

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1971 REPORTS**

TRANSACTIONS

1971 REPORTS OF MORTALITY AND MORBIDITY EXPERIENCE

**REPORTS OF THE COMMITTEE ON MORTALITY UNDER
ORDINARY INSURANCES AND ANNUITIES**

**I. MORTALITY UNDER STANDARD ORDINARY
INSURANCE ISSUES BETWEEN 1969
AND 1970 ANNIVERSARIES**

ABSTRACT

This is one in a series of annual reports on intercompany mortality experience under Standard Ordinary life insurance policies. The included tables, based on data contributed by nineteen large life insurance companies, show amounts exposed to risk, actual death claim amounts, and expected death claim amounts (based on the most recent intercompany mortality tables—the 1955–60 Basic Tables). Ratios of actual to expected deaths are also shown.

This report covers the one year of mortality experience between 1969 and 1970 policy anniversaries and the five years of experience between 1965 and 1970 policy anniversaries. The mortality experience between 1969 and 1970 anniversaries, excluding war deaths, shows a moderate decrease from the previous study. This decrease is evident in each of the three principal divisions of the study: medically examined issues of the fifteen most recent policy years, nonmedical issues of the fifteen most recent policy years, and all issues of sixteen or more policy years.

Recent nonmedical issues observed between 1965 and 1970 anniversaries continue to show higher over-all mortality than comparable medical issues, with the greater differences at issue ages 20 and over. Female mortality on all issues continues to average about 60 per cent of male mortality.

Included in this report are two additional sections entitled “Experience by Cause of Death” and “Mortality Trends.” The first of these sections is an analysis of Standard Ordinary issues by cause of death for the experience from 1965 to 1970 anniversaries. The second section presents a history of mortality rates from 1939 to 1970 anniversaries.

The current trend in mortality shows increases in mortality rates at the younger ages (attained ages under 35) and decreases at the older ages.

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INTRODUCTION

THIS report covers the intercompany mortality experience under Standard Ordinary insurance issues between 1969 and 1970 anniversaries. It reviews in turn the mortality experience under:

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 examination, observed during each of the first fifteen policy years; and
3. 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 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.

Also included in this report is an analysis by cause of death, covering the experience from 1965 to 1970 anniversaries. In addition, there is a section on mortality trends during the last thirty-one years.

In comparison with the 1968-69 study, aggregate mortality ratios, excluding war deaths, for the select experience (observed during each of the first fifteen policy years), both medical and nonmedical, and for the ultimate experience (observed during the sixteenth and subsequent policy years), have decreased moderately. The select medical mortality ratio has decreased from 94.8 per cent last year to 92.7 per cent for the 1969-70 study, and the select nonmedical mortality ratio has decreased from 112.8 per cent to 110.1 per cent. The mortality ratio for the ultimate experience decreased from 93.4 per cent to 90.3 per cent. The aggregate mortality ratio, including war deaths, for select medical business decreased from 95.4 per cent last year to 93.1 per cent in the 1969-70 study, and for nonmedical business there was a more substantial decrease from 128.6 per cent to 118.6 per cent.

Because of the significance of war deaths (see definition in Appendix

II), all tables have been adjusted to exclude or to show separately the war deaths incurred during the exposure period. The following tabulation shows the war deaths and the ratio of war deaths to total deaths experienced between 1965 and 1970 anniversaries:

WAR DEATHS AND THE RATIO OF WAR DEATHS
TO TOTAL DEATHS EXPERIENCED BETWEEN 1965 AND
1970 ANNIVERSARIES

MALE LIVES

(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		
1965-66.....	\$ 1,508	0.4%	\$ 5,543	7.2%	\$ 200	§
1966-67.....	2,774	0.7	9,268	10.8	439	0.1%
1967-68.....	3,526	1.0	12,831	14.3	750	0.1
1968-69.....	2,702	0.7	12,653	12.2	570	0.1
1969-70.....	2,081	0.5	7,401	7.2	395	§
Total.....	\$12,591	0.7%	\$47,696	10.4%	\$2,354	0.1%

* Female war deaths of \$5,000 for 1968-69 and \$10,000 for 1969-70 are included.

† Female war deaths of \$25,000 for 1965-66, \$18,500 for 1966-67, \$2,000 for 1967-68, and \$13,000 for 1968-69 are included.

‡ Female war deaths of \$1,000 for 1966-67 and \$2,000 for 1968-69 are included.

§ Negligible.

The names of the nineteen contributing companies and their proportionate contributions to the total exposure are given in Table A of Appendix I.

EXPERIENCE UNDER STANDARD ISSUES DURING THE
FIRST FIFTEEN YEARS OF INSURANCE

Medically Examined Issues

The current experience during the first fifteen policy years is based on an exposure of \$126,915,588,000 and actual claims of \$421,766,000. This represents an increase in the exposure from the preceding year of 3.1 per cent. Not included in the claim total were 172 policies, representing \$2,081,000 in claims resulting from operations of war and reported as deaths between 1969 and 1970 anniversaries.

The 1955-60 Male, Female, and Male and Female Combined Select Basic Tables (*TSA, 1962 Reports*, p. 44, and *1963 Reports*, p. 40) were

used to calculate expected deaths separately for the male experience, female experience, and experience reported without subdivision by sex. The expected deaths for these three classes of experience were combined, and mortality ratios were calculated excluding and including war deaths.

The results by age group at issue are shown in Table 1 for the first

TABLE 1
STANDARD MEDICALLY EXAMINED ISSUES OF 1955-69
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
Expected Deaths on 1955-60 Select Basic Tables
(Amounts Shown in \$1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
		Excluding War Deaths	War Deaths		Excluding War Deaths	Including War Deaths
0.....	\$ 207,195	\$ 125	\$ 0	\$ 113	110.6%	110.6%
1.....	228,325	33	0	87	37.9	37.9
2-4.....	282,645	69	3	110	62.7	65.5
5-9.....	578,098	308	18	290	106.2	112.4
10-14.....	865,834	842	124	708	118.9	136.4
15-19.....	2,171,517	2,204	336	2,106	104.7	120.6
20-24.....	8,403,948	7,778	720	7,784	99.9	109.2
25-29.....	16,875,146	17,274	447	18,829	91.7	94.1
30-34.....	24,007,821	39,560	234	42,098	94.0	94.5
35-39.....	26,104,513	66,689	113	71,991	92.6	92.8
40-44.....	21,666,077	83,728	86	91,332	91.7	91.8
45-49.....	13,779,961	80,224	0	85,287	94.1	94.1
50-54.....	7,214,237	60,169	0	65,467	91.9	91.9
55-59.....	3,140,882	34,881	0	40,373	86.4	86.4
60-64.....	1,070,449	18,215	0	19,695	92.5	92.5
65-69.....	265,230	7,921	0	6,893	114.9	114.9
70 and over.....	53,710	1,746	0	1,921	90.9	90.9
All ages.....	\$126,915,588	\$421,766	\$2,081	\$455,084	92.7%	93.1%

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 is set forth in Table B of Appendix I.

The aggregate mortality ratio, excluding war deaths, for the period from 1969 to 1970 anniversaries was 92.7 per cent. The following tabulation shows how this result compares with previous studies based on the 1955-60 Basic Tables:

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Exposure Year	Aggregate Mortality Ratio
1961-62.....	98.5%
1962-63.....	97.7
1963-64.....	101.0
1964-65.....	96.0
1965-66.....	95.1
1966-67.....	93.2
1967-68.....	94.2
1968-69.....	94.8
1969-70.....	92.7

TABLE 2
STANDARD MEDICALLY EXAMINED ISSUES OF 1955-69
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED

Expected Deaths on 1955-60 Select Basic Tables
(Amounts Shown in \$1,000 Units)

YEAR OF ISSUE	POLICY YEAR	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Excluding War Deaths	Including War Deaths
1955.....	15	\$ 4,748,459	\$ 35,080	\$ 50	\$ 37,409	93.8%	93.9%
1956.....	14	5,285,868	34,624	36	37,198	93.1	93.2
1957.....	13	6,117,372	33,340	106	36,269	91.9	92.2
1958.....	12	6,431,625	32,049	55	35,568	90.1	90.3
1959.....	11	6,689,619	30,647	154	34,121	89.8	90.3
1960.....	10	6,063,751	30,105	43	29,634	101.6	101.7
1961.....	9	6,287,623	25,247	90	28,197	89.5	89.9
1962.....	8	6,513,704	26,919	40	27,039	99.6	99.7
1963.....	7	7,856,164	27,629	131	30,343	91.1	91.5
1964.....	6	8,761,956	27,877	70	29,433	94.7	95.0
1965.....	5	10,108,344	26,537	244	29,324	90.5	91.3
1966.....	4	11,003,342	26,836	150	28,964	92.7	93.2
1967.....	3	11,776,528	24,286	378	26,807	90.6	92.0
1968.....	2	13,133,173	22,655	334	23,554	96.2	97.6
1969.....	1	16,138,060	17,935	200	21,224	84.5	85.4
All years of issue.....		\$126,915,588	\$421,766	\$2,081	\$455,084	92.7%	93.1%

In the current study, issue age group 0 again has a relatively high mortality ratio (110.6 per cent). Although the exposure here is small, it should be noted that issue age 0 has had high mortality ratios in past studies. Table 9, which appears later, shows a mortality ratio of 162.3 per cent for males and 79.4 per cent for females, issue age 0, exposed between 1965 and 1970 anniversaries. The mortality ratios between 1969 and 1970 anniversaries, excluding war deaths, for issue age groups 1 and 2-4 were quite low, being 37.9 and 62.7 per cent, respectively. These figures reflect a reversal of mortality experience for these issue age groups as compared with last year's very high ratios.

War deaths increased the mortality ratio for the issue age group 10-14 by 17.5 percentage points, and for issue age groups 5-9, 15-19 and 20-24 by 6.2, 15.9 and 9.3 percentage points, respectively. War deaths caused an increase of 0.4 percentage points in the all ages mortality ratio, compared with an increase of 0.6 percentage points in last year's study and 1.0 percentage points two years ago.

Mortality ratios by year of issue, excluding war deaths, ranged from 84.5 per cent for 1969 (policy year 1) to 101.6 per cent for 1960 (policy year 10).

The following tabulation indicates the variation in the aggregate mortality ratios of the contributing companies from the all-companies average of 92.7 per cent. War deaths were excluded in determining these ratios.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 20.....	1	4.5%
10-20.....	3	9.3
5-10.....		
0-5.....	4	19.8
Percentage points above average:		
0-5.....	5	23.7
5-10.....	4	34.8
10-20.....	1	3.9
More than 20.....	1	4.0

Nonmedical Issues

The current experience during the first fifteen policy years is based on an exposure of \$81,337,453,000 and actual claims of \$95,759,000. This represents an increase in the exposure from the preceding year of 7.4 per cent. Not included in the claim total were 892 policies, representing \$7,401,000 in claims resulting from operations of war and reported as deaths between 1969 and 1970 anniversaries.

Expected deaths were calculated on the 1955-60 Select Basic Tables in the same manner as for medically examined issues. These tables were based on experience under medical issues, except that nonmedical issues were included for issue ages under 25.

For all age groups combined, nonmedical business now comprises 39.1 per cent of the total experience on recent Ordinary issues, measured by the exposures during the first fifteen policy years, as compared with 38.1 per cent last year. For all age groups combined, the proportion of nonmedical issues in the first policy year for 1969-70 was 45.1 per cent, compared with 46.4 per cent in last year's report. The following tabulation shows nonmedical exposures as a percentage of total exposures, by age group at issue, for experience between 1969 and 1970 anniversaries:

NONMEDICAL EXPOSURES AS PERCENTAGE
OF TOTAL EXPOSURES

Ages at Issue	Policy Year 1	Policy Years 1-15
0-9	89.3%	84.2%
10-19	90.1	83.8
20-29	71.1	63.1
30-39	25.4	22.3
40-49	4.0	2.6
50 and over	0.2	0.2
All ages	45.1%	39.1%

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 1969 to 1970 anniversaries was 110.1 per cent. The following tabulation shows how this result compares with previous studies based on the 1955-60 Basic Tables:

Exposure Year	Aggregate Mortality Ratio
1961-62	105.8%
1962-63	106.3
1963-64	109.5
1964-65	108.5
1965-66	107.8
1966-67	107.0
1967-68	109.9
1968-69	112.8
1969-70	110.1

In the current study, the mortality ratio for issue age group 15-19 continues to be high (122.1 per cent), even when war deaths are excluded. Exclusion of war deaths has a greater effect on nonmedical issues than on medical issues, with issue age group 15-19 and the all ages nonmedical mortality ratio being increased by 26.8 and 8.5 percentage points, respectively, if war deaths are included. War deaths increased the all ages nonmedical mortality ratio in last year's reports by 15.8 percentage points.

TABLE 3
STANDARD NONMEDICAL ISSUES OF 1955-69
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
Expected Deaths on 1955-60 Select Basic Tables
(Amounts Shown in \$1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS*	MORTALITY RATIO	
		Excluding War Deaths	War Deaths		Excluding War Deaths*	Including War Deaths*
0.....	\$ 2,619,829	\$ 1,218	\$ 0	\$ 1,478	82.4%	82.4%
1.....	971,094	422	0	422	100.0	100.0
2-4.....	1,302,382	461	0	526	87.6	87.6
5-9.....	2,019,625	1,088	57	852	127.7	134.4
10-14.....	2,996,084	2,555	418	2,184	117.0	136.1
15-19.....	12,746,347	13,953	3,057	11,427	122.1	148.9
20-24.....	24,197,127	22,481	2,835	19,854	113.2	127.5
25-29.....	19,115,391	19,321	730	18,603	103.9	107.8
30-34.....	10,018,767	17,238	243	16,245	106.1	107.6
35-39.....	4,377,876	13,191	56	11,687	112.9	113.3
40-44.....	893,018	3,448	5	3,231	106.7	106.9
45-49.....	62,054	272	0	292	93.2	93.2
50 and over.....	17,859	111	0	192	57.8	57.8
All ages.....	\$81,337,453	\$95,759	\$7,401	\$86,993	110.1%	118.6%

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

The mortality ratios in Table 3 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 issue age groups 35-39, 40-44, 45-49, and 50 and over are younger than the average ages of the exposures for these age groups in the medical experience entering into the Basic Tables. This situation arises because the maximum age at which nonmedical business

is issued by the various contributing companies falls at 35, 40, 45, or 50. Thus, the nonmedical exposures beyond these ages tend to fall off sharply. It is likely that a further understatement arises from the general practice of reducing nonmedical amount limits in steps of \$5,000 or \$10,000 beyond 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 1955-69
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1-15 COMBINED
(Expected Deaths on 1955-60 Select Basic Tables)

AGES AT ISSUE	MORTALITY RATIOS	
	Unadjusted	Adjusted
35-39.....	112.9%	112.9%
40-44.....	106.7	124.5
45-49.....	93.2	96.5
50 and over.....	57.8	58.1
Ages 35 and over.....	110.5%	114.0%

The unadjusted mortality ratios understate the true mortality on non-medical business to a significant degree at ages 40-44. Except for one company, whose limit for nonmedical issues was age 50 until 1959, non-medical issues at ages 45-49 and especially at ages 50 and over are largely business issued under special circumstances (such as pension trust and salary allotment plans), which do not appreciably affect 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. Policies issued under any "special" approach for obtaining medical evidence of insurability (e.g., paramedical) have been either excluded from the study or included in the recent medical issues by the contributing companies.

The nonmedical mortality ratios by year of issue for all ages at issue combined during the period from 1969 to 1970 anniversaries are presented in Table 4 on an unadjusted basis. The highest mortality ratio by year of issue, excluding war deaths, was 144.5 per cent for issue year 1969 (policy year 1). Mortality ratios for policy year 1 have tended to be high for the last seven experience years.

TABLE 4
STANDARD NONMEDICAL ISSUES OF 1955-69
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED
Expected Deaths on 1955-60 Select Basic Tables
(Amounts Shown in \$1,000 Units)

YEAR OF ISSUE	POLICY YEAR	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS*	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Excluding War Deaths*	Including War Deaths*
1955	15	\$ 1,684,081	\$ 3,668	\$ 41	\$ 3,694	99.3%	100.4%
1956	14	2,259,197	5,296	87	5,294	100.0	101.7
1957	13	3,538,265	7,467	49	7,598	98.3	98.9
1958	12	3,523,821	6,041	122	6,220	97.1	99.1
1959	11	3,595,573	5,320	201	5,461	97.4	101.1
1960	10	3,715,129	5,432	160	5,173	105.0	108.1
1961	9	4,069,729	5,383	210	5,094	105.7	109.8
1962	8	4,084,235	5,032	261	4,619	108.9	114.6
1963	7	4,862,648	5,414	286	5,017	107.9	113.6
1964	6	5,573,955	5,916	463	5,329	111.0	119.7
1965	5	6,365,254	6,235	562	5,723	108.9	118.8
1966	4	6,566,555	6,250	848	5,617	111.3	126.4
1967	3	7,997,093	7,747	1,213	6,520	118.8	137.4
1968	2	10,256,881	8,535	1,819	7,314	116.7	141.6
1969	1	13,245,037	12,023	1,079	8,320	144.5	157.5
All years of issue		\$81,337,453	\$95,759	\$7,401	\$86,993	110.1%	118.6%

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

War deaths have had their greatest impact on nonmedical experience during the very recent years of issue. This continues to be true when the data by year of issue are analyzed to compare only the ages at which most of the exposure to war occurs, approximately attained ages 18-35.

The details of the unadjusted experience by age groups at issue for each year of issue are set forth in Table C of Appendix I.

The following tabulation indicates the variation in the aggregate mortality ratios of the contributing companies from the all-companies average of 110.1 per cent. War deaths were excluded in determining these ratios.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 20	5	6.4%
10-20	3	5.9
5-10	2	1.7
0-5	3	8.7
Percentage points above average:		
0-5	2	57.8
5-10	3	18.1
10-20	1	1.4

Comparison of Medical and Nonmedical Experience

It would be desirable to compare the nonmedical experience with an 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 1965 to 1970 anniversaries. The 1955-60 Male, Female, and Male and Female Combined Select Basic Tables, respectively, were used to calculate expected deaths for the male experience, female experience, and experience reported without subdivision by sex. War deaths have been excluded from the 1965-70 experience.

The nonmedical mortality ratios shown in Table 5 have been adjusted to reflect the approximate distribution of nonmedical exposures by age for issue age groups 35-39 and higher. The lower half of Table 5 shows that, for policy years 1-15 combined, nonmedical mortality exceeds medical mortality appreciably at issue ages 10 and over; the excess ranges from about 3 per cent at issue ages 10-19 to about 26 per cent at issue ages 45-49. Over the past few years, the trend of the ratio of nonmedical to medical mortality has been to increase slightly for the important non-medical issue age group 15-39, policy years 1-15 combined.

¹ Four factors, among others, which 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 each type of business differ; and (d) the proportions of business applied for nonmedically but issued subject to medical examination and then classified as medical business differ among companies.

TABLE 5
 COMPARISON OF MEDICAL AND NONMEDICAL EXPERIENCE*
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 BETWEEN 1965 AND 1970 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 1955-60 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.....	185	85	90	73	127	93	129	101	142	87
1-9.....	80	76	133	99	121	115	132	127	123	106
10-19.....	147	133	125	130	109	112	104	95	115	119
20-24.....	103	131	108	112	97	99	94	92	99	110
25-29.....	105	122	87	104	100	104	92	100	95	106
30-34.....	127	128	108	116	97	107	90	99	98	107
35-39.....	94	124†	96	122†	95	109†	91	109†	94	112†
40-44.....	90	127†	94	110†	96	117†	94	123†	95	119†
45-49.....	88	67†	93	111†	93	99†	94	130†	93	117†
50 and over	89	31†	87	85†	92	134†	96	108†	92	102†
All ages.	95	125†	93	115†	94	106†	94	103†	94	110†
Ratio of Nonmedical to Medical Mortality Ratios										
0.....	46%		81%		73%		78%		61%	
1-9.....	95		74		95		96		86	
10-19.....	90		104		103		91		103	
20-24.....	127		104		102		98		111	
25-29.....	116		120		104		109		112	
30-34.....	101		107		110		110		109	
35-39.....	132†		127†		115†		120†		119†	
40-44.....	141†		117†		122†		131†		125†	
45-49.....	76†		119†		106†		138†		126†	
50 and over	35†		98†		146†		113†		111†	

* Excluding war deaths between 1965 and 1970 anniversaries.

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

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 \$53,841,116,000 and actual claims of \$909,403,000, excluding war deaths. This represents an increase in the exposures from the preceding year of 4.9 per cent. Deaths resulting from operations of war between 1969 and 1970 anniversaries amounted to 255 policies, representing \$395,000 in claims. While war deaths had no effect on the all ages mortality ratio, a few age cells showed a rather large proportion of war deaths: the 20-24 attained age group mortality ratio was 94.6 per cent excluding war deaths and 115.0 per cent including war deaths; the 25-29 group showed 101.9 per cent excluding war deaths and 109.9 per cent including war deaths. Mortality ratios based on (1) the 1955-60 Ultimate Basic Tables (Male, Female, and Male and Female Combined, respectively, for the male experience, female experience, and experience reported without subdivision by sex), (2) the Commissioners 1941 Standard Ordinary Mortality Table, and (3) the Commissioners 1958 Standard Ordinary Mortality Table are presented in Table 6 by attained age groups. The aggregate mortality ratio, excluding war deaths, on the 1955-60 Ultimate Basic Tables for the period from 1969 to 1970 anniversaries was 90.3 per cent.

The following tabulation shows how this result compares with previous studies based on the 1955-60 Basic Tables:

Exposure Year	Aggregate Mortality Ratio
1961-62	96.8%
1962-63	98.6
1963-64	98.1
1964-65	95.4
1965-66	94.9
1966-67	94.3
1967-68	95.5
1968-69	93.4
1969-70	90.3

The tabulation that follows indicates the variation in the aggregate mortality ratios of the contributing companies from the all-companies average of 90.3 per cent. War deaths were excluded in determining the ratios.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
10-20.....	1	0.9%
5-10.....	5	20.0
0-5.....	6	29.8
Percentage points above average:		
0-5.....	3	19.4
5-10.....	4	29.9

TABLE 6
STANDARD ISSUES DURING SIXTEENTH AND SUBSEQUENT POLICY YEARS
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
BY ATTAINED AGE
ALL POLICY YEARS COMBINED
 (Amounts Shown in \$1,000 Units)

ATTAINED AGES	EXPOSED TO RISK	ACTUAL DEATHS		1955-60 ULTIMATE BASIC TABLE			MORTALITY RATIO*	
		Excluding War Deaths	War Deaths	Expected Deaths	Mortality Ratio		1941 CSO Table	1958 CSO Table
					Excluding War Deaths	Including War Deaths		
15-19.....	\$ 1,102,813	\$ 809	\$ 24	\$ 831	97.4%	100.2%	32.6%	45.5%
20-24.....	989,912	961	207	1,016	94.6	115.0	37.5	52.3
25-29.....	843,669	889	69	872	101.9	109.9	33.8	52.8
30-34.....	1,164,432	1,415	18	1,382	102.4	103.7	30.4	53.3
35-39.....	2,420,579	3,867	31	3,886	99.5	100.3	30.2	54.9
40-44.....	4,989,133	13,286	17	13,353	99.5	99.6	37.2	62.4
45-49.....	7,183,248	30,715	13	35,001	87.8	87.8	42.6	66.1
50-54.....	8,141,148	58,708	0	65,655	89.4	89.4	49.9	71.6
55-59.....	8,317,061	95,677	16	106,414	89.9	89.9	54.6	73.7
60-64.....	7,175,566	130,633	0	147,758	88.4	88.4	58.4	74.8
65-69.....	4,848,543	137,240	0	154,260	89.0	89.0	61.4	74.9
70-74.....	3,351,682	148,653	0	162,435	91.5	91.5	64.0	76.3
75-79.....	2,021,955	133,867	0	146,222	91.6	91.6	64.7	78.2
80-84.....	935,855	96,427	0	102,181	94.4	94.4	68.4	81.8
85-89.....	285,962	43,070	0	48,450	88.9	88.9	69.3	84.2
90-95.....	69,558	13,186	0	17,540	75.2	75.2	60.4	73.1
All ages	\$53,841,116	\$909,403	\$395	\$1,007,256	90.3%	90.3%	59.1%	75.4%

* Excluding war deaths between 1969 and 1970 anniversaries.

Comparison of Medical and Nonmedical Experience

Companies were asked to subdivide their ultimate data into medical and nonmedical if they could conveniently do so. Twelve companies were able to subdivide their data in this manner. The results of this experience between 1965 and 1970 anniversaries are shown in Table 7. These data

TABLE 7

COMPARISON OF MEDICAL AND NONMEDICAL MORTALITY EXPERIENCE*
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 STANDARD ISSUES DURING SIXTEENTH AND SUBSEQUENT POLICY YEARS
 EXPERIENCE BETWEEN 1965 AND 1970 ANNIVERSARIES
 BY ATTAINED AGE
 ALL POLICY YEARS COMBINED
 Expected Deaths on 1955-60 Ultimate Basic Tables
 (Amounts Shown in \$1,000 Units)

AT- TAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS				MORTALITY RATIO†		RATIO OF NON- MEDICAL TO MEDICAL MORTALITY RATIOS†
			Excluding War Deaths		War Deaths				
	Medical	Nonmedical	Medical	Non- med- ical	Medi- cal	Non- med- ical	Medical	Non- med- ical	
15-19	\$ 416,614	\$ 1,614,110	\$ 359	\$ 1,281	\$ 12	\$ 73	110.8%	106.6%	96.2%
20-24	480,244	793,787	451	817	114	264	86.2	96.6	112.1
25-29	663,810	622,314	528	717	83	80	74.1	109.6	147.9
30-34	1,183,488	1,199,601	1,390	1,492	55	48	97.1	101.3	104.3
35-39	2,686,046	2,566,277	4,228	3,999	66	43	96.7	98.5	101.9
40-44	6,329,818	3,629,657	16,291	9,479	52	18	94.0	101.4	107.9
45-49	11,193,338	3,411,098	47,907	14,860	51	15	85.2	92.9	109.0
50-54	15,032,643	2,346,093	106,934	17,351	5	5	86.7	97.6	112.6
55-59	15,978,562	1,524,194	187,512	18,511	10	0	90.7	100.3	110.6
60-64	13,926,114	864,348	259,656	17,200	2	0	90.0	98.5	109.4
65-69	8,864,906	430,796	268,279	13,561	3	0	94.8	101.0	106.5
70-74	6,270,454	276,156	284,506	13,842	0	0	93.7	102.9	109.8
75-79	3,638,214	151,813	256,647	11,367	0	0	97.5	102.5	105.1
80-84	1,632,165	58,817	173,974	6,299	0	0	97.8	98.5	100.7
85-89	476,604	11,940	76,964	2,058	0	0	95.0	102.5	107.9
90-95	102,200	1,676	22,978	338	0	0	90.0	80.9	89.9
All ages	\$88,875,220	\$19,502,677	\$1,708,604	\$133,472	\$453	\$546	93.2%	99.3%	106.5%

* Based on data from twelve companies.

† Excluding war deaths between 1965 and 1970 anniversaries.

involve exposures which comprise 44.3 per cent of the entire ultimate experience reported for the period (about the same as in last year's study).

For practically all attained age groups the nonmedical mortality is higher than the medical. War deaths were excluded in determining the mortality ratios.

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 1965 to 1970 anniversaries is shown in Table 8 for standard medical and nonmedical

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 DURING SIXTEENTH AND SUBSEQUENT POLICY YEARS
EXPERIENCE BETWEEN 1965 AND 1970 ANNIVERSARIES
BY ATTAINED AGE
ALL POLICY YEARS COMBINED
Expected Deaths on 1955-60 Ultimate Basic Tables
(Amounts Shown in \$1,000 Units)

AT-TAINED AGES	PREMIUM-PAYING POLICIES*				FULLY PAID-UP POLICIES†			
	Exposed to Risk	Actual Deaths		Mortality Ratio‡	Exposed to Risk	Actual Deaths		Mortality Ratio‡
		Excluding War Deaths	War Deaths			Excluding War Deaths	War Deaths	
15-19.....	\$ 4,267,016	\$ 3,387	\$ 214	106.5%	\$ 179,364	\$ 105	\$ 34	72.9%
20-24.....	2,018,808	2,338	600	113.9	1,707,649	1,851	441	110.2
25-29.....	1,949,503	2,120	201	103.7	1,057,100	1,006	61	95.2
30-34.....	3,851,931	4,667	118	101.8	829,832	945	16	99.9
35-39.....	9,353,150	14,644	138	97.8	1,645,800	2,748	28	106.8
40-44.....	17,391,623	46,214	101	98.9	3,166,656	7,979	7	100.1
45-49.....	24,331,447	107,620	67	90.3	4,420,170	18,808	0	93.2
50-54.....	28,382,143	207,822	9	90.3	5,346,483	38,415	2	93.4
55-59.....	28,250,665	341,453	26	93.7	5,800,591	65,551	2	91.3
60-64.....	23,316,482	448,730	0	92.9	5,809,071	102,349	0	87.7
65-69.....	14,364,365	440,854	3	95.5	5,162,877	139,506	1	85.7
70-74.....	9,989,271	461,569	0	95.0	3,682,988	152,745	0	86.3
75-79.....	5,645,284	407,410	0	99.5	2,299,329	148,051	0	89.2
80-84.....	2,481,886	269,643	0	99.5	1,156,576	117,448	0	93.1
85-89.....	642,280	103,131	0	94.4	435,698	66,570	0	89.7
90-95.....	133,564	27,465	0	82.1	121,768	24,973	0	81.1
All ages	\$176,369,418	\$2,889,067	\$1,477	95.0%	\$42,841,952	\$889,050	\$592	88.8%

* Based on data from fourteen companies.

† Based on data from twelve companies.

‡ Excluding war deaths between 1965 and 1970 anniversaries.

issues combined. Fourteen companies submitted their experience separately on premium-paying policies, and twelve companies did so on fully paid-up policies. Based on the experience between 1965 and 1970 anniversaries, the premium-paying data submitted constituted 72.1 per cent and the fully paid-up data 17.5 per cent of the total ultimate experience of all companies.

Mortality ratios are higher on premium-paying than on fully paid-up policies except at attained ages 35-54. War deaths were excluded in determining the mortality ratios.

EXPERIENCE BY SEX

All the nineteen contributing companies submitted all or the major portion of both their medical and their nonmedical select data separately for males and females. For the period from 1969 to 1970 anniversaries, the select sex-distinct data comprise 99.8 per cent of the medical exposures and 99.9 per cent of the nonmedical exposures.

The detailed select experience by sex for the period from 1969 to 1970 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 the 1955-60 Male Select and the 1955-60 Female Select Basic Tables.

Tables 9, 10, 11, and 12 examine the experience by sex between 1965

TABLE 9
COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD MEDICALLY EXAMINED ISSUES
OBSERVED BETWEEN 1965 AND 1970 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
Expected Deaths on 1955-60 Male Select Basic Table
and 1955-60 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 MOR- TALITY†
			Excluding War Deaths		War Deaths	Male	Female	
	Male	Female	Male	Female	Male	Male	Female	
0	\$ 712,369	\$ 335,254	\$ 693	\$ 112	\$ 0	162.3%	79.4%	36.3%
1	767,432	376,252	413	68	0	125.2	59.6	34.8
2-4	993,170	401,435	477	186	6	111.7	156.3	96.8
5-9	2,058,066	805,497	1,597	218	234	135.2	95.6	37.1
10-14	3,472,093	800,088	4,208	551	711	129.6	223.1	59.3
15-19	9,661,152	1,204,892	10,676	656	2,316	106.6	145.1	50.0
20-24	37,902,003	2,130,739	34,221	1,558	3,932	98.4	132.0	81.6
25-29	75,488,626	2,933,079	78,477	2,559	2,773	94.0	134.6	88.4
30-34	107,713,372	4,933,763	179,073	7,172	1,619	97.5	130.0	96.3
35-39	113,357,438	7,285,500	286,060	11,880	587	93.2	106.1	71.9
40-44	88,996,617	8,729,973	356,230	20,526	334	94.2	99.2	62.3
45-49	53,906,674	6,737,730	321,418	20,993	32	93.1	92.2	54.7
50-54	27,557,007	4,016,282	241,938	19,529	1	92.0	106.9	56.6
55-59	11,708,303	1,983,054	143,763	10,700	0	89.6	78.8	44.8
60-64	3,789,641	815,366	70,304	7,749	0	93.0	89.9	52.7
65-69	913,140	255,665	25,319	3,321	0	100.8	80.4	49.2
70 and over	151,705	55,552	4,940	1,129	0	81.1	103.6	72.7
All ages	\$539,148,808	\$43,800,121	\$1,759,807	\$108,907	\$12,545	93.7%	98.8%	58.7%

* Excluding war deaths between 1965 and 1970 anniversaries.

† Female mortality ratios calculated on 1955-60 Male Select Basic Table.

and 1970 anniversaries for the select and ultimate data. War deaths were excluded in determining the mortality ratios in these tables.

The mortality ratios by age group at issue and sex for the first fifteen policy years combined, covering the experience from 1965 to 1970 anniversaries, are presented in Table 9 for standard medically examined issues and in Table 10 for standard nonmedical issues. For the purpose of

TABLE 10
COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD NONMEDICAL ISSUES
OBSERVED BETWEEN 1965 AND 1970 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
Expected Deaths on 1955-60 Male Select Basic Table
and 1955-60 Female Select Basic Table
(Amounts Shown in \$1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK		ACTUAL DEATHS				MORTALITY RATIO*†		RATIO* OF FE- MALE TO MALE MOR- TALITY‡
			Excluding War Deaths		War Deaths		Male	Female	
	Male	Female	Male	Fe- male	Male	Fe- male			
0-14	\$ 7,901,768	\$ 4,863,823	\$ 4,087	\$ 1,920	\$ 0	\$ 0	85.9%	87.3%	75.7%
15-19	2,932,309	1,746,771	1,445	443	0	0	102.4	76.9	51.4
20-24	3,891,506	2,103,432	1,683	609	5	0	96.7	93.3	65.1
25-29	6,273,880	2,639,094	3,595	772	367	1	120.8	106.0	50.4
30-34	10,425,892	2,801,264	9,499	1,046	2,017	2	108.1	140.4	43.1
35-39	48,347,765	8,803,285	58,147	3,754	19,952	30	120.8	123.9	35.9
40-44	87,893,587	11,726,732	82,972	6,282	16,864	5	110.3	107.8	57.1
45-49	73,193,911	7,919,492	76,051	5,762	6,070	2	104.3	127.2	76.2
50 and over	66,814	10,989	757	70	0	0	96.2	114.8	59.1
All ages	\$296,895,475	\$54,405,302	\$370,073	\$37,918	\$47,629	\$49	109.6%	111.1%	59.4%

* Excluding war deaths between 1965 and 1970 anniversaries.

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

‡ Female mortality ratios calculated on 1955-60 Male Select Basic Table.

comparing male and female mortality, the right-hand columns of these tables are based on mortality ratios for females with expected deaths calculated on the male table. The highest ratios of female to male mortality are found at issue ages 2-4, 20-39, and 70 and over for medical issues and at issue ages 0 and 25-34 for nonmedical issues. The high female mortality ratio at issue ages 2-4 for medical issues can be attributed to two large claims totaling \$90,000 in the 1968-69 experience. The ratios of female to male mortality are generally lower on nonmedical than

TABLE 11

COMPARISON BY SEX OF MEDICAL AND NONMEDICAL EXPERIENCE*
 BETWEEN 1965 AND 1970 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 σ _r	Non- medi- cal σ _r	Medi- cal σ _r	Non- medi- cal σ _r	Medi- cal σ _r	Non- medi- cal σ _r	Medi- cal σ _r	Non- medi- cal σ _r	Medi- cal σ _r	Non- medi- cal σ _r
Male Experience—Mortality Ratios on 1955-60 Male Select Basic Table										
0	220	85	82	67	162	94	134	105	162	86
1-9	79	77	132	104	133	123	137	127	128	110
10-19	130	132	120	131	110	111	103	93	112	119
20-24	100	131	108	114	95	99	94	91	98	110
25-29	104	122	86	103	98	102	91	97	94	104
30-34	125	133	108	118	97	107	89	99	98	108
35-39	94	123†	95	122*	95	109†	91	107†	93	111†
40-44	89	131†	95	111†	96	118†	93	122†	94	120†
45-49	87	67†	92	108†	94	103†	95	136†	93	121†
50 and over	86	32†	86	85†	92	120†	97	114†	92	100†
All ages	93	126†	93	115†	95	106†	94	101†	94	110†
Female Experience—Mortality Ratios on 1955-60 Female Select Basic Table										
0	77	83	119	90	38	89	76	91	78	87
1-9	81	74	139	86	83	87	110	125	102	93
10-19	484	154	193	121	94	117	123	120	172	127
20-24	183	129	114	98	144	105	107	97	132	108
25-29	147	126	135	124	143	126	121	134	135	127
30-34	196	94	94	104	99	106	160	107	130	104
35-39	109	127†	100	123†	92	105†	130	131†	106	119†
40-44	113	115†	84	108†	98	115†	108	114†	99	113†
45-49	104	64†	102	129†	89	84†	84	116†	92	102†
50 and over	127	24†	92	92†	91	11†	84	139†	93	116†
All ages	125	115†	94	110†	93	108†	99	117†	99	112†
Male Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	39%		82%		58%		78%		53%	
1-9	97		79		92		93		86	
10-19	102		109		101		90		106	
20-24	131		106		104		97		112	
25-29	117		120		104		107		111	
30-34	106		109		110		111		110	
35-39	131†		128†		115†		118†		119†	
40-44	147†		117†		123†		131†		128†	
45-49	77†		117†		110†		143†		130†	
50 and over	37†		99†		130†		118†		109†	
Female Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	108%		76%		234%		120%		112%	
1-9	91		62		105		114		91	
10-19	32		63		124		98		74	
20-24	70		86		73		91		82	
25-29	86		92		88		111		94	
30-34	48		111		107		67		80	
35-39	117†		123†		114†		101†		112†	
40-44	102†		129†		117†		106†		114†	
45-49	62†		126†		94†		138†		111†	
50 and over	19†		100†		122†		165†		125†	

* Excluding war deaths between 1965 and 1970 anniversaries.

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

on medical business at issue ages 10 and over. At the younger ages the opposite is true, except for the 2-4 issue age group.

Table 11 presents side by side the experience for the five-year period from 1965 to 1970 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

TABLE 12

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE*
STANDARD ISSUES DURING SIXTEENTH AND SUBSEQUENT POLICY YEARS
EXPERIENCE BETWEEN 1965 AND 1970 ANNIVERSARIES
BY ATTAINED AGE—ALL POLICY YEARS COMBINED
Expected Deaths on 1955-60 Male Ultimate Basic Table
and 1955-60 Female Ultimate Basic Table
(Amounts Shown in \$1,000 Units)

AT-TAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS				MORTALITY RATIO†		RATIO OF FEMALE TO MALE MORTALITY‡
			Excluding War Deaths		War Deaths				
	Male	Female	Male	Female	Male	Female	Male	Female	
15-19	\$ 1,529,665	\$ 1,120,487	\$ 1,440	\$ 517	\$ 241	\$ 0	91.4%	123.1%	48.9%
20-24	1,464,135	949,611	1,615	548	1,097	0	77.1	118.9	52.3
25-29	1,406,984	622,050	1,523	340	279	0	90.9	79.1	50.3
30-34	2,476,888	614,088	3,152	452	156	0	99.7	76.5	58.1
35-39	5,230,356	1,351,930	8,835	1,636	170	1	101.1	94.5	71.9
40-44	10,230,445	2,126,904	28,318	4,071	127	0	99.0	107.6	70.1
45-49	15,237,888	2,436,371	68,752	7,277	89	0	87.1	102.9	66.8
50-54	18,315,522	2,421,781	139,408	10,642	24	2	90.0	97.5	58.0
55-59	18,605,579	2,286,667	233,010	14,805	31	0	93.7	96.4	51.8
60-64	15,940,996	1,773,210	314,159	17,800	2	0	91.7	100.7	51.1
65-69	10,542,373	1,162,071	330,100	17,356	4	0	95.2	88.0	47.6
70-74	7,222,827	842,505	337,923	21,859	0	0	94.4	79.4	55.4
75-79	4,145,093	474,004	299,883	22,793	0	0	97.7	97.5	66.5
80-84	1,860,057	215,016	203,185	16,627	0	0	98.1	99.7	70.5
85-89	557,507	65,176	89,390	8,077	0	0	92.7	94.6	76.9
90-95	124,606	19,308	27,032	3,707	0	0	85.1	88.0	88.4
All ages	\$114,890,921	\$18,480,279	\$2,087,725	\$148,507	\$2,220	\$3	94.1%	93.7%	58.7%

* Based on data from twelve companies.

† Excluding war deaths between 1965 and 1970 anniversaries.

‡ Female mortality ratios calculated on 1955-60 Male Ultimate Basic Table.

nonmedical mortality ratios shown in this table 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 nonmedical to medical mortality tend to increase with issue age and are in excess of 100 per cent at issue ages 10 and over in policy years 1-15 combined. For females, the ratios exceed 100 per cent at issue ages 0 and 35 and over in policy years 1-15 combined.

The mortality ratios by attained age groups and sex for policy years sixteen and over combined, covering the experience from 1965 to 1970

anniversaries, are presented in Table 12 for standard medical and non-medical 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. Twelve of the contributing companies submitted data separately for males and females for policy years 16 and over. The highest ratios of female to male mortality are found at attained ages 35-44 and 80-95.

EXPERIENCE BY CAUSE OF DEATH

The last previous analyses of death rates by cause of death covered the experience from 1963 to 1965 anniversaries for issues in the first fifteen policy years and for issues in the sixteenth and subsequent policy years (*TSA, 1966 Reports*, p. 17). This report carries the experience to 1970 anniversaries.

Experience during the First Fifteen Years of Insurance

Table 13 presents an analysis of the 1965-70 experience on standard medically examined issues in policy years 1-15 combined according to major subdivisions by cause of death, based on the Committee's 1970 Code for Cause of Death (*TSA, 1969 Reports*, p. 1). Results are shown separately for male lives, female lives, and male and female lives combined (including data reported without subdivision by sex). The corresponding data for nonmedical issues are shown in Table 14.

A comparison of the death rates in Tables 13 and 14 with those for the two-year period between 1963 and 1965 anniversaries shows generally little change in the death rates by cause of death, except for the cause of death groups malignant neoplasms, and pneumonia and influenza which display increases throughout the tables for medically examined issues, and the group accidents and homicide which display increases throughout the tables for nonmedical issues. Of course, war deaths for the 1965-70 experience have increased considerably from the 1963-65 study, particularly at issue ages 10-29.

A comparison by sex shows that at issue ages 30 and over death rates from heart and circulatory diseases are three to five times higher for males than for females, for both medical and nonmedical issues. In the past two studies the death rates for issue ages 30-39 from cancer under medical and nonmedical issues were about 50 per cent higher for females than for males; the current study shows the female experience to average about 35 per cent higher in this age group. The accidental death rate for males under both medical and nonmedical issues continues to be about two to three times higher than that for females.

TABLE 13
STANDARD MEDICALLY EXAMINED ISSUES
DEATH RATES BY CAUSE OF DEATH
BETWEEN 1965 AND 1970 ANNIVERSARIES
POLICY YEARS 1-15 COMBINED
(Death Rates per \$100,000)

POLICY YEARS	CAUSE OF DEATH										
	All Causes Combined	Tuberculosis (All Forms) (01, 02)*	Malignant Neoplasms (18-33)	Diabetes Mellitus (37)	Cerebrovascular Diseases (53)	Diseases of the Heart and Circulatory System (49-52, 54, 55)	Pneumonia and Influenza (56, 57)	Accidents and Homicide (88-91, 93-96, 98)	Suicide (97)	War Deaths (99)	All Other Causes and Unknown (Residual)
Male and Female Lives Combined (Including Data Not Subdivided by Sex)											
Age 0 at issue:											
1-5.....	133.7	0.0	0.7	0.0	0.0	1.4	32.2	17.6	0.0	0.0	81.8
6-15.....	43.1	0.0	5.7	0.6	0.7	6.0	1.5	17.8	0.1	0.0	10.7
1-15.....	76.4	0.0	3.9	0.4	0.5	4.3	12.8	17.7	0.1	0.0	36.7
Ages 1-9 at issue:											
1-5.....	36.8	0.0	6.9	0.0	5.7	0.1	0.3	18.5	0.0	0.0	5.3
6-15.....	69.2	0.0	8.7	0.2	1.0	2.7	1.2	37.6	4.1	6.6	7.1
1-15.....	59.0	0.0	8.2	0.1	2.5	1.9	0.9	31.6	2.8	4.5	6.5
Ages 10-29 at issue:											
1-5.....	83.8	0.0	9.5	0.0	1.5	3.7	0.3	45.8	5.0	9.6	8.4
6-15.....	127.4	0.1	21.5	0.3	3.7	26.1	1.1	40.7	10.6	5.3	18.0
1-15.....	107.3	0.1	15.9	0.2	2.7	15.8	0.7	43.0	8.0	7.3	13.6
Ages 30-39 at issue:											
1-5.....	118.6	0.1	18.8	0.1	3.4	28.2	0.9	42.5	9.0	1.3	14.3
6-15.....	292.4	0.2	58.8	0.9	10.4	115.9	3.8	43.2	17.5	0.6	41.1
1-15.....	209.7	0.1	39.8	0.5	7.1	74.4	2.4	42.8	13.4	0.9	28.3
Ages 40-49 at issue:											
1-5.....	251.8	0.1	60.8	0.4	7.3	91.1	2.7	45.5	13.7	0.3	29.9
6-15.....	685.8	0.2	170.2	2.8	28.9	316.5	8.3	47.4	21.7	0.1	89.7
1-15.....	458.6	0.2	112.9	1.5	17.6	198.5	5.4	46.4	17.5	0.2	58.4
Ages 50 and over at issue:											
1-5.....	576.0	0.3	178.2	0.6	19.5	238.0	6.5	47.6	13.9	0.0	71.4
6-15.....	1,616.1	1.1	458.9	8.0	98.0	716.5	25.8	55.5	27.6	0.0	224.7
1-15.....	1,040.2	0.7	303.5	3.9	54.5	451.6	15.1	51.1	20.0	0.0	139.8
All ages at issue:											
1-5.....	194.5	0.1	44.7	0.2	5.7	61.7	1.9	44.3	9.9	2.7	23.3
6-15.....	450.8	0.2	108.1	1.8	20.1	189.6	6.0	44.5	17.4	1.6	61.5
1-15.....	325.1	0.2	77.0	1.0	13.0	127.0	4.0	44.4	13.7	2.1	42.7

* Numbers in parentheses under cause of death refer to Committee's 1970 Code.

TABLE 13—Continued

POLICY YEARS	CAUSE OF DEATH										
	All Causes Combined	Tuberculosis (All Forms) (01, 02)*	Malignant Neoplasms (18-33)	Diabetes Mellitus (37)	Cerebrovascular Diseases (53)	Diseases of the Heart and Circulatory System (49-52, 54, 55)	Pneumonia and Influenza (56, 57)	Accidents and Homicide (88-91, 93-96, 98)	Suicide (97)	War Deaths (99)	All Other Causes and Unknown (Residual)
Male Lives											
Age 0 at issue:											
1-5	167.5	0.0	0.7	0.0	0.0	1.3	46.2	23.1	0.0	0.0	96.2
6-15	51.1	0.0	7.6	1.0	0.5	4.8	0.3	21.6	0.2	0.0	15.1
1-15	98.3	0.0	4.8	0.6	0.3	3.4	18.9	22.2	0.1	0.0	48.0
Ages 1-9 at issue:											
1-5	44.5	0.0	6.3	0.0	8.6	0.0	0.4	21.3	0.0	0.0	7.9
6-15	85.7	0.0	7.6	0.2	1.5	3.8	1.8	47.3	5.4	9.9	8.2
1-15	72.6	0.0	7.2	0.1	3.7	2.6	1.3	39.1	3.7	6.8	8.1
Ages 10-29 at issue:											
1-5	84.8	0.0	9.3	0.0	1.6	3.8	0.3	46.4	5.1	10.2	8.1
6-15	128.4	0.1	21.6	0.3	3.7	26.6	1.1	41.7	10.4	5.7	17.2
1-15	108.2	0.1	15.9	0.2	2.7	16.0	0.7	43.8	8.0	7.8	13.0
Ages 30-39 at issue:											
1-5	118.5	0.1	18.9	0.1	3.1	29.8	0.9	42.0	8.2	1.4	14.0
6-15	294.9	0.2	56.5	0.9	10.2	120.4	3.7	44.0	17.6	0.6	40.8
1-15	210.7	0.1	38.6	0.5	6.8	77.1	2.4	43.0	13.1	1.0	28.1
Ages 40-49 at issue:											
1-5	261.1	0.2	58.9	0.4	7.3	99.4	2.4	47.7	14.3	0.4	30.1
6-15	711.6	0.2	169.5	2.6	29.2	338.1	8.3	49.4	22.3	0.1	91.9
1-15	474.7	0.2	111.3	1.4	17.7	212.6	5.2	48.5	18.1	0.3	59.4
Ages 50 and over at issue:											
1-5	602.7	0.3	175.0	0.4	20.0	261.7	7.2	50.9	15.1	0.0	72.1
6-15	1,732.8	0.9	478.8	6.8	99.9	792.4	26.7	58.8	29.2	0.0	239.3
1-15	1,102.6	0.6	309.4	3.2	55.3	496.4	15.8	54.4	21.4	0.0	146.1
All Ages at issue:											
1-5	195.9	0.1	42.4	0.2	5.5	65.2	1.8	45.3	9.8	2.9	22.7
6-15	456.5	0.2	105.3	1.6	19.6	197.3	5.8	45.8	17.7	1.8	61.4
1-15	328.2	0.2	74.4	0.9	12.7	132.2	3.8	45.5	13.8	2.4	42.3
Female Lives											
Age 0 at issue:											
1-5	67.7	0.0	0.9	0.0	0.0	1.8	0.9	6.6	0.0	0.0	57.5
6-15	15.3	0.0	3.2	0.0	1.0	0.5	0.5	7.2	0.0	0.0	2.9
1-15	33.9	0.0	2.4	0.0	0.6	0.9	0.6	7.0	0.0	0.0	22.4
Ages 1-9 at issue:											
1-5	24.4	0.0	9.6	0.0	0.0	0.3	0.0	14.5	0.0	0.0	0.0
6-15	32.8	0.0	11.8	0.1	0.1	0.4	0.1	12.6	1.7	0.0	6.0
1-15	30.0	0.0	11.1	0.1	0.1	0.4	0.1	13.1	1.1	0.0	4.0
Ages 10-29 at issue:											
1-5	66.7	0.1	10.8	0.3	0.3	3.6	0.3	32.2	5.2	0.3	13.6
6-15	87.2	0.0	18.5	0.1	3.7	5.9	1.3	22.9	9.1	0.1	25.6
1-15	76.6	0.1	14.5	0.2	1.9	4.7	0.8	27.7	7.1	0.2	19.4
Ages 30-39 at issue:											
1-5	95.2	0.0	22.0	0.0	7.7	7.1	1.6	28.3	9.3	0.0	19.2
6-15	231.3	0.3	95.6	0.3	15.3	26.0	5.0	24.9	16.2	0.0	47.7
1-15	155.6	0.1	54.7	0.1	11.0	15.5	3.1	26.9	12.3	0.0	31.9
Ages 40-49 at issue:											
1-5	169.2	0.1	70.8	0.3	8.6	23.3	5.9	21.7	9.4	0.0	29.1
6-15	397.9	0.1	181.8	1.8	23.3	71.3	8.4	29.6	15.8	0.0	65.8
1-15	269.4	0.1	119.5	0.9	15.0	44.3	7.0	25.2	12.2	0.0	45.2
Ages 50 and over at issue:											
1-5	403.3	0.3	197.5	1.1	18.1	76.9	3.6	29.0	3.8	0.0	73.0
6-15	857.1	2.7	345.2	3.4	71.5	245.6	21.9	25.8	10.3	0.0	130.7
1-15	598.2	1.3	260.9	2.1	41.0	149.4	11.5	27.6	6.6	0.0	97.8
All Ages at issue:											
1-5	168.7	0.1	67.7	0.3	8.4	24.2	3.3	26.3	7.5	0.0	30.9
6-15	346.8	0.5	144.8	1.2	23.7	70.1	7.8	25.5	13.0	0.0	60.2
1-15	249.8	0.3	102.9	0.7	15.4	45.1	5.3	25.9	10.0	0.0	44.2

* Numbers in parentheses under cause of death refer to Committee's 1970 Code.

TABLE 14
 STANDARD NONMEDICAL ISSUES
 DEATH RATES BY CAUSE OF DEATH
 BETWEEN 1965 AND 1970 ANNIVERSARIES
 POLICY YEARS 1-15 COMBINED
 (Death Rates per \$100,000)

POLICY YEARS	CAUSE OF DEATH										
	All Causes Combined	Tuberculosis (All Forms) (01, 02)*	Malignant Neoplasms (18-33)	Diabetes Mellitus (37)	Cerebrovascular Diseases (53)	Diseases of the Heart and Circulatory System (49-52, 54, 55)	Pneumonia and Influenza (56, 57)	Accidents and Homicide (88-91, 93-96, 98)	Suicide (97)	War Deaths (99)	All Other Causes and Unknown (Residual)
Male and Female Lives Combined (Including Data Not Subdivided by Sex)											
Age 0 at issue:											
1-5	71.0	0.0	4.9	0.3	1.0	3.1	9.5	18.0	0.0	0.0	34.2
6-15	31.6	0.0	5.9	0.1	0.9	1.6	1.5	11.4	0.4	0.0	9.8
1-15	47.4	0.0	5.5	0.2	0.9	2.2	4.7	14.0	0.2	0.0	19.7
Ages 1-9 at issue:											
1-5	34.5	0.0	5.4	0.1	0.5	1.7	1.0	17.5	0.0	0.0	8.3
6-15	55.1	0.0	6.4	0.3	1.5	2.1	1.1	27.4	2.7	3.5	10.1
1-15	45.6	0.0	6.0	0.2	1.0	1.9	1.0	22.9	1.4	1.9	9.3
Ages 10-29 at issue:											
1-5	111.6	0.1	7.2	0.2	1.5	3.6	0.7	59.3	4.0	23.8	11.2
6-15	120.0	0.1	17.7	0.5	3.2	17.7	1.2	44.4	8.2	9.7	17.3
1-15	115.1	0.1	11.6	0.3	2.2	9.5	0.9	53.2	5.7	17.9	13.7
Ages 30-39 at issue:											
1-5	123.9	0.1	19.6	0.3	4.7	25.9	1.3	39.3	5.6	5.7	21.4
6-15	290.2	0.4	59.2	1.5	12.2	113.9	4.1	37.4	11.1	1.7	48.7
1-15	211.7	0.2	40.5	1.0	8.7	72.4	2.8	38.2	8.5	3.6	35.8
Ages 40-49 at issue:											
1-5	202.6	0.4	45.4	0.9	6.6	65.8	4.9	36.8	7.1	1.2	33.5
6-15	674.4	0.4	151.9	5.8	29.4	311.2	14.6	44.5	16.3	0.3	100.0
1-15	442.8	0.4	99.6	3.4	18.2	190.7	9.8	40.7	11.8	0.8	67.4
Ages 50 and over at issue:											
1-5	565.7	0.0	186.1	13.6	2.3	210.6	7.9	36.2	11.3	0.0	97.7
6-15	2,008.5	2.7	511.5	8.2	115.1	834.8	12.4	242.3	4.0	0.0	277.5
1-15	1,219.3	1.2	333.5	11.1	53.4	493.5	9.9	129.5	8.0	0.0	179.2
All ages at issue:											
1-5	109.8	0.1	9.4	0.2	2.0	7.7	1.1	52.8	4.0	19.0	13.5
6-15	155.0	0.1	27.0	0.7	5.3	40.2	2.0	40.3	8.2	7.0	24.2
1-15	130.3	0.1	17.4	0.5	3.5	22.4	1.5	47.1	5.9	13.5	18.4

* Numbers in parentheses under cause of death refer to Committee's 1970 Code.

TABLE 14—Continued

POLICY YEARS	CAUSE OF DEATH										
	All Causes Combined	Tuberculosis (All Forms) (01, 02)*	Malignant Neoplasms (18-33)	Diabetes Mellitus (37)	Cerebrovascular Diseases (53)	Diseases of the Heart and Circulatory System (49-52, 54, 55)	Pneumonia and Influenza (56, 57)	Accidents and Homicide (88-91, 93-96, 98)	Suicide (97)	War Deaths (99)	All Other Causes and Unknown (Residual)
Male Lives											
Age 0 at issue:											
1-5	75.5	0.0	5.0	0.3	1.1	3.8	10.8	18.6	0.0	0.0	35.9
6-15	36.4	0.0	6.4	0.0	0.9	1.8	1.6	14.7	0.5	0.0	10.5
1-15	52.7	0.0	5.8	0.1	1.0	2.7	5.4	16.2	0.3	0.0	21.2
Ages 1-9 at issue:											
1-5	38.7	0.0	6.1	0.0	0.4	1.8	0.6	21.3	0.0	0.0	8.5
6-15	67.6	0.0	7.2	0.1	1.4	2.4	1.1	34.9	3.5	5.4	11.6
1-15	54.0	0.0	6.7	0.1	0.9	2.1	0.9	28.4	1.9	2.9	10.1
Ages 10-29 at issue:											
1-5	122.6	0.0	7.5	0.1	1.5	3.7	0.8	65.8	4.2	27.8	11.2
6-15	125.0	0.1	17.2	0.5	3.2	18.5	1.2	47.7	8.6	10.9	17.1
1-15	123.7	0.1	11.6	0.3	2.2	10.0	0.9	58.3	6.0	20.6	13.7
Ages 30-39 at issue:											
1-5	133.9	0.1	19.1	0.4	4.3	30.1	1.2	45.6	5.8	7.2	20.1
6-15	300.8	0.4	55.0	1.6	11.9	124.4	4.1	41.1	11.5	2.1	48.7
1-15	224.4	0.2	38.6	1.0	8.4	81.4	2.7	43.2	8.9	4.4	35.6
Ages 40-49 at issue:											
1-5	248.0	0.6	46.6	1.5	6.9	92.3	5.0	50.0	9.4	2.0	33.7
6-15	727.0	0.3	148.0	5.7	30.9	353.2	16.4	52.4	17.6	0.4	102.1
1-15	511.6	0.5	102.4	3.8	20.1	235.8	11.3	51.3	13.9	1.1	71.4
Ages 50 and over at issue:											
1-5	648.4	0.0	226.2	16.5	2.7	228.3	5.5	43.9	13.7	0.0	111.6
6-15	2,108.1	4.0	299.9	8.0	92.3	1,050.8	4.0	349.5	5.9	0.0	293.7
1-15	1,244.4	1.6	256.3	13.0	39.3	564.1	4.9	168.7	10.5	0.0	186.0
All ages at issue:											
1-5	121.3	0.1	9.5	0.2	1.9	8.4	1.0	60.0	4.2	22.9	13.1
6-15	163.4	0.1	25.8	0.7	5.2	43.4	2.0	44.9	8.8	8.2	24.3
1-15	140.5	0.1	17.0	0.4	3.4	24.4	1.5	53.0	6.3	16.2	18.2
Female Lives											
Age 0 at issue:											
1-5	64.2	0.0	4.7	0.4	0.8	2.1	7.3	17.1	0.0	0.0	31.8
6-15	24.1	0.0	4.9	0.2	0.8	1.3	1.4	6.5	0.1	0.0	8.9
1-15	40.0	0.0	4.8	0.3	0.8	1.6	3.8	10.7	0.1	0.0	17.9
Ages 1-9 at issue:											
1-5	26.0	0.0	4.1	0.1	0.8	1.6	1.6	10.4	0.0	0.0	7.4
6-15	29.8	0.0	4.7	0.5	1.7	1.5	1.2	12.2	0.9	0.0	7.1
1-15	28.0	0.0	4.4	0.3	1.2	1.5	1.4	11.5	0.5	0.0	7.2
Ages 10-29 at issue:											
1-5	45.0	0.1	5.0	0.2	1.8	2.7	0.7	20.4	2.7	0.2	11.2
6-15	71.6	0.0	20.2	0.5	3.2	7.6	1.5	15.9	4.8	0.1	17.8
1-15	53.9	0.1	10.0	0.3	2.3	4.4	0.9	18.9	3.4	0.2	13.4
Ages 30-39 at issue:											
1-5	87.3	0.0	21.5	0.2	6.4	10.5	1.9	14.8	4.9	0.0	27.1
6-15	209.3	0.3	83.6	1.0	12.2	35.8	4.0	14.7	6.9	0.0	50.8
1-15	137.7	0.1	47.1	0.6	8.8	21.0	2.8	14.8	5.7	0.0	36.8
Ages 40-49 at issue:											
1-5	125.6	0.0	42.5	0.0	6.2	20.2	4.7	15.1	3.3	0.0	33.6
6-15	374.4	0.0	144.6	4.2	17.5	96.1	9.4	17.0	8.4	0.0	77.2
1-15	216.2	0.0	79.6	1.5	10.3	47.9	6.4	15.8	5.2	0.0	49.5
Ages 50 and over at issue:											
1-5	204.2	0.0	0.0	0.0	0.0	139.3	23.7	0.0	0.0	0.0	41.2
6-15	1,293.5	0.0	704.9	24.8	24.8	228.4	24.8	0.0	0.0	0.0	285.8
1-15	628.4	0.0	274.4	9.7	9.7	174.0	24.2	0.0	0.0	0.0	136.4
All ages at issue:											
1-5	54.3	0.1	8.9	0.2	2.6	4.5	1.5	18.1	2.7	0.1	15.6
6-15	92.7	0.1	31.1	0.6	4.8	13.3	2.1	13.8	4.0	0.1	22.8
1-15	69.5	0.1	17.7	0.4	3.5	8.0	1.7	16.4	3.2	0.1	18.4

* Numbers in parentheses under cause of death refer to Committee's 1970 Code.

TABLE 15
STANDARD ISSUES DURING SIXTEENTH AND SUBSEQUENT POLICY YEARS
CAUSE OF DEATH EXPERIENCE BY AMOUNTS
BETWEEN 1965 AND 1970 ANNIVERSARIES

AT-TAINED AGES	CAUSE OF DEATH										
	All Causes Combined	Tuber- culosis (All Forms) (01, 02)*	Malign- ant Neo- plasms (18-33)	Dia- betes Mel- litus (37)	Cere- bro- vascu- lar Dis- eases (53)	Dis- eases of the Heart and Circu- latory System (49-52, 54, 55)	Pneu- monia and In- fluen- za (56, 57)	Acci- dents and Homicide (88-91, 93-96, 98)	Sui- cide (97)	War Deaths (99)	All Other Causes and Un- known (Res- idual)
Male and Female Lives Combined (Including Data Not Subdivided by Sex)— Death Rates Per \$100,000											
15-24	109.3	0.1	8.4	0.3	1.9	4.3	2.2	52.2	8.3	16.1	15.5
25-39	342.0	0.2	26.0	1.4	4.8	28.3	2.2	38.9	11.0	3.1	26.1
40-49	368.0	0.5	79.1	2.5	15.1	150.3	5.2	39.6	16.6	0.4	58.7
50-59	966.2	1.0	211.6	8.1	49.0	468.7	14.1	49.3	23.7	0.1	140.6
60-69	2,332.4	2.1	511.8	26.8	160.8	1,174.4	40.5	56.1	26.7	0.0	333.2
70-79	5,425.7	5.5	980.3	73.2	603.2	2,673.3	169.3	99.3	25.6	0.0	797.0
80 and over	12,303.0	13.5	1,503.1	151.5	1,902.8	6,041.6	618.3	248.8	32.1	0.0	1,791.3
All ages	1,748.1	1.8	333.6	20.0	159.3	851.9	46.1	57.5	21.6	1.0	255.3
Male Lives—Percentage Distribution by Amount of Claims											
15-24	100.0%	0.1%	6.7%	0.2%	1.5%	3.6%	1.8%	49.1%	6.7%	17.7%	12.6%
25-39	100.0	0.1	15.8	1.0	3.0	21.8	1.3	29.4	7.9	2.5	17.2
40-49	100.0	0.2	19.3	0.7	3.8	43.6	1.3	11.1	4.3	0.1	15.6
50-59	100.0	0.1	20.7	0.9	4.9	49.9	1.4	5.1	2.4	0.0	14.6
60-69	100.0	0.1	21.4	1.3	6.7	50.9	1.6	2.4	1.2	0.0	14.4
70-79	100.0	0.1	18.2	1.5	10.7	49.3	2.9	1.8	0.5	0.0	15.0
80 and over	100.0	0.1	12.4	1.5	15.1	49.4	4.7	2.1	0.3	0.0	14.4
All ages	100.0%	0.1%	18.8%	1.3%	8.6%	49.3%	2.4%	3.4%	1.3%	0.1%	14.7%
Female Lives—Percentage Distribution by Amount of Claims											
15-24	100.0%	0.1%	11.0%	0.8%	3.2%	5.2%	3.1%	42.7%	10.9%	0.0%	23.0%
25-39	100.0	0.3	31.5	1.6	5.4	11.1	2.4	14.9	6.9	0.0	25.9
40-49	100.0	0.2	42.2	1.0	7.0	16.4	2.1	6.4	3.9	0.0	20.8
50-59	100.0	0.1	39.9	0.9	6.8	24.4	1.6	4.7	2.1	0.0	19.5
60-69	100.0	0.1	30.8	1.4	8.3	35.0	2.4	3.0	0.7	0.0	18.3
70-79	100.0	0.1	18.0	2.0	13.5	43.7	3.4	2.0	0.2	0.0	17.1
80 and over	100.0	0.1	10.8	1.1	17.5	46.0	4.2	1.9	0.1	0.0	18.3
All ages	100.0%	0.1%	25.9%	1.4%	11.0%	35.6%	2.8%	3.6%	1.1%	0.0%	18.5%

* Numbers in parentheses under cause of death refer to Committee's 1970 Code.

Because of its small volume, the nonmedical experience at issue ages 50 and over is subject to large chance fluctuations. For reasons explained earlier in this report, nonmedical issues for age groups 30–39 and over have a lower average age than medical issues. Because of the increases in nonmedical limits over the years, it also appears probable that nonmedical issues have a lower average duration. Therefore, a comparison of the death rates of medical and nonmedical issues by cause would not be valid.

Experience during the Sixteenth and Subsequent Policy Years

An analysis of the 1965–70 experience during the sixteenth and subsequent policy years according to major subdivisions by cause of death is presented in Table 15. Death rates are shown for male and female lives combined (including data reported without subdivision by sex). However, since many companies do not subdivide their ultimate exposure by sex, the results for male and female lives separately are shown as percentage distributions of the actual claims.

A comparison with the corresponding experience for the two-year period between 1963 and 1965 anniversaries shows reductions at attained ages 25–79 in the death rates from diseases of the heart and circulatory system and at attained ages 25 and over in the case of cerebrovascular diseases. Increases in death rates occurred in the cause group malignant neoplasms at attained ages 50–79 and in the war deaths group at attained ages 15–49.

The percentage distribution of deaths indicates that a higher proportion of males than of females died of diseases of the heart and circulatory system, while a higher proportion of females than of males died of cancer. At attained ages 59 and below, accidents accounted for a higher proportion of male than female deaths.

MORTALITY TRENDS

The data presented in past reports of the Mortality Committee of the Actuarial Society and in the reports of this Committee has shed light on the mortality trends during the last thirty-one years. This report includes two series of mortality rates on medical issues and one series on medical and nonmedical issues combined for the period from 1939 to 1970 policy anniversaries; also, two series on nonmedical issues for the period from 1951 to 1970 anniversaries are shown. In addition, data furnished by the Canadian Institute of Actuaries are shown to illustrate the comparable trends in Canadian mortality experience. The Canadian data include two series of mortality rates, one series (medical and nonmedical issues separately) for the period from 1956 to 1970 anniversaries and one series

(medical and nonmedical issues combined) for the period from 1949 to 1970 anniversaries. It should be noted that the Society of Actuaries' data includes a small amount of Canadian business, while the Canadian Institute of Actuaries' data is exclusively Canadian business. The series are described below.

SOCIETY OF ACTUARIES' DATA

1. Mortality rates on Standard Ordinary medical issues for policy years 1-5, inclusive, by five-year approximate attained age groups. The trend by year of these death rates by approximate attained age groups in the range from 20 to 64 is shown in Charts I-IX.
2. Mortality rates on Standard Ordinary medical issues for policy years 6-15, inclusive, by five-year approximate attained age groups. The trend by year of these death rates in the age range from 20 to 64 is shown in Charts I-IX.
3. Mortality rates on Standard Ordinary nonmedical issues for policy years 1-5, inclusive, by five-year approximate attained age groups. The trend by year of these death rates in the age range from 20 to 49 is shown in Charts I-VI.
4. Mortality rates on Standard Ordinary nonmedical issues for policy years 6-15, inclusive, by five-year approximate attained age groups. The trend by year of these death rates in the age range from 20 to 49 is shown in Charts I-VI.
5. Mortality rates on Standard Ordinary issues (medical and nonmedical combined) in the sixteenth and subsequent policy years, by five-year attained age groups. The trend by year of these death rates in the attained age range from 25 to 64 is shown in Charts II-IX.

Charts I-IX also show the trend of mortality rates of white males in the United States population for each age group.

CANADIAN INSTITUTE OF ACTUARIES' DATA

1. Mortality rates on Standard Ordinary medical issues for policy years 1-5, inclusive, by five-year approximate attained age groups. (No charts have been included for the Canadian trends.)
2. Mortality rates on Standard Ordinary nonmedical issues for policy years 1-5, inclusive, by five-year approximate attained age groups.
3. Mortality rates on Standard Ordinary issues (medical and nonmedical combined) in the sixth and subsequent policy years, by five-year attained age groups.

The translation of age groups at issue to approximate attained age groups was made from the central age for each age group at issue.

CHART I

Mortality Trends on Standard Ordinary Issues by Attained Age

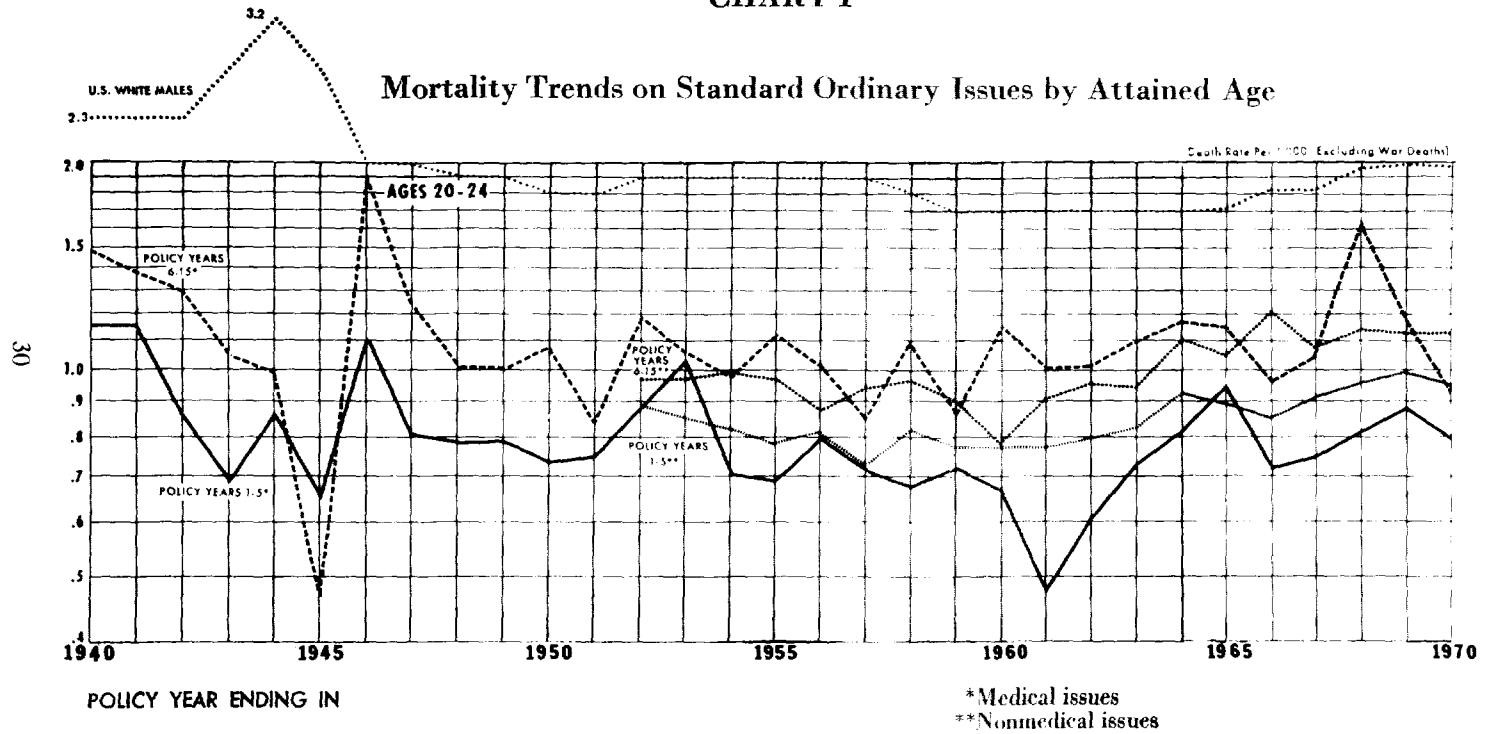
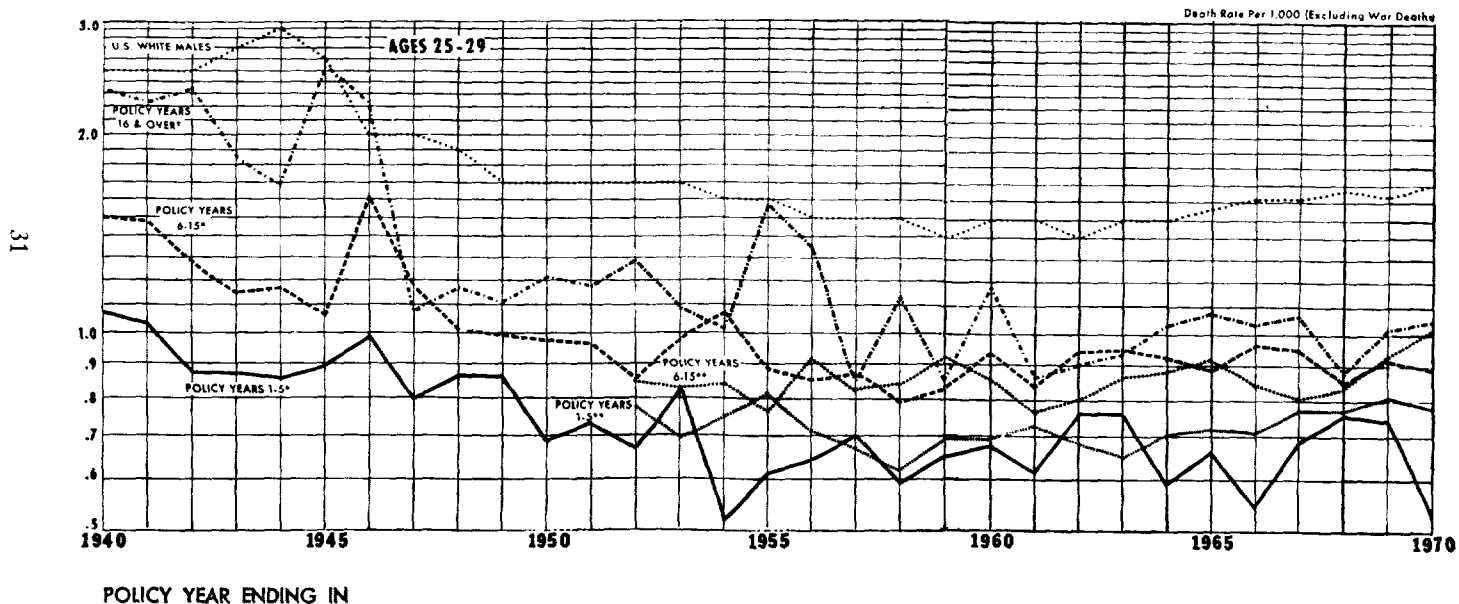


CHART II

Mortality Trends on Standard Ordinary Issues by Attained Age



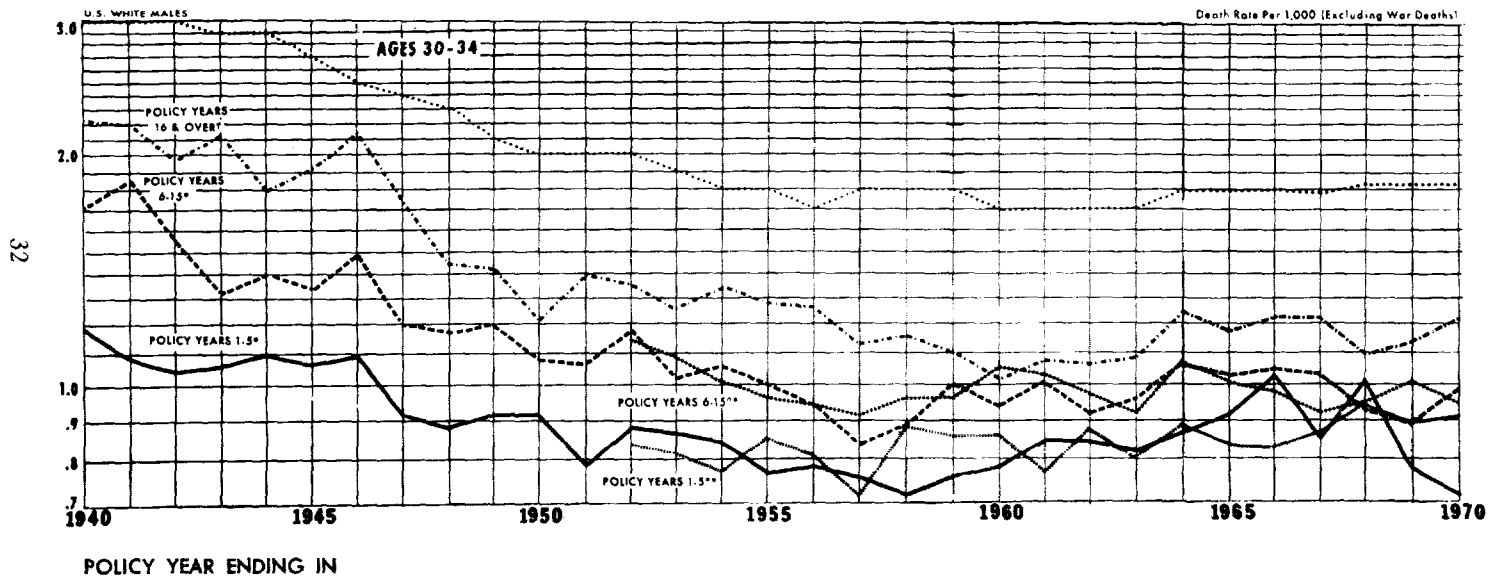
*Medical issues

**Nonmedical issues

†Total issues, medical and nonmedical combined.

CHART III

Mortality Trends on Standard Ordinary Issues by Attained Age



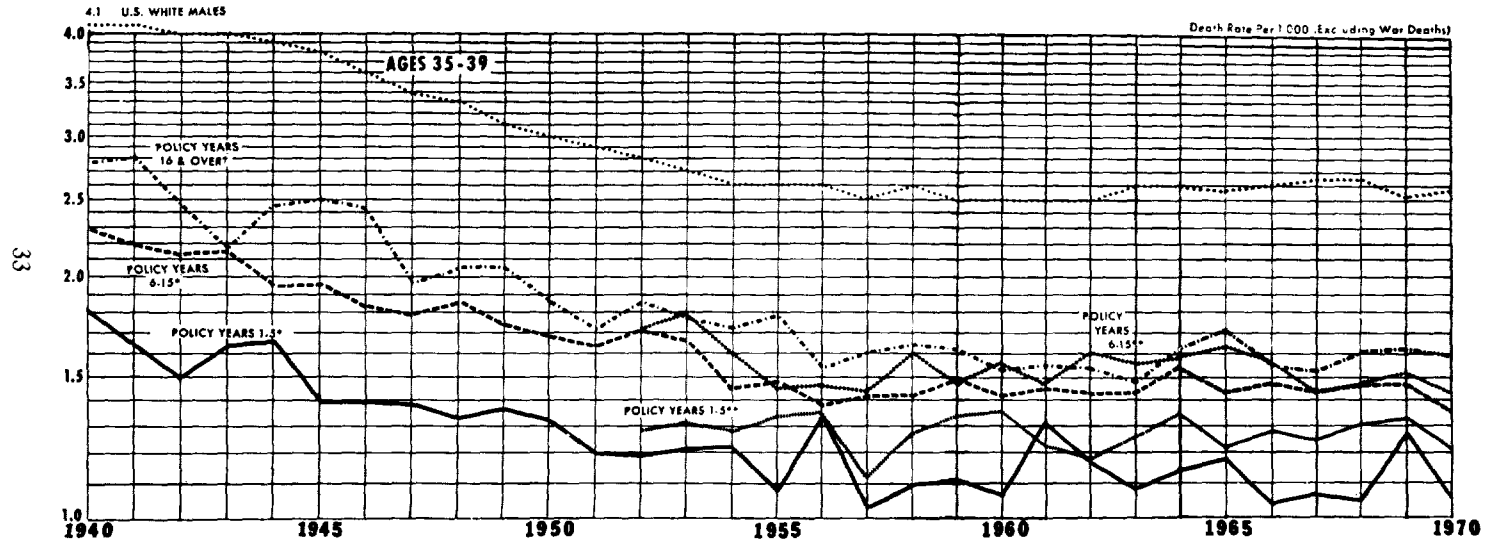
*Medical issues

**Nonmedical issues

†Total issues, medical and nonmedical combined.

CHART IV

Mortality Trends on Standard Ordinary Issues by Attained Age

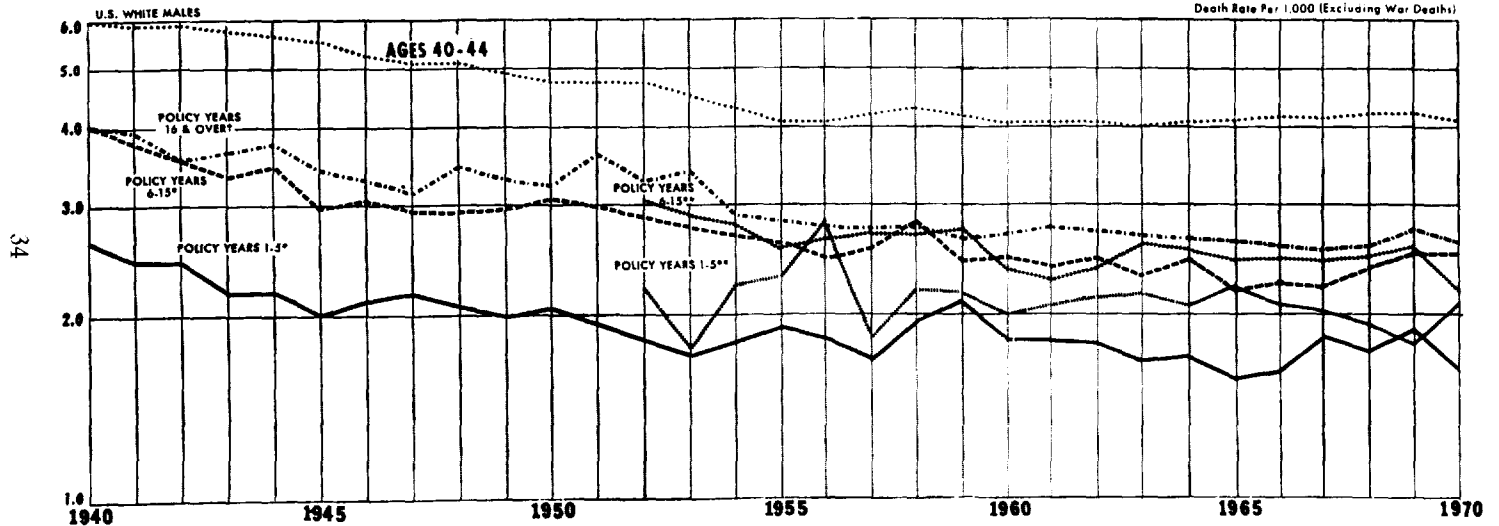


POLICY YEAR ENDING IN

- *Medical issues
- **Nonmedical issues
- †Total issues, medical and nonmedical combined.

CHART V

Mortality Trends on Standard Ordinary Issues by Attained Age



34

POLICY YEAR ENDING IN

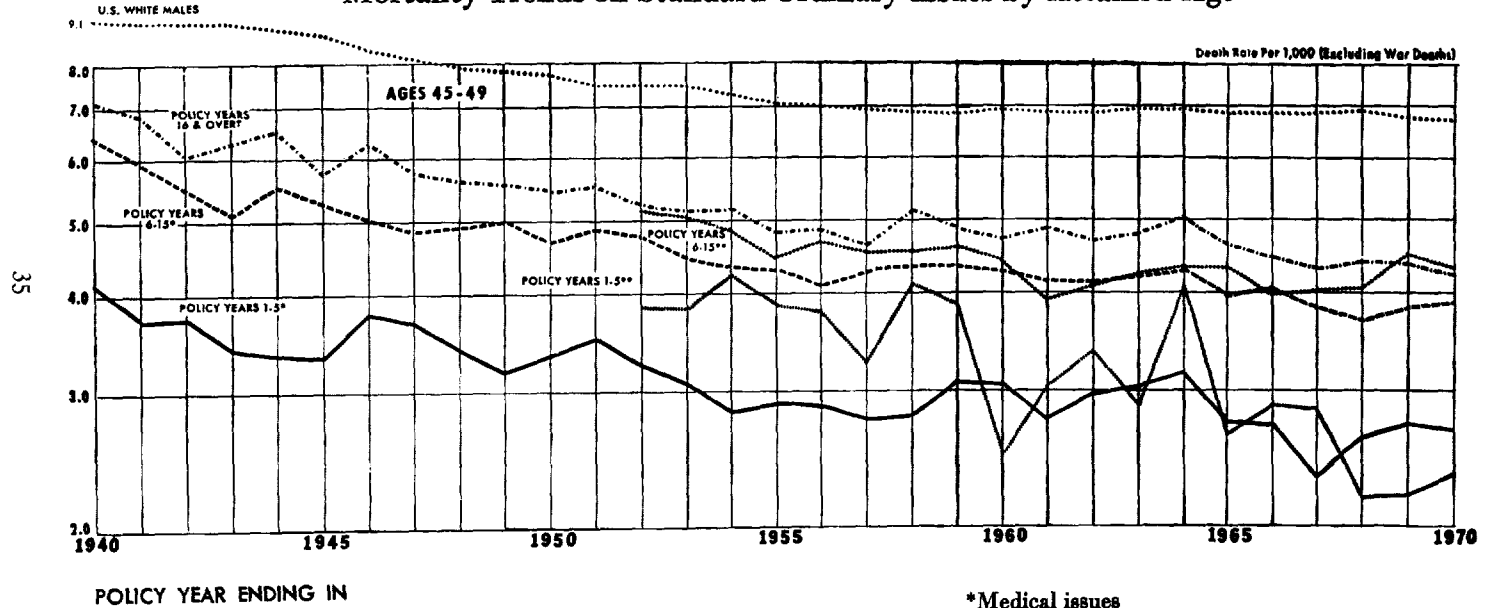
*Medical issues

**Nonmedical issues

†Total issues, medical and nonmedical combined.

CHART VI

Mortality Trends on Standard Ordinary Issues by Attained Age



*Medical issues

**Nonmedical issues

†Total issues, medical and nonmedical combined.

CHART VII

Mortality Trends on Standard Ordinary Issues by Attained Age

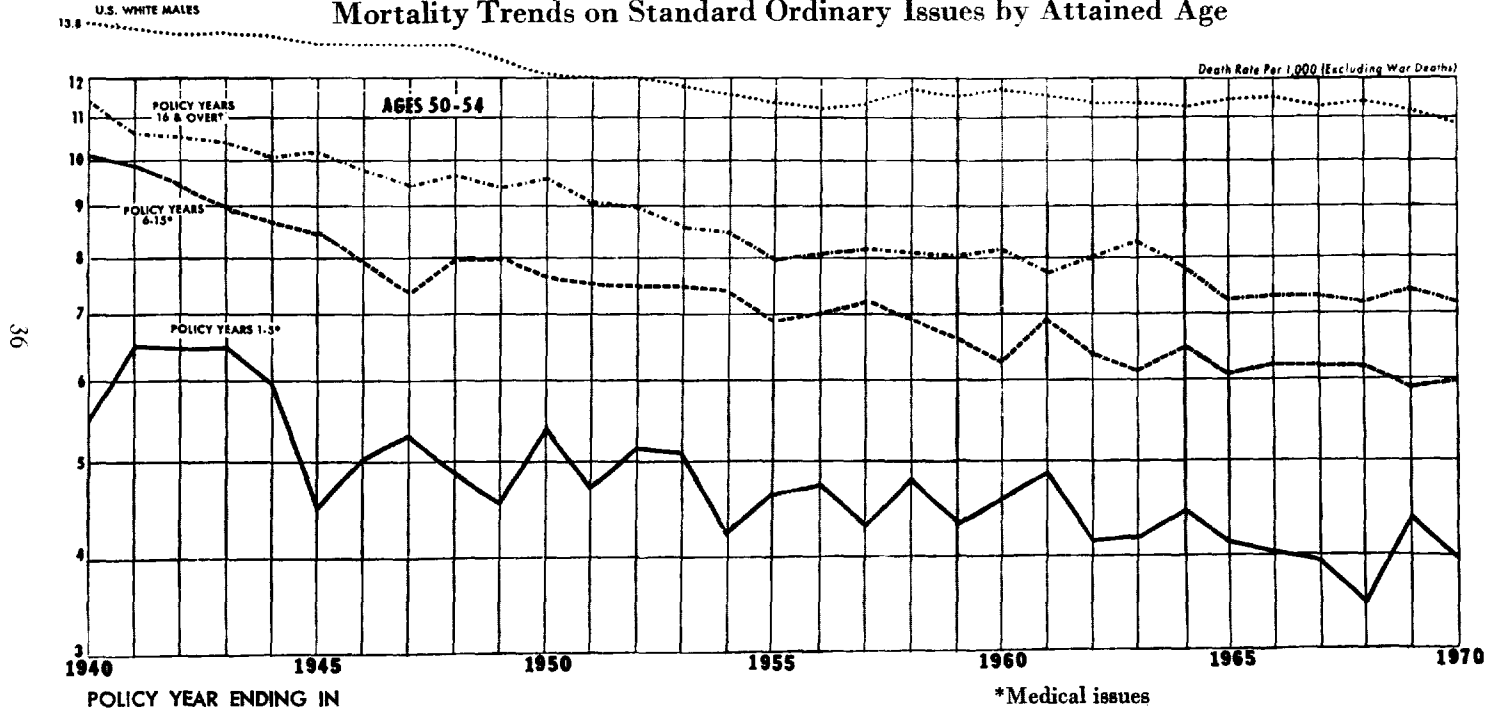
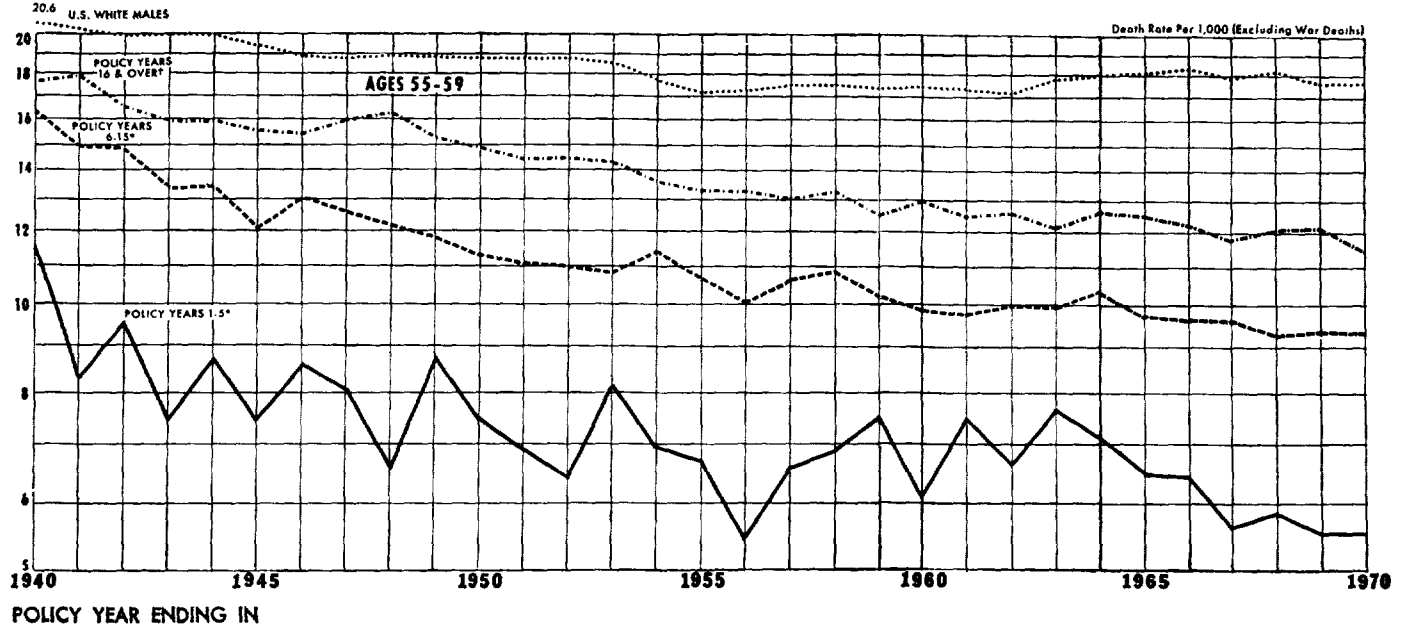


CHART VIII

Mortality Trends on Standard Ordinary Issues by Attained Age

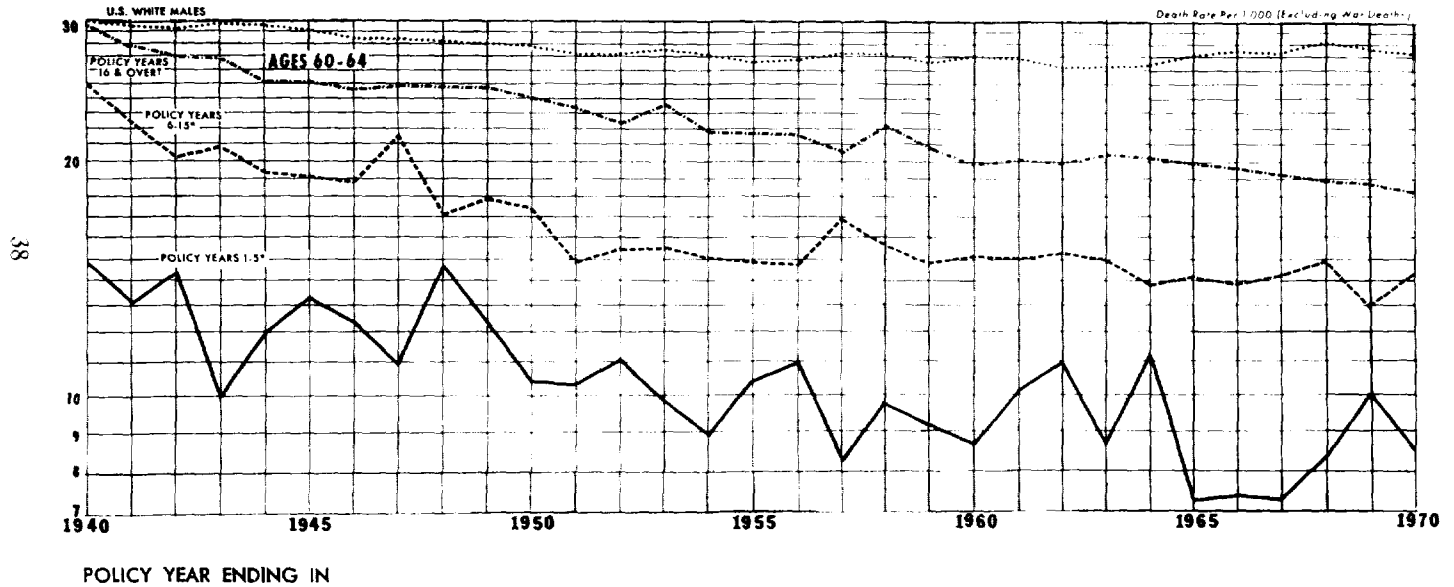


*Medical issues

†Total issues, medical and nonmedical combined.

CHART IX

Mortality Trends on Standard Ordinary Issues by Attained Age



*Medical issues

†Total issues, medical and nonmedical combined.

Since the data were not subdivided by sex until the 1955-59 period and some major contributors could make this subdivision only for the latter part of this period, all data in this section are shown for male and female lives combined.

The mortality trends during the period from 1939 to 1970 anniversaries on Standard Ordinary medical issues in the first five policy years are summarized by approximate attained age groups in Table 16. This table indicates that the trend of improving mortality from the 1939-43 period

TABLE 16
TREND OF EXPERIENCE ON STANDARD ISSUES
MALE AND FEMALE LIVES COMBINED
POLICY YEARS 1-5
EXPERIENCE FOR PERIOD BETWEEN ANNIVERSARIES
IN INDICATED YEARS
MEDICAL*

Approximate Attained Ages	1939-43	1943-47	1947-51	1951-55	1955-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)							
12-14.....	0.585	0.554	0.402	0.463	0.583	0.368	0.710
15-19.....	0.917	0.826	0.799	0.792	0.719	0.827	0.950
20-24.....	0.960	0.854	0.763	0.824	0.718	0.651	0.812
25-29.....	0.964	0.876	0.781	0.653	0.645	0.683	0.695
30-34.....	1.090	1.037	0.869	0.831	0.749	0.832	0.885
35-39.....	1.643	1.446	1.299	1.168	1.128	1.157	1.114
40-44.....	2.447	2.117	1.994	1.814	1.897	1.802	1.779
45-49.....	3.758	3.566	3.383	3.003	2.882	2.987	2.657
50-54.....	6.229	5.162	4.845	4.751	4.572	4.439	3.999
55-59.....	9.282	8.215	7.390	7.012	6.675	7.001	5.902
60-64.....	13.182	12.132	11.851	10.005	9.473	9.976	8.204
65 and over.....	20.500	16.460	20.193	16.234	16.244	15.584	14.358
Mortality Index with 1959-64 Experience = 100 Per Cent							
12-14.....	159.0%	150.5%	109.2%	125.8%	158.4%	100.0%	192.9%
15-19.....	110.9	99.9	96.6	95.8	86.9	100.0	114.9
20-24.....	147.5	131.2	117.2	126.6	110.3	100.0	124.7
25-29.....	141.1	128.3	114.3	95.6	94.4	100.0	101.8
30-34.....	131.0	124.6	104.4	99.9	90.0	100.0	106.4
35-39.....	142.0	125.0	112.3	101.0	97.5	100.0	96.3
40-44.....	135.8	117.5	110.7	100.7	105.3	100.0	98.7
45-49.....	125.8	119.4	113.3	100.5	96.5	100.0	89.0
50-54.....	140.3	116.3	109.1	107.0	103.0	100.0	90.1
55-59.....	132.6	117.3	105.6	100.2	95.3	100.0	84.3
60-64.....	132.1	121.6	118.8	100.3	95.0	100.0	82.2
65 and over.....	131.5	105.6	129.6	104.2	104.2	100.0	92.1

* Excludes war deaths between 1941 and 1946 anniversaries, 1949 and 1954 anniversaries, and 1964 and 1970 anniversaries.

TABLE 16—*Continued*

NONMEDICAL*

Approximate Attained Ages	1951-55	1955-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)				
12-14.....	0.381	0.316	0.292	0.367
15-19.....	0.834	0.836	0.861	1.024
20-24.....	0.834	0.787	0.828	0.933
25-29.....	0.764	0.672	0.695	0.768
30-34.....	0.821	0.825	0.840	0.885
35-39.....	1.311	1.275	1.270	1.262
40-44.....	2.208	2.258	2.082	2.041
45-49.....	3.937	3.731	3.225	2.549
50 and over.....	5.738	6.605	7.743	4.190
Mortality Index with 1959-64 Experience = 100 Per Cent				
12-14.....	130.5%	108.2%	100.0%	125.7%
15-19.....	96.9	97.1	100.0	118.9
20-24.....	100.7	95.0	100.0	112.7
25-29.....	109.9	96.7	100.0	110.5
30-34.....	97.7	98.2	100.0	105.4
35-39.....	103.2	100.4	100.0	99.4
40-44.....	106.1	108.5	100.0	98.0
45-49.....	122.1	115.7	100.0	79.0
50 and over.....	74.1	85.3	100.0	54.1

* Excludes war deaths between 1951 and 1954 anniversaries and 1964 and 1970 anniversaries.

to the 1955-59 period for ages 15 and over was halted during the 1959-64 period. This trend toward improving mortality was resumed at ages 35 and over during the 1964-70 period, but there was a considerable worsening in mortality at ages 12-34 during the later period.

Also in Table 16 are shown the mortality trends during the period from 1951 to 1970 anniversaries on Standard Ordinary nonmedical issues in the first five policy years. In the important age range 15-34 there is an increase in the mortality rates for the more recent period.

The mortality trends during the period from 1939 to 1970 anniversaries on Standard Ordinary medical issues in policy years 6-15 are summarized by approximate attained age group in Table 17. From the 1939-43 period to the 1955-59 period, substantial decreases in mortality were seen at all ages. This trend was halted in the 1959-64 period for ages below 40, and mortality has generally continued to increase slightly for these ages through the 1964-70 period. At ages 40 and over mortality in the 1964-70 period was lower than in the preceding period.

Also in Table 17 are shown the mortality trends during the period from 1951 to 1970 anniversaries on Standard Ordinary nonmedical issues in policy years 6-15. At ages 40 and over there is improvement in mortality through the 1959-64 period; the 1964-70 period shows very slight increases at ages 40-49. There is no clear pattern at the younger ages, although ages 29 and below show marked increases over the 1959-64 period.

The mortality trends during the period from 1939 to 1970 anniversaries

TABLE 17
TREND OF EXPERIENCE ON STANDARD ISSUES
MALE AND FEMALE LIVES COMBINED
POLICY YEARS 6-15
EXPERIENCE FOR PERIOD BETWEEN ANNIVERSARIES
IN INDICATED YEARS
MEDICAL*

Approximate Attained Age	1939-43	1943-47	1947-51	1951-55	1955-59	1959-64	1964-70
Mortality Rates per 1,000 (Based on Amounts of Insurance)							
17-19	1.006	0.777	0.881	0.918	0.756	1.008	1.099
20-24	1.279	1.162	0.986	1.086	0.954	1.027	1.147
25-29	1.339	1.257	0.987	0.947	0.842	0.920	0.912
30-34	1.609	1.355	1.129	1.064	0.918	0.981	0.992
35-39	2.193	1.884	1.735	1.575	1.430	1.463	1.440
40-44	3.686	3.111	2.981	2.716	2.555	2.447	2.388
45-49	5.792	5.194	4.883	4.476	4.278	4.168	3.897
50-54	9.636	8.107	7.788	7.266	6.914	6.442	6.080
55-59	14.929	12.799	11.592	10.985	10.458	9.981	9.476
60-64	22.218	19.638	16.796	15.188	15.497	14.814	14.063
65-69	37.049	28.470	25.651	23.874	23.013	20.379	20.317
70-74	50.493	46.787	37.865	35.529	33.773	31.776	30.892
75 and over	72.883	83.668	58.066	49.000	54.182	51.222	47.110
Mortality Index with 1959-64 Experience = 100 Per Cent							
17-19	99.8%	77.1%	87.4%	91.1%	75.0%	100.0%	109.0%
20-24	124.5	113.1	96.0	105.7	92.9	100.0	111.7
25-29	145.5	136.6	107.3	102.9	91.5	100.0	99.1
30-34	164.0	138.1	115.1	108.5	93.6	100.0	101.1
35-39	149.9	128.8	118.6	107.7	97.7	100.0	98.4
40-44	150.6	127.1	121.8	111.0	104.4	100.0	97.6
45-49	139.0	124.6	117.2	107.4	102.6	100.0	93.5
50-54	149.6	125.8	120.9	112.8	107.3	100.0	94.4
55-59	149.6	128.2	116.1	110.1	104.8	100.0	94.9
60-64	150.0	132.6	113.4	102.5	104.6	100.0	94.9
65-69	181.8	139.7	125.9	117.2	112.9	100.0	99.7
70-74	158.9	147.2	119.2	111.8	106.3	110.0	97.2
75 and over	142.3	163.3	113.4	95.7	105.8	100.0	92.0

* Excludes war deaths between 1941 and 1946 anniversaries, 1949 and 1954 anniversaries, and 1964 and 1970 anniversaries.

TABLE 17—Continued

NONMEDICAL*

Approximate Attained Ages	1951-55	1955-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)				
17-19.....	0.852	0.902	0.824	0.980
20-24.....	0.979	0.922	0.963	1.122
25-29.....	0.822	0.873	0.845	0.901
30-34.....	1.048	0.952	1.011	0.967
35-39.....	1.621	1.500	1.568	1.506
40-44.....	2.805	2.688	2.508	2.540
45-49.....	4.867	4.612	4.189	4.219
50 and over.....	9.137	8.555	8.404	7.489
Mortality Index with 1959-64 Experience = 100 Per Cent				
17-19.....	103.4%	109.5%	100.0%	118.9%
20-24.....	101.7	95.7	100.0	116.5
25-29.....	97.3	103.3	100.0	106.6
30-34.....	103.7	94.2	100.0	95.6
35-39.....	103.4	95.7	100.0	96.0
40-44.....	111.8	107.2	100.0	101.3
45-49.....	116.2	110.1	100.0	100.7
50 and over.....	108.7	101.8	100.0	89.1

* Excludes war deaths between 1951 and 1954 anniversaries and 1964 and 1970 anniversaries.

on Standard Ordinary business, medical and nonmedical issues combined, in the sixteenth and subsequent years are summarized by attained age groups in Table 18. This table shows that, from the 1939-43 period to the 1959-64 period, ultimate mortality decreased in every age group. This trend continues for the 1964-70 period also, with the exception of the three youngest age groups, ages 25-39, which display somewhat higher mortality than that of the 1959-64 period.

Charts I-IX show that the mortality rates for white males in the United States population have remained fairly stationary since about 1956, with only slight increases at the younger ages and slight decreases at the older ages.

The mortality trends during the period from 1956 to 1970 anniversaries on Canadian Standard Ordinary business, medical and nonmedical issues separately, in policy years 1-5 are summarized by approximate attained age groups in Table 19. Unfortunately, very little in the nature of trends can be seen for Canadian medical or nonmedical data. For nonmedical

issues, mortality decreased from the 1959-64 period to the 1964-70 period at ages 25-54 (except ages 45-49).

Also exhibited in Table 19 are the mortality trends during the period from 1949 to 1970 anniversaries on Canadian Standard Ordinary business, medical and nonmedical issues combined, in the sixth and subsequent years. Ages 30 and over generally show improved mortality since the 1949-52 period, with definite decreases in mortality for all ages over 30 (except

TABLE 18

TREND OF EXPERIENCE ON STANDARD MEDICAL AND NONMEDICAL ISSUES*
MALE AND FEMALE LIVES COMBINED
SIXTEENTH AND SUBSEQUENT POLICY YEARS
EXPERIENCE FOR PERIOD BETWEEN ANNIVERSARIES
IN INDICATED YEARS

Attained Ages	1939-43	1943-47	1947-51	1951-55	1955-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)							
25-29	2.142	1.785	1.171	1.244	1.013	0.983	1.025
30-34	2.127	1.903	1.364	1.302	1.154	1.098	1.177
35-39	2.524	2.336	1.922	1.786	1.604	1.552	1.605
40-44	3.813	3.396	3.381	3.085	2.720	2.677	2.658
45-49	6.573	6.108	5.569	5.107	4.899	4.802	4.444
50-54	10.725	9.828	9.427	8.497	8.093	8.022	7.307
55-59	16.905	15.725	15.197	13.883	13.022	12.543	12.021
60-64	27.757	24.991	24.203	22.344	21.237	20.111	19.064
65-69	40.801	36.797	36.381	33.821	32.472	31.432	29.729
70-74	58.594	56.181	53.862	50.850	48.928	47.839	45.130
75-79	85.727	84.016	79.971	75.156	73.760	71.972	69.948
80-84	136.807	124.293	113.844	111.755	112.223	108.802	106.519
85 and over	199.785	180.111	177.068	170.061	181.318	177.152	168.215
Mortality Index with 1959-64 Experience = 100 Per Cent							
25-29	217.9%	181.6%	119.1%	126.6%	193.1%	100.0%	104.3%
30-34	193.7	173.3	124.2	118.6	105.1	100.0	107.2
35-39	162.6	150.5	123.8	115.1	103.4	100.0	103.4
40-44	142.4	126.9	126.3	115.2	101.6	100.0	99.3
45-49	136.9	127.2	116.0	106.4	102.0	100.0	92.5
50-54	133.7	122.5	117.5	105.9	100.9	100.0	91.1
55-59	134.8	125.4	121.2	110.7	103.8	100.0	95.8
60-64	138.0	124.3	120.3	111.1	105.6	100.0	94.8
65-69	129.8	117.1	115.7	107.6	103.3	100.0	94.6
70-74	122.5	117.4	112.6	106.3	102.3	100.0	94.3
75-79	119.1	116.7	111.1	104.4	102.5	100.0	97.2
80-84	125.7	114.2	104.6	102.7	103.1	100.0	97.9
85 and over	112.8	101.7	100.0	96.0	102.4	100.0	95.0

* Excludes war deaths between 1941 and 1946 anniversaries, 1949 and 1954 anniversaries, and 1964 and 1970 anniversaries.

TABLE 19
 CANADIAN EXPERIENCE
 TREND OF EXPERIENCE ON STANDARD ISSUES
 MALE AND FEMALE LIVES COMBINED
 POLICY YEARS 1-5
 EXPERIENCE FOR PERIOD BETWEEN ANNIVERSARIES
 IN INDICATED YEARS

APPROXIMATE ATTAINED AGES	MEDICAL			NONMEDICAL*		
	1956-59	1959-64	1964-70	1956-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)						
12-14.....			0.020		0.411	0.282
15-19.....	0.837	0.944	1.681	0.973	0.956	1.132
20-24.....	0.933	0.835	0.831	0.971	0.960	0.977
25-29.....	0.582	0.685	0.733	0.747	0.792	0.770
30-34.....	0.841	0.735	0.791	0.985	0.947	0.868
35-39.....	1.379	1.138	1.103	1.084	1.282	1.162
40-44.....	1.764	1.451	1.586	1.845	1.767	1.713
45-49.....	2.341	2.447	2.552	2.858	2.884	3.070
50-54.....	3.964	4.397	3.895		8.946	3.937
55-59.....	5.240	6.481	5.978			
60-64.....	8.061	9.495	9.927			
65 and over..	12.268	13.978	14.247			
Mortality Index with 1959-64 Experience = 100 Per Cent						
12-14.....					100.0%	68.6%
15-19.....	88.7%	100.0%	178.1%	101.8%	100.0	118.4
20-24.....	111.7	100.0	99.5	101.2	100.0	101.8
25-29.....	85.0	100.0	107.0	94.3	100.0	97.2
30-34.....	114.4	100.0	107.6	104.0	100.0	91.7
35-39.....	121.2	100.0	96.9	84.6	100.0	90.6
40-44.....	121.6	100.0	109.3	104.4	100.0	96.9
45-49.....	95.7	100.0	104.3	99.1	100.0	106.4
50-54.....	90.2	100.0	88.6		100.0	44.0
55-59.....	80.9	100.0	92.2			
60-64.....	84.9	100.0	104.5			
65 and over..	87.8	100.0	101.9			

* Nonmedical issues to 50 and over only.

TABLE 19—Continued
SIXTH AND SUBSEQUENT POLICY YEARS
MEDICAL AND NONMEDICAL ISSUES†

Attained Ages	1949-52	1952-55	1955-59	1959-64	1964-70
Mortality Rate per 1,000 (Based on Amounts of Insurance)					
15-19	0.838	0.739	0.691	0.734	0.861
20-24	1.085	1.179	1.035	1.099	1.122
25-29	1.023	1.042	0.964	0.892	0.893
30-34	1.061	1.162	1.066	1.017	0.966
35-39	1.608	1.673	1.438	1.459	1.365
40-44	3.079	2.602	2.518	2.413	2.419
45-49	4.871	4.364	4.448	4.285	4.128
50-54	8.399	7.806	7.437	7.005	6.685
55-59	12.509	12.127	11.894	11.238	10.896
60-64	22.595	20.526	20.614	18.659	17.032
65-69	34.058	32.584	30.352	30.684	27.755
70-74	50.665	47.565	46.024	48.084	43.423
75 and over..	86.094	88.239	86.074	87.050	84.870
Mortality Index with 1959-64 Experience = 100 Per Cent					
15-19	114.2%	100.7%	94.1%	100.0%	117.3%
20-24	98.7	107.3	94.2	100.0	102.1
25-29	114.7	116.8	108.1	100.0	100.1
30-34	104.3	114.3	104.8	100.0	95.0
35-39	110.2	114.7	98.6	100.0	93.6
40-44	127.6	107.8	104.4	100.0	100.2
45-49	113.7	101.8	103.8	100.0	96.3
50-54	119.9	111.4	106.2	100.0	95.4
55-59	111.3	107.9	105.8	100.0	97.0
60-64	121.1	110.0	110.5	100.0	91.3
65-69	111.0	106.2	98.9	100.0	90.5
70-74	105.4	98.9	95.7	100.0	90.3
75 and over..	98.9	101.4	98.9	100.0	97.5

† Excludes war deaths between 1949 and 1954 anniversaries.

ages 40-44) from the 1959-64 figures. The three youngest age groups, ages 15-29, have varied increases in mortality over the 1959-64 period, with ages 15-19 having the highest increase in mortality recorded for that group.

A comparison of Tables 16 and 19 shows that, in the first five policy years for the 1964-70 period, mortality rates at ages 30 and over in the Canadian experience are generally lower than those in the Society of Actuaries' study, both on medical and nonmedical business. The opposite is true at ages 15-29.

Because of the differences in duration groupings, a valid comparison cannot be made for the later policy years.

APPENDIX I

TABLE A
CONTRIBUTING COMPANIES
PROPORTION OF TOTAL EXPOSURES BETWEEN 1969 AND 1970 ANNIVERSARIES
CONTRIBUTED BY EACH COMPANY

COMPANY	FIRST FIFTEEN POLICY YEARS		SIXTEENTH 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	Female
				Male	Female	Male	Female		
	Male and Female Lives Combined (Including Data Not Subdivided by Sex)								
Prudential	18.6%	34.9%	17.3%	17.2%	1.4%	29.1%	5.9%	26.5%	4.7%
New York Life	11.3	12.1	11.2	10.2	1.2	9.7	2.4	14.7	2.7
Metropolitan	10.9	18.2	23.0	10.2	0.7	16.1	2.2		
Equitable, N.Y.	8.8	5.8	8.5	8.2	0.6	4.9	0.9		
Northwestern Mutual	7.5	1.7	7.0	6.8	0.6	1.2	0.5	11.4	1.0
Massachusetts Mutual	6.4	2.7	3.3	6.0	0.4	2.3	0.4		
John Hancock	5.2	6.3	5.2	4.8	0.4	5.1	1.2	7.4	1.9
New England Life	3.9	1.7	2.1	3.6	0.3	1.5	0.2	3.4	0.3
Mutual Benefit	3.4	1.3	3.0	3.2	0.3	1.1	0.2	3.6	0.3
Connecticut Mutual	3.4	2.2	2.2	3.2	0.2	1.9	0.3		
Mutual Life, N.Y.	3.0	3.6	4.0	2.8	0.2	3.0	0.6	6.3	0.9
Occidental	3.0	1.0	0.7	2.6	0.2	0.7	0.2		
Travelers	2.9	1.8	2.8	2.7	0.2	1.6	0.2	4.6	0.4
Aetna	2.6	1.4	1.9	2.4	0.2	1.2	0.3	2.9	0.4
Connecticut General	2.5	0.4	0.9	2.3	0.3	0.3	0.1	1.4	0.2
Penn Mutual	2.3	2.2	2.7	2.1	0.2	1.8	0.3		
Lincoln National	2.2	1.3	1.8	2.0	0.2	1.0	0.2	2.8	0.4
Provident Mutual	1.4	0.8	1.4	1.3	0.1	0.7	0.1		
Sun Life, Canada	0.7	0.6	1.0	0.6	0.1	0.5	0.1	1.6	0.2
Total	100.0%	100.0%	100.0%	92.2%	7.8%	83.7%	16.3%	86.6%	13.4%

NOTE.—A Comparative Mortality Study of the select experience between 1965 and 1970 anniversaries for 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 groups separately for medical and nonmedical business.

TABLE B
 STANDARD MEDICALLY EXAMINED ISSUES OF 1955-69
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1955-60 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
1955 (15)	0	\$ 16,708	\$ 6	\$ 0	\$ 7	86%	86%
	1	11,057	1	0	5	20	20
	2-4	15,560	19	3	9	211	244
	5-9	48,932	49	1	43	114	116
	10-14	64,458	28	5	71	39	46
	15-19	115,068	114	0	134	85	85
	20-24	337,689	631	4	503	125	126
	25-29	757,945	1,760	20	1,827	96	97
	30-34	1,014,417	3,661	17	4,549	80	81
	35-39	937,170	5,445	0	6,613	82	82
	40-44	706,426	7,059	0	7,256	97	97
	45-49	411,838	7,051	0	6,969	101	101
	50-54	192,819	5,190	0	4,577	113	113
	55-59	82,269	2,467	0	2,954	84	84
	60-64	29,479	1,238	0	1,406	88	88
65-69	5,991	290	0	398	73	73	
70 and over	633	71	0	88	81	81	
	All ages	\$ 4,748,459	\$35,080	\$ 50	\$37,409	94%	94%
1956 (14)	0	\$ 14,853	\$ 9	\$ 0	\$ 5	180%	180%
	1	14,869	2	0	5	40	40
	2-4	21,127	16	0	11	145	145
	5-9	40,547	31	5	35	89	103
	10-14	66,487	68	4	72	94	100
	15-19	125,036	144	0	137	105	105
	20-24	412,192	461	10	572	81	82
	25-29	833,150	1,466	17	1,802	81	82
	30-34	1,098,197	3,815	0	4,282	89	89
	35-39	1,046,294	6,022	0	6,371	95	95
	40-44	808,263	6,924	0	7,650	91	91
	45-49	467,936	6,704	0	6,996	96	96
	50-54	215,207	4,237	0	4,649	91	91
	55-59	84,450	3,037	0	2,768	110	110
	60-64	31,130	1,209	0	1,427	85	85
65-69	5,628	432	0	349	124	124	
70 and over	502	47	0	67	70	70	
	All ages	\$ 5,285,868	\$34,624	\$ 36	\$37,198	93%	93%

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
1957 (13)	0	\$ 13,205	\$ 0	\$ 0	\$ 4	0%	0%
	1	17,915	1	0	6	17	17
	2-4	20,269	3	0	10	30	30
	5-9	36,931	27	10	30	90	123
	10-14	60,086	27	42	63	43	110
	15-19	128,173	125	2	138	91	92
	20-24	531,756	580	30	673	86	91
	25-29	980,414	1,621	10	1,912	85	85
	30-34	1,356,849	4,729	12	4,540	104	104
	35-39	1,253,802	6,662	0	6,715	99	99
	40-44	903,491	6,623	0	7,655	87	87
	45-49	474,883	5,824	0	6,210	94	94
	50-54	217,320	3,623	0	4,130	88	88
	55-59	84,131	2,046	0	2,424	84	84
	60-64	29,836	1,066	0	1,249	85	85
	65-69	7,805	364	0	447	81	81
	70 and over	506	19	0	63	30	30
All ages	\$ 6,117,372	\$33,340	\$106	\$36,269	92%	92%	
1958 (12)	0	\$ 12,011	\$ 2	\$ 0	\$ 3	67%	67%
	1	20,686	2	0	6	33	33
	2-4	19,946	4	0	9	44	44
	5-9	35,828	21	2	25	84	92
	10-14	60,319	133	0	61	218	218
	15-19	127,949	90	0	136	66	66
	20-24	509,206	605	32	583	104	109
	25-29	949,200	1,299	0	1,633	80	80
	30-34	1,400,725	4,130	0	4,102	101	101
	35-39	1,361,907	5,829	20	6,602	88	89
	40-44	976,171	5,740	1	7,276	79	79
	45-49	539,542	5,483	0	6,078	90	90
	50-54	265,549	5,108	0	4,436	115	115
	55-59	107,604	1,958	0	2,737	72	72
	60-64	35,931	1,162	0	1,357	86	86
	65-69	8,325	424	0	449	94	94
	70 and over	726	59	0	75	79	79
All ages	\$ 6,431,625	\$32,049	\$ 55	\$35,568	90%	90%	
1959 (11)	0	\$ 12,486	\$ 1	\$ 0	\$ 3	33%	33%
	1	22,639	0	0	6	0	0
	2-4	21,637	2	0	8	25	25
	5-9	42,923	45	0	26	173	173
	10-14	73,479	133	30	72	185	226
	15-19	155,091	180	84	166	108	159
	20-24	510,478	527	5	538	98	99
	25-29	920,805	1,155	35	1,366	85	87
	30-34	1,364,711	3,054	0	3,546	86	86
	35-39	1,428,517	5,898	0	6,119	96	96
	40-44	1,028,208	6,562	0	6,864	96	96
	45-49	625,122	5,434	0	6,208	88	88
	50-54	305,018	3,780	0	4,522	84	84
	55-59	125,982	1,966	0	2,795	70	70
	60-64	40,027	1,261	0	1,266	100	100
	65-69	11,545	462	0	525	88	88
	70 and over	951	187	0	91	205	205
All ages	\$ 6,689,619	\$30,647	\$154	\$34,121	90%	90%	

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
1960 (10)	0	\$ 10,265	\$ 0	\$ 0	\$ 3	0%	0%
	1	21,264	0	0	6	0	0
	2-4	19,302	2	0	5	40	40
	5-9	34,208	45	0	19	237	237
	10-14	56,250	62	10	52	119	138
	15-19	127,424	130	0	135	96	96
	20-24	381,843	314	0	380	83	83
	25-29	737,743	734	33	976	75	79
	30-34	1,208,657	2,457	0	2,789	88	88
	35-39	1,316,922	4,146	0	4,973	83	83
	40-44	1,010,272	6,052	0	5,957	102	102
	45-49	625,279	6,214	0	5,518	113	113
	50-54	315,792	5,173	0	4,259	121	121
	55-59	136,931	2,283	0	2,661	86	86
	60-64	47,373	1,933	0	1,277	151	151
	65-69	12,891	409	0	513	80	80
	70 and over	1,335	151	0	111	136	136
	All ages	\$ 6,063,751	\$30,105	\$ 43	\$29,634	102%	102%
1961 (9)	0	\$ 8,784	\$ 5	\$ 0	\$ 3	167%	167%
	1	21,469	5	0	6	83	83
	2-4	18,712	0	0	5	0	0
	5-9	34,317	10	0	17	59	59
	10-14	52,109	19	23	48	40	88
	15-19	134,922	100	5	139	72	76
	20-24	393,941	278	30	368	76	84
	25-29	726,404	712	6	852	84	84
	30-34	1,200,478	2,285	10	2,388	96	96
	35-39	1,356,408	4,714	0	4,472	105	105
	40-44	1,092,297	5,111	16	5,712	89	90
	45-49	665,757	4,780	0	5,311	90	90
	50-54	361,196	3,525	0	4,417	80	80
	55-59	158,128	2,290	0	2,710	85	85
	60-64	47,188	892	0	1,121	80	80
	65-69	12,795	246	0	434	57	57
	70 and over	2,718	275	0	194	142	142
	All ages	\$ 6,287,623	\$25,247	\$ 90	\$28,197	90%	90%
1962 (8)	0	\$ 8,814	\$ 0	\$ 0	\$ 3	0%	0%
	1	22,795	11	0	7	157	157
	2-4	21,054	2	0	5	40	40
	5-9	35,604	5	0	15	33	33
	10-14	50,012	52	0	42	124	124
	15-19	134,068	95	17	133	71	84
	20-24	386,850	378	0	341	111	111
	25-29	741,453	704	10	772	91	92
	30-34	1,194,230	2,036	0	2,044	100	100
	35-39	1,390,465	4,162	13	4,035	103	103
	40-44	1,169,397	4,939	0	5,504	90	90
	45-49	734,711	5,260	0	5,374	98	98
	50-54	381,308	4,858	0	4,285	113	113
	55-59	163,452	2,568	0	2,573	100	100
	60-64	61,127	1,352	0	1,286	105	105
	65-69	15,847	387	0	476	81	81
	70 and over	2,517	110	0	144	76	76
	All ages	\$ 6,513,704	\$26,919	\$ 40	\$27,039	100%	100%

TABLE B—Continued

ISSUE YEAR (POLICY YEAR)	AGES AT ISSUE	EXPOSED TO RISK	ACTUAL DEATHS		EXPECTED DEATHS	MORTALITY RATIO	
			Excluding War Deaths	War Deaths		Excluding War Deaths	Includ- ing War Deaths
1963 (7)	0	\$ 12,839	\$ 0	\$ 0	\$ 5	0%	0%
	1	15,696	0	0	6	0	0
	2-4	17,610	4	0	4	100	100
	5-9	34,515	5	0	12	42	42
	10-14	49,703	28	10	41	68	93
	15-19	133,915	73	32	129	57	81
	20-24	458,453	381	20	388	98	103
	25-29	902,517	949	29	870	109	112
	30-34	1,419,024	2,040	40	2,102	97	99
	35-39	1,685,505	4,283	0	4,402	97	97
	40-44	1,434,481	5,570	0	6,121	91	91
	45-49	898,381	4,415	0	5,966	74	74
	50-54	471,759	4,095	0	4,895	84	84
	55-59	217,348	2,536	0	3,125	81	81
	60-64	79,106	1,142	0	1,493	76	76
	65-69	21,047	1,740	0	569	306	306
	70 and over	4,265	368	0	215	171	171
	All ages	\$ 7,856,164	\$27,629	\$131	\$30,343	91%	91%
1964 (6)	0	\$ 16,637	\$ 0	\$ 0	\$ 8	0%	0%
	1	8,973	11	0	4	275	275
	2-4	16,295	0	0	5	0	0
	5-9	32,578	3	0	9	33	33
	10-14	51,204	105	0	39	269	269
	15-19	145,560	122	10	135	90	98
	20-24	560,671	506	41	465	109	118
	25-29	1,088,576	936	7	981	95	96
	30-34	1,558,873	1,826	12	2,050	89	90
	35-39	1,834,623	3,875	0	4,157	93	93
	40-44	1,578,100	5,683	0	6,030	94	94
	45-49	972,533	6,019	0	5,592	108	108
	50-54	549,781	3,828	0	4,891	78	78
	55-59	238,108	2,419	0	2,925	83	83
	60-64	82,446	1,692	0	1,415	120	120
	65-69	22,398	720	0	546	132	132
	70 and over	4,600	132	0	181	73	73
	All ages	\$ 8,761,956	\$27,877	\$ 70	\$29,433	95%	95%
1965 (5)	0	\$ 15,519	\$ 0	\$ 0	\$ 8	0%	0%
	1	8,984	0	0	4	0	0
	2-4	18,489	3	0	6	50	50
	5-9	37,790	0	0	11	0	0
	10-14	49,260	50	0	34	147	147
	15-19	183,279	235	52	170	138	169
	20-24	695,389	508	54	573	89	98
	25-29	1,277,346	1,034	108	1,108	93	103
	30-34	1,803,194	2,119	30	2,066	103	104
	35-39	2,084,745	3,730	0	4,132	90	90
	40-44	1,792,037	5,341	0	5,834	92	92
	45-49	1,138,051	5,727	0	5,711	100	100
	50-54	623,473	3,789	0	4,665	81	81
	55-59	263,128	2,462	0	2,858	86	86
	60-64	90,376	1,018	0	1,487	68	68
	65-69	22,624	448	0	507	88	88
	70 and over	4,660	73	0	150	49	49
	All ages	\$10,108,344	\$26,537	\$244	\$29,324	90%	91%

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
1966 (4)	0	\$ 16,576	\$ 0	\$ 0	\$ 9	0%	0%
	1	10,404	0	0	5	0	0
	2-4	17,714	5	0	7	71	71
	5-9	37,551	5	0	10	50	50
	10-14	55,885	0	0	35	0	0
	15-19	189,797	209	10	173	121	127
	20-24	759,355	726	89	623	117	131
	25-29	1,392,592	890	27	1,174	76	78
	30-34	1,939,248	1,859	0	2,036	91	91
	35-39	2,236,770	3,296	0	3,882	85	85
	40-44	1,957,397	5,666	24	5,678	100	100
	45-49	1,281,655	5,023	0	5,634	89	89
	50-54	684,997	3,887	0	4,675	83	83
	55-59	294,374	2,725	0	2,889	94	94
	60-64	95,438	1,310	0	1,443	91	91
	65-69	28,022	1,129	0	549	206	206
70 and over	5,567	106	0	142	75	75	
	All ages	\$11,003,342	\$26,836	\$150	\$28,964	93%	93%
1967 (3)	0	\$ 16,281	\$ 0	\$ 0	\$ 10	0%	0%
	1	10,523	0	0	6	0	0
	2-4	19,625	7	0	8	88	88
	5-9	41,366	5	0	11	45	45
	10-14	52,049	0	0	28	0	0
	15-19	162,539	202	76	146	138	190
	20-24	730,349	693	227	576	120	160
	25-29	1,521,249	981	25	1,213	81	83
	30-34	2,078,622	1,741	40	1,945	90	92
	35-39	2,401,525	2,826	0	3,579	79	79
	40-44	2,103,902	5,022	10	5,116	98	98
	45-49	1,401,995	4,497	0	5,157	87	87
	50-54	753,711	3,544	0	4,330	82	82
	55-59	338,268	3,021	0	2,771	109	109
	60-64	111,755	1,418	0	1,357	104	104
	65-69	26,600	256	0	428	60	60
70 and over	6,169	73	0	126	58	58	
	All ages	\$11,776,528	\$24,286	\$378	\$26,807	91%	92%

RUSHMORE MUTUAL LIFE
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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
1968 (2)	0	\$ 14,892	\$ 0	\$ 0	\$ 11	0%	0%
	1	9,192	0	0	6	0	0
	2-4	15,874	2	0	7	29	29
	5-9	38,168	7	0	11	64	64
	10-14	61,473	25	0	27	93	93
	15-19	144,988	203	43	120	169	205
	20-24	741,284	458	143	537	85	112
	25-29	1,748,406	1,472	50	1,139	129	134
	30-34	2,368,605	2,072	48	1,802	115	118
	35-39	2,631,014	3,612	50	3,091	117	118
	40-44	2,346,935	4,273	0	4,639	92	92
	45-49	1,601,078	4,279	0	4,557	94	94
	50-54	858,087	3,404	0	3,664	93	93
	55-59	392,849	1,875	0	2,335	80	80
	60-64	121,850	510	0	1,066	48	48
	65-69	29,731	420	0	390	108	108
	70 and over	8,747	43	0	152	28	28
	All ages	\$13,133,173	\$22,655	\$334	\$23,554	96%	98%
1969 (1)	0	\$ 17,325	\$ 102	\$ 0	\$ 31	329%	329%
	1	11,859	0	0	9	0	0
	2-4	19,431	0	0	11	0	0
	5-9	46,840	50	0	16	313	313
	10-14	63,060	112	0	23	487	487
	15-19	163,708	182	5	115	158	163
	20-24	994,492	732	35	664	110	116
	25-29	2,297,346	1,561	70	1,204	130	135
	30-34	3,001,991	1,736	25	1,857	93	95
	35-39	3,138,846	2,189	30	2,848	77	78
	40-44	2,758,700	3,163	35	4,040	78	79
	45-49	1,941,200	3,514	0	4,006	88	88
	50-54	1,018,220	2,128	0	3,072	69	69
	55-59	453,860	1,228	0	1,848	66	66
	60-64	167,387	1,012	0	1,045	97	97
	65-69	33,981	194	0	313	62	62
	70 and over	9,814	32	0	122	26	26
	All ages	\$16,138,060	\$17,935	\$200	\$21,224	85%	85%

TABLE C
 STANDARD NONMEDICAL ISSUES OF 1955-69
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1955-60 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		Excluding War Deaths	Includ- ing War Deaths
1955 (15)	0	\$ 182,105	\$ 70	\$ 0	\$ 72	97%	97%
	1	63,941	42	0	30	140	140
	2-4	65,751	51	0	38	134	134
	5-9	85,242	114	18	70	163	189
	10-14	91,609	131	1	97	135	136
	15-19	194,755	123	2	214	57	58
	20-24	307,796	432	10	441	98	100
	25-29	315,699	787	10	734	107	109
	30-34	242,141	933	0	1,043	89	89
	35-39	113,006	707	0	716	99	99
	40-44	19,199	218	0	181	120	120
	45-49	1,871	44	0	31	142	142
	50 and over	966	16	0	27	59	59
	All ages	\$ 1,684,081	\$ 3,668	\$ 41	\$ 3,694	99%	100%
	1956 (14)	0	\$ 169,007	\$ 67	\$ 0	\$ 57	118%
1		63,919	28	0	26	108	108
2-4		65,077	56	0	35	160	160
5-9		85,352	112	26	70	160	197
10-14		97,659	99	33	101	98	131
15-19		215,660	188	8	226	83	87
20-24		416,349	480	20	562	85	89
25-29		485,039	977	0	1,030	95	95
30-34		405,766	1,538	0	1,551	99	99
35-39		217,972	1,359	0	1,267	107	107
40-44		34,491	371	0	312	119	119
45-49		1,752	20	0	26	77	77
50 and over		1,154	1	0	31	3	3
All ages		\$ 2,259,197	\$ 5,296	\$ 87	\$ 5,294	100%	102%
1957 (13)		0	\$ 156,922	\$ 55	\$ 0	\$ 46	120%
	1	58,884	15	0	20	75	75
	2-4	60,103	30	0	29	103	103
	5-9	80,316	67	6	64	105	114
	10-14	115,452	110	21	119	92	110
	15-19	363,469	403	6	387	104	106
	20-24	812,973	689	6	1,014	68	69
	25-29	879,789	1,519	10	1,697	90	90
	30-34	638,136	2,317	0	2,107	110	110
	35-39	319,428	1,853	0	1,660	112	112
	40-44	50,109	378	0	409	92	92
	45-49	1,690	28	0	22	127	127
	50 and over	994	3	0	24	13	13
	All ages	\$ 3,538,265	\$ 7,467	\$ 49	\$ 7,598	98%	99%

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
1958 (12)	0	\$ 150,816	\$ 35	\$ 0	\$ 40	88%	88%
	1	60,806	8	0	18	44	44
	2-4	61,428	12	0	25	48	48
	5-9	83,418	69	7	58	119	131
	10-14	138,307	115	34	137	84	109
	15-19	446,540	403	10	472	85	88
	20-24	893,561	883	39	1,010	87	91
	25-29	857,759	1,412	32	1,455	97	99
	30-34	539,565	1,489	0	1,548	96	96
	35-39	249,178	1,386	0	1,145	121	121
	40-44	40,132	213	0	282	76	76
	45-49	1,725	10	0	19	53	53
	50 and over	586	6	0	11	55	55
All ages	\$ 3,523,821	\$ 6,041	\$ 122	\$6,220	97%	99%	
1959 (11)	0	\$ 144,768	\$ 31	\$ 0	\$ 36	86%	86%
	1	57,903	13	0	15	87	87
	2-4	63,102	10	0	22	45	45
	5-9	91,138	61	0	56	109	109
	10-14	155,394	206	92	152	136	196
	15-19	579,391	651	44	615	106	113
	20-24	936,276	897	25	976	92	94
	25-29	810,071	1,032	40	1,185	87	90
	30-34	495,319	1,156	0	1,258	92	92
	35-39	226,172	988	0	913	108	108
	40-44	33,953	236	0	210	112	112
	45-49	1,613	33	0	15	220	220
	50 and over	473	6	0	8	75	75
All ages	\$ 3,595,573	\$ 5,320	\$ 201	\$5,461	97%	101%	
1960 (10)	0	\$ 120,929	\$ 20	\$ 0	\$ 31	65%	65%
	1	47,522	7	0	12	58	58
	2-4	60,270	13	0	18	72	72
	5-9	100,667	52	0	56	93	93
	10-14	165,941	185	40	157	118	143
	15-19	667,140	705	82	700	101	112
	20-24	955,220	1,033	22	942	110	112
	25-29	845,246	1,107	16	1,111	100	101
	30-34	484,110	1,237	0	1,094	113	113
	35-39	226,234	844	0	809	104	104
	40-44	39,347	216	0	217	100	100
	45-49	1,808	10	0	16	63	63
	50 and over	695	3	0	10	30	30
All ages	\$ 3,715,129	\$ 5,432	\$ 160	\$5,173	105%	108%	

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
1961 (9)	0	\$ 124,398	\$ 38	\$ 0	\$ 36	106%	106%
	1	48,780	31	0	13	238	238
	2-4	63,975	20	0	18	111	111
	5-9	106,413	102	0	53	192	192
	10-14	177,314	270	70	164	165	207
	15-19	772,282	858	80	788	109	119
	20-24	1,075,484	872	35	995	88	91
	25-29	902,937	1,128	25	1,052	107	110
	30-34	517,399	1,010	0	1,012	100	100
	35-39	237,977	748	0	749	100	100
	40-44	41,219	297	0	202	147	147
	45-49	1,243	7	0	9	78	78
	50 and over	308	2	0	3	67	67
	All ages	\$ 4,069,729	\$ 5,383	\$ 210	\$5,094	106%	110%
1962 (8)	0	\$ 123,582	\$ 44	\$ 0	\$ 41	107%	107%
	1	50,605	20	0	14	143	143
	2-4	65,894	13	0	17	76	76
	5-9	103,958	69	0	44	157	157
	10-14	165,994	220	66	146	151	196
	15-19	759,145	700	65	747	94	102
	20-24	1,117,589	1,185	94	975	122	131
	25-29	919,910	906	26	952	95	98
	30-34	503,918	939	10	850	110	112
	35-39	233,386	733	0	647	113	113
	40-44	38,135	201	0	167	120	120
	45-49	1,487	0	0	11	0	0
	50 and over	632	2	0	8	25	25
	All ages	\$ 4,084,235	\$ 5,032	\$ 261	\$4,619	109%	115%
1963 (7)	0	\$ 158,731	\$ 30	\$ 0	\$ 60	50%	50%
	1	56,354	45	0	18	250	250
	2-4	84,096	6	0	21	29	29
	5-9	140,158	63	0	51	124	124
	10-14	222,840	198	46	183	108	133
	15-19	855,653	953	111	805	118	132
	20-24	1,371,234	1,286	57	1,145	112	117
	25-29	1,092,569	1,168	54	1,046	112	117
	30-34	572,559	826	18	840	98	100
	35-39	262,742	604	0	656	92	92
	40-44	43,045	211	0	171	123	123
	45-49	1,886	15	0	12	125	125
	50 and over	781	9	0	9	100	100
	All ages	\$ 4,862,648	\$ 5,414	\$ 286	\$5,017	108%	114%

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
1964 (6)	0	\$ 172,442	\$ 61	\$ 0	\$ 74	82%	82%
	1	60,596	30	0	24	125	125
	2-4	93,911	15	0	27	56	56
	5-9	156,149	53	0	48	110	110
	10-14	241,325	243	10	182	134	139
	15-19	992,019	1,223	254	905	135	163
	20-24	1,644,763	1,569	56	1,336	117	122
	25-29	1,244,993	1,113	48	1,108	100	105
	30-34	633,215	762	90	822	93	104
	35-39	282,562	716	5	609	118	118
	40-44	47,791	120	0	168	71	71
	45-49	3,436	3	0	20	15	15
	50 and over	753	8	0	6	133	133
	All ages	\$ 5,573,955	\$ 5,916	\$ 463	\$5,329	111%	120%
1965 (5)	0	\$ 181,412	\$ 74	\$ 0	\$ 86	86%	86%
	1	65,502	17	0	28	61	61
	2-4	101,549	25	0	33	76	76
	5-9	169,033	44	0	47	94	94
	10-14	258,915	201	5	181	111	114
	15-19	1,292,819	1,445	324	1,182	122	150
	20-24	1,907,420	1,650	149	1,533	108	117
	25-29	1,381,948	1,243	51	1,176	106	110
	30-34	673,755	722	25	763	95	98
	35-39	280,045	647	8	525	123	125
	40-44	49,072	156	0	147	106	106
	45-49	2,889	11	0	14	79	79
	50 and over	895	0	0	8	0	0
	All ages	\$ 6,365,254	\$ 6,235	\$ 562	\$5,723	109%	119%
1966 (4)	0	\$ 193,661	\$ 85	\$ 0	\$ 104	82%	82%
	1	69,826	26	0	34	76	76
	2-4	109,488	36	0	42	86	86
	5-9	177,279	102	0	46	222	222
	10-14	264,873	227	0	164	138	138
	15-19	1,202,112	1,386	544	1,055	131	183
	20-24	1,977,566	1,736	264	1,571	111	127
	25-29	1,527,837	1,147	30	1,251	92	94
	30-34	706,553	762	0	729	105	105
	35-39	282,731	633	10	463	137	139
	40-44	49,857	85	0	133	64	64
	45-49	3,536	6	0	15	40	40
	50 and over	1,236	19	0	10	190	190
	All ages	\$ 6,566,555	\$ 6,250	\$ 848	\$5,617	111%	126%

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
1967 (3)	0	\$ 212,812	\$ 76	\$ 0	\$ 132	58%	58%
	1	75,998	55	0	41	134	134
	2-4	117,754	90	0	51	176	176
	5-9	188,357	21	0	49	43	43
	10-14	272,116	125	0	149	84	84
	15-19	1,268,299	1,577	635	1,096	144	202
	20-24	2,559,148	2,420	419	1,949	124	146
	25-29	1,934,892	1,406	99	1,496	94	101
	30-34	914,159	1,101	60	841	131	138
	35-39	359,201	588	0	500	118	118
	40-44	85,910	216	0	184	117	117
	45-49	6,807	45	0	22	205	205
	50 and over	1,640	27	0	10	270	270
	All ages	\$ 7,997,093	\$ 7,747	\$1,213	\$6,520	119%	137%
1968 (2)	0	\$ 237,318	\$ 94	\$ 0	\$ 168	56%	56%
	1	85,651	40	0	54	74	74
	2-4	131,531	19	0	63	30	30
	5-9	207,737	75	0	59	127	127
	10-14	295,574	155	0	130	119	119
	15-19	1,404,058	1,607	677	1,097	146	208
	20-24	3,481,027	2,756	919	2,414	114	152
	25-29	2,567,596	1,899	204	1,620	117	130
	30-34	1,201,084	953	19	894	107	109
	35-39	487,105	683	0	533	128	128
	40-44	142,015	226	0	238	95	95
	45-49	13,441	27	0	32	84	84
	50 and over	2,744	1	0	12	8	8
	All ages	\$10,256,881	\$ 8,535	\$1,819	\$7,314	117%	142%
1969 (1)	0	\$ 290,926	\$ 438	\$ 0	\$ 495	88%	88%
	1	104,807	45	0	75	60	60
	2-4	158,453	65	0	87	75	75
	5-9	244,408	84	0	81	104	104
	10-14	332,771	70	0	122	57	57
	15-19	1,733,005	1,731	215	1,138	152	171
	20-24	4,740,721	4,593	720	2,991	154	178
	25-29	3,349,106	2,477	85	1,690	147	152
	30-34	1,491,088	1,493	21	893	167	170
	35-39	600,137	702	33	495	142	148
	40-44	178,743	304	5	210	145	147
	45-49	16,870	13	0	28	46	46
	50 and over	4,002	8	0	15	53	53
	All ages	\$13,245,037	\$12,023	\$1,079	\$8,320	145%	157%

TABLE D
 STANDARD MEDICALLY EXAMINED ISSUES OF 1955-69
 MALE LIVES
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE

Expected Deaths on 1955-60 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
1955 (15)	0	\$ 11,333	\$ 6	\$ 0	\$ 5	120%	120%
	1	7,965	0	0	4	0	0
	2-4	11,020	4	3	8	50	88
	5-9	37,820	42	1	38	111	113
	10-14	54,405	27	5	66	41	48
	15-19	103,907	114	0	127	90	90
	20-24	316,507	568	4	481	118	119
	25-29	725,767	1,713	20	1,778	96	97
	30-34	965,808	3,569	17	4,404	81	81
	35-39	878,875	4,943	0	6,381	77	77
	40-44	641,650	6,519	0	6,834	95	95
	45-49	365,521	6,457	0	6,514	99	99
	50-54	166,650	4,870	0	4,180	117	117
	55-59	67,807	2,197	0	2,619	84	84
	60-64	23,344	1,063	0	1,216	87	87
65-69	4,607	250	0	341	73	73	
70 and over	457	61	0	67	91	91	
	All ages	\$ 4,383,443	\$ 32,403	\$ 50	\$ 35,063	92%	93%
1956 (14)	0	\$ 9,310	\$ 4	\$ 0	\$ 4	100%	100%
	1	9,685	1	0	4	25	25
	2-4	14,584	6	0	9	67	67
	5-9	30,468	31	5	31	100	116
	10-14	56,768	67	4	67	100	106
	15-19	113,397	129	0	130	99	99
	20-24	391,398	450	10	552	82	83
	25-29	801,704	1,425	17	1,756	81	82
	30-34	1,050,933	3,621	0	4,151	87	87
	35-39	989,963	5,845	0	6,158	95	95
	40-44	740,394	6,456	0	7,234	89	89
	45-49	417,590	6,267	0	6,556	96	96
	50-54	185,292	3,945	0	4,239	93	93
	55-59	71,292	2,764	0	2,485	111	111
	60-64	26,078	997	0	1,286	78	78
65-69	4,168	354	0	284	125	125	
70 and over	342	24	0	47	51	51	
	All ages	\$ 4,913,366	\$ 32,386	\$ 36	\$ 34,993	93%	93%

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		Excluding War Deaths	Including War Deaths
1957... (13)	0	\$ 8,023	\$ 0	\$ 0	\$ 3	0%	0%
	1	11,790	0	0	4	0	0
	2-4	13,958	3	0	8	38	38
	5-9	26,165	23	10	26	88	127
	10-14	50,117	26	42	58	45	117
	15-19	118,008	108	2	133	81	83
	20-24	512,374	571	30	656	87	92
	25-29	951,849	1,559	10	1,875	83	84
	30-34	1,305,726	4,506	12	4,413	102	102
	35-39	1,189,803	6,497	0	6,496	100	100
	40-44	832,542	6,140	0	7,276	84	84
	45-49	425,242	5,599	0	5,826	96	96
	50-54	186,726	3,401	0	3,779	90	90
	55-59	71,609	1,963	0	2,196	89	89
	60-64	23,967	904	0	1,103	82	82
	65-69	6,068	314	0	382	82	82
	70 and over	442	19	0	57	33	33
	All ages	\$ 5,734,409	\$ 31,633	\$ 106	\$ 34,291	92%	93%
1958... (12)	0	\$ 7,799	\$ 0	\$ 0	\$ 2	0%	0%
	1	13,657	0	0	4	0	0
	2-4	14,238	4	0	7	57	57
	5-9	26,385	17	2	22	77	86
	10-14	50,452	133	0	57	233	233
	15-19	116,722	90	0	131	69	69
	20-24	490,536	592	32	569	104	110
	25-29	924,746	1,261	0	1,609	78	78
	30-34	1,357,479	4,030	0	4,018	100	100
	35-39	1,305,053	5,737	20	6,447	89	89
	40-44	906,430	5,423	1	6,998	77	78
	45-49	485,648	5,272	0	5,750	92	92
	50-54	235,635	4,871	0	4,171	117	117
	55-59	92,818	1,847	0	2,526	73	73
	60-64	29,831	1,043	0	1,237	84	84
	65-69	7,039	386	0	409	94	94
	70 and over	509	55	0	59	93	93
	All ages	\$ 6,064,977	\$ 30,761	\$ 55	\$ 34,016	90%	91%
1959... (11)	0	\$ 8,417	\$ 1	\$ 0	\$ 2	50%	50%
	1	14,959	0	0	4	0	0
	2-4	15,439	0	0	6	0	0
	5-9	30,696	45	0	22	205	205
	10-14	60,980	131	30	67	196	240
	15-19	142,561	126	84	160	79	131
	20-24	488,426	517	5	523	99	100
	25-29	893,690	1,126	35	1,341	84	87
	30-34	1,314,761	2,890	0	3,458	84	84
	35-39	1,357,783	5,700	0	5,934	96	96
	40-44	948,717	6,247	0	6,565	95	95
	45-49	559,143	5,105	0	5,837	87	87
	50-54	266,229	3,614	0	4,217	86	86
	55-59	107,219	1,867	0	2,561	73	73
	60-64	32,686	1,075	0	1,138	94	94
	65-69	8,574	429	0	438	98	98
	70 and over	781	182	0	80	228	228
	All ages	\$ 6,251,061	\$ 29,055	\$ 154	\$ 32,353	90%	90%

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		Excluding War Deaths	Including War Deaths
1960 . . . (10)	0	\$ 6,998	\$ 0	\$ 0	\$ 2	0%	0%
	1	13,700	0	0	4	0	0
	2-4	13,646	2	0	4	50	50
	5-9	25,444	45	0	16	281	281
	10-14	45,699	47	10	48	98	119
	15-19	116,200	125	0	130	96	96
	20-24	362,983	300	0	368	82	82
	25-29	713,267	725	33	955	76	79
	30-34	1,160,375	2,366	0	2,710	87	87
	35-39	1,243,210	3,960	0	4,792	83	83
	40-44	918,209	5,796	0	5,631	103	103
	45-49	553,163	5,863	0	5,144	114	114
	50-54	274,818	4,873	0	3,985	122	122
	55-59	114,638	2,173	0	2,432	89	89
	60-64	38,262	1,722	0	1,132	152	152
	65-69	10,211	374	0	439	85	85
	70 and over	1,063	122	0	96	127	127
	All ages	\$ 5,611,886	\$ 28,493	\$ 43	\$ 27,888	102%	102%
1961 . . . (9)	0	\$ 6,333	\$ 5	\$ 0	\$ 2	250%	250%
	1	13,497	0	0	4	0	0
	2-4	12,512	0	0	4	0	0
	5-9	24,061	7	0	14	50	50
	10-14	41,978	17	23	44	39	91
	15-19	121,895	90	5	133	68	71
	20-24	372,953	265	30	355	75	83
	25-29	700,659	650	6	832	78	79
	30-34	1,147,751	2,245	10	2,311	97	98
	35-39	1,271,091	4,541	0	4,276	106	106
	40-44	987,859	4,852	16	5,367	90	91
	45-49	588,892	4,431	0	4,945	90	90
	50-54	313,444	3,178	0	4,114	77	77
	55-59	132,655	2,118	0	2,485	85	85
	60-64	38,456	859	0	992	87	87
	65-69	9,958	203	0	363	56	56
	70 and over	2,138	230	0	166	139	139
	All ages	\$ 5,786,132	\$ 23,691	\$ 90	\$ 26,407	90%	90%
1962 . . . (8)	0	\$ 6,195	\$ 0	\$ 0	\$ 2	0%	0%
	1	14,795	9	0	5	180	180
	2-4	14,373	0	0	4	0	0
	5-9	24,984	5	0	12	42	42
	10-14	38,799	50	0	38	132	132
	15-19	117,839	93	17	126	74	87
	20-24	359,980	359	0	325	110	110
	25-29	708,921	702	10	749	94	95
	30-34	1,135,664	1,876	0	1,966	95	95
	35-39	1,294,911	3,948	13	3,833	103	103
	40-44	1,051,937	4,701	0	5,144	91	91
	45-49	649,916	4,787	0	5,006	96	96
	50-54	327,087	4,220	0	3,971	106	106
	55-59	138,773	2,304	0	2,378	97	97
	60-64	49,348	1,261	0	1,123	112	112
	65-69	12,956	318	0	410	78	78
	70 and over	1,679	76	0	111	68	68
	All ages	\$ 5,948,157	\$ 24,709	\$ 40	\$ 25,203	98%	98%

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		Excluding War Deaths	Including War Deaths
1963... (7)	0	\$ 9,125	\$ 0	\$ 0	\$ 4	0%	0%
	1	10,111	0	0	4	0	0
	2-4	12,678	2	0	3	67	67
	5-9	24,203	0	0	9	0	0
	10-14	39,065	28	10	37	76	103
	15-19	117,767	73	32	122	60	86
	20-24	430,295	377	20	372	101	107
	25-29	865,796	949	29	845	112	116
	30-34	1,346,116	2,017	40	2,014	100	102
	35-39	1,569,496	4,029	0	4,177	96	96
	40-44	1,288,484	5,186	0	5,705	91	91
	45-49	788,479	4,036	0	5,527	73	73
	50-54	406,073	3,720	0	4,541	82	82
	55-59	183,783	2,316	0	2,876	81	81
	60-64	62,529	987	0	1,279	77	77
	65-69	15,548	1,482	0	456	325	325
	70 and over	3,311	261	0	184	142	142
	All ages	\$ 7,172,859	\$ 25,463	\$ 131	\$ 28,155	90%	91%
1964... (6)	0	\$ 11,715	\$ 0	\$ 0	\$ 6	0%	0%
	1	6,759	9	0	3	300	300
	2-4	11,783	0	0	4	0	0
	5-9	22,996	3	0	7	43	43
	10-14	41,173	95	0	36	264	264
	15-19	127,015	117	10	128	91	99
	20-24	530,165	500	41	448	112	121
	25-29	1,041,570	899	7	951	95	95
	30-34	1,475,503	1,724	12	1,962	88	88
	35-39	1,701,511	3,662	0	3,940	93	93
	40-44	1,416,218	5,244	0	5,618	93	93
	45-49	853,903	5,757	0	5,175	111	111
	50-54	475,538	3,612	0	4,548	79	79
	55-59	199,195	2,285	0	2,669	86	86
	60-64	63,847	1,360	0	1,201	113	113
	65-69	15,968	685	0	428	160	160
	70 and over	3,027	125	0	140	89	89
	All ages	\$ 7,997,886	\$ 26,077	\$ 70	\$ 27,264	96%	96%
1965... (5)	0	\$ 10,761	\$ 0	\$ 0	\$ 6	0%	0%
	1	6,201	0	0	3	0	0
	2-4	14,205	3	0	5	60	60
	5-9	26,401	0	0	8	0	0
	10-14	39,366	50	0	32	156	156
	15-19	159,668	217	52	161	135	167
	20-24	657,825	493	54	553	89	99
	25-29	1,221,555	1,024	108	1,075	95	105
	30-34	1,707,729	1,956	30	1,976	99	101
	35-39	1,928,263	3,417	0	3,909	87	87
	40-44	1,610,264	4,920	0	5,429	91	91
	45-49	999,550	5,316	0	5,285	101	101
	50-54	541,485	3,474	0	4,328	80	80
	55-59	224,933	2,251	0	2,624	86	86
	60-64	74,372	843	0	1,323	64	64
	65-69	16,789	383	0	413	93	93
	70 and over	3,256	66	0	121	55	55
	All ages	\$ 9,242,623	\$ 24,413	\$ 244	\$ 27,251	90%	90%

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		Excluding War Deaths	Including War Deaths
1966... (4)	0	\$ 11,743	\$ 0	\$ 0	\$ 7	0%	0%
	1	7,415	0	0	4	0	0
	2-4	13,648	0	0	6	0	0
	5-9	25,223	5	0	7	71	71
	10-14	43,037	0	0	32	0	0
	15-19	162,780	204	10	163	125	131
	20-24	714,598	709	89	600	118	133
	25-29	1,331,789	751	27	1,141	66	68
	30-34	1,837,312	1,824	0	1,947	94	94
	35-39	2,078,277	3,121	0	3,680	85	85
	40-44	1,770,217	5,478	24	5,309	103	104
	45-49	1,130,157	4,748	0	5,225	91	91
	50-54	601,202	3,408	0	4,375	78	78
	55-59	248,245	2,570	0	2,633	98	98
	60-64	78,754	1,220	0	1,294	94	94
	65-69	21,791	1,111	0	465	239	239
	70 and over	3,991	86	0	117	74	74
All ages	\$ 10,080,179	\$ 25,235	\$ 150	\$ 27,005	93%	94%	
1967... (3)	0	\$ 11,581	\$ 0	\$ 0	\$ 8	0%	0%
	1	7,959	0	0	5	0	0
	2-4	13,253	5	0	6	83	83
	5-9	28,229	5	0	8	63	63
	10-14	39,609	0	0	26	0	0
	15-19	136,967	175	76	137	128	183
	20-24	683,934	613	217	554	111	150
	25-29	1,447,373	933	25	1,177	79	81
	30-34	1,969,646	1,691	40	1,862	91	93
	35-39	2,237,540	2,731	0	3,410	80	80
	40-44	1,904,793	4,716	10	4,799	98	98
	45-49	1,230,359	4,141	0	4,763	87	87
	50-54	653,187	3,002	0	4,039	74	74
	55-59	289,262	2,765	0	2,543	109	109
	60-64	92,122	1,349	0	1,214	111	111
	65-69	19,863	215	0	360	60	60
	70 and over	4,132	20	0	100	20	20
All ages	\$ 10,769,809	\$ 22,361	\$ 368	\$ 25,011	89%	91%	
1968... (2)	0	\$ 10,800	\$ 0	\$ 0	\$ 9	0%	0%
	1	6,201	0	0	5	0	0
	2-4	12,028	2	0	6	33	33
	5-9	25,985	5	0	8	63	63
	10-14	47,253	25	0	25	100	100
	15-19	122,128	198	43	114	174	211
	20-24	695,587	458	143	519	88	116
	25-29	1,674,019	1,443	50	1,109	130	135
	30-34	2,244,329	1,917	48	1,728	111	114
	35-39	2,456,471	3,426	50	2,956	116	118
	40-44	2,129,212	4,151	0	4,390	95	95
	45-49	1,418,890	3,868	0	4,267	91	91
	50-54	741,637	3,234	0	3,427	94	94
	55-59	334,400	1,676	0	2,140	78	78
	60-64	98,320	400	0	948	42	42
	65-69	24,267	177	0	347	51	51
	70 and over	6,824	4	0	133	3	3
All ages	\$ 12,048,351	\$ 20,984	\$ 334	\$ 22,131	95%	96%	

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		Excluding War Deaths	Including War Deaths
1969... (1)	0	\$ 12,245	\$ 100	\$ 0	\$ 23	435%	435%
	1	8,484	0	0	7	0	0
	2-4	12,937	0	0	8	0	0
	5-9	32,623	0	0	12	0	0
	10-14	47,456	112	0	21	533	533
	15-19	138,544	166	5	110	151	155
	20-24	931,735	648	35	645	100	106
	25-29	2,199,748	1,547	70	1,172	132	138
	30-34	2,846,567	1,511	25	1,787	85	86
	35-39	2,928,920	2,114	30	2,740	77	78
	40-44	2,513,854	2,815	35	3,859	73	74
	45-49	1,720,980	3,367	0	3,747	90	90
	50-54	884,834	1,989	0	2,881	69	69
	55-59	386,974	1,181	0	1,698	70	70
	60-64	142,643	976	0	965	101	101
	65-69	26,980	184	0	277	66	66
	70 and over	6,670	25	0	99	25	25
	All ages	\$ 14,842,194	\$ 16,735	\$ 200	\$ 20,051	83%	84%
All years (1-15)	0	\$ 142,378	\$ 116	\$ 0	\$ 85	136%	136%
	1	153,178	19	0	64	30	30
	2-4	200,302	31	3	88	35	39
	5-9	411,683	233	18	240	97	105
	10-14	696,157	808	124	654	124	143
	15-19	1,915,398	2,025	336	2,005	101	118
	20-24	7,939,296	7,420	710	7,520	99	108
	25-29	16,202,453	16,707	447	18,365	91	93
	30-34	22,865,699	37,743	234	40,707	93	93
	35-39	24,431,167	63,671	113	69,129	92	92
	40-44	19,660,780	78,644	86	86,158	91	91
	45-49	12,187,433	75,014	0	79,567	94	94
	50-54	6,259,837	55,411	0	60,795	91	91
	55-59	2,663,603	32,277	0	36,865	88	88
	60-64	874,559	16,059	0	17,451	92	92
65-69	204,787	6,865	0	5,812	118	118	
70 and over	38,622	1,356	0	1,577	86	86	
	All ages	\$116,847,332	\$394,399	\$2,071	\$427,082	92%	93%

TABLE D—Continued
 STANDARD MEDICALLY EXAMINED ISSUES OF 1955-69
 FEMALE LIVES
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1955-60 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
1955 (15)	0	\$ 5,057	\$ 0	\$ 2	0%
	1	2,645	1	1	100
	2-4	4,159	15	1	1,500
	5-9	10,305	5	4	125
	10-14	9,304	0	4	0
	15-19	10,436	0	6	0
	20-24	18,863	63	19	332
	25-29	26,506	47	36	131
	30-34	37,727	57	100	57
	35-39	46,396	400	148	270
	40-44	55,018	366	319	115
	45-49	41,113	423	365	116
	50-54	22,022	235	294	80
	55-59	12,054	142	243	58
	60-64	5,109	161	137	118
	65-69	1,290	34	50	68
70 and over	106	8	11	73	
	All ages	\$ 308,110	\$ 1,957	\$ 1,740	112%
1956 (14)	0	\$ 5,128	\$ 5	\$ 1	500%
	1	4,724	0	1	0
	2-4	5,972	10	2	500
	5-9	9,325	0	3	0
	10-14	8,982	0	4	0
	15-19	10,638	15	6	250
	20-24	17,662	11	16	69
	25-29	23,376	38	29	131
	30-34	33,300	105	79	133
	35-39	41,660	109	122	89
	40-44	54,501	379	286	133
	45-49	42,743	333	324	103
	50-54	24,268	256	283	90
	55-59	10,618	235	195	121
	60-64	4,300	172	105	164
	65-69	1,068	77	39	197
70 and over	43	5	4	125	
	All ages	\$ 298,308	\$ 1,750	\$ 1,499	117%

TABLE D--FEMALE LIVES--Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1957 (13)	0	\$ 4,681	\$ 0	\$ 1	0%
	1	5,802	1	2	50
	2-4	5,821	0	2	0
	5-9	10,012	4	3	133
	10-14	9,129	1	4	25
	15-19	9,008	7	4	175
	20-24	16,134	9	13	69
	25-29	21,654	37	24	154
	30-34	36,762	188	79	238
	35-39	49,255	134	139	96
	40-44	58,814	406	273	149
	45-49	43,271	177	299	59
	50-54	26,756	161	275	59
	55-59	11,200	71	188	38
	60-64	5,139	157	114	138
	65-69	1,527	49	52	94
70 and over	46	0	4	0	
	All ages	\$ 315,011	\$ 1,402	\$ 1,476	95%
1958 (12)	0	\$ 4,212	\$ 2	\$ 1	200%
	1	7,029	2	2	100
	2-4	5,708	0	2	0
	5-9	9,443	4	3	133
	10-14	9,867	0	4	0
	15-19	11,227	0	5	0
	20-24	18,670	13	14	93
	25-29	24,454	38	24	158
	30-34	43,246	100	84	119
	35-39	56,854	92	155	59
	40-44	69,741	317	278	114
	45-49	53,894	211	328	64
	50-54	29,914	237	265	89
	55-59	14,786	111	211	53
	60-64	6,100	119	120	99
	65-69	1,286	38	40	95
70 and over	217	4	16	25	
	All ages	\$ 366,648	\$ 1,288	\$ 1,552	83%
1959 (11)	0	\$ 4,069	\$ 0	\$ 1	0%
	1	7,680	0	2	0
	2-4	6,198	2	2	100
	5-9	12,227	0	4	0
	10-14	12,499	2	5	40
	15-19	12,530	54	6	900
	20-24	22,052	10	15	67
	25-29	27,115	29	25	116
	30-34	49,950	164	88	186
	35-39	70,734	198	185	107
	40-44	79,491	315	299	105
	45-49	65,979	329	371	89
	50-54	38,789	166	305	54
	55-59	18,763	99	234	42
	60-64	7,341	186	128	145
	65-69	2,971	33	87	38
70 and over	170	5	11	45	
	All ages	\$ 438,558	\$ 1,592	\$ 1,768	90%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1960..... (10)	0	\$ 3,267	\$ 0	\$ 1	0%
	1	7,564	0	2	0
	2-4	5,656	0	1	0
	5-9	8,764	0	3	0
	10-14	10,551	15	4	375
	15-19	11,224	5	5	100
	20-24	18,860	14	12	117
	25-29	24,476	9	21	43
	30-34	48,282	91	79	115
	35-39	73,712	186	181	103
	40-44	92,063	256	326	79
	45-49	72,116	351	374	94
	50-54	40,974	300	274	109
	55-59	22,293	110	229	48
	60-64	9,111	211	145	146
	65-69	2,680	35	74	47
70 and over	272	29	15	193	
	All ages	\$ 451,865	\$ 1,612	\$ 1,746	92%
1961..... (9)	0	\$ 2,451	\$ 0	\$ 1	0%
	1	7,972	5	2	250
	2-4	6,200	0	1	0
	5-9	10,256	3	3	100
	10-14	10,131	2	4	50
	15-19	13,027	10	6	167
	20-24	20,988	13	13	100
	25-29	25,745	62	20	310
	30-34	52,727	40	77	52
	35-39	85,317	173	196	88
	40-44	104,438	259	345	75
	45-49	76,865	349	366	95
	50-54	47,752	347	303	115
	55-59	25,473	172	225	76
	60-64	8,732	33	129	26
	65-69	2,837	43	71	61
70 and over	580	45	28	161	
	All ages	\$ 501,491	\$ 1,556	\$ 1,790	87%
1962..... (8)	0	\$ 2,619	\$ 0	\$ 1	0%
	1	8,000	2	2	100
	2-4	6,681	2	1	200
	5-9	10,620	0	3	0
	10-14	11,213	2	4	50
	15-19	16,229	2	7	29
	20-24	26,870	19	16	119
	25-29	32,532	2	23	9
	30-34	58,566	160	78	205
	35-39	95,554	214	202	106
	40-44	117,460	238	360	66
	45-49	84,795	473	368	129
	50-54	54,221	638	314	203
	55-59	24,679	264	195	135
	60-64	11,779	91	163	56
	65-69	2,891	69	66	105
70 and over	838	34	33	103	
	All ages	\$ 565,547	\$ 2,210	\$ 1,836	120%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1963..... (7)	0	\$ 3,714	\$ 0	\$ 1	0%
	1	5,585	0	2	0
	2-4	4,932	2	1	200
	5-9	10,312	5	3	167
	10-14	10,638	0	4	0
	15-19	16,148	0	7	0
	20-24	28,158	4	16	25
	25-29	36,721	0	25	0
	30-34	72,908	23	88	26
	35-39	116,009	254	225	113
	40-44	145,997	384	416	92
	45-49	109,902	379	439	86
	50-54	65,686	375	354	106
	55-59	33,565	220	249	88
	60-64	16,577	155	214	72
	65-69	5,499	258	113	228
	70 and over	954	107	31	345
	All ages	\$ 683,305	\$ 2,166	\$ 2,188	99%
1964..... (6)	0	\$ 4,922	\$ 0	\$ 2	0%
	1	2,214	2	1	200
	2-4	4,512	0	1	0
	5-9	9,582	0	2	0
	10-14	10,031	10	3	333
	15-19	18,545	5	7	71
	20-24	30,506	6	17	35
	25-29	47,006	37	30	123
	30-34	83,370	102	88	116
	35-39	133,112	213	217	98
	40-44	161,882	439	412	107
	45-49	118,630	262	417	63
	50-54	74,243	216	343	63
	55-59	38,913	134	256	52
	60-64	18,599	332	214	155
	65-69	6,430	35	118	30
	70 and over	1,573	7	41	17
	All ages	\$ 764,070	\$ 1,800	\$ 2,169	83%
1965..... (5)	0	\$ 4,758	\$ 0	\$ 2	0%
	1	2,783	0	1	0
	2-4	4,284	0	1	0
	5-9	11,389	0	3	0
	10-14	9,894	0	2	0
	15-19	23,611	18	9	200
	20-24	37,564	15	20	75
	25-29	55,791	10	33	30
	30-34	95,465	163	90	181
	35-39	156,482	313	223	140
	40-44	181,773	421	405	104
	45-49	138,501	411	426	96
	50-54	81,988	315	337	93
	55-59	38,195	211	234	90
	60-64	16,004	175	164	107
	65-69	5,835	65	94	69
	70 and over	1,404	7	29	24
	All ages	\$ 865,721	\$ 2,124	\$ 2,073	102%

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1966 (4)	0	\$ 4,833	\$ 0	\$ 2	0%
	1	2,989	0	1	0
	2-4	4,066	5	1	500
	5-9	12,328	0	3	0
	10-14	12,848	0	3	0
	15-19	27,017	5	10	50
	20-24	44,757	17	23	74
	25-29	60,803	139	33	421
	30-34	101,936	35	89	39
	35-39	158,493	175	202	87
	40-44	187,180	188	369	51
	45-49	151,498	275	409	67
	50-54	83,795	479	300	160
	55-59	46,129	155	256	61
	60-64	16,684	90	149	60
	65-69	6,231	18	84	21
	70 and over	1,576	20	25	80
	All ages	\$ 923,163	\$ 1,601	\$ 1,959	82%
1967 (3)	0	\$ 4,700	\$ 0	\$ 2	0%
	1	2,564	0	1	0
	2-4	6,372	2	2	100
	5-9	13,137	0	3	0
	10-14	12,440	0	2	0
	15-19	25,572	27	9	300
	20-24	46,415	80*	22	364
	25-29	73,876	48	36	133
	30-34	108,976	50	83	60
	35-39	163,985	95	169	56
	40-44	199,109	306	317	97
	45-49	171,636	356	394	90
	50-54	100,524	542	291	186
	55-59	49,006	256	228	112
	60-64	19,633	69	143	48
	65-69	6,737	41	68	60
	70 and over	2,037	53	26	204
	All ages	\$1,006,719	\$ 1,925	\$ 1,796	107%
1968 (2)	0	\$ 4,092	\$ 0	\$ 2	0%
	1	2,991	0	1	0
	2-4	3,846	0	1	0
	5-9	12,183	2	3	67
	10-14	14,220	0	2	0
	15-19	22,860	5	6	83
	20-24	45,697	0	18	0
	25-29	74,387	29	30	97
	30-34	124,276	155	74	209
	35-39	174,543	186	135	138
	40-44	217,723	122	249	49
	45-49	182,188	411	290	142
	50-54	116,450	170	237	72
	55-59	58,449	199	195	102
	60-64	23,530	110	118	93
	65-69	5,464	243	43	565
	70 and over	1,923	39	19	205
	All ages	\$1,084,822	\$ 1,671	\$ 1,423	117%

* One female war death for \$10,000 is included.

TABLE D—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1969 (1)	0	\$ 5,080	\$ 2	\$ 8	25%
	1	3,375	0	2	0
	2-4	6,494	0	3	0
	5-9	14,217	50	4	1,250
	10-14	15,604	0	2	0
	15-19	25,164	16	5	320
	20-24	62,757	84	19	442
	25-29	97,598	14	32	44
	30-34	155,424	225	70	321
	35-39	209,926	75	108	69
	40-44	244,846	348	181	192
	45-49	220,220	147	259	57
	50-54	133,386	139	191	73
	55-59	66,886	47	150	31
	60-64	24,744	36	80	45
	65-69	7,001	10	36	28
70 and over	3,144	7	23	30	
	All ages	\$1,295,866	\$ 1,200	\$ 1,173	102%
All years (1-15)	0	\$ 63,583	\$ 9	\$ 28	32%
	1	73,917	13	23	57
	2-4	80,901	38	22	173
	5-9	164,100	73	47	155
	10-14	167,351	32	51	63
	15-19	253,236	169	98	172
	20-24	455,953	358*	253	142
	25-29	652,040	539	421	128
	30-34	1,102,915	1,658	1,246	133
	35-39	1,632,032	2,817	2,607	108
	40-44	1,970,036	4,744	4,835	98
	45-49	1,573,351	4,887	5,429	90
	50-54	940,768	4,576	4,366	105
	55-59	471,009	2,426	3,288	74
	60-64	193,382	2,097	2,123	99
	65-69	59,747	1,048	1,035	101
70 and over	14,883	370	316	117	
	All ages	\$9,869,204	\$25,854	\$26,188	99%

* One female war death for \$10,000 is included.

TABLE E
 STANDARD NONMEDICAL ISSUES OF 1955-69
 MALE LIVES
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1955-60 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
1955 . . . (15)	0	\$ 106,204	\$ 43	\$ 0	\$ 49	88%	88%
	1	37,321	37	0	21	176	176
	2-4	40,298	32	0	29	110	110
	5-9	58,548	84	18	59	142	173
	10-14	71,746	110	1	87	126	128
	15-19	156,299	107	2	191	56	57
	20-24	252,503	380	10	384	99	102
	25-29	276,765	713	10	678	105	107
	30-34	206,762	796	0	943	84	84
	35-39	85,386	594	0	620	96	96
	40-44	13,977	185	0	149	124	124
	45-49	1,553	36	0	28	129	129
	50 and over	859	15	0	26	58	58
	All ages	\$ 1,308,221	\$ 3,132	\$ 41	\$ 3,264	96%	97%
1956 . . . (14)	0	\$ 101,040	\$ 47	\$ 0	\$ 38	124%	124%
	1	38,091	23	0	18	128	128
	2-4	40,480	38	0	26	146	146
	5-9	59,390	101	26	61	166	208
	10-14	77,436	93	33	91	102	138
	15-19	179,344	177	8	206	86	90
	20-24	363,544	438	20	513	85	89
	25-29	446,806	908	0	979	93	93
	30-34	370,192	1,458	0	1,462	100	100
	35-39	189,126	1,255	0	1,176	107	107
	40-44	28,666	344	0	280	123	123
	45-49	1,521	20	0	24	83	83
	50 and over	1,117	1	0	31	3	3
	All ages	\$ 1,896,753	\$ 4,903	\$ 87	\$ 4,905	100%	102%

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 War Deaths	Including War Deaths
1957 (13)	0	\$ 93,100	\$ 41	\$ 0	\$ 30	137%	137%
	1	35,541	13	0	14	93	93
	2-4	37,314	25	0	21	119	119
	5-9	55,048	52	6	55	95	105
	10-14	93,753	106	21	109	97	117
	15-19	324,177	375	6	366	102	104
	20-24	755,056	658	6	966	68	69
	25-29	833,840	1,474	10	1,643	90	90
	30-34	593,914	2,171	0	2,007	108	108
	35-39	285,351	1,716	0	1,558	110	110
	40-44	42,941	340	0	375	91	91
	45-49	1,508	26	0	21	124	124
	50 and over	726	3	0	19	16	16
All ages	\$ 3,152,269	\$ 7,000	\$ 49	\$ 7,184	97%	98%	
1958 (12)	0	\$ 90,826	\$ 29	\$ 0	\$ 26	112%	112%
	1	37,341	7	0	12	58	58
	2-4	38,954	5	0	18	28	28
	5-9	58,309	43	7	50	86	100
	10-14	113,836	106	34	127	83	110
	15-19	403,250	381	10	452	84	87
	20-24	829,588	814	39	962	85	89
	25-29	807,934	1,339	32	1,406	95	98
	30-34	490,571	1,427	0	1,452	98	98
	35-39	210,603	1,229	0	1,040	118	118
	40-44	32,648	171	0	252	68	68
	45-49	1,456	8	0	17	47	47
	50 and over	532	6	0	11	55	55
All ages	\$ 3,115,848	\$ 5,565	\$ 122	\$ 5,825	96%	98%	
1959 (11)	0	\$ 89,213	\$ 22	\$ 0	\$ 24	92%	92%
	1	36,126	9	0	10	90	90
	2-4	41,709	7	0	16	44	44
	5-9	66,423	53	0	48	110	110
	10-14	128,358	183	92	141	130	195
	15-19	527,361	616	44	591	104	112
	20-24	868,665	870	25	929	94	96
	25-29	757,757	982	40	1,137	86	90
	30-34	443,701	1,059	0	1,167	91	91
	35-39	183,843	849	0	803	106	106
	40-44	26,146	204	0	181	113	113
	45-49	1,270	32	0	13	246	246
	50 and over	371	5	0	7	71	71
All ages	\$ 3,170,943	\$ 4,891	\$ 201	\$ 5,067	97%	100%	

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 War Deaths	Including War Deaths
1960 (10)	0	\$ 78,745	\$ 13	\$ 0	\$ 21	62%	62%
	1	31,192	4	0	8	50	50
	2-4	40,957	10	0	13	77	77
	5-9	75,501	47	0	48	98	98
	10-14	138,653	173	40	147	118	145
	15-19	598,161	679	82	669	101	114
	20-24	877,530	994	22	891	112	114
	25-29	785,949	1,026	16	1,061	97	98
	30-34	425,313	1,063	0	998	107	107
	35-39	178,660	711	0	692	103	103
	40-44	29,774	192	0	183	105	105
	45-49	1,516	6	0	14	43	43
	50 and over	605	3	0	9	33	33
	All ages	\$ 3,262,556	\$ 4,921	\$ 160	\$ 4,754	104%	107%
	1961 (9)	0	\$ 81,226	\$ 22	\$ 0	\$ 25	88%
1		31,775	29	0	9	322	322
2-4		43,234	19	0	13	146	146
5-9		80,048	88	0	45	196	196
10-14		146,264	244	70	152	161	207
15-19		691,045	810	80	752	108	118
20-24		981,711	820	35	937	88	91
25-29		832,023	1,044	25	996	105	107
30-34		449,292	926	0	912	102	102
35-39		184,488	631	0	626	101	101
40-44		30,348	270	0	166	163	163
45-49		984	4	0	8	50	50
50 and over		245	2	0	3	67	67
All ages		\$ 3,552,683	\$ 4,909	\$ 210	\$ 4,644	106%	110%
1962 (8)		0	\$ 79,792	\$ 36	\$ 0	\$ 29	124%
	1	33,112	16	0	10	160	160
	2-4	44,749	7	0	12	58	58
	5-9	76,366	63	0	36	175	175
	10-14	136,518	207	66	135	153	202
	15-19	663,260	660	65	707	93	103
	20-24	1,002,085	1,054	94	906	116	127
	25-29	840,281	868	26	895	97	100
	30-34	426,590	786	10	747	105	107
	35-39	174,854	585	0	523	112	112
	40-44	26,810	162	0	132	123	123
	45-49	1,254	0	0	10	0	0
	50 and over	575	2	0	8	25	25
	All ages	\$ 3,506,246	\$ 4,446	\$ 261	\$ 4,150	107%	113%

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
1963..... (7)	0	\$ 102,553	\$ 22	\$ 0	\$ 43	51%	51%
	1	36,504	40	0	13	308	308
	2-4	56,049	4	0	15	27	27
	5-9	100,813	59	0	40	148	148
	10-14	177,858	173	46	168	103	130
	15-19	733,236	914	111	753	121	136
	20-24	1,220,606	1,211	57	1,057	115	120
	25-29	988,054	1,027	54	974	105	111
	30-34	479,492	687	18	727	94	97
	35-39	192,963	475	0	520	91	91
	40-44	29,563	184	0	132	139	139
	45-49	1,576	15	0	11	136	136
	50 and over	695	4	0	9	44	44
	All ages	\$ 4,119,962	\$ 4,815	\$ 286	\$ 4,462	108%	114%
1964..... (6)	0	\$ 109,814	\$ 38	\$ 0	\$ 53	72%	72%
	1	39,006	21	0	17	124	124
	2-4	62,122	12	0	19	63	63
	5-9	111,358	40	0	37	108	108
	10-14	188,586	210	10	167	126	132
	15-19	837,684	1,147	254	843	136	166
	20-24	1,450,255	1,455	56	1,226	119	123
	25-29	1,110,691	999	48	1,022	98	102
	30-34	523,154	691	90	705	98	111
	35-39	205,839	562	5	483	116	117
	40-44	31,977	71	0	128	55	55
	45-49	2,963	3	0	18	17	17
	50 and over	640	6	0	6	100	100
	All ages	\$ 4,674,089	\$ 5,255	\$ 463	\$ 4,724	111%	121%
1965..... (5)	0	\$ 115,424	\$ 38	\$ 0	\$ 61	62%	62%
	1	41,684	15	0	20	75	75
	2-4	67,309	12	0	24	50	50
	5-9	118,317	35	0	35	100	100
	10-14	199,990	182	5	166	110	113
	15-19	1,097,143	1,365	324	1,105	124	153
	20-24	1,674,589	1,516	149	1,407	108	118
	25-29	1,223,777	1,171	51	1,083	108	113
	30-34	552,999	590	25	648	91	95
	35-39	200,699	459	8	411	112	114
	40-44	32,169	130	0	109	119	119
	45-49	2,206	11	0	12	92	92
	50 and over	724	0	0	7	0	0
	All ages	\$ 5,327,030	\$ 5,524	\$ 562	\$ 5,088	109%	120%

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
1966 (4)	0	\$ 122,108	\$ 50	\$ 0	\$ 74	68%	68%
	1	45,035	18	0	24	75	75
	2-4	70,379	27	0	30	90	90
	5-9	123,878	83	0	34	244	244
	10-14	201,505	177	0	150	118	118
	15-19	970,729	1,314	544	969	136	192
	20-24	1,696,252	1,585	264	1,425	111	130
	25-29	1,337,006	992	30	1,148	86	89
	30-34	573,056	645	0	612	105	105
	35-39	198,997	484	10	356	136	139
	40-44	32,749	57	0	99	58	58
	45-49	2,528	4	0	12	33	33
	50 and over	1,066	19	0	10	190	190
	All ages	\$ 5,375,288	\$ 5,455	\$ 848	\$ 4,943	110%	128%
1967 (3)	0	\$ 132,130	\$ 54	\$ 0	\$ 94	57%	57%
	1	48,856	51	0	30	170	170
	2-4	76,727	71	0	37	192	192
	5-9	129,308	14	0	35	40	40
	10-14	203,120	105	0	135	78	78
	15-19	1,006,470	1,493	635	1,005	149	212
	20-24	2,180,897	2,200	419	1,767	125	148
	25-29	1,687,345	1,305	99	1,374	95	102
	30-34	745,252	970	60	712	136	145
	35-39	252,312	434	0	389	112	112
	40-44	47,885	154	0	122	126	126
	45-49	3,799	30	0	15	200	200
	50 and over	1,283	27	0	9	300	300
	All ages	\$ 6,515,384	\$ 6,908	\$ 1,213	\$ 5,724	121%	142%
1968 (2)	0	\$ 147,867	\$ 58	\$ 0	\$ 122	48%	48%
	1	54,541	30	0	39	77	77
	2-4	84,238	16	0	45	36	36
	5-9	139,302	67	0	42	160	160
	10-14	215,558	105	0	118	89	89
	15-19	1,097,263	1,447	677	1,018	142	209
	20-24	2,977,692	2,596	919	2,218	117	158
	25-29	2,229,674	1,728	204	1,482	117	130
	30-34	976,774	853	19	760	112	115
	35-39	346,966	554	0	424	131	131
	40-44	78,277	140	0	164	85	85
	45-49	7,516	22	0	23	96	96
	50 and over	2,156	1	0	11	9	9
	All ages	\$ 8,357,824	\$ 7,617	\$ 1,819	\$ 6,466	118%	146%

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 War Deaths	Including War Deaths
1969 (1)	0	\$ 179,618	\$ 303	\$ 0	\$ 318	95%	95%
	1	64,686	42	0	54	78	78
	2-4	100,303	48	0	62	77	77
	5-9	160,856	67	0	58	116	116
	10-14	238,388	51	0	111	46	46
	15-19	1,321,917	1,596	215	1,049	152	173
	20-24	4,009,639	4,279	720	2,764	155	181
	25-29	2,868,433	2,240	85	1,534	146	152
	30-34	1,198,262	1,351	21	760	178	181
	35-39	427,398	568	33	405	140	148
	40-44	93,288	218	5	145	150	154
	45-49	8,480	5	0	18	28	28
	50 and over	3,500	8	0	15	53	53
		All ages	\$10,674,768	\$10,776	\$1,079	\$ 7,293	148%
All years (1-15)	0	\$ 1,629,660	\$ 816	\$ 0	\$ 1,007	81%	81%
	1	610,811	355	0	299	119	119
	2-4	844,822	333	0	380	88	88
	5-9	1,413,465	896	57	683	131	140
	10-14	2,331,569	2,225	418	2,004	111	132
	15-19	10,607,339	13,081	3,057	10,676	123	151
	20-24	21,140,612	20,870	2,835	18,352	114	129
	25-29	17,026,335	17,816	730	17,412	102	107
	30-34	8,455,324	15,473	243	14,612	106	108
	35-39	3,317,485	11,106	56	10,026	111	111
	40-44	577,218	2,822	5	2,617	108	108
	45-49	40,130	222	0	244	91	91
	50 and over	15,094	102	0	181	56	56
		All ages	\$68,009,864	\$86,117	\$7,401	\$78,493	110%

TABLE E—Continued
 STANDARD NONMEDICAL ISSUES OF 1955-69
 FEMALE LIVES
 EXPERIENCE BETWEEN 1969 AND 1970 ANNIVERSARIES
 BY YEAR OF ISSUE AND AGE AT ISSUE
 Expected Deaths on 1955-60 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
1955..... (15)	0	\$ 74,435	\$ 26	\$ 22	118%
	1	25,386	4	8	50
	2-4	24,359	18	8	225
	5-9	25,045	20	9	222
	10-14	18,657	16	9	178
	15-19	36,907	16	21	76
	20-24	52,333	52	53	98
	25-29	35,335	64	48	133
	30-34	31,026	100	82	122
	35-39	25,684	108	82	132
	40-44	4,945	26	29	90
	45-49	318	8	3	267
	50 and over	107	1	1	100
	All ages	\$ 354,537	\$ 459	\$ 375	122%
	1956..... (14)	0	\$ 66,390	\$ 20	\$ 18
1		24,567	5	7	71
2-4		23,552	11	8	138
5-9		24,545	9	8	113
10-14		19,075	6	9	67
15-19		34,317	11	18	61
20-24		49,588	31	45	69
25-29		34,084	47	42	112
30-34		31,722	76	75	101
35-39		26,914	93	79	118
40-44		5,653	24	30	80
45-49		231	0	2	0
50 and over		37	0	0
All ages		\$ 340,675	\$ 333	\$ 341	98%
1957..... (13)		0	\$ 61,851	\$ 14	\$ 15
	1	22,347	2	6	33
	2-4	21,759	5	7	71
	5-9	24,077	14	8	175
	10-14	20,221	1	9	11
	15-19	36,677	27	18	150
	20-24	52,974	31	42	74
	25-29	41,396	42	45	93
	30-34	40,063	122	86	142
	35-39	32,054	132	91	145
	40-44	6,930	32	32	100
	45-49	182	2	1	200
	50 and over	268	0	5	0
	All ages	\$ 360,799	\$ 424	\$ 365	116%

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1958..... (12)	0	\$ 59,990	\$ 6	\$ 14	43%
	1	23,465	1	6	17
	2-4	22,474	7	7	100
	5-9	25,109	26	8	325
	10-14	24,471	9	10	90
	15-19	43,290	22	20	110
	20-24	63,973	69	48	144
	25-29	49,825	73	49	149
	30-34	48,994	62	96	65
	35-39	38,575	157	105	150
	40-44	7,484	42	30	140
	45-49	269	2	2	100
	50 and over	54	0	0
	All ages	\$ 407,973	\$ 476	\$ 395	121%
1959..... (11)	0	\$ 55,555	\$ 9	\$ 12	75%
	1	21,777	4	5	80
	2-4	21,393	3	6	50
	5-9	24,715	8	8	100
	10-14	27,036	23	11	209
	15-19	52,030	35	24	146
	20-24	67,611	27	47	57
	25-29	52,314	50	48	104
	30-34	51,618	97	91	107
	35-39	42,329	139	110	126
	40-44	7,807	32	29	110
	45-49	343	1	2	50
	50 and over	102	1	1	100
	All ages	\$ 424,630	\$ 429	\$ 394	109%
1960..... (10)	0	\$ 42,184	\$ 7	\$ 10	70%
	1	16,330	3	4	75
	2-4	19,313	3	5	60
	5-9	25,166	5	8	63
	10-14	27,288	12	10	120
	15-19	68,979	26	31	84
	20-24	77,690	39	51	76
	25-29	59,297	81	50	162
	30-34	58,797	174	96	181
	35-39	47,574	133	117	114
	40-44	9,573	24	34	71
	45-49	292	4	2	200
	50 and over	90	0	1	0
	All ages	\$ 452,573	\$ 511	\$ 419	122%
1961..... (9)	0	\$ 43,172	\$ 16	\$ 11	145%
	1	17,005	2	4	50
	2-4	20,741	1	5	20
	5-9	26,365	14	8	175
	10-14	31,050	26	12	217
	15-19	81,237	48	36	133
	20-24	93,773	52	58	90
	25-29	70,914	84	56	150
	30-34	68,107	84	100	84
	35-39	53,489	117	123	95
	40-44	10,871	27	36	75
	45-49	259	3	1	300
	50 and over	63	0	0
	All ages	\$ 517,046	\$ 474	\$ 450	105%

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1962..... (8)	0	\$ 43,790	\$ 8	\$ 12	67%
	1	17,493	4	4	100
	2-4	21,145	6	5	120
	5-9	27,592	6	8	75
	10-14	29,476	13	11	118
	15-19	95,885	40	40	100
	20-24	115,504	131	69	190
	25-29	79,629	38	57	67
	30-34	77,328	153	103	149
	35-39	58,532	148	124	119
	40-44	11,325	39	35	111
	45-49	233	0	1	0
	50 and over	57	0	0
	All ages	\$ 577,989	\$ 586	\$ 469	125%
1963..... (7)	0	\$ 56,178	\$ 8	\$ 17	47%
	1	19,850	5	5	100
	2-4	28,047	2	6	33
	5-9	39,345	4	11	36
	10-14	44,982	25	15	167
	15-19	122,417	39	52	75
	20-24	150,628	75	88	85
	25-29	104,515	141	72	196
	30-34	93,067	139	113	123
	35-39	69,779	129	136	95
	40-44	13,482	27	39	69
	45-49	310	0	1	0
	50 and over	86	5	0
	All ages	\$ 742,686	\$ 599	\$ 555	108%
1964..... (6)	0	\$ 62,628	\$ 23	\$ 21	110%
	1	21,590	9	7	129
	2-4	31,789	3	8	38
	5-9	44,791	13	11	118
	10-14	52,739	33	15	220
	15-19	154,335	76	62	123
	20-24	194,508	114	110	104
	25-29	134,302	114	86	133
	30-34	110,061	71	117	61
	35-39	76,723	154	126	122
	40-44	15,814	49	40	123
	45-49	473	0	2	0
	50 and over	113	2	0
	All ages	\$ 899,866	\$ 661	\$ 605	109%
1965..... (5)	0	\$ 65,988	\$ 36	\$ 25	144%
	1	23,818	2	8	25
	2-4	34,240	13	9	144
	5-9	50,716	9	12	75
	10-14	58,925	19	15	127
	15-19	195,676	80	77	104
	20-24	232,831	134	126	106
	25-29	158,171	72	93	77
	30-34	120,756	132	115	115
	35-39	79,346	188	114	165
	40-44	16,903	26	38	68
	45-49	683	0	2	0
	50 and over	171	0	1	0
	All ages	\$ 1,038,224	\$ 711	\$ 635	112%

TABLE E—FEMALE LIVES—Continued

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1966 (4)	0	\$ 71,553	\$ 35	\$ 30	117%
	1	24,791	8	10	80
	2-4	39,109	9	12	75
	5-9	53,401	19	12	158
	10-14	63,368	50	14	357
	15-19	231,383	72	86	84
	20-24	281,314	151	146	103
	25-29	190,831	155	103	150
	30-34	133,497	117	117	100
	35-39	83,734	149	107	139
	40-44	17,108	28	34	82
	45-49	1,008	2	3	67
	50 and over	170	0	0
	All ages	\$ 1,191,267	\$ 795	\$ 674	118%
1967 (3)	0	\$ 80,682	\$ 22	\$ 38	58%
	1	27,142	4	11	36
	2-4	41,027	19	14	136
	5-9	59,049	7	14	50
	10-14	68,996	20	14	143
	15-19	261,829	84	91	92
	20-24	378,251	220	182	121
	25-29	247,547	101	122	83
	30-34	168,907	131	129	102
	35-39	106,889	154	111	139
	40-44	38,025	62	62	100
	45-49	3,008	15	7	214
	50 and over	357	0	1	0
	All ages	\$ 1,481,709	\$ 839	\$ 796	105%
1968 (2)	0	\$ 89,451	\$ 36	\$ 46	78%
	1	31,110	10	15	67
	2-4	47,293	3	18	17
	5-9	68,435	8	17	47
	10-14	80,016	50	12	417
	15-19	306,795	160	79	203
	20-24	503,335	160	196	82
	25-29	337,922	171	138	124
	30-34	224,310	100	134	75
	35-39	140,139	129	109	118
	40-44	63,738	86	74	116
	45-49	5,925	5	9	56
	50 and over	588	0	1	0
	All ages	\$ 1,899,057	\$ 918	\$ 848	108%
1969 (1)	0	\$ 111,308	\$ 135	\$ 177	76%
	1	40,121	3	21	14
	2-4	58,150	17	25	68
	5-9	83,552	17	23	74
	10-14	94,383	19	11	173
	15-19	411,088	135	89	152
	20-24	731,082	314	227	138
	25-29	480,673	237	156	152
	30-34	292,826	142	133	107
	35-39	172,739	134	90	149
	40-44	85,455	86	65	132
	45-49	8,390	8	10	80
	50 and over	502	0	0
	All ages	\$ 2,570,269	\$1,247	\$1,027	121%

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	\$ 985,155	\$ 401	\$ 468	86%
	1	356,792	66	121	55
	2-4	454,391	120	143	84
	5-9	601,903	179	165	108
	10-14	660,683	322	177	182
	15-19	2,132,845	871	744	117
	20-24	3,045,395	1,600	1,488	108
	25-29	2,076,755	1,470	1,165	126
	30-34	1,551,079	1,700	1,587	107
	35-39	1,054,500	2,064	1,624	127
	40-44	315,113	610	607	100
	45-49	21,924	50	48	104
	50 and over	2,765	9	11	82
All ages	\$13,259,300	\$9,462	\$8,348	113%	

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 "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 the combat area which may nevertheless be attributable to the Vietnam operation. For example, a plane on the way to Vietnam may crash far outside the Vietnam area, or a death in Japan may be 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 which 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 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.