

TRANSACTIONS

1978 REPORTS OF MORTALITY AND MORBIDITY EXPERIENCE

REPORTS OF THE COMMITTEE ON ORDINARY INSURANCE AND ANNUITIES

I. MORTALITY UNDER STANDARD ORDINARY INSURANCE ISSUES BETWEEN 1976 AND 1977 ANNIVERSARIES

ABSTRACT

This is the latest in a series of annual reports on intercompany mortality experience under Standard Ordinary life insurance policies. Each of the tables included in this report (with some minor exceptions) shows amounts exposed to risk, actual amounts of death claims, expected amounts of death claims, and mortality ratios of actual to expected death claims. The expected death claims are based on the 1965-70 Basic Tables. All of the 1976-77 experience is derived from the contributions of nineteen large life insurance companies. However, not all of the companies contributed to all aspects of the study. The tables are each based on either select (first fifteen policy years) or ultimate (policy years 16 and subsequent) experience.

The following results, which exclude the effect of war deaths, summarize the important conclusions reached in this study.

General Mortality between 1976 and 1977 Anniversaries

The overall medical mortality ratio in the select period declined by 5.4 percentage points from last year's study.

The overall nonmedical mortality ratio in the select period declined by 0.6 percentage points from last year's study.

On the basis of limited data in the select period, the overall paramedical mortality ratio declined by 3.4 percentage points from last year's study.

The overall mortality ratio in the ultimate period declined by 3.0 percentage points from last year's study.

Medical versus Nonmedical Mortality between 1972 and 1977 Anniversaries

In the select period, for all policy years combined, nonmedical mortality was higher than medical mortality at issue ages 20-24, 30-44, and 50 and over, but was lower than medical mortality at issue ages 0-19, 25-29, and 45-49 (Table 5).

In the ultimate period, nonmedical mortality exceeded medical mortality for

each of the attained-age groups except 15-19, 25-29, and 35-39 (Table 7). For males in the select period for all policy years combined, nonmedical mortality exceeded medical mortality at issue ages 10-44 and 50 and over (Table 11).

For females in the select period for all policy years combined, nonmedical mortality exceeded medical mortality at issues ages 1-9 and 35 and over (Table 11).

Premium-paying versus Fully Paid-up Mortality in the Ultimate Period, between 1972 and 1977 Anniversaries

Overall, mortality on premium-paying insurance exceeded that on fully paid-up insurance by 2.0 percentage points. However, for attained ages 15-19 and 30-64, the mortality ratios were higher for paid-up insurance (Table 8).

Male versus Female Mortality between 1972 and 1977 Anniversaries

There was little change from last year's report, with female mortality averaging about 60 percent of male mortality (Tables 9, 10, and 12).

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Table	Exposure Period	Policy Years	Medical or Nonmedical	Male and Female	Mortality Ratios by
1	1976-77	1-15	Medical	Combined	Ages at issue
2	1976-77	1-15	Medical	Combined	Year of issue
3	1976-77	1-15	Nonmedical	Combined	Ages at issue
4	1976-77	1-15	Nonmedical	Combined	Year of issue
5	1972-77	1-15	Medical and nonmedical	Combined	Age group at issue and policy year
6	1976-77	16 and later	Combined	Combined	Attained ages
7	1972-77	16 and later	Medical and nonmedical	Combined	Attained ages
8	1972-77	16 and later	Combined	Combined	Attained ages; premium paying and paid-up
9	1972-77	1-15	Medical	Separate	Ages at issue
10	1972-77	1-15	Nonmedical	Separate	Ages at issue
11	1972-77	1-15	Medical and nonmedical	Separate	Age group at issue and policy year
12	1972-77	16 and later	Combined	Separate	Attained age
Appendix I:					
A	Names of the contributing companies, and proportion of total 1976-77 exposures contributed by each company				
B	1976-77	1-15	Medical	Combined	Year of issue and ages at issue
C	1976-77	1-15	Nonmedical	Combined	Year of issue and ages at issue
D	1976-77	1-15	Medical	Separate	Year of issue and ages at issue
E	1976-77	1-15	Nonmedical	Separate	Year of issue and ages at issue

INTRODUCTION

THIS report covers the intercompany mortality experience under Standard Ordinary insurance issues between 1976 and 1977 policy anniversaries, and also for the period between 1972 and 1977 policy anniversaries where one year's exposure generally provided an insufficient volume of data. It reviews the mortality experience under the following:

1. Standard Ordinary insurance issued subject to a medical examination, observed during each of the first fifteen policy years;
2. Standard Ordinary insurance issued without a medical or paramedical examination, observed during each of the first fifteen policy years;
3. Standard Ordinary insurance issued subject to a paramedical examination, observed in the aggregate for the early policy years of the select period; and
4. Standard Ordinary insurance observed during the sixteenth and subsequent policy years. As in previous reports, this ultimate experience is shown for medical and nonmedical issues combined, with a portion of it also shown for medical and nonmedical issues separately. A table comparing the ultimate experience under premium-paying and fully paid-up (excluding reduced paid-up) policies has also been included.

A summary of aggregate mortality ratios, excluding war deaths, based on the 1965-70 Basic Tables for each major category of experience is as follows:

EXPERIENCE BETWEEN POLICY ANNIVERSARIES

	1975-76	1976-77
Medical select.....	80.9%	75.5%
Nonmedical select.....	88.5	87.9
Paramedical select.....	81.4*	78.0*
Ultimate.....	85.0	82.0

* Note that the paramedical experience is concentrated in the early policy years.

The tabulation at the top of page 4 shows war deaths (see definition in Appendix II) by amount and the ratio of war deaths to total deaths experienced between 1972 and 1977 policy anniversaries.

Because of the declining proportion of total deaths represented by war deaths and their minor effect on the mortality ratios, it is felt that the impact of war deaths can be ignored for all practical purposes. For

AMOUNTS OF WAR DEATHS AND THE RATIO OF WAR DEATHS
TO TOTAL DEATHS EXPERIENCED BETWEEN 1972 AND
1977 POLICY ANNIVERSARIES
MALE AND FEMALE LIVES COMBINED
(Amounts Shown in \$1,000 Units)

EXPOSURE YEAR	FIRST FIFTEEN POLICY YEARS				SIXTEENTH AND SUBSEQUENT POLICY YEARS	
	Medical		Nonmedical*		Amount	Ratio
	Amount	Ratio	Amount	Ratio		
1972-73	\$200	†	\$476	0.4%	\$ 87	†
1973-74	142	†	94	0.1	97	†
1974-75	38	†	52	†	40	†
1975-76	10	†	75	0.1	32	†
1976-77	25	†	1	†	13	†
Total	\$415	†	\$698	0.1%	\$269	†

* Female war death of \$20,000 for 1974-75 is included.

† Less than 0.05 percent.

consistency with prior studies, all tables (except the detailed tables in Appendix I) exclude the effect of war deaths.

The names of the nineteen companies that contributed their experience between 1976 and 1977 policy anniversaries, and their proportionate contributions to the 1976-77 exposure, are given in Table A of Appendix I. One of those nineteen companies had not been a contributor prior to the contribution of its experience between 1976 and 1977 anniversaries, while two companies which have contributed regularly to this annual study could not do so this year. However, each of these three companies' contributions represents only a relatively small proportion of the total intercompany data, and so these changes should have relatively little effect on our comparisons of the 1976-77 findings with the findings for prior years.

The 1976-77 study instructions to participating companies were distributed with a covering memorandum dated April 6, 1978. A copy of those instructions, which have changed little in recent years, is included this year as Appendix III.

EXPERIENCE UNDER STANDARD ISSUES DURING THE
FIRST FIFTEEN POLICY YEARS

Medically Examined Issues

The 1976-77 experience during the first fifteen policy years is based on an exposure of \$144 billion and actual deaths of \$398 million. This

represents a decrease in the exposure from the preceding year of about 3.8 percent. The experience of one new contributor was not able to offset the decrease which primarily reflected the omission of two regular contributors this year.

The 1965-70 Male and the 1965-70 Female Select Basic Tables (*TSA, 1973 Reports*, p. 199, and *TSA, 1974 Reports*, p. 57) were used to calculate expected deaths separately for the male experience and the female experience. The expected deaths for these two classes of experience were combined in some of the tables, and the mortality ratios were calculated excluding war deaths.

The experience by age group at issue is shown in Table 1 for the first fifteen policy years combined. The experience by year of issue is presented in Table 2. The detailed experience by age group at issue for each year of issue, for male and female lives combined and separately, is set forth in Tables B and D of Appendix I.

TABLE 1
STANDARD MEDICALLY EXAMINED ISSUES OF 1962-76
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
Expected Deaths on 1965-70 Select Basic Tables
(Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk	Actual Deaths*	Expected Deaths	Mortality Ratio*
0.....	\$ 231,048	\$ 367	\$ 235	156.2%
1.....	181,502	17	103	16.5
2-4.....	300,122	59	136	43.4
5-9.....	575,980	155	307	50.5
10-14.....	754,421	783	588	133.2
15-19.....	1,716,466	1,340	1,698	78.9
20-24.....	7,719,774	5,915	6,936	85.3
25-29.....	18,621,703	15,524	18,708	83.0
30-34.....	26,691,074	31,239	41,488	75.3
35-39.....	27,380,901	54,422	69,775	78.0
40-44.....	23,920,689	72,757	98,300	74.0
45-49.....	17,703,482	82,714	103,165	80.2
50-54.....	10,538,601	60,848	86,575	70.3
55-59.....	4,958,388	42,897	53,873	79.6
60-64.....	1,902,609	17,608	30,094	58.5
65-69.....	537,381	9,139	11,744	77.8
70 and over.....	113,308	2,401	4,018	59.8
All ages.....	\$143,847,449	\$398,185	\$527,743	75.5%

* Excluding war deaths.

TABLE 2
STANDARD MEDICALLY EXAMINED ISSUES OF 1962-76
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED

Expected Deaths on 1965-70 Select Basic Tables
(Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths*	Expected Deaths	Mortality Ratio*
1962	15	\$ 4,630,756	\$ 32,258	\$ 38,900	82.9%
1963	14	5,368,728	29,669	41,865	70.9
1964	13	5,880,536	29,377	40,523	72.5
1965	12	6,418,675	30,785	39,326	78.3
1966	11	6,686,241	26,599	37,116	71.7
1967	10	6,959,655	27,497	35,323	77.8
1968	9	7,154,841	26,816	33,390	80.3
1969	8	8,195,522	24,943	34,787	71.7
1970	7	8,950,445	24,563	34,129	72.0
1971	6	10,152,745	26,961	34,260	78.7
1972	5	11,490,770	25,973	33,941	76.5
1973	4	12,796,812	23,097	34,520	66.9
1974	3	14,843,953	28,285	34,320	82.4
1975	2	16,010,295	22,832	29,903	76.4
1976	1	18,307,475	18,530	25,440	72.8
All years of issue		\$143,847,449	\$398,185	\$527,743	75.5%

* Excluding war deaths.

The aggregate medical mortality ratio, excluding war deaths, for the period from 1976 to 1977 anniversaries was 75.5 percent. The following tabulation compares this result with the results of previous studies based on the 1965-70 Basic Tables.

Exposure Year	Aggregate Mortality Ratio
1972-73	92.8%
1973-74	87.9
1974-75	85.1
1975-76	80.9
1976-77	75.5

As seen in Table 1, there were two issue-age groups that showed medical mortality ratios greater than 100.0 percent for the 1976-77 exposure period: issue ages 0 and 10-14.

As seen in Table 2, medical mortality ratios by year of issue ranged from 66.9 percent for 1973 (policy year 4) to 82.9 percent for 1962 (policy year 15).

The following tabulation indicates the variation in the 1976-77 aggregate medical mortality ratios for the contributing companies from the 1976-77 all-company average of 75.5 percent.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15.....	1	6.1%
10-15.....	2	3.8
5-10.....	5	18.4
0-5.....	4	19.7
Percentage points above average:		
0-5.....	2	15.0
5-10.....	2	10.0
10-15.....	2	24.6
More than 15.....	1	2.4

Nonmedical Issues

The 1976-77 experience during the first fifteen policy years is based on an exposure of \$126 billion and actual deaths of \$112 million. This represents an increase in the exposure from the preceding year of about 4.6 percent. Somewhat less than one-seventh of that increase is attributable to a new contributing company this year. The increase in exposure would have been about two percentage points greater had two regular contributors to past studies submitted their data to this current study.

Expected deaths were calculated on the 1965-70 Select Basic Tables in the same manner as for medically examined issues. Those basic tables were based on experience under medical issues.

For all age groups combined, nonmedical business now comprises 42.0 percent of the total experience (medical, nonmedical and paramedical combined) on recent Ordinary issues, measured by the exposures during the first fifteen policy years, as compared with 41.4 percent last year. For all age groups combined, the proportion of nonmedical issues in the first policy year for 1976-77 was 39.9 percent, compared with 40.0 percent in last year's report. The tabulation at the top of page 8 shows nonmedical exposures as a percentage of total medical, nonmedical, and paramedical exposures, by age group at issue, for the experience between 1976 and 1977 anniversaries.

NONMEDICAL EXPOSURES AS PERCENTAGE
OF TOTAL EXPOSURES

Ages at Issue	Policy Year 1	Policy Years 1-15
0-9.....	93.2%	90.4%
10-19.....	90.3	88.9
20-29.....	63.0	66.3
30-39.....	19.3	22.2
40-49.....	3.4	3.7
50 and over.....	1.0	0.6
All ages.....	39.9%	42.0%

The mortality ratios for nonmedical issues are presented in Table 3 by age group at issue for the first fifteen policy years combined. The aggregate mortality ratio, excluding war deaths, for the period from 1976 to 1977 anniversaries was 87.9 percent. The tabulation at the top of page 9 compares this result with the results of the previous studies based on the 1965-70 Basic Tables.

TABLE 3
STANDARD NONMEDICAL ISSUES OF 1962-76
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
Expected Deaths on 1965-70 Select Basic Tables
(Amounts Shown in \$1,000 Units)

Age at Issue	Exposed to Risk	Actual Deaths*	Expected Deaths†	Mortality Ratio*†
0.....	\$ 4,424,603	\$ 2,134	\$ 5,819	36.7%
1.....	1,681,236	536	997	53.8
2-4.....	2,803,209	742	1,259	58.9
5-9.....	3,938,012	1,606	1,783	90.1
10-14.....	5,097,469	3,526	3,527	100.0
15-19.....	17,422,298	15,600	15,927	97.9
20-24.....	38,274,253	28,092	31,040	90.5
25-29.....	31,020,373	24,428	28,312	86.3
30-34.....	13,776,604	16,987	20,038	84.8
35-39.....	5,314,531	12,266	12,543	97.8
40-44.....	1,568,655	5,217	4,902	106.4
45-49.....	253,080	719	977	73.6
50 and over.....	118,794	595	791	75.2
All ages.....	\$125,693,117	\$112,448	\$127,915	87.9%

* Excluding war deaths.

† Exposures not adjusted for distribution by age within each five-year age group at issue.

Exposure Year	Aggregate Mortality Ratio
1972-73	102.2%
1973-74	99.1
1974-75	94.9
1975-76	88.5
1976-77	87.9

The mortality ratios in Table 3 (and in Table 4) generally understate somewhat the death rates for nonmedical business because, in calculating the expected deaths, no adjustment was made for the fact that the average ages of the exposures under nonmedical issues for each of the issue-age groups 35-39, 40-44, 45-49, and 50 and over are lower than the average ages of the exposures for each of those age groups in the medical experience entering into the 1965-70 Basic Tables. This situation arises because the maximum age at which nonmedical business is issued by

TABLE 4
STANDARD NONMEDICAL ISSUES OF 1962-76
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED

Expected Deaths on 1965-70 Select Basic Tables
(Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths*	Expected Deaths†	Mortality Ratio*†
1962	15	\$ 3,068,433	\$ 5,408	\$ 6,664	81.2%
1963	14	3,612,292	5,787	6,958	83.2
1964	13	4,044,661	5,943	6,899	86.1
1965	12	4,451,413	5,821	6,723	86.6
1966	11	4,473,581	5,025	6,065	82.9
1967	10	5,207,535	6,226	6,609	94.2
1968	9	6,049,086	7,336	7,291	100.6
1969	8	6,476,703	7,065	7,143	98.9
1970	7	7,473,482	7,033	7,570	92.9
1971	6	8,602,577	7,601	8,119	93.6
1972	5	10,295,068	8,466	9,057	93.5
1973	4	12,071,459	9,115	10,092	90.3
1974	3	13,509,639	9,629	10,667	90.3
1975	2	15,534,458	10,293	11,376	90.5
1976	1	20,822,730	11,700	16,682	70.1
All years of issue		\$125,693,117	\$112,448	\$127,915	87.9%

* Excluding war deaths.

† Exposures not adjusted for distribution by age within each five-year age group at issue.

the various contributing companies is generally 35, 40, 45, or 50. Thus the nonmedical exposures beyond each of those issue ages tend to fall off sharply. It is likely that a further understatement of expected deaths arises from the general practice of reducing nonmedical amount limits in steps of \$5,000 or \$10,000 beyond issue ages such as 35 and 40.

An indication of the extent to which Table 3 understates the true mortality on nonmedical business is given in the following tabulation, which shows mortality ratios adjusted for the distribution of exposures by age within each five-year age group at issue. Only the nonmedical age limits of the contributing companies were considered in making this adjustment; the reductions in amount limits mentioned above were not considered.

MORTALITY RATIOS ON NONMEDICAL ISSUES
OF 1962-76
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
(Expected Deaths on 1965-70 Select Basic Tables)

AGES AT ISSUE	MORTALITY RATIOS	
	Unadjusted	Adjusted
35-39.....	97.8%	97.8%
40-44.....	106.4	116.9
45-49.....	73.6	80.5
50 and over.....	75.2	75.2
Ages 35 and over.....	97.8%	100.6%

The unadjusted mortality ratios understate the true mortality experience on nonmedical business to a significant degree at issue ages 40-44. Nonmedical issues at ages 45-49 and especially at ages 50 and over arise largely from business issued under special circumstances (such as pension trust and salary allotment plans) and do not affect appreciably the distribution of exposures by age within each five-year age group at issue. So-called policyholder's nonmedical, issued on the basis of a previous medical examination within six or twelve months, is also included for some companies; others include it in their medical issues.

The nonmedical mortality ratios by calendar year of issue for all ages at issue combined during the period from 1976 to 1977 anniversaries are presented in Table 4 on an unadjusted basis. The mortality ratios

ranged from 70.1 percent for issue year 1976 (policy year 1) to 100.6 percent for issue year 1968 (policy year 9).

The details of the unadjusted nonmedical experience by age groups at issue for each year of issue, for male and female lives combined and separately, are set forth in Tables C and E of Appendix I.

The following tabulation indicates the variation in the 1976-77 aggregate nonmedical mortality ratios of the contributing companies from the 1976-77 all-company average of 87.9 percent.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15	2	2.8%
10-15	3	3.9
5-10	3	9.4
0-5	5	11.1
Percentage points above average:		
0-5	4	64.5
5-10	0	0.0
10-15	0	0.0
More than 15	2	8.3

Comparison of Medical and Nonmedical Experience

It would be desirable to compare the nonmedical experience with the experience on strictly comparable policies issued with a medical examination, but data for such a comparison are not available.¹ Table 5 presents side by side the experience on medical and nonmedical issues as reported to the Committee for the five-year period from 1972 to 1977 anniversaries. The 1965-70 Male, Female, and Male and Female Combined Select Basic Tables, respectively, were used to calculate expected deaths for the male experience, the female experience, and the experience reported without subdivision by sex.

The nonmedical mortality ratios shown in Table 5 have been adjusted to reflect the approximate distribution of nonmedical exposures by age

¹ Five factors, among others, that should be considered in the comparisons presented in this study are the following: (a) the relative proportions of medical and non-medical business differ among companies (see Appendix I, Table A); (b) the underwriting standards of the contributing companies differ; (c) the age distributions of the various types of business differ; (d) the proportions of business applied for non-medically but issued subject to medical examination and then classified as medical business differ among companies; and (e) medical business generally is for larger amounts and is sold at a higher average socioeconomic level.

for issue-age groups 35-39 and higher. The lower half of Table 5 shows that, for policy years 1-15 combined, nonmedical mortality exceeded medical mortality appreciably at issue ages 20-24, 30-44, and 50 and over; the excess ranged from about 6 percent at issue ages 50 and over to about 42 percent at issue ages 40-44.

TABLE 5
COMPARISON OF MEDICAL AND NONMEDICAL EXPERIENCE*
MALE AND FEMALE LIVES COMBINED
BETWEEN 1972 AND 1977 ANNIVERSARIES
BY AGE GROUP AT ISSUE AND DURATION (FIRST FIFTEEN POLICY YEARS)

AGE GROUP AT ISSUE	POLICY YEARS									
	1-2	3-5	6-10	11-15	1-15					
	Mortality Ratios on 1965-70 Select Basic Table									
	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %
0.....	65	28	117	60	45	81	112	98	75	40
1-9.....	29	54	136	72	74	94	130	105	101	78
10-19.....	107	103	108	109	110	105	100	96	106	104
20-24.....	101	101	87	98	90	96	87	86	90	96
25-29.....	126	99	98	97	95	97	79	84	95	94
30-34.....	82	87	84	98	84	95	85	92	84	93
35-39.....	83	111†	97	110†	90	98†	83	101†	87	103†
40-44.....	91	116†	81	122†	80	113†	81	110†	81	115†
45-49.....	88	73†	86	88†	87	85†	85	95†	86	85†
50 and over	80	81†	76	101†	83	69†	84	100†	81	86†
All ages	87	88†	83	100†	85	98†	83	92†	84	95†
Ratio of Nonmedical to Medical Mortality Ratios										
0.....	43%		51%		180%		88%		53%	
1-9.....	186		53		127		81		77	
10-19.....	96		101		95		96		98	
20-24.....	100		113		107		99		107	
25-29.....	79		99		102		106		99	
30-34.....	107		117		113		108		111	
35-39.....	134†		113†		109†		122†		118†	
40-44.....	127†		151†		141†		136†		142†	
45-49.....	83†		102†		98†		112†		99†	
50 and over	101†		133†		83†		119†		106†	

* Excluding war deaths.

† Exposures adjusted for distribution by age within each five-year age group at issue.

Paramedically Examined Issues

Companies were asked to submit their data on paramedically examined business separately. Seventeen companies were able to comply. Of the approximately \$29 billion of paramedical exposure submitted for 1976-77, about 96 percent was concentrated in the first four policy years and almost all of the paramedical exposure was concentrated in the first seven policy years. The approximately \$13 billion of paramedical exposure in the first policy year (year of issue 1976) was about 72 percent of the medically examined exposure in the first policy year and was about 63 percent of the nonmedical exposure in the first policy year. The 1976-77 paramedical data for each year of issue since 1970, along with the corresponding mortality ratios for medical and nonmedical business, were as follows for males and females combined, excluding war deaths:

Year of Issue	Policy Year	Paramedical Exposed to Risk in \$1,000's	Actual Paramedical Deaths in \$1,000's	Paramedical Mortality Ratio	Medical Mortality Ratio	Nonmedical Mortality Ratio
1970	7	\$ 46,635	\$ 201	201.0%	72.0%	92.9%
1971	6	276,047	494	76.4	78.7	93.6
1972	5	919,193	1,572	81.2	76.5	93.5
1973	4	2,441,771	3,612	76.1	66.9	90.3
1974	3	4,661,975	6,620	88.6	82.4	90.3
1975	2	8,011,974	7,538	71.7	76.4	90.5
1976	1	13,121,244	9,788	76.5	72.8	70.1
Total		\$29,478,839	\$29,825	78.0%*	75.2%*	86.8%*

* This figure is for policy years 1-7 only. Note that the distribution of exposures by policy year for the medical and nonmedical data (Tables 2 and 4) is quite different from the distribution shown in the above table for the paramedical data.

EXPERIENCE UNDER STANDARD ISSUES DURING THE
SIXTEENTH AND SUBSEQUENT POLICY YEARS

The current experience during the sixteenth and subsequent policy years is based on an exposure of \$84 billion and actual deaths of \$1,094 million excluding war deaths. This represents an increase in the exposures from the preceding year of about 4.2 percent. About one-fourth of that increase is attributable to a new contributing company this year, but the effect of the new company is approximately offset by the fact that one company that contributed its ultimate experience last year could not do so this year.

Mortality ratios are presented in Table 6 by attained-age groups

TABLE 6
 STANDARD ISSUES OF 1961 AND PRIOR*
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY ATTAINED AGE
 POLICY YEARS 16 AND OVER COMBINED
 (Amounts Shown in \$1,000 Units)

ATTAINED AGES	EXPOSED TO RISK	ACTUAL DEATHS†	1965-70 ULTIMATE BASIC TABLE		MORTALITY RATIO†	
			Expected Deaths	Mortality Ratio†	1941 CSO Table	1958 CSO Table
15-19	\$ 1,187,870	\$ 1,236	\$ 966	128.0%	45.8%	63.5%
20-24	1,673,871	1,894	1,640	115.5	43.6	61.0
25-29	1,584,589	1,756	1,537	114.2	35.3	55.3
30-34	2,612,492	2,800	3,099	90.4	26.7	46.9
35-39	5,449,775	6,743	8,944	75.4	23.5	42.8
40-44	8,595,111	17,381	22,907	75.9	28.4	47.8
45-49	11,563,703	40,341	51,129	78.9	34.8	53.8
50-54	13,272,030	74,570	96,867	77.0	39.0	55.9
55-59	12,394,455	114,268	146,839	77.8	43.9	59.2
60-64	9,855,431	147,387	185,388	79.5	48.1	61.6
65-69	6,461,240	154,095	190,088	81.1	51.5	62.8
70-74	4,478,903	168,400	200,436	84.0	54.4	64.8
75-79	2,627,430	155,827	183,428	85.0	57.7	69.8
80-84	1,373,479	121,369	144,994	83.7	58.5	70.0
85-89	450,959	61,811	70,679	87.5	62.6	76.2
90-95	116,499	24,103	24,904	96.8	65.6	79.3
All ages	\$83,697,837	\$1,093,981	\$1,333,845	82.0%	49.6%	63.7%

* Based on data from nineteen companies.

† Excluding war deaths.

based on (1) the 1965-70 Ultimate Basic Tables (Male, Female, and Male and Female Combined, respectively, for the male experience, the female experience, and the experience reported without subdivision by sex); (2) the Commissioners 1941 Standard Ordinary Mortality Table; and (3) the Commissioners 1958 Standard Ordinary Mortality Table. The aggregate mortality ratio, excluding war deaths, on the 1965-70 Ultimate Basic Tables for the period from 1976 to 1977 anniversaries was 82.0 percent.

The following tabulation compares this result with the results of previous studies based on the 1965-70 Basic Tables:

Exposure Year	Aggregate Mortality Ratio
1972-73.....	93.8%
1973-74.....	93.4
1974-75.....	87.1
1975-76.....	85.0
1976-77.....	82.0

The following tabulation indicates the variation in the 1976-77 aggregate mortality ratios of the contributing companies from the 1976-77 all-company average of 82.0 percent.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15.....	1	0.9%
10-15.....	0	0.0
5-10.....	3	20.0
0-5.....	8	29.7
Percentage points above average:		
0-5.....	4	28.6
5-10.....	3	20.8

Comparison of Medical and Nonmedical Experience

Companies were asked to subdivide their ultimate data into medical and nonmedical if they could do so conveniently. Thirteen companies were able to subdivide their data (in whole or in part) in this manner. The results of this experience between 1972 and 1977 anniversaries are shown in Table 7. These data involve exposures that comprise 49.9 percent of the entire ultimate experience reported for the period as compared with 47.7 percent for the previous study.

For all attained-age groups except 15-19, 25-29, and 35-39, the non-medical mortality is higher than the medical mortality.

Comparison of Premium-paying and Fully Paid-up Experience

A comparison of the mortality on premium-paying and fully paid-up (excluding reduced paid-up) policies for the period from 1972 to 1977 anniversaries is shown in Table 8 for standard medical and nonmedical issues combined. Sixteen companies submitted their experience separately on premium-paying policies, and fifteen companies did so on fully paid-up policies. On the basis of the experience between 1972 and 1977 anniversaries, data identified as premium-paying constituted 78.9 percent

and data identified as fully paid-up constituted 13.7 percent of the total ultimate experience of all companies.

At the higher attained ages, mortality ratios were consistently higher on premium-paying than on fully paid-up policies. For all attained ages combined, the mortality ratio on premium-paying policies exceeded the mortality ratio on fully paid-up policies by 2.0 percentage points.

EXPERIENCE BY SEX

For the select period, each of the nineteen contributing companies submitted all of its medical and all of its nonmedical data separately for males and females.

The detailed select experience by sex for the period from 1976 to 1977 policy anniversaries by age group at issue for each year of issue is presented in Table D of Appendix I for medical issues and in Table E of Appendix I for nonmedical issues. Expected deaths were calculated on

TABLE 7
COMPARISON OF MEDICAL AND NONMEDICAL MORTALITY EXPERIENCE*
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
STANDARD ISSUES OF 1961 AND PRIOR
EXPERIENCE BETWEEN 1972 AND 1977 ANNIVERSARIES
BY ATTAINED AGE
POLICY YEARS 16 AND OVER COMBINED
Expected Deaths on 1965-70 Ultimate Basic Tables
(Amounts Shown in \$1,000 Units)

ATTAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS†		MORTALITY RATIO†		RATIO OF NONMEDICAL TO MEDICAL MORTALITY RATIOS†
	Medical	Nonmedical	Medical	Non-medical	Medical	Non-medical	
15-19	\$ 1,059,752	\$ 2,804,926	\$ 1,105	\$ 2,727	124.5%	123.0%	98.8%
20-24	871,838	2,091,758	920	2,428	106.9	119.2	111.5
25-29	1,098,508	1,780,639	1,278	1,857	118.5	107.6	90.8
30-34	2,352,781	3,892,108	2,355	4,324	84.1	92.5	110.0
35-39	6,080,137	8,255,264	8,336	10,949	82.9	80.7	97.4
40-44	10,681,082	10,312,694	22,655	22,269	77.3	81.3	105.2
45-49	19,221,423	9,702,223	69,043	38,315	79.7	92.3	115.8
50-54	24,411,480	7,095,151	141,170	47,144	77.8	94.8	121.9
55-59	23,926,359	3,494,024	235,044	37,994	81.2	97.6	120.2
60-64	19,418,163	1,206,386	304,551	20,566	82.7	95.2	115.1
65-69	11,939,916	571,432	302,926	16,368	85.0	98.6	116.0
70-74	7,912,840	353,914	320,811	15,074	89.8	94.2	104.9
75-79	4,752,334	197,433	304,716	13,044	91.1	93.0	102.1
80-84	2,323,659	95,950	227,763	10,112	92.3	98.3	106.5
85-89	754,105	29,618	111,746	4,694	93.7	100.7	107.5
90-95	177,206	4,421	37,095	1,082	97.4	114.8	117.9
All ages	\$136,981,583	\$51,887,941	\$2,091,512	\$248,947	86.3%	93.6%	108.5%

* Based on data from thirteen companies.

† Excluding war deaths.

the 1965-70 Male Select Basic Table for male lives and on the 1965-70 Female Select Basic Table for female lives.

Tables 9-11 examine the experience by sex between 1972 and 1977 policy anniversaries for the select data, and Table 12 does the same for the ultimate data.

The mortality ratios by age group at issue and sex for the first fifteen policy years combined, covering the experience from 1972 to 1977 anniversaries, are presented in Table 9 for standard medically examined issues and in Table 10 for standard nonmedical issues. For the purpose of comparing male and female mortality, the right-hand column of each of these tables was based on mortality ratios for females with expected deaths calculated on the male table. The highest ratios of female to male mortality were found at issue ages 1, and 25-39 for medical issues and at issue ages 0, 1, 30-34 and 45-49 for nonmedical issues. For all issue

TABLE 8
COMPARISON OF MORTALITY EXPERIENCE
UNDER PREMIUM-PAYING AND FULLY PAID-UP POLICIES
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
STANDARD ISSUES OF 1961 AND PRIOR
EXPERIENCE BETWEEN 1972 AND 1977 ANNIVERSARIES
BY ATTAINED AGE
POLICY YEARS 16 AND OVER COMBINED
Expected Deaths on 1965-70 Ultimate Basic Tables
(Amounts Shown in \$1,000 Units)

ATTAINED AGES	PREMIUM-PAYING POLICIES*			FULLY PAID-UP POLICIES†			RATIO OF PREMIUM-PAYING TO PAID-UP MORTALITY RATIOS‡
	Exposed to Risk	Actual Deaths‡	Mortality Ratio‡	Exposed to Risk	Actual Deaths‡	Mortality Ratio‡	
15-19	\$ 5,641,821	\$ 5,120	114.0%	\$ 147,001	\$ 308	262.0%	43.5%
20-24	4,222,743	4,946	119.1	2,048,768	1,987	104.8	113.6
25-29	4,159,237	4,632	112.9	1,856,693	1,730	100.4	112.5
30-34	8,136,982	8,716	89.7	1,442,254	1,614	103.4	86.8
35-39	19,526,776	25,870	80.7	1,317,956	2,287	113.5	71.1
40-44	33,817,377	74,495	82.1	2,452,960	6,071	96.3	85.3
45-49	45,854,535	174,998	85.8	6,462,247	14,417	89.8	95.5
50-54	50,259,889	304,771	82.2	5,018,538	29,961	85.5	96.1
55-59	44,721,671	454,242	84.4	6,202,895	61,205	86.9	97.1
60-64	34,423,069	558,923	85.1	6,719,941	104,730	85.3	99.8
65-69	20,702,612	545,467	87.9	7,057,725	170,862	83.7	105.0
70-74	13,714,247	560,527	90.0	5,089,912	187,142	83.0	108.4
75-79	8,166,969	527,556	91.5	3,183,466	186,564	84.4	108.4
80-84	3,923,073	382,950	91.9	1,738,904	159,247	86.7	106.0
85-89	1,104,393	163,802	93.5	744,798	107,350	91.7	102.0
90-95	238,799	49,933	96.9	235,538	47,381	92.2	105.1
All ages	\$298,614,193	\$3,846,948	87.9%	\$51,719,596	\$1,082,856	85.9%	102.3%

* Based on data from sixteen companies.

† Based on data from fifteen companies.

‡ Excluding war deaths.

TABLE 9

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD MEDICALLY EXAMINED ISSUES
OBSERVED BETWEEN 1972 AND 1977 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
Expected Deaths on 1965-70 Male Select Basic Table
and 1965-70 Female Select Basic Table
(Amounts Shown in \$1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK		ACTUAL DEATHS*		MORTALITY RATIO*		RATIO* OF FEMALE TO MALE MORTALITY†
	Male	Female	Male	Female	Male	Female	
0.....	\$ 777,445	\$ 350,314	\$ 662	\$ 173	83.5%	53.0%	53.1%
1.....	692,551	330,057	118	118	31.3	79.8	202.2
2-4.....	1,048,200	449,217	714	36	135.0	20.9	11.5
5-9.....	1,962,648	891,544	1,661	180	135.9	55.3	24.9
10-14.....	2,967,344	922,973	2,693	672	100.6	163.3	86.2
15-19.....	7,958,161	1,377,172	9,045	784	105.9	105.2	50.7
20-24.....	38,348,233	2,797,451	31,562	1,698	90.4	98.8	76.3
25-29.....	88,867,316	4,925,004	84,255	4,448	94.2	116.0	105.5
30-34.....	125,094,713	8,113,500	167,771	8,213	84.0	85.0	84.3
35-39.....	128,969,062	10,579,233	292,279	17,470	87.2	89.7	78.8
40-44.....	109,322,942	11,981,248	369,436	27,643	80.9	90.4	68.8
45-49.....	74,755,334	10,531,665	389,724	32,113	85.9	91.6	59.3
50-54.....	41,383,285	6,696,969	290,831	27,687	80.2	83.6	59.3
55-59.....	18,379,586	3,450,252	181,233	19,551	82.3	99.8	56.4
60-64.....	6,359,950	1,536,691	89,979	11,223	79.2	77.1	49.9
65-69.....	1,615,414	494,761	33,349	6,165	80.8	86.8	57.7
70 and over	327,103	129,340	10,271	2,719	82.0	68.3	67.1
All ages	\$648,829,287	\$65,557,391	\$1,955,583	\$160,893	83.8%	89.0%	62.5%

* Excluding war deaths.

† Female mortality ratios calculated on 1965-70 Male Select Basic Table.

TABLE 10

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD NONMEDICAL ISSUES
OBSERVED BETWEEN 1972 AND 1977 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
Expected Deaths on 1965-70 Male Select Basic Table
and 1965-70 Female Select Basic Table
(Amounts Shown in \$1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK		ACTUAL DEATHS*		MORTALITY RATIO*†		RATIO* OF FEMALE TO MALE MORTALITY‡
	Male	Female	Male	Female	Male	Female	
0.....	\$ 11,362,760	\$ 7,366,717	\$ 6,204	\$ 3,302	41.2%	37.1%	71.0%
1.....	4,494,784	2,770,820	1,758	821	63.1	53.9	70.2
2-4.....	7,251,206	4,447,432	2,763	1,110	77.8	62.7	64.0
5-9.....	10,583,173	5,501,256	5,684	1,312	99.2	72.6	50.1
10-14.....	15,764,856	6,208,339	13,964	2,138	107.2	84.0	45.2
15-19.....	63,404,679	18,001,604	70,722	8,023	106.6	85.1	40.4
20-24.....	144,620,322	30,012,997	123,637	12,504	98.9	72.4	51.5
25-29.....	112,257,200	23,787,289	105,216	12,912	96.4	75.5	69.4
30-34.....	48,215,301	14,510,456	74,401	13,312	96.0	80.6	71.1
35-39.....	17,480,422	8,072,206	49,317	13,339	105.8	92.7	68.1
40-44.....	3,664,896	3,278,559	15,421	7,081	105.8	103.4	63.1
45-49.....	531,872	340,165	1,687	903	69.8	106.4	88.7
50 and over	259,182	48,705	1,550	148	82.6	79.7	54.2
All ages	\$439,890,653	\$124,346,545	\$472,324	\$76,905	97.7%	77.6%	58.2%

* Excluding war deaths.

† Exposures not adjusted for distribution by age.

‡ Female mortality ratios calculated on 1965-70 Male Select Basic Table.

TABLE 11

COMPARISON BY SEX OF MEDICAL AND NONMEDICAL EXPERIENCE*
 BETWEEN 1972 AND 1977 ANNIVERSARIES
 BY AGE GROUP AT ISSUE AND DURATION (FIRST FIFTEEN POLICY YEARS)

AGE GROUP AT ISSUE	POLICY YEARS									
	1-2		3-5		6-10		11-15		1-15	
	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %	Medi- cal %	Non- medi- cal %
Male Experience—Mortality Ratios on 1965-70 Male Select Basic Table										
0	91	28	56	59	48	86	129	103	84	41
1-9	11	56	188	77	79	99	151	110	117	85
10-19	96	108	109	115	112	108	98	96	105	107
20-24	102	109	89	101	87	99	88	85	90	99
25-29	130	109	95	101	94	98	78	84	94	96
30-34	83	100	83	102	85	98	84	91	84	96
35-39	84	126†	98	114†	89	102†	82	101†	87	105†
40-44	92	126†	80	131†	79	117†	80	109†	81	118†
45-49	89	68†	85	67†	77	69†	85	94†	86	74†
50 and over	81	80†	75	104†	82	68†	83	74†	81	83†
All ages	88	97†	83	104†	84	100†	83	91†	84	98†
Female Experience—Mortality Ratios on 1965-70 Female Select Basic Table										
0	6	27	262	60	38	73	58	86	53	37
1-9	65	52	5	62	55	77	67	83	52	63
10-19	194	82	100	79	92	86	149	99	126	85
20-24	107	62	30	74	141	76	104	89	99	72
25-29	73	61	159	76	126	93	109	80	116	75
30-34	66	54	84	87	78	84	106	97	85	80
35-39	61	79†	90	99†	96	89†	94	99†	90	93†
40-44	73	104†	95	109†	85	107†	98	113†	90	108†
45-49	77	88†	104	139†	93	124†	87	102†	92	120†
50 and over	68	122†	78	115†	92	77†	92	64†	86	97†
All ages	71	58†	89	83†	91	87†	94	94†	89	78†
Male Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	31%		105%		179%		80%		49%	
1-9	509		41		125		73		73	
10-19	113		106		96		98		102	
20-24	107		113		114		97		110	
25-29	84		106		104		108		102	
30-34	120		123		115		108		114	
35-39	150†		116†		115†		123†		121†	
40-44	137†		164†		148†		136†		146†	
45-49	76†		80†		79†		111†		86†	
50 and over	99†		139†		83†		89†		102†	
Female Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	450%		23%		192%		148%		70%	
1-9	80		1,240		140		124		121	
10-19	42		79		93		66		67	
20-24	58		247		54		86		73	
25-29	84		48		74		73		65	
30-34	82		104		108		92		94	
35-39	130†		110†		93†		105†		103†	
40-44	142†		115†		126†		115†		120†	
45-49	114†		134†		133†		117†		130†	
50 and over	179†		147†		84†		70†		113†	

* Excluding war deaths.

† Exposures adjusted for distribution by age within each five-year age group.

ages combined, the ratio of female to male mortality was 61.5 percent for medical issues and 58.2 percent for nonmedical issues.

Table 11 presents side by side the experience for the five-year period from 1972 to 1977 anniversaries on medical and nonmedical issues, separately for each sex, for policy years 1-2, 3-5, 6-10, 11-15, and 1-15. The nonmedical mortality ratios shown in Table 11 have been adjusted approximately to reflect the distribution of nonmedical exposures by age for issue-age groups 35-39 and over. For males, the ratios of the nonmedical to the medical mortality ratios exceeded 100 percent at issue ages 10-44 and 50 and over in policy years 1-15 combined. For females, the ratios exceeded 100 percent for issue ages 1-9 and 35 and over in policy years 1-15 combined.

The mortality ratios by attained-age groups and sex for policy years 16 and over combined, covering the experience from 1972-77 anniversaries, are presented in Table 12 for standard medical and standard

TABLE 12
COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE*
STANDARD ISSUES OF 1961 AND PRIOR
EXPERIENCE BETWEEN 1972 AND 1977 ANNIVERSARIES
BY ATTAINED AGE—POLICY YEARS 16 AND OVER COMBINED
Expected Deaths on 1965-70 Male Ultimate Basic Table
and 1965-70 Female Ultimate Basic Table
(Amounts Shown in \$1,000 Units)

ATTAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS†		MORTALITY RATIO‡		RATIO† OF FEMALE TO MALE MORTALITY‡
	Male	Female	Male	Female	Male	Female	
15-19	\$ 2,973,270	\$ 1,717,034	\$ 3,844	\$ 879	133.6%	106.4%	39.3%
20-24	3,354,503	1,685,668	4,779	881	126.3	92.3	35.0
25-29	3,518,927	1,301,359	4,530	730	119.5	98.1	39.6
30-34	6,374,805	1,342,395	7,143	997	88.4	102.1	67.4
35-39	14,317,399	1,804,131	19,930	1,724	81.7	80.7	70.8
40-44	23,906,365	2,293,995	52,708	3,769	79.9	84.5	75.7
45-49	33,829,375	3,168,067	128,616	9,022	83.9	95.8	73.5
50-54	38,004,188	3,808,770	231,458	15,145	80.5	89.8	64.5
55-59	34,368,407	3,682,668	352,945	23,097	82.7	96.4	60.8
60-64	27,031,085	3,091,741	441,750	28,876	83.0	93.0	56.5
65-69	17,841,352	2,215,738	472,077	30,338	84.9	92.2	51.7
70-74	11,712,651	1,548,156	483,895	33,270	87.9	82.8	51.8
75-79	6,818,200	992,251	449,501	39,923	90.6	83.0	61.2
80-84	3,324,072	506,278	330,630	33,286	91.0	84.4	66.3
85-89	1,098,076	162,486	165,506	17,456	93.6	88.1	70.8
90-95	276,067	45,546	56,645	8,437	94.3	93.1	87.9
All ages	\$228,748,742	\$29,366,283	\$3,205,957	\$247,830	86.4%	88.2%	60.6%

* Based on data from sixteen companies.

† Excluding war deaths.

‡ Female mortality ratios calculated on 1965-70 Male Ultimate Basic Table.

nonmedical issues combined. Again, for the purpose of comparing male and female mortality, the right-hand column of this table is based on mortality ratios for females with expected deaths calculated on the male table. Sixteen of the contributing companies submitted data (in whole or in part) separately for males and females for policy years 16 and over. The highest ratios of female to male mortality were found at attained ages 35-49 and 85-95.

APPENDIX I

TABLE A

CONTRIBUTING COMPANIES
PROPORTION OF TOTAL EXPOSURES BETWEEN 1976 AND 1977 ANNIVERSARIES
CONTRIBUTED BY EACH COMPANY

COMPANY	FIRST FIFTEEN POLICY YEARS		SIX-TEENTH AND SUBSEQUENT POLICY YEARS	FIRST FIFTEEN POLICY YEARS BY SEX				SIXTEENTH AND SUBSEQUENT POLICY YEARS BY SEX	
	Medical Issues	Non-medical Issues		Medical Issues		Nonmedical Issues		Male	Fe-male
	Male and Female Lives Combined (Including Data Not Subdivided by Sex)			Male	Fe-male	Male	Fe-male		
Prudential	14.3%	33.6%	22.2%	12.6%	1.7%	24.2%	9.4%	25.6%	3.4%
New York Life	12.8	15.0	11.8	11.2	1.6	10.8	4.2	12.9	1.8
Northwestern Mutual	10.4	3.3	6.2	9.5	0.9	2.2	1.1	7.3	0.8
Equitable, N.Y.	8.4	6.9	8.3	7.6	0.8	5.2	1.7	9.7	1.1
Metropolitan	8.0	14.4	18.3	7.3	0.7	11.0	3.4	2.5*	0.2*
Massachusetts Mutual	7.9	2.9	4.2	7.3	0.6	2.3	0.6	5.0	0.4
John Hancock	5.0	5.5	5.3	4.5	0.5	4.2	1.3	5.7	1.1
New England Life	4.5	1.7	2.3	4.2	0.3	1.4	0.3	2.8	0.2
Connecticut Mutual	4.0	2.5	2.6	3.6	0.4	2.0	0.5		
Mutual Benefit	3.8	1.2	2.8	3.5	0.3	0.9	0.3	3.1	0.3
Mutual Life, N.Y.	3.6	3.6	3.4	3.3	0.3	2.9	0.7	3.9	0.6
Aetna	3.1	1.5	1.6	2.8	0.3	1.1	0.4	1.9	0.3
Phoenix Mutual	3.0	0.8	1.2	2.8	0.2	0.6	0.2	1.4	0.1
Travelers	2.6	1.2	2.4	2.4	0.2	1.0	0.2	2.9	0.2
Penn Mutual	2.4	2.2	2.5	2.2	0.2	1.7	0.5		
Lincoln National	2.0	1.3	1.5	1.8	0.2	1.0	0.3	1.8	0.3
Continental Assurance	1.8	0.6	1.1	1.7	0.1	0.5	0.1	1.3	0.1
Provident Mutual	1.6	1.0	1.3	1.5	0.1	0.8	0.2		
Sun Life	0.8	0.8	1.0	0.7	0.1	0.6	0.2	1.1	0.2
Total	100.0%	100.0%	100.0%	90.5%	9.5%	74.4%	25.6%	88.9%	11.1%

NOTE.—A Comparative Mortality Study of the select experience between 1972 and 1977 anniversaries for most of the above companies is available upon request to the Office of the Society of Actuaries. The companies are not identified by name but are differentiated simply by a system of code letters. Experience is shown by issue-age groups and by issue year separately for medical and nonmedical business.

* Represents the experience of 16th and 17th policy years only.

TABLE B
STANDARD MEDICALLY EXAMINED ISSUES OF 1962-76
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
BY YEAR OF ISSUE AND AGE AT ISSUE

Expected Deaths on 1965-70 Select Basic Tables
(Amounts Shown in \$1,000 Units)

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS			MORTALITY RATIO	
			Excluding War Deaths	War Deaths	EXPECTED DEATHS	Exclud- ing War Deaths	Includ- ing War Deaths
1962 (15)	0	\$ 7,754	\$ 2	\$ 0	\$ 4	50%	50%
	1	20,504	10	0	12	83	83
	2-4	18,991	43	0	15	286	286
	5-9	29,295	10	0	29	34	34
	10-14	40,225	52	0	39	133	133
	15-19	102,209	47	0	118	39	39
	20-24	286,338	483	0	422	114	114
	25-29	544,600	734	0	1,282	57	57
	30-34	853,259	2,569	0	3,341	76	76
	35-39	998,730	5,204	0	6,392	81	81
	40-44	838,761	7,621	0	8,354	91	91
	45-49	513,264	6,603	0	7,976	82	82
	50-54	230,480	4,792	0	5,197	92	92
	55-59	96,701	2,696	0	3,199	84	84
	60-64	39,378	939	0	1,778	52	52
	65-69	9,139	352	0	595	59	59
70 and over	1,119	99	0	147	67	67	
	All ages	\$ 4,630,755	\$32,256	\$ 0	\$38,900	83%	83%
1963 (14)	0	\$ 10,209	\$ 0	\$ 0	\$ 4	0%	0%
	1	14,331	2	0	7	28	28
	2-4	15,721	0	0	11	0	0
	5-9	27,979	0	0	28	0	0
	10-14	39,619	62	0	38	163	163
	15-19	98,031	95	0	110	86	86
	20-24	321,949	186	0	438	42	42
	25-29	626,563	1,015	0	1,316	77	77
	30-34	967,389	2,615	0	3,357	77	77
	35-39	1,159,011	4,319	0	6,482	66	66
	40-44	991,945	6,392	0	8,838	72	72
	45-49	613,620	5,910	0	8,435	70	70
	50-54	291,068	4,150	0	6,027	68	68
	55-59	129,190	3,036	0	3,839	79	79
	60-64	49,843	1,020	0	2,095	48	48
	65-69	10,076	717	0	569	126	126
70 and over	2,176	148	0	271	54	54	
	All ages	\$ 5,368,728	\$29,667	\$ 0	\$41,865	71%	71%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1964 (13)	0	\$ 13,880	\$ 2	\$ 0	\$ 4	50%	50%
	1	7,696	0	0	0	0	0
	2-4	14,247	10	0	8	125	125
	5-9	26,743	33	0	27	122	122
	10-14	42,303	57	0	42	135	135
	15-19	104,728	80	0	113	70	70
	20-24	386,074	429	0	473	90	90
	25-29	741,010	767	0	1,378	55	55
	30-34	1,032,272	2,085	0	3,169	65	65
	35-39	1,233,532	4,960	0	6,106	81	81
	40-44	1,071,647	5,638	0	8,442	66	66
	45-49	653,400	5,709	0	7,912	72	72
	50-54	350,981	4,988	0	6,431	77	77
	55-59	134,210	2,317	0	3,485	66	66
	60-64	53,482	1,714	0	2,046	83	83
	65-69	12,342	485	0	662	73	73
	70 and over	1,977	101	0	221	45	45
	All ages	\$ 5,880,535	\$29,375	\$ 0	\$40,523	72%	72%
1965 (12)	0	\$ 13,565	\$ 10	\$ 0	\$ 4	250%	250%
	1	7,962	3	0	3	100	100
	2-4	15,799	0	0	7	0	0
	5-9	30,461	20	0	29	68	68
	10-14	40,567	118	0	41	287	287
	15-19	126,675	86	0	132	65	65
	20-24	455,115	443	0	506	87	87
	25-29	817,338	1,175	0	1,348	87	87
	30-34	1,123,800	1,934	0	3,104	62	62
	35-39	1,305,474	4,201	0	5,857	71	71
	40-44	1,138,988	5,802	0	7,910	73	73
	45-49	728,823	5,455	0	7,650	71	71
	50-54	390,238	6,484	0	6,258	103	103
	55-59	149,586	2,708	0	3,441	78	78
	60-74	55,894	1,473	0	1,988	74	74
	65-69	15,562	755	0	759	99	99
	70 and over	2,818	116	0	289	40	40
	All ages	\$ 6,418,674	\$30,783	\$ 0	\$39,326	78%	78%
1966 (11)	0	\$ 14,317	\$ 0	\$ 0	\$ 4	0%	0%
	1	8,162	2	0	3	66	66
	2-4	14,674	0	0	6	0	0
	5-9	31,357	7	0	25	28	28
	10-14	44,865	57	0	45	126	126
	15-19	130,686	166	0	129	128	128
	20-24	473,215	369	0	477	77	77
	25-29	854,167	783	0	1,223	64	64
	30-34	1,135,957	2,372	0	2,819	84	84
	35-39	1,327,524	3,516	0	5,337	65	65
	40-44	1,194,079	5,198	0	7,506	69	69
	45-49	794,090	5,421	0	7,381	73	73
	50-54	417,482	4,405	0	5,977	73	73
	55-59	165,366	2,942	0	3,300	89	89
	60-64	58,286	729	0	1,766	41	41
	65-69	18,036	471	0	786	59	59
	70 and over	3,966	160	0	332	48	48
	All ages	\$ 6,686,240	\$26,598	\$ 0	\$37,116	72%	72%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1967 (10)	0	\$ 13,255	\$ 0	\$ 0	\$ 4	0%	0%
	1	9,498	0	0	3	0	0
	2-4	16,544	0	0	5	0	0
	5-9	34,577	25	0	24	104	104
	10-14	43,132	13	0	44	29	29
	15-19	112,345	90	0	111	81	81
	20-24	440,321	267	0	416	64	64
	25-29	896,559	515	0	1,125	45	45
	30-34	1,173,012	2,100	0	2,561	81	81
	35-39	1,388,080	3,711	0	4,945	75	75
	40-44	1,239,376	5,164	0	6,959	74	74
	45-49	842,912	5,421	0	6,963	77	77
	50-54	464,436	4,757	0	5,984	79	79
	55-59	192,197	2,244	0	3,361	66	66
	60-64	70,835	1,359	0	1,813	74	74
	65-69	18,040	1,506	0	668	225	225
70 and over	4,529	323	0	337	95	95	
	All ages	\$ 6,959,654	\$27,495	\$ 0	\$35,323	78%	78%
1968 (9)	0	\$ 12,298	\$ 0	\$ 0	\$ 4	0%	0%
	1	8,269	0	0	3	0	0
	2-4	14,112	0	0	4	0	0
	5-9	31,885	0	0	19	0	0
	10-14	49,192	21	0	52	40	40
	15-19	99,165	101	0	98	103	103
	20-24	409,005	208	0	365	56	56
	25-29	913,336	813	0	1,032	78	78
	30-34	1,206,623	1,663	0	2,331	71	71
	35-39	1,386,800	3,655	0	4,354	83	83
	40-44	1,295,422	4,600	0	6,560	70	70
	45-49	913,759	6,321	0	6,829	92	92
	50-54	484,266	4,407	0	5,572	79	79
	55-59	232,677	3,419	0	3,582	95	95
	60-64	73,301	939	0	1,622	57	57
	65-69	20,430	522	0	671	77	77
70 and over	4,290	147	0	292	50	50	
	All ages	\$ 7,154,840	\$26,816	\$ 0	\$33,390	80%	80%
1969 (8)	0	\$ 13,214	\$ 0	\$ 0	\$ 4	0%	0%
	1	10,871	0	0	4	0	0
	2-4	16,342	0	0	4	0	0
	5-9	37,536	0	0	18	0	0
	10-14	51,428	15	0	52	28	28
	15-19	104,975	168	0	105	160	160
	20-24	465,229	297	0	395	75	75
	25-29	1,076,772	986	0	1,087	90	90
	30-34	1,424,890	1,171	0	2,410	48	48
	35-39	1,542,497	3,704	0	4,279	86	86
	40-44	1,423,521	4,502	0	6,465	69	69
	45-49	1,058,293	5,147	0	7,235	71	71
	50-54	580,699	3,900	0	6,163	63	63
	55-59	268,697	3,243	0	3,744	86	86
	60-64	91,518	1,041	0	1,823	57	57
	65-69	22,733	663	0	638	103	103
70 and over	6,299	104	0	361	28	28	
	All ages	\$ 8,195,522	\$24,941	\$ 0	\$34,787	72%	72%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1970 (7)	0	\$ 17,201	\$ 25	\$ 0	\$ 7	357%	357%
	1	10,702	0	0	4	0	0
	2-4	20,255	5	0	6	83	83
	5-9	39,943	0	0	16	0	0
	10-14	49,215	20	0	46	43	43
	15-19	107,135	7	0	107	6	6
	20-24	576,647	375	0	473	79	79
	25-29	1,241,236	1,127	0	1,142	98	98
	30-34	1,556,979	1,973	0	2,301	85	85
	35-39	1,592,584	2,773	0	3,929	70	70
	40-44	1,531,813	4,082	0	6,211	65	65
	45-49	1,140,524	5,694	0	7,013	81	81
	50-54	618,140	3,411	0	5,911	57	57
	55-59	302,808	3,318	0	3,865	85	85
	60-64	109,753	1,143	0	1,951	58	58
	65-69	29,364	434	0	867	50	50
	70 and over	6,137	173	0	280	61	61
	All ages	\$ 8,950,444	\$24,560	\$ 0	\$34,129	72%	72%
1971 (6)	0	\$ 16,618	\$ 0	\$ 0	\$ 8	0%	0%
	1	11,012	0	0	4	0	0
	2-4	20,638	0	0	7	0	0
	5-9	45,005	0	0	14	0	0
	10-14	54,354	25	0	44	56	56
	15-19	113,365	50	0	114	43	43
	20-24	605,195	352	0	487	72	72
	25-29	1,384,797	1,601	0	1,172	136	136
	30-34	1,809,161	2,317	0	2,426	95	95
	35-39	1,847,060	3,520	0	4,008	87	87
	40-44	1,716,668	5,693	0	6,182	92	92
	45-49	1,266,925	5,527	0	6,775	81	81
	50-54	733,678	3,343	0	5,967	56	56
	55-59	355,525	2,930	0	3,859	75	75
	60-64	132,444	1,123	0	2,139	52	52
	65-69	33,406	381	0	792	48	48
	70 and over	6,885	96	0	262	36	36
	All ages	\$10,152,745	\$26,958	\$ 0	\$34,260	79%	79%
1972 (5)	0	\$ 15,986	\$ 2	\$ 0	\$ 8	25%	25%
	1	14,151	0	0	6	0	0
	2-4	22,631	0	0	8	0	0
	5-9	41,427	0	0	12	0	0
	10-14	58,414	210	0	41	512	512
	15-19	118,422	104	0	117	88	88
	20-24	591,356	326	0	478	68	68
	25-29	1,541,115	1,314	0	1,237	106	106
	30-34	2,149,121	1,840	0	2,572	71	71
	35-39	2,126,301	3,827	0	4,047	94	94
	40-44	1,906,825	3,569	0	5,817	61	61
	45-49	1,456,192	5,057	0	6,764	74	74
	50-54	848,893	4,192	0	5,710	73	73
	55-59	405,897	3,363	0	3,845	87	87
	60-64	146,751	1,333	0	2,195	60	60
	65-69	39,094	621	0	845	73	73
	70 and over	8,186	214	0	239	89	89
	All ages	\$11,490,769	\$25,972	\$ 0	\$33,941	77%	77%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1973 (4)	0	\$ 18,401	\$ 0	\$ 0	\$ 11	0%	0%
	1	12,358	0	0	7	0	0
	2-4	22,059	0	0	8	0	0
	5-9	41,706	50	0	12	416	416
	10-14	53,821	119	0	32	371	371
	15-19	111,176	180	0	106	169	169
	20-24	629,707	411	0	511	80	80
	25-29	1,684,768	1,119	0	1,298	86	86
	30-34	2,490,831	1,802	0	2,744	65	65
	35-39	2,358,599	2,940	0	3,931	74	74
	40-44	2,045,316	4,080	0	5,610	72	72
	45-49	1,618,413	4,028	0	6,566	61	61
	50-54	999,276	3,550	0	6,038	58	58
	55-59	473,025	2,997	0	4,075	73	73
	60-64	177,355	1,223	0	2,426	50	50
	65-69	49,233	368	0	903	40	40
70 and over	10,759	228	0	242	94	94	
	All ages	\$12,796,811	\$23,095	\$ 0	\$34,520	67%	67%
1974 (3)	0	\$ 20,221	\$ 0	\$ 0	\$ 16	0%	0%
	1	13,777	0	0	9	0	0
	2-4	25,790	0	0	12	0	0
	5-9	47,833	0	0	15	0	0
	10-14	57,924	10	0	27	37	37
	15-19	127,350	149	0	117	127	127
	20-24	684,478	655	0	534	122	122
	25-29	1,952,880	1,077	0	1,458	73	73
	30-34	2,953,338	2,431	0	2,888	84	84
	35-39	2,740,235	3,399	0	3,869	87	87
	40-44	2,332,050	4,018	0	5,345	75	75
	45-49	1,845,891	8,380	0	6,296	133	133
	50-54	1,185,030	3,252	0	6,044	53	53
	55-59	559,839	2,671	0	4,014	66	66
	60-64	218,625	1,138	0	2,401	47	47
	65-69	61,548	959	0	956	100	100
70 and over	17,137	144	0	319	45	45	
	All ages	\$14,843,953	\$28,283	\$ 0	\$34,320	82%	82%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1975 (2)	0	\$ 20,473	\$ 0	\$ 0	\$ 26	0%	0%
	1	14,404	0	0	11	0	0
	2-4	29,843	0	0	15	0	0
	5-9	55,782	10	0	19	52	52
	10-14	64,921	0	0	25	0	0
	15-19	129,947	16	0	116	13	13
	20-24	659,156	237	0	472	50	50
	25-29	2,043,654	1,192	0	1,291	92	92
	30-34	3,133,619	2,408	25	2,712	88	89
	35-39	2,987,347	3,168	0	3,325	95	95
	40-44	2,433,078	3,258	0	4,455	73	73
	45-49	2,002,497	5,335	0	5,173	103	103
	50-54	1,373,420	2,698	0	5,315	50	50
	55-59	678,212	2,731	0	3,469	78	78
	60-64	280,071	1,401	0	2,194	63	63
	65-69	89,470	272	0	1,084	25	25
	70 and over	14,390	107	0	201	53	53
	All ages	\$16,010,294	\$22,833	\$ 25	\$29,903	76%	76%
1976 (1)	0	\$ 23,649	\$ 326	\$ 0	\$ 127	256%	256%
	1	17,795	0	0	23	0	0
	2-4	32,468	0	0	20	0	0
	5-9	54,442	0	0	20	0	0
	10-14	64,432	0	0	20	0	0
	15-19	130,246	0	0	105	0	0
	20-24	735,980	877	0	489	179	179
	25-29	2,302,902	1,305	0	1,319	98	98
	30-34	3,680,816	1,959	0	2,753	71	71
	35-39	3,387,121	1,525	0	2,914	52	52
	40-44	2,761,192	3,140	0	3,646	86	86
	45-49	2,254,872	2,706	0	4,197	64	64
	50-54	1,570,507	2,519	0	3,981	63	63
	55-59	814,451	2,282	0	2,795	81	81
	60-64	345,065	1,030	0	1,857	55	55
	65-69	108,898	626	0	949	65	65
	70 and over	22,631	234	0	225	104	104
	All ages	\$18,307,475	\$18,529	\$ 0	\$25,440	73%	73%

TABLE C

STANDARD NONMEDICAL ISSUES OF 1962-76
 MALE AND FEMALE LIVES COMBINED
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE

Expected Deaths on 1965-70 Select Basic Tables
 (Amounts Shown in \$1,000 Units)

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1962 (15)	0	\$ 116,258	\$ 53	\$ 0	\$ 53	100%	100%
	1	48,185	23	0	27	85	85
	2-4	61,223	24	0	49	48	48
	5-9	86,201	155	0	88	176	176
	10-14	125,528	118	0	125	95	95
	15-19	523,396	447	0	604	74	74
	20-24	819,744	834	0	1,196	69	69
	25-29	681,665	1,197	1	1,596	75	75
	30-34	381,856	1,187	0	1,464	81	81
	35-39	186,216	1,029	0	1,107	92	92
	40-44	31,958	287	0	288	99	99
	45-49	2,130	18	0	32	56	56
	50 and over	1,067	34	0	37	91	91
	All ages	\$ 3,068,432	\$ 5,406	\$ 1	\$ 6,664	81%	81%
	1963 (14)	0	\$ 144,679	\$ 47	\$ 0	\$ 57	82%
1		53,058	8	0	25	32	32
2-4		78,404	52	0	55	94	94
5-9		117,604	106	0	121	87	87
10-14		174,514	248	0	170	145	145
15-19		590,775	537	0	660	81	81
20-24		983,229	1,135	0	1,319	86	86
25-29		793,466	1,258	0	1,660	76	76
30-34		428,878	1,058	0	1,447	73	73
35-39		208,483	1,064	0	1,088	97	97
40-44		35,667	257	0	287	89	89
45-49		2,708	5	0	36	13	13
50 and over		820	7	0	31	22	22
All ages		\$ 3,612,291	\$ 5,782	\$ 0	\$ 6,956	83%	83%
1964 (13)		0	\$ 154,555	\$ 51	\$ 0	\$ 51	100%
	1	56,480	9	0	22	40	40
	2-4	86,638	48	0	51	94	94
	5-9	129,648	169	0	130	130	130
	10-14	191,497	123	0	188	65	65
	15-19	667,338	595	0	711	83	83
	20-24	1,145,565	1,103	0	1,374	80	80
	25-29	887,671	1,384	0	1,640	84	84
	30-34	462,838	1,163	0	1,382	84	84
	35-39	219,383	996	0	1,018	97	97
	40-44	39,324	267	0	277	96	96
	45-49	2,993	32	0	33	96	96
	50 and over	726	1	0	24	4	4
	All ages	\$ 4,044,661	\$ 5,941	\$ 0	\$ 6,901	86%	86%

TABLE C—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1965 (12)	0	\$ 159,291	\$ 30	\$ 0	\$ 48	62%	62%
	1	60,510	1	0	19	5	5
	2-4	90,783	9	0	43	20	20
	5-9	140,741	133	0	130	102	102
	10-14	209,115	199	0	207	96	96
	15-19	841,220	830	0	861	96	96
	20-24	1,271,779	1,032	0	1,384	74	74
	25-29	944,112	1,302	0	1,546	84	84
	30-34	476,438	1,253	0	1,281	97	97
	35-39	212,987	811	0	892	90	90
	40-44	39,393	189	0	242	78	78
	45-49	3,406	5	0	33	15	15
	50 and over	1,632	22	0	36	61	61
	All ages	\$ 4,451,413	\$ 5,816	\$ 0	\$ 6,722	87%	87%
	1966 (11)	0	\$ 165,769	\$ 16	\$ 0	\$ 48	33%
1		61,294	9	0	18	50	50
2-4		95,815	17	0	37	45	45
5-9		146,790	148	0	122	121	121
10-14		216,317	243	0	216	112	112
15-19		781,756	694	0	754	92	92
20-24		1,271,920	1,144	0	1,246	91	91
25-29		1,001,185	835	0	1,420	58	58
30-34		481,360	951	0	1,161	81	81
35-39		207,616	707	0	776	91	91
40-44		39,171	248	0	219	113	113
45-49		3,581	12	0	31	38	38
50 and over		1,000	1	0	16	6	6
All ages		\$ 4,473,580	\$ 5,025	\$ 0	\$ 6,064	83%	83%
1967 (10)		0	\$ 176,774	\$ 57	\$ 0	\$ 53	107%
	1	65,571	9	0	19	47	47
	2-4	100,769	34	0	33	103	103
	5-9	153,632	195	0	109	178	178
	10-14	221,584	244	0	226	107	107
	15-19	816,393	697	0	778	89	89
	20-24	1,563,537	1,409	0	1,438	97	97
	25-29	1,199,926	1,476	0	1,492	98	98
	30-34	588,368	983	0	1,258	78	78
	35-39	249,617	720	0	835	86	86
	40-44	64,052	365	0	310	117	117
	45-49	6,143	18	0	45	40	40
	50 and over	1,164	18	0	15	120	120
	All ages	\$ 5,207,534	\$ 6,225	\$ 0	\$ 6,611	94%	94%

TABLE C—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1971 (6)	0	\$ 290,682	\$ 68	\$ 0	\$ 129	52%	52%
	1	116,236	38	0	46	82	82
	2-4	170,849	14	0	55	25	25
	5-9	231,801	42	0	75	56	56
	10-14	320,617	343	0	265	129	129
	15-19	1,129,699	1,046	0	1,073	97	97
	20-24	2,877,261	2,113	0	2,239	94	94
	25-29	2,009,839	1,663	0	1,677	99	99
	30-34	914,395	1,004	0	1,209	83	83
	35-39	386,404	768	0	808	95	95
	40-44	131,249	434	0	405	107	107
	45-49	17,988	49	0	83	59	59
	50 and over	5,551	17	0	53	32	32
	All ages	\$ 8,602,576	\$ 7,599	\$ 0	\$ 8,117	94%	94%
1972 (5)	0	\$ 339,759	\$ 138	\$ 0	\$ 169	81%	81%
	1	147,595	53	0	66	80	80
	2-4	252,852	68	0	90	75	75
	5-9	347,044	87	0	103	84	84
	10-14	477,167	415	0	337	123	123
	15-19	1,438,399	1,264	0	1,349	93	93
	20-24	3,237,559	2,386	0	2,516	94	94
	25-29	2,428,412	1,711	0	1,919	89	89
	30-34	1,036,002	1,008	0	1,217	82	82
	35-39	419,033	785	0	768	102	102
	40-44	143,790	449	0	381	117	117
	45-49	21,171	55	0	86	63	63
	50 and over	6,279	42	0	53	79	79
	All ages	\$10,295,067	\$ 8,461	\$ 0	\$ 9,054	93%	93%
1973 (4)	0	\$ 424,249	\$ 99	\$ 0	\$ 246	40%	40%
	1	165,192	59	0	83	71	71
	2-4	320,339	68	0	125	54	54
	5-9	426,193	93	0	123	75	75
	10-14	579,732	360	0	345	104	104
	15-19	1,763,513	1,670	0	1,590	105	105
	20-24	3,656,917	2,410	0	2,821	85	85
	25-29	2,859,889	1,639	0	2,165	75	75
	30-34	1,221,807	1,332	0	1,312	101	101
	35-39	459,248	685	0	744	92	92
	40-44	159,270	484	0	377	128	128
	45-49	26,651	133	0	96	138	138
	50 and over	8,454	81	0	65	124	124
	All ages	\$12,071,459	\$ 9,113	\$ 0	\$10,092	90%	90%

TABLE C—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1974. (3)	0	\$ 485,768	\$ 248	\$ 0	\$ 360	68%	68%
	1	182,479	44	0	108	40	40
	2-4	352,433	91	0	155	58	58
	5-9	460,795	84	0	137	61	61
	10-14	574,830	130	0	277	46	46
	15-19	1,855,197	1,706	0	1,601	106	106
	20-24	4,080,200	3,036	0	3,013	100	100
	25-29	3,406,507	1,998	0	2,480	80	80
	30-34	1,415,289	1,187	0	1,344	88	88
	35-39	484,863	721	0	660	109	109
	40-44	158,324	317	0	316	100	100
	45-49	36,100	52	0	116	44	44
	50 and over	16,846	13	0	99	13	13
	All ages	\$13,509,638	\$ 9,627	\$ 0	\$10,666	90%	90%
1975. (2)	0	\$ 572,830	\$ 262	\$ 0	\$ 658	39%	39%
	1	204,795	132	0	155	85	85
	2-4	361,234	102	0	180	56	56
	5-9	488,291	57	0	157	36	36
	10-14	554,646	175	0	216	81	81
	15-19	1,847,691	1,882	0	1,520	123	123
	20-24	4,593,645	2,705	0	3,141	86	86
	25-29	4,284,455	2,699	0	2,689	100	100
	30-34	1,780,345	1,317	0	1,502	87	87
	35-39	584,058	581	0	632	91	91
	40-44	190,681	268	0	298	89	89
	45-49	44,340	40	0	103	38	38
	50 and over	27,441	72	0	128	56	56
	All ages	\$15,534,458	\$10,292	\$ 0	\$11,379	90%	90%
1976. (1)	0	\$ 741,988	\$ 879	\$ 0	\$ 3,714	23%	23%
	1	277,997	95	0	329	28	28
	2-4	484,414	128	0	282	45	45
	5-9	701,020	180	0	248	72	72
	10-14	721,029	182	0	234	77	77
	15-19	2,411,254	1,669	0	1,813	92	92
	20-24	6,249,686	3,494	0	3,942	88	88
	25-29	5,862,069	2,947	0	3,341	88	88
	30-34	2,363,218	971	0	1,747	55	55
	35-39	709,008	581	0	593	97	97
	40-44	211,748	257	0	237	108	108
	45-49	51,272	96	0	87	110	110
	50 and over	38,022	218	0	116	187	187
	All ages	\$20,822,731	\$11,697	\$ 0	\$16,683	70%	70%

TABLE D
 STANDARD MEDICALLY EXAMINED ISSUES OF 1962-76
 MALE LIVES
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE

Expected Deaths on 1965-70 Male Select Basic Table
 (Amounts Shown in \$1,000 Units)

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1962 (15)	0	\$ 5,431	\$ 0	\$ 0	\$ 3	0%	0%
	1	13,136	0	0	9	0	0
	2-4	13,064	33	0	12	274	274
	5-9	20,525	10	0	24	41	41
	10-14	31,448	52	0	34	152	152
	15-19	89,465	47	0	110	42	42
	20-24	266,657	473	0	402	117	117
	25-29	519,099	638	0	1,237	51	51
	30-34	810,539	2,033	0	3,225	63	63
	35-39	930,562	4,955	0	6,118	80	80
	40-44	751,009	6,909	0	7,858	87	87
	45-49	452,355	6,041	0	7,461	80	80
	50-54	197,103	4,520	0	4,778	94	94
	55-59	81,135	2,515	0	2,930	85	85
	60-64	30,407	841	0	1,549	54	54
65-69	7,290	323	0	533	60	60	
70 and over	865	89	0	118	75	75	
	All ages	\$ 4,220,100	\$ 29,479	\$ 0	\$ 36,401	81%	81%
1963 (14)	0	\$ 7,176	\$ 0	\$ 0	\$ 3	0%	0%
	1	9,231	0	0	5	0	0
	2-4	11,588	0	0	9	0	0
	5-9	19,717	0	0	23	0	0
	10-14	31,784	60	0	34	176	176
	15-19	86,044	95	0	102	93	93
	20-24	300,958	171	0	418	40	40
	25-29	601,122	983	0	1,275	77	77
	30-34	917,736	2,486	0	3,232	76	76
	35-39	1,078,822	4,113	0	6,185	66	66
	40-44	885,249	5,865	0	8,283	70	70
	45-49	533,729	5,548	0	7,858	70	70
	50-54	250,428	3,799	0	5,575	68	68
	55-59	107,650	2,852	0	3,498	81	81
	60-64	38,029	867	0	1,824	47	47
65-69	6,942	300	0	469	63	63	
70 and over	1,763	128	0	227	56	56	
	All ages	\$ 4,887,976	\$ 27,267	\$ 0	\$ 39,020	70%	70%

TABLE D—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1964 (13)	0	\$ 10,077	\$ 2	\$ 0	\$ 3	66%	66%
	1	5,872	0	0	3	0	0
	2-4	10,596	10	0	7	142	142
	5-9	18,792	33	0	22	149	149
	10-14	34,409	52	0	38	136	136
	15-19	91,106	30	0	104	28	28
	20-24	365,028	419	0	455	92	92
	25-29	709,450	726	0	1,331	54	54
	30-34	978,039	1,981	0	3,044	65	65
	35-39	1,143,362	4,721	0	5,799	81	81
	40-44	958,224	5,064	0	7,915	63	63
	45-49	570,369	5,242	0	7,368	71	71
	50-54	301,760	4,648	0	5,943	78	78
	55-59	110,800	2,093	0	3,151	66	66
	60-64	39,344	1,564	0	1,755	89	89
	65-69	9,015	288	0	563	51	51
	70 and over	1,221	98	0	143	68	68
All ages	\$ 5,357,471	\$ 26,971	\$ 0	\$ 37,644	72%	72%	
1965 (12)	0	\$ 9,776	\$ 10	\$ 0	\$ 3	333%	333%
	1	5,768	3	0	2	149	149
	2-4	11,985	0	0	6	0	0
	5-9	21,852	20	0	24	83	83
	10-14	32,884	118	0	37	318	318
	15-19	110,888	83	0	122	68	68
	20-24	429,446	425	0	486	87	87
	25-29	782,255	1,145	0	1,301	88	88
	30-34	1,064,021	1,881	0	2,978	63	63
	35-39	1,205,439	4,043	0	5,546	72	72
	40-44	1,014,867	5,425	0	7,413	73	73
	45-49	636,923	5,177	0	7,124	72	72
	50-54	337,074	5,767	0	5,797	99	99
	55-59	125,535	2,245	0	3,153	71	71
	60-64	44,438	1,217	0	1,780	68	68
	65-69	11,175	672	0	641	104	104
	70 and over	1,926	109	0	213	51	51
All ages	\$ 5,846,259	\$ 28,340	\$ 0	\$ 36,626	77%	77%	
1966 (11)	0	\$ 9,811	0	\$ 0	\$ 3	0%	0%
	1	6,083	2	0	2	99	99
	2-4	11,463	0	0	5	0	0
	5-9	20,773	2	0	20	9	9
	10-14	35,224	52	0	40	129	129
	15-19	112,373	146	0	118	123	123
	20-24	444,732	364	0	457	79	79
	25-29	816,993	677	0	1,179	57	57
	30-34	1,074,550	2,256	0	2,700	83	83
	35-39	1,232,956	3,392	0	5,067	66	66
	40-44	1,067,961	4,806	0	7,032	68	68
	45-49	692,026	5,028	0	6,843	73	73
	50-54	362,557	4,147	0	5,547	74	74
	55-59	137,993	2,684	0	3,022	88	88
	60-64	47,490	582	0	1,593	36	36
	65-69	13,117	244	0	662	36	36
	70 and over	2,293	147	0	213	69	69
All ages	\$ 6,088,405	\$ 24,529	\$ 0	\$ 34,503	71%	71%	

TABLE D—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing Deaths	Includ- ing Deaths
1967.... (10)	0	\$ 9,201	\$ 0	\$ 0	\$ 3	0%	0%
	1	7,138	0	0	2	0	0
	2-4	11,581	0	0	4	0	0
	5-9	23,102	25	0	19	131	131
	10-14	33,128	13	0	38	34	34
	15-19	96,103	70	0	102	68	68
	20-24	411,265	259	0	396	65	65
	25-29	858,471	498	0	1,085	45	45
	30-34	1,111,703	2,057	0	2,452	83	83
	35-39	1,288,582	3,545	0	4,682	75	75
	40-44	1,113,181	4,882	0	6,515	74	74
	45-49	734,280	4,765	0	6,440	73	73
	50-54	401,264	4,168	0	5,556	75	75
	55-59	160,580	2,056	0	3,099	66	66
	60-64	57,056	1,091	0	1,612	67	67
	65-69	13,083	1,398	0	553	252	252
	70 and over	2,856	279	0	232	120	120
All ages	\$ 6,332,584	\$ 25,106	\$ 0	\$ 32,790	77%	77%	
1968.... (9)	0	\$ 8,921	\$ 0	\$ 0	\$ 3	0%	0%
	1	5,859	0	0	2	0	0
	2-4	10,699	0	0	3	0	0
	5-9	21,584	0	0	15	0	0
	10-14	38,486	21	0	46	45	45
	15-19	83,148	91	0	89	102	102
	20-24	383,636	200	0	348	57	57
	25-29	874,324	781	0	996	78	78
	30-34	1,145,132	1,459	0	2,231	65	65
	35-39	1,290,142	3,275	0	4,119	79	79
	40-44	1,169,358	4,190	0	6,151	68	68
	45-49	801,266	5,967	0	6,331	94	94
	50-54	411,666	4,117	0	5,099	80	80
	55-59	196,494	3,197	0	3,327	96	96
	60-64	57,370	852	0	1,406	60	60
	65-69	16,216	479	0	582	82	82
	70 and over	3,350	143	0	240	59	59
All ages	\$ 6,517,659	\$ 24,772	\$ 0	\$ 30,988	80%	80%	
1969.... (8)	0	\$ 8,765	\$ 0	\$ 0	\$ 3	0%	0%
	1	8,019	0	0	3	0	0
	2-4	10,630	0	0	3	0	0
	5-9	27,861	0	0	15	0	0
	10-14	38,725	15	0	45	33	33
	15-19	89,101	138	0	96	143	143
	20-24	436,105	279	0	376	74	74
	25-29	1,032,803	934	0	1,050	88	88
	30-34	1,345,598	1,146	0	2,294	49	49
	35-39	1,436,708	3,533	0	4,045	87	87
	40-44	1,293,063	4,020	0	6,074	66	66
	45-49	930,251	4,593	0	6,719	68	68
	50-54	500,352	3,724	0	5,676	65	65
	55-59	224,947	3,020	0	3,466	87	87
	60-64	75,195	991	0	1,617	61	61
	65-69	16,981	642	0	528	121	121
	70 and over	4,493	81	0	260	31	31
All ages	\$ 7,479,603	\$ 23,116	\$ 0	\$ 32,270	72%	72%	

TABLE D—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1970 (7)	0	\$ 11,600	\$ 25	\$ 0	\$ 5	499%	499%
	1	7,569	0	0	3	0	0
	2-4	13,743	5	0	4	124	124
	5-9	27,530	0	0	12	0	0
	10-14	36,618	20	0	39	51	51
	15-19	90,257	5	0	98	5	5
	20-24	542,753	373	0	452	82	82
	25-29	1,188,081	1,089	0	1,101	98	98
	30-34	1,474,941	1,885	0	2,192	85	85
	35-39	1,470,891	2,318	0	3,684	62	62
	40-44	1,387,661	3,784	0	5,814	65	65
	45-49	999,166	5,275	0	6,493	81	81
	50-54	528,130	3,010	0	5,408	55	55
	55-59	257,929	3,072	0	3,605	85	85
	60-64	88,734	1,001	0	1,706	58	58
	65-69	21,842	404	0	627	64	64
	70 and over	4,019	161	0	200	80	80
All ages	\$ 8,151,472	\$ 22,427	\$ 0	\$ 31,443	71%	71%	
1971 (6)	0	\$ 11,787	\$ 0	\$ 0	\$ 6	0%	0%
	1	7,364	0	0	3	0	0
	2-4	13,507	0	0	5	0	0
	5-9	29,949	0	0	10	0	0
	10-14	39,242	25	0	37	67	67
	15-19	95,365	47	0	104	45	45
	20-24	567,211	316	0	465	67	67
	25-29	1,311,669	1,341	0	1,120	119	119
	30-34	1,694,792	2,237	0	2,291	97	97
	35-39	1,701,787	3,365	0	3,746	89	89
	40-44	1,554,700	5,530	0	5,784	95	95
	45-49	1,107,647	5,165	0	6,258	82	82
	50-54	627,505	3,042	0	5,433	55	55
	55-59	299,317	2,658	0	3,568	74	74
	60-64	107,403	1,002	0	1,885	53	53
	65-69	26,150	356	0	683	52	52
	70 and over	5,040	86	0	210	40	40
All ages	\$ 9,200,442	\$ 25,170	\$ 0	\$ 31,608	80%	80%	
1972 (5)	0	\$ 10,883	\$ 2	\$ 0	\$ 6	33%	33%
	1	9,356	0	0	4	0	0
	2-4	15,873	0	0	6	0	0
	5-9	29,852	0	0	9	0	0
	10-14	41,252	210	0	34	617	617
	15-19	95,345	104	0	105	99	99
	20-24	547,504	326	0	454	71	71
	25-29	1,454,301	1,314	0	1,178	112	112
	30-34	2,010,114	1,797	0	2,428	74	74
	35-39	1,959,145	3,587	0	3,782	94	94
	40-44	1,726,760	3,274	0	5,432	60	60
	45-49	1,271,608	4,487	0	6,237	71	71
	50-54	726,766	3,939	0	5,148	76	76
	55-59	342,187	3,164	0	3,539	89	89
	60-64	119,730	1,288	0	1,972	65	65
	65-69	30,483	576	0	731	78	78
	70 and over	5,983	192	0	188	102	102
All ages	\$ 10,397,149	\$ 24,260	\$ 0	\$ 31,253	78%	78%	

TABLE D—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1973 (4)	0	\$ 12,297	\$ 0	\$ 0	\$ 8	0%	0%
	1	8,680	0	0	5	0	0
	2-4	15,353	0	0	6	0	0
	5-9	26,979	50	0	8	624	624
	10-14	37,924	119	0	26	457	457
	15-19	88,940	180	0	95	189	189
	20-24	577,016	377	0	483	78	78
	25-29	1,580,596	1,119	0	1,229	91	91
	30-34	2,310,784	1,566	0	2,576	60	60
	35-39	2,155,810	2,650	0	3,636	72	72
	40-44	1,844,757	3,867	0	5,228	73	73
	45-49	1,412,635	3,743	0	6,043	61	61
	50-54	857,279	3,082	0	5,448	56	56
	55-59	399,658	2,752	0	3,757	73	73
	60-64	145,450	1,167	0	2,202	52	52
	65-69	37,219	201	0	771	26	26
70 and over	7,448	197	0	182	108	108	
	All ages	\$ 11,518,834	\$ 21,070	\$ 0	\$ 31,703	66%	66%
1974 (3)	0	\$ 12,169	\$ 0	\$ 0	\$ 10	0%	0%
	1	9,111	0	0	6	0	0
	2-4	16,141	0	0	8	0	0
	5-9	30,802	0	0	10	0	0
	10-14	40,482	0	0	21	0	0
	15-19	101,917	149	0	104	143	143
	20-24	621,116	624	0	501	124	124
	25-29	1,812,531	1,050	0	1,369	76	76
	30-34	2,717,583	2,271	0	2,689	84	84
	35-39	2,501,952	3,307	0	3,579	92	92
	40-44	2,089,386	3,859	0	4,965	77	77
	45-49	1,619,767	7,774	0	5,797	134	134
	50-54	1,018,631	2,778	0	5,459	50	50
	55-59	478,404	2,501	0	3,709	67	67
	60-64	179,016	738	0	2,153	34	34
	65-69	48,322	827	0	847	97	97
70 and over	11,995	138	0	247	55	55	
	All ages	\$ 13,309,334	\$ 26,016	\$ 0	\$ 31,474	83%	83%
1975 (2)	0	\$ 13,788	\$ 0	\$ 0	\$ 18	0%	0%
	1	8,661	0	0	7	0	0
	2-4	17,644	0	0	9	0	0
	5-9	33,123	0	0	12	0	0
	10-14	44,696	0	0	19	0	0
	15-19	104,451	16	0	103	16	16
	20-24	587,904	237	0	433	54	54
	25-29	1,867,764	1,178	0	1,186	99	99
	30-34	2,859,013	2,192	25	2,500	87	88
	35-39	2,701,416	3,084	0	3,043	101	101
	40-44	2,166,684	3,052	0	4,133	73	73
	45-49	1,760,751	5,146	0	4,800	107	107
	50-54	1,192,613	2,389	0	4,841	49	49
	55-59	574,045	2,646	0	3,176	83	83
	60-64	227,749	1,365	0	1,960	69	69
	65-69	70,078	240	0	959	25	25
70 and over	10,642	93	0	160	58	58	
	All ages	\$ 14,241,031	\$ 21,638	\$ 25	\$ 27,359	79%	79%

TABLE D—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1976 (1)	0	\$ 15,145	\$ 326	\$ 0	\$ 87	374%	374%
	1	11,023	0	0	15	0	0
	2-4	20,442	0	0	13	0	0
	5-9	33,449	0	0	13	0	0
	10-14	42,327	0	0	14	0	0
	15-19	100,579	0	0	92	0	0
	20-24	650,223	857	0	446	192	192
	25-29	2,091,378	1,208	0	1,203	100	100
	30-34	3,349,522	1,831	0	2,518	72	72
	35-39	3,059,242	1,514	0	2,661	56	56
	40-44	2,473,697	2,988	0	3,394	88	88
	45-49	1,999,819	2,500	0	3,906	64	64
	50-54	1,375,348	2,475	0	3,614	68	68
	55-59	691,870	2,057	0	2,550	80	80
	60-64	281,835	901	0	1,675	53	53
65-69	88,944	594	0	867	68	68	
70 and over	17,021	221	0	187	118	118	
	All ages	\$ 16,301,872	\$ 17,472	\$ 0	\$ 23,255	75%	75%
All years (1-15)	0	\$ 156,836	\$ 365	\$ 0	\$ 164	222%	222%
	1	122,876	5	0	71	7	7
	2-4	204,317	48	0	100	48	48
	5-9	385,895	140	0	236	59	59
	10-14	558,636	757	0	502	150	150
	15-19	1,435,090	1,201	0	1,544	78	78
	20-24	7,131,562	5,700	0	6,572	86	86
	25-29	17,500,844	14,681	0	17,840	82	82
	30-34	24,864,075	29,078	25	39,350	73	73
	35-39	25,156,823	51,402	0	65,692	78	78
	40-44	21,496,563	67,515	0	91,991	73	73
	45-49	15,522,599	76,451	0	95,678	79	79
	50-54	9,088,483	55,605	0	79,322	70	70
	55-59	4,188,553	39,512	0	49,550	79	79
	60-64	1,539,253	15,467	0	26,689	57	57
65-69	416,864	7,544	0	10,016	75	75	
70 and over	80,920	2,162	0	3,020	71	71	
	All ages	\$129,850,197	\$367,633	\$ 25	\$488,337	75%	75%

TABLE D—Continued
 STANDARD MEDICALLY EXAMINED ISSUES OF 1962-76
 FEMALE LIVES
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1965-70 Female Select Basic Table
 (Amounts Shown in \$1,000 Units)

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1962..... (15)	0	\$ 2,323	\$ 2	\$ 1	199%
	1	7,368	10	3	333
	2-4	5,926	10	3	333
	5-9	8,770	0	5	0
	10-14	8,777	0	5	0
	15-19	12,744	0	8	0
	20-24	19,680	10	20	49
	25-29	25,500	96	45	213
	30-34	42,719	536	116	462
	35-39	68,167	249	274	90
	40-44	87,751	712	496	143
	45-49	60,908	562	515	109
	50-54	33,377	272	419	64
	55-59	15,565	181	269	67
	60-64	8,971	98	229	42
65-69	1,849	29	62	46	
70 and over	254	10	29	34	
	All ages	\$ 410,655	\$ 2,777	\$ 2,499	111%
1963..... (14)	0	\$ 3,033	\$ 0	\$ 1	0%
	1	5,100	2	2	99
	2-4	4,132	0	2	0
	5-9	8,262	0	5	0
	10-14	7,834	2	4	49
	15-19	11,987	0	8	0
	20-24	20,991	15	20	74
	25-29	25,440	32	41	78
	30-34	49,652	129	125	103
	35-39	80,188	206	297	69
	40-44	106,696	527	555	94
	45-49	79,891	362	577	62
	50-54	40,639	351	452	77
	55-59	21,539	184	341	53
	60-64	11,814	153	271	56
65-69	3,134	417	100	416	
70 and over	412	20	44	45	
	All ages	\$ 480,752	\$ 2,400	\$ 2,845	84%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1964..... (13)	0	\$ 3,803	\$ 0	\$ 1	0%
	1	1,823	0	1	0
	2-4	3,650	0	1	0
	5-9	7,951	0	5	0
	10-14	7,893	5	4	124
	15-19	13,621	50	9	555
	20-24	21,046	10	18	55
	25-29	31,560	41	47	87
	30-34	54,233	104	125	83
	35-39	90,170	239	307	77
	40-44	113,423	574	527	108
	45-49	83,031	467	544	85
	50-54	49,221	340	488	69
	55-59	23,410	221	334	67
	60-64	14,137	150	291	51
65-69	3,327	197	99	198	
70 and over	756	3	78	3	
	All ages	\$ 523,064	\$ 2,404	\$ 2,879	84%
1965..... (12)	0	\$ 3,788	\$ 0	\$ 1	0%
	1	2,194	0	1	0
	2-4	3,813	0	1	0
	5-9	8,609	0	5	0
	10-14	7,683	0	4	0
	15-19	15,787	3	10	29
	20-24	25,668	18	20	89
	25-29	35,083	30	47	63
	30-34	59,778	53	126	42
	35-39	100,035	158	311	50
	40-44	124,120	377	497	75
	45-49	91,900	278	526	52
	50-54	53,163	717	461	155
	55-59	24,051	463	288	160
	60-64	11,456	256	208	123
65-69	4,387	83	118	70	
70 and over	892	7	76	9	
	All ages	\$ 572,414	\$ 2,443	\$ 2,700	90%
1966..... (11)	0	\$ 4,505	\$ 0	\$ 1	0%
	1	2,079	0	1	0
	2-4	3,211	0	1	0
	5-9	10,584	5	5	99
	10-14	9,641	5	5	99
	15-19	18,313	20	11	181
	20-24	28,483	5	20	24
	25-29	37,173	106	44	240
	30-34	61,407	116	119	97
	35-39	94,567	124	270	45
	40-44	126,117	392	474	82
	45-49	102,064	393	538	73
	50-54	54,925	258	430	59
	55-59	27,372	258	278	92
	60-64	10,796	147	173	84
65-69	4,919	227	124	183	
70 and over	1,672	13	119	10	
	All ages	\$ 597,834	\$ 2,069	\$ 2,613	79%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1967 (10)	0	\$ 4,053	\$ 0	\$ 1	0%
	1	2,359	0	1	0
	2-4	4,963	0	1	0
	5-9	11,474	0	5	0
	10-14	10,003	0	6	0
	15-19	16,241	20	9	222
	20-24	29,056	8	20	39
	25-29	38,087	17	40	42
	30-34	61,308	43	109	39
	35-39	99,497	166	263	63
	40-44	126,195	282	444	63
	45-49	108,632	656	523	125
	50-54	63,171	589	428	137
	55-59	31,616	188	262	71
	60-64	13,779	268	201	133
	65-69	4,957	108	115	93
70 and over	1,673	44	105	41	
	All ages	\$ 627,070	\$ 2,389	\$ 2,533	94%
1968 (9)	0	\$ 3,376	\$ 0	\$ 1	0%
	1	2,410	0	1	0
	2-4	3,413	0	1	0
	5-9	10,301	0	4	0
	10-14	10,706	0	6	0
	15-19	16,017	10	9	111
	20-24	25,369	8	17	47
	25-29	39,012	32	36	88
	30-34	61,491	204	100	203
	35-39	96,657	380	235	161
	40-44	126,063	410	409	100
	45-49	112,493	354	498	71
	50-54	72,600	290	473	61
	55-59	36,182	222	255	87
	60-64	15,931	87	216	40
	65-69	4,213	43	89	48
70 and over	939	4	52	7	
	All ages	\$ 637,180	\$ 2,044	\$ 2,402	85%
1969 (8)	0	\$ 4,448	\$ 0	\$ 1	0%
	1	2,852	0	1	0
	2-4	5,711	0	1	0
	5-9	9,675	0	3	0
	10-14	12,703	0	7	0
	15-19	15,874	30	9	333
	20-24	29,123	18	19	94
	25-29	43,968	52	37	140
	30-34	79,291	25	116	21
	35-39	105,789	171	234	73
	40-44	130,458	482	391	123
	45-49	128,042	554	516	107
	50-54	80,347	176	487	36
	55-59	43,750	223	278	80
	60-64	16,322	50	206	24
	65-69	5,751	21	110	19
70 and over	1,806	23	101	22	
	All ages	\$ 715,918	\$ 1,825	\$ 2,517	73%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1970 (7)	0	\$ 5,600	\$ 0	\$ 2	0%
	1	3,133	0	1	0
	2-4	6,511	0	2	0
	5-9	12,413	0	4	0
	10-14	12,596	0	7	0
	15-19	16,878	2	9	22
	20-24	33,894	2	21	9
	25-29	53,154	38	41	92
	30-34	82,038	88	109	80
	35-39	121,693	455	245	185
	40-44	144,151	298	397	75
	45-49	141,357	419	520	80
	50-54	90,010	401	503	79
	55-59	44,878	246	260	94
	60-64	21,018	142	245	57
	65-69	7,522	30	240	12
70 and over	2,118	12	80	14	
	All ages	\$ 798,972	\$ 2,133	\$ 2,686	79%
1971 (6)	0	\$ 4,830	\$ 0	\$ 2	0%
	1	3,647	0	1	0
	2-4	7,131	0	2	0
	5-9	15,056	0	4	0
	10-14	15,112	0	7	0
	15-19	18,000	3	10	29
	20-24	37,984	36	22	163
	25-29	73,128	260	52	499
	30-34	114,368	80	135	59
	35-39	145,272	155	262	59
	40-44	161,968	163	398	40
	45-49	159,278	362	517	70
	50-54	106,172	301	534	56
	55-59	56,207	272	291	93
	60-64	25,040	121	254	47
	65-69	7,255	25	109	22
70 and over	1,845	10	52	19	
	All ages	\$ 952,302	\$ 1,788	\$ 2,652	67%
1972 (5)	0	\$ 5,103	\$ 0	\$ 2	0%
	1	4,795	0	2	0
	2-4	6,758	0	2	0
	5-9	11,574	0	3	0
	10-14	17,162	0	7	0
	15-19	23,077	0	12	0
	20-24	43,851	0	24	0
	25-29	86,813	0	59	0
	30-34	139,006	43	144	29
	35-39	167,155	240	265	90
	40-44	180,065	295	385	76
	45-49	184,583	570	527	108
	50-54	122,127	253	562	45
	55-59	63,709	199	306	65
	60-64	27,021	45	223	20
	65-69	8,611	45	114	39
70 and over	2,203	22	51	43	
	All ages	\$ 1,093,620	\$ 1,712	\$ 2,688	64%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1973..... (4)	0	\$ 6,104	\$ 0	\$ 3	0%
	1	3,678	0	2	0
	2-4	6,705	0	2	0
	5-9	14,727	0	4	0
	10-14	15,896	0	6	0
	15-19	22,235	0	11	0
	20-24	52,690	34	28	121
	25-29	104,172	0	69	0
	30-34	180,047	236	168	140
	35-39	202,788	290	295	98
	40-44	200,558	213	382	55
	45-49	205,777	285	523	54
	50-54	141,996	468	590	79
	55-59	73,366	245	318	77
	60-64	31,905	56	224	24
65-69	12,014	167	132	126	
70 and over	3,310	31	60	51	
	All ages	\$ 1,277,977	\$ 2,025	\$ 2,817	72%
1974..... (3)	0	\$ 8,051	\$ 0	\$ 6	0%
	1	4,665	0	3	0
	2-4	9,648	0	4	0
	5-9	17,031	0	5	0
	10-14	17,441	10	6	166
	15-19	25,433	0	13	0
	20-24	63,361	31	33	93
	25-29	140,348	27	89	30
	30-34	235,755	160	199	80
	35-39	238,282	92	290	31
	40-44	242,664	159	380	41
	45-49	226,124	606	499	121
	50-54	166,398	474	585	81
	55-59	81,434	170	305	55
	60-64	39,608	400	248	161
65-69	13,226	132	109	121	
70 and over	5,142	6	72	8	
	All ages	\$ 1,534,619	\$ 2,267	\$ 2,846	80%
1975..... (2)	0	\$ 6,684	\$ 0	\$ 8	0%
	1	5,743	0	4	0
	2-4	12,199	0	6	0
	5-9	22,659	10	7	142
	10-14	20,224	0	6	0
	15-19	25,496	0	13	0
	20-24	71,251	0	39	0
	25-29	175,889	14	105	13
	30-34	274,606	216	212	101
	35-39	285,931	84	282	29
	40-44	266,393	206	322	63
	45-49	241,745	189	373	50
	50-54	180,807	309	474	65
	55-59	104,167	85	293	29
	60-64	52,321	36	234	15
65-69	19,391	32	125	25	
70 and over	3,748	14	41	34	
	All ages	\$ 1,769,263	\$ 1,195	\$ 2,544	47%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1976..... (1)	0	\$ 8,504	\$ 0	\$ 40	0%
	1	6,772	0	8	0
	2-4	12,026	0	7	0
	5-9	20,992	0	7	0
	10-14	22,105	0	6	0
	15-19	29,667	0	13	0
	20-24	85,757	20	43	46
	25-29	211,523	97	116	83
	30-34	331,293	128	235	54
	35-39	327,878	11	253	4
	40-44	287,495	152	252	60
	45-49	255,052	206	291	70
	50-54	195,158	44	367	11
	55-59	122,581	225	245	91
	60-64	63,229	129	182	70
	65-69	19,953	32	82	39
70 and over	5,610	13	38	34	
	All ages	\$ 2,005,602	\$ 1,057	\$ 2,185	48%
All years.... (1-15)	0	\$ 74,212	\$ 2	\$ 71	2%
	1	58,625	12	32	37
	2-4	95,804	10	36	27
	5-9	190,083	15	71	21
	10-14	195,784	22	86	25
	15-19	281,375	138	154	90
	20-24	588,211	215	364	59
	25-29	1,120,857	842	868	97
	30-34	1,826,998	2,161	2,138	101
	35-39	2,224,077	3,020	4,083	73
	40-44	2,424,125	5,242	6,309	83
	45-49	2,180,882	6,263	7,487	83
	50-54	1,450,117	5,243	7,253	72
	55-59	769,835	3,385	4,323	78
	60-64	363,355	2,138	3,405	62
	65-69	120,516	1,588	1,728	91
70 and over	32,387	232	998	23	
	All ages	\$13,997,251	\$30,528	\$39,406	77%

TABLE E
 STANDARD NONMEDICAL ISSUES OF 1962-76
 MALE LIVES
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1965-70 Male Select Basic Table
 (Amounts Shown in \$1,000 Units)

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1962 (15)	0	\$ 74,672	\$ 44	\$ 0	\$ 39	112%	112%
	1	31,398	18	0	21	85	85
	2-4	41,551	17	0	40	42	42
	5-9	64,439	140	0	75	186	186
	10-14	104,175	113	0	111	101	101
	15-19	452,480	378	0	557	67	67
	20-24	728,522	785	0	1,102	71	71
	25-29	619,041	1,090	1	1,485	73	73
	30-34	323,359	1,052	0	1,297	81	81
	35-39	138,086	836	0	914	91	91
	40-44	22,209	249	0	233	106	106
	45-49	1,767	13	0	29	44	44
	50 and over	1,019	34	0	37	91	91
	All ages	\$ 2,602,723	\$ 4,769	\$ 1	\$ 5,940	80%	80%
1963 (14)	0	\$ 92,987	\$ 40	\$ 0	\$ 42	95%	95%
	1	34,441	2	0	19	10	10
	2-4	52,523	39	0	44	88	88
	5-9	85,957	85	0	102	83	83
	10-14	140,408	230	0	152	151	151
	15-19	501,552	503	0	601	83	83
	20-24	866,511	1,049	0	1,209	86	86
	25-29	712,172	1,174	0	1,528	76	76
	30-34	355,522	917	0	1,262	72	72
	35-39	150,906	883	0	873	101	101
	40-44	24,260	194	0	228	85	85
	45-49	2,251	3	0	33	9	9
	50 and over	682	5	0	30	16	16
	All ages	\$ 3,020,178	\$ 5,124	\$ 0	\$ 6,123	84%	84%

TABLE E—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1964 (13)	0	\$ 97,752	\$ 28	\$ 0	\$ 35	79%	79%
	1	36,318	9	0	16	56	56
	2-4	57,441	40	0	40	99	99
	5-9	93,588	141	0	109	129	129
	10-14	151,378	112	0	166	67	67
	15-19	558,321	556	0	641	86	86
	20-24	1,000,918	1,029	0	1,251	82	82
	25-29	787,571	1,286	0	1,492	86	86
	30-34	378,944	1,013	0	1,189	85	85
	35-39	157,288	841	0	806	104	104
	40-44	25,772	210	0	214	98	98
	45-49	2,201	22	0	28	78	78
	50 and over	603	1	0	22	4	4
	All ages	\$ 3,348,101	\$ 5,288	\$ 0	\$ 6,009	88%	88%
1965 (12)	0	\$ 100,740	\$ 18	\$ 0	\$ 32	56%	56%
	1	38,472	1	0	13	7	7
	2-4	60,195	4	0	33	12	12
	5-9	99,431	127	0	108	117	117
	10-14	164,689	193	0	183	105	105
	15-19	707,937	759	0	780	97	97
	20-24	1,106,434	908	0	1,255	72	72
	25-29	831,315	1,180	0	1,395	84	84
	30-34	387,209	1,092	0	1,903	99	99
	35-39	149,924	660	0	695	94	94
	40-44	25,256	154	0	185	83	83
	45-49	2,569	5	0	28	17	17
	50 and over	1,536	21	0	35	59	59
	All ages	\$ 3,675,713	\$ 5,122	\$ 0	\$ 5,835	88%	88%
1966 (11)	0	\$ 104,178	\$ 12	\$ 0	\$ 32	37%	37%
	1	39,632	5	0	12	41	41
	2-4	62,444	15	0	27	55	55
	5-9	103,836	134	0	101	132	132
	10-14	167,845	226	0	189	119	119
	15-19	629,418	581	0	665	87	87
	20-24	1,080,801	1,032	0	1,110	92	92
	25-29	870,036	744	0	1,264	58	58
	30-34	386,708	779	0	977	79	79
	35-39	142,925	533	0	591	90	90
	40-44	25,381	181	0	167	108	108
	45-49	2,634	9	0	26	34	34
	50 and over	837	1	0	15	6	6
	All ages	\$ 3,616,682	\$ 4,252	\$ 0	\$ 5,176	82%	82%

TABLE E—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Excluding Deaths	Includ- ing War Deaths
1967 (10)	0	\$ 109,922	\$ 40	\$ 0	\$ 35	114%	114%
	1	41,985	0	0	13	0	0
	2-4	65,960	32	0	23	139	139
	5-9	106,514	157	0	89	176	176
	10-14	168,372	215	0	195	110	110
	15-19	651,146	617	0	687	89	89
	20-24	1,321,137	1,293	0	1,273	101	101
	25-29	1,036,159	1,355	0	1,321	102	102
	30-34	473,442	832	0	1,052	79	79
	35-39	171,659	573	0	628	91	91
	40-44	35,129	229	0	207	110	110
	45-49	3,888	10	0	34	29	29
	50 and over	915	8	0	14	57	57
	All ages	\$ 4,186,236	\$ 5,361	\$ 0	\$ 5,571	96%	96%
1968 (9)	0	\$ 117,619	\$ 29	\$ 0	\$ 41	70%	70%
	1	44,398	24	0	14	171	171
	2-4	67,672	20	0	21	95	95
	5-9	107,829	56	0	75	74	74
	10-14	172,436	198	0	205	96	96
	15-19	672,625	721	0	712	101	101
	20-24	1,608,082	1,611	0	1,462	110	110
	25-29	1,228,433	1,327	0	1,418	93	93
	30-34	559,196	1,263	0	1,102	114	114
	35-39	215,314	759	0	695	109	109
	40-44	51,806	320	0	276	115	115
	45-49	5,501	14	0	43	32	32
	50 and over	2,143	23	0	31	74	74
	All ages	\$ 4,853,059	\$ 6,365	\$ 0	\$ 6,095	104%	104%
1969 (8)	0	\$ 130,984	\$ 20	\$ 0	\$ 50	39%	39%
	1	49,006	6	0	17	35	35
	2-4	71,798	14	0	22	63	63
	5-9	110,361	61	0	60	101	101
	10-14	177,195	307	0	207	148	148
	15-19	684,214	724	0	731	99	99
	20-24	1,754,501	1,486	0	1,517	97	97
	25-29	1,291,402	1,214	0	1,329	91	91
	30-34	572,471	923	0	987	93	93
	35-39	223,633	737	0	637	115	115
	40-44	53,607	358	0	255	140	140
	45-49	6,061	44	0	43	102	102
	50 and over	2,739	32	0	37	86	86
	All ages	\$ 5,127,977	\$ 5,926	\$ 0	\$ 5,892	101%	101%

TABLE E—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1970. . . . (7)	0	\$ 152,367	\$ 56	\$ 0	\$ 63	88%	88%
	1	59,132	23	0	23	99	99
	2-4	83,118	43	0	27	159	159
	5-9	121,894	9	0	53	16	16
	10-14	185,315	157	0	202	77	77
	15-19	770,034	804	0	826	97	97
	20-24	2,118,953	1,787	0	1,769	101	101
	25-29	1,411,440	1,279	0	1,320	96	96
	30-34	608,309	769	0	913	84	84
	35-39	242,915	724	0	615	117	117
	40-44	59,464	262	0	252	103	103
	45-49	7,199	54	0	46	117	117
	50 and over	3,281	6	0	40	14	14
	All ages	\$ 5,823,427	\$ 5,973	\$ 0	\$ 6,149	97%	97%
1971. . . . (6)	0	\$ 175,404	\$ 35	\$ 0	\$ 82	42%	42%
	1	71,797	22	0	30	73	73
	2-4	106,323	3	0	37	8	8
	5-9	150,318	22	0	53	41	41
	10-14	222,493	309	0	217	142	142
	15-19	843,934	932	0	913	102	102
	20-24	2,377,074	1,924	0	1,949	98	98
	25-29	1,636,596	1,459	0	1,411	103	103
	30-34	684,489	809	0	934	86	86
	35-39	257,531	593	0	574	103	103
	40-44	61,949	203	0	233	87	87
	45-49	10,514	0	0	59	0	0
	50 and over	4,912	15	0	50	29	29
	All ages	\$ 6,603,339	\$ 6,326	\$ 0	\$ 6,542	97%	97%
1972. . . . (5)	0	\$ 202,159	\$ 107	\$ 0	\$ 105	101%	101%
	1	89,912	51	0	42	121	121
	2-4	153,476	57	0	58	98	98
	5-9	212,611	60	0	67	89	89
	10-14	313,714	321	0	267	120	120
	15-19	1,047,310	1,135	0	1,142	99	99
	20-24	2,628,227	2,165	0	2,181	99	99
	25-29	1,947,646	1,484	0	1,593	93	93
	30-34	761,535	823	0	929	88	88
	35-39	275,898	548	0	539	101	101
	40-44	69,307	256	0	220	116	116
	45-49	12,609	28	0	61	45	45
	50 and over	5,389	40	0	49	81	81
	All ages	\$ 7,719,800	\$ 7,075	\$ 0	\$ 7,253	98%	98%

TABLE E—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1973 (4)	0	\$ 246,729	\$ 84	\$ 0	\$ 152	55%	55%
	1	98,874	27	0	52	51	51
	2-4	191,396	46	0	79	58	58
	5-9	256,769	31	0	80	38	38
	10-14	371,587	298	0	266	112	112
	15-19	1,263,415	1,487	0	1,335	111	111
	20-24	2,882,515	2,080	0	2,406	86	86
	25-29	2,224,035	1,414	0	1,743	81	81
	30-34	867,807	1,011	0	978	103	103
	35-39	291,086	414	0	498	83	83
	40-44	74,470	293	0	213	137	137
	45-49	16,253	100	0	69	144	144
	50 and over	7,280	64	0	59	108	108
	All ages	\$ 8,792,222	\$ 7,349	\$ 0	\$ 7,930	93%	93%
	1974 (3)	0	\$ 279,505	\$ 144	\$ 0	\$ 221	65%
1		108,197	27	0	68	39	39
2-4		202,670	46	0	94	48	48
5-9		267,583	55	0	86	63	63
10-14		356,518	95	0	202	47	47
15-19		1,304,360	1,439	0	1,326	108	108
20-24		3,110,788	2,631	0	2,504	105	105
25-29		2,535,346	1,658	0	1,924	86	86
30-34		954,196	915	0	951	96	96
35-39		299,504	562	0	433	129	129
40-44		80,031	213	0	192	110	110
45-49		26,628	29	0	95	30	30
50 and over		13,758	7	0	87	8	8
All ages		\$ 9,539,090	\$ 7,821	\$ 0	\$ 8,183	96%	96%
1975 (2)		0	\$ 325,867	\$ 187	\$ 0	\$ 391	47%
	1	119,318	73	0	96	76	76
	2-4	204,854	67	0	107	62	62
	5-9	282,446	36	0	98	36	36
	10-14	338,163	119	0	151	78	78
	15-19	1,253,759	1,481	0	1,225	120	120
	20-24	3,355,807	2,312	0	2,466	94	94
	25-29	3,085,271	2,096	0	1,971	106	106
	30-34	1,176,901	1,063	0	1,033	102	102
	35-39	357,986	398	0	408	97	97
	40-44	93,337	116	0	179	64	64
	45-49	29,147	17	0	79	21	21
	50 and over	23,895	70	0	117	59	59
	All ages	\$10,646,758	\$ 8,035	\$ 0	\$ 8,321	97%	97%

TABLE E—MALE LIVES—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Exclud- ing War Deaths	Includ- ing War Deaths
1976 (1)	0	\$ 416,274	\$ 565	\$ 0	\$ 2,254	25%	25%
	1	158,851	30	0	196	15	15
	2-4	272,408	83	0	169	49	49
	5-9	393,750	105	0	150	69	69
	10-14	428,210	116	0	153	75	75
	15-19	1,580,076	1,411	0	1,433	98	98
	20-24	4,424,060	2,898	0	3,029	95	95
	25-29	4,111,271	2,368	0	2,380	99	99
	30-34	1,529,797	753	0	1,153	65	65
	35-39	412,720	416	0	363	114	114
	40-44	100,221	126	0	138	91	91
	45-49	35,434	72	0	69	104	104
	50 and over	31,700	203	0	103	197	197
		All ages	\$13,894,778	\$ 9,146	\$ 0	\$ 11,590	79%
All years (1-15)	0	\$ 2,627,168	\$ 1,409	\$ 0	\$ 3,574	39%	39%
	1	1,021,736	318	0	632	50	50
	2-4	1,693,838	526	0	821	64	64
	5-9	2,457,333	1,219	0	1,306	93	93
	10-14	3,462,505	3,009	0	2,866	104	104
	15-19	12,920,588	13,528	0	13,574	99	99
	20-24	30,364,337	24,990	0	26,483	94	94
	25-29	24,327,739	21,128	1	23,574	89	89
	30-34	10,019,891	14,014	0	15,850	88	88
	35-39	3,487,383	9,477	0	9,269	102	102
	40-44	802,206	3,364	0	3,192	105	105
	45-49	164,664	420	0	742	56	56
	50 and over	100,697	530	0	726	73	73
		All ages	\$93,450,090	\$93,932	\$ 1	\$102,609	92%

TABLE E—Continued
 STANDARD NONMEDICAL ISSUES OF 1962-76
 FEMALE LIVES
 EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1965-70 Female Select Basic Table
 (Amounts Shown in \$1,000 Units)

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1962..... (15)	0	\$ 41,585	\$ 9	\$ 14	64%
	1	16,786	5	6	83
	2-4	19,672	7	9	77
	5-9	21,762	15	13	115
	10-14	21,353	5	12	41
	15-19	70,915	69	47	146
	20-24	91,222	49	94	52
	25-29	62,623	107	111	96
	30-34	61,497	135	167	80
	35-39	48,129	193	193	99
	40-44	9,749	38	55	69
	45-49	363	5	3	166
	50 and over	48	0	0	0
		All ages	\$ 465,709	\$ 637	\$ 724
1963..... (14)	0	\$ 51,692	\$ 7	\$ 15	46%
	1	18,617	6	6	99
	2-4	25,880	13	11	118
	5-9	31,647	21	19	110
	10-14	34,106	18	18	99
	15-19	89,222	34	59	57
	20-24	116,718	86	110	78
	25-29	81,293	84	132	64
	30-34	73,355	141	185	76
	35-39	57,577	181	215	84
	40-44	11,407	63	59	106
	45-49	457	2	3	66
	50 and over	137	2	1	199
		All ages	\$ 592,113	\$ 658	\$ 833
1964..... (13)	0	\$ 56,803	\$ 23	\$ 16	143%
	1	20,162	0	6	0
	2-4	29,196	8	11	72
	5-9	36,059	28	21	133
	10-14	40,118	11	22	49
	15-19	109,017	39	70	55
	20-24	144,646	74	123	60
	25-29	100,100	98	148	66
	30-34	83,893	150	193	77
	35-39	62,094	155	212	73
	40-44	13,552	57	63	90
	45-49	792	10	5	199
	50 and over	122	0	2	0
		All ages	\$ 696,559	\$ 653	\$ 892

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1965..... (12)	0	\$ 58,550	\$ 12	\$ 16	74%
	1	22,038	0	6	0
	2-4	30,587	5	10	49
	5-9	41,310	6	22	27
	10-14	44,426	6	24	24
	15-19	133,283	71	81	87
	20-24	165,344	124	129	96
	25-29	112,797	122	151	80
	30-34	89,228	161	188	85
	35-39	63,063	151	197	76
	40-44	14,137	35	57	61
	45-49	836	0	5	0
	50 and over	95	1	1	99
	All ages	\$ 775,699	\$ 694	\$ 887	78%
1966..... (11)	0	\$ 61,591	\$ 4	\$ 16	24%
	1	21,662	4	6	66
	2-4	33,370	2	10	19
	5-9	42,954	14	21	66
	10-14	48,471	17	27	62
	15-19	152,337	113	89	126
	20-24	191,118	112	136	82
	25-29	131,149	91	156	58
	30-34	94,652	172	184	93
	35-39	64,690	174	185	94
	40-44	13,790	67	52	128
	45-49	947	3	5	59
	50 and over	162	0	1	0
	All ages	\$ 856,898	\$ 773	\$ 888	87%
1967..... (10)	0	\$ 66,851	\$ 17	\$ 18	94%
	1	23,585	9	6	149
	2-4	34,808	2	10	19
	5-9	47,117	38	20	189
	10-14	53,212	29	31	93
	15-19	165,246	80	91	87
	20-24	242,399	116	165	70
	25-29	163,766	121	171	70
	30-34	114,925	151	206	73
	35-39	77,957	147	207	71
	40-44	28,922	136	103	132
	45-49	2,254	8	11	72
	50 and over	248	10	1	999
	All ages	\$ 1,021,298	\$ 864	\$ 1,040	83%
1968..... (9)	0	\$ 71,623	\$ 27	\$ 20	134%
	1	25,299	0	7	0
	2-4	37,271	0	10	0
	5-9	51,002	2	19	10
	10-14	59,660	16	35	45
	15-19	180,900	91	97	93
	20-24	286,254	160	190	84
	25-29	199,764	137	188	72
	30-34	140,695	176	230	76
	35-39	92,812	217	227	95
	40-44	45,983	117	151	77
	45-49	4,274	25	19	131
	50 and over	483	0	3	0
	All ages	\$ 1,196,026	\$ 968	\$ 1,196	81%

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1969 (8)	0	\$ 80,896	\$ 27	\$ 26	103%
	1	29,099	0	8	0
	2-4	39,792	5	10	49
	5-9	54,181	14	18	77
	10-14	63,261	23	36	63
	15-19	205,450	101	111	90
	20-24	335,106	93	214	43
	25-29	231,377	195	197	98
	30-34	152,913	222	227	97
	35-39	99,111	220	221	99
	40-44	51,836	199	157	126
	45-49	5,311	39	22	177
	50 and over	389	0	3	0
		All ages	\$ 1,348,726	\$ 1,138	\$ 1,250
1970 (7)	0	\$ 98,503	\$ 23	\$ 36	63%
	1	34,903	0	11	0
	2-4	47,796	2	13	15
	5-9	62,977	8	19	42
	10-14	73,017	39	39	99
	15-19	242,437	120	133	90
	20-24	420,305	152	256	59
	25-29	298,754	166	232	71
	30-34	189,220	221	254	87
	35-39	113,821	162	230	70
	40-44	61,324	137	171	80
	45-49	6,243	25	23	108
	50 and over	749	3	4	74
		All ages	\$ 1,650,055	\$ 1,058	\$ 1,421
1971 (6)	0	\$ 115,277	\$ 33	\$ 47	70%
	1	44,439	16	16	99
	2-4	64,526	11	18	61
	5-9	81,482	20	22	90
	10-14	98,124	34	48	70
	15-19	285,765	114	160	71
	20-24	500,187	189	290	65
	25-29	373,243	204	266	76
	30-34	229,905	195	275	70
	35-39	128,872	175	234	74
	40-44	69,299	231	172	134
	45-49	7,473	49	24	204
	50 and over	639	2	3	66
		All ages	\$ 1,999,236	\$ 1,273	\$ 1,575
1972 (5)	0	\$ 137,599	\$ 31	\$ 64	48%
	1	57,682	2	24	8
	2-4	99,376	11	32	34
	5-9	134,433	27	36	74
	10-14	163,452	94	70	134
	15-19	391,088	129	207	62
	20-24	609,332	221	335	65
	25-29	480,766	227	326	69
	30-34	274,466	185	288	64
	35-39	143,134	237	229	103
	40-44	74,482	193	161	119
	45-49	8,561	27	25	107
	50 and over	889	2	4	49
		All ages	\$ 2,575,266	\$ 1,386	\$ 1,801

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1973 (4)	0	\$ 177,519	\$ 15	\$ 94	15%
	1	66,317	32	31	103
	2-4	128,942	22	46	47
	5-9	169,423	62	43	144
	10-14	208,144	62	79	78
	15-19	500,098	183	255	71
	20-24	774,401	330	415	79
	25-29	635,854	225	422	53
	30-34	353,999	321	334	96
	35-39	168,161	271	246	110
	40-44	84,799	191	164	116
	45-49	10,397	33	27	122
	50 and over	1,173	17	6	283
	All ages	\$ 3,279,236	\$ 1,764	\$ 2,162	82%
1974 (3)	0	\$ 206,262	\$ 104	\$ 139	74
	1	74,282	17	40	42
	2-4	149,763	45	61	73
	5-9	193,212	29	51	56
	10-14	218,311	35	75	46
	15-19	550,837	267	275	97
	20-24	969,412	405	509	79
	25-29	871,160	340	556	61
	30-34	461,093	272	393	69
	35-39	185,359	159	227	70
	40-44	78,292	104	124	83
	45-49	9,472	23	21	109
	50 and over	3,087	6	12	49
	All ages	\$ 3,970,548	\$ 1,806	\$ 2,483	73%
1975 (2)	0	\$ 246,962	\$ 75	\$ 267	28%
	1	85,476	59	59	99
	2-4	156,380	35	73	47
	5-9	205,844	21	59	35
	10-14	216,483	56	65	86
	15-19	593,931	401	295	135
	20-24	1,237,837	393	675	58
	25-29	1,199,183	603	718	83
	30-34	603,444	254	469	54
	35-39	226,071	183	224	81
	40-44	97,344	152	119	127
	45-49	15,193	23	24	95
	50 and over	3,546	2	11	18
	All ages	\$ 4,887,700	\$ 2,257	\$ 3,058	74%
1976 (1)	0	\$ 325,713	\$ 314	\$ 1,460	21%
	1	119,146	65	133	48
	2-4	212,005	45	113	39
	5-9	307,269	75	98	76
	10-14	292,819	66	81	81
	15-19	831,178	258	380	67
	20-24	1,825,625	596	913	65
	25-29	1,750,797	579	961	60
	30-34	833,421	218	594	36
	35-39	296,287	165	230	71
	40-44	111,526	131	99	132
	45-49	15,837	24	18	133
	50 and over	6,322	15	13	115
	All ages	\$ 6,927,952	\$ 2,551	\$ 5,093	50%

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
All years... (1-15)	0	\$ 1,797,434	\$ 721	\$ 2,248	32%
	1	659,499	215	365	58
	2-4	1,109,370	213	437	49
	5-9	1,480,678	380	481	79
	10-14	1,634,963	511	662	77
	15-19	4,501,709	2,070	2,350	88
	20-24	7,909,915	3,100	4,554	68
	25-29	6,692,633	3,299	4,735	70
	30-34	3,756,712	2,974	4,187	71
	35-39	1,827,147	2,790	3,277	85
	40-44	766,448	1,851	1,707	108
	45-49	88,416	296	235	125
	50 and over	18,096	60	65	92
	All ages	\$32,243,026	\$18,480	\$25,303	73%

APPENDIX II

DEFINITION OF "WAR DEATHS"

War deaths are identified by the 1970 Committee Code 99. In coding for war deaths, some companies may refer to the Report of Casualty form furnished by the various armed forces. Item 2 of this form has two boxes to indicate whether death arose in "battle" or in "non-battle." In addition to all "battle" deaths, it should be noted that many (but not all) "non-battle" deaths should be coded 99. For example, a death arising after battle, but due to burns received in battle, may be coded by the government as a "non-battle" death. In cases like this, a review of the comments given in item 2 is necessary to determine the full facts and whether death was due to the operations of war and hence should be coded 99.

Questions may arise with regard to the coding of military service deaths outside of the combat area which may nevertheless be attributable to the Vietnam operation. For example, a plane on the way to Vietnam may have crashed far outside the Vietnam area, or a death in Japan may have been the result of activity for the benefit of the Vietnam engagement. Such deaths should be treated as due to the operations of war and coded 99.

Military service deaths that cannot be tied in with the Vietnam engagement should not be treated as due to operations of war. For example, the Committee's code 89 would apply to a death which resulted from a plane crash in Germany. Deaths occurring in the United States and Canada, not tied in with the Vietnam engagement, should also be assumed not due to war.

Due to the relatively low death rate from disease among troops in Vietnam, no deaths from disease should be considered war deaths.

APPENDIX III

MEMORANDUM

To Participating Companies in the Annual Study of Mortality under Standard Ordinary Insurance Issues:

Enclosed are instructions for this year's Study of Mortality under Standard Ordinary Insurance Issues. The only change from last year's instructions, aside from the updating of the study year, concerns reinsurance ceded business. In order to avoid the impact that business resulting from "reinsurance shopping" might have on this study you are requested to exclude this type of business. Thus, if it is feasible, exclude reinsurance business that your company would have classified at higher than Standard rates had "reinsurance shopping" not been involved. Please indicate in your letter of transmittal accompanying your company's contribution how you have handled this reinsurance ceded business.

Companies have been submitting separate summary cards for medical, non-medical, and paramedical issues. Some companies now utilize other lay screening for acquiring and recording physiological data. Issues emanating from such lay screening should be included with business classified as paramedical.

For the purpose of adjusting the nonmedical experience by age within the five-year issue-age groups, please submit in your letter of transmittal a history of your nonmedical rules for the years 1962 through 1976.

Tables I and II (p. 68) have been attached to aid your company in making its contribution and also to aid us in compiling the study. Table I includes all the major errors, by company code number, that caused unnecessary work and delay in the preceding study. If your company's code number is listed, please try to correct the error. Whether your company is listed or not, you should take note of the errors that other companies have made and try to avoid making the same error. Table II simply gives you a convenient checklist to make sure you are contributing all of the information needed.

Please address your contribution to Mr. John J. Lynch, Actuarial Associate, Metropolitan Life Insurance Company, One Madison Avenue, New York, N.Y. 10010. The Committee would like to have your contribution by the end of August, 1978.

Thank you for your continued cooperation in this study.

Thomas R. Huber
Chairman

INSTRUCTIONS FOR ANNUAL STUDY OF MORTALITY UNDER
STANDARD ORDINARY ISSUES
EXPERIENCE BETWEEN 1976 AND 1977 ANNIVERSARIES

This year the Committee's annual study of mortality on Standard Ordinary insurance covers the experience between 1976 and 1977 policy anniversaries.

The study is to be carried out on a fifteen-year select and ultimate basis, by amounts of insurance, in accordance with the following instructions.

I. General Instructions

A. The data to be submitted will consist of four parts:

1. Recent medical issues (policy years 1-15) on a select basis.
2. Recent nonmedical issues (policy years 1-15) on a select basis.
3. Recent paramedical (including other lay screening) issues (policy years 1-15) on a select basis.
4. Policy years 16 and later, on an ultimate basis. Companies that are able to do so are requested to subdivide this portion of the data in the manner described in Section II, B, below.

Age is defined as the age at issue for the select contributor and the age on the 1976 anniversary for the ultimate contribution. If your company has changed to the age last birthday basis, please indicate in your letter of transmittal which years of issue are on this basis.

B. The following classes of policies should be excluded. If it is not feasible to do so, please inform the Committee in the letter of transmittal accompanying your company's contribution which of them are included. In addition, if the maximum mortality rating permitted for standard insurance in your company varies with age, please state the mortality rating applicable to different ages.

1. Policies not subject to the company's usual underwriting standards:
 - a) Group conversions.
 - b) Term conversions and renewals, unless handled in accordance with C4 below.
 - c) Family policy conversions on dependents.
 - d) Policies issued as a result of exercise of an option under a guaranteed insurability rider.
 - e) Policies issued on a "guaranteed issue" basis (such as certain pension trust business).
 - f) Policies subject to a simplified underwriting or issued up to a mortality limit higher than is customarily used by the company for Standard Ordinary insurance.
2. Substandard policies.
3. Policies in force under extended term insurance or reduced paid-up provisions.
4. Experience on wives and children insured under family policies.
5. Joint life policies.
6. Reinsurance assumed.
7. Policies issued in Canada (if possible).
8. Reinsurance ceded where you would have classified the policy at a higher than Standard rate had "reinsurance shopping" not been involved (if possible). Other reinsurance ceded should be included.

C. The recommended practice for certain policies is indicated below. Please describe any variations from this recommended practice in the letter of transmittal.

1. *Suicide during the exclusion period.*—Include in exposures for full amount and in claims for amount paid.
2. *Compromised claims.*—Same as 1.
3. *Limited benefits under aviation exclusion clause.*—Same as 1.
4. *Term conversions and renewals.*—Consider as issued on issue date of original term policy. If unable to treat in this manner, these policies should be excluded.
5. *Policies for increasing or decreasing amounts (e.g., family income policies).*—The amounts appearing in exposures and claims must be consistent. An equivalent level amount may be used in both cases.
6. *Policies with graded death benefits issued to juveniles.*—Include for full face amount in both exposures and claims.

D. Delayed claims

Any deaths in policy years 1-15 that occurred prior to the 1976 anniversary, but as the result of a delay in reporting were not included in prior contributions, should be included this year at the correct issue age and policy year of death. The issue year should be adjusted so that the issue year plus policy year of death equals 1977. The policy year of death should be calculated on the basis of the actual date of death rather than on the date on which death was reported.

Similarly, any delayed claims in policy years 16 and later should be included at the correct attained age, that is, the attained age nearest (or last) birthday at the policy anniversary preceding death.

II. Instructions for Completion of Summary Cards for Exposures, Actual Claims, and Expected Claims

A. Select mortality (policy years 1-15)

A separate set of summary cards should be submitted for (1) medical issues, (2) nonmedical issues and (3) paramedical (including other lay screening) issues. The data for each of these classes should include the exposures and actual claims by amounts of insurance on issues of 1962 through 1976, observed between 1976 and 1977 anniversaries.

The data should be reported in the following issue-age groups:

0	20-24	50-54
1	25-29	55-59
2-4	30-34	60-64
5-9	35-39	65-69
10-14	40-44	70-74
15-19	45-49	75 & over

Companies which are in a position to submit their experience separately for male and female lives are requested to do so. If your

company is unable to subdivide the data by sex, the combined data should be reported; in that case it is also requested that you furnish the Committee with figures showing the proportions (by amounts of insurance) of males and females in the standard issues of 1976 for each age group at issue, separately for medical and nonmedical issues. These proportions may be based on the business issued in 1976 or on the exposure in 1976-77 on 1976 issues, or they may be obtained by any other method that assures reasonably reliable results.

Companies that split their contribution by sex should calculate expected deaths on the 1965-70 Male Select Basic Table for males and on the 1965-70 Female Select Basic Table for females. Companies that do not split their contribution by sex should calculate expected deaths on the 1965-70 Male and Female Combined Select Basic Table. (The 1965-70 Tables are published in the *TSA, 1973 Reports*, p. 199, for age nearest birthday or the *TSA, 1974 Reports*, p. 57, for age last birthday.)

IBM card form 718668, to be completed in accordance with the instructions in Appendix A should be used for transmitting the data. Check totals should be furnished as described in Appendix A. If readily available, it is requested that you report on the summary punch cards the number of policies terminated by death for each age group at issue and policy year duration combination entering into your company's contribution to this study.

If your company changed its nonmedical rules during 1976, please advise the Committee and describe the changes.

B. Ultimate mortality (policy years sixteen and later)

This year's contribution should cover exposures and actual claims by amounts of insurance on issues of 1961 and earlier, observed between 1976 and 1977 policy anniversaries. Data should be reported for attained ages 15 through 100, on an individual attained-age basis.

Companies that are in a position to submit their experience separately for male and female lives are requested to do so. Companies unable to subdivide their contribution by sex should report the combined data.

If possible, the data should be divided into the experience on (a) premium-paying policies, and (b) policies fully paid-up by their terms. If you cannot furnish data on this basis, your contribution should be submitted without the split between premium-paying and fully paid-up policies.

Companies that are in a position to do so are also requested to subdivide their data on premium-paying business (or all their ultimate data if not split between premium-paying and fully paid-up) into (1) medical issues and (2) nonmedical issues. If your company is

unable to subdivide the data in this manner, the combined data should be reported as in the past.

Companies that split their contribution by sex should calculate expected deaths on the 1965-70 Male Ultimate Basic Table for males and on the 1965-70 Female Ultimate Basic Table for females. Companies that do not split their contribution by sex should calculate expected deaths on the 1965-70 Male and Female Combined Ultimate Basic Table. (The 1965-70 Tables are published in the *TSA, 1973 Reports*, p. 199, for age nearest birthday, or the *TSA, 1974 Reports*, p. 57, for age last birthday.)

Data should be transmitted on IBM card form 718668, completed in accordance with the instructions in Appendix A, with check totals. If readily available, it is requested that you report on the summary punch cards the number of policies terminated by death for each attained age.

III. Instructions for Completion of War Death Summary Cards

To complete the Committee's record of claims paid as a result of the Vietnam war, you are requested to furnish summary punch cards (using IBM card form 718668) for the number of policies and amounts of insurance paid as death claims due to the operations of war. This should be done for each age group at issue and policy year duration combination entering into your company's contribution to the experience between 1976 and 1977 anniversaries in (1) the Recent Medical Issues Study, (2) the Recent Nonmedical Issues Study, (3) the Recent Paramedical (including other lay screening) Issues Study, and (4) for each attained age entering into your company's contribution to the experience between 1976 and 1977 anniversaries in the Study of Ultimate Mortality. These cards are to be coded in accordance with the instructions in Appendix A, except that (1) columns 20-31 (Exposed) and 54-63 (Expected deaths) are not to be punched, (2) the number of policies and amounts of insurance paid as a result of war deaths are to be punched in columns 32-46, and (3) X is to be punched in column 76. The experience control numbers punched in columns 78-80 should be those of the respective studies in which the war deaths are included.

The war deaths to be reported are identified by the 1970 Committee code 99. In coding for war deaths some companies may refer to the Report of Casualty form furnished by the various armed forces. Item 2 of this form has two boxes to indicate whether death arose in "battle" or in "non-battle." In addition to all "battle" deaths, it should be noted that many (but not all) "non-battle" deaths should be coded 99. For example, a death arising after battle, but due to burns received in battle, may be coded by the government as a "non-battle" death. In cases like this, a review of the comments given in item 2 is necessary to determine the full facts and whether death was due to the operations of war and hence a code 99.

Questions may arise with regard to the coding of military service deaths outside of the combat area that may nevertheless be attributable to the Vietnam operation. For example, a plane on the way to Vietnam may have crashed far outside the Vietnam area, or a death in Japan may have been the result of activity for the benefit of the Vietnam engagement. Such deaths should be treated as due to the operations of war and coded 99.

Military service deaths that can not be tied in with the Vietnam engagement should not be treated as due to operations of war. For example, the Committee's code 89 would apply to a death resulting from a plane crash in Germany. Deaths occurring in the United States and Canada, not tied in with the Vietnam engagement, should also be assumed as not due to war.

Due to the relatively low death rate from disease among troops in Vietnam, no deaths from disease should be considered as war deaths.

Cases will no doubt arise which will be difficult to classify; the Committee would like to depend on the judgment of the individual companies on the coding of such cases but will be receptive to questions covering specific situations.

IV. Instructions for Completion of Cause-of-Death Summary Cards

Cause-of-death data for the death claims during policy year 1976-77 are requested separately for (1) medical issues in policy years 1-15, (2) non-medical issues in policy years 1-15, (3) paramedical (including other lay screening) issues in policy years 1-15, and (4) issues in policy years sixteen and later, subdivided as explained below. Data should be reported in the issue-age, duration, and attained-age groups defined in Appendix B.

Companies that can furnish cause-of-death data separately for male and female lives are requested to do so, even if they are unable to furnish summaries for exposures, actual claims, and expected claims subdivided by sex. Except for this, the subdivision of the deaths for compilation by cause of death should correspond to the subdivision of the exposures. If the ultimate mortality experience is not subdivided into premium-paying policies and policies fully paid-up by their terms, or if ultimate premium-paying policies are not subdivided into medical and nonmedical issues, these subdivisions should not be made for the cause-of-death data.

The data should be transmitted on IBM card form 718668, completed in accordance with the instructions in Appendix B. Check totals should be furnished as described in Appendix B; these totals should agree with the corresponding totals reported with the summary cards referred to in Section II above.

V. Instructions for Completion of Individual Death Claim Cards for Claims of \$100,000 and Over

In order to aid the Committee in analyzing the study results, companies are requested to submit data for any death claims where the amount reported under one policy, or the total amount reported for several policies issued at the same time on one individual, is \$100,000 or more.

An individual death claim card should be prepared for each such claim, using IBM card form 725178, in accordance with the instructions in Appendix C. The classification of these claims should correspond to the subdivision of the exposures. Any delayed claims should be reported at the ages and durations described in Section I, D.

A listing of these claim cards, if any, should be included with your company's contribution. If no such claims occurred, please indicate this in the letter of transmittal.

All columns of the summary cards that are part of a field should be punched; if any such column would be blank otherwise, a zero should be punched. The only blanks in the cards should be those columns that are not part of any field.

The work of the Committee would be simplified greatly if each company reviewed its contribution carefully before submitting it, making sure that all fields in the transmittal cards are punched according to the specifications given in the Appendixes. The XX (numeric) punches are one example where care is needed. Also, please be sure that the transmittal cards balance with the check totals requested in Appendixes A and B. In the past the check totals and transmittal cards have not balanced. This can occur if the contributing company uses a set of work cards to establish the check totals, and a punch is omitted in reproducing transmittal cards from the work cards. Please make every effort to prevent this from occurring.

Appendix A

Instructions for Completion of Summary Cards for Exposures, Actual Claims, and Expected Claims

(IBM Card Form 718668)

The following instructions apply to the transmittal of data for (1) the study of recent medical issues (policy years 1-15), (2) the study of recent nonmedical issues (policy years 1-15), (3) the study of recent paramedical (including other lay screening) issues (policy years 1-15), (4) the study of ultimate mortality (policy years sixteen and later), and (5) war deaths.

Columns	Item	Instructions
1-3	Company code number	Your company code number is ———.
4-5	Policy anniversary	Punch the last two digits of the calendar year in which the policy year of observation terminates. Punch 77 for data relating to the 1976-77 experience year.
6-7	Issue year	For recent issues punch the last two digits of the issue year, e.g., 60 for 1960 issues. For ultimate data, punch XX (numeric).
8-9	Duration	Punch the appropriate policy year (01 to 15) for durations 1 to 15. This will be the difference between "Policy Anniversary" and "Issue Year." For ultimate data, punch XX (numeric).

Columns	Item	Instructions
10-13	Age	Where age groups at issue are used (recent issues), punch the lowest age in columns 10-11 and the highest age in columns 12-13. For age group 75 and over, punch 75 in columns 10-11 and XX (numeric) in columns 12-13. Where individual ages at issue are used, as for ages 0, and 1, punch the individual age both in columns 10-11 and 12-13; i.e., 0000, 0101. Where individual attained ages are used (ultimate data), punch XX (numeric) in columns 10-11 and the attained age in columns 12-13. For attained age 100, use 00 in columns 12-13.
14-19		Leave blank.
20-31	Exposed (amounts)	Punch amount to the nearer \$1. If a company summarizes in units greater than \$1, fill in any zeros required to maintain the alignment of the decimal point.
32-36	Actual deaths (policies)	Punch the number of policies terminated by death, if such figures are available; if not, leave the field blank.
37-46	Actual deaths (amounts)	See instructions for columns 20-31. If the amount reported is negative (due to an adjustment of a prior contribution), an X overpunch should be entered in column 46.
47-53		Leave blank.
54-63	Expected deaths (amounts)	Show to the nearer \$1.
64-74		Leave blank.
75	Sex	Punch 1 for males, 2 for females. If data are not subdivided by sex, punch 0.
76	Mortality table	Punch 1 for 1965-70 Male Select Basic Table. Punch 2 for 1965-70 Female Select Basic Table. Punch 3 for 1965-70 Male and Female Combined Select Basic Table. Punch 4 for 1965-70 Male Ultimate Basic Table. Punch 5 for 1965-70 Female Ultimate Basic Table. Punch 6 for 1965-70 Male and Female Combined Ultimate Basic Table.
77	Age basis	Punch 0 for durations on the age nearest birthday basis. Punch 1 for durations on the age last birthday basis.
78-80	Experience control number	Enter the appropriate number from the following schedule.
		Experience Control Number
	Recent Medical Issues (Policy Years 1-15)	000
	Recent Nonmedical Issues (Policy Years 1-15)	004
	Recent Paramedical (including other lay screening) Issues (Policy Years 1-15)	008
	Policy Years Sixteen and Later:	
	Combined Premium-paying and Fully Paid-up:	
	Medical, Nonmedical, and Paramedical Issues Combined	020
	Medical Issues	026
	Nonmedical Issues	028
	Paramedical (including other lay screening) Issues	038
	Premium-paying:	
	Medical, Nonmedical, and Paramedical Issues Combined	022
	Medical Issues	030
	Nonmedical Issues	032
	Paramedical (including other lay screening) Issues	034
	Fully Paid-up	024

NOTE.—Except in fields to be left blank, a zero should be punched in all columns that would otherwise remain unpunched.

The letter of transmittal should be accompanied by totals of exposures, actual deaths (policies and amounts), and expected deaths for each experience control number included in your company's contribution, separately for males and females if your contribution is subdivided by sex. In the recent issues studies, the following check totals should be shown:

1. For each duration (1-15), all ages combined.
2. For each issue-age group summarized in this study (0, 1, 2-4, 5-9, 10-14, etc.), all durations combined.
3. Grand totals for all ages and durations combined.

In the ultimate mortality study, the check totals should be shown as follows:

1. For attained-age groups corresponding to the cause-of-death age grouping (15-24, 25-29, 30-39, etc.).
2. Grand totals for all ages combined.

Separate check totals for war deaths should be included as described above.

Appendix B

Instructions for Completion of Summary Cards for Cause-of-Death Data

(IBM Card Form 718668)

The transmission codes for cause of death to be used are for major subdivisions based on the Committee's 1970 Code for Cause of Death (*TSA 1969 Reports*, p. 1) as indicated in the following table:

Transmission Code*		Committee's 1970 Code
X0	Tuberculosis (all forms)	01, 02
X1	Other infective and parasitic diseases	03-17
X2	Malignant neoplasms	18-33
X3	Diabetes mellitus	37
X4	Cerebrovascular diseases	53
X5	Chronic rheumatic heart disease	49
X6	Ischemic heart disease (including coronary disease), chronic disease of endocardium, and other myocardial insufficiency	50
X7	Other diseases of heart	52
X8	Hypertensive disease including hypertension	51
X9	Other diseases of circulatory system	54, 55
Y0	Pneumonia and influenza	56, 57
Y1	Cirrhosis of the liver	70
Y2	Other diseases of the digestive system	64-69, 71, 72
Y3	Nephritis	73
Y4	All other diseases and unknown causes	Residual
Y5	Motor vehicle accidents	88
Y6	All other accidents	89-91, 93-96
Y7	Suicide	97
Y8	Homicide	98
Y9	Injury resulting from operations of war	99

* Use numeric X and Y.

For each cause-of-death code the data are requested for the issue-age and duration groups shown below for the recent issues studies, and for the attained-age groups shown below for the ultimate study.

Issue-Age Groups	RECENT ISSUES		ULTIMATE
	Duration Groups for Each Issue-Age Group		Attained-Age Groups
0	Policy years	1-2	15-24
1-9		3-5	25-29
10-19		6-10	30-39
20-29		11-15	40-49
30-39			50-59
40-49			60-69
50-59			70-79
60-69			80-89
70-74			90-95
75 and over			96-100

The following instructions apply to the transmittal of cause-of-death data for (1) the study of recent medical issues (policy years 1-15), (2) the study of recent nonmedical issues (policy years 1-15), (3) the study of recent paramedical (including other lay screening) issues (policy years 1-15), and (4) the study of ultimate mortality (policy years 16 and later).

Columns	Item	Instructions
1-3	Company code number	Your company code number is ———.
4-5	Policy anniversary	Punch the last two digits of the calendar year in which the policy year of observation terminates. Punch 77 for data relating to the 1976-77 experience year.
6-7		Leave blank.
8-9	Duration	Punch 02 for policy years 1 and 2 combined. Punch 05 for policy years 3 to 5 combined. Punch 10 for policy years 6 to 10 combined. Punch 15 for policy years 11 to 15 combined. Punch XX (numeric) for policy years 16 and later (ultimate data).
10-13	Age	Punch the lowest age of group in columns 10-11. Punch the highest age of group in columns 12-13. For issue age 0, punch 00 in columns 10-11 and 12-13. For issue-age group 75 and over of recent issues studies, punch 75 in columns 10-11 and XX (numeric) in columns 12-13.
14	Sex	Punch 1 for males, 2 for females. If data are not subdivided by sex, punch 0.
15-31		Leave blank.
32-36	Actual deaths (policies)	Number of policies becoming claims in the age group, duration group, and cause-of-death group specified.
37-46	Actual deaths (amounts)	Amount of claims (nearer \$1) arising from the policies in columns 32-36.
47-73		Leave blank.
74-75	Cause of death	Punch transmission code for cause of death according to table on preceding page.
76-77		Leave blank.
78-80	Experience control number	Enter the appropriate number from the following schedule.

Study	Experience Control Number
Recent Medical Issues (Policy Years 1-15)	001
Recent Nonmedical Issues (Policy Years 1-15)	005
Recent Paramedical (including other lay screening) Issues (Policy Years 1-15)	009
Policy Years Sixteen and Later:	
Combined Premium-paying and Fully Paid-up:	
Medical, Nonmedical, and Paramedical Issues Combined	021
Medical Issues	027
Nonmedical Issues	029
Paramedical (including other lay screening) Issues	039
Premium-paying:	
Medical, Nonmedical, and Paramedical Issues Combined	023
Medical Issues	031
Nonmedical Issues	033
Paramedical (including other lay screening) Issues	035
Fully Paid-up	025

NOTE.—Except in fields to be left blank, a zero should be punched in all columns that would otherwise remain unpunched.

The letter of transmittal should be accompanied by totals of actual deaths (policies and amounts) from all causes combined for each experience control number included in your company's contribution, separately for males and females. In the recent issues studies, the following check totals should be shown:

1. For each duration group (1-2, 3-5, 6-10, 11-15), all ages combined.
2. For each issue-age group summarized in this study (0, 1-9, 10-19, etc.), all durations combined.
3. Grand totals for all ages and durations combined.

Check totals in the ultimate study should be shown as follows:

1. For each attained-age group summarized in this study (15-24, 25-29, 30-39, etc.).
2. Grand totals for all ages combined.

Appendix C

Instructions for Completion of Individual Death Claim Cards for Claims of \$100,000 and over

(IBM Card Form 725178)

The following information is to be provided on the individual death claim card:

Columns	Item	Instructions
1-3	Company code number	Your company code number is ———.
4-11	Policy number	In those cases where the total amount reported for several policies, issued at the same time on one individual, is \$100,000 or more, show the lowest policy number in this field.
12-16		Leave blank.
17-18	Issue age	Punch age nearest birthday. For ultimate data punch XX (numeric).
19-20	Issue year	Punch the last two digits of the issue year. For ultimate data punch XX (numeric).
21-22	Duration	Punch the policy year in which death occurred. For ultimate data punch XX (numeric).
23	Mode of termination	Punch Y (numeric) for termination by death.
24	Sex	Punch 1 for males, 2 for females. If your data are not subdivided by sex, punch 0.
25-30	Date of birth	Punch the month, day, and last two digits of the year of the insured's date of birth.
31-32	Policy anniversary	Punch the last two digits of the calendar year in which the policy year of death terminates. Punch 77 for deaths in the 1976-77 policy year.
33-34	Attained age	For ultimate data punch attained age.
35-55		Leave blank.
56-62	Amount	Punch the death claim amount to the nearer \$1. (In those cases where the total amount reported for several policies, issued at the same time on one individual, is \$100,000 or more, summarize the total amount of death claims for all policies and punch the total in this field.)
63-75		Leave blank.
76-77	Cause of death	Punch the transmission code described in Appendix B.
78-80	Experience control number	Enter the appropriate number from the following schedule.

Study	Experience Control Number
Recent Medical Issues (Policy Years 1-15)	100
Recent Nonmedical Issues (Policy Years 1-15)	104
Recent Paramedical (including other lay screening) Issues (Policy Years 1-15)	108
Policy Years Sixteen and Later:	
Combined Premium-paying and Fully Paid-up:	
Medical, Nonmedical, and Paramedical Issues Combined	120
Medical Issues	126
Nonmedical Issues	128
Paramedical (including other lay screening) Issues	138
Premium-paying:	
Medical, Nonmedical, and Paramedical Issues Combined	122
Medical Issues	130
Nonmedical Issues	132
Paramedical (including other lay screening) Issues	134
Fully Paid-up	124

NOTE.—Except in fields to be left blank, a zero should be punched in all columns that otherwise remain unpunched.

TABLE I

Company by Code Number	Part of Submission	Description of Error	Date Received if More than One Month Late
010			Middle of December
012			Beginning of December
013			Beginning of October
015	Select	No negative over punches	End of August
017	Ultimate	Did not zero fill all fields on some cards	Middle of November
019			Beginning of November
020	Medical	Three cards missing	
021	Ultimate	One female record added in with male	
022	Nonmedical	Duplicate card, and actual deaths not punched on one card	
025	Nonmedical	Duplicate card	End of December
026	Cause of death	Not received	Beginning of January
031			End of December
051	All	No totals on check listing	

TABLE II
CHECKLIST

1. Card submission:
 - Exposures
 - Cause of death
 - War deaths
 - Large claims
2. Nonmedical rules from 1962 to present
3. Checklists for submission:
 - Nonmedical recent issues (select) male and female
 - Medical recent issues (select) male and female
 - Paramedical (including other lay screening) recent issues (select) male and female
 - Ultimate issues
 - Cause of death
 - War deaths
 - Large claims

NOTE.—Since so many lists are involved, please label each list clearly (and accurately) for clarity and please put either the company name or company code number on *each* sheet of paper.