

# THE RECENT TREND OF MORTALITY IN GREAT BRITAIN

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THIS note continues a regular series on mortality rates in Great Britain; the previous note in the series appeared in *J.I.A.* 115, 545 and dealt with mortality in 1986.

Following the 1981 Census, estimates of the resident population have been produced on a new definition. This includes residents temporarily outside the country but excludes foreign visitors. It includes members of both H.M. and foreign forces stationed in the United Kingdom but excludes members of H.M. forces who are stationed abroad. The figures for deaths are not precisely consistent with the new definition of the population, since they do not necessarily include all deaths of residents temporarily absent from the U.K.

Table 1. *Death-rates for age-groups in Great Britain in the years 1984 to 1987*

Age groups	Males				Females			
	1984	1985	1986	1987	1984	1985	1986	1987
Under 1	·01090	·01053	·01096	·01062	·00859	·00836	·00808	·00804
1-4	·00050	·00050	·00045	·00044	·00039	·00042	·00040	·00039
5-9	·00024	·00022	·00021	·00020	·00018	·00019	·00016	·00015
10-14	·00028	·00029	·00023	·00025	·00018	·00019	·00017	·00017
15-19	·00071	·00068	·00072	·00071	·00030	·00028	·00029	·00028
20-24	·00084	·00083	·00084	·00086	·00031	·00031	·00033	·00031
25-29	·00085	·00079	·00082	·00080	·00043	·00038	·00038	·00038
30-34	·00098	·00095	·00100	·00103	·00058	·00057	·00058	·00060
35-39	·00131	·00136	·00132	·00132	·00089	·00090	·00085	·00088
40-44	·00222	·00228	·00220	·00218	·00149	·00150	·00147	·00142
45-49	·00413	·00398	·00397	·00375	·00261	·00253	·00252	·00248
50-54	·00722	·00718	·00696	·00667	·00441	·00429	·00412	·00416
55-59	·01301	·01281	·01251	·01217	·00753	·00746	·00712	·00694
60-64	·02138	·02168	·02121	·02066	·01154	·01203	·01155	·01144
65-69	·03525	·03518	·03467	·03365	·01864	·01893	·01869	·01824
70-74	·05515	·05626	·05472	·05282	·02958	·03055	·02982	·02907
75-79	·08551	·08859	·08637	·08229	·04878	·05013	·04891	·04730
80-84	·13028	·13539	·13022	·12328	·08231	·08571	·08331	·07911
85-89	·19282	·20294	·19974	·17845	·13974	·14674	·14095	·13152
90 & over	·27479	·29486	·28090	·24950	·23693	·25166	·24513	·22229
All ages:								
Crude	·01171	·01207	·01186	·01148	·01122	·01173	·01147	·01121
Standardized*	·01121	·01142	·01115	·01067	·01052	·01086	·01055	·01011

\* Standardized on 1981 Census age distribution.

**Table 2. Ratios of death-rates for age-groups in Great Britain in the years 1984 to 1987 to the rates for 1980-82**

Age groups	Males				Females			
	1984	1985	1986	1987	1984	1985	1986	1987
Under 1	·846	·817	·850	·824	·861	·837	·809	·806
1-4	·913	·912	·824	·806	·890	·960	·920	·895
5-9	·871	·804	·766	·722	·939	·952	·820	·785
10-14	·993	1·020	·821	·878	·909	·957	·873	·868
15-19	·869	·831	·876	·865	·930	·891	·908	·886
20-24	·959	·944	·955	·974	·866	·856	·903	·854
25-29	·983	·917	·954	·928	·988	·868	·866	·876
30-34	·997	·970	1·015	1·046	·942	·933	·951	·973
35-39	·934	·969	·941	·941	·922	·935	·879	·907
40-44	·900	·923	·892	·883	·905	·912	·896	·863
45-49	·930	·897	·895	·845	·912	·885	·880	·868
50-54	·890	·885	·858	·822	·915	·888	·855	·861
55-59	·911	·898	·877	·853	·966	·956	·913	·890
60-64	·942	·955	·934	·910	·957	·998	·958	·949
65-69	·961	·959	·945	·918	·981	·997	·984	·960
70-74	·939	·958	·931	·899	·950	·981	·957	·933
75-79	·933	·966	·942	·898	·931	·956	·933	·903
80-84	·935	·972	·935	·885	·915	·952	·926	·879
85-89	·937	·986	·971	·867	·921	·967	·929	·867
90 & over	·959	1·029	·980	·871	·956	1·015	·989	·897
All ages:								
Crude	·969	·998	·982	·950	·979	1·024	1·004	·979
Standardized*	·935	·953	·930	·890	·937	·967	·940	·901

\*Standardized on 1981 Census age distribution.

This note presents details of the mortality experience in 1987. The rates have been calculated using the deaths recorded as occurring in Great Britain each year and the resident population at 30 June of each year, as estimated by the Registrars General of England and Wales and of Scotland.

Tables 1 and 2 show central death rates for Great Britain for the years 1984 to 1987, together with the ratios of these rates to the corresponding average rates for the three years 1980-82, which have been taken as a standard. Death rates in this form for the years 1971 to 1983 were published in *J.I.A.* 112, 75. To minimize the effect of changes in the age distribution of the population exposed-to-risk, the death rates for age-groups have been calculated, and the comparison with the 1980-82 mortality rates has been made, by standardizing by individual ages on the age distribution of the Great Britain population at the 1981 Census. This represents a slight change in methodology from previous years where the crude death rates for age-groups were calculated. Tables 1 and 2 show figures from 1984 to 1987 on the new basis.

Table 3. *Standardized death-rates for age-groups in Great Britain (standardized on 1981 Census age distribution)*

Year	Under 1	1-14	15-44	45-64	65-79	80 and over	All ages
<i>Males</i>							
1930-32	-0.7953	-0.0337	-0.0390	-0.1738	-0.7192	-2.1402	-0.1827
1950-52	-0.3448	-0.0080	-0.0182	-0.1581	-0.6736	-2.0856	-0.1531
1960-62	-0.2596	-0.0058	-0.0147	-0.1473	-0.6585	-1.8979	-0.1431
1970-72	-0.2024	-0.0049	-0.0136	-0.1383	-0.6390	-1.7605	-0.1354
1980-82	-0.1289	-0.0035	-0.0118	-0.1206	-0.5620	-1.6728	-0.1199
1971	-0.2011	-0.0049	-0.0135	-0.1356	-0.6200	-1.7309	-0.1323
1972	-0.1924	-0.0048	-0.0134	-0.1387	-0.6486	-1.8009	-0.1369
1973	-0.1891	-0.0047	-0.0135	-0.1367	-0.6306	-1.7797	-0.1342
1974	-0.1894	-0.0044	-0.0132	-0.1350	-0.6219	-1.7714	-0.1326
1975	-0.1746	-0.0043	-0.0129	-0.1314	-0.6144	-1.7615	-0.1305
1976	-0.1629	-0.0041	-0.0128	-0.1323	-0.6208	-1.8174	-0.1320
1977	-0.1602	-0.0038	-0.0124	-0.1277	-0.5935	-1.6892	-0.1258
1978	-0.1545	-0.0039	-0.0128	-0.1296	-0.5981	-1.7138	-0.1272
1979	-0.1487	-0.0037	-0.0125	-0.1297	-0.5932	-1.7377	-0.1268
1980	-0.1366	-0.0036	-0.0120	-0.1242	-0.5703	-1.6733	-0.1218
1981	-0.1266	-0.0034	-0.0118	-0.1201	-0.5587	-1.6718	-0.1193
1982	-0.1236	-0.0033	-0.0115	-0.1172	-0.5581	-1.6632	-0.1183
1983	-0.1143	-0.0032	-0.0112	-0.1159	-0.5511	-1.6347	-0.1166
1984	-0.1090	-0.0032	-0.0110	-0.1112	-0.5300	-1.5708	-0.1121
1985	-0.1053	-0.0032	-0.0109	-0.1109	-0.5402	-1.6461	-0.1142
1986	-0.1096	-0.0028	-0.0110	-0.1085	-0.5278	-1.5921	-0.1115
1987	-0.1062	-0.0028	-0.0110	-0.1050	-0.5080	-1.4682	-0.1067
<i>Females</i>							
1930-32	-0.5973	-0.0305	-0.0337	-0.1303	-0.5763	-1.8921	-0.2071
1950-52	-0.2648	-0.0062	-0.0143	-0.0911	-0.4750	-1.7426	-0.1624
1960-62	-0.1987	-0.0042	-0.0093	-0.0779	-0.4147	-1.5523	-0.1407
1970-72	-0.1552	-0.0035	-0.0083	-0.0747	-0.3654	-1.3749	-0.1253
1980-82	-0.0998	-0.0026	-0.0068	-0.0687	-0.3211	-1.2642	-0.1122
1971	-0.1536	-0.0035	-0.0082	-0.0736	-0.3546	-1.3498	-0.1226
1972	-0.1492	-0.0035	-0.0082	-0.0756	-0.3681	-1.3944	-0.1265
1973	-0.1453	-0.0033	-0.0081	-0.0739	-0.3607	-1.3899	-0.1248
1974	-0.1426	-0.0033	-0.0079	-0.0745	-0.3540	-1.3708	-0.1232
1975	-0.1377	-0.0029	-0.0079	-0.0726	-0.3446	-1.3545	-0.1207
1976	-0.1213	-0.0028	-0.0077	-0.0736	-0.3505	-1.4110	-0.1236
1977	-0.1241	-0.0028	-0.0074	-0.0712	-0.3346	-1.3107	-0.1170
1978	-0.1211	-0.0030	-0.0077	-0.0724	-0.3357	-1.3086	-0.1174
1979	-0.1155	-0.0027	-0.0072	-0.0731	-0.3357	-1.3220	-0.1178
1980	-0.1099	-0.0027	-0.0070	-0.0700	-0.3245	-1.2624	-0.1131
1981	-0.0947	-0.0026	-0.0067	-0.0682	-0.3192	-1.2567	-0.1115
1982	-0.0950	-0.0024	-0.0066	-0.0679	-0.3203	-1.2547	-0.1114
1983	-0.0893	-0.0024	-0.0064	-0.0668	-0.3136	-1.2310	-0.1092
1984	-0.0859	-0.0023	-0.0063	-0.0651	-0.3046	-1.1714	-0.1052
1985	-0.0836	-0.0025	-0.0062	-0.0656	-0.3127	-1.2293	-0.1086
1986	-0.0808	-0.0023	-0.0061	-0.0631	-0.3060	-1.1908	-0.1055
1987	-0.0804	-0.0022	-0.0061	-0.0624	-0.2974	-1.1115	-0.1011

**Table 4. Rate of standardized death-rates for age-groups in Great Britain to the rates for 1980-82 (standardized on 1981 Census age distribution)**

Year	Under 1	1-14	15-44	45-64	65-79	80 and over	All ages
<i>Males</i>							
1930-32	6.170	9.712	3.316	1.441	1.280	1.279	1.524
1950-52	2.675	2.305	1.548	1.311	1.199	1.247	1.277
1960-62	2.014	1.671	1.250	1.221	1.172	1.135	1.193
1970-72	1.570	1.412	1.156	1.147	1.137	1.052	1.129
1980-82	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1971	1.560	1.412	1.148	1.124	1.103	1.035	1.103
1972	1.493	1.383	1.139	1.150	1.154	1.077	1.142
1973	1.467	1.354	1.148	1.133	1.122	1.064	1.119
1974	1.469	1.268	1.122	1.119	1.107	1.059	1.106
1975	1.355	1.239	1.097	1.089	1.093	1.053	1.088
1976	1.264	1.182	1.088	1.097	1.105	1.086	1.101
1977	1.243	1.095	1.054	1.059	1.056	1.010	1.049
1978	1.199	1.124	1.088	1.075	1.064	1.025	1.061
1979	1.154	1.066	1.063	1.075	1.056	1.039	1.058
1980	1.060	1.037	1.020	1.030	1.015	1.000	1.016
1981	.982	.980	1.003	.996	.994	.999	.995
1982	.959	.951	.978	.972	.993	.994	.987
1983	.887	.922	.952	.961	.981	.977	.972
1984	.846	.928	.933	.922	.943	.939	.935
1985	.817	.918	.928	.919	.961	.984	.953
1986	.850	.806	.932	.899	.939	.952	.930
1987	.824	.807	.932	.871	.904	.878	.890
<i>Females</i>							
1930-32	5.985	11.961	4.963	1.896	1.795	1.497	1.846
1950-52	2.653	2.431	2.106	1.325	1.479	1.378	1.447
1960-62	1.991	1.647	1.370	1.133	1.292	1.228	1.254
1970-72	1.555	1.373	1.222	1.087	1.138	1.088	1.117
1980-82	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1971	1.539	1.373	1.208	1.071	1.104	1.068	1.093
1972	1.495	1.373	1.208	1.100	1.147	1.103	1.127
1973	1.456	1.294	1.193	1.075	1.123	1.099	1.112
1974	1.429	1.294	1.163	1.084	1.103	1.084	1.098
1975	1.380	1.137	1.163	1.056	1.073	1.071	1.076
1976	1.215	1.098	1.134	1.071	1.092	1.116	1.102
1977	1.243	1.098	1.090	1.036	1.042	1.037	1.043
1978	1.213	1.176	1.134	1.053	1.046	1.035	1.046
1979	1.157	1.059	1.060	1.063	1.046	1.046	1.050
1980	1.101	1.059	1.031	1.018	1.011	.999	1.008
1981	.949	1.020	.987	.992	.994	.994	.994
1982	.952	.941	.972	.988	.998	.992	.993
1983	.895	.941	.943	.972	.977	.974	.973
1984	.861	.911	.922	.948	.949	.927	.937
1985	.837	.959	.908	.955	.974	.972	.967
1986	.809	.880	.900	.918	.953	.942	.940
1987	.806	.859	.893	.907	.926	.879	.901

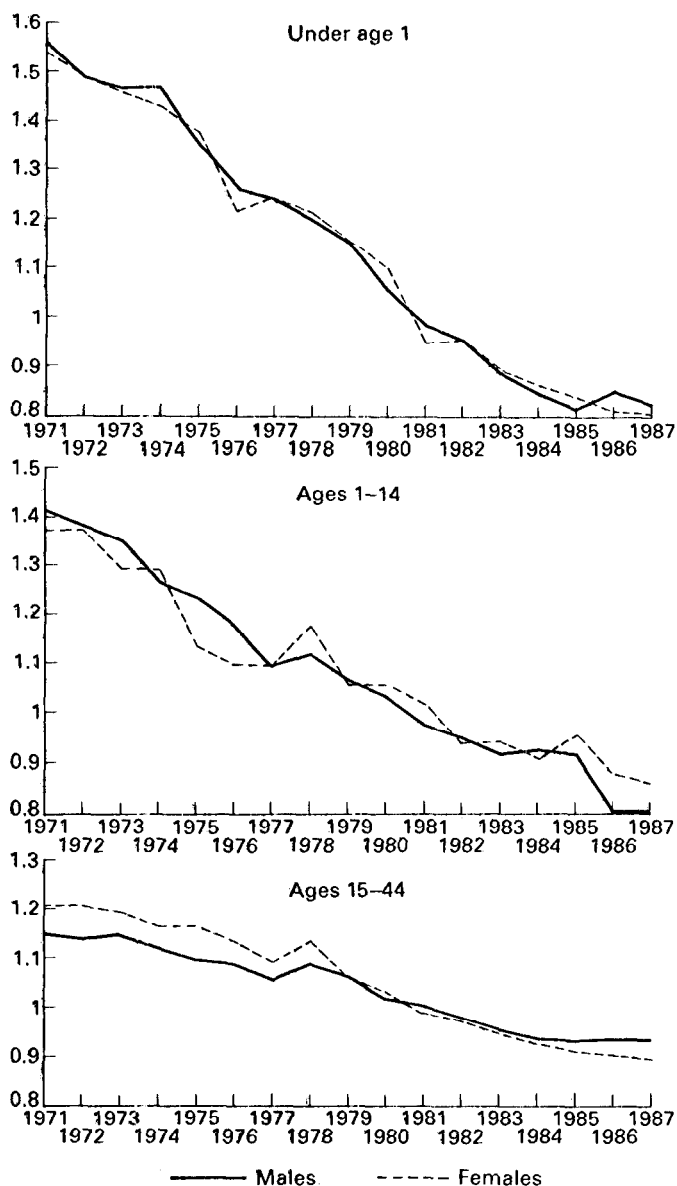


Figure 1. Ratios of standardized group death-rates to 1980-82 rates— children and young adults.

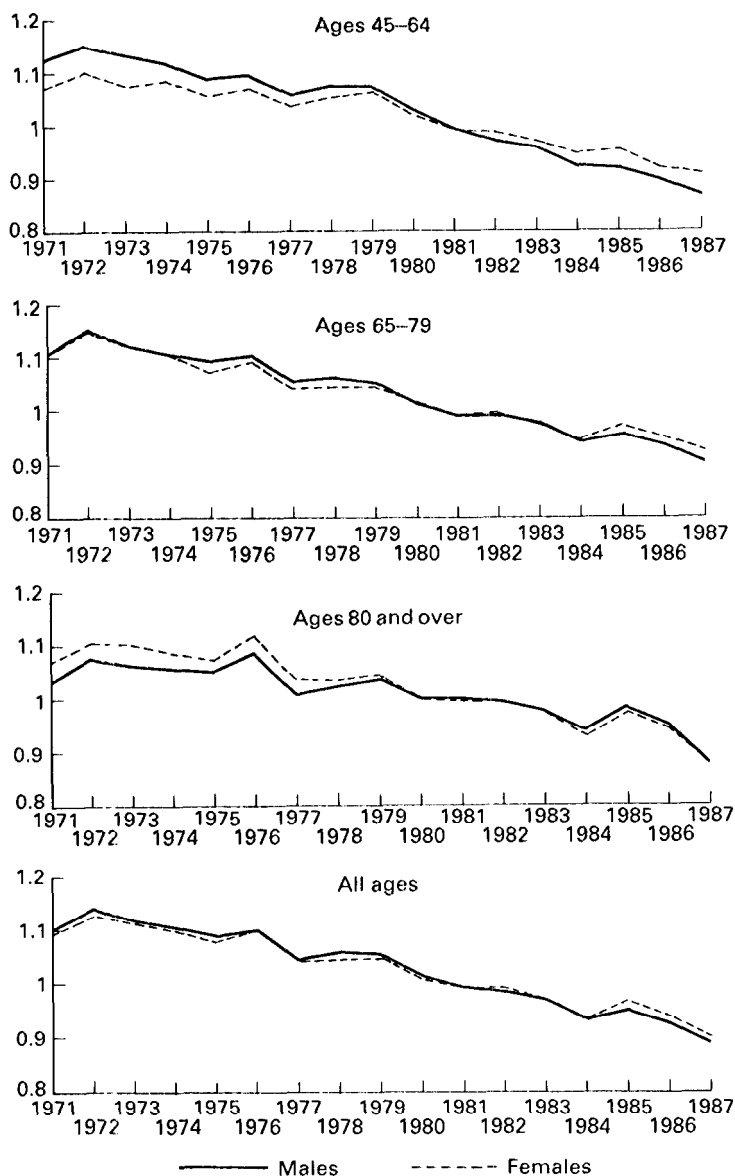


Figure 2. Ratios of standardized group death-rates to 1980-82 rates—older adults and all ages.

The overall pattern of mortality changes over the last 50 years can be illustrated by reference to standardized group death rates for a few broad age-groups. These are set out in Table 3 for each year from 1971, as well as for three-year periods about the Census dates in 1931, 1951, 1961, 1971 and 1981. The ratios of these rates to the 1980-82 standard are given in Table 4 and are also shown graphically in Figures 1 and 2. Six age-groups have been used: under age 1 (infants), 1-14 (children), 15-44 (younger adults), 45-64 (the middle-aged), 65-79 (the younger elderly) and 80 and over (the elderly). The group death rates and ratios have been standardized by single ages on the age distribution of the Great Britain population at the 1981 Census, so as to reduce the effect of changes in the age structure of the population.

Mortality overall (standardized by age-groups) was about 4% lower in 1987 than in 1986 and some 10% lower than in 1980-82. Mortality was lower than in 1986 for most age-groups, although there were increases in mortality for males aged 10 to 14, 20 to 24 and 30 to 34 and for females aged 25 to 39 and 50 to 54. The increase in mortality between 1986 and 1987 for males aged 30 to 34 was 3%, which may suggest some evidence of increased mortality from AIDS. However, only a small proportion of the increase would be accounted for by the reported deaths from AIDS in this age-group. It is tempting to argue that there must be significant numbers of unreported deaths from AIDS but, since neither of the adjacent age-groups shows a similar feature, the evidence for this is rather equivocal. No firm conclusions can be drawn about this feature at the moment.

The average level of mortality in the years 1985-87 was about  $7\frac{1}{2}\%$  lower than the average in the years 1980-82 for males and 6% lower for females. Infant mortality fell by some  $17\frac{1}{2}\%$  between these two periods and the mortality of children between 1 and 15 years of age fell by about 13%. Mortality only failed to improve between 1980-82 and 1985-87 for males aged 30 to 34.