

THE RECENT TREND OF MORTALITY IN GREAT BRITAIN

BY C. D. DAYKIN, M.A., F.I.A., F.S.S.

THIS note continues an annual series on mortality rates in Great Britain; the previous note in the series appeared in *J.I.A.* **108**, 413 and dealt with mortality in 1979. Table 1 below shows central death-rates for Great Britain for the year 1980, together with the ratios of these rates to the corresponding average rates for the three years 1970-72, which have been taken as a standard. Death rates in this form for the years from 1966 to 1979 were published in the previous note in this series. The rates for 1980 have been calculated using the deaths recorded as occurring in Great Britain in 1980 and the 'home' population at 30 June 1980, i.e. the number of people actually in the country at the time, as estimated by the Registrars General of England and Wales and of Scotland.

The overall pattern of mortality changes over the last fifty years can be illustrated by reference to standardized group death-rates for a few broad age-groups. These are set out in Table 2 for each year from 1961, and for two earlier periods, 1930-32 and 1950-52. The ratios of these rates to the 1970-72 standard are given in Table 3, and they are also shown graphically for the years since 1966 in Figures 1 and 2. The age-groups used are five in number, under age 1 (infants), 1-14 (children), 15-44 (younger adults), 45-64 (the middle-aged) and 65 and over (the elderly). The group death-rates and ratios have been standardized by five-year age-groups on the age distribution of the Great Britain population at the 1971 Census, so as to eliminate the effect of changes in the age structure of the population.

Mortality overall (standardized by age-groups) was about 3% lower in 1980 than in 1979 and some 9% lower than in 1970-72. Infant mortality again fell significantly more than mortality at other ages particularly for boys. However, mortality fell from the 1979 levels for all but two or three age groups and reached its lowest level ever for most age groups.

The average level of female mortality in the years from 1978 to 1980 was some 7% lower than the average in the years from 1970 to 1972; male mortality was about 7½% lower. Infant mortality fell by some 27% over the same period and the mortality of children between 1 and 15 years of age fell by 25%. Mortality improvement was only less than 5% between 1970 and 1972 and 1978 and 1980 for males aged from 15 to 19, 25 to 29 and over 75 and for females aged from 25 to 29, from 50 to 64 and over 85. On this three-year average basis, males aged from 80 to 84 are the sole group to have shown no real improvement in mortality rates since the period around the 1971 Census.

As we move further from the 1971 Census, the estimates of home population become progressively less reliable. Following the 1981 Census, the population estimates for the intercensal years will in due course be revised, and the updated mortality rates will be published in a later note in this series.

Table 1. *Death-rates for age-groups in Great Britain in the year 1980 and ratios of those rates to the rates for 1970-72*

Age-groups	Death-rates in 1980		Ratios to 1970-72 rates	
	Males	Females	Males	Females
Under 1	·01365	·01098	·67	·71
1-4	·00058	·00045	·73	·67
5-9	·00030	·00021	·71	·72
10-14	·00028	·00020	·76	·91
15-19	·00085	·00034	·96	·89
20-24	·00090	·00040	·91	·91
25-29	·00087	·00047	·96	·94
30-34	·00099	·00062	·88	·85
35-39	·00149	·00103	·88	·87
40-44	·00252	·00169	·83	·81
45-49	·00459	·00294	·83	·82
50-54	·00850	·00496	·91	·92
55-59	·01464	·00793	·93	·96
60-64	·02356	·01232	·89	·97
65-69	·03751	·01926	·87	·93
70-74	·06035	·03148	·89	·88
75-79	·09534	·05384	·94	·88
80-84	·14257	·09075	·99	·90
85 & over	·23234	·18838	·95	·96
All ages:				
Crude rates:	·01223	·01150	·98	1·02
Standardized*	·01123	·01030	·90	·91

* Standardized on 1971 Census age distribution.

Table 2. *Standardized death-rates for age-groups in Great Britain (standardized on 1971 Census age distribution)*

Year	Under 1	1-14	15-44	45-64	65 and over	All ages
<i>Males</i>						
1930-32	·07953	·00368	·00396	·01738	·08831	·01721
1950-52	·03448	·00085	·00186	·01580	·08392	·01410
1961	·02545	·00062	·00151	·01485	·08114	·01323
1962	·02614	·00059	·00149	·01481	·08157	·01326
1963	·02512	·00062	·00152	·01503	·08372	·01354
1964	·02383	·00056	·00152	·01438	·07564	·01251
1965	·02246	·00058	·00152	·01439	·07742	·01268
1966	·02241	·00058	·00152	·01439	·07961	·01290
1967	·02093	·00056	·00144	·01376	·07484	·01219
1968	·02175	·00056	·00141	·01408	·07986	·01280
1969	·02089	·00055	·00142	·01447	·07914	·01280
1970	·02136	·00051	·00141	·01406	·07757	·01253
1971	·02021	·00052	·00139	·01360	·07524	·01215
1972	·01914	·00051	·00138	·01392	·07868	·01256
1973	·01889	·00050	·00139	·01371	·07690	·01233
1974	·01884	·00046	·00136	·01353	·07605	·01217
1975	·01738	·00045	·00132	·01317	·07540	·01197
1976	·01626	·00042	·00132	·01327	·07667	·01211
1977	·01588	·00038	·00126	·01272	·07264	·01151
1978	·01530	·00039	·00129	·01290	·07342	·01164
1979	·01477	·00037	·00126	·01292	·07335	·01162
1980	·01365	·00037	·00124	·01247	·07102	·01123
<i>Females</i>						
1930-32	·05973	·00333	·00341	·01300	·08229	·01908
1950-52	·02648	·00066	·00146	·00909	·07134	·01460
1961	·01983	·00044	·00096	·00784	·06405	·01281
1962	·01955	·00044	·00097	·00781	·06312	·01265
1963	·01928	·00044	·00095	·00787	·06444	·01287
1964	·01850	·00042	·00094	·00749	·05748	·01165
1965	·01705	·00044	·00094	·00748	·05822	·01175
1966	·01706	·00042	·00092	·00751	·05936	·01193
1967	·01664	·00041	·00089	·00726	·05545	·01122
1968	·01620	·00041	·00088	·00751	·05935	·01189
1969	·01582	·00037	·00090	·00769	·05768	·01167
1970	·01627	·00037	·00087	·00748	·05686	·01148
1971	·01540	·00037	·00084	·00735	·05453	·01106
1972	·01489	·00038	·00085	·00756	·05648	·01141
1973	·01448	·00035	·00084	·00739	·05607	·01129
1974	·01419	·00035	·00081	·00745	·05516	·01115
1975	·01375	·00031	·00082	·00725	·05416	·01093
1976	·01213	·00030	·00080	·00737	·05575	·01117
1977	·01232	·00028	·00076	·00709	·05253	·01058
1978	·01201	·00030	·00079	·00721	·05270	·01065
1979	·01146	·00028	·00074	·00728	·05298	·01068
1980	·01098	·00028	·00073	·00700	·05109	·01030

The Recent Trend of Mortality in Great Britain

Table 3. *Ratios of standardized death-rates for age-groups in Great Britain to the rates for 1970-72 (standardized on 1971 Census age distribution)*

Year	Under 1	1-14	15-44	45-64	65 and over	All ages
<i>Males</i>						
1930-32	3.930	7.191	2.843	1.254	1.144	1.386
1950-52	1.704	1.657	1.334	1.140	1.088	1.135
1961	1.257	1.215	1.086	1.071	1.052	1.066
1962	1.292	1.156	1.066	1.069	1.057	1.068
1963	1.241	1.207	1.086	1.085	1.085	1.090
1964	1.177	1.104	1.092	1.038	.980	1.007
1965	1.110	1.139	1.093	1.038	1.003	1.021
1966	1.107	1.132	1.089	1.038	1.032	1.039
1967	1.034	1.092	1.029	.993	.970	.982
1968	1.075	1.102	1.010	1.016	1.035	1.030
1969	1.032	1.068	1.021	1.044	1.026	1.031
1970	1.055	1.001	1.013	1.015	1.005	1.009
1971	.999	1.008	.998	.981	.975	.979
1972	.946	.991	.989	1.004	1.020	1.012
1973	.933	.971	1.000	.989	.997	.993
1974	.931	.899	.976	.976	.986	.980
1975	.859	.871	.949	.950	.977	.964
1976	.803	.827	.949	.957	.994	.975
1977	.785	.752	.901	.918	.941	.927
1978	.756	.760	.928	.931	.952	.938
1979	.730	.721	.907	.932	.951	.935
1980	.675	.732	.886	.900	.920	.905
<i>Females</i>						
1930-32	3.849	8.891	3.991	1.743	1.471	1.686
1950-52	1.706	1.759	1.709	1.218	1.275	1.290
1961	1.278	1.179	1.125	1.051	1.145	1.132
1962	1.260	1.173	1.131	1.047	1.128	1.118
1963	1.242	1.185	1.116	1.055	1.152	1.137
1964	1.192	1.132	1.096	1.004	1.027	1.030
1965	1.099	1.166	1.106	1.002	1.040	1.038
1966	1.099	1.122	1.079	1.007	1.061	1.054
1967	1.072	1.093	1.037	.973	.991	.992
1968	1.044	1.108	1.025	1.006	1.061	1.051
1969	1.019	.991	1.053	1.031	1.031	1.031
1970	1.048	.990	1.015	1.003	1.016	1.014
1971	.992	1.000	.990	.985	.975	.977
1972	.959	1.010	.995	1.013	1.009	1.008
1973	.933	.930	.979	.990	1.002	.998
1974	.914	.923	.953	.998	.986	.985
1975	.886	.830	.956	.972	.968	.966
1976	.781	.793	.934	.987	.996	.987
1977	.794	.751	.894	.950	.939	.935
1978	.774	.803	.922	.966	.942	.941
1979	.738	.746	.862	.975	.947	.943
1980	.708	.738	.857	.938	.913	.910

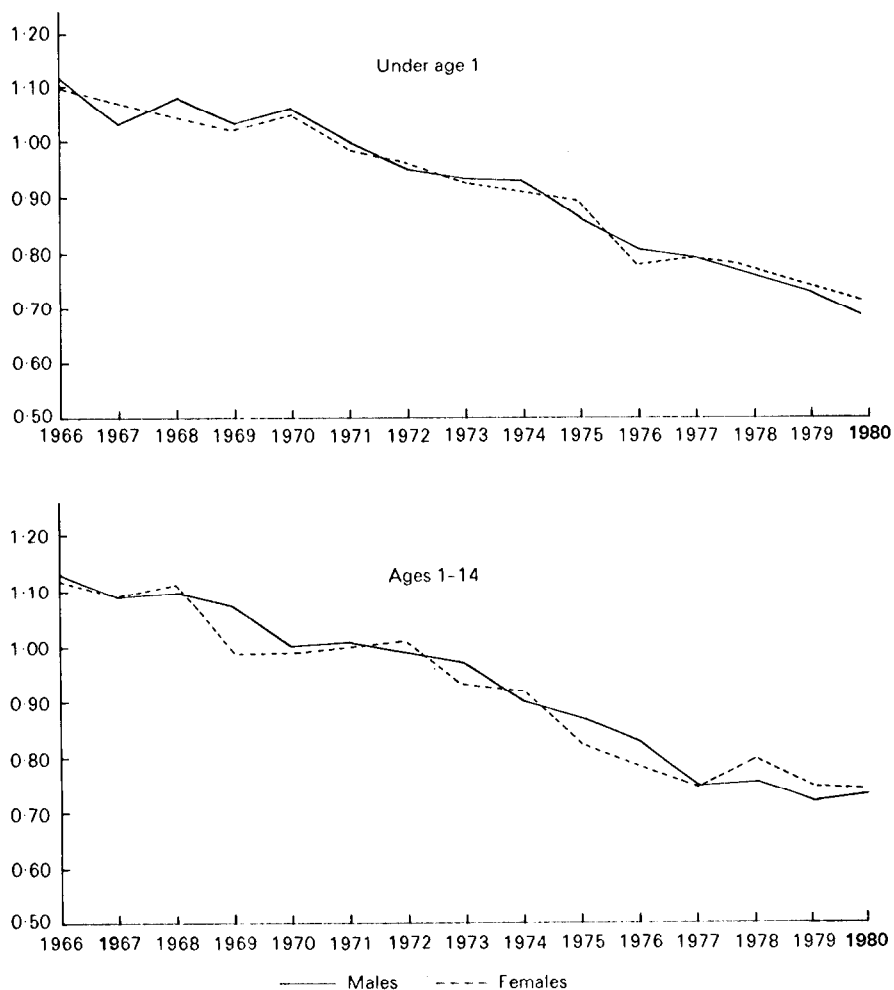


Figure 1. Ratios of Standardized Group death-rates to 1970-72 rates---Children.

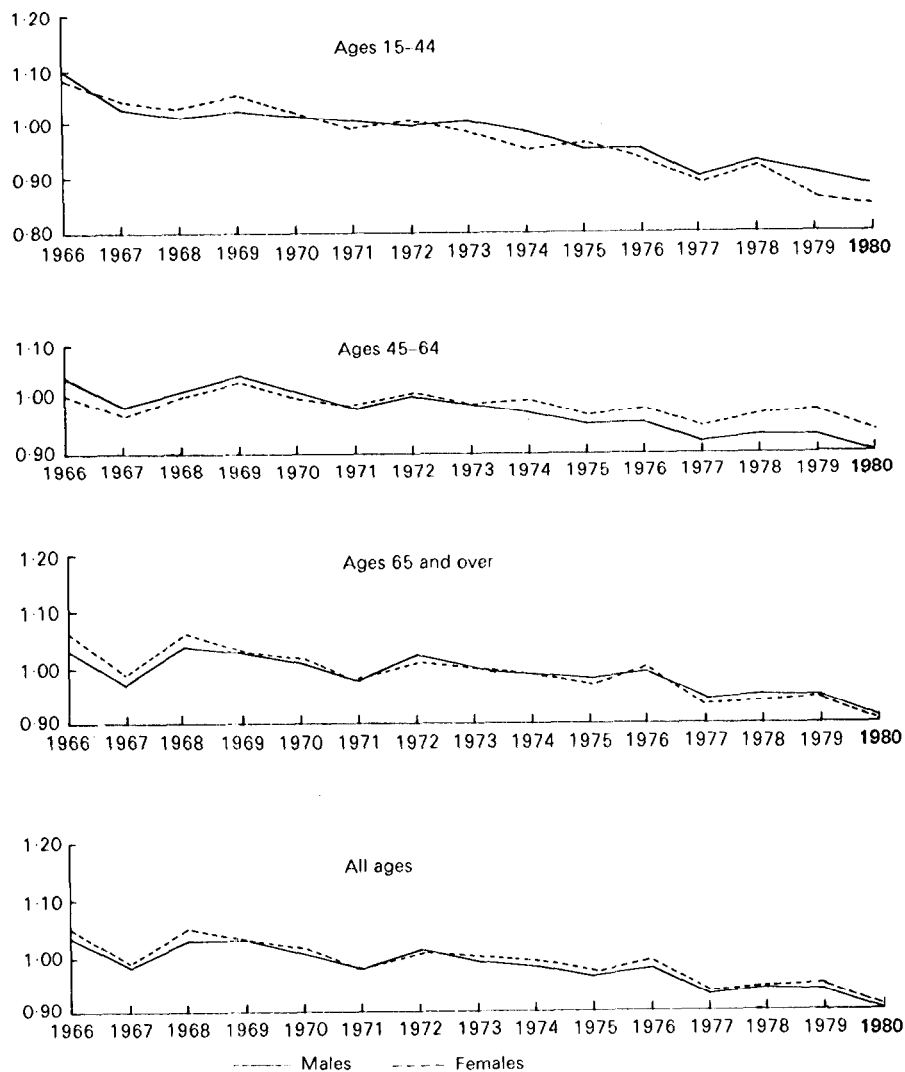


Figure 2. Ratios of Standardized Group death-rates to 1970-72 rates—Adults and all ages.