## TRANSACTIONS OF SOCIETY OF ACTUARIES 1967 VOL. 19 PT. 1 NO. 55

## HOSPITAL AND SURGICAL EXPERIENCE UNDER GROUP PLANS INSURING RETIREES AND THEIR DEPENDENTS

## JOHN E. CHAMPE

Group Health Insurance called upon contributing companies to submit experience under standard group hospital and surgical plans covering retirees and their dependents, and, in the normal course of events, the Committee would have extended its *Reports* to include this retiree experience. With the advent of Medicare, these standard plans for retirees have virtually disappeared from insured programs, as has the need for and ability to collect and publish these types of data in the regular annual *Reports*. Consequently, the Committee decided to drop its plan to compile this type of retiree morbidity experience and has generously made available to me the data which it had collected.

The motivation for presenting this paper comes primarily from a desire to complete the historical record and secondarily from the feeling that, despite Medicare, the data may still be of practical value.

The instructions (which are available from the chairman of the Committee) for contributing experience, the benefit plans studied, and the order of their presentation in the tables parallel the study of experience under groups insuring active employees and their dependents. The experience period covers the three years terminating on the policy anniversary in 1965 and corresponds to the experience period in the latest Committee report published in June, 1967. The tabular claims for both retired employees and their dependents were computed by using the active male employee tabular factors (Tables 1–4), which, together with the basis for their development from active experience, were published in the 1961 Reports. This avoids the assumption of higher female morbidity levels, which the use of active female tabulars would imply, and also excludes from the tabulars any provision for maternity and children's claims.

As pointed out in the annual reports by the Committee, the tabulars do not reflect all the factors affecting experience. For example, neither age distributions nor geographic locations of employees are considered. Retiree experience would also be influenced by other factors, such as the proportion of those retiring because of poor health rather than age. The cautions which apply in interpreting active experience will apply here as well.

In addition to showing ratios of actual to tabular claims, retired employee experience is compared to active employee experience by showing ratios of (a) ratios of actual to tabular claims for retired employees to (b) ratios of actual to tabular claims for active employees. The ratios of actual to tabular claims for active employees used here were published in the 1966 Reports in Table 4, page 129, and Table 8, page 138, for hospital and surgical insurance, respectively. Since these published ratios of actual to tabular claims are not significantly different from the ratios derived from

TABLE 1

RETIRED EMPLOYEE AND DEPENDENT GROUP HOSPITAL EXPENSE
INSURANCE, ALL SIZE GROUPS, ALL INDUSTRIES, COMBINED 1963-65
POLICY YEARS' EXPERIENCE BY PLAN—EMPLOYEE

Plan	Number of Experience Units	Daily Benefit Exposed (000)	Actual Claims (000)	Ratio of Actu- al to 1957 Hospital Tab- ular Claims*	Ratio of Retired A/T to Active† A/T
10×: 31 day	416 65 14	174 106 13	509 480 30‡	199% 345 156‡	169% 290 129
Total	495	293	1,019	246%	208%
15×: 31 day 70 day 120 day	136 61 §	53 27 §	211 125 §	249% 290 §	201% 228
Total	204	82	341	260%	211%
20×: 31 day 70 day 120 day	545 374 57	174 172 32	748 754 143	270% 270 273	221% 220 218
Total	976	378	1,645	270%	220%
20×+75% of excess: 31 day	65 112 11	9 48 1	68 267 4‡	431% 312 445‡	329% 229 325
Total	188	58	339	332%	248%

<sup>\*</sup> Ratios of actual claims to active male employee tabular claims.

<sup>†</sup> Active employee actual to tabular ratios in divisor are from Table 4, p. 129, 1966 Reports.

ILess than \$50,000 actual claims.

Less than \$50,000 of actual claims and less than 10 experience units.

groups with less than 11 per cent female employees included in the published data, the ratios of ratios effectively compare the morbidity levels of retired lives with active male employees.

For dependents, rather than adding a comparison of retired to active experience, the retired dependent experience is compared to retired employee experience by showing ratios of (a) ratios of actual to tabular claims for dependents of retired employees to (b) ratios of actual to tabular claims for retired employees. This approximates a comparison of female to male experience based upon the assumption, derived from active groups, that only 22 per cent of the employees are females and the assumption that nearly all retired dependent groups consist of a spouse only.

TABLE 2

RETIRED EMPLOYEE AND DEPENDENT GROUP HOSPITAL EXPENSE INSURANCE, ALL SIZE GROUPS, ALL INDUSTRIES, COMBINED 1963-65
POLICY YEARS' EXPERIENCE, BY PLAN—DEPENDENT

Plan	Number of Experience Units	Daily Benefit Exposed (000)	Actual Claims (000)	Ratio of Actual to 1957 Hospi- tal Tabular Claims*	Ratio of Dependent A/T to Em- ployee A/T
10×: 31 day	432	116	284	171%	86%
70 day	98	99	324	247	72
120 day	11	5	10‡	131‡	84
Total	541	220	618	202%	82%
15×:					
31 day	68	18	52	183%	73%
70 day	42	15	65	257	89
120 day	§	§	§	§	§
Total	113	34	121	220%	85%
20×:					
31 day	285	58	167	183%	68% 77
70 day	187	63	212	207	
120 day	25	14	28‡	131‡	48
Total	497	135	407	189%	70%
$20 \times +75\%$ of excess:					
31 day	49	5	18‡	207‡%	48%
70 day	71	24	92	218	70
120 day	§	§	_ §	§	8
Total	123	29	110	215%	65%

<sup>\*</sup>Ratios of actual claims to active male employee tabular claims.

<sup>‡</sup> Less than \$50,000 actual claims.

<sup>§</sup> Less than \$50,000 of actual claims and less than 10 experience units.

These studies confirm the high level of claim costs expected for retirees. Retired employee hospital experience is indicated to be between two and two and one-half times the level of experience for active employees, and retired employee surgical experience is indicated to be somewhat less than two times the level for active employees. The relatively higher level of retired hospital experience as compared to retired surgical experience is consistent with expectations. In addition to the higher frequen-

TABLE 3

RETIRED EMPLOYEE AND DEPENDENT GROUP SURGICAL EXPENSE INSURANCE ALL SIZE GROUPS, ALL INDUSTRIES, COMBINED 1963-65
POLICY YEARS' EXPERIENCE, BY PLAN—EMPLOYEE

Plan	Number of Experience Units	Maximum Indemnity Exposed Per \$150, \$200 or \$300 Basic Units (000)	Actual Claims (000)	Ratio of Actual to 1957 Surgical Tabular Claims*	Ratio of Retired A/T to Active† A/T
\$150 schedule \$200 schedule \$300 schedule	215 2,019 424	21 129 14	125 1,081 173	205% 195 210	178% 168 188
Total	2,658	164	1,379	198%	172%

<sup>\*</sup> Ratios of actual claims to active male employee tabular claims.

TABLE 4

RETIRED EMPLOYEE AND DEPENDENT GROUP SURGICAL EXPENSE INSURANCE
ALL SIZE GROUPS, ALL INDUSTRIES, COMBINED 1963-65
POLICY YEARS' EXPERIENCE, BY PLAN—DEPENDENT

Plan	Number of Experience Units	Maximum Indemnity Exposed Per \$150, \$200 or \$300 Basic Units (000)	Actual Claims (000)	Ratio of Actual to 1957 Surgical Tabular Claims*	Ratio of Dependent A/T to Employee A/T
\$150 schedule \$200 schedule \$300 schedule	1,745	11 78 8	55 514 63	181% 154 132	88% 79 63
Total	2,286	97	632	154%	78%

<sup>\*</sup> Ratios of actual claims to active male employee tabular claims.

<sup>†</sup> Active employee actual to tabular ratios in divisor are from Table 8, p. 138, 1966 Reports.

cy of claims, the retired hospital experience reflects longer hospital confinements and higher charges for miscellaneous fees, both of which may be payable within plan maximums. Under surgical insurance, however, the plan maximums are commonly paid under both active and retired plans.

The morbidity level for females is significantly lower than for males, while the opposite relationship between female and male morbidity levels is observed in pre-retirement groups. Although this may be partially accounted for by the assumption that dependents of retired employees are probably younger than their sponsoring retired employees, it does reflect the continuation of trends observed in other studies indicating a relative improvement in female morbidity levels as they approach retirement age. This is apparently a factor contributing to the greater longevity enjoyed by females.