

CONTINUOUS MORTALITY INVESTIGATION

MORTALITY OF PENSIONERS UNDER LIFE OFFICE PENSION SCHEMES: EXPERIENCE FOR 1963-66 (INCLUDING SEPARATE INVESTIGATION OF "WORKS" PENSION SCHEMES)

A report on the investigation into the mortality of pensioners under life office pension schemes in the years 1959-62 was published in *J.I.A.* vol. 91, p. 75 and *T.F.A.* vol. 29, p. 228. A first report of a similar investigation into the mortality of pensioners under schemes covering "works" employees only was published in *J.I.A.* vol. 92, p. 7 and *T.F.A.* vol. 29, p. 243; (the latter investigation did not start until 1961, and the report related to 1961-63). The present note covers the years 1963-66.

Table 1 compares on a "lives" basis the mortality experienced by pensioners who retired at or after the normal age, under all the schemes for which data have been submitted (whether "staff", "works", or mixed schemes), with the expected deaths on four bases, viz.:

- (i) English Life Table No. 11.
- (ii) English Life Table No. 12.
- (iii) The 1947 table of annuitant mortality printed on page xviii of *The a(55) Tables for Annuitants*.
- (iv) The *a(55)* tables.

Basis (i) will facilitate comparison with the experience of previous periods, whilst basis (ii) gives a comparison with the latest available standard table based on population mortality in England and Wales. Bases (iii) and (iv) enable comparisons to be made with the mortality experienced by Immediate Annuitants during the same period of investigation, basis (iii) also being available for comparison with previous periods.

The comparisons between 1963-66 and 1959-62 show for the males only a slight reduction in mortality, apart from the youngest age group (65 and under) where mortality has risen; as mentioned in the previous report, there could be a selective influence at these younger ages due to deferment of retirement of the healthier lives. The female experience shows at all age groups substantial reductions in mortality since the previous four-year period of investigation; the reverse

selective influence just mentioned does not show itself in the female experience.

The percentages based on E.L.T. 12 show that, apart from the males in the youngest age group, the male pensioners experienced mortality at a fairly consistent level of approximately 90% of the mortality according to the latest national table, the corresponding percentage for females being approximately 80%. This difference between the sexes could be due to the fact that in the population as a whole a higher proportion of males than of females are pensioners under some occupational pension scheme.

In the last report a comparison was given between the mortality of pensioners and of annuitants (durations 5 and over) at the more important age groups, expected deaths being based on the 1947 table of annuitant mortality. The figures are reproduced below, with the addition of the percentages for 1963-66 :

Age group	Pensioners			Annuitants			
	1955-58	1959-62	1963-66	1955-58	1959-62	1963-1966	
						purchased before 1957	purchased after 1956
<i>Males</i>							
66-70	129	118	115	108	109	104	93
71-75	114	108	106	112	121	94	73
76-80	105	103	102	96	91	91	78
<i>Females</i>							
61-65	108	101	92	90	101	105	112
66-70	90	95	90	108	94	99	66
71-75	93	110	94	90	94	91	77

Table 2 gives similar comparisons to Table 1 but based on "amounts" instead of "lives". As in the previous report, the percentages according to "amounts" are markedly lower than those according to "lives", except for males over age 85 and females over age 80. This time the difference is almost as marked for females as for males, the mortality by "amounts" for all ages combined being a little over 90% of the mortality by "lives" for each sex.

Tables 3 and 4 give comparisons for pensioners who retired before the normal age, according to "lives" and "amounts". As before, mortality throughout is relatively heavy, the proportional extra

mortality decreasing as age increases. This is also shown in Table 5, which compares the mortality of those who retired early with those who retired at or after the normal age.

In 1961 the Committee started a subsidiary investigation into the mortality experienced by pensioners who retired from "works" schemes and a preliminary report was published in *J.I.A.* vol. 92, p. 7 and *T.F.A.* vol. 29, p. 243 based upon the data for the years 1961-63. Statistics were then available for 10 "office years of experience" based upon the contributions of five offices to the separate "works" data. Five of the ten office years of experience related to the year 1963. The sixth office which was expected to start contributing data in 1964 never in fact joined the investigation and as a result the period 1963-66 yielded 20 office years of experience, five of which overlapped the data for the preliminary report, and a comparison between 1961-63 and 1963-66 would therefore be of little value.

A comparison of the data in respect of those who retired from "works" schemes at normal age or later, with the data from the same offices in respect of those who retired from "non-works" schemes, is given in Table 6 and confirms the earlier conclusion that the mortality of pensioners under "works" schemes is generally heavier than the mortality of pensioners under "non-works" schemes, the only exception to this being in the youngest age group for males, and in two of the female age groups where the data are small.

No figures are included in respect of those who retired from "works" schemes before the normal age as the data available are too sparse.

It should be remembered when comparing "works" with "non-works" schemes that any scheme covering both "staff" and "works" is included with the "non-works" data.

TABLE 1
*Pensioners retiring at or after the normal age: experience 1963-66 on a basis of
 "lives", with some comparative figures for 1955-58 and 1959-62*

Age group (nearest ages)	Actual deaths	100 A/E (E.L.T. 11.)			100 A/E (E.L.T. 12.)	100 A/E (1947 table of annuitants mortality)			100 A/E a(55)
		1955-58	1959-62	1963-66		1955-58	1959-62	1963-66	
<i>Males</i>									
65 and under	1243	128	99	106	107	174	135	143	172
66-70	10126	99	91	89	90	129	118	115	138
71-75	9200	93	87	86	88	114	108	106	125
76-80	6270	86	84	84	88	105	103	102	117
81-85	3041				89				101
86-90	965	82	83	{ 82 81 72 }	{ 89 91 83 }	100	101	{ 98 85 }	113
91 and over	124								108
All ages	30969	94	88	86	89	119	110	108	93
									126
<i>Females</i>									
60 and under	38	121	76	66	78	138	84	73	103
61-65	583	91	85	78	90	108	101	92	116
66-70	653	71	75	72	82	90	95	90	108
71-75	544	70	82	70	80	93	110	94	109
76-80	303			{ 70 66 72 }	{ 80 75 80 }			{ 99 92 95 }	112
81-85	142	68	83			95	116		105
86 and over	59								109
All ages	2322	79	81	72	82	99	102	92	111

Note.—The 1947 table of annuitant mortality is published on page xviii of *The a(55) Tables for Annuitants*.

TABLE 2
Pensioners retiring at or after the normal age : experience 1963-66 on a basis of "amounts", with some comparative figures for 1959-62

Age group (nearest ages)	Actual deaths	100 A/E (E.L.T. 11.)		100 A/E (E.L.T. 12.)	100 A/E (1947 table of annuitants mortality)		100 A/E <i>a</i> (55)
		1959-62	1963-66		1959-62	1963-66	
<i>Males</i>							
65 and under	£						
66-70	185417	80	86	88	110	118	141
71-75	1230689	82	81	82	107	105	125
76-80	993058	78	76	78	96	94	111
81-85	605507	76	73	77	92	89	102
86-90	278590		77	83		93	105
91 and over	79186	74	80	90	91	98	125
All ages	9239		71	82		84	91
	3381686	79	78	80	99	98	115
<i>Females</i>							
60 and under							
61-65	3067	67	55	64	75	61	84
66-70	36304	92	65	76	108	71	97
71-75	36695	70	66	76	89	83	100
76-80	28637	67	68	78	90	92	106
81-85	15660		64	74		91	103
86 and over	7481	83	68	78	116	95	109
All ages	2333		60	67		79	90
	130177	78	66	75	98	84	101

Note.—The 1947 table of annuitant mortality is published on page xviii of *The a(55) Tables for Annuitants*.

TABLE 3
*Pensioners who retired before the normal age : experience 1963-66 on a basis
of "lives", with some comparative figures for 1955-58 and 1959-62*

Age group (nearest ages)	Actual deaths	100 A/E (E.L.T. 11.)			100 A/E (E.L.T. 12.)	100 A/E (1947 table of annuitants mortality)			100 A/E $a(55)$
		1955-58	1959-62	1963-66		1955-58	1959-62	1963-66	
<i>Males</i>	1963-66				1963-66				1963-66
65 and under	2626	260	247	215	220	359	342	297	358
66-70	1499	146	142	133	135	190	185	173	207
71 and over	1203	107	100	104	109	131	123	128	148
All ages	5328	169	162	152	166	220	211	198	235
<i>Females</i>									
60 and under	101	284	191	194	230	318	216	215	297
61-65	118	117	124	104	120	137	146	123	155
66 and over	210	109	89	80	92	141	117	106	124
All ages	429	143	117	100	116	174	144	126	154

TABLE 4
*Pensioners who retired before the normal age : experience 1963-66 on a basis
of " amounts ", with some comparative figures for 1959-62*

Age group (nearest ages)	Actual deaths 1963-66	100 A/E (E.L.T. 11.)		100 A/E (E.L.T. 12.) 1963-66	100 A/E (1947 table of annuitants mortality)		100 A/E a(55) 1963-66
		1959-62	1963-66		1959-62	1963-66	
<i>Males</i>	£						
65 and under	270733	190	148	151	263	204	246
66-70	162329	121	109	110	158	142	170
71 and over	113008	88	104	109	109	128	149
All ages	546070	138	124	127	181	163	194
<i>Females</i>							
60 and under	5376	133	154	181	147	171	236
61-65	5778	120	87	100	142	102	129
66 and over	9172	63	87	99	82	114	134
All ages	20326	95	98	113	116	121	150

TABLE 5
Comparison between experience of pensioners who retired before the normal age and that of pensioners who retired at or after the normal age. (Expected deaths according to the English Life Table No. 11)

Age group (nearest ages)	"Lives" Before normal age 100 A/E		"Lives" At or after normal age 100 A/E		"Lives" 100 A/E (early retirements) ÷ 100 A/E (normal or late retirements)		"Amounts" Before normal age 100 A/E		"Amounts" At or after normal age		100 A/E (early retirements) ÷ 100 A/E (normal or late retirements)	
	1959-62	1963-66	1959-62	1963-66	1959-62	1963-66	1959-62	1963-66	1959-62	1963-66	1959-62	1963-66
<i>Males</i>												
65 and under	247	215	99	106	2.49	2.03	190	148	80	86	2.38	1.72
66-70	142	133	91	89	1.56	1.49	121	109	82	81	1.48	1.35
71 and over	100	104	86	84	1.16	1.24	88	104	77	75	1.14	1.39
All ages	162	152	88	86	1.84	1.77	138	124	79	78	1.75	1.59
<i>Females</i>												
60 and under	191	194	76	66	2.51	2.94	133	154	67	55	1.99	2.80
61-65	124	104	85	78	1.46	1.33	120	87	92	65	1.30	1.34
66 and over	89	80	79	70	1.13	1.14	63	87	72	66	.88	1.32
All ages	117	100	81	72	1.44	1.39	95	98	78	66	1.22	1.48

TABLE 6
Mortality of pensioners under "works" and "non-works" schemes 1963-66: retirements at or after the normal age. (Expected deaths according to the English Life Table No. 11)

Age group (nearest ages)	Works schemes			Non-works schemes		
	Lives		Amounts	Lives		Amounts
	Actual deaths	100 A/E		Actual deaths	100 A/E	
<i>Males</i>						
65 and under	144	95	£ 6,965	627	108	£ 85,417
66-70	1,717	97	84,984	5,806	90	683,556
71-75	1,137	92	46,594	5,352	87	536,099
76-80	619	91	17,900	3,576	83	312,913
81 and over	425	83	10,526	2,491	83	200,194
All ages	4,042	93	166,949	17,852	87	1,818,179
<i>Females</i>						
60 and under	1	50	151	18	68	1,628
61-65	39	81	1,029	331	76	19,111
66-70	17	44	474	398	73	19,842
71 and over	28	85	451	632	70	25,824
All ages	85	70	2,105	1,379	72	66,405