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AUSTRALIAN LIFE TABLES,  
1960-1962

PREPARED BY  
S. W. CAFFIN, F.I.A., F.S.S., A.S.A., A.A.I.I.,  
COMMONWEALTH ACTUARY

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BY  
K. M. ARCHER,  
COMMONWEALTH STATISTICIAN

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# REPORT ON THE AUSTRALIAN LIFE TABLES, 1960-1962 BY THE COMMONWEALTH ACTUARY

In accordance with a request by the Commonwealth Statistician I have compiled Life Tables for Males and Females, derived from the results of the Census of the Commonwealth of Australia, taken as at 30th June, 1961. The Tables contained in this Report are the eighth in the series of Life Tables for Australia and are entitled Australian Life Tables, 1960-1962.

2. For Censuses up to and including the 1911 Census, the practice was to prepare Tables on the basis of two Censuses and the deaths in the intervening decennial period. In more recent times, with the growth in the population, it has been customary to seek a more up-to-date mortality experience by limiting the basis for the calculations to the population returned at a Census and the deaths in the three years surrounding the date upon which the Census was taken. Such a procedure has the further advantage, when population changes are significant, of facilitating a more accurate calculation of the numbers of persons exposed to the risk of death at successive ages.

I have, therefore, prepared the present Tables on the basis of the population as returned at the Census held on 30th June, 1961, together with the numbers of deaths which occurred in the years 1960, 1961 and 1962.

## Statistics

3. The Commonwealth Statistician has supplied me with the following information—

- The numbers of males and females living at each age last birthday, as shown by the 1961 Census;
- the numbers of male and female deaths at each age last birthday, in the years 1960, 1961 and 1962;
- the numbers of births during the years 1954 to 1962;
- analyses of the numbers of deaths under six years of age during the years 1955 to 1962; and
- analyses of the movement of males and females into and out of Australia during 1960 to 1962.

Information relating to the age distribution of the population at the Census and the deaths during 1960 to 1962 is set out in Appendix F.

4. The summary of the Australian population as shown by the last five Censuses is—

## Population

| Year |    |    |    | Males     | Females   | Total      |
|------|----|----|----|-----------|-----------|------------|
| 1921 | .. | .. | .. | 2,762,870 | 2,672,864 | 5,435,734  |
| 1933 | .. | .. | .. | 3,367,111 | 3,262,728 | 6,629,839  |
| 1947 | .. | .. | .. | 3,797,370 | 3,781,988 | 7,579,358  |
| 1954 | .. | .. | .. | 4,546,118 | 4,440,412 | 8,986,530  |
| 1961 | .. | .. | .. | 5,312,252 | 5,195,934 | 10,508,186 |

It has been a feature of recent Censuses that only a relatively small number of males and females fail to state their ages. For this Census, the data supplied by the Commonwealth Statistician already included a distribution of such persons to individual ages.

5. The deaths which occurred during the three years 1960 to 1962 were as follows—

## Deaths

| Year  |    |    |    | Males   | Females | Total   |
|-------|----|----|----|---------|---------|---------|
| 1960  | .. | .. | .. | 49,629  | 38,835  | 88,464  |
| 1961  | .. | .. | .. | 50,248  | 38,713  | 88,961  |
| 1962  | .. | .. | .. | 52,378  | 40,785  | 93,163  |
| Total | .. | .. | .. | 152,255 | 118,333 | 270,588 |

During the three years under consideration, there were 62 male deaths and 17 female deaths for which ages were not stated. These few deaths were allocated to individual ages by a proportionate method.

### Movement of the Population

6. In the course of the preparation of the last two Australian Life Tables special consideration has been given to the effect which the movement of persons into and out of Australia during the period under review has had upon the numbers of each sex, determined as exposed to the risk of death at different ages, in order that correct rates of mortality may be derived from the data.

The net movement into Australia during the years 1960 to 1962 has been—

#### Net Movement—(All Ages)

| Period              |    |    |    | Males   | Females |
|---------------------|----|----|----|---------|---------|
| 1960—First 6 months | .. | .. | .. | 24,826  | 16,904  |
| Second 6 months     | .. | .. | .. | 27,896  | 20,509  |
| 1961—First 6 months | .. | .. | .. | 20,603  | 16,182  |
| Second 6 months     | .. | .. | .. | 8,452   | 16,286  |
| 1962—First 6 months | .. | .. | .. | 10,221  | 13,451  |
| Second 6 months     | .. | .. | .. | 18,399  | 20,451  |
| Total               | .. | .. | .. | 110,397 | 103,783 |

The numbers shown in the above Table are not evenly distributed age by age and include temporary movements, as well as permanent arrivals to and departures from, Australia. At some ages, a net outgo has occurred. As explained in my Report on the Australian Life Tables, 1953-55, adjustments are required in relation to the period during which such persons are considered for the purposes of the Life Tables, to allow for the actual period during which these persons were at risk of death, i.e.—

- (a) departures from Australia during 1960 to 1962 were subject to the risk of death from the beginning of 1960 to the date of their departure and should be included in the experience for this period; and
- (b) arrivals in Australia were subject to the risk of death from the date of their arrival to the end of 1962 and the experience should be adjusted accordingly.

7. An investigation was made into the methods which might be adopted to make allowance for this movement, bearing in mind that it cannot be assumed that the effect upon the numbers exposed to risk at one age will be similar to the effect at another age. After consideration of the results of this investigation, I have decided that the method previously used, when applied to successive ages, provides a satisfactory means of allowing for migratory movements in the population at other than very young ages, viz.,

| For Net Movement into<br>Australia during— | Deduct                         | Add                            |
|--------------------------------------------|--------------------------------|--------------------------------|
| 1960—First 6 months                        | $\frac{1}{2}$ of net movement  | ..                             |
| Second 6 months                            | $\frac{1}{2}$ of net movement  | ..                             |
| 1961—First 6 months                        | $1\frac{1}{2}$ of net movement | ..                             |
| Second 6 months                            | ..                             | $1\frac{1}{2}$ of net movement |
| 1962—First 6 months                        | ..                             | $\frac{1}{2}$ of net movement  |
| Second 6 months                            | ..                             | $\frac{1}{2}$ of net movement  |

### Calculation of Mortality Rates

8. *Ages 0-4.* The formulae adopted for the calculation of the mortality rates for these ages are contained in Appendix G. These formulae do not allow for the effect of migration and, before the final mortality rates were obtained, the exposed to risk at each age was adjusted for this feature.

9. *Ages 5-30.* The examination of the unadjusted mortality rates ( $m_x$ , representing the rate of mortality amongst persons aged  $x$  to  $x+1$ ) derived from the data showed that a pronounced peak occurred in male mortality rates about age 21 and that there was evidence of a similar, but much smaller, peak in female mortality rates about the same age. An examination of the results obtained from the application of a number of graduation formulae to the unadjusted mortality rates at these ages showed that, unless great care was exercised, these peaks which are a definite feature of the experience could be varied or even eliminated. Such a result could not be supported.

The unadjusted mortality rates at these ages are very small and in the main show a regular progression from age to age. The rates adopted for these ages were, therefore, obtained from an examination of all of the data without recourse to a graduation formula.

10. *Ages 31 to End of Table.* It was considered that it would not be advisable to accept, as calculated from the data, the unadjusted mortality rates for high ages, as doubts existed as to the accuracy at these ages of the method of determining the exposed to risk, in view of possible age mis-statements and the small numbers of surviving population. Some doubts were also held as to the accuracy of the reported ages at death. The unadjusted mortality rates for males from age 90 onwards and for females from age 89 onwards were, therefore, replaced by a series of values derived from mathematical formulae which were calculated to provide a satisfactory representation of the rates of mortality at ages from 80 years onwards, having regard to the total deaths over age 80 and their general trend from one age to the next. The formulae used were—

$$\text{Males: } m_x = .013220 (1.04111)^x - .21234$$

$$\text{Females: } m_x = .009515 (1.04345)^x - .20063$$

The resulting series of mortality rates were then graduated in order to produce a series of mortality rates which would properly represent the experience of the population during the period under review. For the graduation of mortality rates from age 31 onwards, I have used the same summation graduation method as was used for the purposes of the Australian Life Tables, 1953-55. This method involves a formula developed by the late John Spencer, F.I.A., and is as follows—

$$u_x^1 = \frac{[5]^2 [7]}{350} \{ [1] + [3] + [5] - [7] \} u_x$$

where  $u_x^1$  = the graduated value of  $m_x$ ,

$u_x$  = the ungraduated value of  $m_x$ , and

$$[5] u_x = (u_{x-2} + u_{x-1} + u_x + u_{x+1} + u_{x+2}), \text{ etc.}$$

#### Examination of Graduation

11. The graduated mortality rates have been examined for reliability and adherence to the original experience. The data under examination is substantial and the unadjusted mortality rates do not show fluctuations of a size which would suggest that a satisfactory graduation is unlikely to be achieved.

I have considered whether the criteria for acceptance of the graduation should be the application of standard statistical tests customarily used in the determination of the reliability of results obtained from other types of statistical data. In my view, it is not possible to accept conclusions drawn from such statistical tests as being of prime importance in determining the suitability of a graduation of population mortality data because of the possibility of age errors affecting the distribution of the data. In addition, the purpose of such a graduation is to produce a series of mortality rates which satisfactorily represent the disclosed experience of the period being examined. Practical problems arise in the fulfillment of this task, the solutions to which are frequently bound to impair the validity of applying many standard statistical tests.

12. The numbers of deaths expected at each age according to the graduated mortality rates have been calculated and are compared in Appendix C, age by age, with the numbers of deaths which actually occurred. It will be seen that the deviations between actual and expected deaths change sign frequently and tend to counter-balance over short ranges of age. I have concluded, therefore, that the graduated rates of mortality ( $q_x$ ) shown in Appendices A and B satisfactorily represent the mortality experienced by the Australian population during the years 1960 to 1962.

#### The Life Tables

13. In Appendices A and B, I have tabulated the Life Tables for male and female lives, showing the following functions:—

$l_x$  = the number of persons surviving at exact age  $x$ ;

$d_x$  = the number of deaths in the year of age  $x$  to  $x + 1$  among the  $l_x$  persons who enter on that year;

$p_x$  = the probability of a person aged  $x$  living a year;

$q_x$  = the probability of a person aged  $x$  dying within a year;

$\mu_x$  = the nominal annual rate of mortality based on the assumption that the intensity of mortality during the moment following the attainment of age  $x$  continues throughout the year of age  $x$  to  $x + 1$ ;

$e_x$  = the complete expectation of life or the average number of years lived after age  $x$  by each of a group of persons aged exactly  $x$ .

The formulae adopted for the calculation of the various functions were as follows:—

$$q_x = \frac{m_x \left(1 - \frac{1}{12} \frac{q_{x-1}}{p_{x-1}}\right)}{1 + \frac{5}{12} m_x}$$

$$\mu_x = \frac{1}{12l_x} \left[ 7(d_{x-1} + d_x) - (d_{x-2} + d_{x+1}) \right],$$

$$\hat{e}_x = \frac{1}{l_x} \sum_{t=x}^{\omega} l_{x+t} + \frac{1}{2} - \frac{1}{12} \mu_x$$

#### Main Features of the Mortality Rates

14. In the following Table, I compare the new mortality rates with the rates derived from earlier Australian experience.

Rates of Mortality at Representative Ages

| Age     |    |    |    | 1960-62 | 1953-55 | 1946-48 | 1932-34 | 1901-10 |
|---------|----|----|----|---------|---------|---------|---------|---------|
| MALES   |    |    |    |         |         |         |         |         |
| 0       | .. | .. | .. | .02239  | .02521  | .03199  | .04543  | .09510  |
| 10      | .. | .. | .. | .00041  | .00056  | .00072  | .00119  | .00179  |
| 20      | .. | .. | .. | .00173  | .00186  | .00169  | .00219  | .00370  |
| 30      | .. | .. | .. | .00157  | .00170  | .00186  | .00271  | .00519  |
| 40      | .. | .. | .. | .00300  | .00297  | .00337  | .00460  | .00816  |
| 50      | .. | .. | .. | .00804  | .00819  | .00919  | .00966  | .01395  |
| 60      | .. | .. | .. | .02176  | .02221  | .02278  | .02216  | .02584  |
| 70      | .. | .. | .. | .05177  | .05315  | .05256  | .05082  | .06162  |
| 80      | .. | .. | .. | .11617  | .11958  | .12011  | .12659  | .13795  |
| FEMALES |    |    |    |         |         |         |         |         |
| 0       | .. | .. | .. | .01757  | .01989  | .02519  | .03642  | .07953  |
| 10      | .. | .. | .. | .00028  | .00035  | .00050  | .00087  | .00159  |
| 20      | .. | .. | .. | .00060  | .00064  | .00091  | .00183  | .00329  |
| 30      | .. | .. | .. | .00082  | .00096  | .00165  | .00279  | .00519  |
| 40      | .. | .. | .. | .00187  | .00217  | .00284  | .00402  | .00718  |
| 50      | .. | .. | .. | .00464  | .00530  | .00641  | .00744  | .00956  |
| 60      | .. | .. | .. | .01074  | .01203  | .01360  | .01466  | .01920  |
| 70      | .. | .. | .. | .02933  | .03250  | .03607  | .03802  | .04777  |
| 80      | .. | .. | .. | .08507  | .09314  | .10027  | .10106  | .11333  |

15. The Table shows the continuation of the progress which has occurred over the past 60 years or more towards lower mortality rates for both males and females. With the exception of males of ages 40 to 47 and ages 62 to 66, lower mortality rates were experienced during 1960 to 1962, than for the period 1953 to 1955.

16. To enable further comparisons with earlier Australian mortality, I have had prepared the tabulations appearing in Appendix D, relating to successive Australian Life Tables. The tabulations are—

- the ratio of the mortality rate for one period to the rate for the preceding period and to the rate for the years 1901-1910;
- the number of survivors ( $l_x$ ) at representative ages; and
- the complete expectation of life ( $\hat{e}_x$ ) at representative ages.

These analyses show clearly the reductions which have occurred in Australian mortality since the commencement of the century and which have become more evident in each successive Table. It is no surprise to find that the probability of a child born in 1961 dying in one year is less than one-quarter of the probability of death in one year which attached to the child who was born 60 years ago. Even at advanced ages, the reductions which have occurred in mortality rates, as compared with 60 years ago, are very substantial.

There is evidence that female longevity continues to improve at a faster rate than male longevity. It would seem that the risks associated with child-bearing for females are far outweighed by the greater accident propensity of younger males and the more rapid deterioration of health, presumably due to business and other pressures, of older males.

An improvement has occurred in male mortality from accidents of all types as the following summary shows. There is some indication that, for females, the accident mortality rate has deteriorated slightly. The rates are, however, still substantially below the corresponding rates for males.

**Mortality from Accidents of All Types**

| Age Group |    |    | Males   |         | Females |         |
|-----------|----|----|---------|---------|---------|---------|
|           |    |    | 1960-62 | 1953-55 | 1960-62 | 1953-55 |
| 15-19     | .. | .. | .00084  | .00099  | .00020  | .00015  |
| 20-24     | .. | .. | .00100  | .00115  | .00013  | .00013  |
| 25-29     | .. | .. | .00071  | .00089  | .00008  | .00010  |
| 30-34     | .. | .. | .00062  | .00071  | .00009  | .00008  |
| 35-39     | .. | .. | .00066  | .00064  | .00012  | .00011  |
| 40-44     | .. | .. | .00059  | .00068  | .00014  | .00012  |

17. Appendix E contains the results of an investigation into the changes which have occurred since the previous Census in the mortality attributable to various causes of death, for the first four years of life by single ages and thereafter in decennial age-groups.

The comparisons contained in Appendix E show that the reductions in mortality rates which has occurred since 1953 to 1955 are due to a lower mortality for most causes of death, rather than to an outstanding reduction in relation to one or two causes. The exception is Deaths due to Infective and Parasitic Diseases (Class I.). The reduction for both sexes for all age-groups under this heading is relatively substantial and shows a consistency which is not evident in other causes of death.

S. W. CAFFIN,  
*Commonwealth Actuary.*

7th May, 1965.

## APPENDIX A

## AUSTRALIAN LIFE TABLE, 1960-1962

## Males

A<sub>M61</sub>A<sub>M61</sub>

| Age<br>$x$ | $l_x$   | $d_x$ | $p_x$  | $q_x$  | $\mu_x$ | $\hat{e}_x$ | Age<br>$x$ | $l_x$  | $d_x$ | $p_x$  | $q_x$  | $\mu_x$ | $\hat{e}_x$ |
|------------|---------|-------|--------|--------|---------|-------------|------------|--------|-------|--------|--------|---------|-------------|
| 0          | 100,000 | 2,239 | .97761 | .02239 | ..      | 67.92       | 55         | 84,142 | 1,127 | .98661 | .01339 | .01283  | 19.18       |
| 1          | 97,761  | 177   | .99819 | .00181 | ..      | 68.46       | 56         | 83,015 | 1,225 | .98524 | .01476 | .01415  | 18.43       |
| 2          | 97,584  | 117   | .99880 | .00120 | ..      | 67.59       | 57         | 81,790 | 1,331 | .98373 | .01627 | .01561  | 17.70       |
| 3          | 97,467  | 88    | .99910 | .00090 | .00102  | 66.67       | 58         | 80,459 | 1,442 | .98208 | .01792 | .01722  | 16.99       |
| 4          | 97,379  | 64    | .99934 | .00066 | .00076  | 65.73       | 59         | 79,017 | 1,561 | .98025 | .01975 | .01898  | 16.29       |
| 5          | 97,315  | 56    | .99942 | .00058 | .00060  | 64.77       | 60         | 77,456 | 1,685 | .97824 | .02176 | .02094  | 15.60       |
| 6          | 97,259  | 53    | .99945 | .00055 | .00056  | 63.81       | 61         | 75,771 | 1,817 | .97602 | .02398 | .02310  | 14.94       |
| 7          | 97,206  | 52    | .99947 | .00053 | .00054  | 62.84       | 62         | 73,954 | 1,952 | .97360 | .02640 | .02548  | 14.29       |
| 8          | 97,154  | 49    | .99950 | .00050 | .00052  | 61.87       | 63         | 72,002 | 2,087 | .97101 | .02899 | .02806  | 13.67       |
| 9          | 97,105  | 43    | .99956 | .00044 | .00047  | 60.91       | 64         | 69,915 | 2,216 | .96830 | .03170 | .03079  | 13.06       |
| 10         | 97,062  | 40    | .99959 | .00041 | .00042  | 59.93       | 65         | 67,699 | 2,338 | .96546 | .03454 | .03366  | 12.47       |
| 11         | 97,022  | 41    | .99958 | .00042 | .00041  | 58.96       | 66         | 65,361 | 2,451 | .96250 | .03750 | .03666  | 11.90       |
| 12         | 96,981  | 45    | .99954 | .00046 | .00044  | 57.98       | 67         | 62,910 | 2,557 | .95936 | .04064 | .03982  | 11.34       |
| 13         | 96,936  | 51    | .99947 | .00053 | .00049  | 57.01       | 68         | 60,353 | 2,657 | .95598 | .04402 | .04320  | 10.80       |
| 14         | 96,885  | 60    | .99938 | .00062 | .00057  | 56.04       | 69         | 57,696 | 2,752 | .95230 | .04770 | .04688  | 10.28       |
| 15         | 96,825  | 73    | .99925 | .00075 | .00068  | 55.07       | 70         | 54,944 | 2,844 | .94823 | .05177 | .05094  | 9.77        |
| 16         | 96,752  | 92    | .99905 | .00095 | .00084  | 54.11       | 71         | 52,100 | 2,932 | .94372 | .05628 | .05546  | 9.27        |
| 17         | 96,660  | 119   | .99877 | .00123 | .00107  | 53.16       | 72         | 49,168 | 3,008 | .93882 | .06118 | .06046  | 8.80        |
| 18         | 96,541  | 157   | .99837 | .00163 | .00144  | 52.23       | 73         | 46,160 | 3,064 | .93354 | .06646 | .06588  | 8.34        |
| 19         | 96,384  | 169   | .99825 | .00175 | .00173  | 51.31       | 74         | 43,092 | 3,108 | .92788 | .07212 | .07174  | 7.90        |
| 20         | 96,215  | 166   | .99827 | .00173 | .00175  | 50.40       | 75         | 39,984 | 3,124 | .92186 | .07814 | .07804  | 7.47        |
| 21         | 96,049  | 163   | .99830 | .00170 | .00172  | 49.49       | 76         | 36,860 | 3,115 | .91549 | .08451 | .08474  | 7.06        |
| 22         | 95,886  | 158   | .99835 | .00165 | .00168  | 48.57       | 77         | 33,745 | 3,084 | .90860 | .09140 | .09196  | 6.67        |
| 23         | 95,728  | 151   | .99842 | .00158 | .00162  | 47.65       | 78         | 30,661 | 3,032 | .90112 | .09888 | .09985  | 6.29        |
| 24         | 95,577  | 145   | .99848 | .00152 | .00155  | 46.73       | 79         | 27,629 | 2,960 | .89287 | .10713 | .10856  | 5.92        |
| 25         | 95,432  | 140   | .99853 | .00147 | .00149  | 45.80       | 80         | 24,669 | 2,866 | .88383 | .11617 | .11823  | 5.57        |
| 26         | 95,292  | 138   | .99855 | .00145 | .00146  | 44.86       | 81         | 21,803 | 2,749 | .87393 | .12607 | .12894  | 5.24        |
| 27         | 95,154  | 140   | .99853 | .00147 | .00146  | 43.93       | 82         | 19,054 | 2,606 | .86321 | .13679 | .14074  | 4.92        |
| 28         | 95,014  | 143   | .99850 | .00150 | .00149  | 42.99       | 83         | 16,448 | 2,440 | .85164 | .14836 | .15366  | 4.63        |
| 29         | 94,871  | 145   | .99847 | .00153 | .00152  | 42.06       | 84         | 14,008 | 2,250 | .83938 | .16062 | .16766  | 4.35        |
| 30         | 94,726  | 149   | .99843 | .00157 | .00155  | 41.12       | 85         | 11,758 | 2,042 | .82637 | .17363 | .18272  | 4.08        |
| 31         | 94,577  | 152   | .99839 | .00161 | .00159  | 40.18       | 86         | 9,716  | 1,819 | .81274 | .18726 | .19886  | 3.84        |
| 32         | 94,425  | 158   | .99833 | .00167 | .00164  | 39.25       | 87         | 7,897  | 1,591 | .79849 | .20151 | .21602  | 3.61        |
| 33         | 94,267  | 164   | .99826 | .00174 | .00170  | 38.31       | 88         | 6,306  | 1,363 | .78380 | .21620 | .23417  | 3.40        |
| 34         | 94,103  | 172   | .99817 | .00183 | .00178  | 37.38       | 89         | 4,943  | 1,143 | .76867 | .23133 | .25321  | 3.20        |
| 35         | 93,931  | 182   | .99806 | .00194 | .00188  | 36.45       | 90         | 3,800  | 938   | .75325 | .24675 | .27312  | 3.02        |
| 36         | 93,749  | 195   | .99792 | .00208 | .00201  | 35.51       | 91         | 2,862  | 751   | .73759 | .26241 | .29377  | 2.85        |
| 37         | 93,554  | 211   | .99774 | .00226 | .00217  | 34.59       | 92         | 2,111  | 587   | .72179 | .27821 | .31512  | 2.70        |
| 38         | 93,343  | 231   | .99753 | .00247 | .00236  | 33.67       | 93         | 1,524  | 448   | .70585 | .29415 | .33711  | 2.55        |
| 39         | 93,112  | 253   | .99728 | .00272 | .00259  | 32.75       | 94         | 1,076  | 334   | .68977 | .31023 | .35979  | 2.42        |
| 40         | 92,859  | 279   | .99700 | .00300 | .00286  | 31.84       | 95         | 742    | 242   | .67351 | .32649 | .38322  | 2.29        |
| 41         | 92,580  | 306   | .99670 | .00330 | .00315  | 30.93       | 96         | 500    | 171   | .65706 | .34294 | .40748  | 2.17        |
| 42         | 92,274  | 336   | .99636 | .00364 | .00347  | 30.03       | 97         | 329    | 118   | .64037 | .35963 | .43267  | 2.06        |
| 43         | 91,938  | 369   | .99599 | .00401 | .00383  | 29.14       | 98         | 211    | 79    | .62346 | .37654 | .45887  | 1.96        |
| 44         | 91,569  | 404   | .99559 | .00441 | .00421  | 28.25       | 99         | 132    | 52    | .60636 | .39364 | .48610  | 1.86        |
| 45         | 91,165  | 442   | .99515 | .00485 | .00463  | 27.38       | 100        | 80     | 33    | .58913 | .41087 | ..      | ..          |
| 46         | 90,723  | 485   | .99465 | .00535 | .00510  | 26.51       | 101        | 47     | 20    | .57178 | .42822 | ..      | ..          |
| 47         | 90,238  | 533   | .99409 | .00591 | .00564  | 25.65       | 102        | 27     | 12    | .55435 | .44565 | ..      | ..          |
| 48         | 89,705  | 587   | .99346 | .00654 | .00623  | 24.80       | 103        | 15     | 7     | .53690 | .46310 | ..      | ..          |
| 49         | 89,118  | 645   | .99276 | .00724 | .00690  | 23.96       | 104        | 8      | 4     | .51943 | .48057 | ..      | ..          |
| 50         | 88,473  | 711   | .99196 | .00804 | .00765  | 23.13       | 105        | 4      | 2     | .50201 | .49799 | ..      | ..          |
| 51         | 87,762  | 783   | .99108 | .00892 | .00850  | 22.31       | 106        | 2      | 1     | .48467 | .51533 | ..      | ..          |
| 52         | 86,979  | 860   | .99011 | .00989 | .00943  | 21.51       | 107        | 1      | 1     | .46747 | .53253 | ..      | ..          |
| 53         | 86,119  | 944   | .98904 | .01096 | .01046  | 20.72       | 108        | ..     | ..    | .45047 | .54953 | ..      | ..          |
| 54         | 85,175  | 1,033 | .98787 | .01213 | .01160  | 19.94       | 109        | ..     | ..    | .43370 | .56630 | ..      | ..          |

## APPENDIX B

## AUSTRALIAN LIFE TABLES, 1960-1962

## Females

A<sub>F61</sub>A<sub>F61</sub>

| Age <sub>x</sub> | <i>l<sub>x</sub></i> | <i>d<sub>x</sub></i> | <i>p<sub>x</sub></i> | <i>q<sub>x</sub></i> | $\mu_x$ | $\hat{e}_x$ | Age <sub>x</sub> | <i>l<sub>x</sub></i> | <i>d<sub>x</sub></i> | <i>p<sub>x</sub></i> | <i>q<sub>x</sub></i> | $\mu_x$ | $\hat{e}_x$ |
|------------------|----------------------|----------------------|----------------------|----------------------|---------|-------------|------------------|----------------------|----------------------|----------------------|----------------------|---------|-------------|
| 0                | 100,000              | 1,757                | .98243               | .01757               | ..      | 74.18       | 55               | 90,191               | 625                  | .99307               | .00693               | .00669  | 23.63       |
| 1                | 98,243               | 169                  | .99828               | .00172               | ..      | 74.49       | 56               | 89,566               | 671                  | .99251               | .00749               | .00723  | 22.79       |
| 2                | 98,074               | 100                  | .99898               | .00102               | ..      | 73.62       | 57               | 88,895               | 724                  | .99186               | .00814               | .00783  | 21.96       |
| 3                | 97,974               | 63                   | .99936               | .00064               | .00078  | 72.70       | 58               | 88,171               | 783                  | .99112               | .00888               | .00853  | 21.13       |
| 4                | 97,911               | 57                   | .99942               | .00058               | .00059  | 71.74       | 59               | 87,388               | 851                  | .99026               | .00974               | .00933  | 20.32       |
| 5                | 97,854               | 49                   | .99950               | .00050               | .00054  | 70.78       | 60               | 86,537               | 929                  | .98926               | .01074               | .01027  | 19.51       |
| 6                | 97,805               | 43                   | .99956               | .00044               | .00047  | 69.82       | 61               | 85,608               | 1,017                | .98812               | .01188               | .01135  | 18.72       |
| 7                | 97,762               | 37                   | .99962               | .00038               | .00041  | 68.85       | 62               | 84,591               | 1,112                | .98686               | .01314               | .01257  | 17.94       |
| 8                | 97,725               | 32                   | .99967               | .00033               | .00035  | 67.88       | 63               | 83,479               | 1,214                | .98546               | .01454               | .01391  | 17.17       |
| 9                | 97,693               | 29                   | .99970               | .00030               | .00031  | 66.90       | 64               | 82,265               | 1,321                | .98394               | .01606               | .01540  | 16.42       |
| 10               | 97,664               | 27                   | .99972               | .00028               | .00029  | 65.92       | 65               | 80,944               | 1,432                | .98231               | .01769               | .01699  | 15.68       |
| 11               | 97,637               | 26                   | .99973               | .00027               | .00027  | 64.94       | 66               | 79,512               | 1,550                | .98050               | .01950               | .01874  | 14.95       |
| 12               | 97,611               | 27                   | .99972               | .00028               | .00027  | 63.95       | 67               | 77,962               | 1,677                | .97849               | .02151               | .02068  | 14.24       |
| 13               | 97,584               | 28                   | .99971               | .00029               | .00028  | 62.97       | 68               | 76,285               | 1,815                | .97621               | .02379               | .02286  | 13.54       |
| 14               | 97,556               | 31                   | .99968               | .00030               | .00030  | 61.99       | 69               | 74,470               | 1,965                | .97362               | .02638               | .02535  | 12.86       |
| 15               | 97,525               | 37                   | .99962               | .00038               | .00035  | 61.01       | 70               | 72,505               | 2,127                | .97067               | .02933               | .02819  | 12.19       |
| 16               | 97,488               | 45                   | .99954               | .00046               | .00042  | 60.03       | 71               | 70,378               | 2,299                | .96734               | .03266               | .03142  | 11.54       |
| 17               | 97,443               | 52                   | .99947               | .00053               | .00050  | 59.06       | 72               | 68,079               | 2,479                | .96359               | .03641               | .03507  | 10.92       |
| 18               | 97,391               | 56                   | .99943               | .00057               | .00055  | 58.09       | 73               | 65,600               | 2,661                | .95943               | .04057               | .03918  | 10.31       |
| 19               | 97,335               | 57                   | .99941               | .00059               | .00058  | 57.12       | 74               | 62,939               | 2,843                | .95483               | .04517               | .04374  | 9.72        |
| 20               | 97,278               | 58                   | .99940               | .00060               | .00060  | 56.16       | 75               | 60,096               | 3,019                | .94976               | .05024               | .04879  | 9.16        |
| 21               | 97,220               | 59                   | .99939               | .00061               | .00061  | 55.19       | 76               | 57,077               | 3,189                | .94413               | .05587               | .05441  | 8.62        |
| 22               | 97,161               | 60                   | .99938               | .00062               | .00062  | 54.22       | 77               | 53,888               | 3,345                | .93793               | .06207               | .06067  | 8.10        |
| 23               | 97,101               | 59                   | .99939               | .00061               | .00062  | 53.26       | 78               | 50,543               | 3,485                | .93105               | .06895               | .06762  | 7.60        |
| 24               | 97,042               | 58                   | .99940               | .00060               | .00060  | 52.29       | 79               | 47,058               | 3,605                | .92340               | .07660               | .07541  | 7.13        |
| 25               | 96,984               | 60                   | .99938               | .00062               | .00061  | 51.32       | 80               | 43,453               | 3,697                | .91493               | .08507               | .08414  | 6.68        |
| 26               | 96,924               | 63                   | .99935               | .00065               | .00063  | 50.35       | 81               | 39,756               | 3,750                | .90568               | .09432               | .09382  | 6.25        |
| 27               | 96,861               | 67                   | .99931               | .00069               | .00067  | 49.38       | 82               | 36,006               | 3,759                | .89560               | .10440               | .10449  | 5.85        |
| 28               | 96,794               | 71                   | .99927               | .00073               | .00071  | 48.42       | 83               | 32,247               | 3,717                | .88474               | .11526               | .11619  | 5.47        |
| 29               | 96,723               | 74                   | .99923               | .00077               | .00075  | 47.45       | 84               | 28,530               | 3,621                | .87308               | .12692               | .12892  | 5.12        |
| 30               | 96,649               | 79                   | .99918               | .00082               | .00079  | 46.49       | 85               | 24,909               | 3,469                | .86073               | .13927               | .14268  | 4.79        |
| 31               | 96,570               | 85                   | .99912               | .00088               | .00085  | 45.53       | 86               | 21,440               | 3,266                | .84769               | .15231               | .15743  | 4.49        |
| 32               | 96,485               | 93                   | .99904               | .00096               | .00092  | 44.57       | 87               | 18,174               | 3,016                | .83403               | .16597               | .17320  | 4.20        |
| 33               | 96,392               | 100                  | .99896               | .00104               | .00100  | 43.61       | 88               | 15,158               | 2,731                | .81980               | .18020               | .18993  | 3.94        |
| 34               | 96,292               | 109                  | .99887               | .00113               | .00108  | 42.65       | 89               | 12,427               | 2,422                | .80514               | .19486               | .20758  | 3.70        |
| 35               | 96,183               | 118                  | .99877               | .00123               | .00118  | 41.70       | 90               | 10,005               | 2,100                | .79010               | .20990               | .22604  | 3.48        |
| 36               | 96,065               | 129                  | .99866               | .00134               | .00128  | 40.75       | 91               | 7,905                | 1,780                | .77479               | .22521               | .24527  | 3.27        |
| 37               | 95,936               | 139                  | .99855               | .00145               | .00139  | 39.81       | 92               | 6,125                | 1,475                | .75921               | .24079               | .26521  | 3.08        |
| 38               | 95,797               | 151                  | .99842               | .00158               | .00151  | 38.86       | 93               | 4,650                | 1,193                | .74344               | .25656               | .28588  | 2.91        |
| 39               | 95,646               | 165                  | .99828               | .00172               | .00165  | 37.92       | 94               | 3,457                | 942                  | .72745               | .27255               | .30724  | 2.74        |
| 40               | 95,481               | 179                  | .99813               | .00187               | .00179  | 36.99       | 95               | 2,515                | 726                  | .71175               | .28875               | .32937  | 2.59        |
| 41               | 95,302               | 195                  | .99795               | .00205               | .00196  | 36.06       | 96               | 1,789                | 546                  | .69477               | .30523               | .35233  | 2.45        |
| 42               | 95,107               | 214                  | .99775               | .00225               | .00215  | 35.13       | 97               | 1,243                | 400                  | .67803               | .32197               | .37624  | 2.32        |
| 43               | 94,893               | 235                  | .99752               | .00248               | .00236  | 34.21       | 98               | 843                  | 286                  | .66101               | .33899               | .40113  | 2.19        |
| 44               | 94,658               | 258                  | .99727               | .00273               | .00261  | 33.29       | 99               | 557                  | 198                  | .64374               | .35626               | .42705  | 2.08        |
| 45               | 94,400               | 283                  | .99700               | .00300               | .00287  | 32.38       | 100              | 359                  | 134                  | .62620               | .37380               | ..      | ..          |
| 46               | 94,117               | 308                  | .99673               | .00327               | .00314  | 31.48       | 101              | 225                  | 88                   | .60848               | .39152               | ..      | ..          |
| 47               | 93,809               | 335                  | .99643               | .00357               | .00342  | 30.58       | 102              | 137                  | 56                   | .59058               | .40942               | ..      | ..          |
| 48               | 93,474               | 365                  | .99610               | .00390               | .00374  | 29.69       | 103              | 81                   | 35                   | .57256               | .42744               | ..      | ..          |
| 49               | 93,109               | 396                  | .99575               | .00425               | .00408  | 28.80       | 104              | 46                   | 20                   | .55443               | .44557               | ..      | ..          |
| 50               | 92,713               | 430                  | .99536               | .00464               | .00445  | 27.92       | 105              | 26                   | 12                   | .53626               | .46374               | ..      | ..          |
| 51               | 92,283               | 466                  | .99495               | .00505               | .00485  | 27.05       | 106              | 14                   | 7                    | .51805               | .48195               | ..      | ..          |
| 52               | 91,817               | 503                  | .99452               | .00548               | .00528  | 26.18       | 107              | 7                    | 4                    | .49990               | .50010               | ..      | ..          |
| 53               | 91,314               | 541                  | .99407               | .00593               | .00572  | 25.32       | 108              | 3                    | 2                    | .48184               | .51816               | ..      | ..          |
| 54               | 90,773               | 582                  | .99359               | .00641               | .00618  | 24.47       | 109              | 1                    | 1                    | .46392               | .53608               | ..      | ..          |
| 110              | ..                   | ..                   | ..                   | ..                   | ..      | ..          | ..               | ..                   | ..                   | .44621               | .55379               | ..      | ..          |

## APPENDIX C

Comparison of Actual and Expected Deaths in Three Years, 1960-1962—Australia

| Age | Actual Deaths | Expected Deaths | Deviation |   | Accumulation |   |
|-----|---------------|-----------------|-----------|---|--------------|---|
|     |               |                 | +         | - | +            | - |

  

|       |       |       |     |     |     |     |
|-------|-------|-------|-----|-----|-----|-----|
| Males |       |       |     |     |     |     |
| 4 ..  | 220   | 219   | 1   | ..  | 1   | ..  |
| 5 ..  | 175   | 191   | ..  | 16  | ..  | 15  |
| 6 ..  | 186   | 177   | 9   | ..  | ..  | 6   |
| 7 ..  | 174   | 168   | 6   | ..  | ..  | ..  |
| 8 ..  | 162   | 161   | 1   | ..  | 1   | ..  |
| 9 ..  | 145   | 139   | 6   | ..  | 7   | ..  |
| 10 .. | 124   | 129   | ..  | 5   | 2   | ..  |
| 11 .. | 132   | 130   | 2   | ..  | 4   | ..  |
| 12 .. | 161   | 140   | 21  | ..  | 25  | ..  |
| 13 .. | 171   | 162   | 9   | ..  | 34  | ..  |
| 14 .. | 169   | 204   | ..  | 35  | ..  | 1   |
| 15 .. | 203   | 201   | 2   | ..  | 1   | ..  |
| 16 .. | 255   | 250   | 5   | ..  | 6   | ..  |
| 17 .. | 305   | 310   | ..  | 5   | 1   | ..  |
| 18 .. | 368   | 369   | ..  | 1   | ..  | ..  |
| 19 .. | 403   | 402   | 1   | ..  | 1   | ..  |
| 20 .. | 380   | 379   | 1   | ..  | 2   | ..  |
| 21 .. | 371   | 374   | ..  | 3   | ..  | 1   |
| 22 .. | 343   | 351   | ..  | 8   | ..  | 9   |
| 23 .. | 337   | 334   | 3   | ..  | ..  | 6   |
| 24 .. | 319   | 319   | ..  | ..  | ..  | 6   |
| 25 .. | 261   | 303   | ..  | 42  | ..  | 48  |
| 26 .. | 325   | 291   | 34  | ..  | ..  | 14  |
| 27 .. | 301   | 294   | 7   | ..  | ..  | 7   |
| 28 .. | 319   | 309   | 10  | ..  | 3   | ..  |
| 29 .. | 320   | 318   | 2   | ..  | 5   | ..  |
| 30 .. | 355   | 361   | ..  | 6   | ..  | 1   |
| 31 .. | 336   | 363   | ..  | 27  | ..  | 28  |
| 32 .. | 378   | 386   | ..  | 8   | ..  | 36  |
| 33 .. | 424   | 409   | 15  | ..  | ..  | 21  |
| 34 .. | 467   | 429   | 38  | ..  | 17  | ..  |
| 35 .. | 474   | 471   | 3   | ..  | 20  | ..  |
| 36 .. | 478   | 498   | ..  | 20  | ..  | ..  |
| 37 .. | 500   | 522   | ..  | 22  | ..  | 22  |
| 38 .. | 589   | 586   | 3   | ..  | ..  | 19  |
| 39 .. | 635   | 636   | ..  | 1   | ..  | 20  |
| 40 .. | 690   | 718   | ..  | 28  | ..  | 48  |
| 41 .. | 667   | 691   | ..  | 24  | ..  | 72  |
| 42 .. | 803   | 717   | 86  | ..  | 14  | ..  |
| 43 .. | 795   | 781   | 14  | ..  | 28  | ..  |
| 44 .. | 837   | 852   | ..  | 15  | 13  | ..  |
| 45 .. | 977   | 985   | ..  | 8   | 5   | ..  |
| 46 .. | 1,064 | 1,100 | ..  | 36  | ..  | 31  |
| 47 .. | 1,222 | 1,216 | 6   | ..  | ..  | 25  |
| 48 .. | 1,325 | 1,329 | ..  | 4   | ..  | 29  |
| 49 .. | 1,414 | 1,398 | 16  | ..  | ..  | 13  |
| 50 .. | 1,584 | 1,585 | ..  | 1   | ..  | 14  |
| 51 .. | 1,624 | 1,583 | 41  | ..  | 27  | ..  |
| 52 .. | 1,734 | 1,737 | ..  | 3   | 24  | ..  |
| 53 .. | 1,773 | 1,864 | ..  | 91  | ..  | 67  |
| 54 .. | 2,061 | 1,983 | 78  | ..  | 11  | ..  |
| 55 .. | 2,046 | 2,075 | ..  | 29  | ..  | 18  |
| 56 .. | 2,256 | 2,260 | ..  | 4   | ..  | 22  |
| 57 .. | 2,370 | 2,318 | 52  | ..  | 30  | ..  |
| 58 .. | 2,489 | 2,481 | 8   | ..  | 38  | ..  |
| 59 .. | 2,665 | 2,603 | 62  | ..  | 100 | ..  |
| 60 .. | 2,895 | 2,977 | ..  | 82  | 18  | ..  |
| 61 .. | 2,860 | 3,095 | ..  | 235 | ..  | 217 |
| 62 .. | 3,051 | 2,884 | 167 | ..  | ..  | 50  |
| 63 .. | 3,002 | 3,022 | ..  | 20  | ..  | 70  |
| 64 .. | 3,269 | 3,216 | 53  | ..  | ..  | 17  |
| 65 .. | 3,474 | 3,447 | 27  | ..  | 10  | ..  |
| 66 .. | 3,383 | 3,413 | ..  | 30  | ..  | 20  |
| 67 .. | 3,792 | 3,704 | 88  | ..  | 68  | ..  |
| 68 .. | 3,919 | 3,942 | ..  | 23  | 45  | ..  |
| 69 .. | 4,109 | 4,095 | 14  | ..  | 39  | ..  |
| 70 .. | 4,317 | 4,317 | ..  | ..  | 59  | ..  |

Comparison of Actual and Expected Deaths in Three Years, 1960-1962—Australia—continued

| Age             | Actual Deaths | Expected Deaths | Deviation |       | Accumulation |     |
|-----------------|---------------|-----------------|-----------|-------|--------------|-----|
|                 |               |                 | +         | -     | +            | -   |
| Males—continued |               |                 |           |       |              |     |
| 71 .. .. .      | 4,067         | 4,228           | ..        | 161   | ..           | 102 |
| 72 .. .. .      | 4,517         | 4,572           | ..        | 55    | ..           | 157 |
| 73 .. .. .      | 4,610         | 4,519           | 91        | ..    | ..           | 66  |
| 74 .. .. .      | 4,627         | 4,412           | 215       | ..    | 149          | ..  |
| 75 .. .. .      | 4,201         | 4,326           | ..        | 125   | 24           | ..  |
| 76 .. .. .      | 4,249         | 4,233           | 16        | ..    | 40           | ..  |
| 77 .. .. .      | 3,836         | 3,856           | ..        | 20    | 20           | ..  |
| 78 .. .. .      | 3,784         | 3,728           | 56        | ..    | 76           | ..  |
| 79 .. .. .      | 3,487         | 3,459           | 28        | ..    | 104          | ..  |
| 80 .. .. .      | 3,341         | 3,431           | ..        | 90    | 14           | ..  |
| 81 .. .. .      | 2,890         | 2,971           | ..        | 81    | ..           | 67  |
| 82 .. .. .      | 2,929         | 2,797           | 132       | ..    | 65           | ..  |
| 83 .. .. .      | 2,521         | 2,655           | ..        | 134   | ..           | 69  |
| 84 .. .. .      | 2,494         | 2,399           | 95        | ..    | 26           | ..  |
| 85 .. .. .      | 2,067         | 2,067           | ..        | ..    | 26           | ..  |
| 86 .. .. .      | 1,895         | 1,886           | 9         | ..    | 35           | ..  |
| 87 .. .. .      | 1,542         | 1,549           | ..        | 52    | ..           | 17  |
| 88 .. .. .      | 1,341         | 1,334           | 7         | ..    | ..           | 10  |
| 89 .. .. .      | 1,090         | 1,080           | 10        | ..    | ..           | ..  |
| 90 .. .. .      | 913           | 934             | ..        | 21    | ..           | 21  |
| 91 .. .. .      | 693           | 720             | ..        | 27    | ..           | 48  |
| 92 .. .. .      | 573           | 494             | 79        | ..    | 31           | ..  |
| 93 .. .. .      | 436           | 419             | 17        | ..    | 48           | ..  |
| 94 .. .. .      | 310           | 321             | ..        | 11    | 37           | ..  |
| 95 .. .. .      | 202           | 237             | ..        | 35    | 2            | ..  |
| 96 .. .. .      | 175           | 136             | 39        | ..    | 41           | ..  |
| 97 .. .. .      | 89            | 79              | 10        | ..    | 51           | ..  |
| 98 .. .. .      | 69            | 67              | 2         | ..    | 53           | ..  |
| 99 .. .. .      | 43            | 49              | ..        | 6     | 47           | ..  |
| 100 plus        | 56            | 69              | ..        | 13    | 34           | ..  |
| Totals .. ..    | 142,779       | 142,745         | 1,697     | 1,663 | 34           | ..  |

## Females

|       |     |     |    |    |    |    |
|-------|-----|-----|----|----|----|----|
| 4 ..  | 191 | 183 | 8  | .. | 8  | .. |
| 5 ..  | 143 | 155 | .. | 12 | .. | 4  |
| 6 ..  | 143 | 136 | 7  | .. | 3  | .. |
| 7 ..  | 116 | 115 | 1  | .. | 4  | .. |
| 8 ..  | 93  | 102 | .. | 9  | .. | 5  |
| 9 ..  | 89  | 90  | .. | 1  | .. | 6  |
| 10 .. | 75  | 84  | .. | 9  | .. | 15 |
| 11 .. | 93  | 80  | 13 | .. | .. | 2  |
| 12 .. | 82  | 81  | 1  | .. | .. | 1  |
| 13 .. | 96  | 84  | 12 | .. | 11 | .. |
| 14 .. | 88  | 100 | .. | 12 | .. | 1  |
| 15 .. | 100 | 96  | 4  | .. | 3  | .. |
| 16 .. | 116 | 116 | .. | .. | 3  | .. |
| 17 .. | 130 | 128 | 2  | .. | 5  | .. |
| 18 .. | 119 | 123 | .. | 4  | 1  | .. |
| 19 .. | 127 | 129 | .. | 2  | .. | 1  |
| 20 .. | 113 | 124 | .. | 11 | .. | 12 |
| 21 .. | 128 | 124 | 4  | .. | .. | 8  |
| 22 .. | 126 | 125 | 1  | .. | .. | 7  |
| 23 .. | 124 | 121 | 3  | .. | .. | 4  |
| 24 .. | 111 | 118 | .. | 7  | .. | 11 |
| 25 .. | 118 | 120 | .. | 2  | .. | 13 |
| 26 .. | 107 | 122 | .. | 15 | .. | 28 |
| 27 .. | 142 | 126 | 16 | .. | .. | 12 |
| 28 .. | 149 | 137 | 12 | .. | .. | .. |
| 29 .. | 148 | 145 | 3  | .. | 3  | .. |
| 30 .. | 166 | 174 | .. | 8  | .. | 5  |
| 31 .. | 171 | 180 | .. | 9  | .. | 14 |
| 32 .. | 176 | 201 | .. | 25 | .. | 39 |
| 33 .. | 237 | 222 | 15 | .. | .. | 24 |
| 34 .. | 253 | 242 | 11 | .. | .. | 13 |
| 35 .. | 282 | 277 | 5  | .. | .. | 8  |
| 36 .. | 312 | 303 | 9  | .. | 1  | .. |
| 37 .. | 337 | 315 | 22 | .. | 23 | .. |
| 38 .. | 341 | 360 | .. | 19 | 4  | .. |
| 39 .. | 366 | 381 | .. | 15 | .. | 11 |
| 40 .. | 411 | 438 | .. | 27 | .. | 38 |

Comparison of Actual and Expected Deaths in Three Years, 1960-1962—Australia—continued

| Age               | Actual Deaths | Expected Deaths | Deviation |       | Accumulation |     |  |
|-------------------|---------------|-----------------|-----------|-------|--------------|-----|--|
|                   |               |                 | +         | -     | +            | -   |  |
| Females—continued |               |                 |           |       |              |     |  |
| 41 .. .. .        | 415           | 401             | 14        | ..    | ..           | 24  |  |
| 42 .. .. .        | 466           | 438             | 28        | ..    | 4            | ..  |  |
| 43 .. .. .        | 459           | 472             | ..        | 13    | ..           | 9   |  |
| 44 .. .. .        | 514           | 516             | ..        | 2     | ..           | 11  |  |
| 45 .. .. .        | 573           | 589             | ..        | 16    | ..           | 27  |  |
| 46 .. .. .        | 664           | 658             | 6         | ..    | ..           | 21  |  |
| 47 .. .. .        | 694           | 703             | ..        | 9     | ..           | 30  |  |
| 48 .. .. .        | 798           | 752             | 46        | ..    | 16           | ..  |  |
| 49 .. .. .        | 810           | 769             | 41        | ..    | 57           | ..  |  |
| 50 .. .. .        | 794           | 888             | ..        | 94    | ..           | 37  |  |
| 51 .. .. .        | 792           | 810             | ..        | 18    | ..           | 55  |  |
| 52 .. .. .        | 916           | 898             | 18        | ..    | ..           | 37  |  |
| 53 .. .. .        | 956           | 940             | 16        | ..    | ..           | 21  |  |
| 54 .. .. .        | 1,071         | 985             | 86        | ..    | 65           | ..  |  |
| 55 .. .. .        | 939           | 995             | ..        | 56    | 9            | ..  |  |
| 56 .. .. .        | 1,106         | 1,068           | 38        | ..    | 47           | ..  |  |
| 57 .. .. .        | 1,048         | 1,079           | ..        | 31    | 16           | ..  |  |
| 58 .. .. .        | 1,179         | 1,185           | ..        | 6     | 10           | ..  |  |
| 59 .. .. .        | 1,269         | 1,244           | 25        | ..    | 35           | ..  |  |
| 60 .. .. .        | 1,511         | 1,577           | ..        | 66    | ..           | 31  |  |
| 61 .. .. .        | 1,476         | 1,574           | ..        | 98    | ..           | 129 |  |
| 62 .. .. .        | 1,743         | 1,564           | 179       | ..    | 50           | ..  |  |
| 63 .. .. .        | 1,716         | 1,748           | ..        | 32    | 18           | ..  |  |
| 64 .. .. .        | 1,881         | 1,878           | 3         | ..    | 21           | ..  |  |
| 65 .. .. .        | 2,145         | 2,178           | ..        | 33    | ..           | 12  |  |
| 66 .. .. .        | 2,189         | 2,181           | 8         | ..    | ..           | 4   |  |
| 67 .. .. .        | 2,457         | 2,386           | 71        | ..    | 67           | ..  |  |
| 68 .. .. .        | 2,663         | 2,653           | 10        | ..    | 77           | ..  |  |
| 69 .. .. .        | 2,790         | 2,721           | 69        | ..    | 146          | ..  |  |
| 70 .. .. .        | 2,938         | 3,153           | ..        | 215   | ..           | 69  |  |
| 71 .. .. .        | 2,864         | 2,876           | ..        | 12    | ..           | 81  |  |
| 72 .. .. .        | 3,382         | 3,332           | 50        | ..    | ..           | 31  |  |
| 73 .. .. .        | 3,548         | 3,531           | 17        | ..    | ..           | 14  |  |
| 74 .. .. .        | 3,704         | 3,547           | 157       | ..    | 143          | ..  |  |
| 75 .. .. .        | 3,597         | 3,645           | ..        | 48    | 95           | ..  |  |
| 76 .. .. .        | 3,707         | 3,781           | ..        | 74    | 21           | ..  |  |
| 77 .. .. .        | 3,490         | 3,520           | ..        | 30    | ..           | 9   |  |
| 78 .. .. .        | 3,722         | 3,704           | 18        | ..    | 9            | ..  |  |
| 79 .. .. .        | 3,627         | 3,489           | 138       | ..    | 147          | ..  |  |
| 80 .. .. .        | 3,736         | 3,865           | ..        | 129   | 18           | ..  |  |
| 81 .. .. .        | 3,307         | 3,414           | ..        | 107   | ..           | 89  |  |
| 82 .. .. .        | 3,386         | 3,347           | 39        | ..    | ..           | 50  |  |
| 83 .. .. .        | 3,278         | 3,168           | 110       | ..    | 60           | ..  |  |
| 84 .. .. .        | 3,164         | 3,203           | ..        | 39    | 21           | ..  |  |
| 85 .. .. .        | 2,817         | 2,881           | ..        | 64    | ..           | 43  |  |
| 86 .. .. .        | 2,615         | 2,636           | ..        | 21    | ..           | 64  |  |
| 87 .. .. .        | 2,292         | 2,184           | 108       | ..    | 44           | ..  |  |
| 88 .. .. .        | 1,880         | 1,972           | ..        | 92    | ..           | 48  |  |
| 89 .. .. .        | 1,639         | 1,737           | ..        | 98    | ..           | 146 |  |
| 90 .. .. .        | 1,503         | 1,464           | 39        | ..    | ..           | 107 |  |
| 91 .. .. .        | 1,180         | 1,197           | ..        | 17    | ..           | 124 |  |
| 92 .. .. .        | 975           | 872             | 103       | ..    | ..           | 21  |  |
| 93 .. .. .        | 753           | 727             | 26        | ..    | 5            | ..  |  |
| 94 .. .. .        | 564           | 567             | ..        | 3     | 2            | ..  |  |
| 95 .. .. .        | 437           | 410             | 27        | ..    | 29           | ..  |  |
| 96 .. .. .        | 313           | 324             | ..        | 11    | 18           | ..  |  |
| 97 .. .. .        | 244           | 235             | 9         | ..    | 27           | ..  |  |
| 98 .. .. .        | 160           | 163             | ..        | 3     | 24           | ..  |  |
| 99 .. .. .        | 84            | 89              | ..        | 5     | 19           | ..  |  |
| 100 plus .. .. .  | 124           | 137             | ..        | 13    | 6            | ..  |  |
| Totals .. .. .    | 111,183       | 111,177         | 1,648     | 1,642 | 6            | ..  |  |

## APPENDIX D

## 1. Rates of Mortality for One Period as a Proportion of the Rates for the Preceding Period

| Age      | Males   |         |         |         | Females |         |         |         |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
|          | 1960-62 | 1953-55 | 1946-48 | 1932-34 | 1960-62 | 1953-55 | 1946-48 | 1932-34 |
|          | 1953-55 | 1946-48 | 1932-34 | 1920-22 | 1953-55 | 1946-48 | 1932-34 | 1920-22 |
| 0 .. ..  | .89     | .79     | .70     | .64     | .88     | .79     | .69     | .65     |
| 10 .. .. | .73     | .78     | .61     | .76     | .80     | .70     | .57     | .69     |
| 20 .. .. | .93     | 1.10    | .77     | .77     | .94     | .70     | .50     | .73     |
| 30 .. .. | .92     | .91     | .69     | .69     | .85     | .58     | .59     | .72     |
| 40 .. .. | 1.01    | .88     | .73     | .75     | .86     | .76     | .71     | .77     |
| 50 .. .. | .98     | .89     | .95     | .83     | .88     | .88     | .93     | .93     |
| 60 .. .. | .98     | .97     | 1.03    | .92     | .89     | .90     | .95     | .93     |
| 70 .. .. | .97     | 1.01    | 1.03    | .96     | .90     | .90     | .95     | .93     |
| 80 .. .. | .97     | 1.00    | .95     | .95     | .91     | .93     | .99     | .90     |

## 2. Rates of Mortality as a Proportion of the Rates for the Period 1901-10

| Age      | Males   |         |         |         | Females |         |         |         |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
|          | 1960-62 | 1953-55 | 1946-48 | 1932-34 | 1960-62 | 1953-55 | 1946-48 | 1932-34 |
|          | 1901-10 | 1901-10 | 1901-10 | 1901-10 | 1901-10 | 1901-10 | 1901-10 | 1901-10 |
| 0 .. ..  | .24     | .27     | .34     | .48     | .22     | .25     | .32     | .46     |
| 10 .. .. | .23     | .31     | .40     | .66     | .18     | .22     | .31     | .55     |
| 20 .. .. | .47     | .50     | .46     | .59     | .18     | .19     | .28     | .56     |
| 30 .. .. | .30     | .33     | .36     | .52     | .16     | .18     | .32     | .54     |
| 40 .. .. | .37     | .36     | .41     | .56     | .26     | .30     | .40     | .56     |
| 50 .. .. | .58     | .59     | .66     | .69     | .49     | .55     | .67     | .78     |
| 60 .. .. | .84     | .86     | .88     | .86     | .56     | .63     | .71     | .76     |
| 70 .. .. | .84     | .86     | .85     | .82     | .61     | .68     | .76     | .80     |
| 80 .. .. | .84     | .87     | .87     | .92     | .75     | .82     | .88     | .89     |

3. Number of Survivors ( $l_x$ ) at Selected Ages out of 100,000 Births

| Age (x)  | Males   |         |         |         | Females |         |         |         |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
|          | 1960-62 | 1953-55 | 1946-48 | 1901-10 | 1960-62 | 1953-55 | 1946-48 | 1901-10 |
|          |         |         |         |         |         |         |         |         |
| 0 .. ..  | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 10 .. .. | 97,062  | 96,488  | 95,619  | 86,622  | 97,664  | 97,228  | 96,549  | 88,395  |
| 20 .. .. | 96,215  | 95,460  | 94,562  | 84,493  | 97,278  | 96,774  | 95,953  | 86,459  |
| 30 .. .. | 94,726  | 93,801  | 92,967  | 80,844  | 96,649  | 96,055  | 94,740  | 82,909  |
| 40 .. .. | 92,859  | 91,861  | 90,823  | 75,887  | 95,481  | 94,715  | 92,758  | 78,001  |
| 50 .. .. | 88,473  | 87,553  | 85,946  | 68,221  | 92,713  | 91,573  | 89,011  | 71,945  |
| 60 .. .. | 77,456  | 76,256  | 74,251  | 56,782  | 86,537  | 84,665  | 81,257  | 63,247  |
| 70 .. .. | 54,944  | 54,054  | 52,230  | 38,275  | 72,505  | 69,613  | 65,398  | 46,793  |
| 80 .. .. | 24,669  | 23,658  | 22,785  | 14,330  | 43,453  | 39,633  | 35,401  | 21,556  |
| 90 .. .. | 3,800   | 3,507   | 3,144   | 1,652   | 10,005  | 8,087   | 6,556   | 3,566   |

4. Complete Expectation of Life ( $e_x$ ) at Selected Ages

| Age (x)  | Males   |         |         |         | Females |         |         |         |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
|          | 1960-62 | 1953-55 | 1946-48 | 1901-10 | 1960-62 | 1953-55 | 1946-48 | 1901-10 |
|          |         |         |         |         |         |         |         |         |
| 0 .. ..  | 67.92   | 67.14   | 66.07   | 55.20   | 74.18   | 72.75   | 70.63   | 58.84   |
| 10 .. .. | 59.93   | 59.53   | 59.04   | 53.53   | 65.92   | 64.78   | 63.11   | 56.38   |
| 20 .. .. | 50.40   | 50.10   | 49.64   | 44.74   | 56.16   | 55.06   | 53.47   | 47.52   |
| 30 .. .. | 41.12   | 40.90   | 40.40   | 36.52   | 46.49   | 45.43   | 44.08   | 39.33   |
| 40 .. .. | 31.84   | 31.65   | 31.23   | 28.56   | 36.99   | 35.99   | 34.91   | 31.47   |
| 50 .. .. | 23.13   | 22.92   | 22.67   | 21.16   | 27.92   | 27.03   | 26.14   | 23.69   |
| 60 .. .. | 15.60   | 15.47   | 15.36   | 14.35   | 19.51   | 18.78   | 18.11   | 16.20   |
| 70 .. .. | 9.77    | 9.59    | 9.55    | 8.67    | 12.19   | 11.62   | 11.14   | 9.96    |
| 80 .. .. | 5.57    | 5.47    | 5.36    | 4.96    | 6.68    | 6.30    | 6.02    | 5.73    |

## APPENDIX E

| Class<br>Number | Cause of Death                                                            |
|-----------------|---------------------------------------------------------------------------|
| I.              | Infective and Parasitic Diseases                                          |
| II.             | Neoplasms                                                                 |
| III.            | Allergic, Endocrine System, Metabolic and Nutritional Diseases.           |
| IV.             | Diseases of the Blood and Blood-forming Organs.                           |
| V.              | Mental, Psychoneurotic and Personality Disorders.                         |
| VI.             | Diseases of the Nervous System and Sense Organs.                          |
| VII.            | Diseases of the Circulatory System.                                       |
| VIII.           | Diseases of the Respiratory System.                                       |
| IX.             | Diseases of the Digestive System.                                         |
| X.              | Diseases of the Genito-Urinary System.                                    |
| XI.             | Deliveries and Complications of Pregnancy, Childbirth and the Puerperium. |
| XII.            | Diseases of the Skin and Cellular Tissue.                                 |
| XIII.           | Diseases of the Bones and Organs of Movement.                             |
| XIV.            | Congenital Malformations.                                                 |
| XV.             | Certain Diseases of Early Infancy.                                        |
| XVI.            | Symptoms, Senility and Ill-defined Conditions.                            |
| XVII.           | Accidents, Poisonings and Violence.                                       |

The following tables show for each age, or age-group, the numbers of deaths in the appropriate period and the resulting crude mortality rate.

Male Mortality Rates By Cause of Death

| Class of Cause of Death | Age           |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         | 0             |                  |               |                  | 1             |                  |               |                  | 2             |                  |               |                  | 3             |                  |               |                  | 4             |                  |               |                  |
|                         | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I. .. ..                | 187           | 59.7             | 125           | 34.4             | 91            | 30.3             | 56            | 16.1             | 56            | 19.0             | 31            | 9.1              | 48            | 16.7             | 11            | 3.3              | 38            | 13.7             | 7             | 2.1              |
| II. .. ..               | 26            | 8.3              | 40            | 11.0             | 34            | 11.3             | 36            | 10.3             | 44            | 14.9             | 30            | 8.8              | 43            | 15.0             | 53            | 15.7             | 40            | 14.5             | 41            | 12.3             |
| III. .. ..              | 48            | 15.3             | 21            | 5.8              | 11            | 3.7              | 12            | 3.4              | 12            | 4.1              | 5             | 1.5              | 7             | 2.4              | 2             | .6               | 2             | .7               | 1             | .3               |
| IV. .. ..               | 20            | 6.4              | 17            | 4.7              | 8             | 2.7              | 4             | 1.1              | 4             | 1.4              | 2             | .6               | 1             | .3               | 6             | 1.8              | ..            | ..               | 4             | 1.2              |
| V. .. ..                | 48            | 15.3             | 27            | 7.5              | 19            | 6.3              | 5             | 1.4              | 4             | 1.4              | 8             | 2.3              | 5             | 1.7              | 4             | 1.2              | 2             | .7               | 2             | .6               |
| VI. .. ..               | 156           | 49.8             | 167           | 46.0             | 68            | 22.6             | 34            | 9.8              | 32            | 10.8             | 27            | 7.9              | 10            | 3.5              | 6             | 1.8              | 7             | 2.5              | 2             | .6               |
| VII. .. ..              | 28            | 8.9              | 31            | 8.5              | 11            | 3.7              | 7             | 2.0              | 8             | 2.7              | 9             | 2.6              | 26            | 9.1              | 22            | 6.5              | 13            | 4.7              | 15            | 4.5              |
| VIII. .. ..             | 652           | 208.2            | 708           | 195.0            | 154           | 51.3             | 142           | 40.8             | 90            | 30.5             | 72            | 21.0             | 61            | 21.3             | 40            | 11.8             | 34            | 12.3             | 24            | 7.2              |
| IX. .. ..               | 349           | 111.5            | 347           | 95.6             | 78            | 26.0             | 65            | 18.7             | 43            | 14.6             | 26            | 7.6              | 23            | 8.0              | 15            | 4.4              | 18            | 6.5              | 15            | 4.5              |
| X. .. ..                | 26            | 8.3              | 27            | 7.5              | 9             | 3.0              | 2             | .6               | 9             | 3.1              | 5             | 1.5              | 7             | 2.4              | 4             | 1.2              | 6             | 2.2              | 4             | 1.2              |
| XI. .. ..               | 26            | 8.3              | 15            | 4.1              | 4             | 1.3              | 1             | .3               | 4             | 1.4              | 1             | .3               | ..            | ..               | 1             | .3               | 1             | .4               | 1             | .3               |
| XII. .. ..              | 19            | 6.1              | 15            | 4.1              | 3             | 1.0              | 1             | .3               | 2             | .7               | 2             | .6               | ..            | ..               | 1             | .3               | 2             | .7               | 4             | 1.2              |
| XIII. .. ..             | 1,302         | 415.8            | 1,501         | 413.4            | 106           | 35.3             | 70            | 20.1             | 42            | 14.2             | 38            | 11.1             | 28            | 9.8              | 24            | 7.1              | 23            | 8.3              | 20            | 6.0              |
| XIV. .. ..              | 4,763         | 1,521.2          | 4,817         | 1,326.7          | 3             | 1.0              | 1             | .3               | 1             | .3               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| XV. .. ..               | 38            | 12.1             | 24            | 6.6              | 7             | 2.3              | 6             | 1.7              | 6             | 2.0              | 3             | .9               | 2             | .7               | 1             | .3               | 2             | .7               | 1             | .3               |
| XVI. .. ..              | 206           | 65.8             | 249           | 68.6             | 224           | 74.5             | 189           | 54.3             | 172           | 58.2             | 150           | 43.9             | 118           | 41.3             | 115           | 34.1             | 89            | 32.2             | 79            | 23.7             |
| XVII. .. ..             | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| Total .. ..             | 7,894         | 2,521.0          | 8,131         | 2,239.5          | 830           | 276.3            | 631           | 181.2            | 529           | 179.3            | 409           | 119.6            | 379           | 132.2            | 305           | 90.4             | 277           | 100.1            | 220           | 66.0             |

Male Mortality Rates By Cause of Death

| Class of Cause of Death | Age-Group     |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         | 5-14          |                  |               |                  | 15-24         |                  |               |                  | 25-34         |                  |               |                  | 35-44         |                  |               |                  |
|                         | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I. .. ..                | 167           | 6.8              | 61            | 1.9              | 92            | 5.0              | 39            | 1.7              | 161           | 7.3              | 67            | 3.1              | 264           | 13.5             | 124           | 5.6              |
| II. .. ..               | 211           | 8.6              | 255           | 8.0              | 210           | 11.3             | 192           | 8.3              | 363           | 16.4             | 378           | 17.4             | 836           | 42.9             | 925           | 41.8             |
| III. .. ..              | 22            | .9               | 25            | .8               | 27            | 1.5              | 43            | 1.9              | 63            | 2.8              | 51            | 2.4              | 101           | 5.2              | 123           | 5.6              |
| IV. .. ..               | 10            | .4               | 16            | .5               | 17            | .9               | 14            | .6               | 3             | .1               | 12            | .6               | 10            | .5               | 15            | .7               |
| V. .. ..                | 18            | .7               | 17            | .5               | 17            | .9               | 19            | .8               | 46            | 2.1              | 27            | 1.2              | 102           | 5.2              | 74            | 3.3              |
| VI. .. ..               | 92            | 3.7              | 114           | 3.6              | 110           | 5.9              | 119           | 5.1              | 200           | 9.1              | 190           | 8.7              | 513           | 25.3             | 501           | 22.6             |
| VII. .. ..              | 66            | 2.7              | 53            | 1.7              | 127           | 6.9              | 104           | 4.5              | 346           | 15.7             | 325           | 14.9             | 1,391         | 71.3             | 1,791         | 80.8             |
| VIII. .. ..             | 117           | 4.8              | 86            | 2.7              | 74            | 4.0              | 62            | 2.7              | 105           | 4.8              | 90            | 4.1              | 230           | 11.8             | 223           | 10.1             |
| IX. .. ..               | 70            | 2.9              | 46            | 1.4              | 64            | 3.5              | 48            | 2.1              | 122           | 5.5              | 94            | 4.3              | 336           | 17.2             | 293           | 13.2             |
| X. .. ..                | 36            | 1.5              | 26            | .8               | 80            | 4.3              | 65            | 2.8              | 173           | 7.8              | 94            | 4.3              | 272           | 13.9             | 205           | 9.2              |
| XI. .. ..               | 2             | .1               | 3             | .1               | 2             | .1               | 2             | .1               | 6             | .3               | 3             | .1               | 7             | .4               | 6             | .3               |
| XII. .. ..              | 13            | .5               | 15            | .5               | 11            | .6               | 14            | .6               | 6             | .3               | 3             | .1               | 12            | .6               | 14            | .6               |
| XIII. .. ..             | 74            | 3.0              | 95            | 3.0              | 52            | 2.8              | 65            | 2.8              | 47            | 2.1              | 25            | 1.2              | 39            | 2.0              | 48            | 2.2              |
| XIV. .. ..              | 6             | .2               | 5             | .2               | 15            | .8               | 14            | .6               | 15            | .7               | 22            | 1.0              | 26            | 1.3              | 32            | 1.4              |
| XV. .. ..               | 690           | 28.2             | 782           | 24.7             | 2,176         | 117.7            | 2,483         | 107.4            | 2,154         | 97.6             | 2,104         | 96.7             | 1,725         | 88.4             | 2,091         | 94.4             |
| Total .. ..             | 1,594         | 65.0             | 1,599         | 50.4             | 3,074         | 166.2            | 3,283         | 142.0            | 3,810         | 172.6            | 3,485         | 160.1            | 5,864         | 380.5            | 6,465         | 291.8            |

Male Mortality Rates By Cause of Death

| Class of Cause of Death | Age Group     |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         | 45-54         |                  |               |                  | 55-64         |                  |               |                  | 65-74         |                  |               |                  | 75-84         |                  |               |                  |
|                         | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I. .. .. .              | 491           | 30.7             | 243           | 12.9             | 738           | 66.0             | 379           | 29.4             | 756           | 105.7            | 483           | 60.4             | 300           | 120.3            | 273           | 88.9             |
| II. .. .. .             | 2,080         | 129.9            | 2,618         | 138.7            | 4,251         | 380.1            | 5,201         | 403.7            | 5,872         | 820.7            | 7,140         | 892.9            | 3,823         | 1,533.2          | 4,520         | 1,472.2          |
| III. .. .. .            | 257           | 16.1             | 215           | 11.4             | 506           | 45.3             | 505           | 39.2             | 765           | 106.9            | 788           | 98.6             | 456           | 182.9            | 539           | 175.6            |
| IV. .. .. .             | 26            | 1.6              | 27            | 1.4              | 66            | 5.9              | 65            | 5.1              | 125           | 17.5             | 98            | 12.3             | 135           | 54.1             | 118           | 38.4             |
| V. .. .. .              | 157           | 9.8              | 126           | 6.7              | 171           | 15.3             | 151           | 11.7             | 116           | 16.2             | 112           | 14.0             | 63            | 25.3             | 58            | 18.9             |
| VI. .. .. .             | 1,324         | 82.7             | 1,219         | 64.6             | 2,905         | 259.8            | 2,747         | 213.2            | 4,939         | 690.3            | 5,308         | 663.8            | 4,151         | 1,664.7          | 5,183         | 1,688.2          |
| VII. .. .. .            | 4,868         | 304.1            | 6,503         | 344.5            | 10,978        | 981.7            | 12,863        | 998.5            | 17,180        | 2,401.3          | 19,927        | 2,492.1          | 13,701        | 5,494.7          | 16,556        | 5,392.5          |
| VIII. .. .. .           | 540           | 33.7             | 584           | 30.9             | 1,349         | 120.6            | 1,568         | 121.7            | 2,204         | 308.1            | 3,088         | 386.2            | 2,191         | 878.7            | 2,978         | 970.0            |
| IX. .. .. .             | 698           | 43.6             | 673           | 35.7             | 1,116         | 99.8             | 977           | 75.8             | 1,261         | 176.3            | 1,232         | 154.1            | 818           | 328.1            | 934           | 304.2            |
| X. .. .. .              | 454           | 28.4             | 335           | 17.8             | 694           | 62.1             | 619           | 48.1             | 1,341         | 187.4            | 1,034         | 129.3            | 1,350         | 541.4            | 1,196         | 389.6            |
| XI. .. .. .             | 13            | .8               | 21            | 1.1              | 22            | 2.0              | 23            | 1.8              | 53            | 7.4              | 33            | 4.1              | 46            | 18.4             | 39            | 12.7             |
| XII. .. .. .            | 19            | 1.2              | 29            | 1.5              | 53            | 4.7              | 57            | 4.4              | 95            | 13.3             | 134           | 16.8             | 72            | 28.9             | 106           | 34.5             |
| XIII. .. .. .           | 49            | 3.1              | 51            | 2.7              | 31            | 2.8              | 45            | 3.5              | 21            | 2.9              | 23            | 2.9              | 4             | 1.6              | 7             | 2.3              |
| XIV. .. .. .            | 37            | 2.3              | 42            | 2.2              | 82            | 7.3              | 40            | 3.1              | 230           | 32.2             | 91            | 11.4             | 646           | 259.1            | 376           | 122.5            |
| XV. .. .. .             | 1,633         | 102.0            | 2,085         | 110.5            | 1,584         | 141.6            | 1,651         | 128.2            | 1,311         | 183.2            | 1,306         | 163.3            | 807           | 323.6            | 834           | 271.6            |
| Total .. .. .           | 12,646        | 790.0            | 14,771        | 782.6            | 24,546        | 2,195.0          | 26,891        | 2,087.4          | 36,269        | 5,069.4          | 40,797        | 5,102.2          | 28,563        | 11,455.0         | 33,717        | 10,982.1         |

Female Mortality Rates By Cause of Death

| Class of Cause of Death |    |    | Age           |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|----|----|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         |    |    | 0             |                  |               |                  | 1             |                  |               |                  | 2             |                  |               |                  | 3             |                  |               |                  | 4             |                  |               |                  |
|                         |    |    | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         |    |    | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I.                      | .. | .. | 146           | 48.9             | 94            | 27.3             | 77            | 26.8             | 39            | 11.7             | 45            | 16.0             | 16            | 4.9              | 29            | 10.6             | 10            | 3.1              | 23            | 8.7              | 11            | 3.5              |
| II.                     | .. | .. | 28            | 9.4              | 20            | 5.8              | 39            | 13.6             | 32            | 9.6              | 29            | 10.3             | 35            | 10.7             | 54            | 19.7             | 29            | 9.0              | 40            | 15.1             | 43            | 13.6             |
| III.                    | .. | .. | 35            | 11.7             | 19            | 5.5              | 21            | 7.3              | 18            | 5.4              | 7             | 2.5              | 4             | 1.2              | 4             | 1.5              | 2             | .6               | 7             | 2.6              | 2             | .6               |
| IV.                     | .. | .. | 8             | 2.7              | 17            | 4.9              | 9             | 3.1              | 2             | .6               | 3             | 1.1              | 5             | 1.5              | ..            | ..               | 2             | .6               | 2             | .8               | 2             | .6               |
| V.                      | .. | .. | 36            | 12.1             | 26            | 7.6              | 8             | 2.8              | 6             | 1.8              | 7             | 2.5              | 1             | .3               | 2             | .7               | 4             | 1.2              | ..            | ..               | ..            | ..               |
| VI.                     | .. | .. | 114           | 38.2             | 114           | 33.2             | 48            | 16.7             | 31            | 9.3              | 28            | 9.9              | 32            | 9.8              | 15            | 5.5              | 7             | 2.2              | 21            | 7.9              | 10            | 3.1              |
| VII.                    | .. | .. | 15            | 5.0              | 24            | 7.0              | 13            | 4.5              | 9             | 2.7              | 7             | 2.5              | 2             | .6               | 3             | 1.1              | 2             | .6               | 9             | 3.4              | 3             | 1.0              |
| VIII.                   | .. | .. | 536           | 179.6            | 575           | 167.3            | 155           | 53.9             | 129           | 38.8             | 62            | 21.9             | 62            | 19.1             | 36            | 13.1             | 36            | 11.2             | 29            | 11.0             | 17            | 5.4              |
| IX.                     | .. | .. | 282           | 94.5             | 234           | 68.1             | 94            | 32.7             | 52            | 15.7             | 25            | 8.9              | 15            | 4.6              | 13            | 4.7              | 11            | 3.4              | 7             | 2.6              | 5             | 1.6              |
| X.                      | .. | .. | 15            | 5.0              | 7             | 2.0              | 8             | 2.8              | 4             | 1.2              | 9             | 3.2              | 5             | 1.5              | 6             | 2.2              | 4             | 1.2              | 6             | 2.3              | 3             | 1.0              |
| XI.                     | .. | .. | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| XII.                    | .. | .. | 10            | 3.4              | 14            | 4.1              | 2             | .7               | 1             | .3               | 1             | .4               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| XIII.                   | .. | .. | 9             | 3.0              | 18            | 5.2              | 4             | 1.4              | 4             | 1.2              | 1             | .4               | ..            | ..               | ..            | ..               | 1             | .3               | ..            | ..               | 4             | 1.3              |
| XIV.                    | .. | .. | 1,051         | 352.1            | 1,203         | 350.0            | 76            | 26.5             | 83            | 25.0             | 41            | 14.6             | 34            | 10.4             | 27            | 9.9              | 19            | 5.9              | 16            | 6.0              | 15            | 4.8              |
| XV.                     | .. | .. | 3,477         | 1,164.7          | 3,468         | 1,008.9          | ..            | ..               | 1             | .3               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| XVI.                    | .. | .. | 26            | 8.7              | 23            | 6.7              | 4             | 1.4              | 8             | 2.4              | 3             | 1.1              | 4             | 1.2              | 2             | .7               | ..            | ..               | 1             | .4               | 1             | .3               |
| XVII.                   | .. | .. | 149           | 49.9             | 185           | 53.8             | 150           | 52.2             | 152           | 45.8             | 100           | 35.3             | 118           | 36.3             | 58            | 21.2             | 78            | 24.4             | 61            | 23.1             | 75            | 23.7             |
| Total                   | .. | .. | 5,937         | 1,988.9          | 6,041         | 1,757.4          | 708           | 246.4            | 571           | 171.9            | 368           | 130.6            | 333           | 102.1            | 249           | 90.9             | 205           | 63.7             | 222           | 83.9             | 191           | 60.5             |

# Female Mortality Rates By Cause of Death

| Class of Cause of Death | Age-Group     |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         | 5-14          |                  |               |                  | 15-24         |                  |               |                  | 25-34         |                  |               |                  | 35-44         |                  |               |                  |
|                         | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I. .. .. .              | 118           | 5.0              | 51            | 1.7              | 82            | 4.7              | 39            | 1.8              | 158           | 7.7              | 50            | 2.5              | 181           | 9.7              | 89            | 4.2              |
| II. .. .. .             | 153           | 6.5              | 216           | 7.1              | 113           | 6.5              | 144           | 6.6              | 424           | 20.8             | 384           | 19.2             | 1,126         | 60.2             | 1,251         | 59.0             |
| III. .. .. .            | 23            | 1.0              | 29            | 1.0              | 48            | 2.8              | 46            | 2.1              | 88            | 4.3              | 78            | 3.9              | 126           | 6.7              | 137           | 6.5              |
| IV. .. .. .             | 14            | .6               | 17            | .6               | 17            | 1.0              | 13            | .6               | 18            | .9               | 13            | .7               | 35            | 1.9              | 21            | 1.0              |
| V. .. .. .              | 9             | .4               | 11            | .4               | 13            | .8               | 8             | .4               | 24            | 1.2              | 21            | 1.0              | 37            | 2.0              | 37            | 1.7              |
| VI. .. .. .             | 85            | 3.6              | 61            | 2.0              | 86            | 5.0              | 79            | 3.6              | 174           | 8.5              | 132           | 6.6              | 522           | 27.9             | 463           | 21.8             |
| VII. .. .. .            | 69            | 2.9              | 36            | 1.2              | 98            | 5.6              | 101           | 4.6              | 199           | 9.7              | 180           | 9.0              | 651           | 34.8             | 613           | 28.9             |
| VIII. .. .. .           | 94            | 4.0              | 82            | 2.7              | 80            | 4.6              | 47            | 2.1              | 86            | 4.2              | 70            | 3.5              | 130           | 7.0              | 124           | 5.8              |
| IX. .. .. .             | 72            | 3.1              | 40            | 1.3              | 57            | 3.3              | 54            | 2.5              | 104           | 5.1              | 69            | 3.5              | 244           | 13.0             | 175           | 8.3              |
| X. .. .. .              | 51            | 2.2              | 28            | .9               | 66            | 3.8              | 33            | 1.5              | 149           | 7.3              | 105           | 5.3              | 325           | 17.4             | 246           | 11.6             |
| XI. .. .. .             | ..            | ..               | ..            | ..               | 85            | 4.9              | 79            | 3.6              | 174           | 8.5              | 125           | 6.3              | 132           | 7.1              | 105           | 5.0              |
| XII. .. .. .            | 5             | .2               | 6             | .2               | 4             | .2               | 4             | .2               | 7             | .3               | 7             | .4               | 17            | .9               | 11            | .5               |
| XIII. .. .. .           | 6             | .3               | 9             | .3               | 5             | .3               | 2             | .1               | 3             | .2               | 3             | .1               | 10            | .5               | 9             | .4               |
| XIV. .. .. .            | 57            | 2.4              | 85            | 2.8              | 38            | 2.2              | 41            | 1.9              | 22            | 1.1              | 31            | 1.6              | 31            | 1.7              | 30            | 1.4              |
| XV. .. .. .             | 4             | .2               | 3             | .1               | 7             | .4               | 4             | .2               | 12            | .6               | 13            | .7               | 15            | .8               | 15            | .7               |
| XVII. .. .. .           | 278           | 11.9             | 344           | 11.4             | 282           | 16.2             | 500           | 22.8             | 333           | 16.3             | 386           | 19.3             | 395           | 21.1             | 576           | 27.2             |
| Total .. .. .           | 1,038         | 44.3             | 1,018         | 33.7             | 1,081         | 62.3             | 1,194         | 54.6             | 1,975         | 96.7             | 1,667         | 83.6             | 3,977         | 212.7            | 3,902         | 184.0            |

**Female Mortality Rates By Cause of Death**

| Class of Cause of Death | Age-Group     |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |               |                  |
|-------------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
|                         | 45-54         |                  |               |                  | 55-64         |                  |               |                  | 65-74         |                  |               |                  | 75-84         |                  |               |                  |
|                         | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  | 1953-55       |                  | 1960-62       |                  |
|                         | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 | No. of Deaths | Rate per 100,000 |
| I. .. .. .              | 170           | 11.5             | 110           | 6.2              | 180           | 14.9             | 109           | 8.3              | 182           | 22.0             | 148           | 14.8             | 135           | 39.7             | 123           | 27.6             |
| II. .. .. .             | 2,331         | 157.2            | 2,635         | 147.0            | 3,713         | 306.7            | 3,684         | 281.6            | 4,705         | 568.3            | 5,292         | 529.7            | 3,524         | 1,037.5          | 4,149         | 932.2            |
| III. .. .. .            | 216           | 14.6             | 221           | 12.3             | 595           | 49.1             | 467           | 35.7             | 1,120         | 135.3            | 1,086         | 108.7            | 784           | 230.8            | 922           | 207.1            |
| IV. .. .. .             | 33            | 2.2              | 36            | 2.0              | 95            | 7.8              | 55            | 4.2              | 164           | 19.8             | 135           | 13.5             | 229           | 67.4             | 202           | 45.4             |
| V. .. .. .              | 69            | 4.7              | 60            | 3.4              | 71            | 5.9              | 63            | 4.8              | 83            | 10.0             | 63            | 6.3              | 77            | 22.7             | 77            | 17.3             |
| VI. .. .. .             | 1,543         | 104.1            | 1,249         | 69.7             | 2,939         | 242.7            | 2,305         | 176.2            | 5,626         | 679.6            | 5,674         | 567.9            | 6,375         | 1,876.8          | 7,995         | 1,796.2          |
| VII. .. .. .            | 1,705         | 115.0            | 1,924         | 107.4            | 4,964         | 410.0            | 5,050         | 386.0            | 10,659        | 1,287.6          | 12,788        | 1,280.0          | 13,493        | 3,972.4          | 16,658        | 3,742.6          |
| VIII. .. .. .           | 205           | 13.8             | 222           | 12.4             | 409           | 33.8             | 401           | 30.7             | 879           | 106.2            | 920           | 92.1             | 1,627         | 479.0            | 1,669         | 375.0            |
| IX. .. .. .             | 369           | 24.9             | 359           | 20.0             | 621           | 51.3             | 485           | 37.1             | 783           | 94.6             | 827           | 82.8             | 705           | 207.6            | 926           | 208.0            |
| X. .. .. .              | 375           | 25.3             | 418           | 23.3             | 411           | 33.9             | 465           | 35.6             | 543           | 65.6             | 631           | 63.1             | 516           | 151.9            | 539           | 121.1            |
| XI. .. .. .             | 7             | .5               | 5             | .2               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| XII. .. .. .            | 23            | 1.5              | 16            | .9               | 29            | 2.4              | 29            | 2.2              | 33            | 4.0              | 45            | 4.5              | 43            | 12.7             | 44            | 9.9              |
| XIII. .. .. .           | 24            | 1.6              | 23            | 1.3              | 66            | 5.5              | 54            | 4.1              | 131           | 15.8             | 145           | 14.5             | 145           | 42.7             | 219           | 49.2             |
| XIV. .. .. .            | 35            | 2.4              | 65            | 3.6              | 23            | 1.9              | 25            | 1.9              | 15            | 1.8              | 27            | 2.7              | 9             | 2.7              | 15            | 3.4              |
| XV. .. .. .             | 26            | 1.7              | 20            | 1.1              | 32            | 2.6              | 18            | 1.4              | 168           | 20.3             | 82            | 8.2              | 797           | 234.6            | 470           | 105.6            |
| XVI. .. .. .            | 489           | 33.0             | 704           | 39.3             | 469           | 38.7             | 656           | 50.1             | 574           | 69.3             | 812           | 81.3             | 955           | 281.2            | 1,001         | 224.9            |
| XVII. .. .. .           | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               | ..            | ..               |
| Total .. .. .           | 7,620         | 514.0            | 8,067         | 450.1            | 14,617        | 1,207.2          | 13,866        | 1,059.9          | 25,665        | 3,100.2          | 28,675        | 2,870.1          | 29,414        | 8,659.7          | 35,009        | 7,865.5          |

## APPENDIX F

## 1. POPULATION AT CENSUS, 30TH JUNE, 1961 AND DEATHS IN THREE YEARS, 1960-1962—AUSTRALIA

## Males

| Age Last Birthday. | Population | Deaths | Age Last Birthday | Population | Deaths  |
|--------------------|------------|--------|-------------------|------------|---------|
| (1)                | (2)        |        | (3)               | (4)        |         |
| 0 .. ..            | 116,736    | 8,131  | 35 .. ..          | 51,289     | 2,046   |
| 1 .. ..            | 112,262    | 631    | 36 .. ..          | 50,583     | 2,256   |
| 2 .. ..            | 114,988    | 409    | 37 .. ..          | 47,029     | 2,370   |
| 3 .. ..            | 112,964    | 305    | 38 .. ..          | 45,699     | 2,489   |
| 4 .. ..            | 110,792    | 220    | 39 .. ..          | 43,451     | 2,665   |
| 5 .. ..            | 110,153    | 175    | 60 .. ..          | 45,097     | 2,895   |
| 6 .. ..            | 107,560    | 186    | 61 .. ..          | 42,415     | 2,860   |
| 7 .. ..            | 105,820    | 174    | 62 .. ..          | 35,870     | 3,051   |
| 8 .. ..            | 107,441    | 162    | 63 .. ..          | 34,185     | 3,002   |
| 9 .. ..            | 105,072    | 145    | 64 .. ..          | 33,238     | 3,269   |
| 10 .. ..           | 105,177    | 124    | 65 .. ..          | 32,641     | 3,474   |
| 11 .. ..           | 103,709    | 132    | 66 .. ..          | 29,705     | 3,383   |
| 12 .. ..           | 101,525    | 161    | 67 .. ..          | 29,728     | 3,792   |
| 13 .. ..           | 101,962    | 171    | 68 .. ..          | 29,152     | 3,919   |
| 14 .. ..           | 110,034    | 169    | 69 .. ..          | 27,904     | 4,109   |
| 15 .. ..           | 89,575     | 203    | 70 .. ..          | 27,017     | 4,317   |
| 16 .. ..           | 87,878     | 255    | 71 .. ..          | 24,291     | 4,067   |
| 17 .. ..           | 84,179     | 305    | 72 .. ..          | 24,130     | 4,517   |
| 18 .. ..           | 75,801     | 368    | 73 .. ..          | 21,874     | 4,610   |
| 19 .. ..           | 77,355     | 403    | 74 .. ..          | 19,627     | 4,627   |
| 20 .. ..           | 74,022     | 380    | 75 .. ..          | 17,723     | 4,201   |
| 21 .. ..           | 74,204     | 371    | 76 .. ..          | 15,971     | 4,249   |
| 22 .. ..           | 71,691     | 343    | 77 .. ..          | 13,407     | 3,836   |
| 23 .. ..           | 71,079     | 337    | 78 .. ..          | 11,949     | 3,784   |
| 24 .. ..           | 70,535     | 319    | 79 .. ..          | 10,173     | 3,487   |
| 25 .. ..           | 69,234     | 261    | 80 .. ..          | 9,279      | 3,341   |
| 26 .. ..           | 67,430     | 325    | 81 .. ..          | 7,359      | 2,890   |
| 27 .. ..           | 67,175     | 301    | 82 .. ..          | 6,344      | 2,929   |
| 28 .. ..           | 69,111     | 319    | 83 .. ..          | 5,519      | 2,521   |
| 29 .. ..           | 69,493     | 320    | 84 .. ..          | 4,568      | 2,494   |
| 30 .. ..           | 76,844     | 355    | 85 .. ..          | 3,622      | 2,067   |
| 31 .. ..           | 75,304     | 336    | 86 .. ..          | 3,032      | 1,895   |
| 32 .. ..           | 77,195     | 378    | 87 .. ..          | 2,364      | 1,542   |
| 33 .. ..           | 78,517     | 424    | 88 .. ..          | 1,828      | 1,341   |
| 34 .. ..           | 78,315     | 467    | 89 .. ..          | 1,370      | 1,090   |
| 35 .. ..           | 81,081     | 474    | 90 .. ..          | 1,102      | 913     |
| 36 .. ..           | 79,847     | 478    | 91 .. ..          | 789        | 693     |
| 37 .. ..           | 77,061     | 500    | 92 .. ..          | 505        | 573     |
| 38 .. ..           | 79,199     | 589    | 93 .. ..          | 402        | 436     |
| 39 .. ..           | 78,059     | 635    | 94 .. ..          | 289        | 310     |
| 40 .. ..           | 79,779     | 690    | 95 .. ..          | 200        | 202     |
| 41 .. ..           | 69,623     | 667    | 96 .. ..          | 108        | 175     |
| 42 .. ..           | 65,501     | 803    | 97 .. ..          | 59         | 89      |
| 43 .. ..           | 64,792     | 795    | 98 .. ..          | 47         | 69      |
| 44 .. ..           | 64,278     | 837    | 99 .. ..          | 32         | 43      |
| 45 .. ..           | 67,518     | 977    | 100 and over ..   | 40         | 56      |
| 46 .. ..           | 68,428     | 1,064  |                   |            |         |
| 47 .. ..           | 68,344     | 1,222  |                   |            |         |
| 48 .. ..           | 67,536     | 1,325  |                   |            |         |
| 49 .. ..           | 64,064     | 1,414  |                   |            |         |
| 50 .. ..           | 65,434     | 1,584  |                   |            |         |
| 51 .. ..           | 58,877     | 1,624  |                   |            |         |
| 52 .. ..           | 58,222     | 1,734  |                   |            |         |
| 53 .. ..           | 56,328     | 1,773  |                   |            |         |
| 54 .. ..           | 54,142     | 2,061  |                   |            |         |
|                    |            |        | Total ..          | 5,312,252  | 152,255 |

2. POPULATION AT CENSUS, 30TH JUNE, 1961 AND DEATHS IN THREE YEARS, 1960-62—AUSTRALIA  
Females

| Age Last Birthday | Population | Deaths | Age Last Birthday | Population | Deaths  |
|-------------------|------------|--------|-------------------|------------|---------|
| (1)               | (2)        |        | (3)               | (4)        |         |
| 0 .. ..           | 111,755    | 6,041  | 55 .. ..          | 47,669     | 939     |
| 1 .. ..           | 106,214    | 571    | 56 .. ..          | 47,261     | 1,106   |
| 2 .. ..           | 110,424    | 333    | 57 .. ..          | 43,900     | 1,048   |
| 3 .. ..           | 108,076    | 205    | 58 .. ..          | 44,196     | 1,179   |
| 4 .. ..           | 105,282    | 191    | 59 .. ..          | 42,304     | 1,269   |
| 5 .. ..           | 103,763    | 143    | 60 .. ..          | 48,610     | 1,511   |
| 6 .. ..           | 103,457    | 143    | 61 .. ..          | 43,845     | 1,476   |
| 7 .. ..           | 101,152    | 116    | 62 .. ..          | 39,342     | 1,743   |
| 8 .. ..           | 103,284    | 93     | 63 .. ..          | 39,661     | 1,716   |
| 9 .. ..           | 99,819     | 89     | 64 .. ..          | 38,590     | 1,881   |
| 10 .. ..          | 100,466    | 75     | 65 .. ..          | 40,603     | 2,145   |
| 11 .. ..          | 98,818     | 93     | 66 .. ..          | 36,856     | 2,189   |
| 12 .. ..          | 97,003     | 82     | 67 .. ..          | 36,576     | 2,457   |
| 13 .. ..          | 97,018     | 96     | 68 .. ..          | 36,718     | 2,663   |
| 14 .. ..          | 104,272    | 88     | 69 .. ..          | 33,891     | 2,790   |
| 15 .. ..          | 84,616     | 100    | 70 .. ..          | 35,283     | 2,938   |
| 16 .. ..          | 84,211     | 116    | 71 .. ..          | 28,833     | 2,864   |
| 17 .. ..          | 80,284     | 130    | 72 .. ..          | 29,931     | 3,382   |
| 18 .. ..          | 72,174     | 119    | 73 .. ..          | 28,429     | 3,548   |
| 19 .. ..          | 72,860     | 127    | 74 .. ..          | 25,572     | 3,704   |
| 20 .. ..          | 69,135     | 113    | 75 .. ..          | 23,580     | 3,597   |
| 21 .. ..          | 67,872     | 128    | 76 .. ..          | 21,929     | 3,707   |
| 22 .. ..          | 67,139     | 126    | 77 .. ..          | 18,302     | 3,490   |
| 23 .. ..          | 65,993     | 124    | 78 .. ..          | 17,305     | 3,722   |
| 24 .. ..          | 65,768     | 111    | 79 .. ..          | 14,608     | 3,627   |
| 25 .. ..          | 64,333     | 118    | 80 .. ..          | 14,490     | 3,736   |
| 26 .. ..          | 62,694     | 107    | 81 .. ..          | 11,501     | 3,307   |
| 27 .. ..          | 61,094     | 142    | 82 .. ..          | 10,127     | 3,386   |
| 28 .. ..          | 62,787     | 149    | 83 .. ..          | 8,631      | 3,278   |
| 29 .. ..          | 62,720     | 148    | 84 .. ..          | 7,878      | 3,164   |
| 30 .. ..          | 70,790     | 166    | 85 .. ..          | 6,409      | 2,817   |
| 31 .. ..          | 68,362     | 171    | 86 .. ..          | 5,327      | 2,615   |
| 32 .. ..          | 70,031     | 176    | 87 .. ..          | 4,017      | 2,292   |
| 33 .. ..          | 71,301     | 237    | 88 .. ..          | 3,312      | 1,880   |
| 34 .. ..          | 71,309     | 253    | 89 .. ..          | 2,671      | 1,639   |
| 35 .. ..          | 75,046     | 282    | 90 .. ..          | 2,074      | 1,503   |
| 36 .. ..          | 75,407     | 312    | 91 .. ..          | 1,566      | 1,180   |
| 37 .. ..          | 72,465     | 337    | 92 .. ..          | 1,058      | 975     |
| 38 .. ..          | 75,906     | 341    | 93 .. ..          | 820        | 753     |
| 39 .. ..          | 73,845     | 366    | 94 .. ..          | 596        | 564     |
| 40 .. ..          | 77,950     | 411    | 95 .. ..          | 402        | 437     |
| 41 .. ..          | 65,142     | 415    | 96 .. ..          | 296        | 313     |
| 42 .. ..          | 64,918     | 466    | 97 .. ..          | 201        | 244     |
| 43 .. ..          | 63,457     | 459    | 98 .. ..          | 132        | 160     |
| 44 .. ..          | 63,087     | 514    | 99 .. ..          | 68         | 84      |
| 45 .. ..          | 65,396     | 573    | 100 and over ..   | 91         | 124     |
| 46 .. ..          | 66,826     | 664    |                   |            |         |
| 47 .. ..          | 65,470     | 694    |                   |            |         |
| 48 .. ..          | 64,116     | 798    |                   |            |         |
| 49 .. ..          | 60,133     | 810    |                   |            |         |
| 50 .. ..          | 63,599     | 794    |                   |            |         |
| 51 .. ..          | 53,324     | 792    |                   |            |         |
| 52 .. ..          | 54,496     | 916    |                   |            |         |
| 53 .. ..          | 52,395     | 956    |                   |            |         |
| 54 .. ..          | 51,009     | 1,071  |                   |            |         |
|                   |            |        | Total ..          | 5,195,934  | 118,333 |

## APPENDIX G

## FORMULAE USED FOR CALCULATION OF MORTALITY RATES AT AGES 0 TO 4

*Age 0.*—If the rate of mortality at age 0 is  $q_0$ , and the probability of dying in the first three months after birth is  $q_0^{(0-3 \text{ months})}$ , —  $q_0 = q_0^{(0-3 \text{ months})} + q_0^{(3-6 \text{ months})} + q_0^{(6-9 \text{ months})} + q_0^{(9-12 \text{ months})}$

The formula used for  $q_0^{(0-3 \text{ months})}$  is,—

$$q_0^{(0-3 \text{ months})} = \frac{\text{Deaths in 1960, 1961 and 1962 at age 0-3 months}}{\frac{1}{4}\beta^4 1959 + \beta 1960 + \beta 1961 + \beta^3 1962 + \beta^2 1962 + \beta^4 1962 + \frac{1}{4}\beta^4 1962}$$

$$q_0^{(3-6 \text{ months})} = \frac{\text{Deaths in 1960, 1961 and 1962 at age 3-6 months}}{\frac{1}{4}\beta^3 1959 + \beta^4 1959 + \beta 1960 + \beta 1961 + \beta^3 1962 + \beta^2 1962 + \frac{1}{4}\beta^3 1962}$$

In the above formula  $\beta 1960$  is the number of births in the year 1960,  $\beta^3 1962$  is the number of births in the first quarter of 1962, &c.,

*Ages 1-4.*—

$$q_1 = \frac{\text{Deaths in 1960, 1961 and 1962 at age 1}}{\frac{1}{4}\beta^3 1958 + \frac{1}{4}\beta^2 1958 + \frac{1}{4}\beta^3 1958 + \frac{1}{4}\beta^4 1958 + \beta 1959 + \beta 1960 + \frac{1}{4}\beta^3 1961 + \frac{1}{4}\beta^2 1961 + \frac{1}{4}\beta^3 1961 + \frac{1}{4}\beta^4 1961} \\ - (\text{deaths at age 0-1 in 1959, 1960 and 1961}).$$

For the formula for other ages see Report on English Life Table No. 10 Decennial Supplement of the Registrar-General (U.K.), 1931.

NOTE.—The above formulae do not include any adjustment for migration.