |                    |         |                    |         |                         |         |                    |         |
| 20-29.....                                 | .00041            | .00056  | 7.8                     | 8.4     | .0032              | .0047   | .00147             | .00175  | 6.5                     | 4.8     | .0096              | .0084   |
| 30-39.....                                 | .00056            | .00049  | 8.0                     | 5.7     | .0045              | .0028   | .00184             | .00234  | 8.5                     | 8.3     | .0157              | .0194   |
| 40-49.....                                 | .00046            | .00070  | 8.9                     | 9.4     | .0041              | .0066   | .00152             | .00191  | 8.8                     | 9.0     | .0134              | .0171   |
| 50-59.....                                 | .00054            | .00048  | 7.0                     | 7.9     | .0038              | .0038   | .00162             | .00209  | 9.4                     | 10.1    | .0152              | .0211   |
| 60-64.....                                 | .00084            | .00094  | 7.4                     | 7.8     | .0062              | .0073   | .00192             | .00220  | 9.1                     | 8.3     | .0174              | .0182   |
| 7-Day Sickness                             |                   |         |                         |         |                    |         |                    |         |                         |         |                    |         |
| 20-29.....                                 | .00047            | .00082  | 7.0                     | 7.1     | .0033              | .0058   | .00089             | .00088  | 8.1                     | 8.2     | .0072              | .0072   |
| 30-39.....                                 | .00091            | .00099  | 8.2                     | 8.2     | .0075              | .0081   | .00128             | .00160  | 8.0                     | 8.4     | .0102              | .0134   |
| 40-49.....                                 | .00237            | .00291  | 8.9                     | 9.2     | .0211              | .0268   | .00320             | .00413  | 9.1                     | 8.5     | .0290              | .0352   |
| 50-59.....                                 | .00558            | .00684  | 10.1                    | 10.0    | .0562              | .0686   | .00842             | .00990  | 9.6                     | 9.9     | .0806              | .0977   |
| 60-64.....                                 | .01327            | .01643  | 10.0                    | 9.7     | .1325              | .1595   | .01810             | .02098  | 9.9                     | 10.6    | .1799              | .2215   |
| Total of 0-Day Accident and 7-Day Sickness |                   |         |                         |         |                    |         |                    |         |                         |         |                    |         |
| 20-29.....                                 | .00088            | .00138  | 7.4                     | 7.6     | .0065              | .0105   | .00236             | .00263  | 7.1                     | 5.9     | .0168              | .0156   |
| 30-39.....                                 | .00147            | .00148  | 8.2                     | 7.4     | .0120              | .0109   | .00312             | .00394  | 8.3                     | 8.3     | .0259              | .0328   |
| 40-49.....                                 | .00283            | .00361  | 8.9                     | 9.3     | .0252              | .0334   | .00472             | .00604  | 9.0                     | 8.7     | .0424              | .0523   |
| 50-59.....                                 | .00612            | .00732  | 9.8                     | 9.9     | .0600              | .0724   | .01004             | .01199  | 9.5                     | 9.9     | .0958              | .1188   |
| 60-64.....                                 | .01411            | .01737  | 9.8                     | 9.6     | .1387              | .1668   | .02002             | .02318  | 9.9                     | 10.3    | .1973              | .2397   |

\* Per \$1 of monthly income benefit.

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 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 which 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 rate and cost at ages 30-39. Male II annual claim costs are significantly higher than Male I annual claim costs.

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. The slope by age of the experience is similar to that of the sickness experience. The Male I and Male II costs are consistently higher than the Commissioners claim costs.

Table 12 shows second-year experience for claims incurred in 1967-72 and for claims incurred in 1971-72. In general, Male I and Male II annual claim rates, claim durations, and annual claim costs for claims incurred during 1971-72 are higher than for those incurred during the period 1967-72.