TRANSACTIONS

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REPORTS OF THE COMMITTEE ON ORDINARY INSURANCE AND ANNUITIES

MORTALITY UNDER STANDARD ORDINARY INSURANCE ISSUES BETWEEN 1978 AND 1979 ANNIVERSARIES

ABSTRACT

This is the latest in a series of annual reports on intercompany mortality experience under Standard Ordinary life insurance policies. Each of the tables included in this report (with some minor exceptions) shows amounts exposed to risk, actual amounts of death claims, expected amounts of death claims, and mortality ratios of actual to expected death claims. The expected death claims are based on the 1965–70 Basic Tables. All of the 1978–79 experience is derived from the contributions of twenty-one large life insurance companies. However, not all of the companies contributed to all aspects of the study. Each of the tables is based on either select (first fifteen policy years) or ultimate (policy years 16 and subsequent) experience.

The following results summarize the important conclusions reached in this study.

General Mortality between 1978 and 1979 Anniversaries

The overall medical mortality ratio in the select period declined by 6.3 percentage points from last year's study.

The overall nonmedical mortality ratio in the select period declined by 1.0 percentage point from last year's study.

On the basis of limited data in the select period, the overall paramedical mortality ratio declined by 6.0 percentage points from last year's study.

The overall mortality ratio in the ultimate period declined by 3.5 percentage points from last year's study.

Medical versus Nonmedical Mortality between 1974 and 1979 Anniversaries

In the select period, for all policy years combined, nonmedical mortality exceeded medical mortality except at issue ages 0–19, 25–29, and 50 and over (Table 5).

In the ultimate period, nonmedical mortality exceeded medical mortality for each of the attained-age groups except 15–19 (Table 7). All the ultimate business in this attained-age group, of course, was issued at ages 0–4.

For males in the select period for all policy years combined, nonmedical mortality exceeded medical mortality at issue ages 20–44 (Table 11).

For females in the select period for all policy years combined, nonmedical mortality exceeded medical mortality at issue ages 0 and 35–49 (Table 11). Although the female nonmedical mortality ratio at age zero was three times the female medical mortality ratio, this resulted from an actual-to-expected ratio of only 33% for nonmedical business versus only 11% for medical business.

Premium-paying versus Fully Paid-up Mortality in the Ultimate Period, between 1974 and 1979 Anniversaries

Overall mortality on premium-paying insurance exceeded that on fully paid-up insurance by 0.3 of a percentage point. However, for attained ages 15–19, 30–64, and 90–95, the mortality ratios were higher for paid-up insurance (Table 8).

Male versus Female Mortality between 1974 and 1979 Anniversaries

There was little change from last year's report, with female mortality averaging about 61 percent of male mortality (Tables 9, 10, 12).

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Table	Exposure Period	Policy Years	Medical or Nonmedical	Male and Female	Mortality Ratios by
1	1978–79	1–15	Medical	Combined	Ages at issue
2	1978–79	1–15	Medical	Combined	Year of issue
3	1978–79	1–15	Nonmedical	Combined	Ages at issue
4	1978–79	1–15	Nonmedical	Combined	Year of issue
5	1974–79	1–15	Medical and nonmedical	Combined	Age group at issue and policy year
6	1978–79	16 and later	Combined	Combined	Attained ages
7	1974–79	16 and later	Medical and nonmedical	Combined	Attained ages
8	1974–79	16 and later	Combined	Combined	Attained ages; premium paying and paid-up
9	1974–79	1–15	Medical	Separate	Ages at issue
10	1974–79	1–15	Nonmedical	Separate	Ages at issue
11	1974–79	1–15	Medical and nonmedical	Separate	Age group at issue and policy year
12	1974–79	16 and later	Combined	Separate	Attained ages
Appendix I:					
A	Names of the contributing companies, and proportion of total 1978–79 exposures contributed by each company				
B	1978–79	1–15	Medical	Separate	Year of issue and ages at issue
C	1978–79	1–15	Nonmedical	Separate	Year of issue and ages at issue

INTRODUCTION

THIS report covers the intercompany mortality experience under Standard Ordinary insurance issues between 1978 and 1979 policy anniversaries, and also for the period between 1974 and 1979 policy anniversaries where one year's exposure generally provided an insufficient volume of data. It reviews the mortality experience under the following:

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

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

EXPERIENCE BETWEEN POLICY ANNIVERSARIES

	1977-78	1978-79
Medical select	75.0%	68.7%
Nonmedical select	85.9	84.9
Paramedical select	80.5*	74.5*
Total select	77.4	72.1
Ultimate	80.5	77.0
Select and ultimate	79.4	75.2

* Note that the paramedical experience identified in this report is limited to the first nine policy years.

Because of the declining proportion of total deaths represented by war deaths and their minor effect on the mortality ratios, it is felt that the impact of war deaths can be ignored for all practical purposes. Thus, in this report, war deaths have not been excluded from any of the tabular data or from any of the comparisons with prior years' figures.

The names of the twenty-one companies that contributed their experience between 1978 and 1979 policy anniversaries, and their proportionate contributions to the 1978-79 exposure, are given in Table A of Appendix I. One of the regular contributors did not contribute its experience between 1976

and 1978 anniversaries but did contribute this year. However, the inclusion of that company's contribution has relatively little effect on our comparisons of the 1978–79 findings with the findings for prior years.

<div align="center">

EXPERIENCE UNDER STANDARD ISSUES DURING THE
FIRST FIFTEEN POLICY YEARS

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Medically Examined Issues

The 1978–79 experience during the first fifteen policy years is based on an exposure of $170 billion and actual deaths of $430 million. This represents an increase in the exposure from the preceding year of about 9.7 percent. Almost one-half of that increase is attributable to the data submitted by one company, which contributed to this current study but did not contribute its experience between 1976 and 1978 anniversaries.

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

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

The aggregate medical mortality ratio for the period from 1978 to 1979 anniversaries was 68.7 percent. The following tabulation compares this result with the results of previous studies based on the 1965–70 Basic Tables.

Exposure Year	Aggregate Mortality Ratio
1972–73	92.9%
1973–74	88.0
1974–75	85.1
1975–76	80.9
1976–77	75.5
1977–78	75.0
1978–79	68.7

As seen in Table 1, issue ages 2–19 showed medical mortality ratios greater than 100.0 percent for the 1978–79 exposure period.

As seen in Table 2, medical mortality ratios by year of issue ranged from 63.0 percent for 1969 (policy year 10) to 73.9 percent for 1968 (policy year 11).

The tabulation at the top of page 6 indicates the variation in the 1978–79 aggregate medical mortality ratios for the contributing companies from the 1978–79 all-company average of 68.7 percent.

TABLE 1

STANDARD MEDICALLY EXAMINED ISSUES OF 1964–78
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1–15 COMBINED

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

Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
0	$ 286,618	$ 56	$ 354	15.8%
1	202,805	7	122	5.7
2–4	347,266	231	161	143.5
5–9	668,791	385	343	112.2
10–14	841,734	800	634	126.2
15–19	1,719,248	1,818	1,683	108.0
20–24	7,841,290	5,644	7,110	79.4
25–29	20,304,635	16,651	20,548	81.0
30–34	31,675,762	32,357	47,460	68.2
35–39	32,340,140	58,724	77,795	75.5
40–44	27,778,391	73,587	109,923	66.9
45–49	21,308,944	78,856	120,674	65.3
50–54	13,746,669	68,754	107,764	63.8
55–59	6,794,401	50,067	69,328	72.2
60–64	2,741,302	27,021	40,191	67.2
65–69	793,212	10,907	16,197	67.3
70 and over	173,059	4,319	5,636	76.6
All ages	$169,564,267	$430,184	$625,923	68.7%

TABLE 2

STANDARD MEDICALLY EXAMINED ISSUES OF 1964–78
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED

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

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1964	15	$ 5,627,203	$ 32,506	$ 48,560	66.9%
1965	14	6,135,633	34,963	47,505	73.6
1966	13	6,362,268	31,026	44,629	69.5
1967	12	6,342,532	29,144	40,593	71.8
1968	11	6,531,690	28,301	38,281	73.9
1969	10	7,754,569	25,864	41,085	63.0
1970	9	8,369,830	25,207	39,585	63.7
1971	8	9,373,134	29,669	40,491	73.3
1972	7	10,343,288	27,494	40,826	67.3
1973	6	11,486,952	27,350	40,510	67.5
1974	5	13,446,856	29,126	41,787	69.7
1975	4	14,274,435	30,501	41,513	73.5
1976	3	16,593,946	26,933	42,372	63.6
1977	2	20,907,202	28,029	40,438	69.3
1978	1	26,014,729	24,071	37,748	63.8
All years of issue ...	......	$169,564,267	$430,184	$625,923	68.7%

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15	4	10.9%
10–15	1	3.0,
5–10	1	6.4
0–5	2	16.4
Percentage points above average:		
0–5	3	20.0
5–10	9	37.3
10–15	0	0.0
More than 15	1	6.0

Nonmedical Issues

The 1978–79 experience during the first fifteen policy years is based on an exposure of $148 billion and actual deaths of $126 million. This represents an increase in the exposure from the preceding year of about 8.6 percent. Only one-sixteenth of that increase is attributable to the data submitted by one company, which contributed to this current study but did not contribute its experience between 1976 and 1978 anniversaries.

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

For all issue-age groups combined, nonmedical exposure now comprises 39.1 percent of the total exposure (medical, nonmedical, and paramedical combined) during the first fifteen policy years, as compared with 40.6 percent last year. For all issue-age groups combined, the proportion of nonmedical issues in the first policy year for 1978–1979 was 36.4 percent, the same percentage as in last year's report. The following tabulation shows nonmedical exposures as a percentage of total medical, nonmedical, and paramedical exposures, by age group at issue, for the experience between 1978 and 1979 anniversaries.

NONMEDICAL EXPOSURES AS PERCENTAGE
OF TOTAL EXPOSURES

Ages at Issue	Policy Year 1	Policy Years 1–15
0–9	90.8%	90.5%
10–19	88.6	88.6
20–29	64.7	64.7
30–39	19.4	20.4
40–49	3.1	3.5
50 and over	1.1	0.7
All ages	36.4%	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 for the period from 1978 to 1979 anniversaries was 84.9 percent. The following tabulation compares this result with the results of the previous studies based on the 1965–70 Basic Tables.

Exposure Year	Aggregate Mortality Ratio
1972–73	102.6%
1973–74	99.1
1974–75	94.9
1975–76	88.5
1976–77	87.9
1977–78	85.9
1978–79	84.9

The mortality ratios in Table 3 (and in Table 4) generally understate somewhat the mortality ratios for nonmedical business because, in calculating the expected deaths, no adjustment was made for the fact that the average ages of the exposures under nonmedical issues for each of the issue-age groups 40–44, 45–49, and 50 and over are lower than the average corresponding ages of the exposures for each of those age groups in the medical experience entering into the 1965–70 Basic Tables. This situation arises because the maximum age at which nonmedical business is issued by the various contributing companies is generally 40 or 45. Thus, the nonmedical exposures beyond each of those issue ages tend to fall off sharply. It is likely that a further understatement of expected deaths arises from the general practice of reducing nonmedical amount limits by multiples of $5,000 beyond issue ages such as 35 and 40.

An attempt was made to estimate the extent to which Table 3 understates the true mortality ratio on nonmedical business. This was done by calculating mortality ratios based on an adjusted distribution of exposures by age within each five-year age group at issue. The adjusted distribution of exposures takes into consideration the nonmedical age limits of the contributing companies; the reductions in amount limits mentioned above were not considered.

Although the adjustment is not precise, it is estimated that the unadjusted mortality ratios understate the true mortality ratio on nonmedical business to a significant degree (about 11½ percent) at issue ages 40–44 and to a lesser degree (about 5½ percent) at issue ages 45–49. Except for one company, whose limit for nonmedical issues was age 50 for issues of 1978, nonmedical issues at ages 50 and over arise largely from business issued

TABLE 3

STANDARD NONMEDICAL ISSUES OF 1964–78
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY AGE AT ISSUE
POLICY YEARS 1–15 COMBINED

Expected Deaths on 1965–70 Select Basic Tables

(Amounts Shown in $1,000 Units)

Age at Issue	Exposed to Risk	Actual Deaths	Expected Deaths*	Mortality Ratio*
0	$ 5,521,633	$ 2,345	$ 7,201	32.6%
1	2,068,176	567	1,228	46.2
2–4	3,412,837	1,025	1,507	68.0
5–9	4,869,950	1,849	2,162	85.5
10–14	5,915,156	4,273	4,099	104.2
15–19	18,795,181	17,339	16,970	102.2
20–24	43,348,125	30,930	34,929	88.6
25–29	37,913,369	28,002	33,824	82.8
30–34	17,302,582	20,036	23,752	84.4
35–39	6,279,297	11,848	13,974	84.8
40–44	1,868,502	5,831	5,883	99.1
45–49	362,867	966	1,468	65.8
50 and over	206,651	877	1,363	64.3
All ages	$147,864,326	$125,888	$148,360	84.9%

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

TABLE 4

STANDARD NONMEDICAL ISSUES OF 1964–78
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY YEAR OF ISSUE
ALL AGES COMBINED

Expected Deaths on 1965–70 Select Basic Tables

(Amounts Shown in $1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths	Expected Deaths*	Mortality Ratio*
1964	15	$ 3,817,464	$ 6,185	$ 8,048	76.9%
1965	14	4,187,680	5,916	7,695	76.9
1966	13	4,203,826	5,418	6,913	78.4
1967	12	4,794,258	6,329	7,322	86.4
1968	11	5,518,967	6,766	7,887	85.8
1969	10	5,940,765	6,475	7,692	84.2
1970	9	6,821,809	6,620	8,025	82.5
1971	8	7,735,853	7,240	8,348	86.7
1972	7	9,132,580	8,019	8,970	89.4
1973	6	10,536,756	8,713	9,677	90.0
1974	5	11,597,485	9,417	10,073	93.5
1975	4	12,617,490	9,580	10,589	90.5
1976	3	15,191,382	12,124	11,962	101.4
1977	2	18,764,710	11,180	13,636	82.0
1978	1	27,003,301	15,906	21,523	73.9
All years of issue	......	$147,864,326	$125,888	$148,360	84.9%

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

under special circumstances (such as pension trust and salary allotment plans). So-called policyholder's nonmedical, issued on the basis of a previous medical examination within six or twelve months, is also included for some companies; others include it in their medical issues.

The nonmedical mortality ratios by calendar year of issue for all ages at issue combined during the period from 1978 to 1979 anniversaries are presented in Table 4 on an unadjusted basis. The mortality ratios ranged from 73.9 percent for issue year 1978 (policy year 1) to 101.4 percent for issue year 1976 (policy year 3).

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

The following tabulation indicates the variation in the 1978–79 aggregate nonmedical mortality ratios of the contributing companies from the 1978–79 all-company average of 84.9 percent.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15	5	9.7%
10–15	3	3.9
5–10	4	12.7
0–5	0	0.0
Percentage points above average:		
0–5	5	62.8
5–10	2	2.8
10–15	0	0.0
More than 15	2	8.1

Comparison of Medical and Nonmedical Experience

It would be desirable to compare the nonmedical experience with the experience on strictly comparable policies issued with a medical examination, but data for such a comparison are not available.[1] Table 5 presents the experience on medical and nonmedical select issues as reported to the Committee for the five-year period from 1974 to 1979 anniversaries. The

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

1965–70 Male, Female, and Male and Female Combined Select Basic Tables, respectively, were used to calculate expected deaths for the male experience, the female experience, and the experience reported without subdivision by sex.

The nonmedical mortality ratios shown in Table 5 have *not* been adjusted to reflect the approximate distribution of nonmedical exposures by age for

TABLE 5

COMPARISON OF MEDICAL AND NONMEDICAL EXPERIENCE*
MALE AND FEMALE LIVES COMBINED
BETWEEN 1974 AND 1979 ANNIVERSARIES
BY AGE GROUP AT ISSUE AND POLICY-YEAR GROUP
(FIRST FIFTEEN POLICY YEARS)

AGE GROUP AT ISSUE	POLICY YEARS									
	1–2		3–5		6–10		11–15		1–15	
	Mortality Ratios on 1965–70 Select Basic Table									
	Medical %	Nonmedical %	Medical %	Nonmedical %	Medical %	Nonmedical %	Medical %	Nonmedical %	Medical %	Nonmedical %
0	40	25	20	57	60	73	110	79	45	36
1–9	44	51	126	68	96	78	118	101	99	72
10–19	130	99	131	106	106	103	118	94	118	101
20–24	95	93	92	94	79	91	83	82	86	90
25–29	133	90	92	94	86	87	72	78	90	87
30–34	74	75	81	97	75	88	78	86	77	87
35–39	72	97	87	96	82	96	76	95	79	95
40–44	71	115	73	142	72	104	76	89	74	110
45–49	79	60	80	97	78	70	74	82	77	78
50 and over	72	66	69	85	74	63	79	71	75	72
All ages	77	79	76	96	76	92	77	86	77	88

AGE GROUP AT ISSUE	Ratio of Nonmedical to Medical Mortality Ratios				
	1–2	3–5	6–10	11–15	1–15
0	63%	285%	122%	72%	80%
1–9	116	54	81	86	73
10–19	76	81	97	80	86
20–24	98	102	115	99	105
25–29	68	102	101	108	97
30–34	101	120	117	110	113
35–39	135	110	117	125	120
40–44	162	195	144	117	149
45–49	76	121	90	111	101
50 and over	92	123	85	90	96
All ages	103%	126%	121%	112%	114%

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

issue-age groups 40–44 and higher. The lower half of Table 5 indicates that, for policy years 1–15 combined, nonmedical mortality exceeded medical mortality at issue ages 20–24 and 30–49; the excess ranged from about 1 percent at issue ages 45–49 to about 49 percent at issue ages 40–44. It should be noted that this 49 percent excess at issue ages 40–44 is based on unadjusted exposures. If the actual distribution of nonmedical exposures had been available and had been used, the excess would have been even greater.

Paramedically Examined Issues

Companies were asked to submit their data on paramedically examined business separately. Nineteen companies were able to comply. Of the approximately $60 billion of paramedical exposure submitted for 1978–79, about 61 percent was concentrated in the first two policy years, and almost all of the paramedical exposure was concentrated in the first nine policy years. In the first policy year (year of issue 1978) the approximately $21 billion of paramedical exposure was about 81 percent of the medically examined exposure and about 78 percent of the nonmedical exposure. The 1978–79 paramedical data for each year of issue since 1970, along with the corresponding mortality ratios for medical and nonmedical business, were as follows for males and females combined:

Year of Issue	Policy Year	Paramedical Exposed to Risk in $1,000's	Actual Paramedical Deaths in $1,000's	Paramedical Mortality Ratio	Medical Mortality Ratio	Nonmedical Mortality Ratio
1970	9	$ 44,585	$ 73	58.4%	63.7%	82.5%
1971	8	247,251	461	61.0	73.3	86.7
1972	7	791,718	1,305	59.5	67.3	89.4
1973	6	2,065,296	3,237	62.7	67.5	90.0
1974	5	3,971,754	5,569	66.9	69.7	93.5
1975	4	6,512,557	9,134	71.9	73.5	90.5
1976	3	9,946,544	12,728	78.8	63.6	101.4
1977	2	15,613,670	17,654	89.1	69.3	82.0
1978	1	21,151,637	14,429	67.3	63.8	73.9
Total .	.....	$60,345,012*	$64,590*	74.5%*	68.0%*	86.4%*

* These figures are for policy years 1–9 only. Note that the distributions of exposures by policy year for the medical and nonmedical data (Tables 2 and 4) are quite different from the distribution shown in the above table for the paramedical data.

EXPERIENCE UNDER STANDARD ISSUES DURING THE
SIXTEENTH AND SUBSEQUENT POLICY YEARS

The current experience during the sixteenth and subsequent policy years is based on an exposure of $92 billion and actual deaths of $1.2 billion. This

represents an increase in the exposures from the preceding year of about
5.6 percent. About one-fifth of that increase is attributable to the data sub-
mitted by one company, which contributed to this current study but did not
contribute its experience between 1976 and 1978 anniversaries.

Mortality ratios are presented in Table 6 by attained-age groups based on
(1) the 1965–70 Ultimate Basic Tables (Male, Female, and Male and Female
Combined, respectively, for the male experience, the female experience,
and the experience reported without subdivision by sex); (2) the Commis-
sioners 1941 Standard Ordinary Mortality Table; and (3) the Commissioners
1958 Standard Ordinary Mortality Table. The aggregate mortality ratio on
the 1965–70 Ultimate Basic Tables for the period from 1978 to 1979 anni-
versaries was 77.0 percent.

TABLE 6

STANDARD ISSUES OF 1963 AND PRIOR*
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY ATTAINED AGE
POLICY YEARS 16 AND OVER COMBINED
(Amounts Shown in $1,000 Units)

| ATTAINED AGES | EXPOSED TO RISK | ACTUAL DEATHS | 1965–70 ULTIMATE BASIC TABLE | | MORTALITY RATIO | |
			Expected Deaths	Mortality Ratio	1941 CSO Table	1958 CSO Table
15–19	$ 1,144,348	$ 1,116	$ 931	119.9%	43.0%	59.8%
20–24	1,843,810	1,970	1,799	109.5	41.1	57.5
25–29	1,807,124	1,953	1,747	111.8	34.6	54.1
30–34	2,898,233	2,937	3,411	86.1	25.4	44.5
35–39	6,211,860	8,521	10,140	84.0	26.2	47.7
40–44	9,460,866	17,631	25,330	69.6	26.2	44.0
45–49	11,823,242	39,062	52,384	74.6	32.9	51.0
50–54	14,398,996	77,871	105,387	73.9	37.5	53.8
55–59	14,038,855	119,214	166,445	71.6	40.4	54.5
60–64	11,302,307	158,918	212,416	74.8	45.2	58.0
65–69	7,265,064	160,064	214,139	74.7	47.7	58.2
70–74	5,053,953	178,247	225,711	79.0	51.0	60.8
75–79	2,998,973	162,770	208,320	78.1	53.0	64.1
80–84	1,535,602	133,856	162,282	82.5	57.6	68.9
85–89	539,593	68,598	84,288	81.4	58.1	70.7
90–95	140,528	26,455	30,011	88.2	59.7	72.2
All ages ...	$92,463,354	$1,159,183	$1,504,741	77.0%	46.7%	59.8%

* Based on data from twenty-one companies.

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

Exposure Year	Aggregate Mortality Ratio
1972–73	93.8%
1973–74	93.4
1974–75	87.1
1975–76	85.0
1976–77	82.0
1977–78	80.5
1978–79	77.0

The following tabulation indicates the variation in the 1978–79 aggregate mortality ratios of the contributing companies from the 1978–79 all-company average of 77.0 percent.

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15	1	2.1%
10–15	2	2.6
5–10	3	12.9
0–5	6	28.9
Percentage points above average:		
0–5	7	32.5
5–10	2	21.0

Comparison of Medical and Nonmedical Experience

Companies were asked to subdivide their ultimate data into medical and nonmedical if they could do so conveniently. Fifteen companies were able to subdivide their data (in whole or in part) in this manner. The results of this experience between 1974 and 1979 anniversaries are shown in Table 7. The exposures for this subdivided data comprised 52.5 percent of the total ultimate exposure reported for the period as compared with 51.4 percent for the previous study.

For all attained-age groups except 15–19 the nonmedical mortality is higher than the medical mortality. All of the ultimate business in this attained-age group, of course, was issued at ages 0–4.

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 1974 to 1979 anniver-

saries is shown in Table 8 for standard medical and nonmedical issues combined. Eighteen companies submitted their experience separately on premium-paying policies, and sixteen companies did so on fully paid-up policies. Exposures identified as premium-paying constituted 81.5 percent, and exposures identified as fully paid-up constituted 12.8 percent of the total ultimate exposures reported for this period.

The mortality ratios on premium-paying policies exceeded those on fully paid-up policies at attained ages 20–29 and 65–89. For all attained ages combined, the mortality ratio on premium-paying policies exceeded the mortality ratio on fully paid-up policies by 0.3 of a percentage point.

TABLE 7

COMPARISON OF MEDICAL AND NONMEDICAL MORTALITY EXPERIENCE*
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
STANDARD ISSUES OF 1963 AND PRIOR
EXPERIENCE BETWEEN 1974 AND 1979 ANNIVERSARIES
BY ATTAINED AGE
POLICY YEARS 16 AND OVER COMBINED
Expected Deaths on 1965–70 Ultimate Basic Tables
(Amounts Shown in $1,000 Units)

ATTAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS		MORTALITY RATIO		RATIO OF NONMEDICAL TO MEDICAL MORTALITY RATIOS
	Medical	Nonmedical	Medical	Non-medical	Medi-cal	Non-medical	
15–19	$ 655,028	$ 2,983,904	$ 702	$ 2,611	127.6%	109.3%	85.7%
20–24	1,032,777	2,850,193	1,133	3,250	110.5	115.3	104.3
25–29	1,230,379	2,425,996	1,285	2,601	106.0	109.3	103.1
30–34	1,891,423	5,530,521	1,873	5,795	83.0	86.7	104.5
35–39	4,771,868	11,861,463	6,042	15,174	75.4	77.9	103.3
40–44	11,269,524	14,181,250	22,946	28,254	74.3	75.0	100.9
45–49	20,465,127	12,501,513	69,375	45,779	74.9	85.0	113.5
50–54	28,112,523	8,964,674	155,079	57,023	74.2	90.0	121.3
55–59	27,887,197	4,930,739	246,085	50,982	73.3	91.9	125.4
60–64	22,839,990	1,618,543	337,811	25,618	78.0	89.1	114.2
65–69	13,414,594	614,385	315,181	16,718	78.7	93.3	118.6
70–74	8,971,395	401,492	338,820	15,914	84.0	88.3	105.1
75–79	5,172,477	220,687	307,328	13,682	84.8	87.5	103.2
80–84	2,592,014	107,140	238,338	10,542	86.9	92.0	105.9
85–89	849,161	35,008	120,194	5,137	89.8	92.4	102.9
90–95	210,936	6,134	42,378	1,391	94.0	106.6	113.4
All ages	$151,366,413	$69,233,642	$2,204,570	$300,471	80.6%	87.6%	108.7%

* Based on data from fifteen companies.

EXPERIENCE BY SEX

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

The detailed select experience by sex for the period from 1978 to 1979 policy anniversaries by age group at issue for each year of issue is presented in Table B of Appendix I for medical issues and in Table C of Appendix I for nonmedical issues. Expected deaths were calculated on the 1965–70

TABLE 8

COMPARISON OF MORTALITY EXPERIENCE
UNDER PREMIUM-PAYING AND FULLY PAID-UP POLICIES
MALE AND FEMALE LIVES COMBINED
(INCLUDING DATA NOT SUBDIVIDED BY SEX)
STANDARD ISSUES OF 1963 AND PRIOR
EXPERIENCE BETWEEN 1974 AND 1979 ANNIVERSARIES
BY ATTAINED AGE
POLICY YEARS 16 AND OVER COMBINED
Expected Deaths on 1965–70 Ultimate Basic Tables
(Amounts Shown in $1,000 Units)

ATTAINED AGES	PREMIUM-PAYING POLICIES*			FULLY PAID-UP POLICIES†			RATIO OF PREMIUM-PAYING TO PAID-UP MORTALITY RATIOS
	Exposed to Risk	Actual Deaths	Mortality Ratio	Exposed to Risk	Actual Deaths	Mortality Ratio	
15–19 ..	$ 5,678,084	$ 5,194	112.9%	$ 149,034	$ 348	292.4%	38.6%
20–24 ..	5,629,025	6,473	115.4	2,246,772	2,158	102.1	113.0
25–29 ..	5,339,859	5,735	108.4	2,244,623	2,059	99.8	108.6
30–34 ..	10,415,472	11,017	88.0	1,894,767	2,068	102.0	86.3
35–39 ..	24,641,753	32,375	79.9	1,642,537	2,733	110.9	72.0
40–44 ..	38,440,228	78,079	75.9	2,331,538	5,208	89.2	85.1
45–49 ..	49,768,124	177,477	80.4	6,327,507	12,828	84.9	94.7
50–54 ..	56,827,461	324,326	77.7	4,951,349	27,354	82.1	94.6
55–59 ..	51,771,688	474,551	76.9	5,988,404	53,397	80.4	95.6
60–64 ..	39,826,296	601,818	80.4	6,703,248	96,849	80.5	99.9
65–69 ..	23,305,670	562,197	81.0	7,306,985	167,659	80.7	100.4
70–74 ..	15,652,291	597,389	84.8	5,521,916	190,306	78.7	107.8
75–79 ..	9,083,418	542,817	85.2	3,449,079	187,577	79.0	107.8
80–84 ..	4,515,826	416,236	87.1	1,910,642	169,177	84.4	103.2
85–89 ..	1,291,376	180,234	88.7	867,165	114,773	85.1	104.2
90–95 ..	292,799	57,808	92.2	269,384	54,237	94.2	97.9
All ages	$342,479,370	$4,073,726	82.2%	$53,804,950	$1,088,731	81.9%	100.4%

* Based on data from eighteen companies.
† Based on data from sixteen companies.

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

Tables 9–11 examine the experience by sex between 1974 and 1979 policy anniversaries for the select data, and Table 12 does the same for the ultimate data.

The mortality ratios by sex and issue-age group for the first fifteen policy years combined, covering the experience from 1974 to 1979 anniversaries, are presented in Table 9 for standard medically examined issues and in Table 10 for standard nonmedical issues. For the purpose of comparing male and female mortality, the right-hand column of each of these tables was based on mortality ratios for females with expected deaths calculated on the male table. The highest ratios of female to male mortality were found at issue

TABLE 9

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD MEDICALLY EXAMINED ISSUES
OBSERVED BETWEEN 1974 AND 1979 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1–15 COMBINED

Expected Deaths on 1965–70 Male Select Basic Table
and 1965–70 Female Select Basic Table
(Amounts Shown in $1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK		ACTUAL DEATHS		MORTALITY RATIO		RATIO OF FEMALE TO MALE MORTALITY*
	Male	Female	Male	Female	Male	Female	
0	$ 838,158	$ 399,778	$ 560	$ 45	60.2%	10.8%	15.0%
1	655,499	314,050	89	112	23.8	71.8	246.2
2–4	1,072,925	496,678	980	47	181.8	24.7	10.4
5–9	2,021,679	986,598	1,178	396	96.0	111.9	72.7
10–14	2,908,040	1,016,212	2,966	799	114.0	178.3	83.6
15–19	7,381,754	1,449,265	9,478	633	119.5	80.6	34.5
20–24	36,707,212	3,093,380	29,015	1,496	86.0	78.9	64.1
25–29	90,887,100	5,966,530	81,928	4,822	89.0	105.5	101.7
30–34	132,296,598	9,978,803	157,707	9,921	76.4	86.5	94.6
35–39	134,098,592	11,961,678	272,258	16,514	79.5	76.7	74.0
40–44	113,911,715	12,813,805	350,121	27,805	73.3	84.8	70.9
45–49	81,789,207	11,553,626	378,290	34,203	76.2	87.5	63.8
50–54	48,309,552	7,767,382	300,780	32,397	72.5	84.6	66.5
55–59	22,306,830	4,146,722	198,311	21,447	76.5	93.0	56.7
60–64	8,183,520	1,945,831	98,762	12,779	70.7	71.6	52.1
65–69	2,175,873	658,576	40,093	6,766	76.7	75.2	52.9
70 and over	433,394	182,502	13,399	2,490	84.0	45.6	43.9
All ages .	$685,977,648	$74,731,416	$1,935,915	$172,672	76.1%	83.3%	64.4%

* Female mortality ratios calculated on 1965–70 Male Select Basic Table.

ages 1 and 25–34 for medical issues and at issue ages 45–49 for nonmedical issues. For all issue ages combined, the ratio of female to male mortality was 64.4 percent for medical issues and 56.1 percent for nonmedical issues.

Table 11 presents the experience for the five-year period from 1974 to 1979 anniversaries on medical and nonmedical issues, separately for each sex, for policy years 1–2, 3–5, 6–10, 11–15, and 1–15. The nonmedical mortality ratios shown in Table 11 have *not* been adjusted to reflect the distribution of nonmedical exposures by age for issue-age groups 40–44 and over. For males, the ratios of the nonmedical to the medical mortality ratios exceeded 100 percent at issue ages 20–44 in policy years 1–15 combined. For females, the ratios exceeded 100 percent for issue ages 0 and 35–49 in policy years 1–15 combined. Although the female nonmedical mortality ratio at age zero was three times the female medical mortality ratio, this resulted from an actual-to-expected of only 33 percent for nonmedical business versus only 11 percent for medical business.

TABLE 10

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD NONMEDICAL ISSUES
OBSERVED BETWEEN 1974 AND 1979 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1–15 COMBINED
Expected Deaths on 1965–70 Male Select Basic Table
and 1965–70 Female Select Basic Table
(Amounts Shown in $1,000 Units)

AGES AT ISSUE	EXPOSED TO RISK		ACTUAL DEATHS		MORTALITY RATIO*		RATIO* OF FEMALE TO MALE MORTALITY†
	Male	Female	Male	Female	Male	Female	
0	$ 13,453,880	$ 9,238,895	$ 6,801	$ 3,736	37.4%	32.6%	68.7%
1	5,230,247	3,394,363	1,962	837	60.7	44.6	60.6
2–4	8,632,083	5,656,876	2,910	1,249	69.5	56.1	64.5
5–9	12,539,977	7,547,558	6,167	1,688	92.6	69.0	51.6
10–14	17,538,401	8,300,206	15,030	2,737	103.3	80.9	44.6
15–19	65,440,585	22,780,921	72,156	9,492	105.0	79.7	38.2
20–24	154,015,549	40,643,215	126,260	16,005	94.1	68.4	51.0
25–29	124,884,926	34,836,363	109,477	16,109	90.8	65.4	63.1
30–34	52,350,442	19,878,018	74,141	15,846	90.7	72.3	68.0
35–39	18,146,876	9,484,630	47,368	13,908	99.9	82.9	64.5
40–44	4,136,851	3,890,404	16,351	9,078	100.0	104.7	67.3
45–49	865,065	445,442	2,775	1,205	71.6	100.3	81.1
50 and over .	512,626	90,911	2,611	277	71.7	80.1	62.6
All ages ..	$477,747,508	$166,187,802	$484,009	$92,167	92.5%	70.7%	56.1%

* Exposures not adjusted for distribution by age within each five-year age group.
† Female mortality ratios calculated on 1965–70 Male Select Basic Table.

TABLE II

COMPARISON BY SEX OF MEDICAL AND NONMEDICAL EXPERIENCE*
BETWEEN 1974 AND 1979 ANNIVERSARIES
BY AGE GROUP AT ISSUE AND POLICY-YEAR GROUP
(FIRST FIFTEEN POLICY YEARS)

AGE GROUP AT ISSUE	POLICY YEARS									
	1–2		3–5		6–10		11–15		1–15	
	Medical %	Non-medical %	Medical %	Non-medical %	Medical %	Non-medical %	Medical %	Non-medical %	Medical %	Non-medical %
Male Experience—Mortality Ratios on 1965–70 Male Select Basic Table										
0	57	26	17	61	76	77	129	79	60	37
1–9	11	56	181	73	96	83	124	104	105	78
10–19	136	105	126	112	107	107	119	94	118	105
20–24	96	102	95	98	78	94	83	82	86	94
25–29	136	105	89	100	86	88	72	78	89	91
30–34	76	88	80	106	75	90	76	85	76	91
35–39	74	118	89	102	82	99	75	95	79	100
40–44	69	117	73	165	71	105	75	88	73	112
45–49	80	50	80	95	77	57	73	80	76	72
50 and over	73	63	69	88	73	58	78	73	74	72
All ages	77	90	76	102	76	94	76	86	76	93
Female Experience—Mortality Ratios on 1965–70 Female Select Basic Table										
0	3	25	27	51	20	66	45	77	11	33
1–9	108	44	4	58	94	64	94	91	79	58
10–19	98	76	165	78	99	80	110	91	116	80
20–24	75	59	43	73	102	71	90	79	79	68
25–29	97	51	145	70	100	78	79	73	106	65
30–34	51	48	97	72	62	82	132	90	86	72
35–39	48	60	68	82	82	86	89	91	77	83
40–44	94	113	77	110	83	103	88	95	85	105
45–49	67	101	86	103	91	101	90	88	87	100
50 and over	64	94	72	93	83	67	92	50	81	80
All ages	67	52	78	75	84	81	92	86	83	71
Male Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	46%		359%		101%		61%		62%	
1–9	509		40		86		84		74	
10–19	77		89		100		79		89	
20–24	106		103		121		99		109	
25–29	77		112		102		108		102	
30–34	116		133		120		112		120	
35–39	159		115		121		127		127	
40–44	170		226		148		117		153	
45–49	63		119		74		110		95	
50 and over	86		128		79		94		97	
All ages	117%		134%		124%		113%		122%	
Female Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0	833%		189%		330%		171%		300%	
1–9	41		1,450		68		97		73	
10–19	78		47		81		83		69	
20–24	79		170		70		88		86	
25–29	53		48		78		92		61	
30–34	94		74		132		68		84	
35–39	125		121		105		102		108	
40–44	120		143		124		108		124	
45–49	151		120		111		98		115	
50 and over	147		129		81		54		99	
All ages	78%		96%		96%		93%		86%	

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

The mortality ratios by attained-age groups and sex for policy years 16 and over combined, covering the experience from 1974 to 1979 anniversaries, are presented in Table 12 for standard medical and standard nonmedical issues combined. Again, for the purpose of comparing male and female mortality, the right-hand column of this table is based on mortality ratios for females with expected deaths calculated on the male table. Eighteen of the contributing companies submitted data (in whole or in part) separately for males and females for policy years 16 and over. The highest ratios of female to male mortality were found at attained ages 40–49 and 90–95.

TABLE 12

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE*
STANDARD ISSUES OF 1963 AND PRIOR
EXPERIENCE BETWEEN 1974 AND 1979 ANNIVERSARIES
BY ATTAINED AGE—POLICY YEARS 16 AND OVER COMBINED

Expected Deaths on 1965–70 Male Ultimate Basic Table
and 1965–70 Female Ultimate Basic Table
(Amounts Shown in $1,000 Units)

ATTAINED AGES	EXPOSED TO RISK		ACTUAL DEATHS		MORTALITY RATIO		RATIO OF FEMALE TO MALE MORTALITY†
	Male	Female	Male	Female	Male	Female	
15–19	$ 3,221,113	$ 1,784,900	$ 3,940	$ 884	125.9%	102.3%	40.7%
20–24	4,311,973	2,085,148	6,035	1,072	123.0	90.9	36.7
25–29	4,431,334	1,704,295	5,629	863	117.2	88.3	39.9
30–34	8,546,377	1,819,724	9,614	1,293	88.5	96.9	63.7
35–39	19,062,358	2,473,539	26,255	2,305	80.9	79.0	69.2
40–44	30,210,933	2,741,537	62,114	4,411	74.8	83.1	78.9
45–49	40,545,120	3,622,399	144,642	9,731	78.4	90.2	75.4
50–54	47,136,493	4,552,815	272,522	17,157	76.3	84.9	65.0
55–59	43,321,251	4,563,611	400,874	26,996	74.6	90.7	63.8
60–64	33,848,422	3,787,898	519,241	34,600	77.8	91.2	59.4
65–69	21,577,153	2,717,102	533,602	36,991	79.5	91.6	54.8
70–74	14,405,444	1,955,554	564,309	39,146	83.3	76.8	51.0
75–79	8,203,998	1,229,537	504,782	45,517	84.7	76.6	59.9
80–84	4,068,765	658,054	390,190	41,358	87.7	80.4	65.3
85–89	1,375,460	224,351	197,700	22,766	89.1	83.0	70.6
90–95	353,494	58,032	71,474	10,237	92.5	89.3	87.1
All ages	$284,619,688	$35,978,496	$3,712,923	$295,327	81.2%	83.8%	61.6%

* Based on data from eighteen companies.
† Female mortality ratios calculated on 1965–70 Male Ultimate Basic Table.

TABLE A

CONTRIBUTING COMPANIES
PROPORTION OF TOTAL EXPOSURES BETWEEN 1978 AND 1979 ANNIVERSARIES
CONTRIBUTED BY EACH COMPANY

COMPANY	FIRST FIFTEEN POLICY YEARS		SIX-TEENTH AND SUBSEQUENT POLICY YEARS	FIRST FIFTEEN POLICY YEARS BY SEX				SIXTEENTH AND SUBSEQUENT POLICY YEARS BY SEX	
	Medical Issues	Non-medical Issues		Medical Issues		Nonmedical Issues			
				Male	Female	Male	Female	Male	Female
	Male and Female Lives Combined (Including Data Not Subdivided by Sex)								
New York Life	12.5%	13.9%	11.9%	10.8%	1.7%	9.7%	4.2%	12.5%	1.8%
Prudential	11.1	32.3	21.9	9.7	1.4	22.4	9.9	23.9	3.4
Northwestern Mutual	10.4	4.2	6.2	9.4	1.0	2.7	1.5	7.0	0.8
Equitable, New York	7.5	7.8	8.1	6.7	0.8	5.7	2.1	9.1	1.0
Massachusetts Mutual	7.3	3.3	4.4	6.7	0.6	2.5	0.8	5.1	0.5
Metropolitan	7.1	13.9	15.9	6.4	0.7	10.1	3.8	4.1†	0.3†
New England Life	4.7	1.7	2.5	4.3	0.4	1.3	0.4	2.8	0.2
Occidental	4.5	1.4	1.1	4.0	0.5	0.9	0.5	0.8	0.1
John Hancock	4.0	5.0	5.4	3.6	0.4	3.7	1.3	5.6	1.1
Connecticut Mutual	4.0	2.5	2.8	3.6	0.4	1.9	0.6	....	....
Connecticut General	4.0	0.5	1.1	3.5	0.5	0.4	0.1	1.1	0.2
Mutual Benefit	3.6	1.1	2.8	3.3	0.3	0.8	0.3	3.0	0.3
Phoenix Mutual	3.3	0.7	1.2	3.0	0.3	0.5	0.2	1.4	0.1
Mutual Life, New York	3.2	3.6	3.4	2.9	0.3	2.8	0.8	3.7	0.5
Aetna	2.8	1.4	1.6	2.5	0.3	1.0	0.4	1.8	0.3
Penn Mutual	2.2	2.0	2.4	2.0	0.2	1.5	0.5	....	....
Travelers	2.2	1.0	2.3	2.0	0.2	0.8	0.2	2.7	0.2
Lincoln National	1.8	1.5	1.5	1.6	0.2	1.1	0.4	1.6	0.3
Continental Assurance	1.7	0.5	1.2	1.6	0.1	0.4	0.1	1.3	0.1
Provident Mutual	1.4	0.9	1.3	1.3	0.1	0.7	0.2	....	....
Sun Life	0.7	0.8	1.0	0.6	0.1	0.6	0.2	1.1	0.2
Total	100.0%	100.0%	100.0%	89.5%	10.5%	71.5%	28.5%	88.6%	11.4%

NOTE.—A Comparative Mortality Study of the select experience between 1974 and 1979 anniversaries for most of the above companies is available upon request to the Office of the Society of Actuaries. The companies are not identified by name but are differentiated simply by a system of code letters. Experience is shown by issue-age groups and by issue year separately for medical and nonmedical business.

† Represents the experience of the 16th through the 19th policy years only.

TABLE B

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

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1964	0	$ 10,273	$ 0	$ 5	0%
(15)	1	6,393	1	4	25
	2–4	10,949	10	10	100
	5–9	19,346	5	22	23
	10–14	34,929	30	37	81
	15–19	87,990	78	109	72
	20–24	341,886	286	523	55
	25–29	675,724	884	1,632	54
	30–34	938,126	2,845	3,775	75
	35–39	1,105,579	4,664	7,332	64
	40–44	921,289	6,063	9,714	62
	45–49	545,514	6,292	9,060	69
	50–54	271,736	3,994	6,617	60
	55–59	103,699	2,495	3,749	67
	60–64	35,471	1,599	1,809	88
	65–69	7,951	445	584	76
	70 and over	1,180	55	164	34
	All ages	$ 5,118,045	$ 29,746	$ 45,146	66%
1965	0	$ 10,006	$ 0	$ 4	0%
(14)	1	5,833	1	3	33
	2–4	13,068	75	11	682
	5–9	22,262	5	26	19
	10–14	32,943	45	36	125
	15–19	106,339	129	127	102
	20–24	404,978	307	563	55
	25–29	741,438	1,156	1,571	74
	30–34	1,015,688	2,745	3,572	77
	35–39	1,160,383	4,920	6,646	74
	40–44	979,249	6,811	9,159	74
	45–49	612,961	5,846	9,016	65
	50–54	305,894	4,556	6,806	67
	55–59	117,630	2,964	3,821	78
	60–64	41,971	1,702	2,017	84
	65–69	9,318	408	628	65
	70 and over	1,591	108	211	51
	All ages	$ 5,581,561	$ 31,778	$ 44,217	72%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1966 .... (13)	0	$ 10,238	$ 0	$ 3	0%
	1	6,234	0	3	0
	2–4	11,965	16	8	200
	5–9	21,331	29	24	121
	10–14	34,591	120	38	316
	15–19	107,379	111	123	90
	20–24	414,871	330	516	64
	25–29	762,801	1,084	1,429	76
	30–34	1,019,629	2,349	3,168	74
	35–39	1,184,694	4,191	5,996	70
	40–44	1,027,518	5,596	8,474	66
	45–49	663,246	5,910	8,554	69
	50–54	332,529	4,126	6,545	63
	55–59	126,842	2,940	3,606	82
	60–64	45,337	1,086	2,022	54
	65–69	12,130	300	756	40
	70 and over	1,854	179	217	82
	All ages	$ 5,783,197	$ 28,367	$ 41,482	68%
1967 .... (12)	0	$ 9,535	$ 0	$ 3	0%
	1	7,440	0	2	0
	2–4	11,745	0	6	0
	5–9	22,826	0	25	0
	10–14	33,728	35	37	95
	15–19	89,879	102	98	104
	20–24	375,001	333	423	79
	25–29	760,778	718	1,261	57
	30–34	1,008,612	2,027	2,816	72
	35–39	1,169,748	3,669	5,367	68
	40–44	1,023,323	5,427	7,453	73
	45–49	674,532	4,611	7,534	61
	50–54	360,053	4,267	6,188	69
	55–59	139,695	2,991	3,505	85
	60–64	50,975	1,689	2,039	83
	65–69	10,913	524	625	84
	70 and over	2,652	118	280	42
	All ages	$ 5,751,445	$ 26,511	$ 37,662	70%
1968 .... (11)	0	$ 9,314	$ 23	$ 3	767%
	1	5,940	0	2	0
	2–4	11,172	100	5	2000
	5–9	21,329	45	20	225
	10–14	39,116	25	44	57
	15–19	78,481	35	82	43
	20–24	351,136	409	358	114
	25–29	788,836	1,002	1,132	89
	30–34	1,043,359	1,648	2,612	63
	35–39	1,170,504	3,283	4,806	68
	40–44	1,064,934	4,413	7,004	63
	45–49	735,545	4,973	7,266	68
	50–54	380,783	4,010	5,826	69
	55–59	170,327	4,217	3,729	113
	60–64	51,837	1,362	1,738	78
	65–69	13,420	584	681	86
	70 and over	2,710	129	262	49
	All ages	$ 5,938,752	$ 26,258	$ 35,570	74%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1969	0	$ 9,084	$ 0	$ 3	0%
(10)	1	7,879	0	2	0
	2–4	10,772	15	4	375
	5–9	27,925	100	23	435
	10–14	38,364	0	44	0
	15–19	83,550	72	88	82
	20–24	406,674	593	390	152
	25–29	960,547	710	1,210	59
	30–34	1,267,808	1,712	2,787	61
	35–39	1,355,406	3,863	4,916	79
	40–44	1,227,239	4,144	7,183	58
	45–49	894,698	4,795	7,844	61
	50–54	475,150	3,115	6,580	47
	55–59	207,734	1,986	4,010	50
	60–64	73,947	1,717	2,089	82
	65–69	15,924	652	679	96
	70 and over	4,003	190	324	59
	All ages	$ 7,066,713	$ 23,664	$ 38,176	62%
1970	0	$ 12,147	$ 0	$ 4	0%
(9)	1	7,501	0	2	0
	2–4	12,850	0	4	0
	5–9	27,325	0	18	0
	10–14	35,655	30	42	71
	15–19	84,881	51	90	57
	20–24	492,597	292	447	65
	25–29	1,085,876	1,079	1,238	87
	30–34	1,373,048	1,393	2,676	52
	35–39	1,380,764	3,098	4,407	70
	40–44	1,306,482	4,217	6,875	61
	45–49	940,199	3,828	7,437	51
	50–54	499,815	3,712	6,194	60
	55–59	238,552	2,972	4,045	73
	60–64	85,491	1,029	2,101	49
	65–69	20,275	435	732	59
	70 and over	4,064	404	290	139
	All ages	$ 7,607,530	$ 22,540	$ 36,602	62%
1971	0	$ 11,541	$ 32	$ 4	800%
(8)	1	7,794	0	5	0
	2–4	13,499	0	4	0
	5–9	29,156	0	15	0
	10–14	38,466	105	45	233
	15–19	88,732	115	95	121
	20–24	512,748	367	443	83
	25–29	1,180,396	1,107	1,201	92
	30–34	1,553,383	2,035	2,651	77
	35–39	1,566,996	3,622	4,415	82
	40–44	1,430,883	5,713	6,726	85
	45–49	1,034,850	4,882	7,483	65
	50–54	595,733	4,025	6,760	60
	55–59	279,912	2,439	4,317	56
	60–64	99,674	1,083	2,146	50
	65–69	25,080	1,073	782	137
	70 and over	4,201	195	264	74
	All ages	$ 8,473,052	$ 26,793	$ 37,356	72%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1972	0	$ 10,340	$ 0	$ 4	0%
(7)	1	9,214	0	4	0
	2–4	15,082	0	5	0
	5–9	28,946	100	12	833
	10–14	40,780	0	44	0
	15–19	89,657	57	97	59
	20–24	483,830	245	403	61
	25–29	1,264,300	832	1,168	71
	30–34	1,757,853	1,739	2,607	67
	35–39	1,743,271	3,222	4,356	74
	40–44	1,559,247	3,906	6,524	60
	45–49	1,176,666	4,009	7,630	53
	50–54	679,454	4,251	6,949	61
	55–59	315,040	3,119	4,402	71
	60–64	110,601	2,096	2,122	99
	65–69	28,950	509	829	61
	70 and over	5,726	172	283	61
	All ages	$ 9,318,962	$ 24,257	$ 37,439	65%
1973	0	$ 12,291	$ 0	$ 6	0%
(6)	1	8,643	0	4	0
	2–4	15,375	0	5	0
	5–9	26,983	0	9	0
	10–14	39,104	25	37	68
	15–19	84,006	135	92	147
	20–24	499,482	375	410	91
	25–29	1,359,291	1,071	1,157	93
	30–34	2,015,732	2,251	2,716	83
	35–39	1,910,407	4,058	4,188	97
	40–44	1,665,613	2,766	6,181	45
	45–49	1,291,083	4,937	7,272	68
	50–54	800,714	3,949	6,919	57
	55–59	379,896	3,715	4,522	82
	60–64	132,731	1,775	2,326	76
	65–69	35,591	463	929	50
	70 and over	8,208	60	329	18
	All ages	$ 10,285,160	$ 25,580	$ 37,102	69%
1974	0	$ 12,360	$ 0	$ 7	0%
(5)	1	9,138	0	4	0
	2–4	16,437	0	6	0
	5–9	30,651	0	10	0
	10–14	39,857	15	33	45
	15–19	97,931	49	108	45
	20–24	534,207	584	443	132
	25–29	1,571,347	1,152	1,271	91
	30–34	2,392,440	2,479	2,883	86
	35–39	2,254,297	3,845	4,341	89
	40–44	1,914,136	4,657	6,002	78
	45–49	1,490,973	4,705	7,294	65
	50–54	957,098	4,028	6,765	60
	55–59	456,824	3,221	4,714	68
	60–64	175,157	1,508	2,884	52
	65–69	44,706	1,073	1,071	100
	70 and over	11,272	139	363	38
	All ages	$ 12,008,840	$ 27,455	$ 38,199	72%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1975 .... (4)	0	$ 14,074	$ 0	$ 9	0%
	1	8,440	0	4	0
	2–4	16,104	0	7	0
	5–9	30,705	0	10	0
	10–14	44,040	0	30	0
	15–19	96,280	444	103	431
	20–24	487,757	130	409	32
	25–29	1,570,791	1,104	1,220	90
	30–34	2,486,755	2,131	2,764	77
	35–39	2,385,130	3,181	4,007	79
	40–44	1,946,924	3,253	5,505	59
	45–49	1,608,414	5,893	6,867	86
	50–54	1,122,003	4,908	7,116	69
	55–59	536,115	3,213	5,023	64
	60–64	213,408	2,040	3,227	63
	65–69	64,274	537	1,329	40
	70 and over	10,381	1,169	250	468
	All ages	$ 12,641,602	$ 28,003	$ 37,880	74%
1976 .... (3)	0	$ 14,045	$ 0	$ 12	0%
	1	10,990	0	7	0
	2–4	18,982	0	9	0
	5–9	32,863	0	11	0
	10–14	43,341	85	23	370
	15–19	90,594	50	93	54
	20–24	509,955	318	412	77
	25–29	1,733,325	882	1,307	67
	30–34	2,907,363	2,097	2,869	73
	35–39	2,743,689	4,095	3,907	105
	40–44	2,270,037	3,756	5,381	70
	45–49	1,903,841	4,242	6,793	62
	50–54	1,349,548	3,833	7,212	53
	55–59	702,550	3,149	5,426	58
	60–64	285,945	1,143	3,427	33
	65–69	87,315	490	1,530	32
	70 and over	16,800	69	330	21
	All ages	$ 14,721,192	$ 24,209	$ 38,749	63%
1977 .... (2)	0	$ 19,359	$ 0	$ 25	0%
	1	14,594	0	12	0
	2–4	22,844	0	12	0
	5–9	41,631	0	15	0
	10–14	47,997	15	21	71
	15–19	110,618	99	109	91
	20–24	627,729	404	462	87
	25–29	2,065,428	2,039	1,310	156
	30–34	3,799,997	2,005	3,319	60
	35–39	3,627,342	3,306	4,073	81
	40–44	2,908,067	3,446	5,536	62
	45–49	2,307,790	2,985	6,279	48
	50–54	1,642,430	4,106	6,657	62
	55–59	851,601	2,760	4,702	59
	60–64	331,153	2,384	2,846	84
	65–69	97,610	936	1,336	70
	70 and over	17,959	490	272	180
	All ages	$ 18,534,159	$ 24,975	$ 36,986	68%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1978	0	$ 26,809	$ 0	$ 157	0%
(1)	1	19,952	0	26	0
	2–4	32,044	3	21	14
	5–9	55,816	0	22	0
	10–14	63,123	0	21	0
	15–19	108,568	225	99	227
	20–24	701,152	393	482	82
	25–29	2,331,578	1,047	1,340	78
	30–34	4,555,503	1,752	3,423	51
	35–39	4,732,450	2,804	4,109	68 ·
	40–44	3,690,558	2,633	5,059	52
	45–49	2,800,871	3,649	5,467	67
	50–54	2,087,223	4,665	5,478	85
	55–59	1,112,805	2,827	4,096	69
	60–64	492,614	1,661	2,921	57
	65–69	138,017	651	1,345	48
	70 and over	27,026	137	303	45
	All ages	$ 22,976,117	$ 22,447	$ 34,369	65%
All years ...	0	$ 191,425	$ 55	$ 249	22%
(1–15)	1	135,992	2	84	2
	2–4	232,897	219	117	187
	5–9	439,102	284	262	108
	10–14	606,040	530	532	100
	15–19	1,404,892	1,752	1,513	116
	20–24	7,144,011	5,366	6,684	80
	25–29	18,852,462	15,867	19,447	82
	30–34	29,135,303	31,208	44,638	70
	35–39	29,490,667	55,821	72,866	77
	40–44	24,935,507	66,801	102,776	65
	45–49	18,681,191	71,557	111,796	64
	50–54	11,860,171	61,545	98,612	62
	55–59	5,739,232	45,008	63,667	71
	60–64	2,226,320	23,874	35,714	67
	65–69	611,480	9,080	13,836	66
	70 and over	119,635	3,614	4,142	87
	All ages	$151,806,327	$392,583	$576,935	68%

TABLE B—*Continued*

Expected Deaths on 1965–70 Female 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
1964 (15)	0	$ 4,207	$ 2	$ 1	200%
	1	1,967	0	1	0
	2–4	3,874	2	1	200
	5–9	7,944	0	5	0
	10–14	8,031	0	4	0
	15–19	13,648	5	9	56
	20–24	21,084	25	22	114
	25–29	30,924	12	55	22
	30–34	52,307	131	143	92
	35–39	86,894	393	352	112
	40–44	111,891	406	640	63
	45–49	81,734	567	698	81
	50–54	44,256	553	558	99
	55–59	22,591	300	392	77
	60–64	13,823	245	349	70
	65–69	3,373	96	113	85
	70 and over	602	24	70	34
	All ages	$ 509,157	$ 2,761	$ 3,413	81%
1965 (14)	0	$ 4,083	$ 0	$ 1	0%
	1	2,289	0	1	0
	2–4	3,909	0	2	0
	5–9	8,732	0	5	0
	10–14	7,614	0	4	0
	15–19	15,254	2	10	20
	20–24	24,662	0	23	0
	25–29	33,122	0	54	0
	30–34	57,059	73	144	51
	35–39	97,069	365	360	101
	40–44	121,430	876	632	139
	45–49	90,209	493	651	76
	50–54	49,217	828	547	151
	55–59	23,976	255	379	67
	60–64	10,474	166	239	69
	65–69	3,903	102	124	82
	70 and over	1,060	24	112	21
	All ages	$ 554,072	$ 3,184	$ 3,288	97%

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Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1966 ...... (13)	0	$ 4,724	$ 0	$ 1	0%
	1	2,795	0	1	0
	2–4	3,315	0	1	0
	5–9	10,147	0	6	0
	10–14	9,448	0	5	0
	15–19	17,201	5	11	45
	20–24	27,328	23	23	100
	25–29	35,292	32	52	62
	30–34	59,552	86	137	63
	35–39	92,307	293	314	93
	40–44	123,227	604	571	106
	45–49	100,099	639	655	98
	50–54	50,578	361	501	72
	55–59	26,475	352	378	93
	60–64	10,721	214	220	97
	65–69	4,333	28	129	22
	70 and over	1,520	21	141	15
	All ages	$ 579,071	$ 2,658	$ 3,146	85%
1967 ...... (12)	0	$ 4,233	$ 0	$ 1	0%
	1	2,361	0	1	0
	2–4	5.091	0	2	0
	5–9	11,590	25	6	417
	10–14	9,513	10	5	200
	15–19	15,279	10	9	111
	20–24	27,499	15	21	71
	25–29	34,349	51	46	111
	30–34	55,416	173	116	149
	35–39	91,202	264	283	93
	40–44	120,691	401	482	83
	45–49	104,802	562	598	94
	50–54	60,792	694	527	132
	55–59	29,210	219	349	63
	60–64	13,111	159	238	67
	65–69	4,421	41	117	35
	70 and over	1,519	9	130	7
	All ages	$ 591,087	$ 2,633	$ 2,931	90%
1968 ...... (11)	0	$ 3,547	$ 0	$ 1	0%
	1	2,439	0	1	0
	2–4	3,441	0	1	0
	5–9	10,469	26	5	520
	10–14	11,157	0	6	0
	15–19	14,899	3	9	33
	20–24	22,760	0	16	0
	25–29	35,250	7	41	17
	30–34	56,025	28	108	26
	35–39	87,076	90	248	36
	40–44	116,862	390	437	89
	45–49	106,499	509	561	91
	50–54	69,683	434	545	80
	55–59	33,484	298	340	88
	60–64	14,915	186	239	78
	65–69	3,614	64	90	71
	70 and over	808	8	63	13
	All ages	$ 592,937	$ 2,043	$ 2,711	75%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1969 .... (10)	0	$ 4,276	$ 0	$ 1	0%
	1	2,889	5	1	500
	2–4	5,502	0	1	0
	5–9	9,743	0	4	0
	10–14	12,259	0	7	0
	15–19	14,953	5	8	63
	20–24	27,405	8	19	42
	25–29	41,806	0	46	0
	30–34	75,990	49	135	36
	35–39	101,204	337	267	126
	40–44	123,484	344	433	79
	45–49	123,553	354	595	59
	50–54	78,647	470	532	88
	55–59	42,774	335	354	95
	60–64	16,574	170	241	71
	65–69	4,807	45	112	40
	70 and over	1,980	79	154	51
	All ages	$ 687,856	$ 2,201	$ 2,910	76%
1970 .... (9)	0	$ 5,479	$ 0	$ 2	0%
	1	2,928	0	1	0
	2–4	6,047	0	2	0
	5–9	12,434	0	4	0
	10–14	12,053	0	7	0
	15–19	15,480	5	8	63
	20–24	30,351	29	20	145
	25–29	49,526	12	46	26
	30–34	77,089	85	125	68
	35–39	114,715	177	279	63
	40–44	138,012	551	448	123
	45–49	136,926	768	606	127
	50–54	87,733	255	572	45
	55–59	43,538	426	309	138
	60–64	20,123	197	272	72
	65–69	7,765	143	163	88
	70 and over	2,093	19	119	16
	All ages	$ 762,300	$ 2,667	$ 2,983	89%
1971 .... (8)	0	$ 4,868	$ 0	$ 2	0%
	1	3,642	0	1	0
	2–4	6,943	0	2	0
	5–9	14,805	0	5	0
	10–14	14,730	50	8	625
	15–19	17,173	0	9	0
	20–24	35,706	60	23	261
	25–29	68,269	43	57	75
	30–34	104,578	121	154	79
	35–39	133,400	197	295	67
	40–44	153,174	418	459	91
	45–49	150,653	687	607	113
	50–54	103,938	495	630	79
	55–59	53,361	322	340	95
	60–64	25,808	301	325	93
	65–69	7,140	86	136	63
	70 and over	1,885	95	83	114
	All ages	$ 900,081	$ 2,875	$ 3,136	92%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1972	0	$ 5,044	$ 0	$ 2	0%
(7)	1	5,126	0	2	0
	2–4	6,484	0	2	0
	5–9	11,534	0	3	0
	10–14	15,785	0	8	0
	15–19	21,501	5	12	42
	20–24	39,598	0	24	0
	25–29	77,103	49	59	83
	30–34	125,854	31	167	19
	35–39	153,345	132	308	43
	40–44	168,568	429	464	92
	45–49	177,484	695	651	107
	50–54	118,502	644	662	97
	55–59	61,078	649	353	184
	60–64	26,372	196	308	64
	65–69	9,025	274	289	95
	70 and over	1,914	134	73	184
	All ages	$ 1,024,326	$ 3,238	$ 3,387	96%
1973	0	$ 5,867	$ 0	$ 2	0%
(6)	1	3,614	0	1	0
	2–4	6,507	0	2	0
	5–9	14,611	0	4	0
	10–14	16,522	0	8	0
	15–19	21,423	0	12	0
	20–24	48,427	0	28	0
	25–29	90,777	44	64	69
	30–34	166,341	37	194	19
	35–39	186,216	57	335	17
	40–44	186,489	513	458	112
	45–49	201,468	321	651	49
	50–54	135,604	248	683	36
	55–59	72,460	268	376	71
	60–64	30,442	81	311	26
	65–69	11,628	93	176	53
	70 and over	3,389	107	103	104
	All ages	$ 1,201,793	$ 1,769	$ 3,408	52%
1974	0	$ 8,094	$ 0	$ 4	0%
(5)	1	4,347	0	1	0
	2–4	9,252	0	3	0
	5–9	16,944	0	4	0
	10–14	17,734	0	7	0
	15–19	24,439	5	13	38
	20–24	56,718	10	31	32
	25–29	122,007	159	82	194
	30–34	217,012	0	225	0
	35–39	219,584	6	348	2
	40–44	223,803	177	478	37
	45–49	211,959	432	604	72
	50–54	166,638	242	767	32
	55–59	79,878	270	382	71
	60–64	40,878	200	339	59
	65–69	13,583	164	179	92
	70 and over	5,138	6	121	5
	All ages	$ 1,438,016	$ 1,671	$ 3,588	47%

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1975	0	$ 6,462	$ 0	$ 4	0%
(4)	1	5,858	0	3	0
	2–4	11,374	0	4	0
	5–9	22,035	0	6	0
	10–14	16,873	0	6	0
	15–19	22,495	2	11	18
	20–24	59,188	17	32	53
	25–29	153,105	45	101	45
	30–34	246,351	56	229	24
	35–39	259,575	150	377	40
	40–44	249,066	248	474	52
	45–49	229,427	276	581	48
	50–54	172,179	584	715	82
	55–59	104,653	326	452	72
	60–64	51,522	672	360	187
	65–69	18,843	97	206	47
	70 and over	3,817	25	72	35
	All ages	$ 1,632,833	$ 2,498	$ 3,633	69%
1976	0	$ 8,100	$ 0	$ 6	0%
(3)	1	6,639	0	3	0
	2–4	11,424	0	5	0
	5–9	21,149	0	6	0
	10–14	21,428	200	7	2857
	15–19	27,089	0	14	0
	20–24	67,002	25	35	71
	25–29	173,083	55	110	50
	30–34	296,894	58	250	23
	35–39	300,877	165	366	45
	40–44	265,569	195	415	47
	45–49	251,200	425	552	77
	50–54	202,915	813	713	114
	55–59	124,606	369	464	80
	60–64	66,898	264	418	63
	65–69	22,019	127	181	70
	70 and over	5,853	28	78	36
	All ages	$ 1,872,755	$ 2,724	$ 3,623	75%
1977	0	$ 13,223	$ 0	$ 16	0%
(2)	1	7,311	0	5	0
	2–4	14,914	0	7	0
	5–9	25,484	50	7	714
	10–14	26,820	0	10	0
	15–19	34,691	0	17	0
	20–24	97,290	0	53	0
	25–29	237,011	75	141	53
	30–34	400,999	96	308	31
	35–39	395,545	37	388	10
	40–44	326,739	1,138	394	289
	45–49	295,978	342	453	75
	50–54	233,317	561	612	92
	55–59	147,924	176	416	42
	60–64	75,515	76	337	23
	65–69	29,988	412	192	215
	70 and over	10,286	92	96	96
	All ages	$ 2,373,044	$ 3,055	$ 3,452	89%

TABLE B—FEMALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1978	0	$ 12,979	$ 0	$ 61	0%
(1)	1	12,600	0	15	0
	2–4	16,285	9	9	100
	5–9	32,061	0	11	0
	10–14	35,718	10	10	100
	15–19	38,824	20	18	111
	20–24	112,252	65	56	116
	25–29	270,542	200	147	136
	30–34	548,985	125	387	32
	35–39	530,457	240	410	59
	40–44	413,870	96	362	27
	45–49	365,754	229	415	55
	50–54	312,490	27	588	5
	55–59	189,154	494	378	131
	60–64	97,798	20	281	7
	65–69	37,283	55	153	36
	70 and over	11,552	34	78	44
	All ages	$ 3,038,612	$ 1,624	$ 3,379	48%
All years ...	0	$ 95,194	$ 2	$ 105	2%
(1–15)	1	66,813	5	38	13
	2–4	114,369	11	44	25
	5–9	229,690	101	81	125
	10–14	235,694	270	102	265
	15–19	314,356	67	170	39
	20–24	697,279	277	426	65
	25–29	1,452,172	784	1,101	71
	30–34	2,540,459	1,149	2,822	41
	35–39	2,849,473	2,903	4,930	59
	40–44	2,842,884	6,786	7,147	95
	45–49	2,627,753	7,299	8,878	82
	50–54	1,886,497	7,209	9,152	79
	55–59	1,055,169	5,059	5,662	89
	60–64	514,983	3,147	4,477	70
	65–69	181,732	1,827	2,360	77
	70 and over	53,423	705	1,493	47
	All ages	$ 17,757,940	$ 37,601	$ 48,988	77%

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TABLE C

STANDARD NONMEDICAL ISSUES OF 1964–1978
MALE LIVES
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY YEAR OF ISSUE AND AGE AT ISSUE

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

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1964 .... (15)	0	$ 97,123	$ 41	$ 54	76%
	1	36,264	2	25	8
	2–4	56,638	75	55	136
	5–9	93,489	145	106	137
	10–14	144,024	148	154	96
	15–19	520,621	589	644	91
	20–24	931,238	978	1,429	68
	25–29	734,911	1,329	1,793	74
	30–34	356,386	1,048	1,446	72
	35–39	149,597	827	1,002	83
	40–44	24,618	173	261	66
	45–49	2,434	42	40	105
	50 and over	557	2	24	8
	All ages	$ 3,147,907	$ 5,399	$ 7,033	77%
1965 .... (14)	0	$ 99,458	$ 37	$ 44	84%
	1	38,210	13	21	62
	2–4	60,050	35	50	70
	5–9	98,479	93	117	79
	10–14	156,566	192	170	113
	15–19	657,204	658	787	84
	20–24	1,027,708	1,053	1,431	74
	25–29	772,170	1,006	1,652	61
	30–34	362,637	1,068	1,286	83
	35–39	141,272	698	817	85
	40–44	24,317	190	228	83
	45–49	2,762	18	41	44
	50 and over	1,343	2	40	5
	All ages	$ 3,442,283	$ 5,063	$ 6,684	76%
1966 .... (13)	0	$ 102,630	$ 9	$ 36	25%
	1	39,652	1	17	6
	2–4	62,169	45	43	105
	5–9	101,948	125	119	105
	10–14	161,429	152	177	86
	15–19	584,220	534	670	80
	20–24	1,001,735	928	1,247	74
	25–29	806,884	1,009	1,521	66
	30–34	361,158	936	1,128	83
	35–39	134,774	619	685	90
	40–44	24,375	127	203	63
	45–49	3,264	2	42	5
	50 and over	873	98	22	445
	All ages	$ 3,385,117	$ 4,585	$ 5,910	78%

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TABLE C—MALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1967	0	$ 107,896	$ 37	$ 34	109%
(12)	1	41,511	4	14	29
	2–4	65,279	74	36	206
	5–9	103,693	112	112	100
	10–14	163,022	227	178	128
	15–19	595,543	630	655	96
	20–24	1,201,820	962	1,360	71
	25–29	939,231	1,204	1,569	77
	30–34	428,716	1,070	1,206	89
	35–39	156,805	693	725	96
	40–44	33,150	215	244	88
	45–49	4,389	86	49	176
	50 and over	695	0	14	0
	All ages	$ 3,841,757	$ 5,314	$ 6,196	86%
1968	0	$ 115,139	$ 29	$ 36	81%
(11)	1	43,513	16	14	114
	2–4	66,643	17	29	59
	5–9	105,282	142	102	139
	10–14	167,073	225	188	120
	15–19	610,238	726	645	113
	20–24	1,448,968	1,084	1,490	73
	25–29	1,100,947	1,330	1,602	83
	30–34	501,364	977	1,270	77
	35–39	196,254	742	814	91
	40–44	48,502	286	323	89
	45–49	5,550	40	54	74
	50 and over	2,923	45	50	90
	All ages	$ 4,412,402	$ 5,659	$ 6,617	86%
1969	0	$ 127,153	$ 59	$ 41	144%
(10)	1	47,819	7	15	47
	2–4	69,992	0	24	0
	5–9	108,070	57	90	63
	10–14	170,707	237	197	120
	15–19	622,867	698	657	106
	20–24	1,583,892	1,406	1,525	92
	25–29	1,164,639	1,062	1,486	71
	30–34	521,462	830	1,160	72
	35–39	208,113	738	763	97
	40–44	50,361	390	298	131
	45–49	6,394	24	56	43
	50 and over	2,781	0	46	0
	All ages	$ 4,684,257	$ 5,508	$ 6,358	87%
1970	0	$ 147,028	$ 62	$ 51	122%
(9)	1	57,638	33	18	183
	2–4	81,048	16	25	64
	5–9	119,478	63	83	76
	10–14	179,366	230	213	108
	15–19	700,179	636	741	86
	20–24	1,901,231	1,584	1,729	92
	25–29	1,268,988	1,040	1,462	71
	30–34	550,918	927	1,084	86
	35–39	223,110	635	720	88
	40–44	55,351	207	295	70
	45–49	6,673	47	52	90
	50 and over	2,905	17	44	39
	All ages	$ 5,293,918	$ 5,497	$ 6,517	84%

TABLE C—MALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1971 .... (8)	0	$ 167,936	$ 49	$ 64	77%
	1	68,767	20	24	83
	2–4	101,178	18	31	58
	5–9	145,604	60	80	75
	10–14	214,197	252	250	101
	15–19	758,102	703	810	87
	20–24	2,090,309	1,689	1,808	93
	25–29	1,446,469	1,180	1,490	79
	30–34	609,205	949	1,052	90
	35–39	235,050	600	670	90
	40–44	58,268	325	277	117
	45–49	10,447	10	75	13
	50 and over	4,387	7	59	12
	All ages	$ 5,909,926	$ 5,862	$ 6,690	88%
1972 .... (7)	0	$ 190,922	$ 39	$ 79	49%
	1	84,829	7	32	22
	2–4	145,066	36	46	78
	5–9	203,328	73	91	80
	10–14	299,460	325	329	99
	15–19	933,245	1,055	1,000	106
	20–24	2,273,923	1,701	1,899	90
	25–29	1,681,641	1,346	1,573	86
	30–34	669,636	896	1,005	89
	35–39	249,666	669	632	106
	40–44	63,724	323	269	120
	45–49	11,789	93	76	122
	50 and over	4,858	25	60	42
	All ages	$ 6,812,094	$ 6,588	$ 7,091	93%
1973 .... (6)	0	$ 230,272	$ 53	$ 107	50%
	1	92,644	0	39	0
	2–4	177,187	17	61	28
	5–9	241,491	90	87	103
	10–14	352,032	467	348	134
	15–19	1,112,777	1,535	1,202	128
	20–24	2,435,444	1,779	1,997	89
	25–29	1,881,464	1,338	1,622	82
	30–34	754,918	810	1,029	79
	35–39	262,165	587	583	101
	40–44	70,973	148	265	56
	45–49	15,959	38	89	43
	50 and over	7,934	73	82	89
	All ages	$ 7,635,268	$ 6,935	$ 7,511	92%
1974 .... (5)	0	$ 256,111	$ 131	$ 133	98%
	1	99,275	11	47	23
	2–4	185,044	25	70	36
	5–9	247,342	114	78	146
	10–14	335,256	397	285	139
	15–19	1,142,857	1,284	1,247	103
	20–24	2,573,995	1,984	2,136	93
	25–29	2,108,192	1,920	1,722	111
	30–34	815,687	1,020	992	103
	35–39	269,350	450	524	86
	40–44	71,272	158	225	70
	45–49	21,975	23	107	21
	50 and over	14,921	25	126	20
	All ages	$ 8,141,284	$ 7,542	$ 7,692	98%

TABLE C—MALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1975 . . . . . . (4)	0	$ 291,597	$ 24	$ 180	13%
	1	106,432	43	56	77
	2–4	178,550	45	75	60
	5–9	250,791	72	78	92
	10–14	309,616	220	218	101
	15–19	1,052,553	1,252	1,113	112
	20–24	2,591,737	2,089	2,165	96
	25–29	2,418,919	1,887	1,893	100
	30–34	954,884	1,179	1,071	110
	35–39	306,037	354	519	68
	40–44	82,169	143	233	61
	45–49	28,654	100	121	83
	50 and over	22,004	97	172	56
	All ages	$ 8,593,948	$ 7,505	$ 7,894	95%
1976 . . . . . . (3)	0	$ 348,560	$ 141	$ 276	51%
	1	129,723	58	81	72
	2–4	211,886	51	99	52
	5–9	311,001	66	100	66
	10–14	356,761	294	200	147
	15–19	1,185,659	1,433	1,206	119
	20–24	3,003,736	2,644	2,418	109
	25–29	2,934,333	2,236	2,225	100
	30–34	1,139,085	1,865	1,132	165
	35–39	327,159	392	471	83
	40–44	86,974	334	207	161
	45–49	38,479	133	136	98
	50 and over	29,689	318	194	164
	All ages	$ 10,103,050	$ 9,965	$ 8,745	114%
1977 . . . . . . (2)	0	$ 426,564	$ 174	$ 512	34%
	1	151,986	50	123	41
	2–4	244,817	100	128	78
	5–9	368,669	111	128	87
	10–14	396,312	74	176	42
	15–19	1,326,256	1,423	1,297	110
	20–24	3,644,328	2,977	2,679	111
	25–29	3,622,307	2,456	2,311	106
	30–34	1,499,356	1,031	1,314	78
	35–39	409,441	472	466	101
	40–44	105,462	212	201	105
	45–49	36,615	20	99	20
	50 and over	26,692	39	133	29
	All ages	$ 12,258,812	$ 9,139	$ 9,567	96%

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TABLE C—MALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1978 .... (1)	0	$ 494,671	$ 603	$ 2,680	23%
	1	190,653	85	236	36
	2–4	311,820	177	195	91
	5–9	449,498	77	171	45
	10–14	457,788	63	163	39
	15–19	1,620,916	1,909	1,470	130
	20–24	5,392,573	3,957	3,692	107
	25–29	5,654,496	3,609	3,274	110
	30–34	2,508,362	1,514	1,891	80
	35–39	729,186	562	641	88
	40–44	155,341	290	214	136
	45–49	54,578	31	106	29
	50 and over	54,670	82	183	45
	All ages	$ 18,074,557	$ 12,959	$ 14,916	87%
All years ... (1–15)	0	$ 3,203,067	$ 1,488	$ 4,327	34%
	1	1,228,924	350	762	46
	2–4	2,017,373	731	967	76
	5–9	2,948,169	1,400	1,542	91
	10–14	3,863,615	3,503	3,246	108
	15–19	13,423,244	15,065	14,144	107
	20–24	33,102,644	26,815	29,005	92
	25–29	28,535,598	23,952	27,195	88
	30–34	12,033,781	16,120	18,066	89
	35–39	3,998,088	9,038	10,032	90
	40–44	954,866	3,521	3,743	94
	45–49	249,970	707	1,143	62
	50 and over	177,241	830	1,249	66
	All ages	$105,736,580	$103,520	$115,421	90%

TABLE C—*Continued*

STANDARD NONMEDICAL ISSUES OF 1964–1978
FEMALE LIVES
EXPERIENCE BETWEEN 1978 AND 1979 ANNIVERSARIES
BY YEAR OF ISSUE AND AGE AT ISSUE

Expected Deaths on 1965–70 Female 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
1964	0	$ 56,322	$ 21	$ 19	111%
(15)	1	20,108	10	7	143
	2–4	28,560	37	13	285
	5–9	35,184	30	20	150
	10–14	38,657	22	21	105
	15–19	103,366	45	70	64
	20–24	138,389	103	146	71
	25–29	95,165	72	171	42
	30–34	79,747	194	219	89
	35–39	60,086	183	244	75
	40–44	13,072	62	75	83
	45–49	773	9	7	129
	50 and over	121	0	2	0
	All ages	$ 669,557	$ 788	$ 1,014	78%
1965	0	$ 58,095	$ 2	$ 17	12%
(14)	1	21,955	2	7	29
	2–4	30,345	12	13	92
	5–9	40,731	46	24	192
	10–14	42,431	6	23	26
	15–19	126,600	99	85	116
	20–24	157,567	129	148	87
	25–29	106,913	87	174	50
	30–34	85,131	188	215	87
	35–39	60,967	199	228	87
	40–44	13,674	81	71	114
	45–49	892	2	6	33
	50 and over	88	1	1	100
	All ages	$ 745,396	$ 854	$ 1,012	84%
1966	0	$ 60,653	$ 7	$ 17	41%
(13)	1	21,741	7	6	117
	2–4	33,314	13	12	103
	5–9	42,231	47	23	204
	10–14	46,592	42	25	168
	15–19	143,223	79	92	86
	20–24	180,622	91	154	59
	25–29	123,404	121	183	66
	30–34	89,852	155	207	75
	35–39	62,576	204	213	96
	40–44	13,261	63	62	102
	45–49	1,099	2	7	29
	50 and over	137	2	2	100
	All ages	$ 818,709	$ 833	$ 1,003	83%

TABLE C—FEMALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1967 .... (12)	0	$ 65,480	$ 3	$ 17	18%
	1	23,402	0	6	0
	2–4	34,306	18	12	150
	5–9	45,373	27	24	113
	10–14	50,700	26	28	93
	15–19	153,417	82	94	87
	20–24	223,827	129	174	74
	25–29	149,169	203	199	102
	30–34	104,789	199	221	90
	35–39	72,764	208	227	92
	40–44	26,979	94	110	85
	45–49	2,124	25	12	208
	50 and over	166	0	2	0
	All ages	$ 952,501	$ 1,014	$ 1,126	90%
1968 .... (11)	0	$ 70,116	$ 13	$ 18	72%
	1	24,953	3	7	43
	2–4	36,736	2	11	18
	5–9	49,117	12	24	50
	10–14	57,032	84	32	263
	15–19	166,863	55	97	57
	20–24	261,583	158	187	84
	25–29	181,178	166	216	77
	30–34	125,457	196	244	80
	35–39	85,542	204	245	83
	40–44	43,569	194	166	117
	45–49	3,959	19	21	90
	50 and over	454	0	2	0
	All ages	$ 1,106,565	$ 1,106	$ 1,270	87%
1969 .... (10)	0	$ 78,471	$ 19	$ 21	90%
	1	28,349	5	7	71
	2–4	38,795	13	11	118
	5–9	52,072	12	22	55
	10–14	60,422	17	35	49
	15–19	189,188	61	105	58
	20–24	308,552	133	210	63
	25–29	212,541	173	223	78
	30–34	140,463	195	252	77
	35–39	92,919	163	247	66
	40–44	49,318	174	174	100
	45–49	5,051	0	24	0
	50 and over	361	1	3	33
	All ages	$ 1,256,509	$ 966	$ 1,334	72%
1970 .... (9)	0	$ 94,694	$ 4	$ 27	15%
	1	33,980	2	9	22
	2–4	46,373	7	12	58
	5–9	61,233	11	23	48
	10–14	69,733	35	40	88
	15–19	221,520	110	119	92
	20–24	382,988	127	255	50
	25–29	272,491	158	256	62
	30–34	174,128	221	284	78
	35–39	106,346	201	260	77
	40–44	57,977	219	191	115
	45–49	5,734	23	26	88
	50 and over	687	5	6	83
	All ages	$ 1,527,891	$ 1,123	$ 1,508	75%

TABLE C—FEMALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1971 .... (8)	0	$ 110,373	$ 60	$ 35	171%
	1	42,669	3	12	25
	2–4	61,350	3	16	19
	5–9	78,176	20	26	77
	10–14	93,440	13	54	24
	15–19	258,300	132	139	95
	20–24	447,027	160	286	56
	25–29	333,966	249	284	88
	30–34	208,586	247	310	80
	35–39	119,679	216	267	81
	40–44	64,666	244	196	124
	45–49	7,090	31	29	107
	50 and over	599	0	4	0
	All ages	$ 1,825,927	$ 1,378	$ 1,658	83%
1972 .... (7)	0	$ 129,259	$ 34	$ 47	72%
	1	54,635	33	18	183
	2–4	93,668	0	25	0
	5–9	127,469	33	38	87
	10–14	154,708	73	84	87
	15–19	349,808	138	192	72
	20–24	534,464	245	326	75
	25–29	422,653	180	328	55
	30–34	244,750	290	328	88
	35–39	130,612	189	264	72
	40–44	69,464	215	194	111
	45–49	8,111	0	30	0
	50 and over	879	1	5	20
	All ages	$ 2,320,486	$ 1,431	$ 1,879	76%
1973 .... (6)	0	$ 163,955	$ 35	$ 67	52%
	1	61,152	15	22	68
	2–4	118,833	29	34	85
	5–9	157,262	17	43	40
	10–14	195,056	98	96	102
	15–19	439,347	169	246	69
	20–24	664,003	317	385	82
	25–29	547,723	305	390	78
	30–34	313,674	354	375	94
	35–39	152,127	220	276	80
	40–44	77,779	180	194	93
	45–49	9,405	38	31	123
	50 and over	1,165	1	7	14
	All ages	$ 2,901,488	$ 1,778	$ 2,166	82%
1974 .... (5)	0	$ 188,097	$ 5	$ 87	6%
	1	67,663	17	28	61
	2–4	134,485	8	43	19
	5–9	176,775	22	47	47
	10–14	203,545	78	87	90
	15–19	479,315	211	254	83
	20–24	810,086	350	446	78
	25–29	741,280	455	503	90
	30–34	406,179	361	427	85
	35–39	165,450	136	264	52
	40–44	71,469	183	155	118
	45–49	8,954	33	25	132
	50 and over	2,898	17	15	113
	All ages	$ 3,456,202	$ 1,876	$ 2,381	79%

TABLE C—FEMALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1975	0	$ 219,849	$ 53	$ 118	45%
(4)	1	75,071	3	35	9
	2–4	133,839	20	48	42
	5–9	179,634	22	46	48
	10–14	194,616	124	73	170
	15–19	490,534	250	250	100
	20–24	965,507	375	516	73
	25–29	962,640	503	639	79
	30–34	508,570	262	478	55
	35–39	192,808	215	282	76
	40–44	84,343	218	163	134
	45–49	12,933	25	33	76
	50 and over	3,193	5	14	36
	All ages	$ 4,023,542	$ 2,075	$ 2,695	77%
1976	0	$ 270,588	$ 124	$ 183	68%
(3)	1	95,515	39	51	76
	2–4	161,289	50	66	76
	5–9	235,832	71	63	113
	10–14	236,508	55	81	68
	15–19	606,056	240	303	79
	20–24	1,246,776	515	654	79
	25–29	1,262,984	421	806	52
	30–34	634,797	265	539	49
	35–39	230,335	219	282	78
	40–44	89,920	136	143	95
	45–49	13,341	20	30	67
	50 and over	4,383	4	16	25
	All ages	$ 5,088,332	$ 2,159	$ 3,217	67%
1977	0	$ 345,005	$ 115	$ 375	31%
(2)	1	117,337	40	81	49
	2–4	195,378	7	91	8
	5–9	286,272	32	82	39
	10–14	276,315	45	83	54
	15–19	731,593	221	363	61
	20–24	1,639,070	626	893	70
	25–29	1,642,924	426	983	43
	30–34	858,274	288	665	43
	35–39	291,547	98	288	34
	40–44	102,303	111	125	89
	45–49	14,101	21	22	95
	50 and over	5,770	11	18	61
	All ages	$ 6,505,897	$ 2,041	$ 4,069	50%

TABLE C—FEMALE LIVES—*Continued*

Issue Year (Policy Year)	Ages at Issue	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1978	0	$ 407,602	$ 360	$ 1,828	20%
(1)	1	150,714	38	172	22
	2–4	248,185	75	133	56
	5–9	354,410	47	114	41
	10–14	331,780	52	91	57
	15–19	912,801	383	417	92
	20–24	2,285,012	657	1,143	57
	25–29	2,322,734	531	1,274	42
	30–34	1,294,397	501	921	54
	35–39	457,443	156	354	44
	40–44	135,835	135	121	112
	45–49	19,323	11	22	50
	50 and over	8,502	0	17	0
	All ages	$ 8,928,744	$ 2,946	$ 6,607	45%
All years ...	0	$ 2,318,566	$ 855	$ 2,876	30%
(1–15)	1	839,252	217	468	46
	2–4	1,395,464	294	540	54
	5–9	1,921,780	449	619	73
	10–14	2,051,542	770	853	90
	15–19	5,371,937	2,275	2,826	81
	20–24	10,245,481	4,115	5,923	70
	25–29	9,377,771	4,050	6,629	61
	30–34	5,268,801	3,916	5,685	69
	35–39	2,281,209	2,811	3,941	71
	40–44	913,636	2,309	2,140	108
	45–49	112,897	259	325	80
	50 and over	29,410	48	114	42
	All ages	$ 42,127,746	$ 22,368	$ 32,939	68%

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