

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1984 REPORTS**

**II. MORTALITY UNDER STANDARD ORDINARY INSURANCE
ISSUES BETWEEN 1984 AND 1985 ANNIVERSARIES**

ABSTRACT

This study is the latest in a series of annual reports on intercompany mortality experience under Standard Ordinary life insurance policies. Because of differences in contributors, comparisons with previous studies are affected.

Mortality ratios based on the 1975-80 Basic Tables are shown in the body of the report. Mortality ratios based on the 1965-70 Basic Tables also are shown for comparison with previous reports.

A general direct comparison with the previous study (between 1983 and 1984 anniversaries) shows the following results using mortality ratios based on the 1975-80 Basic Table:

- The overall medical mortality ratio in the select period (90.5 percent) was down from 93.6 percent.
- The overall nonmedical mortality ratio in the select period (92.5 percent) increased by almost 3 percentage points from 89.6 percent. This was the first increase after continual decreases (on the 1965-70 Select Basic Table) since the 1972-73 experience.
- The overall paramedical mortality ratio in the select period (94.3 percent) increased about 2 percentage points from 92.2 percent.
- the overall mortality ratio in the ultimate period (91.1 percent) decreased from 91.8 percent.
- The combined medical, paramedical, and nonmedical select experience was 68.5 percent on the 1965-70 Select Basic Table and 91.9 percent on the 1975-80 Select Basic Table.

In the select period, for all policy years combined, nonmedical mortality was significantly higher than medical mortality for issue ages 25-29 and 35 and above.

In the ultimate period, nonmedical mortality exceeded medical mortality for the attained age groups below 25 and at 40 and over.

As has been true in the past, overall mortality on premium-paying insurance was slightly lower than that on fully paid-up insurance.

Comparisons of male and female mortality were made for experience between 1980 and 1985 anniversaries. In the select period, female mortality averaged 72.4 percent of male mortality for medical issues, 56.2 percent for

nonmedical issues, and 69.0 percent for paramedical issues (1981-85 anniversaries). In the ultimate period, female mortality was 62.3 percent of male mortality.

A comparison of smoker and nonsmoker experience is included based on contributions of 14 companies. Smoker mortality rating was more than double those for nonsmokers for medical (180.3 percent versus 84.1 percent) and paramedical issues (164.5 percent and 63.0 percent). The nonmedical smoker ratio was 115.9 percent, compared to 63.8 percent for nonsmokers.

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Table	Exposure Period	Policy Years	Medical, Nonmedical, or Paramedical	Male and Female	Mortality Ratios by	Mortality Ratios Based on:
1	1984-85	1-15	Medical	Combined	Ages at issue	1965-70 and 1975-80 Select Basic Tables
2	1984-85	1-15	Medical	Combined	Year of issue	1965-70 and 1975-80 Select Basic Tables
3	1984-85	1-15	Nonmedical	Combined	Ages at issue	1965-70 and 1975-80 Select Basic Tables
4	1984-85	1-15	Nonmedical	Combined	Year of issue	1965-70 and 1975-80 Select Basic Tables
5	1984-85	1-15	Paramedical	Combined	Ages at issue	1965-70 and 1975-80 Select Basic Tables
6	1984-85	1-15	Paramedical	Combined	Year of issue	1965-70 and 1975-80 Select Basic Tables
7	1980-85	1-15	Medical and nonmedical	Combined	Year of issue	1975-80 Select Basic Tables
8	1980-85	1-15	Medical	Separate	Ages at issue	1965-70 and 1975-80 Select Basic Tables
9	1980-85	1-15	Nonmedical	Separate	Ages at issue	1965-70 and 1975-80 Select Basic Tables
10	1981-85	1-15	Paramedical	Separate	Ages at issue	1965-70 and 1975-80 Select Basic Tables
11	1980-85	1-15	Medical and nonmedical	Separate	Age group at issue and policy year	1975-80 Select Basic Tables
12	1984-85	1-15	Smoker and nonsmoker; medical, nonmedical and paramedical	Combined	Year of issue	1975-80 Select Basic Tables
13	1984-85	16 and later	Medical and nonmedical	Combined	Attained ages	1965-70 and 1975-80 Select Basic Tables
14	1980-85	16 and later	Medical and nonmedical	Combined	Attained ages	1965-70 and 1975-80 Select Basic Tables
15	1980-85	16 and later	Medical and nonmedical	Combined	Attained ages; premium-paying and paid-up	1965-70 and 1975-80 Select Basic Tables
16	1980-85	16 and later	Medical and nonmedical	Separate	Attained ages	1965-70 and 1975-80 Select Basic Tables
Appendix Table A	Names of the contributing companies and proportion of total 1984-85 exposures contributed by each company					

INTRODUCTION

This report covers the intercompany (U.S.) mortality experience under Standard Ordinary insurance between 1984 and 1985 policy anniversaries. The report also shows combined experience between 1980 and 1985 policy anniversaries in order to have sufficient experiences for more detailed analysis for certain comparisons of data. The following classes of business are included:

1. Standard Ordinary insurance issued subject to a medical examination, observed during the first 15 policy years;
2. Standard Ordinary insurance issued without a medical or paramedical examination, observed during the first 15 policy years;
3. Standard Ordinary insurance issued subject to a paramedical examination, observed during the first 15 policy years;
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. The ultimate experience also is shown separately for premium-paying and fully paid-up (excluding reduced paid-up) policies.

Each of the tables included in this report (with some minor exceptions) shows amounts exposed to risk, actual amounts of death claims, and expected amounts of death claims and mortality ratios of actual to expected death claims based on the 1975-80 Male and Female Basic Tables and on the 1965-70 Basic Tables. All the data were submitted separately for males and females in the select period; some of the data were submitted on a combined male-female basis in the ultimate period.

The 1984-85 experience is derived from the contributions of 23 companies. Table A of the Appendix gives the names and proportionate contributions of these companies. Each of the tables is based on either select (first 15 policy years) or ultimate (policy years 16 and subsequent) experience.

The two tabulations on page 28 compare relative percentages of exposures by underwriting category in policy year one for several years of issue and the distribution of exposures by underwriting category for the different groups of ages at issue for policy year 1 and years 1-15.

COMMITTEE ON LIFE INSURANCE

EXPOSURES FOR POLICY YEAR 1
AS A PERCENTAGE OF TOTAL EXPOSURES

Year of Issue	Medical	Nonmedical	Paramedical
1977.....	34.7%	36.4%	28.9%
1978.....	35.1	36.4	28.5
1979.....	35.1	34.4	30.5
1980.....	38.2	29.3	32.5
1981.....	33.1	36.3	30.6
1982.....	29.2	45.7	25.1
1983.....	24.7	51.8	23.5
1984.....	22.5	52.2	25.3

EXPOSURES AS A PERCENTAGE OF TOTAL EXPOSURES
(1984-85 Experience)

Ages at Issue	Medical		Nonmedical		Paramedical	
	Policy Year 1	Policy Years 1-15	Policy Year 1	Policy Years 1-15	Policy Year 1	Policy Years 1-15
0-9.....	2.3%	5.6%	96.9%	93.3%	0.8%	1.1%
10-19.....	2.5	6.0	95.6	90.9	1.9	3.1
20-29.....	4.8	11.0	86.7	76.8	8.5	12.3
30-39.....	20.0	28.8	51.1	40.3	28.9	31.0
40-49.....	39.3	49.7	21.5	14.6	39.2	35.7
50 and over.....	53.6	65.0	8.0	5.1	38.4	29.9
All ages.....	22.5	29.6	52.2	46.1	25.3	24.3

The next summary table shows the aggregate mortality ratios for the results of studies made since the 1965-70 Basic Tables were first introduced.

AGGREGATE MORTALITY RATIOS
BASED ON 1965-70 SELECT BASIC TABLES

Exposure Year	Policy Years 1-15				Policy Years 16 and Over
	Medical	Nonmedical	Paramedical	Combined	
1972-73.....	92.8%	102.2%	—	—	93.8%
1973-74.....	88.0	99.1	81.1	89.9	93.4
1974-75.....	85.1	94.9	85.5	87.8	87.1
1975-76.....	80.9	88.5	81.4	82.3	85.0
1976-77.....	75.5	87.9	78.0	77.9	82.0
1977-78.....	75.0	85.9	80.5	77.4	80.5
1978-79.....	68.7	84.9	74.5	72.1	77.0
1979-80.....	69.8	82.9	80.2	73.3	77.1
1980-81.....	69.5	79.8	70.1	71.0	75.2
1981-82.....	67.8	79.2	73.2	70.7	72.8
1982-83.....	68.0	74.2	69.9	69.6	73.2
1983-84.....	68.6 (93.6)*	70.8 (89.6)	68.8 (92.2)	69.1 (92.4)	71.2 (91.8)
1984-85.....	66.2 (90.5)	72.4 (92.5)	69.9 (94.3)	68.5 (91.9)	71.0 (91.1)

*Numbers in parentheses are mortality ratios based on the 1975-80 Basic Tables.

Variations in aggregate medical, nonmedical, paramedical and ultimate mortality ratios based on the 1975-80 Basic Tables among the contributing companies are shown in the following two summaries.

VARIATION IN 1984-85 AGGREGATE MORTALITY RATIOS
FOR ALL CONTRIBUTING COMPANIES
BASED ON 1975-80 BASIC TABLES

	MEDICAL		NONMEDICAL		PARAMEDICAL	
	Number of Companies	Proportion of Actual Deaths	Number of Companies	Proportion of Actual Deaths	Number of Companies	Proportion of Actual Deaths
Percentage points below average:						
More than 15..	5	21.4%	6	7.3%	7	12.2%
10-15.....	1	3.1	2	4.6	1	3.0
5-10.....	0	0.0	3	20.1	2	3.9
0-5.....	5	23.5	5	22.6	4	33.0
Percentage points above average:						
0-5.....	0	0.0	2	14.5	1	2.0
5-10.....	2	8.0	1	1.6	0	0.0
10-15.....	3	6.2	2	24.4	3	32.6
More than 15..	7	37.7	2	4.9	5	13.3

VARIATION IN 1984-85 AGGREGATE ULTIMATE MORTALITY RATIOS
FOR ALL CONTRIBUTING COMPANIES
BASED ON 1975-80 BASIC TABLES

	Number of Companies	Proportion of Actual Deaths
Percentage points below average:		
More than 15.....	1	1.0%
10-15.....	3	12.9
5-10.....	4	18.2
0-5.....	3	10.3
Percentage points above average:		
0-5.....	4	16.1
5-10.....	3	22.5
10-15.....	4	17.5
More than 15.....	1	1.4

It would be desirable for the comparisons of medical, nonmedical, and paramedical experience to be based on strictly comparable policies, but data for such comparisons are not available. Medically underwritten business generally includes larger amounts of insurance issued to persons at higher average socioeconomic levels than nonmedical and paramedical business. However, medical business also includes policies issued to individuals within nonmedical or paramedical amount limits who were not acceptable on those

bases because of medical histories. Similarly, paramedical policies include persons not acceptable on a nonmedical basis. In addition, there are considerable variations in limits and proportions of medical, nonmedical, and paramedical policies among contributing companies. Note also that in this report the different mix of companies from those in previous studies may account for some of the differences in the mortality ratios.

EXPERIENCE UNDER STANDARD ISSUES
DURING THE FIRST 15 POLICY YEARS

Medically Examined Issues

The 1984-85 experience during the first 15 policy years includes exposures of \$206 billion and actual deaths of \$548 million. The corresponding amounts in the 1983-84 experience were \$214 billion and \$567 million, respectively.

The experience by age group at issue is shown in Table 1 for the first 15 policy years combined. The experience by year of issue is shown in Table 2. The detailed experience by age group at issue for each year of issue, for male and female lives separately, is not shown in this report but is available from the Society Research Department upon request for a nominal charge for duplication and mailing.

TABLE 1
STANDARD MEDICALLY EXAMINED ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
(Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
			Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
0-9	\$ 1,847,719	\$ 537	\$ 1,043	51.5%	\$ 713	75.3%
10-14	839,440	700	621	112.7	647	108.3
15-19	1,228,314	689	1,159	59.4	1,157	59.6
20-24	4,561,365	5,048	4,329	116.6	3,690	136.8
25-29	14,508,579	9,348	16,033	58.3	13,084	71.4
30-34	31,682,429	32,623	46,972	69.5	36,389	89.6
35-39	41,770,407	56,187	84,744	66.3	66,239	84.8
40-44	38,004,221	80,310	122,794	65.4	89,189	90.0
45-49	27,990,647	85,476	139,906	61.1	103,518	82.6
50-54	20,939,254	101,942	149,946	68.0	101,464	100.5
55-59	13,043,257	74,000	120,470	61.4	91,050	81.3
60-64	6,564,325	54,775	85,049	64.4	57,599	95.1
65-69	2,245,181	31,835	40,424	78.8	30,837	103.2
70 and over	590,088	14,624	13,990	104.5	9,974	146.6
All ages	\$205,815,227	\$548,094	\$827,479	66.2%	\$605,551	90.5%

TABLE 2
STANDARD MEDICALLY EXAMINED ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY YEAR OF ISSUE—ALL AGES COMBINED
(Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
				Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
1970	15	\$ 5,303,638	\$ 30,799	\$ 50,108	61.5%	\$ 38,008	81.0%
1971	14	5,728,599	31,839	49,700	64.1	37,704	84.4
1972	13	6,217,168	29,720	48,592	61.2	36,821	80.7
1973	12	6,320,937	30,426	45,415	67.0	34,405	88.4
1974	11	6,866,116	27,278	45,123	60.5	33,836	80.6
1975	10	7,202,972	29,169	43,379	67.2	31,942	91.3
1976	9	7,855,157	30,324	44,877	67.6	32,923	92.1
1977	8	8,789,476	27,123	44,508	60.9	32,375	83.8
1978	7	9,657,060	32,218	46,858	68.8	33,863	95.1
1979	6	11,584,271	39,214	50,663	77.4	37,080	105.8
1980	5	14,118,050	50,257	55,439	90.7	41,652	120.7
1981	4	18,862,085	49,396	67,870	72.8	48,523	101.8
1982	3	27,502,388	47,839	84,379	56.7	59,946	79.8
1983	2	36,385,978	53,123	91,101	58.3	63,758	83.3
1984	1	33,421,332	39,370	59,468	66.2	42,716	92.2
All years of issue		\$205,815,227	\$548,094	\$827,479	66.2%	\$605,551	90.5%

The aggregate medical mortality ratio for the period from 1984 to 1985 anniversaries was 90.5 percent on the 1975-80 Select Basic Tables. The 1984-85 result is a decrease of 3.1 percentage points from the general mortality level of the 1983-84 study for male and female lives combined. For female lives the mortality ratios decreased from 120.1 percent to 103.5 percent on the 1975-80 Basic Tables. The exposure for female lives was relatively small (about \$25 billion compared to \$181 billion for male lives). Compared to the 1983-84 experience, the female exposures were only slightly less, but actual deaths were down from \$67 million to \$59 million. The single most significant change was at issue ages 65-69 where actual deaths and the mortality ratio fell from \$9.6 million and 262 percent in 1983-84 to \$3.2 million and 77 percent in 1984-85, respectively.

Nonmedical Issues

The 1984-85 experience during the first 15 policy years includes exposures of \$321 billion and actual deaths of \$241 million. The corresponding amounts in the 1983-84 study were \$294 billion and \$207 million, respectively.

As shown in the summary on page 28, the increase in the proportion of nonmedical business for the policy year was much less than in the previous three years.

The experience by age group at issue is shown in Table 3 for the first 15 policy years combined. The experience by year of issue is shown in Table 4. The detailed unadjusted experience by age group for each year of issue, for male and female lives separately, is not shown in this report but is available from the Society Research Department for a nominal charge.

TABLE 3
STANDARD NONMEDICAL ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
(Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
			Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
0-9	\$ 30,660,585	\$ 8,601	\$ 23,773	36.2%	\$ 11,619	74.0%
10-14	9,580,457	5,445	6,044	90.1	6,017	90.5
15-19	21,857,080	17,915	18,807	95.3	18,759	95.5
20-24	53,551,876	33,550	41,664	80.5	36,002	93.2
25-29	80,019,127	46,323	63,404	73.1	54,360	85.2
30-34	66,521,748	43,118	68,784	62.7	52,426	82.2
35-39	36,159,642	37,312	48,711	76.6	36,448	102.4
40-44	13,959,587	21,614	28,077	77.0	20,682	104.5
45-49	5,488,730	12,192	15,185	80.3	11,652	104.6
50 and over . . .	3,418,210	15,019	18,467	81.3	12,594	119.3
All ages . . .	\$321,217,042	\$241,090	\$332,916	72.4%	\$260,560	92.5%

TABLE 4
STANDARD NONMEDICAL ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY YEAR OF ISSUE—ALL AGES COMBINED
(Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
				Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
1970	15	\$ 4,859,613	\$ 8,691	\$ 10,539	82.5%	\$ 8,197	106.0%
1971	14	5,260,081	8,033	10,249	78.4	8,071	99.5
1972	13	6,097,350	8,418	10,377	81.1	8,284	101.6
1973	12	6,753,467	8,211	10,401	78.9	8,473	96.9
1974	11	7,389,293	8,074	10,176	79.3	8,441	95.7
1975	10	7,723,974	7,698	9,937	77.5	8,166	94.3
1976	9	8,821,814	7,984	10,203	78.3	8,395	95.1
1977	8	10,014,934	8,522	10,850	78.5	8,996	94.7
1978	7	12,133,496	9,921	12,796	77.5	10,706	92.7
1979	6	14,111,700	12,032	13,887	86.6	11,689	102.9
1980	5	16,790,257	12,471	15,873	78.6	13,313	93.7
1981	4	24,524,422	19,726	25,139	78.5	20,249	97.4
1982	3	44,897,548	33,700	46,620	72.3	36,632	92.0
1983	2	74,491,235	45,743	68,937	66.4	52,940	86.4
1984	1	77,347,858	41,868	66,932	62.6	48,007	87.2
All years of issue		\$321,217,042	\$241,090	\$332,916	72.4%	\$260,560	92.5%

The aggregate mortality ratio for the period from 1984 to 1985 anniversaries was 92.5 percent on the 1975-80 Select Basic Tables. As the summary of aggregate mortality ratios on page 29 shows, the overall nonmedical ratio (on the 1965-70 Select Basic Tables) increased for the first time since 1972-73.

The mortality ratios in Tables 3 and 4 generally understate the mortality ratios for nonmedical business because, in calculating the expected deaths, no adjustment has been made to allow for differences in the average age of the exposure in each nonmedical five-year age group compared with the average age of the exposure in the corresponding age group used in developing the Basic Tables. The 1975-80 Basic Tables were based on combined medical, nonmedical, and paramedical issues. Differences arise because companies typically change their nonmedical limits at ages 30, 35, 40, and so on.

Nonmedical issues over age 50 arise largely from business issued under special circumstances such as pension trust and salary allotment plans. For

other policies, nonmedical limits extending to age 50 and in some cases even for limited amounts above age 50 have been introduced only in recent years. So-called policyholder's nonmedical, issued on the basis of a medical examination within the previous six to twelve months, is also included in nonmedical issues for some companies while for others in their medical or paramedical issues.

Paramedically Examined Issues

The 1984-85 paramedical experience includes exposures of \$169 billion and actual deaths of \$262 million. The volume of paramedical business increased from exposures of \$157 billion and actual deaths of \$218 million in 1983-84. The limited experience at the higher durations should be noted carefully in comparisons with medical and nonmedical results.

The detailed experience by age group at issue is included in Table 5. The experience by year of issue is shown in Table 6.

TABLE 5
STANDARD PARAMEDICALLY EXAMINED ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
(Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
			Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
0-9	\$ 350,957	\$ 105	\$ 200	52.6%	\$ 116	90.4%
10-14	273,462	117	188	62.2	189	61.8
15-19	799,240	758	725	104.5	749	101.3
20-24	4,428,913	3,276	3,537	92.6	3,171	103.3
25-29	16,913,628	11,812	13,972	84.5	12,426	95.1
30-34	36,644,301	25,249	41,509	60.8	32,915	76.7
35-39	42,329,701	42,190	64,177	65.7	49,999	84.4
40-44	29,257,215	43,137	68,019	63.4	49,037	88.0
45-49	18,181,479	47,318	62,440	75.8	47,217	100.2
50-54	11,107,485	38,100	54,926	69.4	36,101	105.5
55-59	6,154,326	29,414	38,752	75.9	28,311	103.9
60-64	2,039,428	14,375	18,398	78.1	12,079	119.0
65-69	520,066	4,530	6,686	67.8	4,734	95.7
70 and over ..	118,741	2,025	1,666	121.5	1,342	150.9
All ages ...	\$169,118,942	\$262,407	\$375,195	69.9%	\$278,387	94.3%

TABLE 6
STANDARD PARAMEDICALLY EXAMINED ISSUES OF 1970-84
MALE AND FEMALE LIVES COMBINED
EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
BY YEAR OF ISSUE—ALL AGES COMBINED
(Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Exposed to Risk	Actual Deaths	1965-70 Select Basic Tables		1975-80 Select Basic Tables	
				Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio
1970	15	\$ 31,590	\$ 90	\$ 183	49.3%	\$ 136	66.0%
1971	14	166,381	690	1,014	68.1	770	89.6
1972	13	513,259	1,781	2,802	63.6	2,129	83.7
1973	12	1,207,595	4,073	6,065	67.2	4,620	88.1
1974	11	2,049,025	7,917	8,971	88.3	6,813	116.2
1975	10	3,198,994	9,286	12,907	71.9	9,669	96.0
1976	9	4,606,418	11,522	16,460	70.0	12,305	93.6
1977	8	6,392,267	15,028	20,161	74.5	15,083	99.6
1978	7	7,952,905	16,599	23,402	70.9	17,557	94.5
1979	6	10,554,293	20,183	28,211	71.5	21,424	94.2
1980	5	14,668,736	25,967	34,888	74.4	27,045	96.0
1981	4	18,757,863	33,150	43,099	76.9	32,092	103.3
1982	3	25,614,868	33,562	55,835	60.1	40,927	82.0
1983	2	35,909,807	49,930	69,053	72.3	49,358	101.2
1984	1	37,494,939	32,630	52,145	62.6	38,458	84.8
All years of issue		\$169,118,942	\$262,407	\$375,195	69.9%	\$278,387	94.3%

The aggregate paramedical mortality ratio for the period from 1984 to 1985 anniversaries was 94.3 percent on the 1975-80 Table. As the summary of aggregate mortality ratios on page 29 shows, the overall paramedical ratio increased compared to last year.

Comparison of Medical and Nonmedical 1980-85 Experience

Table 7 presents the experience on medical and nonmedical select issues between 1980 and 1985 anniversaries. The nonmedical mortality ratios shown in Table 7 are based on the 1975-80 Basic Tables. They have not been age-adjusted to reflect the distribution of nonmedical exposures by age, which is likely to have a significant effect on issue-age groups 40-44 and higher. Table 7 indicates that, for policy years 1 to 15 combined, nonmedical mortality was generally less than medical for issue ages 10 through 24. A significant proportion of medical issues at these young ages includes persons who were not acceptable on a nonmedical basis because of medical histories.

TABLE 7
 COMPARISON OF MEDICAL AND NONMEDICAL EXPERIENCE*
 MALE AND FEMALE LIVES COMBINED
 BETWEEN 1980 AND 1985 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
Mortality Ratios on 1975-80 Select Basic Tables										
0-9	33%	79%	90%	72%	67%	83%	81%	91%	70%	81%
10-19	123	90	86	94	94	94	102	98	98	94
20-24	132	91	106	98	117	98	89	95	107	95
25-29	83	78	81	94	90	96	88	94	87	89
30-34	82	80	95	93	88	96	85	92	87	89
35-39	86	96	113	99	81	104	88	103	91	100
40-44	93	96	93	106	93	113	88	118	91	106
45-49	82	102	90	96	95	107	93	95	91	101
50 and over . . .	91	99	104	142	96	78	89	118	95	109
All ages	89%	87%	100%	97%	93%	97%	89%	97%	93%	93%
Ratio of Nonmedical to Medical Mortality Ratios										
0-9	239%		80%		124%		112%		116%	
10-19	73		109		100		96		96	
20-24	69		92		84		107		89	
25-29	94		116		107		107		102	
30-34	98		98		109		108		102	
35-39	112		88		128		117		110	
40-44	103		114		122		134		116	
45-49	124		107		113		102		111	
50 and over . . .	109		137		81		133		115	
All ages	98%		97%		104%		109%		100%	

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

Comparison of Male and Female 1980-85 Experience

For the select period, each of the 23 contributing companies submitted medical, nonmedical, and paramedical data separately for males and females.

Tables 8 and 9 show the experience by sex and issue age group between 1980 and 1985 anniversaries for the first 15 policy years combined for standard medical and nonmedical issues, respectively. A new exhibit, Table 10, shows comparable data for standard paramedical issues for the four-year period 1981 to 1985. For the purpose of comparing male and female mortality, the ratios of female to male mortality are based on expected deaths for females calculated on the male table. For all issue ages combined, the ratios of female to male mortality were 72.4 percent for medical issues, 56.2

TABLE 8
 COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
 STANDARD MEDICALLY EXAMINED ISSUES
 OBSERVED BETWEEN 1980 AND 1985 ANNIVERSARIES
 BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
 EXPECTED DEATHS ON MALE AND FEMALE SELECT BASIC TABLES
 (Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk		Actual Deaths		Based on 1965-70 Basic Tables			Based on 1975-80 Basic Tables		
	Male	Female	Male	Female	Mortality Ratio		Ratio of Female to Male Mortality*	Mortality Ratio		Ratio of Female to Male Mortality*
					Male	Female		Male	Female	
0-9	\$ 5,884,351	\$ 3,438,652	\$ 1,998	\$ 582	50.9%	33.0%	49.6%	72.7%	61.7%	53.1%
10-14	3,012,062	1,428,492	2,951	1,173	112.5	189.9	90.6	105.4	206.8	92.2
15-19	5,515,989	1,545,123	5,487	402	92.5	48.4	26.6	89.4	58.6	25.9
20-24	25,676,678	3,306,489	22,616	2,053	91.6	100.8	76.7	104.5	137.3	73.9
25-29	78,468,097	8,329,563	61,977	3,614	73.2	56.2	65.5	87.0	79.1	61.3
30-34	150,879,145	16,078,440	152,682	11,951	67.8	66.8	83.1	86.9	93.7	81.9
35-39	176,413,320	19,108,264	273,401	18,615	71.8	61.3	67.4	91.4	83.4	66.9
40-44	154,277,514	17,803,414	351,654	37,769	64.2	95.8	92.5	89.6	112.0	92.4
45-49	113,810,177	15,471,059	407,017	42,539	65.7	86.2	72.6	90.6	98.3	72.8
50-54	81,500,408	12,448,234	393,574	39,427	63.7	67.6	60.9	94.6	91.5	60.8
55-59	46,669,695	8,172,601	305,170	41,542	65.8	101.8	72.4	87.6	116.4	71.8
60-64	20,757,993	4,763,216	189,691	30,638	64.1	83.8	67.3	95.7	112.0	67.1
65-69	6,246,023	2,119,325	92,439	24,672	71.7	111.8	79.2	92.1	163.6	79.5
70 and over	1,319,621	654,764	31,039	9,654	83.9	76.4	65.6	111.8	133.9	64.7
All ages	\$870,431,073	\$114,667,635	\$2,291,696	\$264,633	66.6%	82.9%	72.3%	91.2%	106.4%	72.4%

*Female mortality ratios calculated on Male Select Basic Tables.

TABLE 9
COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
STANDARD NONMEDICAL ISSUES
OBSERVED BETWEEN 1980 AND 1985 ANNIVERSARIES
BY AGE AT ISSUE—POLICY YEARS 1–15 COMBINED
EXPECTED DEATHS ON MALE AND FEMALE SELECT BASIC TABLES
(Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk		Actual Deaths		Based on 1965–70 Basic Tables			Based on 1975–80 Basic Tables		
					Mortality Ratio		Ratio of Female to Male Mortality*	Mortality Ratio		Ratio of Female to Male Mortality*
	Male	Female	Male	Female	Male	Female		Male	Female	
0–9	\$ 66,875,699	\$ 51,646,072	\$ 24,697	\$ 11,903	43.9%	32.3%	57.7%	81.5%	79.1%	63.8%
10–14	23,197,590	15,106,036	18,112	4,860	96.7	77.7	45.1	93.1	86.9	45.9
15–19	65,528,446	33,367,934	68,546	13,587	99.4	77.3	39.3	94.4	95.3	38.3
20–24	170,295,414	73,771,071	133,616	25,762	89.2	60.4	47.5	97.4	85.4	46.0
25–29	208,354,849	91,045,928	151,423	34,886	82.8	55.5	59.2	90.3	82.7	56.3
30–34	138,038,813	68,835,310	118,596	34,088	73.6	52.1	61.8	91.9	78.7	61.2
35–39	65,067,788	34,359,888	82,439	26,862	81.3	61.3	62.1	104.2	87.9	61.6
40–44	23,071,540	13,197,112	41,537	18,801	76.5	83.2	69.0	109.0	98.7	68.6
45–49	9,472,510	4,159,545	21,976	6,892	73.4	90.2	72.0	98.6	107.3	71.8
50 and over.	5,766,530	2,378,740	26,268	6,776	71.7	90.6	75.0	104.8	131.3	75.3
All ages.	\$775,669,179	\$387,867,636	\$687,211	\$184,418	79.9%	58.9%	55.7%	95.3%	87.1%	56.2%

*Female mortality ratios calculated on Male Select Basic Tables.

TABLE 10
 COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
 STANDARD PARAMEDICAL ISSUES
 OBSERVED BETWEEN 1981 AND 1985 ANNIVERSARIES
 BY AGE AT ISSUE—POLICY YEARS 1-15 COMBINED
 EXPECTED DEATHS ON MALE AND FEMALE SELECT BASIC TABLES
 (Amounts Shown in \$1,000 Units)

Ages at Issue	Exposed to Risk		Actual Deaths		Based on 1965-70 Basic Tables			Based on 1975-80 Basic Tables		
					Mortality Ratio		Ratio of Female to Male Mortality*	Mortality Ratio		Ratio of Female to Male Mortality*
	Male	Female	Male	Female	Male	Female				
0-9	\$ 789,368	\$ 527,020	\$ 410	\$ 135	88.4%	49.3%	44.7%	148.5%	102.3%	49.8%
10-14	671,619	399,562	467	15	91.9	9.6	5.9	90.9	10.6	6.0
15-19	2,480,387	910,878	2,144	570	82.8	122.2	72.7	75.7	154.7	71.9
20-24	17,563,261	3,361,415	11,661	1,690	81.4	91.3	77.8	86.4	132.4	76.5
25-29	63,611,318	11,001,019	40,581	4,909	80.8	68.0	74.2	85.2	101.3	72.2
30-34	119,164,445	22,989,807	85,335	10,439	65.9	49.2	66.1	80.5	74.6	65.7
35-39	118,386,257	24,047,734	110,157	17,019	62.6	57.2	78.2	78.8	85.0	77.6
40-44	74,351,922	16,637,138	116,370	18,083	65.2	69.0	69.5	92.3	83.3	69.6
45-49	44,701,497	11,521,185	122,466	19,908	75.6	77.5	60.2	101.9	92.9	60.0
50 and over.....	43,760,930	13,720,638	203,709	47,065	73.1	86.5	65.9	108.2	119.1	65.7
All ages.....	\$485,481,002	\$105,116,396	\$693,300	\$119,834	69.9%	71.7%	68.0%	93.1%	97.1%	69.0%

*Female mortality ratios calculated on Male Select Basic Tables.

percent for nonmedical issues, and 69.0 percent for paramedical issues on the 1975–80 Select Basic Tables. The difference in favor of females on nonmedical issues reflects particularly the generally lower ratio of female to male mortality rates at younger ages, largely due to the higher accidental death rate for males. The detailed select experience by sex for the period from 1984 to 1985 policy anniversaries by age group at issue for each year of issue is available from the Society Research Department: Table B for medical issues, Table C for nonmedical issues, and Table D for paramedical issues.

Table 11 compares the experience between 1980 and 1985 anniversaries on medical and nonmedical issues, separately for each sex, for policy years 1–2, 3–5, 6–10, 11–15, and 1–15 based on the 1975–80 Select Basic Tables. The nonmedical mortality ratios shown in Table 11 have not been adjusted to reflect the distribution of nonmedical exposures by age, which is likely to have a significant effect on issue age groups 40–44 and over. For males, the ratios of the nonmedical to the medical mortality ratios were 100 percent or greater at all issue ages except 20–24 in policy years 1–15 combined. For females, the ratios exceeded 100 percent for issue ages 0–9 and 25–29, 35–39 and 45 and over in policy years 1–15 combined.

Comparison of Smoker and Nonsmoker Experiences

Tables 1–6 were analyzed by using available smoker/nonsmoker data for the 14 companies that submitted any smoker/nonsmoker distinct data. Table 12 shows the available experience for durations 1, 2, 3, 4 and 5–15 combined. The exposures by smoker and nonsmoker status are concentrated in the first three policy years. Nearly all the duration 1–4 medical and paramedical exposure for the companies is distinct by smoking status. But a substantial volume of nonmedical exposure is for smoking status unknown. Overall, the exposures for smokers are less than 25% of the exposures for nonsmokers. Tables by smoker status are available from the Society Research Department.

Because of the limited data, for convenience we have also shown the combined results for experience between 1983 and 1985 anniversaries (Table 13); only nine companies contributed experience between 1983 and 1984 anniversaries.

TABLE 11

COMPARISON BY SEX OF MEDICAL AND NONMEDICAL EXPERIENCE*
 BETWEEN 1980 AND 1985 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 1975-1980 Male Select Basic Tables										
0-9	44%	76%	76%	76%	89%	83%	75%	93%	73%	82%
10-19	121	89	65	93	96	94	103	100	94	94
20-24	118	93	109	100	118	101	86	96	104	97
25-29	86	78	81	96	88	100	90	96	87	90
30-34	83	84	90	94	89	102	85	95	87	92
35-39	86	106	114	96	81	111	88	104	91	104
40-44	84	103	92	110	93	116	88	115	90	109
45-49	81	103	89	92	97	103	91	87	91	99
50 and over ..	87	94	102	139	92	77	89	109	93	105
All ages ...	86%	89%	98%	98%	92%	100%	89%	98%	91%	95%
Female Experience—Mortality Ratios on 1975-80 Female Select Basic Tables										
0-9	9%	84%	121%	64%	11%	81%	108%	85%	62%	79%
10-19	129	95	215	96	83	94	96	84	126	93
20-24	284	84	74	86	98	87	140	86	137	85
25-29	47	78	81	88	122	83	48	84	79	83
30-34	68	68	156	89	75	83	75	81	94	79
35-39	88	69	92	108	75	89	84	99	83	88
40-44	204	76	109	97	94	108	89	122	112	99
45-49	96	99	112	112	79	120	109	119	98	107
50 and over ..	124	120	116	156	122	88	96	182	114	131
All ages ...	122%	79%	114%	93%	103%	89%	95%	93%	106%	87%
Male Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0-9	173%		100%		93%		124%		112%	
10-19	74		143		98		97		100	
20-24	79		92		86		112		93	
25-29	91		119		114		107		103	
30-34	101		104		115		112		106	
35-39	123		84		137		118		114	
40-44	123		120		125		131		121	
45-49	127		103		106		96		109	
50 and over ..	108		136		84		122		113	
All ages ...	103%		100%		109%		110%		104%	
Female Experience—Ratio of Nonmedical to Medical Mortality Ratios										
0-9	933%		53%		736%		79%		127%	
10-19	74		45		113		88		74	
20-24	30		116		89		61		62	
25-29	166		109		68		175		105	
30-34	100		57		111		108		84	
35-39	78		117		119		118		106	
40-44	37		89		115		137		88	
45-49	103		100		152		109		109	
50 and over ..	97		134		72		190		115	
All ages ...	65%		82%		86%		98%		82%	

*Exposures not adjusted for distribution by age.

TABLE 12
 SMOKER/NONSMOKER DATA
 STANDARD ISSUES OF 1970-84
 MALE AND FEMALE LIVES COMBINED
 EXPERIENCE BETWEEN 1984 AND 1985 ANNIVERSARIES
 BY YEAR OF ISSUE
 BASED ON EXPERIENCE FROM FOURTEEN CONTRIBUTING COMPANIES
 (Amounts Shown in \$1,000 Units)

Year of Issue	Policy Year	Nonsmoker		Smoker		Status Unknown	
		Actual Deaths	Mortality Ratio	Actual Deaths	Mortality Ratio	Actual Deaths	Mortality Ratio
Medically Examined Issues							
1984.....	1	\$ 21,535	78.9%	\$ 8,965	203.7%	\$ 859	187.7%
1983.....	2	24,786	69.7	11,558	199.2	1,045	134.4
1982.....	3	21,357	64.4	9,000	160.9	2,850	181.8
1981.....	4	22,833	122.6	4,853	124.7	8,892	80.1
1970-80.....	5-15	16,082	132.8	7,782	210.9	206,223	85.5
All years.....	1-15	\$106,593	84.1%	\$42,158	180.3%	\$219,868	86.2%
Nonmedical Issues							
1984.....	1	\$ 18,015	64.1%	\$ 6,811	101.4%	\$ 8,565	276.2%
1983.....	2	18,271	65.8	8,184	118.7	7,392	292.5
1982.....	3	10,015	55.6	6,752	130.2	8,290	256.0
1981.....	4	4,343	77.4	1,924	103.8	9,748	109.1
1970-80.....	5-15	1,047	71.3	819	171.3	73,833	98.8
All years.....	1-15	\$ 51,691	63.8%	\$24,490	115.9%	\$107,828	116.5%
Paramedically Examined Issues							
1984.....	1	\$ 13,307	54.1%	\$ 8,444	158.7%	\$ 2,894	470.4%
1983.....	2	18,865	72.6	10,241	171.3	5,306	649.5
1982.....	3	11,543	52.8	8,325	148.8	3,850	283.9
1981.....	4	8,224	77.5	5,873	181.5	2,835	115.8
1970-80.....	5-15	3,594	70.6	3,319	176.6	81,980	99.2
All years.....	1-15	\$ 55,533	63.0%	\$36,202	164.5%	\$106,864	110.7%

TABLE 13
 SMOKER/NONSMOKER DATA
 MALE AND FEMALE LIVES COMBINED
 EXPERIENCE BETWEEN 1983 AND 1985 ANNIVERSARIES
 BY YEAR OF ISSUE
 (Amounts Shown in \$1,000 Units)

Policy Year	Nonsmoker		Smoker		Unknown	
	Actual Deaths	Mortality Ratio	Actual Deaths	Mortality Ratio	Actual Deaths	Mortality Ratio
Medically Examined Issues						
1	\$ 38,536	78.00%	\$13,704	165.10%	\$ 1,820	191.50%
2	39,968	71.20	15,113	169.50	7,614	118.20
3	35,835	76.90	12,339	167.10	16,355	121.30
4	27,156	120.20	8,617	185.50	24,720	95.10
5-15	18,509	115.60	8,012	185.20	366,575	87.70
1-15	\$160,004	83.90%	\$57,785	172.10%	\$417,084	89.70%
Nonmedical Issues						
1	\$32,235	67.50%	\$15,716	125.70%	\$ 10,723	206.00%
2	26,150	68.80	13,330	129.80	11,205	130.30
3	11,748	57.80	7,552	128.30	18,619	138.20
4	4,995	78.60	2,183	108.10	15,919	97.30
5-15	1,341	69.10	844	139.80	123,995	96.80
1-15	\$76,469	66.80%	\$39,625	126.60%	\$180,461	105.10%
Paramedical Issues						
1	\$23,586	61.00%	\$14,614	163.90%	\$ 3,127	369.50%
2	27,239	71.60	15,225	162.80	6,787	264.50
3	16,441	57.60	10,429	139.40	12,257	117.10
4	9,248	69.10	6,796	178.10	24,340	105.90
5-15	4,693	70.80	4,067	156.10	134,139	99.20
1-15	\$81,206	64.80%	\$51,131	158.90%	\$180,651	105.00%

EXPERIENCE UNDER STANDARD ISSUES
DURING THE SIXTEENTH AND SUBSEQUENT POLICY YEARS

The 1984–85 experience during the sixteenth and subsequent policy years includes exposures of \$123 billion and actual deaths of \$1.4 billion. The 1983–84 experience included exposures of \$117 billion and actual deaths of \$1.4 billion.

Table 14 shows mortality ratios by attained age groups based on (1) the 1965–70 and 1975–80 Ultimate Basic Tables, (2) the Commissioners 1958 Standard Ordinary Mortality Table, and (3) the Commissioners 1980 Standard Ordinary Mortality Table.

The aggregate mortality ratio for the period from 1984 to 1985 anniversaries on the 1975–80 Ultimate Basic Tables was 91.1 percent. The tabulation of aggregate mortality ratios on page 29 compares this result with the results of previous studies.

Comparison of Ultimate Medical and Nonmedical Experience

Companies were asked to subdivide their ultimate data into medical and nonmedical if possible. Nineteen companies, comprising 72.0 percent of the total ultimate exposure, were able to subdivide their data, in whole or in part, in this manner. The combined experience between 1980 and 1985 anniversaries is shown in Table 15.

The pattern of this experience is generally similar to that in past years, in that the nonmedical experience has higher ratios at the older attained ages. The relatively low exposure at the younger attained ages limits the usefulness of the data. As in the 1983–84 study, at attained ages 35–39 where most medical examinations were obtained because of a medical history, the medical experience shows higher mortality ratios.

Comparison of Premium-Paying and Fully Paid-up Ultimate Experience

A comparison of the mortality on premium-paying and fully paid-up, excluding reduced paid-up, policies for the period from 1980 to 1985 anniversaries is shown in Table 16 for standard medical and nonmedical issues combined. Twenty companies submitted their experience separately on premium-paying policies, while eighteen companies did so on fully paid-up policies. This difference could distort somewhat comparisons between premium-paying and paid-up.

TABLE 14
 STANDARD ISSUES OF 1969 AND PRIOR*
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 EXPERIENCE BETWEEN 1984 AND 1985 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 Tables		1975-80 Ultimate Basic Tables		Mortality Ratio	
			Expected Deaths	Mortality Ratio	Expected Deaths	Mortality Ratio	1958 CSO Table	1980 CSO Table
15-19	\$ 1,556,136	\$ 947	\$ 1,252	75.7%	\$ 1,386	68.4%	39.3%	43.0%
20-24	2,160,195	2,044	2,050	99.7	2,395	85.3	52.0	58.2
25-29	2,698,178	2,753	2,525	109.0	2,775	99.2	51.7	64.7
30-34	3,823,781	4,057	4,360	93.1	3,841	105.6	47.6	59.9
35-39	8,541,357	10,145	13,929	72.8	10,780	94.1	42.3	50.1
40-44	13,311,332	22,056	35,352	62.4	25,317	87.1	40.4	47.2
45-49	14,994,877	42,057	65,836	63.9	48,510	86.7	44.6	53.6
50-54	16,321,123	75,575	119,424	63.3	87,541	86.3	47.0	59.0
55-59	18,161,279	145,143	216,261	67.1	156,311	92.9	52.3	66.2
60-64	16,395,630	205,066	307,099	66.8	228,160	89.9	52.8	68.2
65-69	10,610,640	208,438	310,564	67.1	236,621	88.1	53.3	68.3
70-74	6,968,618	217,285	308,407	70.5	245,297	88.6	55.5	69.8
75-79	4,079,145	213,960	282,315	75.8	226,394	94.5	63.7	73.1
80-84	2,027,977	163,919	212,095	77.3	175,963	93.2	66.2	73.6
85-89	735,521	93,695	114,568	81.8	97,413	96.2	72.7	75.5
90-95	210,928	41,849	44,964	93.1	41,058	101.9	78.9	81.1
All ages.....	\$122,596,717	\$1,448,988	\$2,041,000	71.0%	\$1,589,760	91.1%	56.4%	68.4%

*Not including paramedical data: based on data from twenty-three companies.

TABLE 15
 COMPARISON OF MEDICAL AND NONMEDICAL EXPERIENCE*
 MALE AND FEMALE LIVES COMBINED
 (INCLUDING DATA NOT SUBDIVIDED BY SEX)
 STANDARD ISSUES OF 1969 AND PRIOR
 EXPERIENCE BETWEEN 1980 AND 1985 ANNIVERSARIES
 BY ATTAINED AGE—POLICY YEARS 16 AND OVER COMBINED
 (Amounts Shown in \$1,000 Units)

Attained Ages	Exposed to Risk		Actual Deaths		Based on 1965-70 Basic Tables			Based on 1975-80 Basic Tables		
					Mortality Ratio		Ratio of Nonmedical to Medical Mortality*	Mortality Ratio		Ratio of Nonmedical to Medical Mortality*
	Medical	Nonmedical	Medical	Nonmedical	Medical	Nonmedical		Medical	Nonmedical	
15-19	\$ 603,072	\$ 4,632,787	\$ 354	\$ 3,390	70.0%	91.2%	130.3%	62.6%	82.3%	131.5%
20-24	1,258,809	5,415,043	1,067	5,503	87.4	105.6	120.8	74.4	90.2	121.3
25-29	1,693,314	5,852,410	1,729	5,955	106.3	106.3	100.0	96.1	96.2	100.0
30-34	2,389,053	9,414,630	2,668	10,390	95.5	94.1	98.6	108.1	107.1	99.1
35-39	5,794,356	21,175,812	7,258	25,349	74.6	73.0	97.9	96.9	94.3	97.4
40-44	13,602,854	26,408,785	21,666	46,370	58.3	66.6	114.2	82.1	93.0	113.2
45-49	22,792,290	22,564,756	62,152	67,037	60.5	69.0	113.9	82.7	93.5	113.1
50-54	34,035,573	16,637,393	165,667	87,679	65.0	74.3	114.4	89.1	101.1	113.5
55-59	42,266,504	10,996,089	333,605	99,074	65.1	79.1	121.6	90.5	108.7	120.1
60-64	38,401,287	5,608,861	486,806	82,449	66.9	80.9	121.0	90.3	108.8	120.5
65-69	23,894,869	1,679,056	480,816	39,515	67.8	83.0	122.3	89.3	108.9	122.0
70-74	15,055,759	812,761	493,264	30,714	73.1	85.9	117.5	92.0	107.8	117.2
75-79	8,731,789	468,577	457,038	27,593	74.9	84.8	113.1	93.4	105.5	112.9
80-84	4,113,091	200,003	330,362	17,193	76.2	81.6	107.1	91.9	97.9	106.6
85-89	1,438,626	54,627	184,227	6,982	81.5	81.1	99.6	95.8	94.9	99.1
90-95	354,663	13,711	71,697	2,749	94.0	93.1	99.0	101.9	101.1	99.2
All ages.....	\$216,425,910	\$131,935,300	\$3,100,377	\$557,943	70.8%	77.4%	109.4%	91.3%	102.0%	111.8%

*Based on data from nineteen companies.

TABLE 16
 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 1969 AND PRIOR
 EXPERIENCE BETWEEN 1980 AND 1985 ANNIVERSARIES
 BY ATTAINED AGE—POLICY YEARS 16 AND OVER COMBINED
 EXPECTED DEATHS MALE AND FEMALE ULTIMATE BASIC TABLES
 (Amounts Shown in \$1,000 Units)

Attained Ages	Exposed to Risk		Actual Deaths		Based on 1965-70 Basic Tables			Based on 1975-80 Basic Tables		
					Mortality Ratio		Ratio of Premium- Paying to Paid-up Mortality	Mortality Ratio		Ratio of Premium- Paying to Paid-up Mortality
	Premium-Paying	Paid-up	Premium-Paying	Paid-up	Premium-Paying	Paid-up		Premium-Paying	Paid-up	
15-19	\$ 6,147,771	\$ 97,883	\$ 4,513	\$ 121	91.2%	160.4%	56.8%	82.2%	148.6%	55.3%
20-24	7,996,147	1,050,347	7,907	952	102.0	100.3	101.8	87.1	88.3	98.6
25-29	8,988,272	1,962,402	9,100	1,722	105.1	96.9	108.4	95.0	91.4	104.0
30-34	14,048,129	2,048,201	15,265	2,182	92.3	100.5	91.9	105.0	114.8	91.4
35-39	33,315,417	1,946,868	39,612	2,481	72.1	86.7	83.1	93.2	110.0	84.8
40-44	51,328,228	1,971,988	86,579	4,222	63.1	87.9	71.8	88.5	118.8	74.5
45-49	59,281,858	2,446,220	167,129	8,061	63.9	81.0	78.9	87.2	107.9	80.8
50-54	66,845,936	3,578,435	335,677	18,399	68.1	76.3	89.3	93.4	102.9	90.8
55-59	70,815,039	4,767,476	577,498	38,173	68.0	73.8	92.2	94.6	100.4	94.2
60-64	59,476,073	5,764,841	770,861	70,715	68.5	70.1	97.7	92.9	93.9	98.9
65-69	35,109,607	7,557,095	718,385	154,084	69.0	72.4	95.4	91.2	95.3	95.7
70-74	22,425,774	5,977,536	745,322	194,631	73.9	75.0	98.6	93.4	95.4	97.9
75-79	13,227,217	4,149,731	703,390	213,609	75.9	75.0	101.2	95.0	94.7	100.3
80-84	6,362,102	2,338,028	518,389	184,270	77.0	75.3	102.2	93.2	91.7	101.6
85-89	2,035,781	1,200,156	262,691	147,472	82.0	78.8	104.0	96.5	93.4	103.3
90-95	473,301	419,613	94,528	77,621	92.6	86.4	107.1	100.5	94.5	106.4
All ages	\$457,876,654	\$47,276,823	\$5,056,847	\$1,118,717	71.9%	75.7%	95.0%	93.3%	94.7%	98.6%

*Premium-paying based on data from twenty companies; fully paid-up based on data from eighteen companies.

For all attained ages combined, the ratio of premium paying to paid-up mortality was 98.6 percent on the 1975–80 Select Tables. The ratios at attained ages 15–19 and 30–59 for premium-paying policies were significantly less than the ratios for fully paid-up policies.

Comparison of Male and Female Experience

Table 17 shows the experience by sex and attained-age groups between 1980 and 1985 anniversaries for policy years 16 and over for standard medical and nonmedical issues combined. Twenty-one of the contributing companies submitted data, in whole or in part, separately for males and females for policy years 16 and over. As with Tables 7 and 8, in comparing male and female mortality, the ratios of female to male mortality are based on the expected deaths for females calculated on the male table. For all ages combined, the 1980–85 ratio of female mortality to male mortality was 62.3 percent based on the 1975–80 Tables, essentially the same as for the 1979–84 experience.

APPENDIX

Table A shows the proportion of total exposures between 1984 and 1985 anniversaries contributed by each company.

TABLE 17

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE*
 STANDARD ISSUES OF 1969 AND PRIOR
 EXPERIENCE BETWEEN 1980 AND 1985 ANNIVERSARIES
 BY ATTAINED AGE—POLICY YEARS 16 AND OVER COMBINED
 EXPECTED DEATHS MALE AND FEMALE ULTIMATE BASIC TABLES
 (Amounts Shown in \$1,000 Units)

Attained Ages	Exposed to Risk		Actual Deaths		Based on 1965-70 Basic Tables			Based on 1975-80 Basic Tables		
					Mortality Ratio		Ratio of Female to Male Mortality*	Mortality Ratio		Ratio of Female to Male Mortality†
	Male	Female	Male	Female	Male	Female		Male	Female	
15-19	\$ 4,148,405	\$ 2,263,330	\$ 3,804	\$ 818	93.9%	74.5%	40.3%	81.3%	81.6%	40.4%
20-24	6,089,530	2,916,110	7,201	1,486	104.2	90.5	43.0	84.9	97.1	43.1
25-29	7,476,131	3,056,582	9,069	1,518	111.8	86.3	41.0	97.6	93.3	40.8
30-34	12,239,523	3,503,475	14,838	2,220	95.2	85.2	52.8	107.3	100.0	52.4
35-39	28,830,847	5,701,307	37,015	4,389	74.3	64.0	62.1	96.6	79.6	61.3
40-44	45,394,844	5,855,269	79,791	7,410	63.7	65.6	73.8	90.7	77.6	73.8
45-49	52,866,183	5,695,286	154,324	12,448	64.2	73.6	75.7	88.2	85.8	75.8
50-54	60,161,308	6,546,657	307,588	24,583	66.8	84.1	73.9	92.1	98.9	73.9
55-59	63,918,466	7,332,946	534,654	39,473	66.7	81.7	64.5	93.5	93.0	64.5
60-64	53,851,242	6,478,480	721,321	51,421	67.6	79.0	59.4	91.9	91.3	59.4
65-69	34,103,825	4,347,543	715,914	53,825	67.3	83.1	58.9	89.0	95.7	58.9
70-74	21,496,929	3,189,881	738,589	63,068	72.9	75.3	57.4	91.1	98.2	57.4
75-79	12,396,599	2,079,079	692,383	63,437	76.7	62.8	54.4	94.1	88.3	54.4
80-84	5,829,340	1,109,161	497,143	60,473	77.8	69.4	63.7	92.5	89.5	63.7
85-89	2,074,718	432,516	276,018	43,239	81.9	80.9	75.0	95.2	99.6	75.0
90-95	541,988	124,910	110,354	20,042	92.7	80.8	78.9	98.4	103.6	78.9
All ages.....	\$411,419,882	\$60,632,533	\$4,900,005	\$449,848	71.5%	75.0%	63.4%	92.1%	93.3%	62.3%

*Based on data from twenty-one companies.

†Female mortality ratios calculated on Male Ultimate Basic Tables.

TABLE A
 PROPORTION OF TOTAL EXPOSURES BETWEEN 1984 AND 1985 ANNIVERSARIES
 CONTRIBUTED BY EACH COMPANY

Company	Male and Female Combined (Including Data Not Subdivided by Sex)				First 15 Policy Years by Sex						16th and Subsequent Policy-Years by Sex	
	First 15 Years			16th and Subsequent Policy-Years	Medical		Nonmedical		Paramedical		Male	Female
	Medical	Nonmedical	Paramedical		Male	Female	Male	Female	Male	Female		
Northwestern Mutual . . .	14.3%	6.9%	10.6%	7.6%	12.7%	1.6%	4.3%	2.6%	8.7%	1.9%	6.7%	0.9%
New York Life	11.5	15.3	15.1	11.1	9.7	1.8	10.1	5.3	12.1	3.0	8.4	2.5
Occidental	9.5	3.1	3.9	0.8	8.6	0.9	2.0	1.1	3.2	0.6	0.5	0.1
Equitable	7.9	8.0	4.4	6.8	6.9	1.0	5.3	2.8	3.7	0.7	6.0	0.8
Massachusetts Mutual . . .	6.5	3.2	8.4	4.6	5.8	0.6	2.2	0.9	7.1	1.2	4.2	0.4
Prudential	6.0	20.5	13.2	19.1	5.1	0.9	13.0	7.6	10.4	2.8	16.2	2.9
State Farm Life	5.8	10.8	8.9	2.4	5.0	0.8	7.3	3.4	7.3	1.6	2.2	0.3
Connecticut Mutual	5.1	3.1	5.1	12.3	4.6	0.6	2.1	1.0	4.5	0.7	11.1	1.1
New England Life	4.6	2.3	3.4	2.3	4.1	0.5	1.6	0.7	2.9	0.5	2.1	0.2
Phoenix Mutual	4.2	0.6	1.5	1.2	3.8	0.4	0.4	0.2	1.2	0.3	1.0	0.1
Metropolitan	4.0	10.7	6.7	9.0	3.4	0.6	6.6	4.1	5.3	1.4	7.8	1.3
Aetna	3.3	1.6	3.2	1.4	3.0	0.3	1.1	0.5	2.7	0.5	1.2	0.2
John Hancock	2.5	2.8	5.0	5.3	2.2	0.3	1.7	1.1	4.0	1.1	4.5	0.8
Penn Mutual	2.0	0.9	0.8	2.3	1.7	0.2	0.7	0.3	0.7	0.1	—	—
Mutual of New York	1.9	2.7	2.1	3.2	1.6	0.3	1.9	0.8	1.8	0.4	2.7	0.4
Connecticut General	1.9	0.2	1.0	0.9	1.6	0.3	0.1	0.1	0.8	0.2	0.8	0.1
Continental Assurance	1.9	0.8	1.1	1.0	1.7	0.1	0.6	0.2	0.9	0.1	0.9	0.1
Mutual Benefit Life	1.8	0.6	0.4	2.4	1.6	0.2	0.4	0.2	0.3	0.1	2.1	0.2
Travelers	1.7	1.0	2.0	1.4	1.5	0.2	0.7	0.3	1.6	0.3	1.2	0.2
Franklin Life	1.7	3.2	1.1	1.7	1.4	0.2	2.1	1.1	0.9	0.2	1.3	0.4
Provident Mutual	1.0	0.8	1.0	1.5	0.9	0.1	0.6	0.2	0.9	0.1	—	—
Lincoln National	0.7	0.4	0.9	0.9	0.6	0.1	0.2	0.1	0.7	0.1	0.8	0.1
Sun Life	0.3	0.4	0.3	0.8	0.3	—	0.3	0.2	0.2	—	0.7	0.1
	100.0%	100.0%	100.0%	100.0%	87.9%	12.0%	65.2%	34.7%	81.9%	18.0%	82.4%	13.3%