# 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. 111, 181 and dealt with mortality in 1981.

Following the 1981 Census, revised estimates of the 'home' population of England and Wales since 1961 have been published. These allow for revision of past estimates in the light of the Census and also for a new definition of 'home' population, which brings the concept closer to that of 'resident' population. The 'home' population is now defined as including residents temporarily outside the country but excluding 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.

This note presents details of the mortality experience in 1982 and 1983. However, the opportunity has been taken to revise the figures for previous years onto the basis of the new definition of 'home' population. The figures for deaths are not precisely consistent with this definition of the population since they do not necessarily include all deaths of residents whilst temporarily absent from the United Kingdom.

Tables 1 and 2 show central death-rates for Great Britain for the years 1971 to 1983 and Tables 3 and 4 show the ratios of those rates to the corresponding average rates for the 3 years 1980-82, which are now taken as the standard.

The developing pattern of mortality can be illustrated by reference to standardized group death-rates for a few broad age-groups. These are set out in Table 5 for each year from 1971, as well as for a sequence of 3 year periods about the Census dates in 1931, 1951, 1961, 1971 and 1981. The ratios of these rates to the 1980-82 rates are given in Table 6 and they 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 (younger elderly) and 80 and over (the elderly). The group rates and ratios have been standardized by 5 -year age-groups on the age distribution of the Great Britain population at the 1981 Census, in order to eliminate as far as possible the effect of changes in the age structure of the population. However, such changes still have a distorting effect on the oldest age-group, particularly for years up to 1970 for which no disaggregation of the estimated population in the 85 and over age group is available.

The availability of consistent figures spanning a period of 50 years enables an analysis to be made of changing rates of improvement in mortality experience. Table 7 gives annual rates of improvement by 5 -year age-groups for periods of 10



为

1978
.01545
.00061
.00033
.00030
.00090
.00100
.00090
.00103
.00164
.00261
.00491
.00988
.01467
.02474
.03934
.06241
.09712
.14360
.20871
.29261

.01235
.01272

~
.01227
.01305

. 00294
.00536
응
.01566
.02502
.04119
. 06622
. 09826

․․
Table 1. Death-rates for age-groups in Great Britain in the years 1971 to 1983-Males

| 1980 | 1981 |
| :---: | :---: |
| .01366 | .01266 |

 .00449 .01422
.02249
N .09096 N
0
0
0
0
0
$\stackrel{\substack{0}}{0} \frac{2}{6}$

 $\begin{array}{ll}1976 & 1977 \\ .1629 & .01602\end{array}$ \% 00084 8 8
8
8
8
8 00154
.00264 훙 01440 $\stackrel{\circ}{x}$ 06209言
 1975
01746 .00035
.00034
.00087 .00100 .00085
.00108 . 000154 .00523
.00922 . 02474 .04044
.06463 .09889
.14720
.21337 . 30767 섬 1974
.01894
.00074
.00036
.00032
.00090
.00096
.00088
.00109
.00160 .00294 .00936

.01566 | $\stackrel{N}{6}$ |
| :---: |
| 응 |

 .01234
.01326 * Standardized on 1981 Census age distribution. m 1972
.01924 -00042 .00036 .00086
.00099 .00088 . 00169 . 00297
  . 04330 8 - 10240 - 14921 - 22245
 1971
.02011
.00076
.00044 00091 00095 00089 .00168 $\stackrel{+}{6}$ .00548 00914
-01538 02573 -04190
.06519
.09760
.14376
.21179
.30326 .01212
.01323

| Age |
| :---: |
| groups |
| Under 1 |
| $1-4$ |
| $5-9$ |
| $10-14$ |
| $15-19$ |
| $20-24$ |
| $25-29$ |
| $30-34$ |
| $35-39$ |
| $40-44$ |
| $45-49$ |
| $50-54$ |
| $55-59$ |
| $60-64$ |
| $65-69$ |
| $70-74$ |
| $75-79$ |
| $80-84$ |
| $85-89$ |
| $90 \&$ over |
| All ages: |
| Crude |
| Standardized* |

1983
.00893
.00040
.00019
.00018
.00031
.00031
.00041
.00058
.00093
.00153
.00267
.00461
.00758
.01191
.01902
.03039
.05056
.08720
.14803
.24270
.01146
.01092


| 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| . 01536 | . 01492 | . 01453 | . 01426 | . 01377 | .01213 | . 01241 | . 01211 | .01155 | -01099 | -00947 |
| . 00063 | . 00070 | .00061 | . 00059 | . 00054 | . 00048 | . 00051 | . 00053 | . 00048 | . 00046 | . 00045 |
| . 00029 | . 00029 | . 00027 | . 00026 | . 00024 | . 00024 | -00020 | -00023 | . 00021 | . 00021 | . 00020 |
| -00024 | . 00019 | . 00021 | . 00023 | . 00018 | -00021 | -00020 | -00022 | $\cdot 00020$ | -00020 | -00020 |
| . 00038 | . 00040 | . 00041 | . 00037 | . 00037 | -00034 | .000.34 | .00037 | .00031 | -00033 | -00032 |
| .00041 | . 00043 | . 00043 | . 00042 | -00043 | .00041 | -00043 | .00042 | . 000037 | . 00039 | . 000035 |
| .00049 | . 00049 | . 00050 | . 00046 | . 00050 | . 00048 | ()())45 | .00051 | .0)(0)48 | . 000046 | .00043 |
| .00075 | . 00070 | . 00069 | . 00066 | . 00067 | . 00068 | -00)(6) | .00067 | .00065 | $\cdot 00061$ | .00061 |
| . 00118 | . 00118 | . 00112 | . 00116 | . 00112 | . 00108 | (0)1()9 | .00110 | .00104 | .00102 | . 00093 |
| .00205 | . 00206 | . 00205 | .00199 | . 00197 | . 00193 | -0182 | .00188 | .(0)177 | . 00168 | .00167 |
| . 00356 | . 00357 | .00352 | .00346 | .00330 | .00332 | 00321 | .(0)315 | -00314 | -00293 | -00288 |
| . 00533 | . 00550 | .00537 | . 00541 | . 00532 | . 00543 | .00511 | -(0)534 | . 00532 | -00494 | . 00485 |
| . 00809 | . 00839 | . 00823 | . 00834 | . 00801 | .00794 | . 00788 | - 00799 | . 00798 | . 00793 | . 00775 |
| . 01251 | . 01283 | . 01250 | .01264 | . 01247 | .01281 | -01232 | . 01252 | . 01287 | . 01223 | .01186 |
| . 02008 | . 02080 | . 02060 | . 02029 | . 01986 | . 02008 | .01952 | .01983 | . 01956 | . 01911 | - 01886 |
| . 03447 | . 03573 | . 03486 | . 03434 | . 03325 | . 03386 | .03234 | .03234 | . 03242 | . 03132 | .03113 |
| . 05911 | . 06147 | . 06011 | . 05875 | . 05726 | . 05835 | . 05516 | .05513 | . 05543 | .05331 | . 05191 |
| . 09814 | . 10196 | $\cdot 10207$ | - 10015 | .09911 | - 10233 | . 09627 | . 09544 | . 09590 | . 09061 | . 09030 |
| . 16088 | $\cdot 16545$ | $\cdot 16387$ | - 16028 | - 15914 | $\cdot 16639$ | - 15469 | $\cdot 15748$ | -15941 | - 15326 | - 15093 |
| . 25698 | . 26437 | . 26380 | . 26580 | . 26013 | . 27410 | . 24832 | . 24420 | . 24847 | . 23966 | . 24192 |
| .01105 | . 01153 | . 01148 | . 01146 | . 01138 | . 01178 | .01130 | . 01151 | -01168 | $\cdot 01141$ | . 01140 |
| .01226 | . 01265 | . 01248 | . 01232 | . 01207 | . 01236 | . 01170 | . 01174 | . 01178 | . 011131 | . 01115 |

* Standardized on 1981 Census age distribution.

Table 3. Ratios of death-rates for age-groups in Great Britain in the years 1971 to 1983 to the rates for 1980-82-Males

| Age <br> groups | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: |
| Under 1 | 1.56 | 1.49 | 1.47 | 1.47 | 1.35 | 1.26 | 1.24 | 1.20 | 1.15 | 1.06 | .98 | .96 | .89 |
| $1-4$ | 1.40 | 1.44 | 1.44 | 1.36 | 1.25 | 1.20 | 1.12 | 1.12 | 1.00 | 1.06 | .98 | .96 | .87 |
| $5-9$ | 1.58 | 1.52 | 1.45 | 1.29 | 1.27 | 1.23 | 1.19 | 1.18 | 1.22 | 1.09 | .99 | .93 | .96 |
| $10-14$ | 1.35 | 1.26 | 1.20 | 1.14 | 1.21 | 1.11 | 1.01 | 1.06 | 1.04 | .98 | 1.01 | 1.00 | .97 |
| $15-19$ | 1.11 | 1.05 | 1.05 | 1.09 | 1.06 | 1.08 | 1.02 | 1.10 | 1.05 | 1.02 | 1.01 | .97 | .92 |
| $20-24$ | 1.08 | 1.13 | 1.20 | 1.09 | 1.14 | 1.11 | 1.07 | 1.14 | 1.06 | 1.01 | .98 | 1.00 | .93 |
| $25-29$ | 1.04 | 1.03 | 1.09 | 1.02 | .99 | 1.02 | 1.05 | 1.05 | 1.07 | 1.01 | 1.01 | .98 | .99 |
| $30-34$ | 1.13 | 1.13 | 1.12 | 1.11 | 1.10 | 1.07 | 1.01 | 1.05 | 1.06 | .99 | .99 | 1.02 | 1.00 |
| $35-39$ | 1.20 | 1.21 | 1.18 | 1.15 | 1.10 | 1.13 | 1.10 | 1.17 | 1.09 | 1.05 | .99 | .95 | .96 |
| $40-44$ | 1.23 | 1.20 | 1.19 | 1.19 | 1.12 | 1.11 | 1.07 | 1.06 | 1.06 | 1.02 | 1.01 | .97 | .94 |
| $45-49$ | 1.23 | 1.24 | 1.24 | 1.21 | 1.18 | 1.13 | 1.11 | 1.11 | 1.08 | 1.03 | 1.01 | .96 | .96 |
| $50-54$ | 1.13 | 1.16 | 1.14 | 1.15 | 1.14 | 1.13 | 1.10 | 1.11 | 1.09 | 1.04 | 1.00 | .96 | .92 |
| $55-59$ | 1.08 | 1.11 | 1.12 | 1.10 | 1.04 | 1.05 | 1.01 | 1.03 | 1.05 | 1.02 | 1.00 | .98 | .95 |
| $60-64$ | 1.13 | 1.16 | 1.12 | 1.10 | 1.09 | 1.11 | 1.07 | 1.09 | 1.09 | 1.03 | .99 | .98 | .99 |
| $65-69$ | 1.14 | 1.18 | 1.14 | 1.12 | 1.10 | 1.10 | 1.06 | 1.07 | 1.05 | 1.01 | .99 | .99 | 1.00 |
| $70-74$ | 1.11 | 1.17 | 1.13 | 1.13 | 1.10 | 1.11 | 1.06 | 1.06 | 1.05 | 1.01 | 1.00 | .99 | .98 |
| $75-79$ | 1.06 | 1.12 | 1.10 | 1.07 | 1.08 | 1.10 | 1.05 | 1.06 | 1.06 | 1.02 | .99 | .99 | .97 |
| $80-84$ | 1.03 | 1.07 | 1.06 | 1.06 | 1.06 | 1.09 | 1.01 | 1.03 | 1.04 | 1.01 | 1.00 | 1.00 | .98 |
| $85-89$ | 1.03 | 1.08 | 1.05 | 1.04 | 1.04 | 1.08 | 1.00 | 1.01 | 1.04 | 1.00 | 1.00 | 1.00 | .98 |
| $90 \&$ over | 1.08 | 1.11 | 1.11 | 1.12 | 1.09 | 1.12 | 1.06 | 1.04 | 1.05 | .98 | 1.02 | .99 | .99 |
| All ages: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Crude | 1.00 | 1.04 | 1.03 | 1.02 | 1.01 | 1.04 | 1.00 | 1.02 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 |
| Standardized* | 1.10 | 1.14 | 1.12 | 1.11 | 1.09 | 1.10 | 1.05 | 1.06 | 1.06 | 1.02 | 1.00 | .99 | .97 |

Table 4. Ratios of death-rates for age-groups in Great Britain in the years 1971 to 1983 to the rates for 1980-82-Females

| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| groups | 1.971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| Under 1 | 1.54 | 1.49 | 1.45 | 1.43 | 1.38 | 1.21 | 1.24 | 1.21 | 1.16 | 1.10 | .95 | .95 | .89 |
| $1-4$ | 1.44 | 1.61 | 1.39 | 1.35 | 1.24 | 1.09 | 1.16 | 1.21 | 1.09 | 1.04 | 1.03 | .93 | .92 |
| $5-9$ | 1.47 | 1.48 | 1.36 | 1.32 | 1.25 | 1.22 | 1.04 | 1.17 | 1.09 | 1.10 | 1.00 | .90 | .98 |
| $10-14$ | 1.24 | .99 | 1.07 | 1.17 | .91 | 1.08 | 1.01 | 1.12 | 1.05 | 1.00 | 1.00 | .99 | .94 |
| $15-19$ | 1.20 | 1.26 | 1.30 | 1.17 | 1.16 | 1.09 | 1.09 | 1.17 | .99 | 1.06 | 1.01 | .94 | .98 |
| $20-24$ | 1.13 | 1.20 | 1.19 | 1.15 | 1.17 | 1.13 | 1.18 | 1.15 | 1.02 | 1.09 | .95 | .96 | .86 |
| $25-29$ | 1.12 | 1.11 | 1.13 | 1.04 | 1.15 | 1.10 | 1.02 | 1.17 | 1.09 | 1.05 | .99 | .97 | .95 |
| $30-34$ | 1.22 | 1.14 | 1.12 | 1.07 | 1.09 | 1.11 | 1.04 | 1.09 | 1.05 | .99 | .99 | 1.01 | .94 |
| $35-39$ | 1.23 | 1.23 | 1.16 | 1.21 | 1.17 | 1.13 | 1.13 | 1.14 | 1.08 | 1.06 | .97 | .98 | .96 |
| $40-44$ | 1.25 | 1.25 | 1.25 | 1.21 | 1.20 | 1.18 | 1.11 | 1.14 | 1.08 | 1.03 | 1.02 | .96 | .93 |
| $45-49$ | 1.24 | 1.25 | 1.23 | 1.21 | 1.15 | 1.16 | 1.12 | 1.10 | 1.10 | 1.02 | 1.01 | .97 | .93 |
| $50-54$ | 1.10 | 1.14 | 1.11 | 1.12 | 1.10 | 1.12 | 1.06 | 1.11 | 1.10 | 1.02 | 1.00 | .97 | .95 |
| $55-59$ | 1.04 | 1.08 | 1.06 | 1.07 | 1.03 | 1.02 | 1.01 | 1.03 | 1.02 | 1.02 | .99 | .99 | .97 |
| $60-64$ | 1.04 | 1.06 | 1.04 | 1.05 | 1.03 | 1.06 | 1.02 | 1.04 | 1.07 | 1.01 | .98 | 1.00 | .99 |
| $65-69$ | 1.06 | 1.09 | 1.08 | 1.07 | 1.04 | 1.06 | 1.03 | 1.04 | 1.03 | 1.01 | .99 | 1.00 | 1.00 |
| $70-74$ | 1.11 | 1.15 | 1.12 | 1.10 | 1.07 | 1.09 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | .97 |
| $75-79$ | 1.13 | 1.17 | 1.15 | 1.12 | 1.09 | 1.11 | 1.05 | 1.05 | 1.06 | 1.02 | .99 | .99 | .96 |
| $80-84$ | 1.09 | 1.13 | 1.13 | 1.11 | 1.10 | 1.14 | 1.07 | 1.06 | 1.06 | 1.01 | 1.00 | .99 | .97 |
| $85-89$ | 1.06 | 1.09 | 1.08 | 1.06 | 1.05 | 1.10 | 1.02 | 1.04 | 1.05 | 1.01 | .99 | 1.00 | .98 |
| $90 \&$ over | 1.06 | 1.09 | 1.09 | 1.10 | 1.08 | 1.13 | 1.03 | 1.01 | 1.03 | .99 | 1.00 | 1.01 | 1.00 |

Table 5. 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 | $\begin{gathered} \text { All } \\ \text { ages } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males |  |  |  |  |  |  |  |
| 1930-32 | . 07953 | . 00337 | . 00390 | . 01738 | . 07192 | . 21402 | . 01827 |
| 1950-52 | -03448 | -00080 | 00182 | . 01581 | . 06736 | - 20856 | 01531 |
| 1960-62 | . 02596 | . 00058 | . 00147 | . 01473 | . 06585 | . 18979 | . 01431 |
| 1970-72 | -02024 | -00049 | 00136 | . 01383 | . 06390 | $\cdot 17605$ | - 01354 |
| 1980-82 | . 01289 | . 00034 | 00118 | . 01205 | . 05624 | . 16694 | . 01198 |
| 1971 | -02011 | . 00049 | . 00135 | . 01356 | 06200 | . 17309 | . 01323 |
| 1972 | -01924 | . 00048 | . 00134 | . 01387 | . 06486 | . 18009 | . 01369 |
| 1973 | -01891 | . 00047 | . 00135 | . 01367 | 06306 | . 17797 | . 01342 |
| 1974 | . 01894 | . 00044 | . 00132 | . 01350 | . 06219 | . 17714 | . 01326 |
| 1975 | . 01746 | . 00043 | .00129 | . 01314 | . 06144 | . 17615 | -01305 |
| 1976 | $\cdot 01629$ | . 00041 | . 00128 | . 01323 | . 06208 | . 18174 | . 01320 |
| 1977 | -01602 | . 00038 | . 00124 | . 01277 | 05935 | - 16892 | . 01258 |
| 1978 | . 01545 | .00039 | . 00128 | . 01296 | 05981 | . 17138 | . 01272 |
| 1979 | $\cdot 01487$ | .00037 | .00125 | . 01297 | -05932 | - 17377 | . 01268 |
| 1980 | .01366 | . 00036 | . 00120 | . 01242 | . 05703 | . 16733 | . 01218 |
| 1981 | -01266 | -00034 | . 00118 | . 01201 | . 05587 | - 16718 | . 01193 |
| 1982 | .01236 | . 00033 | . 00115 | . 01172 | . 05581 | . 16632 | . 01183 |
| 1983 | . 01143 | . 00032 | .00112 | .01159 | . 05511 | $\cdot 16347$ | . 01166 |
| Females |  |  |  |  |  |  |  |
| 1930-32 | 05973 | . 00305 | . 00337 | . 01303 | . 05763 | . 18921 | . 02071 |
| 1950-52 | 02648 | . 00062 | -00143 | . 00911 | . 04750 | . 17426 | . 01624 |
| 1960-62 | -01987 | . 00042 | -00093 | . 00779 | 04147 | . 15523 | . 01407 |
| 1970-72 | -01552 | . 00035 | -00083 | . 00747 | . 03654 | . 13749 | . 01253 |
| 1980-82 | . 00999 | 00026 | -00068 | . 00687 | . 03213 | - 12579 | .01120 |
| 1971 | 01536 | . 00035 | -00082 | . 00736 | . 03546 | - 13498 | . 01226 |
| 1972 | 01492 | . 00035 | . 00082 | . 00756 | . 03681 | . 13944 | . 01265 |
| 1973 | . 01453 | .00033 | . 00081 | -00739 | .03607 | . 13899 | . 01248 |
| 1974 | . 01426 | . 00033 | .00079 | . 00745 | . 03540 | $\cdot 13708$ | .01232 |
| 1975 | 01377 | . 00029 | .00079 | . 00726 | . 03446 | . 13545 | . 01207 |
| 1976 | . 01213 | . 00028 | $\cdot 00077$ | - 00736 | . 03505 | . 14110 | . 01236 |
| 1977 | -01241 | . 00028 | -00074 | . 00712 | . 03346 | . 13107 | . 01170 |
| 1978 | 01211 | . 00030 | -00077 | . 00724 | . 03357 | . 13086 | . 01174 |
| 1979 | 01155 | . 00027 | . 00072 | . 00731 | . 03357 | . 13220 | . 01178 |
| 1980 | 01099 | . 00027 | $\cdot 00070$ | . 00700 | $\cdot 03245$ | . 12624 | .01131 |
| 1981 | . 00947 | . 00026 | . 00067 | . 00682 | -03192 | . 12567 | . 01115 |
| 1982 | . 00950 | . 00024 | $\cdot 00066$ | . 00679 | . 03203 | . 12547 | . 01114 |
| 1983 | $\cdot 00893$ | -00024 | .00064 | . 00668 | . 03136 | . 12310 | . 01092 |

Table 6. Ratios 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males |  |  |  |  |  |  |  |
| 1930-32 | $6 \cdot 168$ | $9 \cdot 735$ | $3 \cdot 320$ | 1-442 | 1.279 | $1 \cdot 282$ | 1.525 |
| 1950-52 | 2.674 | $2 \cdot 326$ | 1.550 | 1-312 | $1 \cdot 198$ | 1-249 | $1 \cdot 278$ |
| 1960-62 | 2.013 | I-669 | 1.254 | 1-222 | $1 \cdot 171$ | $1 \cdot 137$ | $1 \cdot 194$ |
| 1970-72 | 1.570 | 1.414 | $1 \cdot 155$ | 1-148 | 1.136 | $1 \cdot 055$ | $1 \cdot 130$ |
| 1980-82 | 1.000 | I•000 | $1 \cdot 000$ | I•000 | $1 \cdot 000$ | $1 \cdot 000$ | 1.000 |
| 1971 | 1.560 | 1.430 | $1 \cdot 151$ | I-125 | 1-102 | 1.037 | $1 \cdot 104$ |
| 1972 | 1.492 | $1 \cdot 397$ | $1 \cdot 140$ | [151 | $1 \cdot 153$ | $1 \cdot 079$ | $1 \cdot 143$ |
| 1973 | 1.467 | 1-362 | $1 \cdot 150$ | 1.135 | $1 \cdot 121$ | $1 \cdot 066$ | $1 \cdot 120$ |
| 1974 | 1.469 | 1. 262 | $1 \cdot 125$ | $1 \cdot 120$ | $1 \cdot 106$ | $1 \cdot 061$ | $1 \cdot 106$ |
| 1975 | $1 \cdot 354$ | I. 243 | 1-094 | I-090 | 1.093 | $1 \cdot 055$ | 1-089 |
| 1976 | $1 \cdot 264$ | $1 \cdot 178$ | 1-093 | I $\cdot 098$ | $1 \cdot 104$ | $1 \cdot 089$ | 1.101 |
| 1977 | $1 \cdot 243$ | 1-104 | 1.057 | 1-060 | 1.055 | $1 \cdot 012$ | $1 \cdot 050$ |
| 1978 | $1 \cdot 198$ | $1 \cdot 114$ | 1.092 | $1 \cdot 076$ | 1.064 | 1.027 | 1.062 |
| 1979 | $1 \cdot 153$ | 1.073 | 1.063 | $1 \cdot 076$ | 1.055 | 1.041 | 1.059 |
| 1980 | $1 \cdot 060$ | 1.040 | 1.019 | $1 \cdot 031$ | $1 \cdot 014$ | $1 \cdot 002$ | $1 \cdot 016$ |
| 1981 | . 982 | . 993 | $1 \cdot 002$ | . 996 | . 994 | 1.001 | . 996 |
| 1982 | . 959 | . 966 | . 980 | . 973 | 992 | . 996 | . 988 |
| 1983 | -886 | . 928 | . 955 | . 962 | 980 | . 979 | .973 |
| Females |  |  |  |  |  |  |  |
| 1930-32 | 5.982 | 12.007 | 4.974 | 1.896 | 1.793 | 1.504 | 1.849 |
| 1950-52 | $2 \cdot 652$ | 2.434 | $2 \cdot 112$ | 1.326 | 1.478 | $1 \cdot 385$ | 1.450 |
| 1960-62 | 1.990 | 1.643 | $1 \cdot 377$ | $1 \cdot 134$ | 1.291 | 1.234 | 1.256 |
| 1970-72 | $1 \cdot 554$ | $1 \cdot 380$ | $1 \cdot 220$ | 1.087 | $1 \cdot 137$ | 1.093 | $1 \cdot 119$ |
| 1980-82 | $1 \cdot 000$ | 1.000 | $1 \cdot 000$ | $1 \cdot 000$ | 1.000 | 1.000 | $1 \cdot 000$ |
| 1971 | 1.538 | 1-384 | $1 \cdot 210$ | [.071 | $1 \cdot 104$ | 1.073 | 1.094 |
| 1972 | 1.494 | $1 \cdot 382$ | $1 \cdot 211$ | [100 | $1 \cdot 145$ | $1 \cdot 108$ | $1 \cdot 130$ |
| 1973 | 1.455 | 1.282 | $1 \cdot 197$ | 1.076 | $1 \cdot 122$ | $1 \cdot 105$ | $1 \cdot 115$ |
| 1974 | 1.428 | 1.285 | 1.161 | [.084 | $1 \cdot 102$ | $1 \cdot 090$ | $1 \cdot 100$ |
| 1975 | $1 \cdot 379$ | $1 \cdot 135$ | 1.163 | [.057 | 1.072 | $1 \cdot 077$ | $1 \cdot 078$ |
| 1976 | $1 \cdot 215$ | $1 \cdot 119$ | $1 \cdot 134$ | 1.071 | 1.091 | $1 \cdot 122$ | $1 \cdot 104$ |
| 1977 | 1.243 | 1.084 | 1.098 | 1.036 | 1.041 | 1.042 | $1 \cdot 044$ |
| 1978 | $1 \cdot 213$ | $1 \cdot 174$ | $1 \cdot 140$ | 1.053 | 1.045 | $1 \cdot 040$ | $1 \cdot 049$ |
| 1979 | $1 \cdot 157$ | $1 \cdot 076$ | 1.061 | $1 \cdot 064$ | 1.045 | $1 \cdot 051$ | $1 \cdot 052$ |
| 1980 | $1 \cdot 101$ | 1.044 | 1.038 | $1 \cdot 018$ | 1.010 | $1 \cdot 004$ | $1 \cdot 010$ |
| 1981 | . 948 | 1.013 | . 993 | . 993 | 993 | . 999 | . 995 |
| 1982 | . 951 | . 944 | . 969 | . 989 | 997 | . 997 | 995 |
| 1983 | . 894 | . 945 | . 939 | . 972 | 976 | . 979 | 975 |





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．

Table 7. Mortality improvement in Great Britain from 1930-32 to 1980-82

|  | Annual percentage reduction |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1930-32$ | $1950-52$ | $1960-62$ | $1970-72$ | $1930-32$ |
| Age | to | to | to | to | to |
| group | $1950-52$ | $1960-62$ | $1970-72$ | $1980-82$ | $1980-82$ |

Males

| 0 | $4 \cdot 1$ | $2 \cdot 8$ | $2 \cdot 5$ | $4 \cdot 4$ | $3 \cdot 6$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $1-4$ | $8 \cdot 3$ | $3 \cdot 4$ | $2 \cdot 3$ | $3 \cdot 6$ | $5 \cdot 2$ |
| $5-9$ | $6 \cdot 0$ | $3 \cdot 2$ | $1 \cdot 5$ | $4 \cdot 0$ | $4 \cdot 2$ |
| $10-14$ | $5 \cdot 0$ | $3 \cdot 1$ | $\cdot 8$ | $2 \cdot 7$ | $3 \cdot 3$ |
| $15-19$ | $4 \cdot 8$ | $\cdot 5$ | $\cdot 2$ | $\cdot 8$ | $2 \cdot 2$ |
| $20-24$ | $4 \cdot 2$ | $2 \cdot 0$ | $1 \cdot 5$ | $1 \cdot 1$ | $2 \cdot 6$ |
| $25-29$ | $3 \cdot 9$ | $3 \cdot 8$ | $1 \cdot 3$ | $\cdot 5$ | $2 \cdot 7$ |
| $30-34$ | $3 \cdot 7$ | $3 \cdot 3$ | $1 \cdot 1$ | $1 \cdot 3$ | $2 \cdot 6$ |
| $35-39$ | $3 \cdot 6$ | $1 \cdot 9$ | $1 \cdot 4$ | $1 \cdot 8$ | $2 \cdot 5$ |
| $40-44$ | $3 \cdot 0$ | $1 \cdot 5$ | $\cdot 1$ | $2 \cdot 0$ | $1 \cdot 9$ |
| $45-49$ | $2 \cdot 0$ | $1 \cdot 6$ | $(\cdot 2)$ | $2 \cdot 1$ | $1 \cdot 5$ |
| $50-54$ | $\cdot 8$ | $1 \cdot 4$ | $\cdot 2$ | $1 \cdot 4$ | $1 \cdot 0$ |
| $55-59$ | $\cdot 3$ | $\cdot 6$ | $\cdot 8$ | $1 \cdot 0$ | $\cdot 6$ |
| $60-64$ | - | $\cdot 3$ | $\cdot 8$ | $1 \cdot 5$ | $\cdot 5$ |
| $65-69$ | $\cdot 2$ | $\cdot 2$ | $\cdot 3$ | $1 \cdot 6$ | $\cdot 5$ |
| $70-74$ | $\cdot 4$ | $\cdot 1$ | $\cdot 2$ | $1 \cdot 4$ | $\cdot 5$ |
| $75-79$ | $\cdot 4$ | $\cdot 5$ | $\cdot 4$ | $\cdot 9$ | $\cdot 5$ |
| $80-84$ | $\cdot 3$ | $\cdot 7$ | $1 \cdot 0$ | $\cdot 3$ | $\cdot 5$ |
| $85 \&$ over | $(\cdot 1)$ | $1 \cdot 2$ | $\cdot 4$ | $\cdot 8$ | $\cdot 5$ |

Females

| 0 | + 0 | 2.8 | $2 \cdot 4$ | 4.3 | $3 \cdot 5$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1-4 | 8.5 | $3 \cdot 9$ | 1.9 | $4 \cdot 1$ | 5.4 |
| 5-9 | 7.0 | 3.4 | 1.6 | 3.6 | $4 \cdot 6$ |
| 10-14 | 6.4 | 4.3 | $1 \cdot 3$ | $\cdot 9$ | 3.9 |
| 15-19 | 5.9 | 6.0 | ( 3 ) | 1.7 | 3.9 |
| 20-24 | $5 \cdot 1$ | 6.8 | $1 \cdot 1$ | 2.0 | 4.0 |
| 25-29 | 4.5 | 6.8 | 2.0 | 1.3 | $3 \cdot 8$ |
| 30-34 | 4.2 | 4.8 | 2.0 | 1.8 | 3.4 |
| 35-39 | 3.7 | 3.0 | 1.7 | $2 \cdot 1$ | $2 \cdot 8$ |
| 40-4 | 3.0 | 2.0 | $\cdot 6$ | $2 \cdot 3$ | 2.2 |
| 45-49 | $2 \cdot 4$ | 1.8 | ( 2 ) | $2 \cdot 2$ | 1.7 |
| 50-54 | 2.0 | 1.7 | 1 | $1 \cdot 1$ | 1.4 |
| 55-59 | 1.7 | 1.7 | $\cdot 1$ | 5 | 1.2 |
| 60-64 | 1.5 | 1.3 | $\cdot 9$ | 6 | 1.2 |
| 65-69 | 1.2 | 1.4 | $1 \cdot 1$ | 9 | 1.2 |
| 70-74 | 1.0 | 1.4 | $1 \cdot 1$ | $1 \cdot 3$ | 1.2 |
| 75-79 | -8 | $1 \cdot 3$ | 1.3 | 1.6 | 1.2 |
| 80-84 | . 5 | $1 \cdot 3$ | 1.5 | $1 \cdot 1$ | 1.0 |
| 85 \& over | $\cdot 3$ | 1.0 | $\cdot 8$ | 9 | 6 |

(in one case 20) years and for the full 50 years. A summary of the rates of improvement for the broader age-groupings is given below:

|  | Annual rates of mortality improvement $(\%)$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1930-32$ | $1950-52$ | $1960-62$ | $1970-72$ | $1930-32$ |
| Agc | to | to | to | to | to |
| groups | $1950-52$ | $1960-62$ | $1970-72$ | $1980-82$ | $1980-82$ |


| Males |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | $4 \cdot 1$ | $2 \cdot 8$ | 2.5 | $4 \cdot 4$ | 3.6 |
| 1-14 | 6.9 | $3 \cdot 2$ | 1.7 | $3 \cdot 6$ | 4.5 |
| 15-44 | 3.7 | $2 \cdot 1$ | -8 | $1 \cdot 4$ | $2 \cdot 4$ |
| 45-64 | . 5 | $\cdot 7$ | - 6 | 1.4 | $\cdot 7$ |
| 65-79 | $\cdot 3$ | 2 | $\cdot 3$ | $1 \cdot 3$ | . 5 |
| 80 \& over | 1 | $\cdot 9$ | $\cdot 7$ | 5 | . 5 |
| All ages | -9 | $\cdot 7$ | 6 | 1.2 | $\cdot 8$ |
| Females |  |  |  |  |  |
| 0 | 4.0 | 2.8 | $2 \cdot 4$ | $4 \cdot 3$ | 3.5 |
| 1-14 | 7.7 | 3.8 | 1.8 | $3 \cdot 3$ | 4.9 |
| 15-44 | 4.2 | $4 \cdot 2$ | $1 \cdot 1$ | 2.0 | $3 \cdot 2$ |
| 45-64 | 1.8 | 1.6 | -4 | . 8 | 1.3 |
| 65-79 | 1.0 | 1.3 | . 6 | $1 \cdot 3$ | $1 \cdot 2$ |
| 80 \& over | $\cdot 4$ | $1 \cdot 1$ | $1 \cdot 2$ | $\cdot 9$ | . 8 |
| All ages | $1 \cdot 2$ | 1.4 | 1.2 | $1 \cdot 1$ | $1 \cdot 2$ |

The tendency over the years has been for female mortality rates to fall faster than male rates. Table 8 shows the ratio of female mortality rates to male rates for 5 -year age-groups over the 50 year period.

The rates for the broader age-groupings may be summarized as follows:

| Ratios of female mortality rates to male mortality rates |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1930-32$ | $1950-52$ | $1960-62$ | $1970-72$ | $1930-32$ |
| Age | to | to | to | to | to |
| groups | $1950-52$ | $1960-62$ | $1970-72$ | $1980-82$ | $1980-82$ |
| 0 | .75 | .77 | .77 | .77 | .78 |
| $1-14$ | .91 | .78 | .72 | .71 | .74 |
| $15-44$ | .86 | .79 | .63 | .61 | .58 |
| $45-64$ | .75 | .58 | .53 | .54 | .57 |
| $65-79$ | .80 | .71 | .63 | .57 | .57 |
| $80 \&$ over | .88 | .84 | .82 | .78 | .75 |

Mortality overall (standardized by age-groups) was some 11\% lower in 1980-82 than in 1970-72. The 1983 level was a further $2 \frac{1}{2} \%$ lower. The rate of improvement continues to be most marked for infants, where there was a fall of $36 \%$ from $1970-72$ to $1980-82$ and the 1983 level was $11 \%$ lower still. The improvement from 1970-72 to 1980-82 was significantly greater for nearly all 5 -year age-groups than over the previous 10 years, exceeding $8 \%$ for all age-groups except females aged 55 to 64 and males aged 25 to 29 and over 80 .

From the numbers of deaths reported for 1984, it would appear that there will be a further marked fall, perhaps 2 to $3 \%$, in the overall level of mortality in that year as compared to 1983.

Table 8. Ratios of female mortality rates to male mortality rates

| Age <br> group | $1930-32$ <br> to <br> $1950-52$ | $1950-52$ <br> to <br> $1960-62$ | $1960-62$ <br> to <br> $1970-72$ | $1970-72$ <br> to <br> $1980-82$ | $1930-32$ <br> to <br> $1980-82$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1-4$ | .75 | .77 | .77 | .77 | .78 |
| $5-9$ | .90 | .85 | .81 | .85 | .80 |
| $10-14$ | .88 | .71 | .69 | .69 | .71 |
| $15-19$ | .95 | .71 | .62 | .59 | .71 |
| $20-24$ | .86 | .72 | .41 | .43 | .39 |
| $25-29$ | .93 | .81 | .43 | .45 | .41 |
| $30-34$ | .93 | .83 | .79 | .56 | .51 |
| $35-39$ | .83 | .82 | .73 | .65 | .62 |
| $40-44$ | .76 | .76 | .72 | .69 | .69 |
| $45-49$ | .73 | .67 | .65 | .65 | .67 |
| $50-54$ | .73 | .58 | .57 | .58 | .60 |
| $55-59$ | .74 | .54 | .49 | .52 | .55 |
| $60-64$ | .74 | .54 | .49 | .49 | .53 |
| $65-69$ | .73 | .59 | .52 | .48 | .52 |
| $70-74$ | .75 | .67 | .58 | .53 | .53 |
| $75-79$ | .79 | .73 | .67 | .61 | .57 |
| $80-84$ | .83 | .78 | .74 | .70 | .65 |
| $85 \&$ over | .88 | .82 | .83 | .80 | .80 |

