

**TRANSACTIONS OF SOCIETY OF ACTUARIES  
1966 REPORTS**

**II. MORTALITY UNDER CARIBBEAN STANDARD ORDINARY  
INSURANCE ISSUES STUDIED BETWEEN THE  
1959 AND 1964 POLICY ANNIVERSARIES**

**T**HE Canadian Institute of Actuaries made a study of the mortality experience under standard ordinary business issued in the Caribbean area. The study included the issues through 1963, exposed between 1959 and 1964 policy anniversaries. Eight companies submitted data with the exposed to risk amounting to 410,355 years by number of policies and \$1,713,729,000 by amounts. Deaths in the study numbered 1,933 policies for \$7,689,000.

The select and ultimate mortality rates from the C.A. (Canadian Assured Lives) 1952-56 Table were used to compute the expected deaths. The C.A. 1952-56 Table represents the mortality experience, by amounts, during the period 1952-56 policy anniversaries under Canadian Standard Ordinary Issues of 22 Canadian and United States companies.

*Experience by Duration*

Table 1 gives the results of the study for all ages combined for each of the first five policy years separately and for policy years 6 and over

**TABLE 1**  
**CARIBBEAN MORTALITY**  
**STANDARD ORDINARY INSURANCE ISSUES—BY POLICY YEAR**  
**EXPERIENCE BETWEEN 1959 AND 1964 ANNIVERSARIES**  
**MALE AND FEMALE COMBINED**  
**MEDICAL AND NONMEDICAL COMBINED**  
**ALL AGES COMBINED**  
Expected Deaths Based on C.A. 1952-56 Table  
(Amounts Shown in \$1,000 Units)

Policy Year	Exposed to Risk	Actual Deaths	Expected Deaths	Mortality Ratio
1.....	\$ 267,970	\$ 399	\$ 396	101%
2.....	217,303	293	374	78
3.....	177,016	632	352	180
4.....	147,658	653	336	194
5.....	120,838	467	336	139
Total 1-5.....	\$ 930,785	\$2,444	\$1,794	136%
6 and over.....	782,944	5,245	5,676	92
Grand total.....	\$1,713,729	\$7,689	\$7,470	103%

combined. The experience in the Caribbean area for the first five policy years combined was 136 per cent of the C.A. 1952-56 Table. The corresponding experience in Canada between 1959 and 1964 policy anniversaries was 92 per cent of the C.A. 1952-56 Table for policy years 1-5. In policy years 6 and over, the Caribbean mortality was 92 per cent of the C.A. 1952-56 Table compared with 94 per cent for the Canadian experience for the same period. Over-all, the Caribbean mortality was approximately 10 per cent higher than mortality in Canada.

TABLE 2  
CARIBBEAN MORTALITY  
STANDARD ORDINARY INSURANCE ISSUES—BY AGE GROUP  
EXPERIENCE BETWEEN 1959 AND 1964 ANNIVERSARIES  
MALE AND FEMALE COMBINED  
MEDICAL AND NONMEDICAL COMBINED  
Expected Deaths Based on C.A. 1952-56 Table  
(Amounts Shown in \$1,000 Units)

	ACTUAL DEATHS		MORTALITY RATIO*
	Number of Policies	Amount	
Policy Years 1-5			
Issue age:			
0-4.....	4	\$ 8	†
5-29.....	58	334	119%
30-44.....	127	1,109	175
45-59.....	112	800	108
60 and over.....	17	193	145
Total.....	318	\$2,444	136%
Policy Years 6 and Over			
Attained age:			
5-29.....	41	\$ 75	107%
30-44.....	240	619	108
45-59.....	691	2,266	93
60-74.....	495	1,833	88
75 and over.....	148	452	88
Total.....	1,615	\$5,245	92%

\* Based on amounts.

† Fewer than five deaths.

*Experience by Age Group*

Table 2 gives the results of the study by issue age group for policy years 1-5 combined and by attained age group for policy years 6 and over combined. The results are shown for male and female lives combined (only five companies could differentiate) and for medical and nonmedical combined (only four companies could differentiate). Within the first five policy years, mortality ratios by age group fluctuate widely. Issue age group 30-44 has the highest mortality ratio, namely, 175 per cent.

TABLE 3  
CARIBBEAN MORTALITY  
STANDARD ORDINARY INSURANCE ISSUES—BY TERRITORY  
EXPERIENCE BETWEEN 1959 AND 1964 ANNIVERSARIES  
MALE AND FEMALE COMBINED  
MEDICAL AND NONMEDICAL COMBINED  
Expected Deaths Based on the C.A. 1952-56 Table

TERRITORY	POLICY YEARS 1-5		POLICY YEARS 6 AND OVER		ALL POLICY YEARS	
	Actual Deaths*	Mor- tality Ratio†	Actual Deaths*	Mor- tality Ratio†	Actual Deaths*	Mor- tality Ratio†
Bermuda and Bahamas (5) ‡ . . .	14	261%	68	120%	82	157%
Jamaica (6) . . . . .	60	137	247	99	307	114
Puerto Rico, Aruba, Curaçao, Virgin Islands (5) . . . . .	37	132	214	70	251	84
Trinidad and Tobago (5) . . . . .	78	121	261	121	339	121
Other British West Indies (4) . . .	8	112	46	67	54	78
Dominican Republic and Haiti (5) . . . . .	17	127	120	109	137	112
British Guiana and Surinam (4)	61	177	195	112	256	138
Total (territory-divided data)	275	143%	1,151	92%	1,426	106%

\* Number of policies.

† Based on amounts.

‡ Numbers in parentheses show the number of companies contributing experience.

*Experience by Territory*

Table 3 shows the experience by geographical territory, for those companies able to do this, for policy years 1-5 and 6 and over for males and females combined and medical and nonmedical combined. The results showed variations from 157 per cent of the C.A. 1952-56 Table for Bahamas and Bermuda to 78 per cent of the same table for other British West Indies.

*Experience by Ethnic Groups*

Experience was also examined by racial origin, but only two companies were able to contribute their data in this form. The over-all results as a percentage of the C.A. 1952-56 Table were: Caucasians, 94 per cent; East Indians, 135 per cent; Chinese, 156 per cent; all others (mainly West Indians and Negroes), 95 per cent.

More detailed data—including a breakdown of experience by sex, a comparison of medical and nonmedical experience, and a breakdown of deaths by cause—are included in the Canadian Institute of Actuaries Mortality Committee Report, dated February, 1966.