# TRANSACTIONS OF SOCIETY OF ACTUARIES 1993-94 REPORTS

## REPORT OF THE INTERCOMPANY SUBCOMMITTEE<sup>1</sup> OF THE LONG-TERM-CARE EXPERIENCE COMMITTEE

# LONG-TERM-CARE INTERCOMPANY STUDY: 1984–1991 EXPERIENCE

#### I. INTRODUCTION

The following document is the first Intercompany Study of the Long-Term-Care Experience Committee. It also is the first public report on experience of lives insured under private insurance plans. The committee has been gathering and refining the quality of the data since 1987. Ten insurers of long-term-care insurance agreed to provide information from their data files to further the knowledge of long-term-care insurance. The insurers are listed in Appendix A.

Data were collected as available on policies in force between January 1, 1984, through December 31, 1991. Claims incurred during this time frame on policies in force were followed from claim inception through the earlier of claim termination or June 30, 1992. Allowing a six-month period to report incurred claims should remove most of the incurred but not reported claims as of year-end 1991.

The ten insurers provided information on either 100% of their insureds or a substantial but representative portion of their insureds. Sample sizes were selected to protect the confidentiality of any one company's experience. Records were submitted on more than 50 different policy forms. More than 800,000 exposure records were gathered. There were almost 100,000 claim payment records on more than 13,000 claimants. Just under \$200,000,000 in benefits were reported as paid. Because of the types of policies primarily in force during the exposure period, the vast majority of the claims submitted were for nursing home care.

The average age of the exposure file of in-force policyholders was 67, and the average age at the time of claim incurral was 77. Female insureds represented 62% of the exposure and 64% of the claims. General characteristics of the exposure file and claim file are given in Appendixes B and C, respectively.

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The committee requested a significant amount of data from contributors. Because much of that information was not available for electronic submission from enough carriers, extensive reporting was not possible. With expanded contributors for the next report period and increasing data submissions from current contributors, we hope that a broader report can be prepared in the future. However, valuable information has been assembled and is reported in the following sections. The four main sections within this report cover the topics of morbidity, claim characteristics, persistency, and home care.

Two main points need to be made about the findings in this report. First, most of the claim experience is based on policies that provide little in the way of home care benefits. Therefore, this is primarily a nursing home facility experience study. Section I presents claim experience for both nursing home and home care. Section II presents nursing home experience only. Section IV is dedicated solely to home health care experience.

Second, most of the contributors write either individual or association group coverages, both of which are underwritten. Thus, more than 99% of this claim experience is based on individually selected insureds. Less than 1% of the claim experience is on corporate-sponsored employer group plans.

The content of each section is set to provide information of two kinds: a report on the combined experience of all companies and a perspective on the range of differences in experience by contributors. Experience is reported exactly as calculated. There has been no attempt to smooth, interpolate or extrapolate numerical data at this time. The next study may have a sufficiently large volume of data to allow the development of more credible tables.

Each section reports on several areas for which sufficient data are available. These areas are sex, issue age, attained age, elimination period, policy duration, and issue year.

## Calculations

Many tables in this report are broken down by policy duration. Duration is calculated based on exposure from either active or terminated records. For active records, duration is calculated by using only the latest record in the following formula:

duration in months = (1 + last observation date - issue date)/ days per month

Note that 30.42 was used as the days per month to account for monthly variations and leap years. For terminated policy records, duration is calculated by substituting the termination date for the last observation date in this formula.

The incidence tables break duration down into annual periods as follows:

- Duration 1, 0 to 13 months
- Duration 2, 14 to 25 months
- Duration 3, 26 to 37 months
- Duration 4, 38 to 49 months
- Duration 5, 50 to 61 months
- Duration 6, 62 to 73 months.

The first duration spans 13 months to estimate the effect of the grace period. The application of grace periods in practice varies significantly from carrier to carrier. In general, a company does not consider a policy "terminated" until at least the end of the grace period. For administrative simplicity, many carriers do not terminate (or lapse) a policy until well after the grace period has expired. The division of duration into these time periods has the effect of counting any active policy currently in its grace period in the previous duration.

Each policy is credited with a full exposure year for all integer duration years up to and including the duration year in which the observation period or termination date ends. For example, a policy whose duration is 26 months, 7 days is included and counted as completing duration 3. This methodology overstates duration by duration group and in total. Claim incidence and persistency rates are understated as a result.

Incurral date is the earliest incurred date shown on records submitted for each claimant. Issue date is the earliest date of issue recorded for each insured. For each claim a duration is calculated by using the following formula:

duration in months = (1 + incurral date - issue date)/days per month

where the days per month depends on the observation period to account for monthly variations and leap years.

An incidence rate is found by dividing the number of claims in the durationelimination period cell by the exposure in the duration-elimination period cell.

Data were submitted for many specific elimination periods. Because the data for some elimination periods were very small, data were aggregated

into elimination period groups. The elimination period category labeled "0 days" includes only zero-day elimination period coverage. The elimination period category labeled "15–30 days" includes 15-day, 20-day and 30-day elimination period experience but essentially comprises 20-day elimination period experience. The elimination period category labeled "60–150 days" includes 60-day, 90-day, 100-day, and 150-day elimination period experience but essentially comprises (about equally) 90-day and 100-day elimination period experience. Table B-2 in Appendix B details this study's exposure by elimination period. A trivial portion of all records provided contained no information on the elimination period. These records have been excluded from all calculations of incidence.

## Caveat

This analysis, and all tables and charts, are based on raw data that cut across broad variation in market and product. While the data were being analyzed, several problems with data submissions were found and corrected. However, because this analysis is based on files submitted from a variety of sources, there may be other issues that were not discovered.

Underlying these results are distortions caused by aggregating over several years the results of companies with different distribution methods, target markets, pricing levels, products, and administrative rules. The representation of any one company varies from cell to cell, so trends shown are in part distorted by a shift in the underlying mix. Note also that incidence and lapse rates have fallen significantly over the experience period, so averages are not indicative of levels at the end of the period. Therefore, great care needs to be exercised when applying the results in this report. Consideration must be given to whether the averages shown are appropriate for use as is, or whether adjustments need to be made for application elsewhere.

### II. MORBIDITY

#### Incidence Rates Methodology

The incidence rates developed in this report are always shown by climination period category and attained age. These categories were considered to be central to any unbiased determination of incidence rates. Within these categories, incidence rates are classified by other variables including sex, issue year, and duration of the policy.

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## Incidence Rates by Attained Age and Elimination Period (Table D-1)

For all elimination periods combined, the incidence rates by attained age increase markedly, rising from an overall rate of 0.032 per hundred at ages "less than 60" to 5.211 per hundred at age group "ages 85+." The same phenomenon exists when viewed by attained age within elimination period category. Some unusual patterns are noted when the data are viewed by attained age group across elimination period categories. In particular, at the two youngest age groups, the incidence rates for the "60–150 day" elimination period category is equal to or greater than the corresponding rate for the "15–30 day" category.

# Incidence Rates by Attained Age and Elimination Period for Companies with the Highest and Lowest Rates (Table D-2)

Other parts of this study break out data by company in a quartile format. However, the data used for incidence rates were insufficient for developing quartiles in any meaningful manner, so the data were aggregated and reformatted.

Data for companies with insufficient aggregate exposure and/or claim count in the attained age/elimination period cells have been excluded from this exhibit. This left a limited number of companies with data for the comparison. Nonetheless the exercise is useful. With few exceptions throughout the attained age groups, one company consistently had the highest incidence rate and another consistently had the lowest rate.

In some cells the "average" incidence rate is outside the "highest" and "lowest" rates, because of the exclusion of companies with insufficient data in the development of the "highest" and "lowest" incidence rates. All data were used to develop the "average" rate. Since the total amount of data available is relatively small in some cells, incidence rates that are extreme for companies with relatively little data to report do affect the "average" rates but do not affect the "highest" and "lowest" rates.

## Incidence Rates by Attained Age, Elimination Period, and Sex (Table D-3)

Overall the incidence rate for females is modestly higher than that for males. For all elimination periods combined, the male incidence rate is within 10% of the incidence rate for females in all attained age groups. In

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some cases the male incidence rate is higher than that for females and in others, lower. However, the aggregation of data for all elimination period categories masks underlying differences in attained age group/elimination period cells. In some cells incidence rates for males and females are virtually identical. In other cells, female rates are considerably higher than male rates, and in other cells, the reverse is true.

# Incidence Rates by Attained Age, Elimination Period, and Issue Year (Table D-4)

For all attained age groups and elimination period categories combined, the incidence rates by issue year have been improving as the issue year moves toward the present. Even when the data are viewed by elimination period category for all attained age groups combined, incidence rates have decreased over the issue years. In general, this decrease over issue years is also apparent for each attained age group for all elimination period categories combined. Results are consistent at almost all policy durations studied. Speculating on the reasons for this improvement, we might include the industry's movement up the underwriting "learning curve," advances in the tools available to underwriters, better definitions of which impairments translate into long-term-care risks, and increased market penetration leading to the coverage of a more diverse, age-normal set of health risks.

# Incidence Rates by Attained Age, Elimination Period, and Policy Duration (Table D-5)

For all attained age groups and elimination period categories combined, incidence rates increase by duration group. In total, incidence rises quickly in the first few durations, and the rate of increase slows over the fourth and fifth durations. This could reflect a typical pattern of the "wearing off" of underwriting as selection factors rise to an ultimate level. This increase is also noticeable when viewed by elimination period category within attained age group. However, this pattern is not apparent when viewed by duration within attained age group. For all elimination period groups combined, the incidence rate pattern by duration within attained age group shows a different pattern. Incidence rates initially rise, then fall. We can speculate that this pattern is a natural development of the improvement in underwriting ability. In this study contract-holders with longer durations were underwritten early in the underwriting learning curve. Antiselection would manifest itself in

early duration incidence rates and then decrease as duration increases. In extreme cases of antiselection, claims would appear in duration 3 (after the incontestability clause expires).

The incidence rates for "all" ages combined increase monotonically (despite the rising and falling pattern in the attained age groups) because of the shift in relative weights by attained age group. The older attained age groups have relatively more "longer duration" exposure than the younger attained age groups. Thus the all ages incidence rates for longer durations consist of relatively older attained age exposure and claims than earlier durations. These findings therefore must be used carefully.

Data for duration months 62 and later are not presented because of insufficient exposure and/or claim count in the attained age/elimination period/ duration cells.

# Comparison of Incidence Rates to Admission Rates in the Report from the 1985 National Nursing Home Survey Utilization Data (Table D-6)

The first report of the Long-Term-Care Experience Committee included utilization data from the 1985 National Nursing Home Survey (NNHS). Part of the statistics presented were admission rates on three bases: all stays (stay concept), all stays (benefit period concept), and insurable stays (benefit period concept). Table D-6 compares the incidence rates from this current study with selected rates from Table 3 of that general population report, specifically with those under the insurable stays (benefit period concept).

For all attained age groups and elimination period categories combined, incidence rates are 40% to 50% of those presented based on the 1985 NNHS. Caution should be used in interpreting the results, because direct comparisons are difficult to make given the differences in the data available, particularly because of the early durational experience included here.

## Continuance by Elimination Period (Table D-7)

The percentage persisting for n days or longer is generally greater as the elimination period category increases. This is to be expected because persistency on claim is measured from the end of the elimination period. Claimants in the "60–150 day" category have already been in a nursing home at least 60 days (and 90 or 100 days in the vast majority of cases) before reaching day 1 in the table. By contrast, the "0 day" elimination period measures claim persistency from the first day of incurral. A notable

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exception to the persistency on claim increasing with elimination period is the "15–30 day" category at the longer claim durations. At about 304 days, persistency on claim becomes greater for the "0 day" group than for the "15–30 day" group. This may be an anomaly with the data, insufficient volume or antiselection at time of purchase (see Table 1).

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	E	limination Period Gro	աթ
Days	0 Days	1530 Days	60-150 Days
1	99.8%	99.8%	99.8%
10	90.7	95.8	98.9
20	80.9	91.9	97.7
30	73.7	84.5	96.9
60	61.9	69.6	94.4
90	55.9	61.5	92.0
121	52.3	56.3	87.6
151	50.1	51.9	83.5
182	47.9	49.0	80.2
212	45.3	46.6	77.5
243	43.4	44.3	74.4
273	42.0	42.1	71.5
304	40.7	40.5	69.4
334	39.2	38.7	66.9
365	37.7	37.1	64.8
547	32.0	29.9	56.5
730	28.3	24.7	49.6
912	25.2	19.7	42.9
1,095	21.3	16.5	39.0
1,277	18.0	13.9	36.5
1,460	14.4	12.0	31.0
1,642	13.8	10.2	28.3

	TABLE	1		
PERCENTAGE I	Persisting	AT	LEAST	N DAYS

BY ELIMINATION PERIOD

## Continuance by Sex (Table D-8)

Overall the percentage persisting on claim for n days or longer for males is similar to that for females. The differences by sex at any claim duration are generally small. In some cases the male incidence rate is higher than that for females and in others, lower (see Table 2).

FERCENTAGE LERSISTING AT LEAST IN							
<u></u>	DAYS BY SEX						
Days	Female	Male					
1	99.2%	99.1%					
10	91.7	92.1					
20	84.1	84.4					
30	78.0	79.2					
60	67.3	69.0					
90	61.5	63.1					
121	57.7	59.0					
151	54.9	56.1					
182	52.5	53.3					
212	50.1	50.6					
243	48.2	48.2					
273	46.6	46.2					
304	45.2	44.5					
334	43.6	42.8					
365	41.8	40.9					
547	36.0	34.1					
730	31.6	28.1					
912	27.6	23.9					
1,095	24.2	19.3					
1,277	20.7	16.7					
1,460	17.2	14.2					
1,642	14.7	14.2					

TABLE 2

PERCENTAGE PERSISTING AT LEAST N

## Continuance by Age (Table D-9)

The appendix shows that, at almost all claim durations, persistency on claim increases as the age of the claimant increases. At least one exception can be seen at the longest durations for the 85+ group; this may be due to the paucity of data (see Table 3).

		Age	Group	
Days	55-64	6574	75-84	85+
1	96.8%	99.1%	99.3%	99.7%
10	86.6	90.4	92.5	94.5
20	79.6	81.8	85.2	86.7
30	73.6	74.7	80.1	81.9
60	63.0	63.1	70.0	72.6
90	56.0	56.4	64.4	68.3
121	53.1	52.6	60.4	64.7
151	49.9	49.9	57.6	61.5
182	47.3	47.3	55.0	59.7
212	42.5	44.9	52.5	56.8
243	40.9	42.8	50.4	54.2
273	38.6	41,2	48.7	51.5
304	37.4	39.6	47.3	49.9
334	36.5	38.4	45.4	47.1
365	35.7	37.0	43.4	44.6
547	28.4	31.6	37.1	29.2
730	24.3	27.1	31.7	24.5
912	22.0	23.9	27.1	12.3
1,095	22.0	19.9	23.2	12.3
1,277	22.0	17.3	19.7	
1.460		15.3	16.3	
1,642		14.2	14.6	

TABLE 3

PERCENTAGE PERSISTING AT LEAST N DAYS BY AGE

## Comparison of Continuance to Continuance from the 1985 NNHS Utilization Data (Table D-10)

The 1985 NNHS presented persistency on claim statistics on three bases: all stays (stay concept), all stays (benefit period concept), and insurable stays (benefit period concept). Table D-11 compares the persistency on claim presented here with selected rates from Table 8 of that report<sup>2</sup>, specifically with those under the insurable stays (benefit period concept).

Except for the "55–64" age group, persistency on claim is generally higher (often significantly higher) than that presented in the 1985 NNHS. This is particularly true at the longest claim durations, at which the ratios of the 1994 study data to the 1985 NNHS data range widely by attained age group.

<sup>&</sup>lt;sup>2</sup>Long-Term-Care Experience Committee. "1985 National Nursing Home Survey Utilization Data," 1988-89-90 TSA Reports (1992): 101-164.

## Technical Notes on Continuance of Claim

The continuance of claim tables in this report are based on raw claim data without any adjustments for smoothing or graduation. Some adjustments were made to the data to develop the tables and data presented. This section documents the methodology to provide a framework for understanding and developing conclusions about the limitations of the data.

A value of 1 is assigned to each day a claimant is on claim, beginning with the earliest service begin date (or, if this was not available, the incurral date plus the elimination period) and ending with the latest service end date. The service begin date is the date that services began for the claim payment being made. The service end date is the date that services ended for the claim payment being made. Claims incurred on which no payment was ever made are excluded from this study. Because the service begin date exists only in the context of a payment, day 1 of the data begins at the end of the elimination period. All tables develop continuance data from this point for each claimant.

Data were tabulated separately using different characteristics: elimination period, sex, and age. The elimination period groupings were set to aggregate data into "like" periods because the data available for some elimination periods were very small. Day 1 represents the first day after the elimination period for that particular claimant. None of the continuance data was restated so that all continuance began from a common elimination period central to the group.

Data were initially tabulated for claims marked either open, closed, or unknown as of the end of the observation period. There appeared to be wide variation in the labeling of claims by company, so some of the data were adjusted to separate data into only an open or closed status. All claims marked closed initially remained as marked. For each claim initially marked open or unknown, if the latest service end date was different than the observation date by more than 180 days, the claim was closed.

Separating open claims from closed allows an effective study of continuance behavior. Open claim date can be used to support continuance curve research, but its usefulness is limited to the time the observation period ends. The persistency-on-claim data reported here combine the experience of the open claims (from inception to the observation date) and closed claims (throughout the claim).

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Tables D-8 through D-10 are in the same format. "Number of claims open" is the number of claimants marked open with a value of 1 for that particular duration. "Number of claims closed" is the number of claimants marked closed with a value of 1 for that particular duration. In measuring persistency from one duration to the next, only the claims that are observable at the next duration can be counted. "Beginning exposure" is the number of open claims observable at the next duration plus the number of closed claims at the current duration. Specifically the formula is as follows:

beginning exposure, = open claims, +1 + closed claims,

The number of claims terminating on day n is calculated from the "number of claims closed" column.

terminating on day  $n_i = closed_i - closed_{i+1}$ 

where closed is the "number of claims closed" for that duration.

percent persisting *n* days<sub>*v*</sub> = percent persisting *n* days<sub>*v*-1</sub>\*

 $[1 - (\text{terminating on day } n/\text{beginning exposure}_{i})]$ 

where \* gives the percentage of claimants lasting at least n days.

## III. CLAIM CHARACTERISTICS

Approximately 98,000 claim payment records were received from the 10 companies in the study. The claim payment records for each individual claimant were combined into composite claim records, each of which contained the payment information for one claim over its duration. The following discussion refers to tables developed from the composite claim record file and shown in Appendix E.

Nursing home benefits were paid for 12,668 claims. The average amount paid for these claims was \$15,518, which covered an average of 307 days of nursing home care. The average size claim is understated because, as is discussed in the next paragraph, a number of them were not completely reported.

More than 18% of these claims were coded as open, and nearly 27% were coded as status unknown at the end of the reporting period. Because there were a significant number of claims coded in an unknown status, we assigned a status code based on the length of time between the last service date and June 30, 1992 (the end of the claim observation period). If the

number of days was less than or equal to 180, we assumed the claim was still open. Otherwise, the claim was considered closed. For consistency, the same logic was applied to claims with status coded as open and last service date more than 180 days before June 30, 1992. We decided to close claims after 180 days of inactivity based on claim experience that subcommittee members had within their own organizations that made this a reasonable course of action.

### Attained Age (Table E-1)

The average amount paid decreases by attained age from about \$21,000 for claims incurred at ages under 65 to about \$17,000 for claims incurred at ages 65 through 79 to about \$10,000 for claims incurred at ages 85 and over. The average length of stay for ages under 65 was 396 days; for ages 65–79, 323 days; for ages 80–84, 286 days; and for ages 85 and over, 215 days.

#### Sex (Table E-2)

Of all claims submitted, 64% were for female insureds. There was very little difference in the average amount paid and the average length of stay for female insureds (\$15,345 for 305 days) versus the average amount paid for male insureds (\$15,848 for 311 days).

## Duration of Claim since Issue (Table E-3)

The severity of a claim appears to decrease by duration since issue; that is, claims incurred shortly after issue cost more and last longer. The average length of stay was 354 days for claims incurred in duration 1, declining 14% to 303 days for claims incurred in duration 3 and 35% to 198 days for claims incurred in duration 5. However, there is an increasing trend by duration in the number of claims remaining open at the end of the claim observation period. More than 13% of the claims incurred in the first duration were still open on June 30, 1992, compared to 29% of those claims incurred in duration 5. These open claims could have significant effects on the average length of stay for claims incurred in each duration.

Durations 6 through 8 should be viewed with some skepticism, because most of the claims were on polices issued in 1986 through 1989 (see the section "Issue Year" below). Therefore, there were a limited number of insureds who could have incurred a claim in durations 6 through 8 for this study.

## Claim Status (Tables E-4 and E-5)

Claim status was known for 73% of the claim records. Of these, 75% were coded as closed and 25% as open. After the adjustment for claims with unknown status and open status described above, 77% were coded as closed and 23% as open. After the adjustment, the average amount paid for a closed claim was \$11,246 for an average of 231 days. The average amount paid (so far) for an open claim was \$23,704 for an average of 450 days. The average amount paid (so far) for an open claim open claim with unknown claim status was \$30,037 for an average of 564 days.

Of the closed claims, 64% were coded as closed for unspecified reasons; 17% were closed due to death; 3% had reached the end of the benefit period; and 15% were coded as recovered. The average length of stay for a claim that had reached the end of the benefit period was 541 days. The average length for a claim that was closed due to death was 214 days, and the average length of stay for a claim for which the insured recovered and was discharged was 78 days. The average length of stay for claims that were closed for unspecified reasons was 258 days.

Table E-5 shows the distribution of nursing home claims by paid amount for open and closed claims.

#### Elimination Period (Table E-6)

The average length of stay was 259 days for claims with a 0 day elimination period; 271 days for claims with elimination periods of 15–30 days (20 days was predominant); and 505 days for claims with elimination periods of 60 days or more (90 and 100 days were predominant).

### Issue Year (Table E-7)

As noted above, most of the claims were from policies issued in 1986 through 1989. The percentage of claims remaining open at the end of the study increased by issue year and is expected to almost completely offset the declining average lengths of stay and amounts paid seen in issue years 1987 and later.

### Company (Table E-8)

Table E-8 groups the submitting companies into ranges based on the number of claims submitted. There were wide fluctuations in results by carrier. Three companies submitted 11,375 claims (almost 90% of the file) and experienced slightly lower average length of stay and amount paid than shown above for the entire file. The other seven companies submitted the remaining 1,293 claims and experienced much longer average lengths of stay and amounts paid. This may be due to the "law of large numbers." More likely it is a result of the difference in expertise between companies that underwrite and process claims in larger numbers versus smaller numbers.

## Conditions (Tables E-9 through E-13)

About 4,700 of the nursing home composite claim records were coded with a primary diagnosis (37% of the composite claim record file). Each composite claim record includes 1 or more payments; the first payment record with a valid diagnosis code determined the primary diagnosis for the composite claim record. Because the primary diagnosis can change over the length of stay in the nursing home, some consideration may be given to this in future studies.

We grouped the diagnosis codes into 12 major categories: Alzheimer's, arthritis, cancer, circulatory diseases, diabetes, hypertension, injuries, mental conditions (excluding Alzheimer's), nervous system conditions, respiratory diseases, strokes, and other. Table E-9 shows the ICD-9-CM codes included in each category, and Table E-10 shows the ICD-9-CM codes for the "other" category.

Table E-11 shows the nursing home claims coded with primary diagnosis information. The highest numbers of claims received were for injuries, circulatory diseases, and strokes. The highest amount of claim payments and number of days paid were for nervous system conditions, circulatory diseases, and Alzheimer's. There were few claims for hypertension and diabetes.

Table E-11 displays the average length of stay and average amount paid by condition. The average length of stay for all claims with primary diagnosis information was 388 days, somewhat longer than the average length of stay for the entire claim file. The longest average length of stay was 656 days for nervous system conditions. The average length of stay for Alzheimer's claims was 548 days. Mental conditions claims averaged 531 days, and hypertension claims averaged 522 days. The shortest length of stay was for cancer claims, which averaged 202 days. Injury claims were also short, averaging 225 days.

The average amount paid for all claims with primary diagnosis information was just under \$20,000 (compared to \$15,518 for the entire claim file). For average length of stay, the highest average amounts paid were for nervous system conditions, Alzheimer's, and mental conditions, while the lowest amounts paid were for cancer and injury claims.

In this study, conditions that are the most frequent and the most costly for nursing home coverage are nervous system and Alzheimer's claims. Hypertension claims, while relatively infrequent, are also costly. Another conclusion that can be drawn from these data is that cancer claims and injury claims, while frequent, are less costly than most other types of claims.

Note that Table E-11 contains both open and closed claims. Table E-12 shows the same information as Table E-11, but with the claims for each diagnosis code separated into open and closed categories. The average lengths of stay and amounts paid are always greater for open claims than for closed claims (consistent with the comparison shown in Table E-4).

Table E-13 shows the breakdown of the other category into the major diagnosis that it contains.

## Conditions and Other Characteristics (Tables E-14 through E-21)

Tables E-14 and E-15 are equivalent to Table E-11 except that Table E-14 shows the data for female insureds and Table E-15 shows the data for male insureds. These two tables do not total Table D-11 because there were a few claims for which sex was coded as unknown.

Nearly 65% of the claims with primary diagnosis information were for female insureds. The most prevalent claims for female insureds were for injuries, circulatory diseases, and strokes. The average amount paid for female claims with primary diagnosis information was \$20,222, and the average length of stay was 393 days. The highest average amounts paid and longest average lengths of stay were for diagnosis of nervous system conditions, Alzheimer's, mental conditions, and hypertension.

The claims for male insureds had an average amount paid of \$19,573 and an average length of stay of 380 days. The most frequent claims were for circulatory diseases, nervous system conditions, and strokes. The highest average amounts paid and longest average lengths of stay were for the same four diagnoses as female insureds but in slightly different order: mental conditions, nervous system conditions, Alzheimer's, and hypertension.

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It is interesting to compare the male and female tables. While overall the average amount paid and average lengths of stay are very similar, marked differences exist in the prevalence of injury claims for females (more than 19% of the number of claims) versus males (about 7% of the number of claims) and in the average lengths of stay for nervous system conditions (the average length of stay for females is 166 days longer than that for males) and for circulatory conditions (the average length of stay for females). For mental conditions, the average length of stay for males is 76 days longer than that for females, while for Alzheimer's the average length of stay for females is 69 days longer than that for males. Again, open claims are expected to have an effect on these findings as more information becomes available.

Appendexes E-16 through E-21 show average length of stay and average amount paid by condition by attained age range. Average lengths of stay generally decrease by age at time of diagnosis for Alzheimer's, circulatory conditions, and mental conditions. It is difficult to draw many conclusions from these six tables, because some cells have too few claims to be considered credible. Also, the claims that remain open or with unknown claim status may change these tables considerably, particularly in the cells with very few claims.

#### IV. PERSISTENCY

This report presents the termination experience of long-term-care insurance in the U.S. for issue years 1984–1990. This study is designed to help companies in monitoring long-term-care product performance and to assist in product development.

This report primarily addresses lapses, defined generally as all terminations except those caused by death. Death rates are shown separately.

Lapse rates are measured for each of the first four years following the coverage effective date. In addition, lapse rates are broken out by the following categories: issue year, issue age, elimination period, and sex.

Lapse rates in this report are percentages of insured lives exposed during an experience period. They are the ratio of the sum of all companies' lapses to the sum of all companies' exposure. Therefore, companies with larger exposure receive greater weight than companies with smaller exposure. See Appendix F for detailed tables.

## Caveat

This analysis is based on raw data and cuts across broad variation in market and product. Underlying these results are distortions caused by aggregating over several years the results of companies with different distribution methods, target markets, pricing levels, and products. Of particular note are the following:

- Lapse rates have fallen significantly over the experience period, so averages are not indicative of lapse levels at the end of the period.
- Lapses due to upgrades or conversions were not separately requested, so that lapses reported by some companies may be overstated. If this is true, it may help explain why average lapse rates increased in the fourth duration. (Another possible explanation is that a premium increase was implemented.) Unfortunately, there was no time to investigate these suspicions.
- A few companies did not differentiate between lapses and deaths, so all their terminations were treated as lapses.
- While the data were being analyzed, several problems with data submissions were found and corrected. However, because the data submitted were largely unedited, it is likely that there are several more that have not been found.
- The representation of any one company varies from cell to cell, so the lapse trends shown are in part distorted by a shift in the underlying mix. Great care needs to be exercised when applying the results in this report.

Consideration must be given to whether the averages shown are appropriate for use as is, or whether adjustments need to be made.

## Results

Average lapse rates were 17.4% in the first duration, declining to 12.5% two years later, and then rising to 14.1% in the fourth duration. The overall average lapse rate was 15.0%. Underlying the average lapse rates were significant company-by-company variations, as indicated by the first and third quartiles shown in Table 4 and Figure 1.

LAPSE BY DURATION						
	Total			First	Third	
Duration	Exposure	Lapse	Rate	Quartile	Quartile	
1	677,222	117,604	17.4%	10.1%	19.3%	
2	418,013	53,909	12.9	9.2	15.0	
3	234,561	29,298	12.5	8.8	12.9	
4	101,966	14,383	14.1	8.1	19.2	
Total	1,431,762	215,194	15.0%	9.9%	17.8%	

TABLE 4

LAPSE BY DURATION

FIGURE 1

LAPSE RATE BY DURATION



Table 5 shows lapse experience by issue year. Rates for 1984 and 1985 are not shown because exposures were low and the experience represents only a few companies. Lapse rates have shown a fairly steady decline over the 1986–1990 period. First-year lapse rates fell from 20.9% to 14.6%. Rates for subsequent durations showed similar declines.

Duration	1986	1987	1988	1989	1990
1 2 3 4	20.9% 14.0 15.1 15.8	19.6% 16.8 13.8 13.7	18.4% 12.7 11.0	16.6% 10.4	14.6%
Total	16.9%	16.5%	14.6%	13.9%	14.6%

TABLE 5 LAPSE RATES BY ISSUE YEAR AND DURATION

Lapse rates generally increased with issue age. First-year lapse rates were 11.8% for issue ages 50–59, compared to 20.7% for issue ages 70–79. By the fourth duration, the issue age 50–59 lapse rate was 7.1%, while the rate for issue ages 70–79 was 14.4% (see Figure 2).

#### FIGURE 2

LAPSE RATE BY ISSUE AGE



Lapse rates decreased as the elimination period increased. Zero-day elimination period plans had 27.4% first-year lapse rates, compared to 15.1% for 15–30 day elimination period plans and 12.8% for coverage with elimination periods of 60 days or more. By the fourth duration, lapse rates were 20.4% for zero-day plans, 13.9% for 15–30 day plans, and 10.9% for plans with elimination periods of 60 days or more (Figure 3).



FIGURE 3 Lapse Rate by Elimination Period

Fernale lapse rates have averaged about 1 percentage point higher than male rates (see Table 6).

TABLE 6

LAPSE RATES BY SEX AND DURATION Female Duration Male 1 17.8% 16.8% 13.3 12.8 12.3 2 3 11.9 4 14.4 13.7 Total 15.4% 14.5%

Mortality rates are summarized in Table 7. The rates shown were developed by excluding those companies who did not differentiate between lapses and deaths.

TABLE /
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MORTALITY RATES BY ISSUE AGE AND DURATION

Duration	50-59	60-69	7079
1	0.4%	0.6%	1.2%
2	0.5	0.9	2.0
3	0.5	1.3	2.6
4	0.7	1.6	3.1
Total	0.4%	0.9%	1.9%

## Definitions

## Lapse

An individual's coverage is considered lapsed if it was terminated by the individual's 1991 coverage anniversary with one of the following reason codes:

- o Terminated, reason unknown
- Terminated as a result of nonpayment of premiums
- Terminated as a result of expiration of benefits
- Terminated as a result of termination of the group
- Terminated for other reasons
- Terminated to reduced paid-up
- Terminated to extended term.

Coverage is not considered lapsed if:

- Terminated as a result of death
- Terminated after their 1991 coverage anniversary.

Duration is calculated as the number of years between the termination date and issue date. Both dates are provided by the participating company. When the duration is calculated, a one-month grace period after the coverage anniversary is assumed. For example, if coverage terminates between 1 and 13 months after the issue date, the duration is 1. If coverage terminates between 14 and 25 months after the issue date, the duration is 2; and so forth.

## In Force

Coverage is considered in force if the termination reason code is specified as in force at the end of the observation period. In-force business includes coverage issued from 1984 through 1990. The observation periods are calendar years 1986 through 1991.

## Quartiles

The total lapse rate for each participating company was ranked by magnitude for each duration. The first quartile corresponds to the 25th percentile of lapse rates, or the bottom fourth, of the rates. The fourth quartile equals the 75th percentile, or the top 25%, of lapse rates. A minimum exposure criterion of 2,000 for each duration and each company was used before the lapse rates were ranked. If the percentile did not fall exactly on one of the rates, the quartile was the interpolated value between the two neighboring rates.

#### LTC INTERCOMPANY STUDY: 1984–1991

#### V. HOME HEALTH CARE

## Age (Table G-1)

There were 512 claims in the composite claim record file for which home health care claims had been paid. Of these claims, 69% were closed and 31% were open at the end of the claim observation period (status codes were determined for claims coded as open and unknown following the same logic as described for nursing home claims in the cause of claim section). The average amount paid was about \$4,900 and covered an average of 159 visits. The average number of visits per week was three and one-half. For claims incurred at attained ages less than 65, the average amount paid was \$6,530 for an average of 205 days. For claims incurred at attained ages 65 and older, the average amount paid was \$4,515 and covered an average of 149 visits. This information is presented in Table G-1. Further breakdowns by age are shown, but most of these cells do not contain enough claims to be considered statistically credible.

#### Sex (Table G-2)

Nearly two-thirds of the home health care claims were for female insureds. About 2.5% of the claims were coded as sex unknown. The average amount paid for female insureds was \$4,556 for 147 visits and for male insureds, \$5,080 for 167 visits. The unknown claims had an average amount paid of \$10,730, covering an average of 363 visits. This information is presented in Table G-2.

## Conditions (Table G-3)

Of the 512 claims, 399 had primary diagnosis information coded. These claims had a slightly higher average amount paid and average number of visits (approximately \$5,300 for 169 visits).

The same diagnosis breakdowns that were used to classify the nursing home claims were used to classify the home health care claims. These data are shown in Table G-3. The most frequent diagnosis, as well as the largest amounts paid, were for cancer, circulatory conditions, nervous system conditions, and injuries. While some cells certainly do not contain enough information to be credible, hypertension, nervous system conditions, Alzheimer's, and circulatory conditions have the highest average number of visits per claim. The lowest average number of visits per claim were for diagnosis of diabetes and respiratory conditions (which contain only four and eight claims, respectively).

## Visits per Week (Table G-4)

Table G-4 shows the average number of home health care visits per week by diagnosis. Service length is the number of days between the date of the first service and the date of the last service and was used to determine the number of weeks over which the home health care visits were performed. The average number of visits per week for home health care claims with diagnosis information was about three and one-half. The highest numbers of visits per week are seen for claims with diagnosis of hypertension (only three claims in the study) and cancer. The fewest visits per week are seen for diagnoses of diabetes, respiratory conditions, and arthritis.

#### VI. CONCLUSION

This report of the first Intercompany Study of the Society of Actuaries Long-Term-Care Experience Committee includes some valuable but limited information. The data compiled verified some long held expectations about long-term care:

- Incidence rates rise steeply by attained age.
- Lapse rates generally decrease as duration increases.
- Lapse rates generally increase as age at issue increases.
- Average number of home care visits per week is 3.5.
- Males use home care more often and longer than females.
- Some results were contrary to expectations, as follows:
- Male and female results are more "similar" than expected in incidence and duration of claims and persistency of policies.
- Claim continuance appears to increase as age of claimant increases.
- There is little difference in amount or length of claim by sex.
- Only 17% of the known closed claims ended due to death.
- Some other results of interest from these data are as follows:
- Incidence rates have fallen as issue year increases.
- Over five durations, incidence rates generally peak in the third duration.
- Persistency rates have increased over time.
- Company lapse and morbidity rates vary widely.

- Incidence rates for zero-day elimination period policies are 85–95% of the admission rates reported in the general population data from the 1985 NNHS.
- Continuance rates are generally 25% or more above the 1985 NNHS.
- Persistency is higher for policies that have a longer elimination period.
- The smaller the number of claims for a company, the longer and costlier the claim.
- The most frequent and costly claims are due to Alzheimer's and nervous system disorders.
- Cancer and injury claims are frequent but inexpensive claims.

This report is not the finalization of the Intercompany Study; it is just a first step toward gathering, analyzing and understanding a small portion of the numerical results of long-term-care insurance. This report is based on experience found in early policy durations in simple and general terms by companies that have a variety of different styles of marketing, sales, underwriting, processing, and administration practices for their particular forms of coverage.

More than 20 of the largest writers of long-term-care coverage have agreed to contribute to the next exposure period. Just as long-term-care products being sold have evolved quickly over the past decade, so will intercompany long-term-care experience knowledge explode over the next few years of this decade.

## ACKNOWLEDGMENTS

The Intercompany Subcommittee takes responsibility for this report. However, it must publicly recognize the significant contributions made by a number of persons. Although every person's effort cannot be recognized, certain names must be mentioned.

- A review of certain technical issues was made by Frank Knorr and James Robinson.
- Compilation, refinement and tabulation of the submissions were completed
- and advice on the structure of the report was received at the Center of Medico-Actuarial Statistics by John Avery, Leo D'Angelo, and William MacDonald.
- Analysis and administrative support were generously supplied by Donna Nezames and Michele Tuninsky.
- Last, very important recognition must be given to Sam Gutterman, whose initial vision and ongoing support secured the data from the contributors. Without these data, this study would not have been possible.

### 1993-94 TSA REPORTS

## APPENDIX A

CONTRIBUTING COMPANIES Aegon USA, Inc. Aetna Life Insurance Company Allstate American Family Life Assurance Company Amex Life Insurance Company Bankers Life & Casualty John Hancock Life Insurance Company Lutheran Brotherhood Prudential Life Insurance Company Transport Life Insurance Company

## APPENDIX B EXPOSURE DISTRIBUTION

#### TABLE B-1

#### EXPOSURE DISTRIBUTION BY AGE AND SEX

	M	ale	Fea	nale	Unk	nown
Issue Age	Number of Insureds	Percentage of Insureds	Number of Insureds	Percentage of Insureds	Number of Insureds	Percentage of Insureds
<40	5,608	0.68%	7,210	0.68%	759	0.09%
40-44	2,850	0.34	3,225	0.39	492	0.06
45-49	2,814	0.34	3,563	0.43	448	0.05
50-54	6,696	0.81	12,421	1.50	406	0.05
55-59	17,828	2.15	34,332	4.14	493	0.06
6064	51,392	6.20	90,037	10.86	534	0.06
65-69	96,416	11.62	146,065	17.62	446	0.05
70-74	73,366	8.85	111,720	13.47	174	0.02
75-79	42,757	5.16	77,151	9.31	72	0.01
8084	12,733	1.54	26,377	3.18	17	0.00
85-89	225	0.03	505	0.06	8	0.00
90+	6	0.00	9	0.0	1	0.00
Total	312,691	37.72%	512,615	61.82%	3,850	0.46%

TABLE B-2

EXPOSURE DISTRIBUTION BY ELIMINATION PERIOD

r EkiOD		
Elimination Period (days)	Number of Policies	Percentage of Policies
0	199,424	24.05%
15	179	0.02
20	259,118	31.25
30	14,319	1.73
60	7,169	0.87
90	149,649	18.05
100	177,906	21.46
150	3,685	0.44
Not Coded	17,707	2.14
Total	829,156	100.00%

#### TABLE B-3

Expc	distribution	
ву Махімим	BENEFIT PERIOD OR AMOUNT	

	Number of Policies	Percentage of Policies
	Poncies	Policies
Maximum Benefit Period		
≤] year	93,011	11.22%
2 3 4 5 6 7	85,083	10.26
3	202,801	24.45
4	129,638	15.63
5	106,944	12.90
6	37,969	4.58
	563	0.07
10	133	0.02
Life	165,482	19.96
Other	6,692	0.81
Unknown	840	0.10
Total	829,156	100.00%
Maximum Benefit Amount		
≤\$25,000	56,761	6.85%
25,001 to 50,000	58,659	7.07
50,001 to 75,000	173,708	20.94
75,001 to 100,000	80,027	9.65
100,001 to 125,000	71,465	8.62
125,001 to 150,000	48,291	5.82
150,001 to 175,000	6,719	0.81
175,001 to 200,000	17,537	2.12
200,001 to 225,000	12,492	1.51
225,001 to 250,000	503	0.06
250,001 to 500,000	3,564	0.43
500,001 to 1,000,000	8,983	1.08
1,000,001 to Unlimited	156,504	18.87
Unknown	133,943	16.15
Total	829,156	100.00%

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#### TABLE B-4

#### EXPOSURE DISTRIBUTION BY MAXIMUM DAILY BENEFIT AMOUNT

Daily	Number of	Percentage
Bencfit	Policies	of Policies
\$ 0-9	38	0.00%
10-19	1,604	0.19
20-29	8,865	1.07
30-39	21,988	2.65
40-49	51,107	6.16
50-59	210,389	25.38
6069	108,024	13.04
7079	80,702	9.73
8089	66,363	8.00
9099	6,084	0.73
100-109	86,066	10.39
110-119	3,496	0.42
120-129	6,522	0.79
130-139	3,005	0.36
140-149	581	0.07
150-159	3,288	0.40
160-169	199	0.02
170-179	41	0.00
180-189	89	0.01
190-199	2	0.00
200+	19,159	2.31
Unknown	151,544	18.28
Total	829.156	100.00%

State	Number of Policies	Percentage of Policies
Alabama	4.870	1.46%
Alaska	40	0.01
Arizona	8,350	2.50
Arkansas	2,096	0.63
California	12,607	3.77
Colorado	5,077	1.52
Connecticut	5,797	1.74
Delaware	415	0.12
District of Columbia	242	0.12
Florida	19,297	5.78
	5,565	1.67
Georgia Hawaii	1.532	0.46
Idaho	2,931	0.40
Illinois	22,618	6.77
Indiana	20,598	6.17
lowa		5.68
	18,961	3.23
Kansas Kentucky	4,575	1.37
	· · · ·	0.60
Louisiana Maine	2,006	0.42
Maryland	1,418 2,311	0.42
Massachusetts	2,020	0.69
		4.15
Michigan Minnacata	13,872	0.07
Minnesota Michiesippi		0.67
Mississippi Missouri	2,230 15,062	4,51
Montana		0.81
Nebraska	2,698	2.47
Nevada	8,239 695	0.21
New Hampshire	1.998	0.21
		0.60
New Jerscy New Mexico	1,992	0.00
	1,237	
New Yerk North Carolina	6,264	1.88
North Caronna North Dakota	3,882	1.16 1.66
Ohio	5,545	9.27
Oklahoma	30,948	
	4,915 10,701	1.47
Oregon Donnarduania		3.83
Pennsylvania Puerto Rico	12,777	0.00
Rhode Island	509	0.00
South Carolina	7,041	2.11
South Dakota	2,481	0.74
Tennessee		1.45
Texas	4,832 17.617	5.27
Utah	959	0.29
Vermont Virgin Islands	1,222	0.37 0.00
virgini istanus	4,273	1.28
Virginia Washington	10,406	3.12
Washington West Virginia	2,535	0.76
Wisconsin	4,162	1.25
Wyoming	4,102	0.18
Unknown	495,127	59.71
Total	829,156	100.00%

TABLE B-5 Exposure Distribution by State of Issue

TABLE	B-6

Year of	Number of	Percentage
Issue	Policies	of Policies
1984	4,717	0.57%
1985	10,962	1.32
1986	53,374	6.44
1987	116,875	14.10
1988	172,188	20.77
1989	171,488	20.68
1990	147,516	17.79
1991	152,036	18.33
Total	829,156	100.00%

#### EXPOSURE DISTRIBUTION BY YEAR OF ISSUE

## APPENDIX C

## CLAIMANT DISTRIBUTION

#### TABLE C-1

#### CLAIMANT DISTRIBUTION BY SEX

	Male		Female		Unknown	
	Number of	Percentage	Number of	Percentage	Number of	Percentage
	Insureds	of Insureds	Insureds	of Insureds	Insureds	of Insureds
Age at Issue						
<40	1	0.01%	0	0.00%	0	0.00%
40-44	2	0.01	1	0.01	0	0.00
45-49	- 1	0.01	2	0.02	1	0.01
50-54	11	0.08	14	0.10	1	0.01
55-59	35	0.26	69	0.51	3	0.02
60-64	203	1.50	340	2.51	6	0.04
65–69	755	5.56	1,233	9.09	10	0.07
70–74	1,353	9.97	2,119	15.62	11	0.08
75–79	1,815	13.38	3,300	24.32	11	0.08
80-84	694	5.12	1,557	11.48	0	0.00
85-89	4	0.03	15	0.11	0	0.00
Total	4,874	35.93%	8,650	63.76%	43	0.31%
Age at Claim						
<40	1	0.01%	0	0.00%	0	0.00%
40-44	1	0.01	0	0.00	0	0.00
45-49	1	0.01	3	0.02	1	0.01
5054	6	0.04	7	0.05	1	0.00
55-59	23	0.17	35	0.26	2 3	0.01
60-64	107	0.79	170	1.25	3	0.02
65-69	441	3.25	816	6.02	10	0.07
70-74	1,113	8.20	1,741	12.83	12	0.09
75–79	1,669	12.30	2,749	20.26	12	0.09
80-84	1,291	9.52	2,603	19.19	2	0.01
85-89	221	1.63	526	3.88	0	0.00
Total	4,874	35.93%	8.650	63.76%	43	0.31%

#### CLAIMANT DISTRIBUTION BY ELIMINATION PERIOD

Elimination Period (days)	Number of Policies	Percentage of Policies
0	6,660	49.08%
15	3	0.02
20	3,762	27.73
30	149	1.10
60	27	0.20
90	1,204	8.87
100	1,661	12.25
150	35	0.26
Not Coded	66	0.49
Total	13,567	100.00%

#### TABLE C-3

#### Claimant Distribution by Maximum Benefit Period or Amount

	Number of	Percentage of
	Policies	Policies
Maximum Benefit Period		
$\leq 1$ year	3,866	28.51%
2	1,492	11.00
2 3 4 5 6 7	3,639	26.82
4	1,873	13.81
5	1,935	14.26
6	265	1.95
7	12	0.09
10	2	0.02
Life	478	3.52
Other	5	0.04
Total	13,567	100.00%
Maximum Benefit Amount		
≤ \$25,000	1,502	17.34%
25,001 to 50,000	1,176	13.57
50,001 to 75,000	2,746	31.69
75,001 to 100,000	1,572	18.14
100,001 to 125,000	576	6.65
125,001 to 150,000	357	4,12
150,001 to 175,000	44	0.51
175,001 to 200,000	142	1.64
200,001 to 225,000	43	0.50
225,001 to 250,000	9	0.10
250,001 to 500,000	19	0.22
500,001 to 1,000,000	14	0.16
1,000,001 to Unlimited	464	5.36
Unknown	4,903	36.14
Total	13,567	100.00%

ĺ	Number	Percentage
Daily Benefit	of Policies	of Policies
\$ 10-19	27	0.32%
20–29	193	2.25
30-39	475	5.54
40-49	1,052	12.27
5059	4,088	47.68
60-69	1,118	13.04
70–79	772	9.01
80-89	387	4.51
90-99	34	0.40
100-109	305	3.56
110-119	10	0.12
120-129	29	0.34
130–139	18	0.21
140-149	2	0.02
150-159	8	0.09
160-169		
170-179	1	0.01
180-189	2	0.02
190-199		
200+	52	0.61
Unknown	4,994	36.80
Total	13,567	100.00%

#### CLAIMANT DISTRIBUTION by Maximum Daily Benefit Amount

#### CLAIMANT DISTRIBUTION BY STATE OF ISSUE

	Number of	Percentage
State	Policies	of Policies
Alabama	67	1.09%
Alaska	0	.00
Arizona	179	2.92
Arkansas	35	0.57
California	146	2.38
Colorado	68	1.11
Connecticut	2.2	0.36
Delaware	1	0.02
District of Columbia	1	0.02
Florida	296	4.82
Georgia	81	1.32
Hawaii	12	0.20
Idaho	75	1.22
Illinois	462	7.53
Indiana	529	8.62
Iowa	590	9.61
Kansas	373	6.08
Kentucky	85	1.39
Louisiana	39	0.64
Maine	22	0.36
Maryland	35	0.57
Massachusetts	24	0.39
Michigan	187	3.05
Minnesota	1	0.02
Mississippi	33	0.54
Missouri	447	7.28
Montana	75	1.22
Nebraska	225	3.67
Nevada	20	0.35
New Hampshire	22	0.36
New Jersey	8	0.13
New Mexico	15	0.24
New York	7	0.11
North Carolina	50	0.82
North Dakota	53	0.86
Ohio	381	6.21
Oklahoma	161	2.62
Oregon	231	3.76
Pennsylvania	167	2.72
Rhode Island	5	0.08
South Carolina	56	0.91
South Dakota	50	0.82
Tennessee	71	1.16
Texas	324	5.28
Utah	18	0.29
Vermont	26	0.42
Virginia	63	1.03
Washington	181	2.95
West Virginia	48	0.78
Wisconsin	61	0.99
Wyoming	9	0.15
Unknown	7,430	54.77
Total	13,567	100.00%

#### CLAIMANT DISTRIBUTION BY ISSUE YEAR AND CLAIM YEAR

	Claims by Issue Year		Claims by Incurral Year	
Year	Number	Percentage	Number	Percentage
1984	166	1.22%	7	0.05%
1985	427	3.15	24	0.18
1986	2,533	18.67	255	1.88
1987	3,693	27.22	1,006	7.42
1988	3,466	25.55	1,915	14.12
1989	2,104	15.51	2,869	21.15
1990	921	6.79	3,594	26.49
1991	257	1.89	3,897	28.72
Total	13,567	100.00%	13,567	100.00%
### APPENDIX D INCIDENCE RATES

#### TABLE D-1

### Incidence Rates by Attained Age and Elimination Period

-	All E	limination Peric	ods		0 Days			15 30 Days			60–150 Days	·
Attained Age Group	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60 60-64 65-69 70-74 75-79 80-84 Ages 85-	195,165 270,005 549,513 502,884 322,897 139,990 14,240	62 240 1,163 2,725 4,260 3,804 742	0.032 0.089 0.212 0.542 1.319 2.717 5.211	16,733 54,404 141,599 130,715 78,521 36,589 4,585	14 95 631 1,438 2,128 1,876 452	$\begin{array}{c} 0.084\\ 0.175\\ 0.446\\ 1.100\\ 2.710\\ 5.127\\ 9.858\end{array}$	38,677 87,680 192,173 180,583 117,378 44,798 3,444	6 59 325 808 1,261 1,199 190	0.016 0.067 0.169 0.447 1.074 2.676 5.517	139,755 127,921 215,741 191,586 126,998 58,603 6,211	42 86 207 479 871 729 100	$\begin{array}{c} 0.030\\ 0.067\\ 0.096\\ 0.250\\ 0.686\\ 1.244\\ 1.610\\ \end{array}$
All Ages	1,994,694	12,996	0.652	463,146	6,634	1.432	664,733	3,848	0.579	866,815	2,514	0.290

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#### TABLE D-2

			Incidence Rate/100	
Attained Age Group	Rates	0 Days	15-30 Days	60-150 Days
Less than 60	Average	0.084	0.016	0.030
	Highest	0.190	0.010	0.075
	Lowest	0.062	0.000	0.000
6064	Average	0.175	0.067	0.067
	Highest	0.200	0.100	0.110
	Lowest	0.160	0.040	0.010
6569	Average	0.446	0.169	0.096
	Highest	0.540	0.290	0.160
	Lowest	0.420	0.100	0.010
7074	Average	1.100	0.447	0.250
	Highest	1.340	0.750	0.380
	Lowest	1.020	0.240	0.060
75-79	Average	2.710	1.074	0.686
	Highest	2.920	0.168	0.960
	Lowest	2.730	0.670	0.180
Ages 80+	Average	5.127	2.676	1.244
2	Highest	6.110	3.450	2.020
	Lowest	4.920	1.760	0.320

# Incidence Rates by Attained Age and Elimination Period for Companies with the Highest and Lowest Rates

### TABLE D-3

INCIDENCE RATES BY ATTAINED AGE, ELIMINATION PERIOD, AND SEX

		All	Elimination Per	iods		0 Days			15-30 Days			50–150 Days	
Attained				Incidence			Incidence			Incidence			Incidence
Age Group	Sex	Exposure	Claims	Rate/100	Exposure	Claims	Ratc/100	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100
Less than 60	All Female Male Unknown	195,165 118,494 71,055 5,616	62 35 23 4	0.032 0.030 0.032 0.071	16,733 11,811 4,922 0	14 7 7 0	0.084 0.059 0.142 N/A	38,677 26,594 12,011 72	6 5 1 0	0.016 0.019 0.008 0.000	139,755 80,089 54,122 5,544	42 23 15 4	$\begin{array}{c} 0.030 \\ 0.029 \\ 0.028 \\ 0.072 \end{array}$
60–64	All Female Male Unknown	270,005 173,396 95,635 974	$240 \\ 148 \\ 90 \\ 2$	0.089 0.085 0.094 0.205	54,404 36,867 17,535 2	95 67 28 0	$\begin{array}{c} 0.175 \\ 0.182 \\ 0.160 \\ 0.000 \end{array}$	87,680 58,046 29,536 98	59 31 28 0	0.067 0.053 0.095 0.000	127,921 78,483 48,564 874	86 50 34 2	0.067 0.064 0.070 0.229
65–69	All	549,513	1,163	0.212	141,599	631	0.446	192,173	325	0.169	215,741	207	0.096
	Female	336,503	747	0.222	87,975	404	0.459	119,420	217	0.182	129,108	126	0.098
	Male	212,152	410	0.193	53,624	227	0.423	72,665	108	0.149	85,863	75	0.087
	Unknown	858	6	0.699	0	0	N/A	88	0	0.000	770	6	0.779
70–74	All	502,884	2,725	0.542	130,715	1,438	1.100	180,583	808	0.447	191,586	479	0.250
	Female	303,571	1,657	0.546	79,107	836	1.057	111,081	513	0.462	113,383	308	0.272
	Male	198,971	1,063	0.534	51,606	602	1.167	69,479	294	0.423	77,886	167	0.214
	Unknown	342	5	1.462	2	0	0.000	23	1	4.348	317	4	1.262
75–79	All	322,897	4,260	1.319	78,521	2,128	2.710	117,378	1,261	1.074	126,998	871	0.686
	Female	204,555	2,654	1.297	50,073	1,313	2.622	75,689	773	1.021	78,793	568	0.721
	Male	118,188	1,600	1.354	28,448	815	2.865	41,676	486	1.166	48,064	299	0.622
	Unknown	154	6	3.896	0	0	N/A	13	2	15.385	141	4	2.837
Ages 80+	All	154,230	4,546	2.948	41,174	2,328	5.654	48,242	1,389	2.879	64,814	829	1.279
	Female	103,437	3,070	2.968	28,529	1,558	5.461	32,086	946	2.948	42,822	566	1.322
	Male	50,745	1,476	2.909	12,645	770	6.089	16,155	443	2.742	21,945	263	1.198
	Unknown	48	0	0.000	0	0	N/A	1	0	0.000	47	0	0.000
All Ages	All	1,994,694	12,996	0.652	463,146	6,634	1.432	664,733	3,848	0.579	866,815	2,514	0.290
	Female	1,239,956	8,311	0.670	294,362	4,185	1.422	422,916	2,485	0.588	522,678	1,641	0.314
	Male	746,746	4,662	0.624	168,780	2,449	1.451	241,522	1,360	0.563	336,444	853	0.254
	Unknown	7,992	23	0.288	4	0	0.000	295	3	1.017	7,693	20	0.260

		All	Elimination Per	iods		0 Days			15-30 Days			60-150 Days	3
Attained	Issue			Incidence			Incidence			Incidence			Incidence
Age Group	Year	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100
Less than 60	All	75,578	26	0.034	7,892	8	0.101	16,564	2	0.012	51,122	16	0.031
	1986	698	0	0.000	214	0	0.000	405	0	0.000	79	0	0.000
	1987	8,015	5	0.062	829	1	0.121	966	0	0.000	6,220	4	0.064
	1988	24,600	10	0.041	1,669	2	0.120	3,490	1	0.029	19,441	7	0.036
	1989	21,961	7	0.032	2,696	5	0.185	5,848	1	0.017	13,417	1	0.007
	1990	20,304	4	0.020	2,484	0	0.000	5,855	0	0.000	11,965	4	0.033
5064	All	111,178	103	0.093	27,762	49	0.177	37,229	25	0.067	46,187	29	0.063
	1986	5,112	5	0.098	2,470	4	0.162	1,678	1	0.060	964	0	0.000
	1987	18,125	23	0.127	4,803	12	0.250	3,535	2	0.057	9,787	9	0.092
	1988	29,739	26	0.087	6,092	10	0.164	8,368	5	0.060	15,279	11	0.072
	1989	31,028	29	0.093	7,886	15	0.190	12,214	7	0.057	10,928	7	0.064
	1990	27,174	20	0.074	6,511	8	0.123	11,434	10	0.087	9,229	2	0.022
6569	All	194,894	393	0.202	54,990	241	0.438	69,401	91	0.131	70,503	61	0.087
	1986	17,151	61	0.356	6,465	45	0.696	5,086	10	0.197	5,600	6	0.107
	1987	37,800	114	0.302	12,347	67 ·	0.543	9,262	26	0.281	16,191	21	0.130
	1988	48,965	77	0.157	12,625	43	0.341	16,430	14	0.085	19,910	20	0.100
	1989	49,948	72	0.144	14,082	50	0.355	20,719	17	0.082	15,147	5	0.033
	1990	41,030	69	0.168	9,471	36	0.380	17,904	24	0.134	13,655	9	0.066
7074	All	147,614	874	0.592	42,884	501	1.168	53,291	243	0.456	51,439	130	0.253
	1986	15,947	132	0.828	4,956	84	1.695	4,979	27	0.542	6,012	21	0.349
	1987	29,097	221	0.760	9,706	118	1.216	7,807	56	0.717	11,584	47	0.406
	1988	36,508	196	0.537	10,460	106	1.013	13,154	60	0.456	12,894	30	0.233
	1989	36,454	174	0.477	10,908	103	0.944	14,838	61	0.411	10,708	10	0.093
	1990	29,608	151	0.510	6,854	90	1.313	12,513	39	0.312	10,241	22	0.215

#### TABLE D-4

		All	Elimination Per	iods		0 Days			15-30 Days			60–150 Days	
Attained Age Group	Issue Year	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
7579	All 1986 1987 1988 1989 1990	95,758 12,512 19,408 23,261 22,657 17,920	1,355 227 340 319 268 201	1.415 1.814 1.752 1.371 1.183 1.122	27,732 3,571 6,699 6,872 6,868 3,722	756 123 189 175 162 107	2.726 3.444 2.821 2.547 2.359 2.875	33,288 3,870 5,231 8,069 8,734 7,384	366 65 86 72 78 65	$     \begin{array}{r}       1.099 \\       1.680 \\       1.644 \\       0.892 \\       0.893 \\       0.880 \\     \end{array} $	34,738 5,071 7,478 8,320 7,055 6,814	233 39 65 72 28 29	0.671 0.769 0.869 0.865 0.397 0.426
Ages 80+	All 1986 1987 1988 1989 1990	31,581 1,952 4,437 9,170 9,488 6,534	1,127 105 241 312 288 181	3.569 5.379 5.432 3.402 3.035 2.770	10,978 1,055 2,397 3,046 3,182 1,298	642 72 173 175 141 81	5.848 6.825 7.217 5.745 4.431 6.240	8,326 378 712 2,825 2,761 1,650	311 21 26 98 113 53	3.735 5.556 3.652 3.469 4.093 3.212	12,277 519 1,328 3,299 3,545 3,586	174 12 42 39 34 47	1.417 2.312 3.163 1.182 0.959 1.311
All Ages	All 1986 1987 1988 1989 1990	656,603 53,372 116,882 172,243 171,536 142,570	3,878 530 944 940 838 626	0.591 0.993 0.808 0.546 0.489 0.439	172,238 18,731 36,781 40,764 45,622 30,340	2,197 328 560 511 476 322	1.276 1.751 1.523 1.254 1.043 1.061	218,099 16,396 27,513 52,336 65,114 56,740	1,038 124 196 250 277 191	0.476 0.756 0.712 0.478 0.425 0.337	266,266 18,245 52,588 79,143 60,800 55,490	643 78 188 179 85 113	0.241 0.428 0.357 0.226 0.140 0.204

		All	Elimination Per	iods		0 Days			15-30 Days			60 150 Days	
Attained Age Group	Issue Year	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60	All	53,136	18	0.034	4,113	3	0.073	10,884	3	0.028	38,139	12	0.031
	1986	399	1	0.251	[12	1	0.893	247	0	0.000	40	0	0.000
	1987	4,980	2	0.040	432	0	0.000	572	0	0.000	3,976	2	0.050
	1988	18,339	11	0.060	945	2	0.212	2,277	1	0.044	15,117	8	0.053
	1989	15,005	2	0.013	1,425	0	0.000	3,951	0	0.000	9,629	2	0.021
	1990	14,413	2	0.014	1,199	0	0.000	3,837	2	0.052	9,377	0	0.000
6064	All	69,536	66	0.095	12,549	19	0.151	23,760	21	0.088	33,227	26	0.078
	1986	2,129	4	0.188	903	2	0.221	853	2	0.234	373	0	0.000
	1987	11,375	19	0.167	2,083	7	0.336	2,103	2	0.095	7,189	10	0.139
	1988	19,347	19	0.098	2,735	2	0.073	5,186	6	0.116	11,426	11	0.096
	1989	19,926	20	0.100	3,751	6	0.160	8,198	10	0.122	7,977	4	0.050
	1990	16,759	4	0.024	3,077	2	0.065	7,420	1	0.013	6,262	1	0.016
65–69	All	153,361	352	0.230	40,406	189	0.468	55,262	95	0.172	57,693	68	0.118
	1986	12,533	45	0.359	4,800	24	0.500	3,709	14	0.377	4,024	7	0.174
	1987	28,630	101	0.353	8,570	53	0.618	6,894	18	0.261	13,166	30	0.228
	1988	38,610	102	0.264	8,985	51	0.568	12,619	24	0.190	17,006	27	0.159
	1989	41,084	79	0.192	10,662	48	0.450	17,501	27	0.154	12,921	4	0.031
	1990	32,504	25	0.077	7,389	13	0.176	14,539	12	0.083	10,576	0	0.000
7074	All	129,031	730	0.566	34,232	370	1.081	47,686	236	0.495	47,113	124	0.263
	1986	13,326	116	0.870	4,017	62	1.543	4,303	34	0.790	5,006	20	0.400
	1987	25,917	177	0.683	7,991	101	1.264	7,041	44	0.625	10,885	32	0.294
	1988	31,705	212	0.669	8,181	94	1.149	11,400	69	0.605	12,124	49	0.404
	1989	32,125	177	0.551	8,505	93	1.093	13,572	67	0.494	10,048	17	0.169
	1990	25,958	48	0.185	5,538	20	0.361	11,370	22	0.193	9,050	6	0.066

## Incidence Rates by Attained Age, Elimination Period, and Issue Year for Duration 2

		All	Elimination Per	iods		0 Days			1530 Days			60-150 Days	
Attained	Issue			Incidence			Incidence			Incidence			Incidence
Age Group	Year	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100	Exposure	Claims	Rate/100
75–79	All	77,678	1,157	1.489	19,626	573	2.920	28,302	337	1.191	29,750	247	0.830
	1986	9,642	213	2.209	2,582	91	3.524	3,084	63	2.043	3,976	59	1.484
	1987	15,709	271	1.725	4,909	152	3.096	4,283	55	1.284	6,517	64	0.982
	1988	18,858	316	1.676	4,972	150	3.017	6,716	94	1.400	7,170	72	1.004
	1989	18,708	283	1.513	4,579	140	3.057	7,831	98	1.251	6,298	45	0.715
	1990	14,761	74	0.501	2,584	40	1.548	6,388	27	0.423	5,789	7	0.121
Ages 80+	All	35,127	1,114	3.171	9,812	619	6.309	10,631	304	2.860	14,684	191	1.301
0	1986	3,220	141	4,379	1,149	83	7.224	883	34	3.851	1,188	24	2.020
	1987	5,901	259	4.389	2,468	163	6.605	1,251	46	3.677	2,182	50	2.291
	1988	9,858	345	3.500	2,834	177	6.246	3,152	104	3.299	3,872	64	1.653
	1989	9,252	306	3.307	2,342	162	6.917	3,134	104	3.318	3,776	40	1.059
	1990	6,896	63	0.914	1,019	34	3.337	2,211	16	0.724	3,666	13	0.355
All Ages	All	517,869	3,437	0.664	120,738	1,773	1.468	176,525	996	0.564	220,606	668	0.303
0	1986	41,249	520	1.261	13,563	263	1.939	13,079	147	1.124	14,607	110	0.753
	1987	92,512	829	0.896	26,453	476	1.799	22,144	165	0.745	43,915	188	0.428
	1988	136,717	1,005	0.735	28,652	476	1.661	41,350	298	0.721	66,715	231	0.346
	1989	136,100	867	0.637	31,264	449	1.436	54,187	306	0.565	50,649	112	0.221
	1990	111,291	216	0.194	20,806	109	0.524	45,765	80	0.175	44,720	27	0.060

		All	Elimination Per	iods		0 Days			1530 Days			60-150 Days	
Attained Age Group	Íssue Year	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60	All 1986 1987 1988 1989	28,194 263 3,258 14,001 10,672	13 0 2 10 1	0.046 0.000 0.061 0.071 0.009	1,757 73 255 583 846	0 0 0 0 0	$\begin{array}{c} 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\end{array}$	4,561 167 347 1,548 2,499	1 0 0 1 0	$\begin{array}{c} 0.022\\ 0.000\\ 0.000\\ 0.065\\ 0.000\\ \end{array}$	21,876 23 2,656 11,870 7,327	12 0 2 9 1	0.055 0.000 0.075 0.076 0.014
60-64	All 1986 1987 1988 1989	37,154 1,267 8,105 14,314 13,468	42 3 11 21 7	0.113 0.237 0.136 0.147 0.052	5,707 501 1,075 1,676 2,455	16 2 4 5 5	0.280 0.399 0.372 0.298 0.204	11,083 539 1,360 3,528 5,656	6 0 0 4 2	$\begin{array}{c} 0.054 \\ 0.000 \\ 0.000 \\ 0.113 \\ 0.035 \end{array}$	20,364 227 5,670 9,110 5,357	20 1 7 12 0	0.098 0.441 0.123 0.132 0.000
65-69	All 1986 1987 1988 1989	90,828 8,763 21,234 29,845 30,986	240 38 76 87 39	0.264 0.434 0.358 0.292 0.126	22,708 3,414 5,641 6,132 7,521	111 21 33 34 23	0.489 0.615 0.585 0.554 0.306	30,629 2,621 4,964 9,539 13,505	83 12 25 30 16	0.271 0.458 0.504 0.314 0.118	37,491 2,728 10,629 14,174 9,960	46 5 18 23 0	0.123 0.183 0.169 0.162 0.000
70 -74	All 1986 1987 1988 1989	91,376 12,002 22,509 28,441 28,424	536 115 168 197 56	0.587 0.958 0.746 0.693 0.197	24,125 3,706 6,545 6,801 7,073	283 68 91 89 35	1.173 1.835 1.390 1.309 0.495	31,966 3,844 6,056 9,935 12,131	138 23 45 57 13	0.432 0.598 0.743 0.574 0.107	35,285 4,452 9,908 11,705 9,220	115 24 32 51 8	0.326 0.539 0.323 0.436 0.087

		All	Elimination Per	iods		0 Days			15-30 Days			60-150 Days	
Attained	Issue Year	Evnouvo	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Age Group		Exposure			·····			+ · ·			· · · · · · · · · · · · · · · · · · ·		
7579	All	54,996	798	1.451	13,843	397	2.868	19,614	233	1.188	21,539	168	0.780
	1986	8,283	161	1.944	2,141	80	3.737	2,684	42	1.565	3,458	39	1.128
	1987	13,420	262	1.952	3,937	134	3.404	3,657	74	2.024	5,826	54	0.927
	1988	16,584	281	1.694	3,983	128	3.214	6,077	85	1.399	6,524	68	1.042
	1989	16,709	94	0.563	3,782	55	1.454	7,196	32	0.445	5,731	7	0.122
Ages 80+	All	30,739	982	3.195	8,665	507	5.851	9,491	310	3.266	12,583	165	1.311
8	1986	4,128	166	4.021	1,251	84	6.715	1,238	48	3.877	1,639	34	2.074
	1987	6,953	269	3.869	2,508	160	6.380	1.619	61	3.768	2,826	48	1.699
	1988	10,340	412	3.985	2,795	197	7.048	3,283	149	4.539	4,262	66	1.549
	1989	9,318	135	1.449	2,111	66	3.126	3,351	52	1.552	3,856	17	0.441
All Ages	All	333,287	2,611	0.783	76,805	1,314	1.711	107.344	771	0.718	149,138	526	0.353
	1986	34,706	483	1.392	11,086	255	2.300	11,093	125	1.127	12,527	103	0.822
	1987	75.479	788	1.044	19,961	422	2.114	18,003	205	1.139	37.515	161	0.429
	1988	113,525	1,008	0.888	21,970	453	2.062	33,910	326	0.961	57,645	229	0.397
	1989	109,525	332	0.303	23,788	184	0.773	44,338	115	0.259	41,451	33	0.080

		All	Elimination Per	iods		0 Days			15-30 Days			60-150 Days	
Attained Age Group	Issue Year	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60	All 1986 1987 1988	13,419 170 2,163 11,086	2 0 0 2	0.015 0.000 0.000 0.018	559 51 167 341	0 0 0	0.000 0.000 0.000 0.000	1,276 100 215 961	0 0 0 0	$\begin{array}{c} 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\end{array}$	11,584 19 1,781 9,784	2 0 0 2	$\begin{array}{c} 0.017 \\ 0.000 \\ 0.000 \\ 0.020 \end{array}$
6064	All	16,841	19	0.113	1,717	9	0.524	3,329	2	0.060	11,795	8	0.068
	1986	687	3	0.437	215	2	0.930	351	1	0.285	121	0	0.000
	1987	5,957	10	0.168	573	5	0.873	801	1	0.125	4,583	4	0.087
	1988	10,197	6	0.059	929	2	0.215	2,177	0	0.000	7,091	4	0.056
65-69	All	42,767	94	0.220	9,831	48	0.488	11,545	22	0.191	21,391	24	0.112
	1986	5,770	26	0.451	2,284	15	0.657	1,791	7	0.391	1,695	4	0.236
	1987	15,550	44	0.283	3,675	22	0.599	3,434	9	0.262	8,441	13	0.154
	1988	21,447	24	0.112	3,872	11	0.284	6,320	6	0.095	11,255	7	0.062
7074	All	53,922	291	0.540	13,815	164	1.187	16,379	71	0.433	23,728	56	0.236
	1986	10,061	82	0.815	3,142	50	1.591	3,211	19	0.592	3,708	13	0.351
	1987	19,816	150	0.757	5,452	87	1.596	5,100	35	0.686	9,264	28	0.302
	1988	24,045	59	0.245	5,221	27	0.517	8,068	17	0.211	10,756	15	0.139
75–79	All	33,745	460	1.363	8,327	229	2.750	10,859	124	1.142	14,559	107	0.735
	1986	7,272	154	2.118	1,829	80	4.374	2,382	40	1.679	3,061	34	1.111
	1987	12,134	225	1.854	3,263	111	3.402	3,276	62	1.893	5,595	52	0.929
	1988	14,339	81	0.565	3,235	38	1.175	5,201	22	0.423	5,903	21	0.356
Ages 80+	All	22,173	636	2.868	6,271	347	5.533	6,606	158	2.392	9,296	131	1.409
	1986	4,695	196	4.175	1,336	95	7.111	1,454	50	3.439	1,905	51	2.677
	1987	7,501	281	3.746	2,446	169	6.909	1,875	60	3.200	3,180	52	1.635
	1988	9,977	159	1.594	2,489	83	3.335	3,277	48	1.465	4,211	28	0.665
All Ages	All	182,867	1,502	0.821	40,520	797	1.967	49,994	377	0.754	92,353	328	0.355
	1986	28,655	461	1.609	8,857	242	2.732	9,289	117	1.260	10,509	102	0.971
	1987	63,121	710	1.125	15,576	394	2.530	14,701	167	1.136	32,844	149	0.454
	1988	91,091	331	0.363	16,087	161	1.001	26,004	93	0.358	49,000	77	0.157

		All	Elimination Per	iods		0 Days			15-30 Days			60-150 Days	
Attained Age Group	lssuc Year	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60	All	1,478	0	0.000	136	0	0.000	177	0	0.000	1,165	0	0.000
	1986	121	0	0.000	37	0	0.000	70	0	0.000	14	0	0.000
	1987	1,357	0	0.000	99	0	0.000	107	0	0.000	1,151	0	0.000
60–64	All 1986 1987	4,980 408 4,572	3 1 2	0.060 0.245 0.044	379 102 277	0 0 0	0.000 0.000 0.000	691 245 446	1 1 0	$0.145 \\ 0.408 \\ 0.000$	3,910 61 3,849	2 0 2	0.051 0.000 0.052
6569	All	13,991	19	0.136	3,437	11	0.320	3,067	5	0.163	7,487	3	0.040
	1986	3,381	12	0.355	1,406	6	0.427	1,144	4	0.350	831	2	0.241
	1987	10,610	7	0.066	2,031	5	0.246	1,923	1	0.052	6,656	1	0.015
70–74	All	24,142	120	0.497	6,555	61	0.931	6,285	43	0.684	11,302	16	0.142
	1986	8,082	79	0.977	2,614	40	1.530	2,539	26	1.024	2,929	13	0.444
	1987	16,060	41	0.255	3,941	21	0.533	3,746	17	0.454	8,373	3	0.036
75–79	All	16,469	181	1.099	4,117	105	2.550	4,742	35	0.738	7,610	41	0.539
	1986	6,318	107	1.694	1,586	65	4.098	2,120	18	0.849	2,612	24	0.919
	1987	10,151	74	0.729	2,531	40	1.580	2,622	17	0.648	4,998	17	0.340
Ages 80+	All	11,993	312	2.602	3,423	141	4.119	3,365	98	2.912	5,205	73	1.402
	1986	4,947	191	3.861	1,288	79	6.134	1,581	62	3.922	2,078	50	2.406
	1987	7,046	121	1.717	2,135	62	2.904	1,784	36	2.018	3,127	23	0.736
All Ages	All	73,053	635	0.869	18,047	318	1.762	18,327	182	0.993	36,679	135	0.368
	1986	23,257	390	1.677	7,033	190	2.702	7,699	111	1.442	8,525	89	1.044
	1987	49,796	245	0.492	11,014	128	1.162	10,628	71	0.668	28,154	46	0.163

		Ali	Elimination Pe.	iods		0 Days			15-30 Days			60-150 Days	
Attained Age Group	Dura- tion	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
Less than 60	All	195,074	62	0.032	16,715	[4	0.084	38,618	6	0.016	139.741	42	0.030
	0-13	98,111	29	0.030	10,150	11	0.108	21.520	2	0.009	66,441	16	0.024
	14-25	53,452	18	0.034	4,113	3	0.073	10,979	3	0.027	38,360	12	0.031
	2637	28,323	13	0.046	1.757	0	0.000	4.615	1	0.022	21,951	12	0.055
	38-49	13,577	2	0.015	559	0	0.000	1,309	0	0.000	11,709	2	0.017
	5061	1,611	0	0.000	136	0	0.000	195	Ó	0.000	1,280	ō	0.000
60-64	ΛII	269,609	240	0.089	54,373	95	0.175	87,381	59	0.068	127,855	86	0.067
	013	139,535	109	0.078	33,893	51	0.150	47,499	28	0.059	58,143	30	0.052
	14 25	70,258	67	0.095	12,622	19	0.151	24,211	22	0.091	33,425	26	0.078
	26-37	37,564	42	0.112	5,741	16	0.279	11,369	6	0.053	20,454	20	0.098
	38 49	17,109	19	0.111	1,734	9	0.519	3,496	2	0.057	11,879	8	0.067
	5061	5,143	3	0.058	383	0	0.000	806	1	0.124	3,954	2	0.051
65-69	All	547,345	1,156	0.211	140,983	627	0.445	191,084	323	0.169	215,278	206	0.096
	0-13	237,778	425	0.179	63,725	261	0.410	86,105	102	0.118	87,948	62	0.070
	14-25	156,721	362	0.231	40,746	192	0.471	56,955	101	0.177	59,020	69	0.117
	26-37	93,308	244	0.261	22,967	113	0.492	31,897	85	0.266	38,444	46	0.120
	38 49	44,474	102	0.229	9,993	48	0.480	12,453	28	0.225	22,028	26	0.118
	50-61	15,064	23	0.153	3,552	13	0.366	3,674	7	0.191	7,838	3	0.038
70-74	All	493,787	2,685	0.544	128,768	1,420	1.103	176,770	788	0.446	188,249	477	0.253
	0-13	180,982	939	0.519	49,074	522	1.064	66,772	271	0.406	65,136	146	0.224
	14 25	133,466	757	0.567	34,480	376	1.090	50,104	249	0.497	48,882	132	0.270
	26-37	95,268	549	0.576	24,380	285	1.169	34,077	144	0.423	36,811	120	0.326
	38-49	57,259	304	0.531	14,075	171	1.215	18,140	76	0.419	25,044	57	0.228
	50-61	26,812	136	0.507	6,759	66	0.976	7,677	48	0.625	12,376	22	0.178

#### TABLE D-5

### Incidence Rates by Attained Age, Elimination Period, and Duration

		Ali	Elimination Per	iods		0 Days			1530 Days			60-150 Days	
Attained Age Group	Dura- tion	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100	Exposure	Claims	Incidence Rate/100
75–79	All	313,008	4,204	1.343	77,237	2,108	2.729	112,569	1,238	1.100	123,202	858	0.696
	0–13	117,062	1,466	1.252	30,887	793	2.567	41,866	413	0.986	44,309	260	0.587
	14–25	81,401	1,193	1.466	19,753	575	2.911	30,308	359	1.185	31,340	259	0.826
	26–37	58,401	825	1.413	13,956	401	2.873	21,467	248	1.155	22,978	176	0.766
	38–49	36,857	500	1.357	8,429	232	2.752	12,588	154	1.223	15,840	114	0.720
	50–61	19,287	220	1.141	4,212	107	2.540	6,340	64	1.009	8,735	49	0.561
Ages 80+	All	144,759	4,387	3.031	40,090	2,287	5.705	43,674	1,308	2.995	60,995	792	1.298
	0-13	38,365	1,194	3.112	11,697	661	5.651	10,107	343	3.394	16,561	190	1.147
	14-25	36,139	1,138	3.149	9,849	621	6.305	11,178	320	2.863	15,112	197	1.304
	26-37	32,188	1,019	3.166	8,716	509	5.840	10,271	333	3.242	13,201	177	1.341
	38-49	23,990	679	2.830	6,335	352	5.556	7,598	187	2.461	10,057	140	1.392
	50-61	14,077	357	2.536	3,493	144	4.123	4,520	125	2.765	6,064	88	1.451
All Ages	All	1,963,582	12,734	0.649	458,166	6,551	1.430	650,096	3,722	0.573	855,320	2,461	0.288
	0-13	811,833	4,162	0.513	199,426	2,299	1.153	273,869	1,159	0.423	338,538	704	0.208
	14-25	531,437	3,535	0.665	121,563	1,786	1.469	183,735	1,054	0.574	226,139	695	0.307
	26-37	345,052	2,692	0.780	77,517	1,324	1.708	113,696	817	0.719	153,839	551	0.358
	38-49	193,266	1,606	0.831	41,125	812	1.974	55,584	447	0.804	96,557	347	0.359
	50-61	81,994	739	0.901	18,535	330	1.780	23,212	245	1.055	40,247	164	0.407

### INCIDENCE RATES BY ATTAINED AGE, ELIMINATION PERIOD, AND DURATION

					Incidence Rate/100				
		Both Sexes			Females Only			Males Only	
Attained Age Group	Intercompany Study	1985 Nursing Home Survey	Study/Survey	Intercompany Study	1985 Nursing Home Survey	Study/Survey	Intercompany Study	1985 Nursing Home Survey	Study/Survey
ess than 60 ) 64 569 ) 74 579 ) 84	0.084 0.175 0.446 1.100 2.710 5.654	$\begin{array}{c} 0.110\\ 0.270\\ 0.590\\ 1.320\\ 3.010\\ 6.200 \end{array}$	0.761 0.647 0.755 0.833 0.900 0.912	0.059 0.182 0.459 1.057 2.622 5.461	$\begin{array}{c} 0.080\\ 0.270\\ 0.720\\ 1.360\\ 3.020\\ 6.650\end{array}$	0.741 0.673 0.638 0.777 0.868 0.821	0.142 0.160 0.423 1.167 2.865 6.089	0.140 0.270 0.430 1.280 2.990 5.360	1.016 0.591 0.984 0.911 0.958 1.136

TABLE D-6

#### TABLE D-7

PERCENTAGE PERSISTING AT LEAST *n* DAYS BY ELIMINATION PERIOD CATEGORY FOR ALL BENEFIT PERIODS

				1 Dittorio											
		0 Day	Elimination Per	riod			15-30	Day Elimination	n Period			60 -150	Day Elimination	on Period	
		-		Number		Number			Number		Number			Number	
	Number	Number		Termin-	Percentage	of	Number		Termin-	Percentage	of	Number		Termin-	Percentage
	of Claims	of Claims	Beginning	ating on	Persisting	Claims	of Claims	Beginning	ating on	Persisting	Claims	of Claims	Beginning	ating on	Persisting
Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days
1	1.355	5,279	6,634	15	99.77%	630	3,217	3,847	7	99.82%	972	1,538	2,510	5	99.80%
2	1,355	5,264	6,619	24	99.41	630	3,210	3,840	15	99.43	972	1,533	2,505	3	99.68
3	1,355	5,240	6,595	32	98.93	630	3,195	3,825	18	98.96	972	1,530	2,502	3	99.56
4	1,355	5,208	6,563	70	97.87	630	3,177	3,807	21	98.41	972	1,527	2,499	3	99.44
5	1,355	5,138	6,493	61	96.96	630	3,156	3,786	19	97.92	972	1,524	2,495	4	99.28
6	1,355	5,077	6,432	68	95.93	630	3,137	3,767	15	97.53	971	1,520	2,491		99.24
7	1,355	5,009	6,364	91	94.56	630	3,122	3,752	15	97.14	971	1,519	2,489	3	99.12
8	1,355	4,918	6,273	97	93.10	630	3,107	3,737	12	96.83	970	1,516	2,486	2	99.04
9	1,355	4,821	6,176	80	91.89	630	3,095	3,725	20	96.31	970	1,514	2,484		99.00
10	1,355	4,741	6,096	80	90.68	630	3,075	3,705	19	95.81	970	1,513	2,483	2	98.92
11	1.355	4.661	6,016	72	89.60	630	3.056	3,686	16	95,40	970	1,511	2,481	4	98.76
12	1.355	4,589	5,944	59	88.71	630	3,040	3,670	10	95.14	970	1,507	2,477	3	98.64
13	1,355	4,530	5,885	75	87.58	630	3,030	3,660	20	94.62	970	1,504	2,473	3	98.53
14	1.355	4,455	5.809	70	86.52	630	3,010	3,640	16	94.20	969	1.501	2,470	2	98.45
15	1,354	4,385	5,739	73	85.42	630	2,994	3,624	16	93.79	969	1,499	2,468	2	98.37
16	1,354	4,312	5,665	57	84.56	630	2,978	3,608	12	93.48	969	1,497	2,466	6	98.13
17	1,353	4,255	5,608	73	83.46	630	2,966	3,596	22	92.90	969	1,491	2,460	3	98.01
18	1,353	4,182	5,534	45	82.78	630	2,944	3,574	11	92.62	969	1,488	2,457	2	97.93
19	1,352	4,137	5,489	58	81.91	630	2,933	3,563	21	92.07	969	1,486	2,455	3	97.81
20	1,352	4,079	5,431	286	80.94	630	2,912	3,542	103	91.86	969	1,483	2,452	10	97.73
25	1,350	3,793	5,143	207	76.92	630	2,809	3,439	146	88.46	967	1,473	2,440	8	97.25
30	1.345	3,586	4.931	194	73.75	629	2,663	3,292	137	84.51	967	1,465	2,431	13	96.93
35	1,343	3,392	4,735	166	70.95	629	2,526	3,155	115	81.36	963	1,452	2,415	5	96.57
40	1,342	3,226	4,568	141	68.53	629	2,411	3,040	118	78.50	963	1,447	2,410	14	96.25
45	1,339	3,085	4,422	123	66.40	629	2,293	2,922	70	75.51	962	1,433	2,395	16	95.73
50	1,335	2,962	4,297	104	64.63	628	2,223	2,851	82	73.90	962	1,417	2,379	6	95.09
55	1,333	2,858	4,191	81	63.25	628	2,141	2,769	78	71.58	962	1,411	2,373	11	94.89
60	1,329	2,777	4,106	99	61.90	628	2,063	2,691	79	69.58	962	1,400	2,362	13	94.45
65	1,327	2,678	4,004	74	60.40	627	1,984	2,611	57	67.52	962	1,387	2,349	9	93.97
70	1,320	2,604	3,923	62	59.49	625	1,927	2,551	58	66.04	961	1,378	2,339	7	93.57

TABLE	D-7	- Continued

		0 Day	Elimination Pe	riod			1530	Day Elimination	Period			60 150	Day Eliminat	ion Period	
				Number		Number			Number			Number		Number	
	Number	Number		Termin-	Percentage	of	Number		Termin	Percentage	Number	of		Termin-	Percentage
	of Claims	of Claims	Beginning	ating on	Persisting	Claims	of Claims	Beginning	ating on	Persisting	of Claims	Claims	Beginning	ating on	Persisting
Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days
75	1,316	2.542	3,858	63	58.53%	621	1,869	2,490	42	64.76%	961	1,371	2,332	12	93.33%
80	1,308	2,479	3,786	54	57.51	621	1,827	2,448	41	63.61	961	1,359	2,319	10	92.73
85	1,306	2,425	3,731	56	56.63	618	1,786	2,404	44	62.60	958	1,349	2,307	9	92.41
90	1,300	2,369	3,668	52	55.91	616	1,742	2,358	38	61.47	958	1,340	2,294	10	92.05
95	1,295	2,317	3,612	39	55.15	615	1,704	2,319	44	60.38	953	1,330	2,282	9	91.69
100	1,294	2,278	3,572	49	54.52	614	1,660	2,274	40	59.22	950	1,321	2,270	17	91.24
105	1,290	2,229	3,519	31	53.82	613	1,620	2,231	19	58.39	947	1,304	2,251	18	90.44
110	1,287	2,198	3,484	32	53.31	611	1,601	2,212	23	57.86	943	1,286	2,229	· 26	89.75
115	1,277	2,166	3,440	28	52.86	611	1,578	2,189	27	57.18	940	1,260	2,200	21	88.74
120	1,269	2,138	3,406	37	52.40	609	1,551	2,158	33	56.45	940	1,239	2,178	20	87.77
125	1,266	2.101	3.364	21	51.83	607	1,518	2.125	28	55.50	929	1.219	2.146	16	87.12
130	1,259	2.080	3,337	27	51.57	604	1,490	2,094	33	54.85	925	1,203	2,128	17	86.51
135	1,252	2,053	3,305	16	51.15	600	1,457	2,057	18	54.03	923	1,186	2,109	14	85.82
140	1,241	2,037	3,277	24	50.83	598	1,439	2,037	28	53.50	923	1,172	2,093	21	85.13
145	1,234	2,013	3,243	20	50.50	598	1,411	2,007	25	52.84	918	1,151	2,068	16	84.23
150	1,222	1,993	3,214	138	50.19	595	1,386	1,981	113	52.11	914	1,135	2,049	80	83.62
180	1,168	1,855	3,019	152	47.99	564	1,273	1,837	91	49.15	883	1,055	1,936	63	80.36
210	1,099	1,703	2,799	115	45.53	538	1,182	1,714	80	46.77	832	992	1,822	70	77.70
240	1,029	1,588	2,615	90	43.66	510	1,102	1,610	78	44.57	799	922	1,721	66	74.76
270	972	1,498	2,469	77	42.14	475	1,024	1,499	57	42.44	760	856	1,614	51	71.86
300	916	1.421	2,335	79	40.85	434	967	1,400	66	40.75	725	805	1.530	51	69.52
330	854	1,342	2,196	79	39.43	406	901	1,306	49	38.81	681	754	1,434	43	67.24
360	816	1,263	2,079	56	37.97	381	852	1,230	41	37.36	644	711	1,355	32	65.20
390	660	580	1,239	31	36.53	343	487	829	30	35.72	595	461	1,056	22	63.28
420	621	549	1,169	25	35.68	319	457	775	25	34.44	561	439	994	22	62.06
450	591	524	1,114	27	34.91	298	432	729	26	33.27	537	417	954	21	60.67
480	558	497	1,052	29	34.05	279	406	685	22	32.07	511	396	907	14	59.32
510	526	468	993	22	33.10	265	384	649	18	31.02	475	382	856	25	58.38
540	499	446	945	23	32.36	253	366	619	20	30.15	461	357	818	7	56.59
570	468	423	891	22	31.56	238	346	583	19	29.16	444	350	794	16	56.10

		0 Day	Elimination Per	riod			15-30	Day Eliminatior	n Period			60-150	Day Eliminatio	on Period	
				Number		Number			Number		Number			Number	
	Number	Number		Termin-	Percentage	of	Number		Termin-	Percentage	of	Number		Termin-	Percentage
	of Claims	of Claims	Beginning	ating on	Persisting	Claims	of Claims	Beginning	ating on	Persisting	Claims	of Claims	Beginning	ating on	Persisting
Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days	Open	Closed	Exposure	Day n	n Days
600	451	401	851	11	30.77%	225	327	551	19	28.15%	426	334	760	20	54.95%
630	421	390	808	16	30.33	211	308	519	12	27.27	407	314	719	15	53.56
660	392	374	764	14	29.76	194	296	490	14	26.62	387	299	686	14	52.42
690	362	360	722	11	29.20	180	282	462	16	25.79	359	285	642	14	51.33
720	337	349	685	20	28.71	167	266	432	15	24.88	333	271	604	12	50.20
750	289	233	522	11	27.80	156	229	. 385	16	23.97	319	228	546	10	49.16
780	276	222	497	8	27.20	143	213	356	11	23.01	296	218	513	16	48.24
810	256	214	470	5	26.75	135	202	337	10	22.30	278	202	480	12	46.62
840	240	209	448	9	26.40	121	192	313	9	21.62	262	190	451	12	45.33
870	220	200	419	9	25.92	112	183	295	9	20.99	250	178	428	9	44.31
900	209	191	399	10	25.35	102	174	276	13	20.19	225	169	393	6	43.35
930	195	181	376	6	24.63	94	161	255	6	19.30	210	163	373	5	42.67
960	173	175	347	9	24.23	83	155	238	1	18.90	189	158	345	6	42.08
990	162	166	328	10	23.66	79	154	233	7	18.74	176	152	327	5	41.21
1020	150	156	306	6	22.84	71	147	217	5	18.24	160	147	307	5	40.56
1050	137	150	286	11	22.46	61	142	202	11	17.72	146	142	288	4	39.88
1080	127	139	265	5	21.58	54	131	184	5	16.64	126	138	264	3	39.45
1110	107	73	180	8	21.02	40	67	107	1	16.30	63	39	102	1	39.00
1140	107	65	172	1	20.20	38	66	103	2	16.15	61	38	99	1	38.61
1170	97	64	161	4	20.07	35	64	99	2	15.83	57	37	94	2	38.21

#### TABLE D-7-Continued

		0 Day	Elimination Pe	riod			15-30	Day Eliminatio	n Period			60-150	) Day Eliminatio	on Period	
Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Termin- ating on Day n	Percentage Persisting n Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Termin- ating on Day n	Percentage Persisting n Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Termin- ating on Day n	Percentage Persisting n Days
1200 1230 1260 1290 1320 1350 1380 1410 1440 1470	89 81 68 65 60 52 45 39 25 23	60 55 51 45 41 39 36 34 13 11	149 136 118 110 101 89 81 73 38 34	5 4 6 4 2 3 2 1 2 0	19.56% 18.88 18.31 17.37 16.73 16.38 15.80 15.39 15.18 14.36	30 27 25 23 22 20 19 18 16 16	62 58 56 53 51 48 47 45 9 9	92 85 80 76 73 68 66 63 25 24		15.50% 14.82 14.47 13.92 13.37 13.00 12.80 12.41 12.02 12.02	55 51 47 41 36 34 32 29 23 20	35 34 33 30 29 28 27 24 11 11	90 85 80 71 65 62 59 53 34 31		37.39% 36.95 36.51 35.03 34.53 34.00 33.43 31.66 31.01 31.01
1500 1530 1560 1590 1620 1650 1680 1710 1740 1770 1800	21 18 17 15 14 10 7 5 5 4 2	11 10 10 10 10 10 10 10 10 10 10	32 29 27 25 24 20 16 15 15 15 14 12		14.36 14.36 13.85 13.85 13.85 13.85 13.85 13.85 13.85 13.85 13.85 13.85	14 14 11 11 10 8 7 6 4 1	8 8 8 7 6 5 5 5 5 4 4	22 22 19 17 14 12 11 9 5 5	$ \begin{array}{c} 0 \\ 0 \\ 1 \\ 1 \\ 0 \\ 0 \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \end{array} $	11.52 11.52 11.52 11.52 10.88 10.15 9.37 9.37 7.81 7.81	19 18 13 13 12 11 9 5 3 1	11 11 11 10 9 9 9 9 9 9	30 28 24 24 22 20 18 14 12 10 10		31.01 31.01 31.01 31.01 29.67 28.25 28.25 28.25 28.25 28.25 28.25 28.25

TABLE D-7 Continued

TABLE	E D-8
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PERCENTAGE PERSISTING AT LEAST n DAYS BY SEX FOR ALL BENEFIT PERIODS

			Female					Male		
Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day n	Percentage Persisting n Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day n	Percentage Persisting <i>n</i> Days
1	1.932	6,420	8,351	63	99.25%	1,037	3,635	4,671	40	99.14%
2	1,931	6,357	8,288	35	98.83	1.036	3,595	4,631	27	98.57
3	1,931	6,322	8,253	45	98.29	1,036	3,568	4,604	30	97.92
4	1,931	6,277	8,208	76	97.38	1,036	3,538	4,574	32	97.24
5	1,931	6,201	8,131	74	96.49	1,036	3,506	4,542	36	96.47
6	1,930	6,127	8,056	74	95.60	1.036	3,470	4,506	33	95.76
ž	1,929	6,053	7,981	79	94.66	1,036	3,437	4,473	49	94.71
8	1,928	5,974	7,901	83	93.66	1,036	3,388	4,424	42	93.81
9	1,927	5,891	7.818	75	92.77	1,036	3,346	4,381	41	92.93
10	1,927	5,816	7,743	92	91.66	1,035	3,305	4,339	38	92.12
11	1,927	5,724	7,651	65	90.88	1,034	3,267	4,301	48	91.09
12	1,927	5,659	7,586	67	90.08	1,034	3,219	4,253	20	90.66
13	1,927	5,592	7,517	72	89.22	1,034	3,199	4,233	36	89.89
14	1,925	5,520	7,445	71	88.37	1,034	3,163	4,196	46	88.91
15	1,925	5,449	7,374	68	87.55	1,033	3,117	4,150	47	87.90
16	1,925	5,381	7,305	53	86.92	1,033	3,070	4,103	36	87.13
17	1,924	5,328	7,252	74	86.03	1,033	3,034	4,067	40	86.27
18	1,924	5,254	7,177	44	85.50	1,033	2,994	4,027	27	85.69
19	1,923	5,210	7,133	60	84.78	1,033	2,967	4,000	30	85.05
20	1,923	5,150	7,073	287	84.07	1,033	2,937	3,970	148	84.37
25	1,921	4,863	6,784	226	80.80	1,030	2,789	3,819	102	81.32
30	1,915	4,637	6,552	213	78.03	1,030	2,687	3,716	120	79.16
35	1,910	4,424	6,333	193	75.62	1,028	2,567	3,595	88	76.78
40	1,908	4,231	6,138	170	73.24	1,028	2,479	3,507	82	74.97
45	1,903	4,061	5,962	139	71.29	1,027	2,397	3,424	70	73.13
50	1,896	3,922	5,818	99	69.72	1,026	2,327	3,352	74	71.65
55	1,893	3,823	5,716	102	68.61	1,024	2,253	3,277	50	70.17
60	1,891	3,721	5,612	120	67.31	1,021	2,203	3,224	58	68.98
65	1,889	3,601	5,489	81	65.90	1,017	2,145	3,161	57	67.80

			Female					Male		
Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day n	Percentage Persisting n Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day <i>n</i>	Percentage Persisting n Days
70	1,879	3,520	5,397	67	65.03%	1.013	2,088	3,101	54	66.64%
75	1,873	3,453	5,325	83	64.22	1,011	2.034	3.045	43	65.52
80	1,865	3,370	5,235	79	63.21	1,009	1,991	2,998	28	64.48
85	1.859	3,291	5,149	66	62.22	1,005	1,963	2,966	42	63.98
90	1,853	3,225	5,076	58	61.49	997	1,921	2,916	40	63.14
95	1,843	3,167	5,008	53	60.80	992	1.881	2,873	34	62.25
100	1,838	3,114	4,949	60	60.14	988	1.847	2.835	37	61.53
105	1,831	3,054	4,884	39	59.47	985	1,810	2,795	22	60.68
110	1,819	3,015	4,833	50	58.88	981	1.788	2,768	27	60.20
115	1,804	2.965	4,766	41	58.37	976	1,761	2,736	27	59.62
120	1,795	2,924	4,716	57	57.84	973	1,734	2,706	25	59.05
125	1,781	2,867	4,643	44	57.10	967	1.709	2,674	17	58.54
130	1,772	2,823	4,593	32	56.65	961	1,692	2,653	29	58.10
135	1,763	2,791	4,554	20	56.30	959	1,663	2,622	29	57.47
140	1,758	2,771	4,527	38	55.94	951	1,634	2,583	19	56.90
145	1,748	2,733	4,478	38	55.50	942	1,615	2,554	11	56.48
150	1,733	2,695	4,428	192	55.04	931	1,604	2,534	121	56.21
180	1,648	2,503	4,148	176	52.64	883	1,483	2,361	117	53.47
210	1,562	2,327	3,886	151	50.35	832	1,366	2,196	103	50.83
240	1,477	2,176	3,651	122	48.43	769	1,263	2,030	80	48.40
270	1,387	2,054	3,439	103	46.80	723	1,183	1,906	74	46.47
300	1,303	1,951	3,249	118	45.40	681	1,109	1,790	67	44.66
330	1,218	1,833	3,048	104	43.70	635	1,042	1,672	69	42.94
360	1,148	1,729	2,876	85	42.14	607	973	1,580	44	41.17
390	1,003	880	1,882	44	40.56	526	580	1,106	34	39.74
420	935	836	1,768	46	39.59	498	546	1,043	22	38.54
450	888	790	1,676	36	38.57	478	524	1,001	28	37.72
480	837	754	1,589	29	37.75	457	496	953	29	36.61
510	795	725	1,520	31	37.03	435	467	901	27	35.52
540	758	694	1,452	37	36.29	414	440	852	27	34.41
570	716	657	1,373	30	35.35	386	413	798	31	33.26

TABLE D-8 -- Continued

			Female					Male		
	Number	Number		Number	Percentage	Number	Number		Number	Percentage
	of Claims	of Claims	Beginning	Terminating	Persisting	of Claims	of Claims	Beginning	Terminating	Persisting
Days	Open	Closed	Exposure	on Day n	n Days	Open	Closed	Exposure	on Day <i>n</i>	n Days
600	679	627	1,305	30	34.57%	361	382	742	14	32.02%
630	629	597	1,222	19	33.75	340	368	707	20	31.37
660	595	578	1,173	21	33.22	314	348	660	20	30.51
690	552	557	1,109	26	32.62	298	328	626	22	29.52
720	510	531	1,040	20	31.80	276	306	581	21	28.46
750	455	407	862	17	31.16	250	242	491	16	27.35
780	434	390	822	21	30.46	235	226	461	8	26.50
810	391	369	760	17	29.74	218	218	435	9	26.03
840	365	352	716	12	29.02	201	209	410	10	25.48
870	328	340	668	12	28.55	184	199	382	12	24.84
900	302	328	629	20	27.94	176	187	363	7	23.99
930	278	308	586	4	27.12	163	180	343	10	23.51
960	250	304	553	12	26.88	153	170	321	6	22.89
990	224	292	516	14	26.34	136	164	300	7	22.37
1020	201	278	478	8	25.60	126	157	283	13	21.84
1050	180	270	449	14	25.11	117	144	259	12	20.89
1080	159	256	414	6	24.36	104	132	236	7	19.90
1110	116	110	226	4	23.87	82	64	146	5	19.17
1140	112	106	218	4	23.45	80	59	139	1	18.64
1170	100	102	201	7	23.01	74	58	132	3	18.51

TABLE D-8-Continued

			Female					Male		
Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day n	Percentage Persisting n Days	Number of Claims Open	Number of Claims Closed	Beginning Exposure	Number Terminating on Day <i>u</i>	Percentage Persisting n Days
				· · · · · · · · · · · · · · · · · · ·				·		·
1200	86	95 90	181 169	5	22.04%	70	55	125	4	18.08%
1230 1260	79 69	90 86	155	4	21.54 21.02	64	51	103		17.49 17.02
1200	66	80 81	133	5	20.33	56 52	40	96	2	16.36
1290	58	76	134	5	19.48	51	41	90	3	15.84
1320	48	71	119	5 0	18.87	45	41	84	3	15.84
1380	42	71	113		18.87	43	38	79	2	15.27
1410	39	67	106	4	18.20	35	36	71	2	14.86
1440	27	25	52		17.52	29	8	36	1	14.65
1470	26	23	50	i	17.18	26	7	32	Ó	14.22
1500	25	23	48		16.84	22	7	29	0	14.22
1530	20	22	42	2	16.47	20	7	27	l o l	14.22
1560	19	20	39	0	15.67	20	7	27	0	14.22
1590	16	20	36	1	15.67	18	7	23	0	14.22
1620	13	19	32	1	15.22	14	7	21	0	14.22
1650	10	18	27	1	14.74	9	7	16	0	14.22
1680	6	17	23	0	14.20	8	7	14	0	14.22
1710	5	17	22	0	14.20	5	7	12	0	14.22
1740	4	17	21	1	14.20	4	7	11	0	14.22
1770	3	16	19	0	13.52	2	7	9	2	14.22
1800	2	16	18	2	13.52	1	5	6	0	10.66
1825	1	14	0		0.00	1	5	5		0.00

#### TABLE D-9

PERCENTAGE PERSISTING AT LEAST *n* DAYS BY AGE GROUP FOR ALL BENEFIT PERIODS

			Age 55-	-64				Age 65-7	4				Age 75 8	4				Ages 85	+	
	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-
	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-
Days	Claims Open	Claims Closed	Expo- sure	ating on Day n	sisting n Days	Claims Open	Claims Closed	Expo- sure	ating on Day <i>n</i>	sisting n Days	Claims Open	Claims Closed	Expo- sure	ating on Day n	sisting n Days	Claims Open	Claims Closed	Expo- sure	ating on Day n	sisting <i>n</i> Days
Days	70	214	284	9	96.83%	856	3,053	3,909	36	99.08%	1.867	6,227	8.092	57	99.30%	168	575	743	2	99.73%
2	70	214	275	9	96.48	856	3,033	3,873	19	98.59	1,867	6,170	8.035	40	98.80	168	573	741	2	99.46
3	70	203	274	2	95.77	856	2,998	3,854	35	97.70	1.865	6.130	7,995	37	98.34	168	571	739	Ĩ	99.33
4	7Õ	202	272	1	95.42	856	2,963	3,819	35	96.80	1,865	6,093	7,958	67	97.52	168	570	738	5	98.65
5	70	201	271	2	94.72	856	2,928	3,784	44	95.68	1,865	6,026	7,890	61	96.76	168	565	733	3	98.25
6	70	199	269	4	93.31	856	2,884	3,740	39	94.68	1,864	5,965	7,829	63	95.98	168	562	729	1	98.12
7	70	195	265	5	91.55	856	2,845	3,700	40	93.66	1,864	5,902	7,766	73	95.08	167	561	728	9	96.90
8	70	190	260	5	89.79 89.44	855 855	2,805 2,763	3,660 3,618	42 43	92.58 91.48	1,864 1,863	5,829 5,756	7,692 7,618	73 66	94.18 93.36	167 167	552 546	719 713	6 6	96.09 95.29
10	70 70	185 184	255 254	8	89.44	855	2,703	3,575	43	90.35	1,863	5,690	7,551	72	93.30	167	540	707	6	94.48
10	10	104	254	0	80.02	055	2,720	5,515		10.55	1,002	5,070	ŕ	12	J2.41				_	
11	70	176	246	4	85.21	855	2,676	3,531	37	89.41	1,861	5,618	7,479	63	91.69	167	534	701	9	93.26
12	70	172	242	1	84.86	855	2,639	3,494	33	88.56	1,861	5,555	7,416	48	91.10	167	525	692	5	92.59
13	70	171	241	2	84.15	855	2,606	3,461	39	87.57	1,861	5,507	7,366	60	90.36	167	520	687	7	91.65
14	70 70	169 168	239	$\begin{vmatrix} 1\\ 3 \end{vmatrix}$	83.80 82.75	855 855	2,567 2,530	3,422 3,385	37 42	86.62 85.54	1,859 1,858	5,447 5,370	7,305	77 61	89.41 88.65	167 167	513 511	680 678	2 9	91.38 90.16
15 16	70	168	238 235		82.73	855	2,330	3,343	28	84.83	1,858	5,309	7,166	55	87.97	167	502	669	4	89.62
17	70	163	233	3	80.99	855	2,460	3,315	41	83.78	1,857	5,254	7,111	62	87.20	167	498	665	8	88.55
18	70	160	230	lĭ	80.63	855	2,419	3,273	17	83.34	1,857	5,192	7.049	49	86.60	167	490	657	4	88.01
19	70	159	229	2	79.93	854	2,402	3,256	29	82.60	1,857	5,143	7,000	51	85.97	167	486	653	8	86.93
20	70	157	227	8	79.58	854	2,373	3,227	152	81.81	1,857	5,092	6,949	258	85.25	167	478	645	17	86.66
25	70	149	219	10	77.11	853	2.221	3,074	133	78.02	1,853	4,834	6,687	172	82.24	167	461	628	14	84.37
30	70	139	209	3	73.59	853	2,088	2,941	118	74.71	1,850	4,662	6,511	195	80.07	164	447	611	18	81.93
35	70	136	206	8	71.83	850	1,970	2,819	83	71.92	1,846	4,467	6,313	175	77.84	164	429	593	15	79.36
40	70	128	198	8	69.01	849	1,887	2,736	78	69.72	1,845	4,292	6,136	154	75.66	164	414	578	12	77.73
45	70	120	190	2	66.20	849	1,809	2,657	75	67.61	1,839	4,138	5,977	120	73.83	164	402	565	12	76.38
50	70	118	188	3	66.20	847	1,734	2,581	60	65.89	1,835	4,018	5,852	102 88	72.30	162 161	390	552 542	97	75.02
55 60	70	115	185	6	64.44 63.03	846 846	1,674 1,624	2,520 2,470	50 59	64.43 63.12	1,832 1,827	3,916 3,828	5,748 5,655	110	71.20	161	381 374	542 535	8	73.53 72.57
65	70 70	109 108	179 178	$\begin{bmatrix} 1\\6 \end{bmatrix}$	62.32	846	1,024	2,410	50	61.53	1,827	3,718	5,539	78	68.70	160	366	526	5	71.62
70	70	108	172	2	60.56	842	1,505	2.356	40	60.48	1,813	3,640	5,452	71	67.80	159	361	520	8	70.39

TABLI	E D-9–	-Continued

			Age 55-	64				Age 65-7	4				Age 758	4				Ages 85	ŀ	
	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-
	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-
	Claims	Claims	1:xpo	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n
Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days
75	70	100	170	4	59.86%	839	1,475	2,314	34	59.45%	1,808	3,569	5.377	85	66.89%	159	353	512	3	69.84%
80	70	96	166	5	58.45	839	1,441	2,280	- 38	58.52	1,801	3,484	5,283	58	65.80	156	350	506	6	69.29
85	69	91	160	2	56.33	837	1,403	2,238	42	57.49	1,795	3,426	5,220	62	65.13	155	344	499	3	68.60
- 90	69	89	158	3	55.98	834	1,361	2,193	37	56.41	1,787	3,364	5,149	57	64.44	152	341	493	1	68.33
95	68	- 86	154	1	54.91	829	1,324	2,153	- 30	55.55	1,779	3,307	5,084	51	63.69	151	340	491	4	68.05
100	- 68	85	153	0	54.55	825	1,294	2,118	28	54.80	1,774	3,256	5,029	64	63.02	151	336	486	5	67.63
105	68	85	153	0	54.55	822	1,266	2,088	- 14	54.15	1,769	3,192	4,960	40	62.22	149	331	480	7	66.94
110	68	85	153	1	54.55	820	1,252	2,072	15	53.66	1.756	3,152	4,907	55	61.69	148	324	471	6	65.68
115	67	84	151	2	54.19	818	1,237	2,055	23	53.30	1,744	3,097	4,837	41	61.06	143	318	461	2	65.12
120	67	82	149	1	53.12	815	1,214	2,028	23	52.75	1,737	3,056	4,790	53	60.51	141	316	457	5	64.83
125	67	81	148	2	52.76	812	1,191	2,001	20	52.05	1,725	3,003	4,725	36	59.88	136	311	445	3	64.12
130	67	79	146	1	52.40	808	1,171	1,978	25	51.58	1,719	2,967	4,685	34	59.43	131	308	439	1	63.68
135	67	78	145	2	51.68	802	1,146	1,948	15	51.03	1,715	2,933	4,648	29	59.01	130	307	437	3	63.54
140	67	76	143	3	50.96	797	1,131	1,927	12	50.61	1,707	2,904	4,608	34	58.59	130	304	434	8	62.96
145	67	73	140	0	50.25	793	1,119	1,911	11	50.29	1,694	2,870	4,559	36	58.16	128	296	424	3	61.93
150	66	73	139	8	50.25	789	1,108	1,896	96	50.00	1,678	2,834	4,512	196	57.70	123	293	416	12	61.49
180	63	65	128	12	47.34	756	1,012	1,768	78	47.47	1,598	2,638	4,228	191	55.15	107	281	388	16	59.69
210	60	53	113	3	42.84	728	934	1,662	82	45.19	1,510	2,447	3,952	155	52.70	89	265	354	15	57.17
240	57	50	107		41.70	694	852	1,545	58	43.04	1,412	2,292	3,702	122	50.63	76	250	325	16	54.54
270	56	43	99	4	38.95	668	794	1,462	58	41.46	1,313	2,170	3,481	105	48.91	66	234	300	11	51.98
300	52	39	91	2	37.36	638	736	1,372	41	39.80	1,234	2,065	3,296	128	47.44	54	223	276	15	50.05
330	48	37	85	2	36.54	601	695	1,294	42	38.63	1,152	1,937	3,083	118	45.52	45	208	253	11	47.29
360	47	35	82	2	35.67	566	653	1,219	42	37.26	1,099	1,819	2,917	81	43.77	36	197	233	5	45.20
390	45	32	77	3	34.78	537	498	1,035	19	35.95	936	916	1,851	55	42.15	4	15	19	1	40.46
420	43	29	72	0	33.40	505	479	984	22	35.28	876	861	1,733	45	40.90	3	14	17	1	38.21
450	41	29	70	1	33.40	482	457	937	29	34.48	833	816	1,649	33	39.84	3	13	16	0	35.96
480	39	28	67	2	32.91	459	428	887	20	33.40	787	783	1,568	36	39.01	3	13	16	1	35.96
510	38	26	64	6	31.93	436	408	844	20	32.63	747	747	1,493	31	38.12	3	12	15	2	33.71
540	37	20	57	2	28.89	421	388	807	20	31.85	705	716	1,421	41	37.35	3	10	13	0	29.22
570	34	18	52	0	27.88	392	368	760	24	31.01	668	675	1,342	37	36.23	3	10	13	0	29.22

			Age 55–	64				Age 657	4				Age 75-8	4				Ages 85	+	
	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-
	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-
	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Ехро-	ating on	sisting n
Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days
600	32	18	50	2	27.88%	369	344	713	12	30.05%	631	638	1,267	30	35.24%	3	10	13	1	29.22%
630	31	16	47	1	26.75	350	332	679	14	29.50	581	608	1,187	23	34.39	2	9	11	1	26.97
660	29	15	44	0	26.17	325	318	642	17	28.92	549	585	1,133	25	33.71	2	8	10	0	24.52
690	29	15	44	2	26.17	302	301	603	18	28.10	513	560	1,073	28	32.95	2	8	10	0	24.52
720	26	13	39	1	24.95	278	283	561	12	27.28	476	532	1,006	27	32.01	2	8	10	1	24.52
750	25	9	34	2	24.31	250	233	482	8	26.65	425	406	831	23	31.10		0	1		12.26
780	24	7	31		22.86	241	225	466	11	26.15	399	383	780	18	30.22		0	1		12.26
810	23	7	30	0	22.86	219	214	433	8	25.58	362	365	726	18	29.54			1		12.26
840	20	/ /	27		22.86	209	206	415		25.04	333 299	347 337	679 635	10	28.79			1		12.26
870	20	6	26	0	22.01	189	195	384		24.41	299	337	035	10	28.36	1	0	I	0	12.20
900	19	6	25	0	22.01	177	188	365	9	23.96	279	321	599	18	27.50	1	0	1	0	12.26
930	19	6	25	Ů	22.01	160	179	339	7	23.28	259	303	562	7	26.79	1	Ö	1	0	12.26
960	19	6	25	0	22.01	140	172	310	5	22.85	242	296	537	13	26.41	1	0	1	0	12.26
990	14	6	20	0	22.01	128	167	295	6	22.48	216	283	499	15	25.74	1	0	1	0	12.26
1020	14	6	20	0	22.01	111	161	272	11	21.93	200	268	467	11	25.01	1	0	1	0	12.26
1050	11	6	17	0	22.01	100	150	250	10	21.10	184	257	438	15	24.41	1	0	1	0	12.26
1080	11	6	16	0	22.01	91	140	231	5	20.24	159	242	401	8	23.55	1	0	. 1	0	12.26
1110	6	1	7	0	22.01	70	60	130	2	19.74	121	113	234	( 7	22.90	1	0	1	0	12.26
1140	6	1	7	0	22.01	68	58	126		19.43	117	106	223	4	22.31	1	0	1		12.26
1170	6	1	7	0	22.01	64	57	120	2	19.28	103	102	205	8	21.90				<u> </u>	l

TABLE	D-9—Continued

			Age 55	64				Age 657	4				∆ge 758	4				Ages 85	-1	
	Number	Number	Begin-	Number		Number	Number	Begin-	Number	Percent-	Number	Number	Begin-	Number	Percent-	Number	Number	Begin	Number	Percent-
	of	of	ning	Termin-	age Per-	of	of	ning	Termin-	age Per-	of	oť	ning	Termin-	age Per-	ហ	റി	ning	Termin-	age Per-
	Claims	Claims		ating on		Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n	Claims	Claims	Expo-	ating on	sisting n
Days	Орен	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days	Open	Closed	sure	Day n	Days
1200	6	1	7	0	22.01%	54	55	109	5	18.95%	95	94	189	4	20.90%					
1230	5	1	6	0	22.01	53	50	103	3	18.07	84	90	174	4	20.56		1 1			
1260	5	1	6		22.01	43	47	90	3	17.53	76	86	161	5	20.08					
1290						43	44	87	4	16.95	70	- 81	151	4	19.45					
1320						38	40	78	3	15.94	66	77	143	2	18.93					
1350		1				34	37	71	2	15.51	55	75	128		18.65					
1380						33	35	68	2	15.06	47	74	120	4	18.50					
1410	Į					31	33	64	4	14.61	40	70	110	1	17.87					
$1440 \\ 1470$						29 21	29 13	57 34	4	16.44	36 29	66	102	5	17.04				ļ	
1470		} :				21	15	34	0	15.25	2.9	18	46		16.35		1			
1500						21	13	34	1	15.25	24	17	41	0	15.98					
1530						18	12	30	0	14.79	21	17	38	2	15.98		1			
1560		.				18	12	30	0	14.79	20	15	35	0	15.12					
1590						16	12	27	1	14.79	17	15	31	0	15.12					
1620				ļ		13	11	24	0	14.24	13	15	28	1	15.12					
1650	1					11	11	22	0	14.24	7	14	20	1	14.58					
1680						9	11	19	0	14.24	4	13	17	0	13.85		}		}	
1710	1					8	11	19	0	14.24	1	13	14		13.85					
1740						7	11	18	1	14.24				{						
1770		1				4	10	14	1	13.40										
1800						1	9	10	0	12.29				1						
1825		l'				0	9	9		12.29							1			

TABLE D-9 -Continued

#### TABLE D-10

### PERCENTAGE PERSISTING AT LEAST *n* DAYS—LTC INTERCOMPANY STUDY VERSUS 1985 NATIONAL NURSING HOME STUDY

		Ages 55-64			Ages 65-74			Ages 75-84			Ages 85+	
	1994	1985		1994	1985		1994	1985		1994	1985	
	Intercompany	Nursing	Ratio									
Days	Study	Home Survey	Study/Survey									
0	100.00%	100.00%	1.000	100.00%	100.00%	1.000	100.00%	100.00%	1.000	100.00%	100.00%	1.000
10	86.62	93.26	0.929	90.35	91.33	0.989	92.47	91.46	1.011	94.48	90.54	1.043
20	79.58	84.71	0.939	81.81	83.76	0.977	85.25	83.17	1.025	86.66	82.28	1.053
30	73.59	80.10	0.919	74.71	76.74	0.974	80.07	75.56	1.060	81.93	76.73	1.068
60	63.03	67.60	0.932	63.12	63.93	0.987	69.95	63.92	1.094	72.57	65.31	1.111
90	55.98	59.11	0.947	56.41	55.29	1.020	64.44	55.81	1.155	68.33	57.31	1.192
121	53.12	53.22	0.998	52.62	49.33	1.067	60.41	50.00	1.208	64.69	51.59	1.254
151	49.89	49.05	1.017	49.89	45.13	1.106	57.61	45.75	1.259	61.49	47.40	1.297
182	47.34	46.02	1.029	47.31	42.13	1.123	55.00	42.56	1.292	59.69	44.25	1.349
212	42.46	43.76	0.970	44.92	39.95	1.124	52.49	40.08	1.310	56.85	41.84	1.359
243	40.92	42.00	0.974	42.84	38.32	1.118	50.44	38.10	1.324	54.20	39.92	1.358
273	38.56	40.55	0.951	41.21	37.05	1.112	48.73	36.46	1.336	51.46	38.34	1.342
304	37.36	39.28	0.951	39.57	36.02	1.099	47.27	35.04	1.349	49.87	36.99	1.348
334	36.54	38.08	0.959	38.45	35.12	1.095	45.37	33.79	1.343	47.10	35.79	1.316
365	35.67	36.89	0.967	36.99	34.28	1.079	43.44	32.64	1.331	44.61	34.67	1.287
547	28.39	29.43	0.965	31.57	28.96	1.090	37.06	26.81	1.382	29.22	28.74	1.017
730	24.31	24.21	1.004	27.09	23.21	1.167	31.69	22.05	1.437	24.52	23.27	1.054
912	22.01	21.61	1.019	23.89	19.05	1.254	27.08	18.03	1.502	12.26	18.50	0.663
1,095	22.01	19.51	1.128	19.89	16.16	1.231	23.19	14.59	1.590	12.26	14.74	0.832
1,277	22.01	17.36	1.268	17.34	13.66	1.269	19.70	11.93	1.652			
1,460				15.25	11.64	1.310	16.35	9.79	1.670			
1,642		L		14.24	10.34	1.377	14.58	7.87	1.853		Í	Ĺ

#### 1993-94 TSA REPORTS

### APPENDIX E NURSING HOME CLAIMS

	NURS	SING HOME CLAIM	IS BY ATTAINED	AGE	
Attained Age	Number of Claims Paid	Amount Paid	Average Amount Paid Per Claim	Number of Days Paid	Average Length of Stay
Under Age 65 65–69 70–74 75–79 80–84 85 and Over	218 1,111 2,660 4,193 3,754 732	\$ 4,627,391 19,086,379 44,405,499 69,583,875 51,194,069 7,688,970	\$21,227 17,179 16,694 16,595 13,637 10,504	86,414 341,171 829,283 1,399,903 1,073,965 157,143	396 307 312 334 286 215
Total	12,668	\$196,586,183	\$15,518	3,887,879	307

NURSING HOME CLAIMS BY ATTAINED AGE

TABLE E-2

N	URSING	Home	CLAIMS	ΒY	Sex	OF -	INSURED
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Sex of Insured	Number of Claims Paid	Amount Paid	Average Amount Paid Per Claim	Number of Days Paid	Average Length of Stay
Female Male Unknown	8,105 4,549 14	\$124,371,258 72.094,135 120,790	\$15,345 15,848 8,628	2,470,743 1,413,244 3,892	305 311 278
Total	12,668	\$196,586,183	\$15,518	3,887,879	307

TA	BL	E	E-3

Duration	Number of Claims Paid	Percentage Still Open	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
	3,491	13.5%	\$63,700,181	\$18,247	1.234,879	354
	3,542	18.5	60,075,804	16,961	1,192,482	337
	2,764	28.7	42,162,085	15,254	838,867	303
	1,734	31.1	20,873,990	12,038	418,513	241
	815	38.9	7,772,309	9,537	161,425	198
	275	35.6	1,810,009	6,582	37,504	136
	37	8.1	162,920	4,403	3,430	93
	10	0.0	28,885	2,889	779	78
otal	12,668	22.7%	\$196,586,183	\$15,518	3,887,879	307

#### NURSING HOME CLAIMS BY DURATION

NURSING HOME CLAIMS BY CLAIM STATUS

Number of Claim Status Claims Paid		Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Unspecified Death End of Benefit Period Recovered	6,305 1,704 292 1,487	\$78,542,254 \$18,775,107 \$7,275,249 \$5,485,654	\$12,457 \$11,018 \$24,915 \$3,689	1,625,195 364,426 157,976 115,897	258 214 541 78
Total Closed	9,788	\$110,078,264	\$11,246	2,263,494	231
Open	2,880	86,507,919	30,037	1,624,385	564
Total	12,668	\$196,586,183	\$15,518	3,887,879	307

### TABLE E-5

## DISTRIBUTION OF NURSING HOME CLAIMS BY PAID AMOUNT

Amount			·····
7 Gradiant	Closed	Open	Total
S0-4,999 5,000-9,999 10,000-14,999 15,000-19,999 20,000-24,999 25,000-29,999 30,000-34,999 35,000-39,999 40,000-44,999	5,447 1,196 783 673 372 267 182 163 129 112	171 360 433 351 252 194 168 125 149 120	5,618 1,556 1,216 1,024 624 461 350 288 278 232
50,000-54,999 55,000-59,999 60,000-64,999 65,000-69,999 70,000-74,999 75,000-79,999 80,000-84,999 85,000-89,999 90,000-94,999 95,000-99,999	126 73 45 44 36 21 27 27 20 10	114 106 71 56 52 46 27 28 13 9	240 179 116 100 88 67 54 55 33 19
$\begin{array}{c} 100,000-104,999\\ 105,000-109,999\\ 110,000-114,999\\ 125,000-124,999\\ 125,000-124,999\\ 125,000-129,999\\ 130,000-134,999\\ 135,000-139,999\\ 140,000-144,999\\ 145,000-149,999 \end{array}$	12 7 4 2 3 1 1	10 4 3 2 1 2 1 3 1	22 11 8 5 2 3 1 3 2
150,000-154,999 155,000-159,999 160,000-164,999 165,000-169,999 170,000-174,999 175,000-179,999 180,000-184,999	1	2	2 1 0 1 2 1
Total	9,788	2,880	12,668

Elimination	Number of	Amount Paid	Average Amount	Number of	Average Length
Period	Claims Paid		Paid per Claim	Days Paid	of Stay
)	6,600	\$ 86,921,111	\$13,170	1,707,914	259
15–30	3,785	55,453,009	14,651	1,026,775	271
60 and Over	2,283	54,212,063	23,746	1,153,190	505
Total	12,668	\$196,586,183	\$15,518	3,887,879	307

TABLE E-6

NURSING HOME CLAIMS BY ELIMINATION PERIOD

#### TABLE E-7

#### NURSING HOME CLAIMS BY POLICY ISSUE YEAR

Policy Issue Year	Number of Claims Paid	Percentage Still Open	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
1984	164	1.8%	\$ 2,300,079	\$14,025	47,801	291
1985	421	13.1	7,549,477	17,932	147,053	349
1986	2,506	15.8	41,852,505	16,701	878,746	351
1987	3,472	21.7	59,397,677	17,108	1,253,595	361
1988	3,139	26.0	49,947,397	15,912	944,779	301
1989	1,967	26.6	25,677,388	13,054	448,059	228
1990	804	32.0	8,395,739	10,442	143,551	179
1991	195	40.0	1,465,921	7,518	24,295	125
Total	12,668	22.7%	\$196,586,183	\$15,518	3,887,879	307

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10	עעע		-0

NURSING HOME CLAIMS BY COMPANY

Claim Range	Number of Companies	Number of Claims Paid	Amount Paid	Average Amount per Claim	Days Paid	Average Days per Claim
<100 100–999 1,000 +	4 3 3	109 1,184 11,375	\$ 3,328,820 26,627,631 166,629,732	\$30,540 22,490 14,649	47,147 601,136 3,239,596	433 508 285
Total		12,668	\$196,586,183	\$15,518	3,887,879	307

#### 1993-94 TSA REPORTS

#### TABLE E-9

### ICD-9-CM CODES BY DIAGNOSIS CATEGORIES

Diagnosis Category	ICD-9-CM Codes Included		
Alzheimer's	290-294, 797		
Arthritis	710-739		
Cancer	141-239		
Circulatory	390-398, 410-417, 420-429, 440-459		
Diabetes	250		
Hypertension	401-405		
Injury	800-996		
Mental	295-319		
Nervous System and Sense Organs	323-380		
Respiratory	011, 012, 460-496, 500-519		
Stroke	430-438		
Other	All Other Codes		

#### TABLE E-10

#### ICD-9-CM CODES INCLUDED IN "OTHER" DIAGNOSIS CATEGORIES

Diagnosis Category	ICD-9-CM Codes Included
Congenital	742-756
Digestive System	530-579
Endocrine, Immunity System	242-249, 251-289
Genitourinary System	580-618
Ill-Defined Conditions	780-796, 798-799
Skin and Subcutaneous Tissue	680-709
Miscellaneous	All Other Codes Not Defined Elsewhere

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	474	\$13,742,749	\$28,993	259,942	548
Arthritis	247	3,671,017	14,862	71,748	290
Cancer	422	4,267,407	10,112	85,441	202
Circulatory	695	15,023,748	21,617	311,531	448
Diabetes	99	2,101,185	21,224	39,560	400
Hypertension	62	1,585,293	25,569	32,371	522
Injury	705	8,196,624	11,626	158,289	225
Mental	281	7,958,568	28,322	149,185	531
Nervous System	488	16,254,410	33,308	320,314	656
Respiratory	250	3,298,287	13,193	64,896	260
Stroke	586	10,890,041	18,584	200,527	342
Other	389	6,814,253	17,517	129,852	334
Total	4,698	\$93,803,582	\$19,967	1,823,656	388

TABLE E-11

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS

TABLE E	·iZ
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Primary		Number of	Amount	Average Amount	Number of	Average Length
Diagnosis	Category	Claims Paid	Paid	Paid per Claim	Days Paid	of Stay
Alzheimer's	Open	269	\$8,366,007	\$31,100	152,937	569
	Closed	205	5,376,742	26,228	107,005	522
Arthritis	Open	53	1,625,124	30,663	31,183	588
	Closed	194	2,045,893	10,546	40,565	209
Cancer	Open	34	1,063,050	31,266	20,376	599
	Closed	388	3,204,357	8,259	65,065	168
Circulatory	Open	211	6,594,585	31,254	138,509	656
	Closed	484	8,429,163	17,416	173,022	357
Diabetes	Open	31	951,655	30,699	18,776	606
	Closed	68	1,149,530	16,905	20,784	306
Hypertension	Open	20	827,375	41,369	17,616	881
	Closed	42	757,918	18,046	14,755	351
Injury	Open	123	3,116,165	25,335	58,862	479
	Closed	582	5,080,459	8,729	99,427	171
Mental	Open	137	4,466,765	32,604	80,632	589
	Closed	144	3,491,803	24,249	68,553	476
Nervous System	Open	226	8,395,075	37,146	166,085	735
	Closed	262	7,859,335	29,997	154,229	589
Respiratory	Open	38	751,896	19,787	13,674	360
	Closed	212	2,546,391	12,011	51,222	242
Stroke	Open	136	3,862,742	28,403	67,719	498
	Closed	450	7,027,299	15,616	132,808	295
Other	Open	94	3,016,317	32,088	55,324	589
	Closed	295	3,797,936	12,874	74,528	253
Total		4,698	\$93,803,582	\$19,967	1,823,656	388

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Congenital	8	\$ 32,330	\$ 4,041	756	95
Digestive System	100	1,423,721	14,237	27,966	280
Endocrine, İmmunity System	66	1,612,403	24,430	30,720	465
Genitourinary System	76	1.184,585	15,587	21,811	287
Ill-Defined Conditions	92	1,586,399	17,243	31,888	347
Miscellaneous	18	386,056	21,448	6,740	374
Skin & Subcutaneous Tissue	29	588,759	20,302	9,971	344
Total	389	\$6,814,253	\$17,517	129,852	334

#### TABLE E-13

#### NURSING HOME CLAIMS—OTHER DIAGNOSIS

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS—CLAIMS INCURRED FOR FEMALE INSUREDS

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	297	S 9,132,404	\$30,749	170,702	575
Arthritis	196	3,003,572	15,324	58,450	298
Cancer	240	2,393,936	9,975	48,569	202
Circulatory	406	9.680,135	23,843	202,053	498
Diabetes	64	1,361,557	21,274	25,054	391
Hypertension	45	1,188,238	26,405	23,891	531
Injury	592	7,136,012	12,054	134,690	228
Mental	173	4,707,908	27,213	87,000	503
Nervous System	261	9,492,916	36,371	191,815	735
Respiratory	140	1,877,035	13,407	36,424	260
Stroke	370	6,917,183	18,695	128,921	348
Other	254	4,544,065	17,890	85,471	337
Total	3,038	\$61,434,961	\$20,222	1,193,040	393

Number of	Amount	Average Amount	Number of	Average Length
Claims Paid	Paid	Paid per Claim	Days Paid	of Stay
176	\$ 4,606,745	\$26,175	88,986	$506 \\ 261 \\ 200 \\ 381 \\ 414 \\ 499 \\ 209 \\ 579 \\ 579 \\ 579 \\ 506 $
51	667,445	13,087	13,298	
179	1,842,621	10,294	35,791	
287	5,338,813	18,602	109,294	
35	739,628	21,132	14,506	
17	397,055	23,356	8,480	
113	1,060,612	9,386	23,599	
107	3,250,560	30,379	61,999	
223 110 216 134	1,421,252 3,972,858 2,263,688	30,019 12,920 18,393 16,893	126,785 28,472 71,606 44,159	569 259 332 330 380
	Claims Paid 176 51 179 287 35 17 113 107 223 110 216	Claims Paid         Paid           176         \$ 4,606,745           51         667,445           179         1,842,621           287         5,338,813           35         739,628           17         397,055           113         1,060,612           107         3,250,560           223         6,694,314           110         1,421,252           216         3,972,858           134         2,263,688	Claims Paid         Paid         Paid per Claim           176         \$ 4,606,745         \$26,175           51         667,445         13,087           179         1,842,621         10,294           287         5,338,813         18,602           35         739,628         21,132           17         397,055         23,356           113         1,060,612         9,386           107         3,250,560         30,379           223         6,694,314         30,019           110         1,421,252         12,920           216         3,972,858         18,393           134         2,263,688         16,893	Claims PaidPaidPaid per ClaimDays Paid176\$ 4,606,745\$26,17588,98651667,44513,08713,2981791,842,62110,29435,7912875,338,81318,602109,29435739,62821,13214,50617397,05523,3568,4801131,060,6129,38623,5991073,250,56030,37961,9992236,694,31430,019126,7851101,421,25212,92028,4722163,972,85818,39371,6061342,263,68816,89344,159

TABLE E-15

#### NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS---CLAIMS INCURRED FOR MALE INSUREDS

NURSING HOME	CLAIMS BY PRIMARY DIAGNOSIS
CLAIMS INCURRED	AT ATTAINED AGES LESS THAN 65

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	5	\$ 180,542	\$36,108	3,154	631
Arthritis	3	14,567	4,856	281	94
Cancer	16	78,007	4,875	1,912	120
Circulatory	9	346,430	38,492	8,473	941
Diabetes	2	115,860	57,930	2,282	1,141
Hypertension	1	53,350	53,350	1,247	1,247
Injury	9	101,875	11,319	1,413	157
Mental	6	418,088	69,681	8,537	1,423
Nervous System	33	1,291,335	39,131	23,684	718
Respiratory	3	97,150	32,383	2,030	677
Stroke	8	259,630	32,454	3,325	416
Other	7	75,700	10,814	1,754	251
Total	102	\$3,032,534	\$29,731	58,092	570

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS-CLAIMS INCURRED AT ATTAINED AGES 65-69

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	47	\$ 1,920,595	\$40,864	32,817	698
Arthritis	20	313,242	15,662	6,061	303
Cancer	56	609,019	10,875	9,764	174
Circulatory	57	1.548,919	27,174	31.650	555
Diabetes	9	182,760	20,307	3.346	372
Hypertension	1	3,927	3,927	44	44
Injury	58	671,901	11.585	10,803	186
Mental	31	1,090,522	35,178	19,537	630
Nervous System	60	2,202,604	36,710	41,053	684
Respiratory	21	266,209	12,677	4,371	208
Stroke	44	1,027,392	23,350	15,027	342
Other	39	786,500	20,167	13,901	356
Total	443	\$10,623,590	\$23,981	188,374	425

TABLE E-18

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS--CLAIMS INCURRED AT ATTAINED AGES 70-74

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	113	\$ 3,427,514	\$30,332	61,855	547
Arthritis	45	493.408	10,965	9,840	219
Cancer	128	1.323.372	10,339	26,694	209
Circulatory	139	3.557.924	25,597	67,757	487
Diabetes	27	475.085	17,596	8,668	321
Hypertension	10	130,970	13,097	2,901	290
Injury	127	1,384,882	10,905	25,171	198
Mental	64	2,092,473	32,695	33,822	528
Nervous System	123	4.310,502	35,045	84,057	683
Respiratory	49	537,979	10.979	10,686	218
Stroke	135	2.826.247	20,935	51,341	380
Other	98	2,240,142	22,859	41,700	426
Total	1,058	\$22,800,498	\$21,551	424,492	401

NURSING HOME C	LAIMS BY PR	IMARY DIAGNOS	IS	RED AT ATTAIN	ED AGES /5-/9
Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's Arthritis Cancer Circulatory Diabetes Hypertension Injury Mental Nervous System Respiratory	166 90 135 218 27 18 223 95 161 96	\$ 5,089,499 1,482,402 1,363,543 4,981,696 826,656 646,764 2,955,659 2,502,235 5,879,400 1,387,522	\$30,660 16,471 10,100 22,852 30,617 35,931 13,254 26,339 36,518 14,453	99,399 28,364 27,801 103,389 15,040 12,347 57,691 49,436 121,713 27,660	599 315 206 474 557 686 259 520 756 288 288
Stroke Other	202 107	3,991,667 1,809,601	19,761 16,912	76,622 34,943	379 327
Total	1,538	\$32,916,644	\$21,402	654,405	425

TABLE E-19

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS---CLAIMS INCURRED AT ATTAINED AGES 75-79

TABLE E-20

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS-CLAIMS INCURRED AT ATTAINED AGES 80-84

Primary	Number of	Amount	Average Amount	Number of	Average Length
Diagnosis	Claims Paid	Paid	Paid per Claim	Days Paid	of Stay
Alzheimer's	128	S 2,771,849	\$21,655	56,430	441
Arthritis	81	1,268,084	15,655	25,501	315
Cancer	80	869,455	10,868	18,695	234
Circulatory	236	4,258,514	18,045	93,546	396
Diabetes	31	440,944	14,224	9,458	305
Hypertension	28	685,600	24,486	14,539	519
Injury	244	2,561,183	10,497	53,585	220
Mental	79	1,777,663	22,502	36,443	461
Nervous System	103	2,439,481	23,684	47,784	464
Respiratory	79	992,027	12,557	19,737	250
Stroke	180	2,552,021	14,178	50,449	280
Other	124	1,681,914	13,564	33,815	273
Total	1,393	\$22,298,735	\$16,008	459,982	330

#### 1993-94 TSA REPORTS

Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Days Paid	Average Length of Stay
Alzheimer's	15	\$ 352,750	\$23,517	6,287	419
Arthritis	8	99,314	12,414	1,701	213
Cancer	7	24,011	3,430	575	82
Circulatory	36	330,265	9,174	6,716	187
Diabetes	3	59,880	19,960	766	255
Hypertension	4	64,682	16,171	1,293	323
Injury	4,4,	521,124	11,844	9,626	219
Mental	6	77.587	12,931	1,410	235
Nervous System	8	131.088	16,386	2,023	253
Respiratory	2	17.400	8,700	412	206
Stroke	17	233.084	13,711	3,763	221
Other	14	220.396	15,743	3,739	267
Total	164	\$2,131.581	S12,997	38,311	234

NURSING HOME CLAIMS BY PRIMARY DIAGNOSIS CLAIMS INCURRED AT ATTAINED AGES 85 AND OVER

### APPENDIX F

### LAPSE RATES

### TABLE F-1

LAPSE RATES BY ISSUE YEAR AND DURATION

		1986			1987		1988			1989			1990			19861990		
Duration	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate
1 2 3 4			14.0 15.1	116,876 92,503 75,472 63,097	22,860 15,579 10,430 8,661	16.8 13.8	172,199 136,684 112,699	17,315	12.7	171,498 134,295	28,452 13,922		147,596	21,510	14.6%	661,543 404,731 222,876 91,751	52,597 28,093	13.0 12.6
Total	157,982			347,948	57,530	16.5%	421,582	61,405	14.6%	305,793	42,374	13.9%	147,596	21,510	14.6%	1,380,901	209,500	15.2%

#### TABLE F-2

LAPSE RATES BY ISSUE AGE AND DURATION

	50-59 60-69			60-69			7079		5079			All Ages			
Duration	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate
1 2 3 4	56,108 34,796 19,188 6,047	6,631 3,110 1,508 431	11.8% 8.9 7.9 7.1	313,762 198,789 110,815 48,330	47,331 24,787 14,149 7,136	15.1% 12.5 12.8 14.8	255,098 155,866 90,133 44,892	52,778 22,649 12,291 6,458	20.7% 14.5 13.6 14.4	624,968 389,451 220,136 99,269	106,740 50,546 27,948 14,025	17.1% 13.0 12.7 14.1	677,222 418,013 234,561 101,966	117,604 53,909 29,298 14,383	17.4% 12.9 12.5 14.1
Total	116,139	11,680	10.1%	671,696	93,403	13.9%	545,989	94,176	17.2%	1,333,824	199,259	14.9%	1,431,762	215,194	15.0%

#### TABLE F-3

LAPSE RATES BY ELIMINATION PERIOD AND DURATION

		0 Days			1530 Days			60 + Days			Not Coded			All periods	
Duration	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Exposure	Lapse	Rate
1	173,302	47,462	27.4%	226,383	34,171	15.1%	272,308	34,975	12.8%	5,229	996	19.0%	677,222	117,604	17.4%
2	100,761	19,989	19.8	137,937	16,834	12.2	179,163	17,033	9.5	152	53	34.9	418,013	53,909	12.9
3	53,730	10,376	19.3	69,336	9,052	13.1	111,493	9,870	8.9	2	0	0.0	234,561	29,298	12.5
4	25,039	5,102	20.4	29,555	4,095	13.9	47,372	5,186	10.9				101,966	14,383	14.1
Total	352,832	82,929	23.5%	463,211	64,152	13.8%	610,336	67,064	11.0%	5,383	1,049	19.5%	1,431,762	215,194	15.0%

#### TABLE F-4

Lapse Rates by Sex and Duration

	Female		Female Male		Unknown			All Sexes				
Duration	Exposure	Lapse	Rate	Exposure	Lapse	Rate	Expesure	Lapse	Rate	Exposure	Lapse	Rate
	419,950	74,725	17.8%	254,237	42,590	16.8%	3,035	289	9.5%	677,222	117,604	17.4%
	260,647	34,593	13.3	155,888	19,239	12.3	1,478	77	5.2	418,013	53,909	12.9
	147,963	18,969	12.8	86,337	10,316	11.9	261	13	5.0	234,561	29,298	12.5
	65,310	9,375	14.4	36,639	5,005	13.7	17	3	17.6	101,966	14,383	14.1
otal	893,870	137,662	15.4%	533,101	77,150	14.5%	4,791	382	8.0%	1,431,762	215,194	15.0%

		50-59			60 69			7079			Others			All Ages	
Duration	Exposure	Deaths	Rate	Exposure	Deaths	Rate	Exposure	Deaths	Rate	Exposure	Deaths	Rate	Exposure	Deaths	Rate
$ \begin{array}{c} 1\\2\\3\\4 \end{array} $	47,747 30,683 17,664 5,612	171 143 95 40	0.4% 0.5 0.5 0.7	235,648 156,186 91,063 40,443	1,469 1,442 1,171 628	0.6% 0.9 1.3 1.6	179,727 117,836 71,554 37,188	2,237 2,323 1,895 1,137	1.2% 2.0 2.6 3.1	214,100 113,308 54,280 18,723	320 297 181 63	0.1% 0.3 0.3 0.3	677,222 418,013 234,561 101,966	4,197 4,205 3,342 1,868	0.6% 1.0 1.4 1.8
Total	101,706	449	0.4%	523,340	4,710	0.9%	406,305	7,592	1.9%	400,411	861	0.2%	1,431,762	13,612	1.0%

TABLE F-5

MORTALITY RATES BY ISSUE AGE AND DURATION

## APPENDIX G HOME HEALTH CLAIMS

#### TABLE G-1

Home Health Care Claims by Attained Age on Incurred Date

Attained	Number of	Amount	Average Amount	Number of	Average Number
Age	Claims Paid	Paid	Paid per Claim	Visits Paid	of Visits
Under Age 65	95	\$ 620,341	\$6,530	19,443	205
6569	90	343,169	3,813	12,001	133
7074	111	481,803	4,341	13,562	122
7579	141	806,842	5,722	28,938	205
8084	74	245,389	3,316	7,357	99
85 and Over	1	5,460	5,460	182	182
Total	512	\$2,503,004	\$4,889	81,483	159

#### TABLE G-2

Home Health Care Claims by Sex of Insured

Sex of	Number of	Amount	Average Amount	Number of	Average Number
Insured	Claims Paid	Paid	Paid per Claim	Visits Paid	of Visits
Female	327	\$1,489,811	\$ 4,556	48,122	147
Male	172	873,698	5,080	28,642	167
Unknown	13	139,495	10,730	4,719	363
Total	512	\$2,503,004	\$4,889	81,483	159

TABLE G-3

Но	me Heal'	ed Care	. Claims	BYF	RIMARY	DIAGNOSIS
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Primary Diagnosis	Number of Claims Paid	Amount Paid	Average Amount Paid per Claim	Number of Visits Paid	Average Number of Visits
Alzheimer's	18	\$ 119,403	\$6,634	4,563	254
Arthritis	25	169,148	6,766	2,922	117
Cancer	93	322,730	3,470	10,551	113
Circulatory	67	346,961	5,179	15,361	229
Diabetes	- 4	9.283	2,321	188	47
Hypertension	3	22,525	7,508	962	321
Injury	59	231,409	3,922	6.448	109
Mental	14	71,609	5,115	2.647	189
Nervous System	61	501,760	8,226	17,292	283
Respiratory	8	30,912	3,864	519	65
Stroke	20	175,520	8,776	2,291	115
Other	27	110,950	4,109	3,742	139
Total	399	\$2,112,210	\$5,294	67,486	169

Primary Diagnosis	Number of Claims Paid	Service Length	Number of Visits Paid	Average Number of Visits per Week
Alzheimer's	18	9,559	4,563	3.34
Arthritis	25	9,729	2,922	2.10
Cancer	93	15,947	10,551	4,63
Circulatory	67	29,222	15,361	3.67
Diabetes	4	2,583	188	0.50
Hypertension	3	853	962	7.89
Injury	59	16,192	6,448	2.78
Mental	14	6,098	2,647	3.03
Nervous System	61	33,872	17,292	3.57
Respiratory	8	1,731	519	2.09
Stroke	20	6,966	2,291	2.30
Other	27	6,926	3,742	3.78
Total	399	139,678	67,486	3.38

 TABLE G-4

 Average Number of Home Health Care Visits per Week by Diagnosis