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# **Life expectancies for individuals with cerebral palsy**

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## 1. Summary

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- 1.1 This publication is intended to translate the survival probabilities and mortality loadings found within a range of epidemiological studies to implied life expectancy tables in a robust, objective and consistent manner. A summary of these calculations are provided below.

**Table 1.1 - Estimated life expectancy for individuals with cerebral palsy (additional years)**

| Study cohort                     | Age 0 | Age 5 | Age 10 | Age 15 | Age 20 | Age 25 |
|----------------------------------|-------|-------|--------|--------|--------|--------|
| Australian population            | 82.4  | 77.7  | 72.7   | 67.8   | 62.9   | 58.0   |
| Crichton (1995)                  |       |       |        |        |        |        |
| Cerebral palsy - Hemiplegia      | 78.0  | 74.2  | 69.8   | 65.3   | 60.7   | 56.1   |
| Cerebral palsy - Other           | 66.0  | 66.4  | 64.8   | 62.1   | 58.7   | 54.8   |
| Epilepsy - None                  | 70.1  | 68.6  | 65.9   | 62.5   | 58.8   | 54.7   |
| Epilepsy - Other                 | 64.0  | 63.3  | 61.5   | 58.8   | 55.7   | 52.1   |
| Mental retardation - Moderate    | 74.1  | 72.2  | 69.0   | 65.1   | 60.9   | 56.5   |
| Mental retardation - Severe      | 47.2  | 51.0  | 52.6   | 52.5   | 51.1   | 48.7   |
| Plioplys (1998)                  |       |       |        |        |        |        |
| Group 1                          | 47.9  | 57.9  | 60.7   | 59.5   | 56.3   | 52.3   |
| Group 2                          | 48.8  | 47.3  | 45.1   | 42.7   | 40.1   | 37.2   |
| Group 3                          | 63.7  | 64.8  | 63.2   | 60.1   | 56.3   | 52.1   |
| Blair et al (2001)               |       |       |        |        |        |        |
| Disability score (1 to 3)        | 80.5  | 76.0  | 71.2   | 66.4   | 61.6   | 56.9   |
| Disability score (4 to 6)        | 78.8  | 75.0  | 70.7   | 66.2   | 61.6   | 57.0   |
| Disability score (7 to 9)        | 55.4  | 57.5  | 57.7   | 56.4   | 54.2   | 51.1   |
| Disability score (10 to 12)      | 26.5  | 28.2  | 29.3   | 29.8   | 29.8   | 29.1   |
| "Severe" CP                      | 47.5  | 49.7  | 49.9   | 48.5   | 46.1   | 42.8   |
| Hutton et al (2002)              |       |       |        |        |        |        |
| Severe ambulatory (low bw)       | 73.6  | 69.9  | 65.7   | 61.4   | 57.0   | 52.6   |
| Severe ambulatory (normal bw)    | 69.5  | 66.1  | 62.3   | 58.3   | 54.2   | 50.0   |
| Severe motor (low bs)            | 54.6  | 52.0  | 49.1   | 46.1   | 42.9   | 39.7   |
| Severe motor (normal bs)         | 48.1  | 46.1  | 43.7   | 41.2   | 38.5   | 35.7   |
| Severe motor & cogn. (low bw)    | 38.3  | 37.5  | 36.3   | 34.7   | 32.9   | 30.7   |
| Severe motor & cogn. (normal bw) | 32.4  | 32.3  | 31.8   | 30.8   | 29.4   | 27.7   |
| Severe all (low bw)              | 24.7  | 26.0  | 26.6   | 26.7   | 26.1   | 24.9   |
| Severe all (normal bw)           | 20.1  | 22.3  | 23.8   | 24.6   | 24.5   | 23.7   |
| Hutton et al (2006)              |       |       |        |        |        |        |
| Severe ambulation                | 30.5  | 32.3  | 33.2   | 33.6   | 33.3   | 32.3   |
| Severe dexterity                 | 29.0  | 30.0  | 30.4   | 30.4   | 30.0   | 29.0   |
| Severe cognitive                 | 26.8  | 29.6  | 31.5   | 32.7   | 33.0   | 32.4   |
| Severe visual                    | 41.4  | 42.2  | 42.3   | 41.6   | 40.3   | 38.5   |
| Severe all                       | 21.8  | 22.9  | 23.7   | 24.1   | 24.1   | 23.6   |
| Westbom et al (2011)             |       |       |        |        |        |        |
| GMFCS V                          | 29.2  | 28.1  | 26.7   | 25.2   | 23.5   | 21.6   |
| Reid et al (2012)                |       |       |        |        |        |        |
| Mild+0                           | 81.9  | 77.2  | 72.3   | 67.4   | 62.5   | 57.7   |
| Moderate+0                       | 76.4  | 72.3  | 67.8   | 63.3   | 58.9   | 54.4   |
| Severe+0                         | 65.9  | 63.7  | 60.7   | 57.4   | 53.8   | 49.9   |
| Severe+1                         | 47.2  | 45.4  | 43.3   | 41.1   | 38.7   | 36.2   |
| Severe+2                         | 35.7  | 34.5  | 33.0   | 31.3   | 29.5   | 27.6   |
| Severe+3                         | 28.0  | 27.5  | 26.7   | 25.7   | 24.7   | 23.5   |
| Touyama et al (2013)             |       |       |        |        |        |        |
| GMFCS V                          | 43.7  | 44.3  | 43.8   | 42.6   | 40.7   | 38.2   |

**Table 1.1 (cont'd)- Estimated life expectancy for individuals with cerebral palsy (additional years)**

| Study cohort                        | Age 0 | Age 5 | Age 10 | Age 15 | Age 20 | Age 25 |
|-------------------------------------|-------|-------|--------|--------|--------|--------|
| Strauss at al (2014)                |       |       |        |        |        |        |
| Cannot lift head (tube fed)         | 14.6  | 15.2  | 15.6   | 15.7   | 15.5   | 14.9   |
| Cannot lift head (fed by others)    | 23.2  | 23.4  | 23.1   | 22.6   | 21.8   | 20.6   |
| Lifts head or chest (tube fed)      | 23.6  | 23.1  | 22.3   | 21.4   | 20.3   | 19.1   |
| Lifts head or chest (fed by others) | 33.6  | 32.5  | 31.1   | 29.5   | 27.7   | 25.8   |
| Rolls/sits (tube fed)               | 33.0  | 32.0  | 30.6   | 29.0   | 27.3   | 25.4   |
| Rolls/sits (fed by others)          | 51.0  | 48.7  | 45.9   | 43.1   | 40.1   | 37.1   |
| Himmelmann at al (2015)             |       |       |        |        |        |        |
| CP Type (Hagberg - Tetraplegia)     | 24.3  | 23.8  | 23.1   | 22.2   | 21.2   | 20.1   |
| CP Type (Hagberg - Dyskinetic)      | 55.4  | 52.7  | 49.8   | 46.7   | 43.5   | 40.3   |
| CP Type (SCPE - Dyskinetic)         | 58.5  | 55.6  | 52.4   | 49.1   | 45.7   | 42.3   |
| CP Type (SCPE - BSCP)               | 68.5  | 64.8  | 60.9   | 56.9   | 52.8   | 48.8   |
| Severe motor                        | 48.7  | 46.6  | 44.1   | 41.5   | 38.8   | 36.0   |
| Severe mental retardation           | 46.3  | 44.4  | 42.1   | 39.8   | 37.2   | 34.6   |
| Epilepsy                            | 54.0  | 51.8  | 49.3   | 46.5   | 43.5   | 40.3   |

- 1.2 While these tables may be useful estimating the life expectancy of an individual with cerebral palsy it is crucial to recognise they are average life expectancies, fitted to the cohorts involved in the particular study. No attempt have been made to adjust for improvement in survival rates over the interval of the studies and factors such as comorbidities, access to ongoing care and random outcomes have the ability to greatly affect the actual life expectancy for a particular individual.

## **2. Background**

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- 2.1 Cerebral palsy is a diagnostic label referring to motor conditions that cause physical disability in human development, chiefly in the various areas of body movement.
- 2.2 While it is not a progressive disorder (meaning the brain damage does not worsen) cerebral palsy's nature as a broad category means that the rates, trends and predictors of mortality varies widely, depending partly on the severity of each person's impairment and partly on the capability of each person to self-manage the logistics of life.
- 2.3 A number of papers have investigated the survival patterns of individuals born with cerebral palsy in different countries. These include:

**Table 2.3 - Summary of cerebral palsy papers**

| Author (and year)       | Publication  | Country   | Classification                                       |
|-------------------------|--|-----------|--|
| Crichton et al (1995)   | The Life-expectancy of persons with cerebral palsy   | Canada    | Motor function<br>Epilepsy<br>Mental retardation     |
| Plioplys et al (1998)   | Survival rates among children with severe neurological disabilities                                | U.S.      | Motor function<br>Feeding skill                      |
| Blair et al (2001)      | Life expectancy among people with cerebral palsy in Western Australia                              | Australia | Intellectual ability<br>Motor severity               |
| Hutton et al (2002)     | Effects of cognitive, motor, and sensory disabilities on survival in cerebral palsy                | U.K.      | Ambulation<br>Cognitive ability<br>Visual disability |
| Hutton et al (2006)     | Life expectancy in severe cerebral palsy   | U.K.      | Ambulation<br>Cognitive ability<br>Visual disability |
| Westbom et al (2011)    | Survival at 19 years of age in a total population of children and young people with cerebral palsy | Sweden    | GMFCS V  |
| Reid et al (2012)       | Survival of individuals with cerebral palsy born in Victoria, Australia, between 1970 and 2004     | Australia | Motor severity<br>Additional impairments             |
| Touyama et al (2013)    | Long-term survival of children with cerebral palsy in Okinawa, Japan                               | Japan     | GMFCS V  |
| Strauss et al (2014)    | Recent trends in cerebral palsy survival. Part II: individual survival prognosis                   | U.S.      | Motor function<br>Feeding skill                      |
| Himmelmann et al (2015) | Survival with cerebral palsy over five decades in western Sweden                                   | Sweden    | Motor impairment<br>Cognitive ability<br>Epilepsy    |

### **3 Methodology**

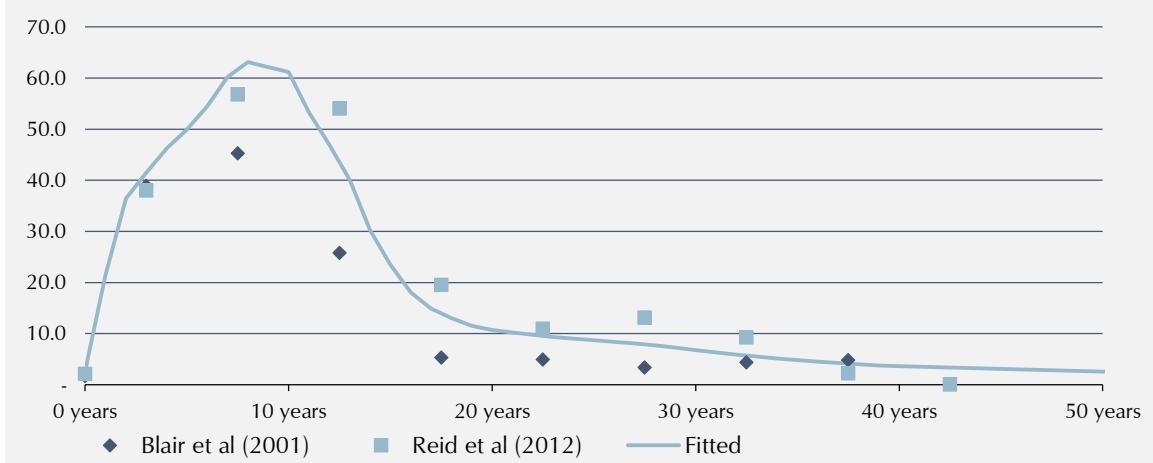
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- 3.1 In order to achieve a robust and intuitive fit of cerebral palsy survival probabilities, a transformation was applied to population survival probabilities (obtained from Australian Bureau of Statistics, "Population Projections, Australia, 2006-2101").
- 3.2 Survival probabilities up to the age specified in the respective study were transformed via a 2-parameter exponential function specified by an adjustment factor at birth, and a rate of change. These parameters were chosen to replicate survival probabilities specified in each study as closely as possible.
- 3.3 Survival probabilities thereafter were estimated via a proportional life expectancy model. Support for this approach can be found in Strauss et al's 2005 publication, "Estimation of Future Mortality Rates and Life Expectancy in Chronic Medical Conditions".
- 3.4 This approach was chosen as it closely replicates the empirical survival rates for individuals with cerebral palsy with a minimal number of parameters, while maintaining consistency with the trends published in broader literature, and reducing the sensitivity of the results to random fluctuations in observed deaths.
- 3.5. The table and graph below compares the mortality ratios from the Blair and Reid papers to fitted ratios under the above approach:

**Table 3.5.1 - Age-specific mortality ratios per 1000 person-years**

| Age (years) | Mortality ratio                     |                      |        |
|-------------|-------------------------------------|----------------------|--------|
|             | Blair et al<br>(2001 <sup>1</sup> ) | Reid et al<br>(2012) | Fitted |
| < 1         | 1.7                                 | 2.1                  | 2.5    |
| 1-4         | 38.9                                | 38.0                 | 32.8   |
| 5-9         | 45.3                                | 56.8                 | 56.9   |
| 11-14       | 25.8                                | 54.0                 | 43.5   |
| 15-19       | 5.3                                 | 19.5                 | 15.1   |
| 21-24       | 4.9                                 | 10.9                 | 9.7    |
| 25-29       | 3.3                                 | 13.1                 | 7.9    |
| 31-34       | 4.3                                 | 9.2                  | 5.8    |
| 35-39       | 4.8                                 | 2.2                  | 4.2    |
| 40+         | n.a                                 | n.a                  |        |

**Graph 3.5.2 - Fitted mortality loading for cerebral palsy population by age (years)**



- 3.6 Categorisations with 100 or fewer individuals were excluded from analysis as their sample size was deemed to be too small to overcome random fluctuations in the number of observed deaths.

## **4 Crichton et al (1995)**

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- 4.1 In their 1995 paper, Crichton et al investigated the survival patterns in persons with cerebral palsy for 3,187 individuals born with cerebral palsy in British Columbia between 1952 and 1989.
- 4.2 This paper used a clinical categorisation of cerebral palsy, epilepsy and mental retardation.

**Table 4.2 - Crichton et al (1995) classification of individuals**

| Disability         | Description  |
|--------------------|--|
| Cerebral palsy     | Spastic quadriplegia and diplegia                          |
|                    | Hemiplegia or monoplegia                                   |
|                    | Athetosis  |
|                    | Other forms  |
| Epilepsy           | Generalized seizures                                       |
|                    | Partial epilepsy with and without secondard generalization |
|                    | Infantile spasms   |
|                    | Unclassified forms   |
| Mental retardation | Non existant or mild                                       |
|                    | Moderate   |
|                    | Severe or profound   |

- 4.3 The relevant statistics from the Critchton paper are replicated below:

**Table 4.3 - Probabilities of survival from one decade to the next**

| Categorisation            | Survival probabilities |          |          |          |
|---------------------------|------------------------|----------|----------|----------|
|                           | 10 years               | 20 years | 30 years | 40 years |
| Overall                   | 93.8%                  | 89.6%    | 87.4%    | 85.2%    |
| Cerebral palsy            |                        |          |          |          |
| Hemiplegia or monopolegia | 97.7%                  | 96.2%    | 95.2%    | 93.5%    |
| Other                     | 92.4%                  | 87.3%    | 84.8%    | 82.2%    |
| Epilepsy                  |                        |          |          |          |
| None                      | 94.5%                  | 92.1%    | 90.3%    | 87.4%    |
| Any                       | 91.3%                  | 81.0%    | 77.6%    | 77.6%    |
| Mental retardation        |                        |          |          |          |
| Non-existant to moderate  | 95.5%                  | 93.5%    | 92.4%    | 90.4%    |
| Severe to profound        | 85.3%                  | 72.6%    | 66.6%    | 63.3%    |

## **5 Plioplys et al (1998)**

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- 5.1 In their 1998 paper, Plioplys et al investigated the survival patterns in persons with cerebral palsy for 447 individuals born with cerebral palsy in Chicago between 1986 and 1996.
- 5.2 This paper used the categorisation of a earlier Californian study with additional focus on clinical parameters the presence of other significant diseases and the use of gastrostomy and nasogastric feeding tubes.

**Table 5.2 - Plioplys et al (1998) classification of individuals**

| Disability | Description  |
|------------|--|
| Group 1    | Tube fed, Not rolling, No hand or arm use            |
| Group 2    | Tube fed, Not rolling, Hand or arm use present       |
| Group 3    | Fed by others, Not rolling, No hand or arm use       |
| Group 4    | Fed by others, Not rolling, Hand or arm use present  |
| Group 5    | Fed by others, Able to roll, Hand or arm use present |
| Group 6    | Tube fed, Able to roll, Hand or arm use present      |

- 5.3 The relevant statistics from the Plioplys paper are replicated below:

**Table 5.3 - Survival in Groups 1 - 3 (transcribed from graph)**

| Categorisation | Survival probabilities |          |          |          |          |          |
|----------------|------------------------|----------|----------|----------|----------|----------|
|                | 5 years                | 10 years | 15 years | 20 years | 25 years | 30 years |
| Group 1        | ~75%                   | ~66%     | ~63%     | ~60%     | ~59%     | ~58%     |
| Group 2        | ~89%                   | ~84%     | ~84%     | ~84%     | ~73%     | ~68%     |
| Group 3        | ~91%                   | ~89%     | ~81%     | ~81%     | ~81%     | ~81%     |
| Group 4        | n.a                    | n.a      | n.a      | n.a      | n.a      | n.a      |
| Group 5        | n.a                    | n.a      | n.a      | n.a      | n.a      | n.a      |
| Group 6        | n.a                    | n.a      | n.a      | n.a      | n.a      | n.a      |

## **6 Blair et al (2001)**

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- 6.1 In their 2001 paper, Blair et al investigated the survival patterns in persons with cerebral palsy for 2,014 individuals born with cerebral palsy in Western Australia between 1958 and 1994.
- 6.2 This paper found strong associations of survival rates with degree of intellectual deficit and motor impairment. Individuals were defined according to the following classifications:

**Table 6.2 - Blair et al (2001) classification of individuals**

| Intellectual deficit | Description      | Motor impairment | Description  |
|----------------------|------------------|------------------|--|
| Normal               | IQ/DQ > 85       | Minimal          | Motor signs present but no functional impairment                                   |
| Borderline           | IQ/DQ > 70 to 85 | Mild             | Symptoms results in some functional impairment                                     |
| Mild                 | IQ/DQ > 50 to 69 | Moderate         | Between mild and severe (ambulant with walking frame)                              |
| Moderate             | IQ/DQ > 35 to 49 | Severe           | Little purposeful voluntary action, though function may be acquired, IQ permitting |
| Severe               | IQ/DQ > 20 to 34 |                  |  |
| Profound             | IQ/DQ < 20       |                  |  |

- 6.3 Further statistical analysis was conducted on the combined impact of several coexisting disabilities. An overall disability score was derived by summing the score assigned to the following disabilities: category of movement disorder (hemiplegia = 1, diplegia = 2, other = 3), severity of movement disorder (minimal = 0, mild = 1, moderate = 2, severe = 3), severity of cognitive deficit (IQ 50 to 69 = 1, IQ 35 to 49 = 2, IQ < 35 = 3), other impairments (blindness = 1; bilateral deafness = 1; current epilepsy = 1).
- 6.4 The relevant statistics from the Blair paper are replicated below:

**Table 6.4.1 - Survival in people with CP in Western Australia (transcribed from graph)**

| Categorisation                      | Survival probabilities |          |          |          |          |          |
|-------------------------------------|------------------------|----------|----------|----------|----------|----------|
|                                     | 5 years                | 10 years | 15 years | 20 years | 25 years | 30 years |
| All individuals with cerebral palsy | ~94%                   | ~91%     | ~89%     | ~88%     | ~86%     | ~85%     |
| Severe CP                           | ~85%                   | ~78%     | ~73%     | ~69%     | ~65%     |          |

**Table 6.4.2 - Crude mortality rates by overall disability score**

| Overall disability score | Crude mortality rates |                 |
|--------------------------|-----------------------|-----------------|
|                          | 1 to <5 yrs           | 1 to <5 yrs     |
| 1                        | 0.0 (0/266)           | 0.0 (0/438)     |
| 2                        | 0.0 (0/980)           | 0.7 (2/2740)    |
| 3                        | 1.7 (2/1176)          | 1.2 (5/4053)    |
| 4                        | 0.7 (1/1335)          | 1.1 (6/5400)    |
| 5                        | 4.0 (3/752)           | 1.3 (4/3129)    |
| 6                        | 6.2 (4/642)           | 3.1 (8/2578)    |
| 7                        | 2.2 (1/456)           | 4.5 (8/1781)    |
| 8                        | 22.2 (8/361)          | 8.5 (12/1411)   |
| 9                        | 51.9 (28/540)         | 14.8 (26/1756)  |
| 10                       | 46.7 (23/492)         | 18.4 (24/1304)  |
| 11                       | 59.1 (14/237)         | 46.0 (15/326)   |
| 12                       | 79.8 (3/37.6)         | 8.2 (1/122)     |
| Missing                  | 0.0 (0/255)           | 3.3 (5/1516)    |
| Total                    | 11.6 (87/7530)        | 4.4 (116/26554) |

## **7 Hutton et al (2002)**

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- 7.1 In their 2002 paper, Hutton et al investigated the survival patterns in persons with cerebral palsy for 1,668 individuals born with cerebral palsy in United Kingdom between 1966 and 1989.
- 7.2 This paper found that severity of cognitive, motor (manual and ambulatory), and visual disabilities have independent effects on the probability of survival.

**Table 7.2 - Hutton et al (2002) classification of individuals**

| Disability                         | Description                                     |
|------------------------------------|---|
| Severe ambulation disability       | Carer operated wheelchair                       |
| Severe manual dexterity disability | Unable to feed and dress                        |
| Severe cognitive disability        | IQ < 50   |
| Severe visual disability           | 6/60 or worse in better eye, functionally blind |
| Severe hearing disability          | Severe bilateral disability                     |

- 7.3 The statistical analysis of the Hutton paper concluded that severe hearing disability did not add additional information when the other four functional disability categories are included.
- 7.4 The relevant statistics from the Hutton paper are replicated below:

**Table 7.4 - Severity category according to functional disability (transcribed from graphs)**

| Categorisation   | Survival probabilities |          |          |
|--|------------------------|----------|----------|
|  | 10 years               | 20 years | 30 years |
| <b>Multivariate analysis</b>                               |                        |          |          |
| No severe disabilities, low bw                             | ~99.6%                 | ~99%     | ~98%     |
| Only severe ambulatory disabilities, low bw                | ~98%                   | ~96%     | ~94%     |
| Only severe ambulatory disabilities, normal bw             | ~97%                   | ~94%     | ~91%     |
| Severe motor disabilities, low bw                          | ~94%                   | ~86%     | ~79%     |
| Severe motor disabilities, normal bw                       | ~91%                   | ~81%     | ~72%     |
| Severe motor and cognitive disabilities, low bw            | ~85%                   | ~70%     | ~59%     |
| Severe motor and cognitive disabilities, normal bw         | ~80%                   | ~62%     | ~50%     |
| Severe motor, cognitive and visual disabilities, low bw    | ~70%                   | ~49%     | ~37%     |
| Severe motor, cognitive and visual disabilities, normal bw | ~62%                   | ~40%     | ~29%     |

## **8 Hutton et al (2006)**

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- 8.1 In their 2006 paper, Hutton et al investigated the survival patterns in persons with cerebral palsy for 1,647 individuals born with cerebral palsy in United Kingdom over an unspecified interval.
- 8.2 This paper found that severity of cognitive, motor (manual and ambulatory), and visual disabilities have independent effects on the probability of survival.

**Table 8.2 - Hutton et al (2006) classification of individuals**

| Disability                         | Description   |
|------------------------------------|---|
| Severe ambulation disability       | Carer operated wheelchair                             |
| Severe manual dexterity disability | Unable to feed and dress                              |
| Severe cognitive disability        | IQ < 50   |
| Severe visual disability           | 6/60 or worse in better eye, functionally blind       |
| Severe hearing disability          | Bilateral disability, or severe unilateral disability |

- 8.3 The statistical analysis of the Hutton paper concluded that severe hearing disability did not add additional information when the other four functional disability categories are included.
- 8.4 The relevant statistics from the Hutton paper are replicated below:

**Table 8.4 - Severity category according to functional disability (transcribed from graphs)**

| Categorisation                     | Cohort count | Survival probabilities |          |          |          |
|------------------------------------|--------------|------------------------|----------|----------|----------|
|                                    |              | 10 years               | 20 years | 30 years | 40 years |
| Univariate analysis                |              |                        |          |          |          |
| Severe ambulation disability       | 384          | ~68%                   | ~49%     | ~40%     | ~33%     |
| Severe manual dexterity disability | 374          | ~68%                   | ~49%     | ~40%     | ~30%     |
| Severe cognitive disability        | 563          | ~64%                   | ~40%     | ~32%     | ~29%     |
| Severe visual disability           | 266          | ~77%                   | ~63%     | ~56%     | ~48%     |
| Multivariate analysis              |              |                        |          |          |          |
| Severe motor, cognitive and visual | 266          | ~57%                   | ~39%     | ~30%     | ~18%     |

## **9 Westbom et al (2011)**

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- 9.1 In their 2011 paper, Westbom et al investigated the survival patterns in persons with cerebral palsy for 708 individuals born with cerebral palsy in Sweden between 1990 and 2005.
- 9.2 The statistical analysis of the Westbom paper was performed with respect to GMFCS level and gastrostomy feeding, though survival curves were presented only for GMFCS (Level V) individuals:
- 9.3 The relevant statistics from the Westbom paper are replicated below:

**Table 9.3 - Survival probabilities for GMFCS Level V individuals (transcribed from graph)**

| Severity | Beginning<br>total | Total<br>deaths | Survival probabilities (from age 2) |          |          |          |
|----------|--------------------|-----------------|-------------------------------------|----------|----------|----------|
|          |                    |                 | 5 years                             | 10 years | 15 years | 20 years |
| GMFCS V  | 102                | 25              | ~92%                                | ~82%     | ~71%     | ~61%     |

## **10 Reid et al (2012)**

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- 10.1 In their 2012 paper, Reid et al investigated the survival patterns in persons with cerebral palsy for 3,507 individuals born with cerebral palsy in Victoria between 1970 and 2004.
- 10.2 This paper found strong associations of survival rates with degree of intellectual deficit and motor impairment. Individuals were defined according to the following classifications:

**Table 10.2 - Reid et al (2012) classification of individuals**

| Motor impairment | Description   |
|------------------|---|
| Mild             | GMFCS Level I and II - Independently ambulant at 5 years of age               |
| Moderate         | GMFCS Level III - Ambulant with the assistance of a hand-held mobility device |
| Severe           | GMFCS Level IV and V - No independent ambulation                              |

- 10.3 The statistical analysis of the Reid paper was performed with respect to motor impairment classification subdivided by the number of additional impairments present from a possible five, comprising epilepsy, severe / profound intellectual impairment ( $IQ < 30$ ), blindness deafness (hearing loss  $> 70\text{dB}$ ), and lack of speech.

- 10.4 The relevant statistics from the Reid paper are replicated below:

**Table 10.4 - Survival probabilities by motor impairment and additional impairments**

| Motor severity + n additional impairments <sup>1</sup> | Beginning total | Total deaths | 10 years | 20 years | 30 years | 40 years |
|--|-----------------|--------------|----------|----------|----------|----------|
| Mild+0   | 1,478           | 14           | 99.9%    | 99.2%    | 98.3%    | 97.7%    |
| Mild+1   | 378             | 7            | 99.2%    | 99.2%    | 97.9%    | 95.1%    |
| Mild+2   | 77              | 1            | 100.0%   | 98.4%    | 98.4%    | 98.1%    |
| Mild+3   | 41              | 4            | 95.1%    | 95.1%    | 88.8%    | 88.8%    |
| Moderate+0   | 262             | 6            | 99.2%    | 99.2%    | 97.6%    | 89.0%    |
| Moderate+1   | 100             | 7            | 95.9%    | 93.5%    | 90.7%    | 90.7%    |
| Moderate+2   | 57              | 7            | 98.2%    | 89.7%    | 83.4%    | -        |
| Moderate+3   | 39              | 3            | 100.0%   | 94.4%    | 91.4%    | -        |
| Severe+0   | 156             | 19           | 91.0%    | 90.1%    | 83.5%    | -        |
| Severe+1   | 222             | 52           | 86.3%    | 78.0%    | 68.7%    | 56.8%    |
| Severe+2   | 297             | 104          | 79.8%    | 68.0%    | 52.1%    | -        |
| Severe+3   | 352             | 182          | 80.7%    | 51.7%    | 35.3%    | 30.8%    |

<sup>1</sup> Additional impairments from a possible five, comprising epilepsy, severe / profound intellectual impairment, blindness deafness, and lack of speech

## **11 Touyama et al (2013)**

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- 11.1 In their 2013 paper, Touyama et al investigated the survival patterns in persons with cerebral palsy for 580 individuals born with cerebral palsy in Japan between 1988 and 2005.
- 11.2 The statistical analysis of the Touyama paper was performed with respect to GMFCS level, birth weight and gestation period, with survival curves presented only for GMFCS (Level V) individuals.
- 11.3 The relevant statistics from the Touyama paper are replicated below:

**Table 11.3 - Survival probabilities for GMFCS Level V individuals (transcribed from graph)**

| Severity | Beginning<br>total | Total<br>deaths | Survival probabilities (from age 2) |          |          |          |
|----------|--------------------|-----------------|-------------------------------------|----------|----------|----------|
|          |                    |                 | 5 years                             | 10 years | 15 years | 20 years |
| GMFCS V  | 166                | 29              | ~94%                                | ~84%     | ~76%     | ~72%     |

## **12 Strauss et al (2014)**

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12.1 In their 2014 paper, Strauss et al investigated the survival patterns in persons with cerebral palsy for 16,440 individuals born with cerebral palsy in California between 1983 and 2010.

12.2 This paper found strong associations of survival rates with gross motor function and mode of feeding. Individuals were defined according to the following classifications:

**Table 12.2 - Strauss et al (2014) classification of individuals**

| Motor impairment                               | Mode of feeding      |
|--|----------------------|
| Does not lift head in the prone position       | Tube fed             |
| Lifts head but not chest in the prone position | Fed orally by others |
| Lifts head and chest, partial rolling          | Feeds self orally    |
| Full rolling, does not walk unaided            |                      |
| Walks unaided                                  |                      |

12.3 The statistical analysis of the Strauss paper was performed with respect to gross motor impairment and mode of feeding. Additional analysis was conducted to adjust Kaplan-Meier survival curves to 2010 levels, though for consistency with other studies in this publication, the unadjusted Kaplan-Meier survival probabilities have been used

12.4 The relevant statistics from the Strauss paper are replicated below:

**Table 12.4 - (Unadjusted) survival probabilities by gross motor impairment and feeding status**

| Categorisation                                 | Beginning<br>total | Survival probabilities |          |          |          |          |
|--|--------------------|------------------------|----------|----------|----------|----------|
|  |                    | 10 years               | 15 years | 20 years | 25 years | 30 years |
| Does not lift head in the prone position       |                    |                        |          |          |          |          |
| Tube fed                                       | 482                | 68%                    | 48%      | 33%      | 25%      | 21%      |
| Fed orally by others                           | 615                | 80%                    | 66%      | 51%      | 43%      | 39%      |
| Feeds self orally                              | 50                 | 95%                    | 88%      | 88%      | -        | -        |
| Lifts head but not chest in the prone position |                    |                        |          |          |          |          |
| Tube fed                                       | 303                | 73%                    | 58%      | 48%      | 38%      | 29%      |
| Fed orally by others                           | 795                | 85%                    | 73%      | 61%      | 49%      | 44%      |
| Feeds self orally                              | 103                | 95%                    | 89%      | 84%      | 74%      | 74%      |
| Lifts head and chest, partial rolling          |                    |                        |          |          |          |          |
| Tube fed                                       | 265                | 77%                    | 65%      | 59%      | 48%      | 35%      |
| Fed orally by others                           | 962                | 90%                    | 81%      | 73%      | 62%      | 52%      |
| Feeds self orally                              | 329                | 96%                    | 93%      | 91%      | 85%      | 75%      |
| Full rolling, does not walk unaided            |                    |                        |          |          |          |          |
| Tube fed                                       | 475                | 87%                    | 81%      | 73%      | 60%      | 52%      |
| Fed orally by others                           | 1,643              | 95%                    | 91%      | 86%      | 82%      | 76%      |
| Feeds self orally                              | 4,906              | 98%                    | 97%      | 95%      | 93%      | 91%      |
| Walks unaided                                  |                    |                        |          |          |          |          |
| Tube fed                                       | 125                | 95%                    | 93%      | 84%      | 79%      | -        |
| Fed orally by others                           | 188                | 96%                    | 95%      | 95%      | 95%      | 86%      |
| Feeds self orally                              | 5,199              | 99%                    | 99%      | 98%      | 96%      | 94%      |

12.5 The Strauss paper also provides life expectancy calculations, but these are in respect of cohorts of individuals aged 15, 30, 45 and 60 during the interval of study (1983 to 2010).

## **13 Himmelmann et al (2015)**

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- 13.1 In their 2015 paper, Himmelmann et al investigated the survival patterns in persons with cerebral palsy for 1,856 individuals born with cerebral palsy in Sweden between 1959 and 2002.
- 13.2 The statistical analysis of the Himmelmann paper was performed with respect to Hagberg classifications (tetraplegia, hemiplegia, etc), SCPE classifications (dyskinetic CP, bilateral spastic CP, etc), GMFCS level, motor impairment, cognitive impairment and epilepsy
- 13.3 The relevant statistics from the Westbom paper are replicated below:

**Table 13.3 - Survival probabilities by CP type (transcribed from graph)**

| Severity                         | Survival probabilities (from age 2) |          |          |          |
|----------------------------------|-------------------------------------|----------|----------|----------|
|                                  | 10 years                            | 20 years | 30 years | 40 years |
| <b>CP Type (Hagberg)</b>         |                                     |          |          |          |
| Tetraplegia                      | ~76%                                | ~51%     | ~35%     | ~19%     |
| Dyskinetic                       | ~96%                                | ~86%     | ~77%     | ~71%     |
| <b>CP Type (SCPE)</b>            |                                     |          |          |          |
| Dyskinetic                       | ~98%                                | ~88%     | ~81%     | ~74%     |
| Bilateral spastic cerebral palsy | ~98%                                | ~93%     | ~90%     | ~86%     |
| Severe motor impairment          | ~91%                                | ~80%     | ~71%     | ~62%     |
| Severe mental retardation        | ~88%                                | ~76%     | ~69%     | ~59%     |
| Epilepsy                         | ~92%                                | ~81%     | ~76%     | ~70%     |

## A Demonstrated parameter fitting

| Age | Regular life table (Australia, 2014-16) |         |           |                         |              | Adjusted life table |           |                         |                         |              |
|-----|---|---------|-----------|-------------------------|--------------|---------------------|-----------|-------------------------|-------------------------|--------------|
|     | Male                                    | Female  | Mortality | Probability of survival | Life expect. | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expect. |
| 0   | 0.00357                                 | 0.00330 | 0.00344   | 100.00%                 | 82.38        | 99.47%              | 0.00872   | 2.54                    | 100.00%                 | 68.80        |
| 1   | 0.00029                                 | 0.00022 | 0.00026   | 99.66%                  | 81.66        | 99.48%              | 0.00547   | 21.47                   | 99.13%                  | 68.41        |
| 2   | 0.00016                                 | 0.00013 | 0.00015   | 99.63%                  | 80.69        | 99.49%              | 0.00528   | 36.42                   | 98.58%                  | 67.78        |
| 3   | 0.00014                                 | 0.00011 | 0.00013   | 99.62%                  | 79.70        | 99.49%              | 0.00518   | 41.43                   | 98.06%                  | 67.14        |
| 4   | 0.00012                                 | 0.00010 | 0.00011   | 99.60%                  | 78.71        | 99.50%              | 0.00508   | 46.21                   | 97.56%                  | 66.48        |
| 5   | 0.00011                                 | 0.00009 | 0.00010   | 99.59%                  | 77.72        | 99.51%              | 0.00499   | 49.93                   | 97.06%                  | 65.82        |
| 6   | 0.00010                                 | 0.00008 | 0.00009   | 99.58%                  | 76.72        | 99.52%              | 0.00490   | 54.49                   | 96.58%                  | 65.15        |
| 7   | 0.00009                                 | 0.00007 | 0.00008   | 99.57%                  | 75.73        | 99.53%              | 0.00482   | 60.21                   | 96.10%                  | 64.47        |
| 8   | 0.00008                                 | 0.00007 | 0.00008   | 99.57%                  | 74.74        | 99.53%              | 0.00474   | 63.15                   | 95.64%                  | 63.78        |
| 9   | 0.00008                                 | 0.00007 | 0.00008   | 99.56%                  | 73.74        | 99.54%              | 0.00466   | 62.15                   | 95.19%                  | 63.08        |
| 10  | 0.00008                                 | 0.00007 | 0.00008   | 99.55%                  | 72.75        | 99.55%              | 0.00459   | 61.17                   | 94.74%                  | 62.37        |
| 11  | 0.00009                                 | 0.00008 | 0.00009   | 99.54%                  | 71.75        | 99.56%              | 0.00452   | 53.23                   | 94.31%                  | 61.66        |
| 12  | 0.00010                                 | 0.00009 | 0.00010   | 99.54%                  | 70.76        | 99.56%              | 0.00446   | 46.98                   | 93.88%                  | 60.93        |
| 13  | 0.00012                                 | 0.00010 | 0.00011   | 99.53%                  | 69.77        | 99.57%              | 0.00441   | 40.07                   | 93.46%                  | 60.20        |
| 14  | 0.00016                                 | 0.00013 | 0.00015   | 99.52%                  | 68.77        | 99.58%              | 0.00437   | 30.17                   | 93.05%                  | 59.47        |
| 15  | 0.00022                                 | 0.00015 | 0.00019   | 99.50%                  | 67.78        | 99.58%              | 0.00435   | 23.49                   | 92.64%                  | 58.73        |
| 16  | 0.00030                                 | 0.00018 | 0.00024   | 99.48%                  | 66.80        | 99.59%              | 0.00433   | 18.06                   | 92.24%                  | 57.98        |
| 17  | 0.00038                                 | 0.00020 | 0.00029   | 99.46%                  | 65.81        | 99.60%              | 0.00432   | 14.89                   | 91.84%                  | 57.23        |
| 18  | 0.00045                                 | 0.00021 | 0.00033   | 99.43%                  | 64.83        | 99.60%              | 0.00429   | 13.01                   | 91.44%                  | 56.48        |
| 19  | 0.00052                                 | 0.00022 | 0.00037   | 99.40%                  | 63.85        | 99.61%              | 0.00427   | 11.54                   | 91.05%                  | 55.72        |
| 20  | 0.00056                                 | 0.00023 | 0.00040   | 99.36%                  | 62.87        | 99.62%              | 0.00423   | 10.71                   | 90.66%                  | 54.96        |
| 21  | 0.00059                                 | 0.00023 | 0.00041   | 99.32%                  | 61.90        | 99.62%              | 0.00418   | 10.21                   | 90.28%                  | 54.19        |
| 22  | 0.00061                                 | 0.00024 | 0.00043   | 99.28%                  | 60.92        | 99.63%              | 0.00414   | 9.74                    | 89.90%                  | 53.41        |
| 23  | 0.00063                                 | 0.00025 | 0.00044   | 99.24%                  | 59.95        | 99.63%              | 0.00409   | 9.30                    | 89.53%                  | 52.63        |
| 24  | 0.00064                                 | 0.00026 | 0.00045   | 99.19%                  | 58.98        | 99.64%              | 0.00405   | 8.99                    | 89.16%                  | 51.85        |
| 25  | 0.00065                                 | 0.00027 | 0.00046   | 99.15%                  | 58.00        | 99.65%              | 0.00400   | 8.69                    | 88.80%                  | 51.06        |
| 26  | 0.00066                                 | 0.00028 | 0.00047   | 99.10%                  | 57.03        | 99.65%              | 0.00395   | 8.41                    | 88.45%                  | 50.26        |
| 27  | 0.00068                                 | 0.00029 | 0.00049   | 99.06%                  | 56.06        | 99.66%              | 0.00391   | 8.06                    | 88.10%                  | 49.46        |
| 28  | 0.00070                                 | 0.00031 | 0.00051   | 99.01%                  | 55.08        | 99.66%              | 0.00387   | 7.67                    | 87.75%                  | 48.65        |
| 29  | 0.00073                                 | 0.00033 | 0.00053   | 98.96%                  | 54.11        | 99.67%              | 0.00385   | 7.26                    | 87.41%                  | 47.84        |
| 30  | 0.00077                                 | 0.00036 | 0.00057   | 98.91%                  | 53.14        | 99.67%              | 0.00383   | 6.77                    | 87.08%                  | 47.02        |
| 31  | 0.00082                                 | 0.00039 | 0.00061   | 98.85%                  | 52.17        | 99.68%              | 0.00381   | 6.30                    | 86.74%                  | 46.20        |
| 32  | 0.00087                                 | 0.00043 | 0.00065   | 98.79%                  | 51.20        | 99.68%              | 0.00381   | 5.86                    | 86.41%                  | 45.37        |
| 33  | 0.00093                                 | 0.00046 | 0.00070   | 98.73%                  | 50.23        | 99.69%              | 0.00380   | 5.47                    | 86.08%                  | 44.54        |
| 34  | 0.00099                                 | 0.00050 | 0.00075   | 98.66%                  | 49.27        | 99.69%              | 0.00380   | 5.10                    | 85.76%                  | 43.71        |
| 35  | 0.00105                                 | 0.00054 | 0.00080   | 98.58%                  | 48.30        | 99.70%              | 0.00380   | 4.78                    | 85.43%                  | 42.88        |
| 36  | 0.00111                                 | 0.00058 | 0.00085   | 98.51%                  | 47.34        | 99.70%              | 0.00380   | 4.50                    | 85.11%                  | 42.04        |
| 37  | 0.00117                                 | 0.00062 | 0.00090   | 98.42%                  | 46.38        | 99.71%              | 0.00381   | 4.25                    | 84.78%                  | 41.20        |
| 38  | 0.00124                                 | 0.00067 | 0.00096   | 98.34%                  | 45.42        | 99.71%              | 0.00382   | 4.00                    | 84.46%                  | 40.35        |
| 39  | 0.00132                                 | 0.00072 | 0.00102   | 98.24%                  | 44.47        | 99.72%              | 0.00384   | 3.76                    | 84.14%                  | 39.51        |
| 40  | 0.00142                                 | 0.00078 | 0.00110   | 98.14%                  | 43.51        |                     | 0.00398   | 3.62                    | 83.81%                  | 38.66        |
| 50  | 0.00298                                 | 0.00180 | 0.00239   | 96.59%                  | 34.12        |                     | 0.00606   | 2.54                    | 79.88%                  | 30.30        |
| 60  | 0.00675                                 | 0.00398 | 0.00537   | 93.23%                  | 25.15        |                     | 0.01035   | 1.93                    | 73.91%                  | 22.31        |
| 70  | 0.01613                                 | 0.00994 | 0.01304   | 85.99%                  | 16.79        |                     | 0.02050   | 1.57                    | 64.18%                  | 14.87        |
| 80  | 0.04793                                 | 0.03188 | 0.03991   | 68.61%                  | 9.59         |                     | 0.05297   | 1.33                    | 46.41%                  | 8.45         |
| 90  | 0.15455                                 | 0.12362 | 0.13909   | 31.16%                  | 4.58         |                     | 0.16644   | 1.20                    | 17.20%                  | 3.98         |
| 100 | 0.34389                                 | 0.31851 | 0.33120   | 2.52%                   | 2.20         |                     | 0.38816   | 1.17                    | 0.82%                   | 1.85         |

## B Crichton et al (1995)

Target and fitted criteria are as follows:

### Overall

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 93.8%  | 93.6%  | 0.004     |
| 0     | 20 | 89.6%  | 89.9%  | 0.009     |
| 0     | 30 | 87.4%  | 87.2%  | 0.003     |
| 0     | 40 | 85.2%  | 85.2%  | 0.000     |
| Total |    |        | 0.0166 |           |

### Cerebral palsy - Hemiplegia or monoplegia

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 97.7%  | 97.7%  | 0.000     |
| 0     | 20 | 96.2%  | 96.3%  | 0.001     |
| 0     | 30 | 95.2%  | 94.9%  | 0.007     |
| 0     | 40 | 93.5%  | 93.6%  | 0.002     |
| Total |    |        | 0.0103 |           |

### Cerebral palsy - Other

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 5  | 92.4%  | 92.3%  | 0.002     |
| 0     | 10 | 87.3%  | 87.6%  | 0.010     |
| 0     | 15 | 84.8%  | 84.5%  | 0.011     |
| 0     | 20 | 82.2%  | 82.3%  | 0.002     |
| Total |    |        |        | 0.0248    |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United States Life Tables, 2014) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00477  | 0.00425 | 0.00451   | 100.00%                 | 81.83           | 99.27%              | 0.01180   | 2.62                    | 100.00%                 | 71.20           | 99.80%              | 0.00651   | 1.44                    | 100.00%                 | 78.04           |
| 1   | 0.00029  | 0.00025 | 0.00027   | 99.55%                  | 81.20           | 99.30%              | 0.00726   | 26.90                   | 98.82%                  | 71.04           | 99.81%              | 0.00221   | 8.19                    | 99.35%                  | 77.55           |
| 2   | 0.00020  | 0.00018 | 0.00019   | 99.52%                  | 80.22           | 99.33%              | 0.00688   | 36.19                   | 98.10%                  | 70.56           | 99.81%              | 0.00207   | 10.88                   | 99.13%                  | 76.72           |
| 3   | 0.00015  | 0.00013 | 0.00014   | 99.50%                  | 79.24           | 99.36%              | 0.00653   | 46.64                   | 97.43%                  | 70.05           | 99.82%              | 0.00196   | 13.97                   | 98.92%                  | 75.88           |
| 4   | 0.00012  | 0.00010 | 0.00011   | 99.49%                  | 78.25           | 99.39%              | 0.00622   | 56.53                   | 96.79%                  | 69.50           | 99.82%              | 0.00186   | 16.95                   | 98.73%                  | 75.02           |
| 5   | 0.00010  | 0.00009 | 0.00010   | 99.48%                  | 77.26           | 99.42%              | 0.00593   | 62.46                   | 96.19%                  | 68.93           | 99.83%              | 0.00179   | 18.85                   | 98.55%                  | 74.16           |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.47%                  | 76.26           | 99.44%              | 0.00566   | 70.76                   | 95.62%                  | 68.34           | 99.84%              | 0.00172   | 21.50                   | 98.37%                  | 73.29           |
| 7   | 0.00008  | 0.00007 | 0.00008   | 99.46%                  | 75.27           | 99.47%              | 0.00541   | 72.12                   | 95.08%                  | 67.73           | 99.84%              | 0.00166   | 22.13                   | 98.20%                  | 72.42           |
| 8   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 74.28           | 99.49%              | 0.00517   | 69.98                   | 94.56%                  | 67.10           | 99.85%              | 0.00161   | 21.43                   | 98.04%                  | 71.54           |
| 9   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 73.28           | 99.51%              | 0.00495   | 65.97                   | 94.07%                  | 66.44           | 99.85%              | 0.00156   | 20.75                   | 97.88%                  | 70.65           |
| 10  | 0.00009  | 0.00008 | 0.00009   | 99.44%                  | 72.29           | 99.53%              | 0.00474   | 55.80                   | 93.61%                  | 65.77           | 99.86%              | 0.00152   | 17.84                   | 97.73%                  | 69.76           |
| 11  | 0.00010  | 0.00009 | 0.00010   | 99.43%                  | 71.29           | 99.55%              | 0.00455   | 47.86                   | 93.17%                  | 65.08           | 99.86%              | 0.00148   | 15.57                   | 97.58%                  | 68.87           |
| 12  | 0.00012  | 0.00010 | 0.00011   | 99.42%                  | 70.30           | 99.57%              | 0.00437   | 39.68                   | 92.74%                  | 64.38           | 99.87%              | 0.00145   | 13.16                   | 97.44%                  | 67.97           |
| 13  | 0.00014  | 0.00012 | 0.00013   | 99.41%                  | 69.31           | 99.59%              | 0.00420   | 32.28                   | 92.34%                  | 63.66           | 99.87%              | 0.00142   | 10.95                   | 97.29%                  | 67.07           |
| 14  | 0.00018  | 0.00014 | 0.00016   | 99.40%                  | 68.32           | 99.61%              | 0.00405   | 25.29                   | 91.95%                  | 62.92           | 99.87%              | 0.00141   | 8.81                    | 97.16%                  | 66.16           |
| 15  | 0.00024  | 0.00017 | 0.00021   | 99.38%                  | 67.33           | 99.63%              | 0.00392   | 19.12                   | 91.58%                  | 62.18           | 99.88%              | 0.00141   | 6.89                    | 97.02%                  | 65.25           |
| 16  | 0.00032  | 0.00021 | 0.00027   | 99.36%                  | 66.34           | 99.64%              | 0.00382   | 14.40                   | 91.22%                  | 61.42           | 99.88%              | 0.00143   | 5.41                    | 96.88%                  | 64.35           |
| 17  | 0.00040  | 0.00024 | 0.00032   | 99.33%                  | 65.36           | 99.66%              | 0.00371   | 11.61                   | 90.87%                  | 60.65           | 99.89%              | 0.00145   | 4.53                    | 96.74%                  | 63.44           |
| 18  | 0.00048  | 0.00026 | 0.00037   | 99.30%                  | 64.38           | 99.68%              | 0.00361   | 9.77                    | 90.53%                  | 59.88           | 99.89%              | 0.00146   | 3.95                    | 96.60%                  | 62.53           |
| 19  | 0.00056  | 0.00027 | 0.00042   | 99.27%                  | 63.40           | 99.69%              | 0.00352   | 8.47                    | 90.21%                  | 59.09           | 99.89%              | 0.00147   | 3.54                    | 96.46%                  | 61.62           |
| 20  | 0.00063  | 0.00028 | 0.00046   | 99.22%                  | 62.43           | 99.70%              | 0.00342   | 7.51                    | 89.89%                  | 58.30           | 99.90%              | 0.00147   | 3.24                    | 96.32%                  | 60.71           |
| 21  | 0.00070  | 0.00029 | 0.00050   | 99.18%                  | 61.46           | 99.72%              | 0.00333   | 6.72                    | 89.58%                  | 57.50           | 99.90%              | 0.00148   | 2.99                    | 96.18%                  | 59.80           |
| 22  | 0.00075  | 0.00031 | 0.00053   | 99.13%                  | 60.49           | 99.73%              | 0.00324   | 6.11                    | 89.28%                  | 56.69           | 99.90%              | 0.00148   | 2.80                    | 96.04%                  | 58.89           |
| 23  | 0.00078  | 0.00032 | 0.00055   | 99.08%                  | 59.52           | 99.74%              | 0.00314   | 5.70                    | 88.99%                  | 55.87           | 99.91%              | 0.00147   | 2.67                    | 95.89%                  | 57.97           |
| 24  | 0.00080  | 0.00033 | 0.00057   | 99.02%                  | 58.55           | 99.75%              | 0.00304   | 5.38                    | 88.71%                  | 55.04           | 99.91%              | 0.00146   | 2.58                    | 95.75%                  | 57.06           |
| 25  | 0.00081  | 0.00034 | 0.00058   | 98.97%                  | 57.58           | 99.76%              | 0.00294   | 5.11                    | 88.45%                  | 54.21           | 99.91%              | 0.00144   | 2.50                    | 95.61%                  | 56.14           |
| 26  | 0.00082  | 0.00035 | 0.00059   | 98.91%                  | 56.62           | 99.77%              | 0.00284   | 4.86                    | 88.19%                  | 53.37           | 99.92%              | 0.00142   | 2.42                    | 95.48%                  | 55.22           |
| 27  | 0.00083  | 0.00037 | 0.00060   | 98.85%                  | 55.65           | 99.78%              | 0.00276   | 4.60                    | 87.93%                  | 52.52           | 99.92%              | 0.00140   | 2.34                    | 95.34%                  | 54.30           |
| 28  | 0.00085  | 0.00038 | 0.00062   | 98.79%                  | 54.68           | 99.79%              | 0.00268   | 4.36                    | 87.69%                  | 51.66           | 99.92%              | 0.00139   | 2.26                    | 95.21%                  | 53.37           |
| 29  | 0.00087  | 0.00040 | 0.00064   | 98.73%                  | 53.72           | 99.80%              | 0.00261   | 4.11                    | 87.46%                  | 50.80           | 99.92%              | 0.00139   | 2.18                    | 95.07%                  | 52.45           |
| 30  | 0.00090  | 0.00042 | 0.00066   | 98.67%                  | 52.75           | 99.81%              | 0.00255   | 3.86                    | 87.23%                  | 49.93           | 99.93%              | 0.00139   | 2.10                    | 94.94%                  | 51.52           |
| 40  | 0.00126  | 0.00077 | 0.00102   | 97.92%                  | 43.11           | 99.88%              | 0.00221   | 2.18                    | 85.23%                  | 40.99           | 99.95%              | 0.00153   | 1.51                    | 93.63%                  | 42.17           |
| 50  | 0.00297  | 0.00197 | 0.00247   | 96.38%                  | 33.71           |                     | 0.00400   | 1.62                    | 82.77%                  | 32.04           |                     | 0.00313   | 1.27                    | 91.63%                  | 32.97           |
| 60  | 0.00716  | 0.00460 | 0.00588   | 92.84%                  | 24.78           |                     | 0.00797   | 1.35                    | 78.34%                  | 23.55           |                     | 0.00678   | 1.15                    | 87.59%                  | 24.23           |
| 70  | 0.01834  | 0.01192 | 0.01513   | 84.58%                  | 16.64           |                     | 0.01824   | 1.21                    | 69.60%                  | 15.80           |                     | 0.01647   | 1.09                    | 78.94%                  | 16.27           |
| 80  | 0.04999  | 0.03429 | 0.04214   | 65.73%                  | 9.80            |                     | 0.04742   | 1.13                    | 51.94%                  | 9.29            |                     | 0.04442   | 1.05                    | 60.29%                  | 9.57            |
| 90  | 0.14500  | 0.10953 | 0.12727   | 30.93%                  | 4.83            |                     | 0.13797   | 1.08                    | 22.58%                  | 4.55            |                     | 0.13188   | 1.04                    | 27.42%                  | 4.71            |
| 100 | 0.34979  | 0.30602 | 0.32791   | 2.84%                   | 2.25            |                     | 0.35089   | 1.07                    | 1.69%                   | 2.10            |                     | 0.33782   | 1.03                    | 2.30%                   | 2.18            |

| Survival adjustment | Adjusted life table |                         |                         |                 |  |
|---------------------|---------------------|-------------------------|-------------------------|-----------------|--|
|                     | Mortality           | Implied mortality ratio | Probability of survival | Life expectancy |  |
| 7.17%               |                     |                         |                         |                 |  |
| 98.28%              | 0.02164             | 4.80                    | 100.00%                 | 66.04           |  |
| 98.40%              | 0.01624             | 60.15                   | 97.84%                  | 66.49           |  |
| 98.52%              | 0.01502             | 79.03                   | 96.25%                  | 66.58           |  |
| 98.62%              | 0.01390             | 99.31                   | 94.80%                  | 66.59           |  |
| 98.72%              | 0.01289             | 117.15                  | 93.48%                  | 66.52           |  |
| 98.81%              | 0.01196             | 125.85                  | 92.28%                  | 66.38           |  |
| 98.90%              | 0.01109             | 138.63                  | 91.18%                  | 66.18           |  |
| 98.98%              | 0.01030             | 137.28                  | 90.16%                  | 65.92           |  |
| 99.05%              | 0.00956             | 127.51                  | 89.24%                  | 65.60           |  |
| 99.12%              | 0.00888             | 118.44                  | 88.38%                  | 65.23           |  |
| 99.18%              | 0.00826             | 97.19                   | 87.60%                  | 64.81           |  |
| 99.24%              | 0.00768             | 80.89                   | 86.87%                  | 64.34           |  |
| 99.30%              | 0.00716             | 65.05                   | 86.21%                  | 63.84           |  |
| 99.35%              | 0.00667             | 51.31                   | 85.59%                  | 63.29           |  |
| 99.39%              | 0.00623             | 38.94                   | 85.02%                  | 62.71           |  |
| 99.44%              | 0.00584             | 28.49                   | 84.49%                  | 62.10           |  |
| 99.48%              | 0.00550             | 20.74                   | 84.00%                  | 61.47           |  |
| 99.51%              | 0.00518             | 16.17                   | 83.53%                  | 60.80           |  |
| 99.55%              | 0.00488             | 13.18                   | 83.10%                  | 60.12           |  |
| 99.58%              | 0.00460             | 11.08                   | 82.70%                  | 59.41           |  |
| 99.73%              | 0.00325             | 5.66                    | 80.73%                  | 54.79           |  |
| 99.75%              | 0.00307             | 5.25                    | 80.47%                  | 53.96           |  |
| 99.77%              | 0.00291             | 4.84                    | 80.22%                  | 53.13           |  |
| 99.79%              | 0.00276             | 4.48                    | 79.99%                  | 52.28           |  |
| 99.80%              | 0.00262             | 4.13                    | 79.77%                  | 51.43           |  |
| 99.82%              | 0.00251             | 3.80                    | 79.56%                  | 50.56           |  |
| 99.91%              | 0.00189             | 1.86                    | 77.89%                  | 41.54           |  |
| 0.00359             | 1.45                | 75.92%                  | 32.48                   |                 |  |
| 0.00740             | 1.26                | 72.19%                  | 23.8                    |                 |  |

## B Crichton et al (1995)

Target and fitted criteria are as follows:

| Overall                   |    |        |        |           | Epilepsy - None           |    |        |        |           | Epilepsy - Other          |    |        |        |           |
|---------------------------|----|--------|--------|-----------|---------------------------|----|--------|--------|-----------|---------------------------|----|--------|--------|-----------|
| Probabilities of survival |    |        |        |           | Probabilities of survival |    |        |        |           | Probabilities of survival |    |        |        |           |
| From                      | To | Target | Fitted | Deviation | From                      | To | Target | Fitted | Deviation | From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 93.8%  | 93.6%  | 0.004     | 0                         | 5  | 94.5%  | 95.1%  | 0.040     | 0                         | 10 | 91.3%  | 88.9%  | 0.646     |
| 0                         | 20 | 89.6%  | 89.9%  | 0.009     | 0                         | 10 | 92.1%  | 91.9%  | 0.003     | 0                         | 20 | 81.0%  | 82.7%  | 0.377     |
| 0                         | 30 | 87.4%  | 87.2%  | 0.003     | 0                         | 15 | 90.3%  | 89.6%  | 0.050     | 0                         | 30 | 77.6%  | 78.8%  | 0.200     |
| 0                         | 40 | 85.2%  | 85.2%  | 0.000     | 0                         | 20 | 87.4%  | 87.8%  | 0.022     | 0                         | 40 | 77.6%  | 76.2%  | 0.249     |
| Total                     |    |        |        |           | Total                     |    |        |        |           | Total                     |    |        |        |           |
|                           |    |        |        |           |                           |    |        |        |           |                           |    |        |        |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United States Life Tables, 2014) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00477  | 0.00425 | 0.00451   | 100.00%                 | 81.83           | 99.27%              | 0.01180   | 2.62                    | 100.00%                 | 71.20           | 99.00%              | 0.01447   | 3.21                    | 100.00%                 | 70.13           | 98.63%              | 0.01819   | 4.03                    | 100.00%                 | 63.98           |
| 1   | 0.00029  | 0.00025 | 0.00027   | 99.55%                  | 81.20           | 99.30%              | 0.00726   | 26.90                   | 98.82%                  | 71.04           | 99.06%              | 0.00971   | 35.95                   | 98.55%                  | 70.15           | 98.69%              | 0.01336   | 49.50                   | 98.18%                  | 64.16           |
| 2   | 0.00020  | 0.00018 | 0.00019   | 99.52%                  | 80.22           | 99.33%              | 0.00688   | 36.19                   | 98.10%                  | 70.56           | 99.11%              | 0.00909   | 47.85                   | 97.60%                  | 69.83           | 98.75%              | 0.01267   | 66.68                   | 96.87%                  | 64.02           |
| 3   | 0.00015  | 0.00013 | 0.00014   | 99.50%                  | 79.24           | 99.36%              | 0.00653   | 46.64                   | 97.43%                  | 70.05           | 99.16%              | 0.00854   | 60.98                   | 96.71%                  | 69.47           | 98.81%              | 0.01203   | 85.95                   | 95.64%                  | 63.84           |
| 4   | 0.00012  | 0.00010 | 0.00011   | 99.49%                  | 78.25           | 99.39%              | 0.00622   | 56.53                   | 96.79%                  | 69.50           | 99.21%              | 0.00803   | 73.00                   | 95.88%                  | 69.06           | 98.87%              | 0.01144   | 104.03                  | 94.49%                  | 63.61           |
| 5   | 0.00010  | 0.00009 | 0.00010   | 99.48%                  | 77.26           | 99.42%              | 0.00593   | 62.46                   | 96.19%                  | 68.93           | 99.25%              | 0.00757   | 79.64                   | 95.11%                  | 68.62           | 98.92%              | 0.01090   | 114.69                  | 93.41%                  | 63.34           |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.47%                  | 76.26           | 99.44%              | 0.00566   | 70.76                   | 95.62%                  | 68.34           | 99.30%              | 0.00713   | 89.08                   | 94.39%                  | 68.14           | 98.97%              | 0.01037   | 129.66                  | 92.39%                  | 63.03           |
| 7   | 0.00008  | 0.00007 | 0.00008   | 99.46%                  | 75.27           | 99.47%              | 0.00541   | 72.12                   | 95.08%                  | 67.73           | 99.34%              | 0.00672   | 89.62                   | 93.72%                  | 67.62           | 99.02%              | 0.00988   | 131.78                  | 91.43%                  | 62.69           |
| 8   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 74.28           | 99.49%              | 0.00517   | 68.98                   | 94.56%                  | 67.10           | 99.37%              | 0.00634   | 84.59                   | 93.09%                  | 67.08           | 99.07%              | 0.00942   | 125.62                  | 90.53%                  | 62.31           |
| 9   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 73.28           | 99.51%              | 0.00495   | 65.97                   | 94.07%                  | 66.44           | 99.41%              | 0.00599   | 79.84                   | 92.50%                  | 66.50           | 99.11%              | 0.00898   | 119.76                  | 89.68%                  | 61.90           |
| 10  | 0.00009  | 0.00008 | 0.00009   | 99.44%                  | 72.29           | 99.53%              | 0.00474   | 55.80                   | 93.61%                  | 65.77           | 99.44%              | 0.00566   | 66.62                   | 91.95%                  | 65.90           | 99.15%              | 0.00857   | 100.86                  | 88.87%                  | 61.45           |
| 11  | 0.00010  | 0.00009 | 0.00010   | 99.43%                  | 71.29           | 99.55%              | 0.00455   | 47.86                   | 93.17%                  | 65.08           | 99.47%              | 0.00536   | 56.37                   | 91.43%                  | 65.27           | 99.19%              | 0.00818   | 86.14                   | 88.11%                  | 60.98           |
| 12  | 0.00012  | 0.00010 | 0.00011   | 99.42%                  | 70.30           | 99.57%              | 0.00437   | 39.68                   | 92.74%                  | 64.38           | 99.50%              | 0.00507   | 46.11                   | 90.94%                  | 64.62           | 99.23%              | 0.00782   | 71.07                   | 87.39%                  | 60.48           |
| 13  | 0.00014  | 0.00012 | 0.00013   | 99.41%                  | 69.31           | 99.59%              | 0.00420   | 32.28                   | 92.34%                  | 63.66           | 99.53%              | 0.00481   | 37.00                   | 90.47%                  | 63.95           | 99.27%              | 0.00747   | 57.50                   | 86.70%                  | 59.95           |
| 14  | 0.00018  | 0.00014 | 0.00016   | 99.40%                  | 68.32           | 99.61%              | 0.00405   | 25.29                   | 91.95%                  | 62.92           | 99.56%              | 0.00457   | 28.59                   | 90.04%                  | 63.26           | 99.30%              | 0.00716   | 44.74                   | 86.06%                  | 59.40           |
| 15  | 0.00024  | 0.00017 | 0.00021   | 99.38%                  | 67.33           | 99.63%              | 0.00392   | 19.12                   | 91.58%                  | 62.18           | 99.58%              | 0.00437   | 21.31                   | 89.63%                  | 62.54           | 99.33%              | 0.00687   | 33.53                   | 85.44%                  | 58.82           |
| 16  | 0.00032  | 0.00021 | 0.00027   | 99.36%                  | 66.34           | 99.64%              | 0.00382   | 14.40                   | 91.22%                  | 61.42           | 99.61%              | 0.00419   | 15.82                   | 89.24%                  | 61.82           | 99.36%              | 0.00662   | 24.98                   | 84.85%                  | 58.23           |
| 17  | 0.00040  | 0.00024 | 0.00032   | 99.33%                  | 65.36           | 99.66%              | 0.00371   | 11.61                   | 90.87%                  | 60.65           | 99.63%              | 0.00402   | 12.57                   | 88.86%                  | 61.07           | 99.39%              | 0.00638   | 19.92                   | 84.29%                  | 57.61           |
| 18  | 0.00048  | 0.00026 | 0.00037   | 99.30%                  | 64.38           | 99.68%              | 0.00361   | 9.77                    | 90.53%                  | 59.88           | 99.65%              | 0.00386   | 10.44                   | 88.50%                  | 60.32           | 99.42%              | 0.00614   | 16.60                   | 83.75%                  | 56.98           |
| 19  | 0.00056  | 0.00027 | 0.00042   | 99.27%                  | 63.40           | 99.69%              | 0.00352   | 8.47                    | 90.21%                  | 59.09           | 99.67%              | 0.00371   | 8.94                    | 88.16%                  | 59.55           | 99.45%              | 0.00591   | 14.25                   | 83.24%                  | 56.33           |
| 20  | 0.00063  | 0.00028 | 0.00046   | 99.22%                  | 62.43           | 99.70%              | 0.00342   | 7.51                    | 89.89%                  | 58.30           | 99.69%              | 0.00356   | 7.83                    | 87.84%                  | 58.77           | 99.48%              | 0.00569   | 12.52                   | 82.75%                  | 55.66           |
| 21  | 0.00070  | 0.00029 | 0.00050   | 99.18%                  | 61.46           | 99.72%              | 0.00333   | 6.72                    | 89.58%                  | 57.50           | 99.71%              | 0.00343   | 6.92                    | 87.52%                  | 57.98           | 99.50%              | 0.00549   | 11.09                   | 82.28%                  | 54.98           |
| 22  | 0.00075  | 0.00031 | 0.00053   | 99.13%                  | 60.49           | 99.73%              | 0.00324   | 6.11                    | 89.28%                  | 56.69           | 99.72%              | 0.00329   | 6.22                    | 87.22%                  | 57.18           | 99.52%              | 0.00529   | 9.98                    | 81.82%                  | 54.28           |
| 23  | 0.00078  | 0.00032 | 0.00055   | 99.08%                  | 59.52           | 99.74%              | 0.00314   | 5.70                    | 88.99%                  | 55.87           | 99.74%              | 0.00316   | 5.74                    | 86.94%                  | 56.36           | 99.55%              | 0.00508   | 9.24                    | 81.39%                  | 53.56           |
| 24  | 0.00080  | 0.00033 | 0.00057   | 99.02%                  | 58.55           | 99.75%              | 0.00304   | 5.38                    | 88.71%                  | 55.04           | 99.75%              | 0.00302   | 5.35                    | 86.66%                  | 55.54           | 99.57%              | 0.00489   | 8.65                    | 80.98%                  | 52.83           |
| 25  | 0.00081  | 0.00034 | 0.00058   | 98.97%                  | 57.58           | 99.76%              | 0.00294   | 5.11                    | 88.45%                  | 54.21           | 99.77%              | 0.00289   | 5.03                    | 86.40%                  | 54.71           | 99.59%              | 0.00469   | 8.16                    | 80.58%                  | 52.09           |
| 26  | 0.00082  | 0.00035 | 0.00059   | 98.91%                  | 56.62           | 99.77%              | 0.00284   | 4.86                    | 88.19%                  | 53.37           | 99.78%              | 0.00277   | 4.74                    | 86.15%                  | 53.87           | 99.61%              | 0.00451   | 7.71                    | 80.20%                  | 51.33           |
| 27  | 0.00083  | 0.00037 | 0.00060   | 98.85%                  | 55.65           | 99.78%              | 0.00276   | 4.60                    | 87.93%                  | 52.52           | 99.79%              | 0.00266   | 4.44                    | 85.91%                  | 53.01           | 99.63%              | 0.00434   | 7.23                    | 79.84%                  | 50.56           |
| 28  | 0.00085  | 0.00038 | 0.00062   | 98.79%                  | 54.68           | 99.79%              | 0.00268   | 4.36                    | 87.69%                  | 51.66           | 99.81%              | 0.00256   | 4.16                    | 85.68%                  | 52.15           | 99.64%              | 0.00418   | 6.79                    | 79.50%                  | 49.78           |
| 29  | 0.00087  | 0.00040 | 0.00064   | 98.73%                  | 53.72           | 99.80%              | 0.00261   | 4.11                    | 87.46%                  | 50.80           | 99.82%              | 0.00247   | 3.89                    | 85.46%                  | 51.29           | 99.66%              | 0.00403   | 6.35                    | 79.16%                  | 48.99           |
| 30  | 0.00090  | 0.00042 | 0.00066   | 98.67%                  | 52.75           | 99.81%              | 0.00255   | 3.86                    | 87.23%                  | 49.93           | 99.83%              | 0.00239   | 3.62                    | 85.25%                  | 50.41           | 99.68%              | 0.00390   | 5.90                    | 78.85%                  | 48.18           |
| 40  | 0.00126  | 0.00077 | 0.00102   | 97.92%                  | 43.11           | 99.88%              | 0.00221   | 2.18                    | 85.23%                  | 40.99           | 99.90%              | 0.00198   | 1.95                    | 83.46%                  | 41.39           | 99.80%              | 0.00301   | 2.97                    | 76.21%                  | 39.69           |
| 50  | 0.00297  | 0.00197 | 0.00247   | 96.38%                  | 33.71           |                     | 0.00400   | 1.62                    | 82.77%                  | 32.04           |                     | 0.00370   | 1.50                    | 81.27%                  | 32.36           |                     | 0.00502   | 2.03                    | 73.36%                  | 31.02           |
| 60  | 0.00716  | 0.00460 | 0.00588   | 92.84%                  | 24.78           |                     | 0.00797   | 1.35                    | 78.34%                  | 23.55           |                     | 0.00756   | 1.29                    | 77.18%                  | 23.78           |                     | 0.00936   | 1.59                    | 68.61%                  | 22.79           |
| 70  | 0.01834  | 0.01192 | 0.01513   | 84.58%                  | 16.64           |                     | 0.01824   | 1.21                    | 69.60%                  | 15.80           |                     | 0.01763   | 1.17                    | 68.91%                  | 15.96           |                     | 0.02030   | 1.34                    | 59.94%                  | 15.29           |
| 80  | 0.04999  | 0.03429 | 0.04214   | 65.73%                  | 9.80            |                     | 0.04742   | 1.13                    | 51.94%                  | 9.29            |                     | 0.04638   | 1.10                    | 51.84%                  | 9.38            |                     | 0.05093   | 1.21                    | 43.54%                  | 8.97            |
| 90  | 0.14500  | 0.10953 | 0.12727   | 30.93%                  | 4.83            |                     | 0.13797   | 1.08                    | 22.58%                  | 4.55            |                     | 0.13587   | 1.07                    | 22.89%                  | 4.61            |                     | 0.14509   | 1.14                    | 17.95%                  | 4.39            |
| 100 | 0.34979  | 0.30602 | 0.32791   | 2.84%                   | 2.25            |                     | 0.35089   | 1.07                    | 1.69%                   | 2.10            |                     | 0.34639   | 1.06                    | 1.78%                   | 2.13            |                     | 0.36618   | 1.12                    | 1.17%                   | 2.01            |

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Target and fitted criteria are as follows:

### Overall

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 93.8%  | 93.6%  | 0.004     |
| 0     | 20 | 89.6%  | 89.9%  | 0.009     |
| 0     | 30 | 87.4%  | 87.2%  | 0.003     |
| 0     | 40 | 85.2%  | 85.2%  | 0.000     |
| Total |    |        | 0.0166 |           |

### Mental retardation - Non-existent to moderate

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 5  | 95.5%  | 95.8%  | 0.012     |
| 0     | 10 | 93.5%  | 93.5%  | 0.000     |
| 0     | 15 | 92.4%  | 91.9%  | 0.029     |
| 0     | 20 | 90.4%  | 90.7%  | 0.013     |
| Total |    |        | 0.0541 |           |

### Mental retardation - Severe to profound

#### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 5  | 85.3%  | 83.7%  | 0.308     |
| 0     | 10 | 72.6%  | 73.7%  | 0.171     |
| 0     | 15 | 66.6%  | 67.2%  | 0.048     |
| 0     | 20 | 63.3%  | 62.7%  | 0.063     |
| Total |    |        |        | 0.5902    |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United States Life Tables, 2014) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00477  | 0.00425 | 0.00451   | 100.00%                 | 81.83           | 99.27%              | 0.01180   | 2.62                    | 100.00%                 | 71.20           | 99.13%              | 0.01316   | 2.92                    | 100.00%                 | 74.06           |
| 1   | 0.00029  | 0.00025 | 0.00027   | 99.55%                  | 81.20           | 99.30%              | 0.00726   | 26.90                   | 98.82%                  | 71.04           | 99.20%              | 0.00828   | 30.65                   | 98.68%                  | 74.04           |
| 2   | 0.00020  | 0.00018 | 0.00019   | 99.52%                  | 80.22           | 99.33%              | 0.00688   | 36.19                   | 98.10%                  | 70.56           | 99.26%              | 0.00757   | 39.83                   | 97.87%                  | 73.65           |
| 3   | 0.00015  | 0.00013 | 0.00014   | 99.50%                  | 79.24           | 99.36%              | 0.00653   | 46.64                   | 97.43%                  | 70.05           | 99.32%              | 0.00694   | 49.56                   | 97.13%                  | 73.21           |
| 4   | 0.00012  | 0.00010 | 0.00011   | 99.49%                  | 78.25           | 99.39%              | 0.00622   | 56.53                   | 96.79%                  | 69.50           | 99.37%              | 0.00638   | 57.96                   | 96.45%                  | 72.72           |
| 5   | 0.00010  | 0.00009 | 0.00010   | 99.48%                  | 77.26           | 99.42%              | 0.00593   | 62.46                   | 96.19%                  | 68.93           | 99.42%              | 0.00587   | 61.78                   | 95.84%                  | 72.18           |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.47%                  | 76.26           | 99.44%              | 0.00566   | 70.76                   | 95.62%                  | 68.34           | 99.47%              | 0.00540   | 67.52                   | 95.28%                  | 71.60           |
| 7   | 0.00008  | 0.00007 | 0.00008   | 99.46%                  | 75.27           | 99.47%              | 0.00541   | 72.12                   | 95.08%                  | 67.73           | 99.51%              | 0.00498   | 66.38                   | 94.76%                  | 70.99           |
| 8   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 74.28           | 99.49%              | 0.00517   | 68.98                   | 94.56%                  | 67.10           | 99.55%              | 0.00459   | 61.25                   | 94.29%                  | 70.34           |
| 9   | 0.00008  | 0.00007 | 0.00008   | 99.45%                  | 73.28           | 99.51%              | 0.00495   | 65.97                   | 94.07%                  | 66.44           | 99.58%              | 0.00424   | 56.53                   | 93.86%                  | 69.66           |
| 10  | 0.00009  | 0.00008 | 0.00008   | 99.44%                  | 72.29           | 99.53%              | 0.00474   | 55.80                   | 93.61%                  | 65.77           | 99.62%              | 0.00392   | 46.15                   | 93.46%                  | 68.96           |
| 11  | 0.00010  | 0.00009 | 0.00010   | 99.43%                  | 71.29           | 99.55%              | 0.00455   | 47.86                   | 93.17%                  | 65.08           | 99.65%              | 0.00363   | 38.23                   | 93.09%                  | 68.23           |
| 12  | 0.00012  | 0.00010 | 0.00011   | 99.42%                  | 70.30           | 99.57%              | 0.00437   | 39.68                   | 92.74%                  | 64.38           | 99.67%              | 0.00337   | 30.63                   | 92.75%                  | 67.47           |
| 13  | 0.00014  | 0.00012 | 0.00013   | 99.41%                  | 69.31           | 99.59%              | 0.00420   | 32.28                   | 92.34%                  | 63.66           | 99.70%              | 0.00313   | 24.10                   | 92.44%                  | 66.70           |
| 14  | 0.00018  | 0.00014 | 0.00016   | 99.40%                  | 68.32           | 99.61%              | 0.00405   | 25.29                   | 91.95%                  | 62.92           | 99.72%              | 0.00293   | 18.30                   | 92.15%                  | 65.91           |
| 15  | 0.00024  | 0.00017 | 0.00021   | 99.38%                  | 67.33           | 99.63%              | 0.00392   | 19.12                   | 91.58%                  | 62.18           | 99.74%              | 0.00276   | 13.44                   | 91.88%                  | 65.10           |
| 16  | 0.00032  | 0.00021 | 0.00027   | 99.36%                  | 66.34           | 99.64%              | 0.00382   | 14.40                   | 91.22%                  | 61.42           | 99.76%              | 0.00261   | 9.87                    | 91.63%                  | 64.28           |
| 17  | 0.00040  | 0.00024 | 0.00032   | 99.33%                  | 65.36           | 99.66%              | 0.00371   | 11.61                   | 90.87%                  | 60.65           | 99.78%              | 0.00249   | 7.77                    | 91.39%                  | 63.45           |
| 18  | 0.00048  | 0.00026 | 0.00037   | 99.30%                  | 64.38           | 99.68%              | 0.00361   | 9.77                    | 90.53%                  | 59.88           | 99.80%              | 0.00237   | 6.39                    | 91.16%                  | 62.60           |
| 19  | 0.00056  | 0.00027 | 0.00042   | 99.27%                  | 63.40           | 99.69%              | 0.00352   | 8.47                    | 90.21%                  | 59.09           | 99.82%              | 0.00225   | 5.43                    | 90.95%                  | 61.75           |
| 20  | 0.00063  | 0.00028 | 0.00046   | 99.22%                  | 62.43           | 99.70%              | 0.00342   | 7.51                    | 89.89%                  | 58.30           | 99.83%              | 0.00215   | 4.72                    | 90.74%                  | 60.89           |
| 21  | 0.00070  | 0.00029 | 0.00050   | 99.18%                  | 61.46           | 99.72%              | 0.00333   | 6.72                    | 89.58%                  | 57.50           | 99.84%              | 0.00206   | 4.15                    | 90.55%                  | 60.02           |
| 22  | 0.00075  | 0.00031 | 0.00053   | 99.13%                  | 60.49           | 99.73%              | 0.00324   | 6.11                    | 89.28%                  | 56.69           | 99.86%              | 0.00197   | 3.71                    | 90.36%                  | 59.14           |
| 23  | 0.00078  | 0.00032 | 0.00055   | 99.08%                  | 59.52           | 99.74%              | 0.00314   | 5.70                    | 88.99%                  | 55.87           | 99.87%              | 0.00188   | 3.41                    | 90.18%                  | 58.26           |
| 24  | 0.00080  | 0.00033 | 0.00057   | 99.02%                  | 58.55           | 99.75%              | 0.00304   | 5.38                    | 88.71%                  | 55.04           | 99.88%              | 0.00179   | 3.16                    | 90.01%                  | 57.37           |
| 25  | 0.00081  | 0.00034 | 0.00058   | 98.97%                  | 57.58           | 99.76%              | 0.00294   | 5.11                    | 88.45%                  | 54.21           | 99.89%              | 0.00170   | 2.96                    | 89.85%                  | 56.47           |
| 26  | 0.00082  | 0.00035 | 0.00059   | 98.91%                  | 56.62           | 99.77%              | 0.00284   | 4.86                    | 88.19%                  | 53.37           | 99.90%              | 0.00162   | 2.77                    | 89.70%                  | 55.56           |
| 27  | 0.00083  | 0.00037 | 0.00060   | 98.85%                  | 55.65           | 99.78%              | 0.00276   | 4.60                    | 87.93%                  | 52.52           | 99.90%              | 0.00156   | 2.59                    | 89.55%                  | 54.65           |
| 28  | 0.00085  | 0.00038 | 0.00062   | 98.79%                  | 54.68           | 99.79%              | 0.00268   | 4.36                    | 87.69%                  | 51.66           | 99.91%              | 0.00150   | 2.43                    | 89.41%                  | 53.74           |
| 29  | 0.00087  | 0.00040 | 0.00064   | 98.73%                  | 53.72           | 99.80%              | 0.00261   | 4.11                    | 87.46%                  | 50.80           | 99.92%              | 0.00145   | 2.28                    | 89.28%                  | 52.82           |
| 30  | 0.00090  | 0.00042 | 0.00066   | 98.67%                  | 52.75           | 99.81%              | 0.00255   | 3.86                    | 87.23%                  | 49.93           | 99.93%              | 0.00141   | 2.13                    | 89.15%                  | 51.89           |
| 40  | 0.00126  | 0.00077 | 0.00102   | 97.92%                  | 43.11           | 99.88%              | 0.00221   | 2.18                    | 85.23%                  | 40.99           | 99.97%              | 0.00135   | 1.33                    | 88.00%                  | 42.51           |
| 50  | 0.00297  | 0.00197 | 0.00247   | 96.38%                  | 33.71           |                     | 0.00400   | 1.62                    | 82.77%                  | 32.04           |                     | 0.00289   | 1.17                    | 86.30%                  | 33.23           |
| 60  | 0.00716  | 0.00460 | 0.00588   | 92.84%                  | 24.78           |                     | 0.00797   | 1.35                    | 78.34%                  | 23.55           |                     | 0.00645   | 1.10                    | 82.73%                  | 24.43           |
| 70  | 0.01834  | 0.01192 | 0.01513   | 84.58%                  | 16.64           |                     | 0.01824   | 1.21                    | 69.60%                  | 15.80           |                     | 0.01599   | 1.06                    | 74.85%                  | 16.40           |
| 80  | 0.04999  | 0.03429 | 0.04214   | 65.73%                  | 9.80            |                     | 0.04742   | 1.13                    | 51.94%                  | 9.29            |                     | 0.04359   | 1.03                    | 57.52%                  | 9.65            |
| 90  | 0.14500  | 0.10953 | 0.12727   | 30.93%                  | 4.83            |                     | 0.13797   | 1.08                    | 22.58%                  | 4.55            |                     | 0.13021   | 1.02                    | 26.49%                  | 4.75            |
| 100 | 0.34979  | 0.30602 | 0.32791   | 2.84%                   | 2.25            |                     | 0.35089   | 1.07                    | 1.69%                   | 2.10            |                     | 0.33424   | 1.02                    | 2.30%                   | 2.21            |

| Age    | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|--------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|        | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 5.99%  |                     |           |                         |                         |                 | 96.17%              | 0.04266   | 9.46                    | 100.00%                 | 47.24           | 96.40%              | 0.03628   | 134.39                  | 95.73%                  | 48.32           |
| 96.61% |                     |           |                         |                         |                 | 96.61%              | 0.03405   | 179.21                  | 92.26%                  | 49.12           | 96.82%              | 0.03197   | 228.36                  | 89.12%                  | 49.83           |
| 97.01% |                     |           |                         |                         |                 | 97.01%              | 0.03003   | 273.04                  | 86.27%                  | 50.46           | 97.19%              | 0.02823   | 297.11                  | 83.68%                  | 51.01           |
| 97.36% |                     |           |                         |                         |                 | 97.36%              | 0.02653   | 331.56                  | 81.32%                  | 51.48           | 97.51%              | 0.02494   | 332.47                  | 79.16%                  | 51.87           |
| 97.51% |                     |           |                         |                         |                 | 97.51%              | 0.02345   | 312.60                  | 77.19%                  | 52.18           | 97.68%              | 0.02204   | 293.92                  | 75.38%                  | 52.42           |
| 97.89% |                     |           |                         |                         |                 | 97.89%              | 0.02074   | 243.97                  | 73.71%                  | 52.59           | 97.93%              | 0.02074   | 243.97                  | 73.71%                  | 52.59           |
| 98.06% |                     |           |                         |                         |                 | 98.06%              | 0.01951   | 205.36                  | 72.19%                  | 52.69           | 98.08%              | 0.01836   | 166.91                  | 70.78%                  | 52.73           |
| 98.24% |                     |           |                         |                         |                 | 98.24%              | 0.01729   | 132.97                  | 69.48%                  | 52.71           | 98.39%              | 0.01629   | 101.80                  | 68.28%                  | 52.63           |
| 98.48% |                     |           |                         |                         |                 | 98.48%              | 0.01536   | 74.95                   | 67.17%                  | 52.49           | 98.55%              | 0.01452   | 54.78                   | 66.13%                  | 52.30           |
| 98.66% |                     |           |                         |                         |                 | 98.66%              | 0.01372   | 42.86                   | 65.17%                  | 52.06           | 98.72%              | 0.01255   | 35.03                   | 64.28%                  | 51.78           |
| 98.78% |                     |           |                         |                         |                 | 98.78%              | 0.01225   | 29.52</td               |                         |                 |                     |           |                         |                         |                 |

Target and fitted criteria are as follows:

**Group 1 - Tube fed, Not rolling, No hand or arm use**

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 5  | 75%    | 75%    | 0.019     |  |
| 0                         | 10 | 66%    | 66%    | 0.002     |  |
| 0                         | 15 | 63%    | 62%    | 0.132     |  |
| 0                         | 20 | 60%    | 60%    | 0.003     |  |
| 0                         | 25 | 59%    | 59%    | 0.000     |  |
| 0                         | 30 | 58%    | 58%    | 0.021     |  |
| Total                     |    |        | 0.1765 |           |  |

**Group 2 - Tube fed, Not rolling, Hand or arm use present**

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 5  | 89%    | 93%    | 1.847     |  |
| 0                         | 10 | 84%    | 87%    | 1.428     |  |
| 0                         | 15 | 84%    | 82%    | 0.271     |  |
| 0                         | 20 | 84%    | 78%    | 4.368     |  |
| 0                         | 25 | 73%    | 74%    | 0.075     |  |
| 0                         | 30 | 68%    | 70%    | 0.538     |  |
| Total                     |    |        | 8.5264 |           |  |

**Group 3 - Fed by others, Not rolling, No hand or arm use**

| Probabilities of survival |    |        |        |           |        |
|---------------------------|----|--------|--------|-----------|--------|
| From                      | To | Target | Fitted | Deviation |        |
| 0                         | 5  | 91%    | 91%    | 0.000     |        |
| 0                         | 10 | 89%    | 86%    | 0.789     |        |
| 0                         | 15 | 81%    | 84%    | 0.878     |        |
| 0                         | 20 | 81%    | 82%    | 0.114     |        |
| 0                         | 25 | 81%    | 81%    | 0.009     |        |
| 0                         | 30 | 81%    | 80%    | 0.174     |        |
| Total                     |    |        |        |           | 1.9635 |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United States Life Tables, 2014) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00633  | 0.00531 | 0.00582   | 100.00%                 | 78.72           | 92.96%              | 0.07581   | 13.03                   | 100.00%                 | 47.89           |
| 1   | 0.00039  | 0.00034 | 0.00037   | 99.42%                  | 78.17           | 93.92%              | 0.06114   | 165.44                  | 92.42%                  | 50.77           |
| 2   | 0.00028  | 0.00022 | 0.00025   | 99.38%                  | 77.20           | 94.75%              | 0.05272   | 212.80                  | 86.77%                  | 53.05           |
| 3   | 0.00021  | 0.00016 | 0.00018   | 99.36%                  | 76.22           | 95.47%              | 0.04550   | 248.21                  | 82.19%                  | 54.97           |
| 4   | 0.00019  | 0.00013 | 0.00016   | 99.34%                  | 75.24           | 96.09%              | 0.03928   | 249.42                  | 78.45%                  | 56.57           |
| 5   | 0.00016  | 0.00012 | 0.00014   | 99.32%                  | 74.25           | 96.62%              | 0.03933   | 239.82                  | 75.37%                  | 57.86           |
| 6   | 0.00014  | 0.00011 | 0.00013   | 99.31%                  | 73.26           | 97.08%              | 0.02930   | 233.32                  | 72.82%                  | 58.88           |
| 7   | 0.00013  | 0.00010 | 0.00011   | 99.30%                  | 72.27           | 97.48%              | 0.02530   | 224.58                  | 70.68%                  | 59.64           |
| 8   | 0.00011  | 0.00009 | 0.00010   | 99.29%                  | 71.28           | 97.82%              | 0.02185   | 215.83                  | 68.89%                  | 60.17           |
| 9   | 0.00010  | 0.00008 | 0.00009   | 99.28%                  | 70.28           | 98.12%              | 0.01887   | 204.90                  | 67.39%                  | 60.51           |
| 10  | 0.00009  | 0.00008 | 0.00009   | 99.27%                  | 69.29           | 98.38%              | 0.01630   | 184.26                  | 66.12%                  | 60.66           |
| 11  | 0.00010  | 0.00009 | 0.00010   | 99.26%                  | 68.30           | 98.60%              | 0.01410   | 147.26                  | 65.04%                  | 60.66           |
| 12  | 0.00014  | 0.00010 | 0.00012   | 99.25%                  | 67.30           | 98.79%              | 0.01221   | 101.69                  | 64.12%                  | 60.52           |
| 13  | 0.00021  | 0.00013 | 0.00017   | 99.24%                  | 66.31           | 98.96%              | 0.01060   | 64.20                   | 63.34%                  | 60.26           |
| 14  | 0.00030  | 0.00016 | 0.00023   | 99.22%                  | 65.32           | 99.10%              | 0.00924   | 40.70                   | 62.67%                  | 59.90           |
| 15  | 0.00039  | 0.00019 | 0.00029   | 99.20%                  | 64.34           | 99.22%              | 0.00807   | 27.52                   | 62.09%                  | 59.45           |
| 16  | 0.00050  | 0.00023 | 0.00036   | 99.17%                  | 63.35           | 99.33%              | 0.00708   | 19.53                   | 61.59%                  | 58.93           |
| 17  | 0.00062  | 0.00027 | 0.00044   | 99.13%                  | 62.38           | 99.42%              | 0.00624   | 14.14                   | 61.15%                  | 58.35           |
| 18  | 0.00075  | 0.00031 | 0.00053   | 99.09%                  | 61.40           | 99.50%              | 0.00554   | 10.48                   | 60.77%                  | 57.71           |
| 19  | 0.00089  | 0.00034 | 0.00062   | 99.04%                  | 60.44           | 99.57%              | 0.00494   | 8.02                    | 60.43%                  | 57.03           |
| 20  | 0.00103  | 0.00038 | 0.00070   | 98.97%                  | 59.47           | 99.63%              | 0.00444   | 6.30                    | 60.14%                  | 56.31           |
| 21  | 0.00116  | 0.00041 | 0.00079   | 98.90%                  | 58.51           | 99.68%              | 0.00401   | 5.10                    | 59.87%                  | 55.56           |
| 22  | 0.00125  | 0.00044 | 0.00085   | 98.83%                  | 57.56           | 99.72%              | 0.00363   | 4.28                    | 59.63%                  | 54.78           |
| 23  | 0.00131  | 0.00047 | 0.00089   | 98.74%                  | 56.61           | 99.76%              | 0.00329   | 3.71                    | 59.41%                  | 53.98           |
| 24  | 0.00133  | 0.00050 | 0.00091   | 98.66%                  | 55.66           | 99.79%              | 0.00299   | 3.27                    | 59.22%                  | 53.16           |
| 25  | 0.00135  | 0.00052 | 0.00093   | 98.57%                  | 54.71           | 99.82%              | 0.00273   | 2.92                    | 59.04%                  | 52.32           |
| 26  | 0.00137  | 0.00055 | 0.00096   | 98.47%                  | 53.76           | 99.85%              | 0.00251   | 2.61                    | 58.88%                  | 51.46           |
| 27  | 0.00139  | 0.00058 | 0.00099   | 98.38%                  | 52.81           | 99.87%              | 0.00232   | 2.35                    | 58.73%                  | 50.59           |
| 28  | 0.00142  | 0.00061 | 0.00102   | 98.28%                  | 51.86           | 99.88%              | 0.00217   | 2.13                    | 58.59%                  | 49.70           |
| 29  | 0.00146  | 0.00064 | 0.00105   | 98.18%                  | 50.92           | 99.90%              | 0.00205   | 1.94                    | 58.47%                  | 48.81           |
| 30  | 0.00150  | 0.00068 | 0.00109   | 98.08%                  | 49.97           | 99.91%              | 0.00195   | 1.79                    | 58.35%                  | 47.91           |
| 40  | 0.00214  | 0.00135 | 0.00174   | 96.79%                  | 40.56           |                     | 0.00280   | 1.61                    | 57.04%                  | 38.89           |
| 50  | 0.00503  | 0.00321 | 0.00412   | 94.34%                  | 31.47           |                     | 0.00549   | 1.33                    | 54.94%                  | 30.16           |
| 60  | 0.01137  | 0.00672 | 0.00904   | 88.70%                  | 23.11           |                     | 0.01090   | 1.21                    | 50.85%                  | 22.15           |
| 70  | 0.02270  | 0.01514 | 0.01892   | 78.15%                  | 15.49           |                     | 0.02169   | 1.15                    | 43.80%                  | 14.84           |
| 80  | 0.05750  | 0.04213 | 0.04981   | 57.65%                  | 9.03            |                     | 0.05457   | 1.10                    | 31.15%                  | 8.64            |
| 90  | 0.16233  | 0.12810 | 0.14521   | 23.77%                  | 4.48            |                     | 0.15479   | 1.07                    | 11.95%                  | 4.27            |
| 100 | 1.00000  | 1.00000 | 1.00000   | 1.80%                   | 2.15            |                     | 1.01997   | 1.02                    | 0.75%                   | 2.11            |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 1.18%               | 98.67%    | 0.01901                 | 3.27                    | 100.00%         | 48.80               | 98.69%    | 0.01347                 | 36.46                   | 98.10%          |
| 1   | 98.70%              | 0.01320   | 53.26                   | 96.78%                  | 48.40           | 98.72%              | 0.01298   | 70.81                   | 95.50%                  | 48.04           |
| 2   | 98.75%              | 0.01264   | 89.33                   | 93.05%                  | 47.28           | 98.77%              | 0.01247   | 99.34                   | 91.88%                  | 46.88           |
| 3   | 98.80%              | 0.01231   | 109.30                  | 90.73%                  | 46.46           | 98.82%              | 0.01216   | 120.10                  | 89.62%                  | 46.03           |
| 4   | 98.85%              | 0.01162   | 96.75                   | 85.41%                  | 44.20           | 98.89%              | 0.01138   | 38.80                   | 82.49%                  | 42.72           |
| 5   | 98.90%              | 0.01152   | 69.79                   | 84.42%                  | 43.72           | 98.93%              | 0.01119   | 18.16                   | 78.82%                  | 40.66           |
| 6   | 98.95%              | 0.01115   | 31.23                   | 81.55%                  | 42.20           | 99.00%              | 0.01087   | 11.90                   | 74.55%                  | 37.80           |
| 7   | 98.98%              | 0.01105   | 13.04                   | 76.22%                  | 38.95           | 99.04%              | 0.01060   | 12.35                   | 75.38%                  | 38.38           |
| 8   | 99.02%              | 0.01062   | 51.72                   | 85.11%                  | 62.07           | 99.05%              | 0.01033   | 91.71                   | 88.82%                  | 64.37           |
| 9   | 99.07%              | 0.01026   | 34.25                   | 84.58%                  | 61.46           | 99.10%              | 0.01006   | 51.72                   | 85.11%                  | 62.07           |
| 10  | 99.13%              | 0.01021   | 34.25                   | 84.58%                  | 61.46           | 99.17%              | 0.01004   | 34.25                   | 84.58%                  | 61.46           |
| 11  | 99.19%              | 0.01019   | 21.25                   | 79.72%                  | 41.15           | 99.24%              | 0.01003   | 18.16                   | 78.82%                  | 40.66           |
| 12  | 99.25%              | 0.01015   | 37.21                   | 79.44%                  | 40.06           | 99.30%              | 0.01003   | 15.82                   | 77.94%                  | 37.21           |
| 13  | 99.30%              | 0.01011   | 14.14                   | 77.07%                  | 39.51           | 99.36%              | 0.01003   | 14.14                   | 77.07%                  | 39.51           |
| 14  | 99.36%              | 0.01009   | 12.35                   | 76.22%                  | 38.95           | 99.41%              | 0.01001   | 12.35                   | 76.22%                  | 38.95           |
| 15  | 99.41%              | 0.01007   | 11.53                   | 73.74%                  | 37.21           | 99.47%              | 0.01001   | 11.53                   | 73.74%                  | 37.21           |
| 16  | 99.47%              | 0.01005   | 10.73                   | 72.17%                  | 36.00           | 99.53%              | 0.01001   | 10.73                   | 72.17%                  | 36.00           |
| 17  | 99.53%              | 0.01003   | 10.73                   | 72.17%                  | 36.00           | 99.59%              | 0.01001   | 10.73                   | 72.17%                  | 36.00           |
| 18  | 99.59%              | 0.01001   | 10.73                   | 72.17%                  | 36.00           | 99.65%              | 0.01001   | 10.73                   | 72.17%                  | 36.00           |
| 19  | 99.65%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.70%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 20  | 99.70%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.76%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 21  | 99.76%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.81%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 22  | 99.81%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.86%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 23  | 99.86%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.91%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 24  | 99.91%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.96%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 25  | 99.96%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 99.99%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 26  | 99.99%              | 0.01000   | 10.73                   | 72.17%                  | 36.00           | 100.00%             | 0.01000   | 10.73                   | 72.17%                  | 36.00           |
| 27  | 100.00%             | 0.01000   | 10.73                   | 72.17%                  | 36.00           |                     |           |                         |                         |                 |

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Target and fitted criteria are as follows:

#### All individuals with cerebral palsy

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 5  | 94%    | 95%    | 0.059     |  |
| 0                         | 10 | 91%    | 91%    | 0.013     |  |
| 0                         | 15 | 89%    | 89%    | 0.000     |  |
| 0                         | 20 | 88%    | 87%    | 0.085     |  |
| 0                         | 25 | 86%    | 86%    | 0.007     |  |
| 0                         | 30 | 85%    | 85%    | 0.011     |  |
| 0                         | 35 | 83%    | 84%    | 0.079     |  |
| Total                     |    |        | 0.2544 |           |  |

#### Disability score 1 to 3

| Relative hazard ratios |    |        |        |           |        |
|------------------------|----|--------|--------|-----------|--------|
| From                   | To | Target | Fitted | Deviation |        |
| 1                      | 5  | 7%     | 6%     | 1.544     |        |
| 5                      | 40 | 22%    | 23%    | 0.707     |        |
| Total                  |    |        |        |           | 2.2513 |

#### Disability score 4 to 6

| Relative hazard ratios |    |        |        |           |        |
|------------------------|----|--------|--------|-----------|--------|
| From                   | To | Target | Fitted | Deviation |        |
| 1                      | 5  | 25%    | 25%    | 0.000     |        |
| 5                      | 40 | 37%    | 37%    | 0.000     |        |
| Total                  |    |        |        |           | 0.0000 |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (Australia, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males                                   | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00357                                 | 0.00330 | 0.00344   | 100.00%                 | 82.38           | 98.88%              | 0.01463   | 4.26                    | 100.00%                 | 69.48           |
| 1   | 0.00029                                 | 0.00022 | 0.00026   | 99.66%                  | 81.66           | 98.95%              | 0.01079   | 42.32                   | 98.54%                  | 69.50           |
| 2   | 0.00016                                 | 0.00013 | 0.00015   | 99.63%                  | 80.69           | 99.01%              | 0.01003   | 69.17                   | 97.47%                  | 69.25           |
| 3   | 0.00014                                 | 0.00011 | 0.00013   | 99.62%                  | 79.70           | 99.07%              | 0.00940   | 75.17                   | 96.50%                  | 68.95           |
| 4   | 0.00012                                 | 0.00010 | 0.00011   | 99.60%                  | 78.71           | 99.13%              | 0.00881   | 80.05                   | 95.59%                  | 68.60           |
| 5   | 0.00011                                 | 0.00009 | 0.00010   | 99.59%                  | 77.72           | 99.18%              | 0.00826   | 82.56                   | 94.75%                  | 68.20           |
| 6   | 0.00010                                 | 0.00008 | 0.00009   | 99.58%                  | 76.72           | 99.23%              | 0.00774   | 86.00                   | 93.96%                  | 67.77           |
| 7   | 0.00009                                 | 0.00007 | 0.00008   | 99.57%                  | 75.73           | 99.28%              | 0.00726   | 90.69                   | 93.24%                  | 67.29           |
| 8   | 0.00008                                 | 0.00007 | 0.00008   | 99.57%                  | 74.74           | 99.33%              | 0.00681   | 90.73                   | 92.56%                  | 66.78           |
| 9   | 0.00008                                 | 0.00007 | 0.00008   | 99.56%                  | 73.74           | 99.37%              | 0.00639   | 85.16                   | 91.93%                  | 66.24           |
| 10  | 0.00008                                 | 0.00007 | 0.00008   | 99.55%                  | 72.75           | 99.41%              | 0.00600   | 79.94                   | 91.34%                  | 65.66           |
| 11  | 0.00009                                 | 0.00008 | 0.00009   | 99.54%                  | 71.75           | 99.44%              | 0.00564   | 66.33                   | 90.80%                  | 65.05           |
| 12  | 0.00010                                 | 0.00009 | 0.00010   | 99.54%                  | 70.76           | 99.48%              | 0.00530   | 55.83                   | 90.28%                  | 64.42           |
| 13  | 0.00012                                 | 0.00010 | 0.00011   | 99.53%                  | 69.77           | 99.51%              | 0.00500   | 45.41                   | 89.81%                  | 63.76           |
| 14  | 0.00016                                 | 0.00013 | 0.00015   | 99.52%                  | 68.77           | 99.54%              | 0.00473   | 32.60                   | 89.36%                  | 63.08           |
| 15  | 0.00022                                 | 0.00015 | 0.00019   | 99.50%                  | 67.78           | 99.57%              | 0.00448   | 24.23                   | 88.93%                  | 62.37           |
| 16  | 0.00030                                 | 0.00018 | 0.00024   | 99.48%                  | 66.80           | 99.60%              | 0.00427   | 17.79                   | 88.54%                  | 61.65           |
| 17  | 0.00038                                 | 0.00020 | 0.00029   | 99.46%                  | 65.81           | 99.62%              | 0.00407   | 14.03                   | 88.16%                  | 60.91           |
| 18  | 0.00045                                 | 0.00021 | 0.00033   | 99.43%                  | 64.83           | 99.65%              | 0.00388   | 11.74                   | 87.80%                  | 60.16           |
| 19  | 0.00052                                 | 0.00022 | 0.00037   | 99.40%                  | 63.85           | 99.67%              | 0.00370   | 9.99                    | 87.46%                  | 59.39           |
| 20  | 0.00056                                 | 0.00023 | 0.00040   | 99.36%                  | 62.87           | 99.69%              | 0.00351   | 8.90                    | 87.14%                  | 58.61           |
| 21  | 0.00059                                 | 0.00023 | 0.00041   | 99.32%                  | 61.90           | 99.71%              | 0.00334   | 8.13                    | 86.83%                  | 57.82           |
| 22  | 0.00061                                 | 0.00024 | 0.00043   | 99.28%                  | 60.92           | 99.73%              | 0.00317   | 7.46                    | 86.54%                  | 57.01           |
| 23  | 0.00063                                 | 0.00025 | 0.00044   | 99.24%                  | 59.95           | 99.74%              | 0.00301   | 6.85                    | 86.27%                  | 56.19           |
| 24  | 0.00064                                 | 0.00026 | 0.00045   | 99.19%                  | 58.98           | 99.76%              | 0.00286   | 6.36                    | 86.01%                  | 55.36           |
| 25  | 0.00065                                 | 0.00027 | 0.00046   | 99.15%                  | 58.00           | 99.77%              | 0.00272   | 5.92                    | 85.76%                  | 54.51           |
| 26  | 0.00066                                 | 0.00028 | 0.00047   | 99.10%                  | 57.03           | 99.79%              | 0.00259   | 5.52                    | 85.53%                  | 53.66           |
| 27  | 0.00068                                 | 0.00029 | 0.00049   | 99.06%                  | 56.06           | 99.80%              | 0.00248   | 5.11                    | 85.30%                  | 52.80           |
| 28  | 0.00070                                 | 0.00031 | 0.00051   | 99.01%                  | 55.08           | 99.81%              | 0.00237   | 4.70                    | 85.09%                  | 51.93           |
| 29  | 0.00073                                 | 0.00033 | 0.00053   | 98.96%                  | 54.11           | 99.82%              | 0.00228   | 4.31                    | 84.89%                  | 51.05           |
| 30  | 0.00077                                 | 0.00036 | 0.00057   | 98.91%                  | 53.14           | 99.84%              | 0.00221   | 3.91                    | 84.70%                  | 50.17           |
| 40  | 0.00142                                 | 0.00078 | 0.00110   | 98.14%                  | 43.51           | 0.00242             | 2.20      | 82.92%                  | 41.14                   | 99.96%          |
| 50  | 0.00298                                 | 0.00180 | 0.00239   | 96.59%                  | 34.12           | 0.00408             | 1.71      | 80.41%                  | 32.25                   | 0.00294         |
| 60  | 0.00675                                 | 0.00398 | 0.00537   | 93.23%                  | 25.15           | 0.00766             | 1.43      | 76.12%                  | 23.76                   | 0.00610         |
| 70  | 0.01613                                 | 0.00994 | 0.01304   | 85.99%                  | 16.79           | 0.01647             | 1.26      | 68.29%                  | 15.85                   | 0.01414         |
| 80  | 0.04793                                 | 0.03188 | 0.03991   | 68.61%                  | 9.59            | 0.04591             | 1.15      | 52.09%                  | 9.03                    | 0.04185         |
| 90  | 0.15455                                 | 0.12362 | 0.13909   | 31.16%                  | 4.58            | 0.15166             | 1.09      | 21.56%                  | 4.29                    | 0.14315         |
| 100 | 0.34389                                 | 0.31851 | 0.33120   | 2.52%                   | 2.20            | 0.35738             | 1.08      | 1.37%                   | 2.04                    | 0.33965         |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00                | 0.00386   | 1.12                    | 100.00%                 | 80.54           | 0.00                | 0.00604   | 1.76                    | 100.00%                 | 78.77           |
| 1   | 0.996%              | 0.00068   | 2.68                    | 99.61%                  | 79.85           | 0.997%              | 0.00273   | 10.70                   | 99.40%                  | 78.25           |
| 2   | 0.996%              | 0.00057   | 3.95                    | 99.55%                  | 78.90           | 0.997%              | 0.00249   | 17.19                   | 99.13%                  | 77.46           |
| 3   | 0.996%              | 0.00055   | 4.42                    | 99.49%                  | 77.94           | 0.998%              | 0.00235   | 18.81                   | 98.88%                  | 76.65           |
| 4   | 0.996%              | 0.00054   | 4.89                    | 99.43%                  | 76.99           | 0.997%              | 0.00222   | 20.19                   | 98.65%                  | 75.83           |
| 5   | 0.996%              | 0.00053   | 5.28                    | 99.38%                  | 76.03           | 0.998%              | 0.00210   | 21.02                   | 98.43%                  | 75.00           |
| 6   | 0.996%              | 0.00052   | 5.75                    | 99.33%                  | 75.07           | 0.998%              | 0.00199   | 22.10                   | 98.22%                  | 74.15           |
| 7   | 0.996%              | 0.00051   | 6.35                    | 99.28%                  | 74.11           | 0.998%              | 0.00188   | 23.51                   | 98.02%                  | 73.30           |
| 8   | 0.996%              | 0.00050   | 6.71                    | 99.23%                  | 73.14           | 0.998%              | 0.00178   | 23.77                   | 97.84%                  | 72.44           |
| 9   | 0.996%              | 0.00050   | 6.71                    | 99.18%                  | 72.18           | 0.998%              | 0.00169   | 22.60                   | 97.67%                  | 71.57           |
| 10  | 0.996%              | 0.00050   | 6.71                    | 99.13%                  | 71.22           | 0.998%              | 0.00161   | 21.48                   | 97.50%                  | 70.69           |
| 11  | 0.996%              | 0.00051   | 6.03                    | 99.08%                  | 70.25           | 0.998%              | 0.00154   | 18.14                   | 97.34%                  | 69.80           |
| 12  | 0.996%              | 0.00052   | 5.50                    | 99.03%                  | 69.29           | 0.998%              | 0.00148   | 15.55                   | 97.19%                  | 68.91           |
| 13  | 0.996%              | 0.00054   | 4.89                    | 98.97%                  | 68.32           | 0.998%              | 0.00142   | 12.91                   | 97.05%                  | 68.01           |
| 14  | 0.996%              | 0.00057   | 3.95                    | 98.92%                  | 67.36           | 0.998%              | 0.00139   | 9.57                    | 96.91%                  | 67.11           |
| 15  | 0.996%              | 0.00061   | 3.31                    | 98.86%                  | 66.40           | 0.998%              | 0.00136   | 7.37                    | 96.78%                  | 66.20           |
| 16  | 0.996%              | 0.00067   | 2.78                    | 98.80%                  | 65.44           | 0.998%              | 0.00136   | 5.66                    | 96.64%                  | 65.29           |
| 17  | 0.996%              | 0.00072   | 2.48                    | 98.74%                  | 64.48           | 0.998%              | 0.00135   | 4.66                    | 96.51%                  | 64.38           |
| 18  | 0.996%              | 0.00076   | 2.30                    | 98.67%                  | 63.53           | 0.998%              | 0.00134   | 4.05                    | 96.38%                  | 63.46           |
| 19  | 0.996%              | 0.00080   | 2.16                    | 98.59%                  | 62.58           | 0.998%              | 0.00132   | 3.58                    | 96.25%                  | 62.55           |
| 20  | 0.996%              | 0.00082   | 2.08                    | 98.51%                  | 61.63           | 0.998%              | 0.00130   | 3.29                    | 96.13%                  | 61.63           |
| 21  | 0.996%              | 0.00084   | 2.04                    | 98.43%                  | 60.68           | 0.998%              | 0.00127   | 3.09                    | 96.00%                  | 60.71           |
| 22  | 0.996%              | 0.00085   | 2.01                    | 98.35%                  | 59.73           | 0.998%              | 0.00124   | 2.91                    | 95.88%                  | 59.78           |
| 23  | 0.996%              | 0.00087   | 1.97                    | 98.27%                  | 58.78           | 0.998%              | 0.00121   | 2.75                    | 95.76%                  | 58.86           |
| 24  | 0.996%              | 0.00088   | 1.95                    | 98.18%                  | 57.83           | 0.998%              | 0.00118   | 2.63                    | 95.65%                  | 57.93           |
| 25  | 0.996%              | 0.00089   | 1.93                    | 98.09%                  | 56.88           | 0.998%              | 0.00115   | 2.51                    | 95.53%                  | 57.00           |
| 26  | 0.996%              | 0.00090   | 1.91                    | 98.01%                  | 55.93           | 0.998%              | 0.00113   | 2.40                    | 95.42%                  | 56.06           |
| 27  | 0.996%              | 0.00091   | 1.88                    | 97.92%                  | 54.98           | 0.998%              | 0.00111   | 2.29                    | 95.32%                  | 55.12           |
| 28  | 0.996%              | 0.00093   | 1.85                    | 97.83%                  | 54.03           | 0.998%              | 0.00110   | 2.17                    | 95.21%                  | 54.19           |
| 29  | 0.996%              | 0.00096   | 1.81                    | 97.74%                  | 53.08           | 0.998%              | 0.00109   | 2.06                    | 95.10%                  | 53.24           |
| 30  | 0.996%              | 0.00099   | 1.76                    | 97.64%                  | 52.13           | 0.998%              | 0.00110   | 1.94                    | 95.00%                  | 52.30           |
| 40  | 0.996%              | 0.00153   | 1                       |                         |                 |                     |           |                         |                         |                 |

Target and fitted criteria are as follows:

#### Disability score 7 to 9

##### Relative hazard ratios

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 1     | 5  | 236%   | 236%   | 0.000     |
| 5     | 40 | 213%   | 213%   | 0.000     |
| Total |    |        | 0.0000 |           |

#### Disability score 10 to 12

##### Relative hazard ratios

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 1     | 5  | 452%   | 452%   | 0.000     |
| 5     | 40 | 523%   | 523%   | 0.000     |
| Total |    |        | 0.0000 |           |

#### Severe CP

##### Probabilities of survival

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 5  | 85%    | 86%    | 0.180     |
| 0     | 10 | 78%    | 78%    | 0.006     |
| 0     | 15 | 73%    | 72%    | 0.080     |
| 0     | 20 | 69%    | 68%    | 0.045     |
| 0     | 25 | 65%    | 66%    | 0.093     |
| Total |    |        |        | 0.4041    |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (Australia, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males                                   | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00357                                 | 0.00330 | 0.00344   | 100.00%                 | 82.38           | 97.28%              | 0.03056   | 8.90                    | 100.00%                 | 55.38           |
| 1   | 0.00029                                 | 0.00022 | 0.00026   | 99.66%                  | 81.66           | 97.44%              | 0.02582   | 101.27                  | 96.94%                  | 56.11           |
| 2   | 0.00016                                 | 0.00013 | 0.00015   | 99.63%                  | 80.69           | 97.60%              | 0.02417   | 166.70                  | 94.44%                  | 56.59           |
| 3   | 0.00014                                 | 0.00011 | 0.00013   | 99.62%                  | 79.70           | 97.74%              | 0.02270   | 181.60                  | 92.16%                  | 56.97           |
| 4   | 0.00012                                 | 0.00010 | 0.00011   | 99.60%                  | 78.71           | 97.88%              | 0.02132   | 193.82                  | 90.07%                  | 57.29           |
| 5   | 0.00011                                 | 0.00009 | 0.00010   | 99.59%                  | 77.72           | 98.01%              | 0.02003   | 200.28                  | 88.15%                  | 57.52           |
| 6   | 0.00010                                 | 0.00008 | 0.00009   | 99.58%                  | 76.72           | 98.13%              | 0.01881   | 209.04                  | 86.38%                  | 57.69           |
| 7   | 0.00009                                 | 0.00007 | 0.00008   | 99.57%                  | 75.73           | 98.24%              | 0.01767   | 220.90                  | 84.75%                  | 57.79           |
| 8   | 0.00008                                 | 0.00007 | 0.00008   | 99.57%                  | 74.74           | 98.35%              | 0.01660   | 221.39                  | 83.26%                  | 57.82           |
| 9   | 0.00008                                 | 0.00007 | 0.00008   | 99.56%                  | 73.74           | 98.45%              | 0.01560   | 208.06                  | 81.87%                  | 57.78           |
| 10  | 0.00008                                 | 0.00007 | 0.00008   | 99.55%                  | 72.75           | 98.54%              | 0.01467   | 195.55                  | 80.60%                  | 57.69           |
| 11  | 0.00009                                 | 0.00008 | 0.00009   | 99.54%                  | 71.75           | 98.63%              | 0.01379   | 162.28                  | 79.41%                  | 57.54           |
| 12  | 0.00010                                 | 0.00009 | 0.00010   | 99.54%                  | 70.76           | 98.71%              | 0.01298   | 136.58                  | 78.32%                  | 57.34           |
| 13  | 0.00012                                 | 0.00010 | 0.00011   | 99.53%                  | 69.77           | 98.79%              | 0.01221   | 111.01                  | 77.30%                  | 57.09           |
| 14  | 0.00016                                 | 0.00013 | 0.00015   | 99.52%                  | 68.77           | 98.86%              | 0.01151   | 79.41                   | 76.36%                  | 56.79           |
| 15  | 0.00022                                 | 0.00015 | 0.00019   | 99.50%                  | 67.78           | 98.93%              | 0.01087   | 58.74                   | 75.48%                  | 56.44           |
| 16  | 0.00030                                 | 0.00018 | 0.00024   | 99.48%                  | 66.80           | 99.00%              | 0.01028   | 42.81                   | 74.66%                  | 56.06           |
| 17  | 0.00038                                 | 0.00020 | 0.00029   | 99.46%                  | 65.81           | 99.06%              | 0.00972   | 33.51                   | 73.89%                  | 55.63           |
| 18  | 0.00045                                 | 0.00021 | 0.00033   | 99.43%                  | 64.83           | 99.11%              | 0.00919   | 27.84                   | 73.17%                  | 55.18           |
| 19  | 0.00052                                 | 0.00022 | 0.00037   | 99.40%                  | 63.85           | 99.17%              | 0.00869   | 23.49                   | 72.50%                  | 54.68           |
| 20  | 0.00056                                 | 0.00023 | 0.00040   | 99.36%                  | 62.87           | 99.22%              | 0.00821   | 20.80                   | 71.87%                  | 54.16           |
| 21  | 0.00059                                 | 0.00023 | 0.00041   | 99.32%                  | 61.90           | 99.27%              | 0.00776   | 18.92                   | 71.28%                  | 53.60           |
| 22  | 0.00061                                 | 0.00024 | 0.00043   | 99.28%                  | 60.92           | 99.31%              | 0.00733   | 17.24                   | 70.73%                  | 53.02           |
| 23  | 0.00063                                 | 0.00025 | 0.00044   | 99.24%                  | 59.95           | 99.35%              | 0.00692   | 15.74                   | 70.21%                  | 52.41           |
| 24  | 0.00064                                 | 0.00026 | 0.00045   | 99.19%                  | 58.98           | 99.39%              | 0.00654   | 14.54                   | 69.72%                  | 51.77           |
| 25  | 0.00065                                 | 0.00027 | 0.00046   | 99.15%                  | 58.00           | 99.43%              | 0.00618   | 13.44                   | 69.27%                  | 51.10           |
| 26  | 0.00066                                 | 0.00028 | 0.00047   | 99.10%                  | 57.03           | 99.46%              | 0.00585   | 12.44                   | 68.84%                  | 50.42           |
| 27  | 0.00068                                 | 0.00029 | 0.00049   | 99.06%                  | 56.06           | 99.49%              | 0.00554   | 11.42                   | 68.44%                  | 49.71           |
| 28  | 0.00070                                 | 0.00031 | 0.00051   | 99.01%                  | 55.08           | 99.52%              | 0.00525   | 10.40                   | 68.06%                  | 48.99           |
| 29  | 0.00073                                 | 0.00033 | 0.00053   | 98.96%                  | 54.11           | 99.55%              | 0.00499   | 9.42                    | 67.70%                  | 48.24           |
| 30  | 0.00077                                 | 0.00036 | 0.00057   | 98.91%                  | 53.14           | 99.58%              | 0.00476   | 8.42                    | 67.36%                  | 47.48           |
| 40  | 0.00142                                 | 0.00078 | 0.00110   | 98.14%                  | 43.51           | 99.78%              | 0.00335   | 3.04                    | 64.72%                  | 39.23           |
| 50  | 0.00298                                 | 0.00180 | 0.00239   | 96.59%                  | 34.12           | 0.00525             | 2.20      | 61.39%                  | 31.07                   |                 |
| 60  | 0.00675                                 | 0.00398 | 0.00537   | 93.23%                  | 25.15           | 0.00925             | 1.72      | 57.33%                  | 22.88                   |                 |
| 70  | 0.01613                                 | 0.00994 | 0.01304   | 85.99%                  | 16.79           | 0.01885             | 1.45      | 50.46%                  | 15.26                   |                 |
| 80  | 0.04793                                 | 0.03188 | 0.03991   | 68.61%                  | 9.59            | 0.05009             | 1.26      | 37.29%                  | 8.68                    |                 |
| 90  | 0.15455                                 | 0.12362 | 0.13909   | 31.16%                  | 4.58            | 0.16041             | 1.15      | 14.46%                  | 4.10                    |                 |
| 100 | 0.34389                                 | 0.31851 | 0.33120   | 2.52%                   | 2.20            | 0.37561             | 1.13      | 0.78%                   | 1.94                    |                 |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 2.49%               | 95.06%    | 0.05268                 | 15.34                   | 100.00%         | 26.50               | 96.77%    | 0.03561                 | 10.37                   | 100.00%         | 47.49 |
| 1   | 95.18%              | 0.04843   | 189.93                  | 94.73%                  | 26.94           | 96.98%              | 0.03045   | 119.43                  | 96.44%                  | 48.22           |       |
| 2   | 95.30%              | 0.04713   | 325.03                  | 90.14%                  | 27.29           | 97.17%              | 0.02840   | 195.87                  | 93.50%                  | 48.72           |       |
| 3   | 95.42%              | 0.04594   | 367.53                  | 85.90%                  | 27.62           | 97.36%              | 0.02656   | 212.49                  | 90.85%                  | 49.13           |       |
| 4   | 95.53%              | 0.04479   | 407.16                  | 81.95%                  | 27.92           | 97.53%              | 0.02484   | 225.85                  | 88.43%                  | 49.46           |       |
| 5   | 95.64%              | 0.04367   | 436.67                  | 78.28%                  | 28.21           | 97.69%              | 0.02324   | 232.39                  | 86.24%                  | 49.70           |       |
| 6   | 95.75%              | 0.04257   | 473.04                  | 74.86%                  | 28.47           | 97.83%              | 0.02174   | 241.54                  | 84.23%                  | 49.88           |       |
| 7   | 95.86%              | 0.04151   | 518.84                  | 71.67%                  | 28.72           | 97.97%              | 0.02033   | 254.17                  | 82.40%                  | 49.97           |       |
| 8   | 95.96%              | 0.04047   | 539.63                  | 68.70%                  | 28.94           | 98.11%              | 0.01902   | 253.65                  | 80.73%                  | 50.00           |       |
| 9   | 96.06%              | 0.03947   | 526.24                  | 65.92%                  | 29.14           | 98.23%              | 0.01780   | 237.37                  | 79.19%                  | 49.96           |       |
| 10  | 96.16%              | 0.03849   | 513.17                  | 63.32%                  | 29.31           | 98.34%              | 0.01666   | 222.13                  | 77.78%                  | 49.86           |       |
| 11  | 96.25%              | 0.03754   | 441.67                  | 60.88%                  | 29.47           | 98.45%              | 0.01560   | 183.54                  | 76.48%                  | 49.69           |       |
| 12  | 96.35%              | 0.03662   | 385.48                  | 58.59%                  | 29.60           | 98.55%              | 0.01461   | 153.80                  | 75.29%                  | 49.47           |       |
| 13  | 96.44%              | 0.03573   | 324.79                  | 56.45%                  | 29.70           | 98.64%              | 0.01369   | 124.46                  | 74.19%                  | 49.20           |       |
| 14  | 96.53%              | 0.03487   | 240.51                  | 54.43%                  | 29.79           | 98.73%              | 0.01285   | 88.62                   | 73.18%                  | 48.87           |       |
| 15  | 96.61%              | 0.03405   | 184.05                  | 52.53%                  | 29.84           | 98.81%              | 0.01207   | 65.25                   | 72.23%                  | 48.50           |       |
| 16  | 96.70%              | 0.03326   | 138.58                  | 50.74%                  | 29.88           | 98.89%              | 0.01136   | 47.33                   | 71.36%                  | 48.09           |       |
| 17  | 96.78%              | 0.03249   | 112.03                  | 49.06%                  | 29.89           | 98.96%              | 0.01069   | 36.87                   | 70.55%                  | 47.64           |       |
| 18  | 96.86%              | 0.03173   | 96.14                   | 47.46%                  | 29.88           | 99.03%              | 0.01006   | 30.49                   | 69.80%                  | 47.15           |       |
| 19  | 96.94%              | 0.03098   | 83.74                   | 45.96%                  | 29.84           | 99.09%              | 0.00947   | 25.61                   | 69.10%                  | 46.62           |       |
| 20  | 97.01%              | 0.03025   | 76.57                   | 44.53%                  | 29.78           | 99.15%              | 0.00891   | 22.56                   | 68.44%                  | 46.06           |       |
| 21  | 97.09%              | 0.02952   | 72.00                   | 43.19%                  | 29.69           | 99.20%              | 0.00838   | 20.43                   | 67.83%                  | 45.47           |       |
| 22  | 97.16%              | 0.02881   | 67.79                   | 41.91%                  | 29.58           | 99.25%              | 0.00788   | 18.54                   | 67.26%                  | 44.85           |       |
| 23  | 97.23%              | 0.02812   | 63.90                   | 40.70%                  | 29.44           | 99.30%              | 0.00741   | 16.85                   | 66.73%                  | 44.20           |       |
| 24  | 97.30%              | 0.02744   | 60.98                   | 39.56%                  | 29.28           | 99.35%              | 0.00697   | 15.50                   | 66.24%                  | 43.53           |       |
| 25  | 97.37%              | 0.02678   | 58.21                   | 38.47%                  | 29.09           | 99.39%              | 0.00656   | 14.27                   | 65.78%                  | 42.83           |       |
| 26  | 97.43%              | 0.02613   | 55.60                   | 37.44%                  | 28.87           | 99.46%              | 0.00668   | 14.21                   | 65.34%                  | 42.11           |       |
| 27  | 97.50%              | 0.02551   | 52.60                   | 36.47%                  | 28.64           | 99.50%              | 0.00680   | 14.02                   | 64.91%                  | 41.39           |       |
| 28  | 97.56%              | 0.02491   | 49.32                   | 35.54%                  | 28.37           | 99.53%              | 0.00693   | 13.73                   | 64.47%                  | 40.67           |       |
| 29  | 97.62%              | 0.02432   | 45.89                   | 34.65%                  | 28.08           | 99.57%              | 0.00707   | 13.35                   | 64.02%                  | 39.95           |       |
| 30  | 97.68%              | 0.02377   | 42.06                   | 33.81%                  | 27.77           | 99.62%              | 0.00723   | 12.79                   | 63.57%                  | 39.23           |       |
| 40  | 98.20%              | 0.01913   | 17.39                   | 27.19%                  | 23.40           | 99.924              | 8.40      | 58.63%                  | 32.11                   |                 |       |
| 50  | 98.052              | 0.01528   | 10.62                   | 20.81%                  | 19.02           | 99.127              | 5.        |                         |                         |                 |       |

## E Hutton et al (2002)

Target and fitted criteria are as follows:

### No severe disabilities, low bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 99.6%  | 100%   | 0.000     |  |
| 2                         | 20 | 99%    | 99%    | 0.001     |  |
| 2                         | 30 | 98%    | 98%    | 0.000     |  |
| Total                     |    |        | 0.0011 |           |  |

### Only severe ambulatory disabilities, low bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 98%    | 98%    | 0.000     |  |
| 2                         | 20 | 96%    | 96%    | 0.000     |  |
| 2                         | 30 | 94%    | 94%    | 0.000     |  |
| Total                     |    |        | 0.0004 |           |  |

### Only severe ambulatory disabilities, normal bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 97%    | 97%    | 0.001     |  |
| 2                         | 20 | 94%    | 94%    | 0.001     |  |
| 2                         | 30 | 91%    | 91%    | 0.000     |  |
| Total                     |    |        | 0.0015 |           |  |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United Kingdom, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00423                                      | 0.00352 | 0.00387   | 100.00%                 | 80.91           | 0.00%               | 99.95%    | 0.00433                 | 1.12                    | 100.00%         | 78.82 |
| 1   | 0.00031                                      | 0.00025 | 0.00028   | 99.61%                  | 80.22           | 99.95%              | 0.00074   | 2.69                    | 99.57%                  | 78.16           |       |
| 2   | 0.00016                                      | 0.00014 | 0.00015   | 99.59%                  | 79.25           | 99.95%              | 0.00062   | 4.10                    | 99.49%                  | 77.21           |       |
| 3   | 0.00013                                      | 0.00011 | 0.00012   | 99.57%                  | 78.26           | 99.95%              | 0.00058   | 5.01                    | 99.43%                  | 76.26           |       |
| 4   | 0.00009                                      | 0.00008 | 0.00009   | 99.56%                  | 77.27           | 99.95%              | 0.00055   | 6.44                    | 99.37%                  | 75.30           |       |
| 5   | 0.00009                                      | 0.00007 | 0.00008   | 99.55%                  | 76.27           | 99.95%              | 0.00054   | 6.85                    | 99.32%                  | 74.35           |       |
| 6   | 0.00009                                      | 0.00007 | 0.00008   | 99.54%                  | 75.28           | 99.95%              | 0.00055   | 6.64                    | 99.27%                  | 73.39           |       |
| 7   | 0.00009                                      | 0.00007 | 0.00008   | 99.53%                  | 74.29           | 99.95%              | 0.00054   | 6.85                    | 99.21%                  | 72.43           |       |
| 8   | 0.00007                                      | 0.00006 | 0.00006   | 99.53%                  | 73.29           | 99.95%              | 0.00053   | 8.38                    | 99.16%                  | 71.47           |       |
| 9   | 0.00009                                      | 0.00007 | 0.00008   | 99.52%                  | 72.30           | 99.95%              | 0.00054   | 7.04                    | 99.10%                  | 70.50           |       |
| 10  | 0.00009                                      | 0.00006 | 0.00008   | 99.51%                  | 71.30           | 99.95%              | 0.00054   | 7.08                    | 99.05%                  | 69.54           |       |
| 11  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 70.31           | 99.95%              | 0.00055   | 6.78                    | 99.00%                  | 68.58           |       |
| 12  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 69.31           | 99.95%              | 0.00054   | 7.00                    | 98.94%                  | 67.62           |       |
| 13  | 0.00010                                      | 0.00011 | 0.00010   | 99.49%                  | 68.32           | 99.95%              | 0.00057   | 5.49                    | 98.89%                  | 66.65           |       |
| 14  | 0.00013                                      | 0.00011 | 0.00012   | 99.48%                  | 67.33           | 99.95%              | 0.00058   | 4.93                    | 98.83%                  | 65.69           |       |
| 15  | 0.00016                                      | 0.00014 | 0.00015   | 99.47%                  | 66.33           | 99.95%              | 0.00061   | 4.14                    | 98.78%                  | 64.73           |       |
| 16  | 0.00021                                      | 0.00016 | 0.00019   | 99.45%                  | 65.34           | 99.95%              | 0.00065   | 3.49                    | 98.71%                  | 63.77           |       |
| 17  | 0.00030                                      | 0.00015 | 0.00023   | 99.43%                  | 64.36           | 99.95%              | 0.00069   | 3.07                    | 98.65%                  | 62.81           |       |
| 18  | 0.00041                                      | 0.00021 | 0.00031   | 99.41%                  | 63.37           | 99.95%              | 0.00078   | 2.49                    | 98.58%                  | 61.85           |       |
| 19  | 0.00045                                      | 0.00021 | 0.00033   | 99.38%                  | 62.39           | 99.95%              | 0.00080   | 2.41                    | 98.51%                  | 60.90           |       |
| 20  | 0.00047                                      | 0.00021 | 0.00034   | 99.35%                  | 61.41           | 99.95%              | 0.00080   | 2.37                    | 98.43%                  | 59.95           |       |
| 21  | 0.00051                                      | 0.00022 | 0.00036   | 99.31%                  | 60.43           | 99.95%              | 0.00083   | 2.28                    | 98.35%                  | 58.99           |       |
| 22  | 0.00050                                      | 0.00022 | 0.00036   | 99.28%                  | 59.45           | 99.95%              | 0.00082   | 2.30                    | 98.27%                  | 58.04           |       |
| 23  | 0.00056                                      | 0.00023 | 0.00039   | 99.24%                  | 58.47           | 99.95%              | 0.00086   | 2.18                    | 98.19%                  | 57.09           |       |
| 24  | 0.00055                                      | 0.00023 | 0.00039   | 99.20%                  | 57.50           | 99.95%              | 0.00085   | 2.19                    | 98.10%                  | 56.14           |       |
| 25  | 0.00059                                      | 0.00025 | 0.00042   | 99.16%                  | 56.52           | 99.95%              | 0.00088   | 2.11                    | 98.02%                  | 55.19           |       |
| 26  | 0.00063                                      | 0.00027 | 0.00045   | 99.12%                  | 55.54           | 99.95%              | 0.00092   | 2.03                    | 97.93%                  | 54.24           |       |
| 27  | 0.00063                                      | 0.00027 | 0.00045   | 99.08%                  | 54.57           | 99.95%              | 0.00092   | 2.03                    | 97.84%                  | 53.28           |       |
| 28  | 0.00067                                      | 0.00033 | 0.00050   | 99.03%                  | 53.59           | 99.95%              | 0.00096   | 1.94                    | 97.75%                  | 52.33           |       |
| 29  | 0.00070                                      | 0.00035 | 0.00052   | 98.98%                  | 52.62           | 99.95%              | 0.00099   | 1.89                    | 97.66%                  | 51.38           |       |
| 30  | 0.00074                                      | 0.00039 | 0.00056   | 98.93%                  | 51.65           | 99.95%              | 0.00103   | 1.83                    | 97.56%                  | 50.43           |       |
| 40  | 0.00156                                      | 0.00094 | 0.00125   | 98.14%                  | 42.02           |                     | 0.00182   | 1.46                    | 96.29%                  | 41.03           |       |
| 50  | 0.00335                                      | 0.00214 | 0.00274   | 96.40%                  | 32.67           |                     | 0.00348   | 1.27                    | 93.98%                  | 31.90           |       |
| 60  | 0.00797                                      | 0.00526 | 0.00662   | 92.54%                  | 23.80           |                     | 0.00762   | 1.15                    | 89.45%                  | 23.23           |       |
| 70  | 0.01935                                      | 0.01301 | 0.01618   | 83.67%                  | 15.73           |                     | 0.01770   | 1.09                    | 79.89%                  | 15.35           |       |
| 80  | 0.05555                                      | 0.03999 | 0.04777   | 63.44%                  | 8.94            |                     | 0.05045   | 1.06                    | 59.36%                  | 8.72            |       |
| 90  | 0.16790                                      | 0.13835 | 0.15313   | 25.70%                  | 4.32            |                     | 0.15868   | 1.04                    | 23.06%                  | 4.20            |       |
| 100 | 0.37248                                      | 0.33058 | 0.35153   | 1.71%                   | 2.15            |                     | 0.36270   | 1.03                    | 1.38%                   | 2.08            |       |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 2.05%               | 99.73%    | 0.00653                 | 1.69                    | 100.00%         | 73.64               | 99.74%    | 0.00289                 | 10.47                   | 99.35%          | 73.12 |
| 1   | 2.05%               | 99.74%    | 0.00271                 | 18.06                   | 99.06%          | 72.33               | 99.75%    | 0.00262                 | 22.62                   | 98.79%          | 71.52 |
| 2   | 2.05%               | 99.76%    | 0.00249                 | 31.26                   | 98.28%          | 69.89               | 99.77%    | 0.00254                 | 29.73                   | 98.53%          | 70.71 |
| 3   | 2.05%               | 99.78%    | 0.00225                 | 29.76                   | 97.34%          | 66.55               | 99.79%    | 0.00221                 | 27.40                   | 96.90%          | 64.84 |
| 4   | 2.05%               | 99.80%    | 0.00212                 | 17.85                   | 96.27%          | 62.26               | 99.81%    | 0.00210                 | 14.22                   | 96.06%          | 61.39 |
| 5   | 2.05%               | 99.82%    | 0.00210                 | 6.21                    | 95.05%          | 57.02               | 99.83%    | 0.00209                 | 5.74                    | 94.85%          | 56.14 |
| 6   | 2.05%               | 99.84%    | 0.00201                 | 4.46                    | 93.89%          | 51.69               | 99.85%    | 0.00205                 | 5.71                    | 94.65%          | 55.25 |
| 7   | 2.05%               | 99.86%    | 0.00201                 | 5.17                    | 94.27%          | 53.48               | 99.87%    | 0.00201                 | 3.41                    | 93.54%          | 50.89 |
| 8   | 2.05%               | 99.88%    | 0.00201                 | 4.81                    | 94.08%          | 52.58               | 99.89%    | 0.00201                 | 3.71                    | 93.14%          | 50.05 |
| 9   | 2.05%               | 99.90%    | 0.00201                 | 4.46                    | 93.89%          | 51.69               | 99.91%    | 0.00203                 | 5.31                    | 92.80%          | 54.22 |
| 10  | 2.05%               | 99.92%    | 0.00209                 | 5.74                    | 94.85%          | 56.14               | 99.93%    | 0.00212                 | 8.81                    | 92.50%          | 53.39 |
| 11  | 2.05%               | 99.94%    | 0.00205                 | 5.71                    | 94.65%          | 55.25               | 99.95%    | 0.00316                 | 8.80                    | 92.20%          | 52.56 |
| 12  | 2.05%               | 99.96%    | 0.00205                 | 5.21                    | 94.46%          | 54.36               | 99.97%    | 0.00315                 | 8.00                    | 91.91%          | 51.73 |
| 13  | 2.05%               | 99.98%    | 0.00201                 | 5.17                    | 94.27%          | 53.48               | 99.99%    | 0.00311                 | 7.97                    | 91.62%          | 50.89 |
| 14  | 2.05%               | 99.99%    | 0.00201                 | 4.81                    | 94.08%          | 52.58               | 99.99%    | 0.00309                 | 7.41                    | 91.34%          | 50.05 |
| 15  | 2.05%               | 99.99%    | 0.00201                 | 4.46                    | 93.89%          | 51.69               | 99.99%    | 0.00308                 | 6.85                    | 91.05%          | 49.20 |
| 16  | 2.05%               | 99.99%    | 0.00201                 | 4.46                    | 93.89%          | 51.69               | 99.99%    | 0.00304                 | 6.76                    | 90.77%          | 48.35 |
| 17  | 2.05%               | 99.99%    | 0.00199                 | 4.01                    | 93.51%          | 49.89               | 99.99%    | 0.00305                 | 6.14                    | 90.50%          | 47.50 |
| 18  | 2.05%               | 99.99%    | 0.00199                 | 3.79                    | 93.33%          | 48.99               | 99.99%    | 0.00304                 | 5.80                    | 90.22%          | 46.64 |
| 19  | 2.05%               | 99.99%    | 0.00200                 | 3.54                    | 93.14%          | 48.08               | 99.99%    | 0.00304                 | 5.40                    | 89.95%          | 45.78 |
| 20  | 2.05%               | 99.99%    | 0.00301                 | 2.41                    | 90.96%          | 39.11               | 99.99%    | 0.00430                 | 3.43                    | 86.84%          | 37.24 |
| 21  | 2.05%               | 99.99%    | 0.00501                 | 1.83                    | 87.60%          | 30.41               | 99.99%    | 0.00666                 | 2.43                    | 82.43%          | 28.94 |
| 22  | 2.05%               | 99.99%    | 0.00973                 | 1.47                    | 81.91%          | 22.14               | 99.99%    | 0.01199                 | 1.81                    | 75.62%          | 21.06 |
| 23  | 2.05%               | 99.99%    | 0.02088                 | 1.29                    | 71.31%          | 14.61               | 99.99%    | 0.02431                 | 1.50                    | 64.04%          | 13.89 |
| 24  | 2.05%               | 99.99%    | 0.05605                 | 1.17                    | 50.79%          | 8.28                | 99.99%    | 0.06208                 | 1.30                    | 43.57%          | 7.86  |
| 25  | 2.05%               | 99.99%    | 0.17025                 | 1.11                    | 18.08%          | 3.97                | 99.99%    | 0.18272                 | 1.19                    | 14.10%          | 3.74  |
| 26  | 2.05%               | 99.99%    | 0.38596                 | 1.10                    | 0.86%           | 1.96                | 99.99%    | 0.41104                 | 1.17                    | 0.53%           | 1.84  |

## E Hutton et al (2002)

Target and fitted criteria are as follows:

### Severe motor disabilities, low bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 94%    | 94%    | 0.017     |  |
| 2                         | 20 | 86%    | 86%    | 0.002     |  |
| 2                         | 30 | 79%    | 79%    | 0.000     |  |
| Total                     |    |        | 0.0184 |           |  |

### Severe motor disabilities, normal bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 91%    | 91%    | 0.000     |  |
| 2                         | 20 | 81%    | 81%    | 0.000     |  |
| 2                         | 30 | 72%    | 72%    | 0.000     |  |
| Total                     |    |        | 0.0001 |           |  |

### Severe motor and cognitive disabilities, low bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 85%    | 85%    | 0.004     |  |
| 2                         | 20 | 70%    | 70%    | 0.004     |  |
| 2                         | 30 | 59%    | 59%    | 0.001     |  |
| Total                     |    |        | 0.0092 |           |  |

Survival adjustment parameters that best replicate the above criteria yields the following table:

| Age | Regular life table (United Kingdom, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |        |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|--------|-------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |        |       |
| 0   | 0.00423                                      | 0.00352 | 0.00387   | 100.00%                 | 80.91           | 0.00%               | 99.19%    | 0.01197                 | 3.09                    | 100.00%         | 54.60 |        |       |
| 1   | 0.00031                                      | 0.00025 | 0.00028   | 99.61%                  | 80.22           | 99.19%              | 0.00841   | 30.47                   | 98.80%                  | 54.25           |       |        |       |
| 2   | 0.00016                                      | 0.00014 | 0.00015   | 99.59%                  | 79.25           | 99.19%              | 0.00828   | 55.23                   | 97.97%                  | 53.71           |       |        |       |
| 3   | 0.00013                                      | 0.00011 | 0.00012   | 99.57%                  | 78.26           | 99.19%              | 0.00825   | 71.12                   | 97.16%                  | 53.15           |       |        |       |
| 4   | 0.00009                                      | 0.00008 | 0.00009   | 99.56%                  | 77.27           | 99.19%              | 0.00822   | 96.14                   | 96.36%                  | 52.59           |       |        |       |
| 5   | 0.00009                                      | 0.00007 | 0.00008   | 99.55%                  | 76.27           | 99.19%              | 0.00821   | 103.32                  | 95.57%                  | 52.02           |       |        |       |
| 6   | 0.00009                                      | 0.00007 | 0.00008   | 99.54%                  | 75.28           | 99.19%              | 0.00822   | 99.60                   | 94.78%                  | 51.45           |       |        |       |
| 7   | 0.00009                                      | 0.00007 | 0.00008   | 99.53%                  | 74.29           | 99.19%              | 0.00821   | 103.32                  | 94.00%                  | 50.87           |       |        |       |
| 8   | 0.00007                                      | 0.00006 | 0.00006   | 99.53%                  | 73.29           | 99.19%              | 0.00820   | 130.12                  | 93.23%                  | 50.29           |       |        |       |
| 9   | 0.00009                                      | 0.00007 | 0.00008   | 99.52%                  | 72.30           | 99.19%              | 0.00821   | 106.64                  | 92.47%                  | 49.70           |       |        |       |
| 10  | 0.00009                                      | 0.00006 | 0.00008   | 99.51%                  | 71.30           | 99.19%              | 0.00821   | 107.33                  | 91.71%                  | 49.11           |       |        |       |
| 11  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 70.31           | 99.19%              | 0.00821   | 102.05                  | 90.95%                  | 48.51           |       |        |       |
| 12  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 69.31           | 99.19%              | 0.00821   | 105.96                  | 90.21%                  | 47.91           |       |        |       |
| 13  | 0.00010                                      | 0.00011 | 0.00010   | 99.49%                  | 68.32           | 99.19%              | 0.00824   | 79.59                   | 89.47%                  | 47.30           |       |        |       |
| 14  | 0.00013                                      | 0.00011 | 0.00012   | 99.48%                  | 67.33           | 99.19%              | 0.00825   | 69.64                   | 88.73%                  | 46.69           |       |        |       |
| 15  | 0.00016                                      | 0.00014 | 0.00015   | 99.47%                  | 66.33           | 99.19%              | 0.00828   | 55.96                   | 88.00%                  | 46.07           |       |        |       |
| 16  | 0.00021                                      | 0.00016 | 0.00019   | 99.45%                  | 65.34           | 99.19%              | 0.00832   | 44.49                   | 87.27%                  | 45.45           |       |        |       |
| 17  | 0.00030                                      | 0.00015 | 0.00023   | 99.43%                  | 64.36           | 99.19%              | 0.00836   | 37.15                   | 86.54%                  | 44.83           |       |        |       |
| 18  | 0.00041                                      | 0.00021 | 0.00031   | 99.41%                  | 63.37           | 99.19%              | 0.00844   | 27.11                   | 85.82%                  | 44.20           |       |        |       |
| 19  | 0.00045                                      | 0.00021 | 0.00033   | 99.38%                  | 62.39           | 99.19%              | 0.00846   | 25.57                   | 85.09%                  | 43.57           |       |        |       |
| 20  | 0.00047                                      | 0.00021 | 0.00034   | 99.35%                  | 61.41           | 99.19%              | 0.00847   | 25.02                   | 84.37%                  | 42.94           |       |        |       |
| 21  | 0.00051                                      | 0.00022 | 0.00036   | 99.31%                  | 60.43           | 99.19%              | 0.00850   | 23.34                   | 83.66%                  | 42.31           |       |        |       |
| 22  | 0.00050                                      | 0.00022 | 0.00036   | 99.28%                  | 59.45           | 99.19%              | 0.00849   | 23.65                   | 82.95%                  | 41.66           |       |        |       |
| 23  | 0.00056                                      | 0.00023 | 0.00039   | 99.24%                  | 58.47           | 99.19%              | 0.00853   | 21.64                   | 82.24%                  | 41.02           |       |        |       |
| 24  | 0.00055                                      | 0.00023 | 0.00039   | 99.20%                  | 57.50           | 99.19%              | 0.00852   | 21.88                   | 81.54%                  | 40.36           |       |        |       |
| 25  | 0.00059                                      | 0.00025 | 0.00042   | 99.16%                  | 56.52           | 99.19%              | 0.00855   | 20.48                   | 80.85%                  | 39.71           |       |        |       |
| 26  | 0.00063                                      | 0.00027 | 0.00045   | 99.12%                  | 55.54           | 99.19%              | 0.00858   | 19.07                   | 80.16%                  | 39.04           |       |        |       |
| 27  | 0.00063                                      | 0.00027 | 0.00045   | 99.08%                  | 54.57           | 99.19%              | 0.00858   | 19.05                   | 79.47%                  | 38.38           |       |        |       |
| 28  | 0.00067                                      | 0.00033 | 0.00050   | 99.03%                  | 53.59           | 99.19%              | 0.00863   | 17.36                   | 78.79%                  | 37.71           |       |        |       |
| 29  | 0.00070                                      | 0.00035 | 0.00052   | 98.98%                  | 52.62           | 99.19%              | 0.00866   | 16.50                   | 78.11%                  | 37.03           |       |        |       |
| 30  | 0.00074                                      | 0.00039 | 0.00056   | 98.93%                  | 51.65           | 99.19%              | 0.00869   | 15.43                   | 77.43%                  | 36.35           |       |        |       |
| 40  | 0.00156                                      | 0.00094 | 0.00125   | 98.14%                  | 42.02           | 0.01125             | 8.98      | 70.23%                  | 29.55                   | 0.01498         | 11.96 | 61.43% | 26.59 |
| 50  | 0.00335                                      | 0.00214 | 0.00274   | 96.40%                  | 32.67           | 0.01559             | 5.68      | 61.64%                  | 22.95                   | 0.02040         | 7.43  | 51.68% | 20.64 |
| 60  | 0.00797                                      | 0.00526 | 0.00662   | 92.54%                  | 23.80           | 0.02426             | 3.67      | 50.95%                  | 16.67                   | 0.03085         | 4.66  | 40.37% | 14.98 |
| 70  | 0.01935                                      | 0.01301 | 0.01618   | 83.67%                  | 15.73           | 0.04288             | 2.65      | 37.10%                  | 10.95                   | 0.05285         | 3.27  | 27.08% | 9.82  |
| 80  | 0.05555                                      | 0.03999 | 0.04777   | 63.44%                  | 8.94            | 0.09473             | 1.98      | 19.63%                  | 6.13                    | 0.11227         | 2.35  | 12.48% | 5.47  |
| 90  | 0.16790                                      | 0.13835 | 0.15313   | 25.70%                  | 4.32            | 0.25025             | 1.63      | 3.73%                   | 2.83                    | 0.28654         | 1.87  | 1.76%  | 2.49  |
| 100 | 0.37248                                      | 0.33058 | 0.35153   | 1.71%                   | 2.15            | 0.54683             | 1.56      | 0.03%                   | 1.38                    | 0.61980         | 1.76  | 0.01%  | 1.22  |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.15%               | 98.83%    | 0.01553                 | 4.01                    | 100.00%         | 48.10               | 98.83%    | 0.01196                 | 43.33                   | 98.45%          | 47.85 |
| 1   | 98.83%              | 0.01196   | 43.33                   | 98.45%                  | 47.85           | 98.83%              | 0.01182   | 78.78                   | 97.27%                  | 47.42           |       |
| 2   | 98.83%              | 0.01177   | 101.43                  | 96.12%                  | 46.98           | 98.84%              | 0.01172   | 137.05                  | 94.99%                  | 46.54           |       |
| 3   | 98.84%              | 0.01168   | 141.56                  | 92.78%                  | 45.62           | 98.84%              | 0.01166   | 146.64                  | 91.69%                  | 45.15           |       |
| 4   | 98.84%              | 0.01162   | 184.50                  | 90.63%                  | 44.68           | 98.84%              | 0.01162   | 150.91                  | 89.57%                  | 44.20           |       |
| 5   | 98.85%              | 0.01160   | 151.65                  | 88.53%                  | 43.71           | 98.85%              | 0.01160   | 120.50                  | 87.35%                  | 43.22           |       |
| 6   | 98.85%              | 0.01159   | 143.94                  | 87.50%                  | 43.22           | 98.85%              | 0.01157   | 149.25                  | 86.49%                  | 42.72           |       |
| 7   | 98.85%              | 0.01157   | 111.83                  | 85.49%                  | 42.22           | 98.86%              | 0.01157   | 97.65                   | 84.50%                  | 41.70           |       |
| 8   | 98.85%              | 0.01156   | 150.91                  | 83.52%                  | 41.19           | 98.86%              | 0.01160   | 62.05                   | 82.56%                  | 40.66           |       |
| 9   | 98.86%              | 0.01158   | 78.27                   | 83.52%                  | 41.19           | 98.86%              | 0.01162   | 32.12                   | 77.85%                  | 37.97           |       |
| 10  | 98.86%              | 0.01160   | 37.53                   | 80.65%                  | 39.60           | 98.87%              | 0.01167   | 29.66                   | 76.05%                  | 36.85           |       |
| 11  | 98.86%              | 0.01167   | 23.20                   | 76.94%                  | 37.41           | 98.87%              | 0.01167   | 25.91                   | 72.55%                  | 34.53           |       |
| 12  | 98.87%              | 0.01171   | 22.33                   | 70.87%                  | 33.32           | 98.88%              | 0.01171   | 22.33                   | 70.87%                  | 33.32           |       |
| 13  | 98.88%              | 0.01173   | 20.82                   | 70.04%                  | 32.71           | 98.89%              | 0.01173   | 19.95                   | 75.16%                  | 31.60           |       |
| 14  | 98.89%              | 0.01174   | 19.95                   | 75.16%                  | 31.60           | 98.90%              | 0.01174   | 44.53                   | 62.32%                  | 31.15           |       |
| 15  | 98.90%              | 0.01172   | 41.22                   | 61.24%                  | 30.69           | 98.92%              | 0.01172   | 41.22                   | 61.24%                  | 30.69           |       |
| 16  | 98.92%              | 0.01170   | 37.95                   | 60.18%                  | 30.22           | 98.94%              | 0.01170   | 35.12                   | 66.94%                  | 32.86           |       |
| 17  | 98.94%              | 0.01169   | 37.56                   | 59.15%                  | 29.74           | 98.95%              | 0.01172   | 48.95                   | 65.74%                  | 32.45           |       |
| 18  | 98.95%              | 0.01169   | 49.15                   | 64.57%                  | 32.03           | 98.96%              | 0.01170   | 49.15                   | 64.57%                  | 31.60           |       |
| 19  | 98.96%              | 0.01170   | 44.45                   | 63.43%                  | 31.60           | 98.97%              | 0.01170   | 44.45                   | 63.43%                  | 31.60           |       |
| 20  | 98.97%              | 0.01171   | 41.22                   | 61.24%                  | 30.69           | 98.98%              | 0.01171   | 41.22                   | 61.24%                  | 30.69           |       |
| 21  | 98.98%              | 0.01172   | 37.95                   | 60.18%                  | 30.22           | 98.99%              | 0.01172   | 35.12                   | 66.94%                  | 32.86           |       |
| 22  | 98.99%              | 0.01173   | 37.56                   | 59.15%                  | 29.74           | 99.00%              | 0.01173   | 48.95                   | 65.74%                  | 32.45           |       |
| 23  | 99.00%              | 0.01174   | 48.95                   | 64.57%                  | 31.60           | 99.01%              | 0.01174   | 48.95                   | 64.57%                  | 31.60           |       |
| 24  | 99.01%              | 0.01172   | 41.22                   | 61.24%                  | 30.69           | 99.02%              | 0.01172   | 41.22                   | 61.24%                  | 30.69           |       |
| 25  | 99.02%              | 0.01170   | 37.95                   | 60.18%                  | 30.22           | 99.03%              | 0.01170   | 35.12                   | 66.94%                  | 32.86           |       |
| 26  | 99.03%              | 0.01171   | 37.56                   | 59.15%                  | 29.74           | 99.04%              | 0.01171   | 48.95                   | 65.74%                  | 32.45           |       |
| 27  | 99.04%              | 0.01172   | 48.95                   | 64.57%                  | 31.60           | 99.05%              | 0.01172   | 48.95                   | 64.57%                  | 31.60           |       |
| 28  | 99.05%              | 0.01173   | 44.45                   | 63.43%                  | 31.60           | 99.06%              | 0.01173   | 44.45                   | 63.43%                  |                 |       |

## E Hutton et al (2002)

Target and fitted criteria are as follows:

### Severe motor and cognitive disabilities, normal bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 80%    | 80%    | 0.005     |  |
| 2                         | 20 | 62%    | 62%    | 0.006     |  |
| 2                         | 30 | 50%    | 50%    | 0.001     |  |
| Total                     |    |        | 0.0114 |           |  |

### Severe motor, cognitive and visual disabilities, low bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 70%    | 70%    | 0.000     |  |
| 2                         | 20 | 49%    | 49%    | 0.000     |  |
| 2                         | 30 | 37%    | 37%    | 0.000     |  |
| Total                     |    |        | 0.0000 |           |  |

### Severe motor, cognitive and visual disabilities, normal bw

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 2                         | 10 | 62%    | 62%    | 0.001     |  |
| 2                         | 20 | 40%    | 40%    | 0.002     |  |
| 2                         | 30 | 29%    | 29%    | 0.000     |  |
| Total                     |    |        |        | 0.0028    |  |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (United Kingdom, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00423                                      | 0.00352 | 0.00387   | 100.00%                 | 80.91           | 1.38%               | 97.01%    | 0.03365                 | 8.70                    | 100.00%         | 32.40 |
| 1   | 0.00031                                      | 0.00025 | 0.00028   | 99.61%                  | 80.22           | 97.05%              | 0.02976   | 107.81                  | 96.63%                  | 32.51           |       |
| 2   | 0.00016                                      | 0.00014 | 0.00015   | 99.59%                  | 79.25           | 97.09%              | 0.02923   | 194.84                  | 93.76%                  | 32.50           |       |
| 3   | 0.00013                                      | 0.00011 | 0.00012   | 99.57%                  | 78.26           | 97.13%              | 0.02879   | 248.21                  | 91.02%                  | 32.46           |       |
| 4   | 0.00009                                      | 0.00008 | 0.00009   | 99.56%                  | 77.27           | 97.17%              | 0.02837   | 331.79                  | 88.40%                  | 32.41           |       |
| 5   | 0.00009                                      | 0.00007 | 0.00008   | 99.55%                  | 76.27           | 97.21%              | 0.02797   | 351.85                  | 85.89%                  | 32.34           |       |
| 6   | 0.00009                                      | 0.00007 | 0.00008   | 99.54%                  | 75.28           | 97.25%              | 0.02759   | 334.43                  | 83.49%                  | 32.25           |       |
| 7   | 0.00009                                      | 0.00007 | 0.00008   | 99.53%                  | 74.29           | 97.29%              | 0.02721   | 342.25                  | 81.18%                  | 32.15           |       |
| 8   | 0.00007                                      | 0.00006 | 0.00006   | 99.53%                  | 73.29           | 97.32%              | 0.02682   | 425.69                  | 78.98%                  | 32.04           |       |
| 9   | 0.00009                                      | 0.00007 | 0.00008   | 99.52%                  | 72.30           | 97.36%              | 0.02646   | 343.68                  | 76.86%                  | 31.91           |       |
| 10  | 0.00009                                      | 0.00006 | 0.00008   | 99.51%                  | 71.30           | 97.40%              | 0.02610   | 341.17                  | 74.82%                  | 31.76           |       |
| 11  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 70.31           | 97.43%              | 0.02574   | 319.81                  | 72.87%                  | 31.60           |       |
| 12  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 69.31           | 97.47%              | 0.02539   | 327.58                  | 70.99%                  | 31.42           |       |
| 13  | 0.00010                                      | 0.00011 | 0.00010   | 99.49%                  | 68.32           | 97.50%              | 0.02506   | 242.17                  | 69.19%                  | 31.23           |       |
| 14  | 0.00013                                      | 0.00011 | 0.00012   | 99.48%                  | 67.33           | 97.54%              | 0.02473   | 208.73                  | 67.46%                  | 31.02           |       |
| 15  | 0.00016                                      | 0.00014 | 0.00015   | 99.47%                  | 66.33           | 97.57%              | 0.02442   | 165.03                  | 65.79%                  | 30.79           |       |
| 16  | 0.00021                                      | 0.00016 | 0.00019   | 99.45%                  | 65.34           | 97.61%              | 0.02413   | 129.03                  | 64.18%                  | 30.55           |       |
| 17  | 0.00030                                      | 0.00015 | 0.00023   | 99.43%                  | 64.36           | 97.64%              | 0.02383   | 105.93                  | 62.63%                  | 30.29           |       |
| 18  | 0.00041                                      | 0.00021 | 0.00031   | 99.41%                  | 63.37           | 97.67%              | 0.02359   | 75.74                   | 61.14%                  | 30.02           |       |
| 19  | 0.00045                                      | 0.00021 | 0.00033   | 99.38%                  | 62.39           | 97.70%              | 0.02329   | 70.37                   | 59.70%                  | 29.73           |       |
| 20  | 0.00047                                      | 0.00021 | 0.00034   | 99.35%                  | 61.41           | 97.73%              | 0.02298   | 67.90                   | 58.31%                  | 29.43           |       |
| 21  | 0.00051                                      | 0.00022 | 0.00036   | 99.31%                  | 60.43           | 97.77%              | 0.02270   | 62.35                   | 56.97%                  | 29.11           |       |
| 22  | 0.00050                                      | 0.00022 | 0.00036   | 99.28%                  | 59.45           | 97.80%              | 0.02238   | 62.35                   | 55.68%                  | 28.78           |       |
| 23  | 0.00056                                      | 0.00023 | 0.00039   | 99.24%                  | 58.47           | 97.83%              | 0.02211   | 56.13                   | 54.43%                  | 28.42           |       |
| 24  | 0.00055                                      | 0.00023 | 0.00039   | 99.20%                  | 57.50           | 97.86%              | 0.02181   | 56.00                   | 53.23%                  | 28.06           |       |
| 25  | 0.00059                                      | 0.00025 | 0.00042   | 99.16%                  | 56.52           | 97.89%              | 0.02154   | 51.60                   | 52.06%                  | 27.67           |       |
| 26  | 0.00063                                      | 0.00027 | 0.00045   | 99.12%                  | 55.54           | 97.92%              | 0.02128   | 47.30                   | 50.94%                  | 27.27           |       |
| 27  | 0.00063                                      | 0.00027 | 0.00045   | 99.08%                  | 54.57           | 97.94%              | 0.02100   | 46.61                   | 49.86%                  | 26.85           |       |
| 28  | 0.00067                                      | 0.00033 | 0.00050   | 99.03%                  | 53.59           | 97.97%              | 0.02076   | 41.77                   | 48.81%                  | 26.42           |       |
| 29  | 0.00070                                      | 0.00035 | 0.00052   | 98.98%                  | 52.62           | 98.00%              | 0.02051   | 39.10                   | 47.80%                  | 25.96           |       |
| 30  | 0.00074                                      | 0.00039 | 0.00056   | 98.93%                  | 51.65           | 98.03%              | 0.02027   | 35.97                   | 46.82%                  | 25.50           |       |
| 40  | 0.00156                                      | 0.00094 | 0.00125   | 98.14%                  | 42.02           |                     | 0.02547   | 20.34                   | 37.33%                  | 20.71           |       |
| 50  | 0.00335                                      | 0.00214 | 0.00274   | 96.40%                  | 32.67           |                     | 0.03389   | 12.35                   | 27.85%                  | 16.06           |       |
| 60  | 0.00797                                      | 0.00526 | 0.00662   | 92.54%                  | 23.80           |                     | 0.04938   | 7.46                    | 18.53%                  | 11.63           |       |
| 70  | 0.01935                                      | 0.01301 | 0.01618   | 83.67%                  | 15.73           |                     | 0.08089   | 5.00                    | 9.83%                   | 7.59            |       |
| 80  | 0.05555                                      | 0.03999 | 0.04777   | 63.44%                  | 8.94            |                     | 0.16158   | 3.38                    | 3.04%                   | 4.18            |       |
| 90  | 0.16790                                      | 0.13835 | 0.15313   | 25.70%                  | 4.32            |                     | 0.38853   | 2.54                    | 0.17%                   | 1.83            |       |
| 100 | 0.37248                                      | 0.33058 | 0.35153   | 1.71%                   | 2.15            |                     | 0.82488   | 2.35                    | 0.00%                   | 0.92            |       |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 1.38%               | 97.01%    | 0.03365                 | 8.70                    | 100.00%         | 2.43%               | 95.03%    | 0.05341                 | 13.80                   | 100.00%         |
| 1   | 97.05%              | 0.02976   | 107.81                  | 96.63%                  | 32.51           | 95.15%              | 0.04879   | 176.78                  | 94.66%                  | 25.06           |
| 2   | 97.09%              | 0.02923   | 194.84                  | 93.76%                  | 32.50           | 95.27%              | 0.04749   | 316.60                  | 90.04%                  | 25.32           |
| 3   | 97.13%              | 0.02879   | 248.21                  | 91.02%                  | 32.46           | 95.38%              | 0.04631   | 399.19                  | 85.76%                  | 25.56           |
| 4   | 97.17%              | 0.02837   | 331.79                  | 88.40%                  | 32.41           | 95.49%              | 0.04515   | 528.11                  | 81.79%                  | 25.78           |
| 5   | 97.21%              | 0.02797   | 351.85                  | 85.89%                  | 32.34           | 95.60%              | 0.04405   | 554.11                  | 78.10%                  | 25.97           |
| 6   | 97.25%              | 0.02759   | 334.43                  | 83.49%                  | 32.25           | 95.71%              | 0.04299   | 521.03                  | 74.66%                  | 26.15           |
| 7   | 97.29%              | 0.02721   | 342.25                  | 81.18%                  | 32.15           | 95.81%              | 0.04194   | 527.53                  | 71.45%                  | 26.30           |
| 8   | 97.32%              | 0.02682   | 425.69                  | 78.98%                  | 32.04           | 95.92%              | 0.04090   | 649.29                  | 68.45%                  | 26.43           |
| 9   | 97.36%              | 0.02646   | 343.68                  | 76.86%                  | 31.91           | 96.01%              | 0.03993   | 518.51                  | 65.65%                  | 26.53           |
| 10  | 97.40%              | 0.02610   | 341.17                  | 74.82%                  | 31.76           | 96.11%              | 0.03896   | 509.22                  | 63.03%                  | 26.62           |
| 11  | 97.43%              | 0.02574   | 319.81                  | 72.87%                  | 31.60           | 96.21%              | 0.03801   | 472.22                  | 60.58%                  | 26.67           |
| 12  | 97.47%              | 0.02539   | 327.58                  | 70.99%                  | 31.42           | 96.30%              | 0.03709   | 478.56                  | 58.27%                  | 26.71           |
| 13  | 97.50%              | 0.02506   | 242.17                  | 69.19%                  | 31.23           | 96.39%              | 0.03621   | 349.89                  | 56.11%                  | 26.72           |
| 14  | 97.54%              | 0.02473   | 208.73                  | 67.46%                  | 31.02           | 96.48%              | 0.03535   | 298.31                  | 54.08%                  | 26.70           |
| 15  | 97.57%              | 0.02442   | 165.03                  | 65.79%                  | 30.79           | 96.56%              | 0.03452   | 233.25                  | 52.17%                  | 26.66           |
| 16  | 97.61%              | 0.02413   | 129.03                  | 64.18%                  | 30.55           | 96.65%              | 0.03372   | 180.34                  | 50.37%                  | 26.60           |
| 17  | 97.64%              | 0.02383   | 105.93                  | 62.63%                  | 30.29           | 96.73%              | 0.03294   | 146.42                  | 48.67%                  | 26.51           |
| 18  | 97.67%              | 0.02359   | 75.74                   | 61.14%                  | 30.02           | 96.81%              | 0.03223   | 103.47                  | 47.07%                  | 26.40           |
| 19  | 97.70%              | 0.02329   | 70.37                   | 59.70%                  | 29.73           | 96.88%              | 0.03147   | 95.09                   | 45.55%                  | 26.26           |
| 20  | 97.73%              | 0.02298   | 67.90                   | 58.31%                  | 29.43           | 96.96%              | 0.03072   | 90.77                   | 44.12%                  | 26.10           |
| 21  | 97.77%              | 0.02270   | 62.35                   | 56.97%                  | 29.11           | 97.03%              | 0.03001   | 82.44                   | 42.76%                  | 25.91           |
| 22  | 97.80%              | 0.02238   | 62.35                   | 55.68%                  | 28.78           | 97.11%              | 0.02928   | 81.57                   | 41.48%                  | 25.69           |
| 23  | 97.83%              | 0.02211   | 56.13                   | 54.43%                  | 28.42           | 97.18%              | 0.02861   | 72.63                   | 40.26%                  | 25.45           |
| 24  | 97.86%              | 0.02181   | 56.00                   | 53.23%                  | 28.06           | 97.25%              | 0.02792   | 71.69                   | 39.11%                  | 25.19           |
| 25  | 97.89%              | 0.02154   | 51.60                   | 52.06%                  | 27.67           | 97.31%              | 0.02728   | 65.34                   | 38.02%                  | 24.90           |
| 26  | 97.92%              | 0.02128   | 47.30                   | 50.94%                  | 27.27           | 97.38%              | 0.02666   | 59.24                   | 36.98%                  | 24.58           |
| 27  | 97.94%              | 0.02100   | 46.61                   | 49.86%                  | 26.85           | 97.44%              | 0.02602   | 57.76                   | 35.99%                  | 24.24           |
| 28  | 97.97%              | 0.02076   | 41.77                   | 48.81%                  | 26.42           | 97.50%              | 0.02545   | 51.20                   | 35.06%                  | 23.88           |
| 29  | 98.00%              | 0.02051   | 39.10                   | 47.80%                  | 25.96           | 97.56%              | 0.02487   | 47.41                   | 34.17%                  | 23.49           |
| 30  | 98.03%              | 0.02027   | 35.97                   | 46.82%                  | 25.50           | 97.62%              | 0.02431   | 43.15                   | 33.32%                  | 23.07           |

Target and fitted criteria are as follows:

#### Severe ambulation disability

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 10 | 68%    | 67%    | 0.074     |  |
| 0                         | 20 | 49%    | 50%    | 0.157     |  |
| 0                         | 30 | 40%    | 40%    | 0.043     |  |
| 0                         | 40 | 33%    | 33%    | 0.000     |  |
| Total                     |    |        | 0.2743 |           |  |

#### Severe manual dexterity disability

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 10 | 68%    | 68%    | 0.008     |  |
| 0                         | 20 | 49%    | 50%    | 0.146     |  |
| 0                         | 30 | 40%    | 38%    | 0.694     |  |
| 0                         | 40 | 30%    | 31%    | 0.164     |  |
| Total                     |    |        | 1.0121 |           |  |

#### Severe cognitive disability

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 0                         | 10 | 64%    | 60%    | 2.042     |  |
| 0                         | 20 | 40%    | 42%    | 1.522     |  |
| 0                         | 30 | 32%    | 33%    | 0.350     |  |
| 0                         | 40 | 29%    | 28%    | 0.700     |  |
| Total                     |    |        |        | 4.6144    |  |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United Kingdom, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00423                                      | 0.00352 | 0.00387   | 100.00%                 | 80.91           | 2.65%               |           |                         |                         |                 |
| 1   | 0.00031                                      | 0.00025 | 0.00028   | 99.61%                  | 80.22           | 95.80%              | 0.04229   | 153.22                  | 95.31%                  | 31.02           |
| 2   | 0.00016                                      | 0.00014 | 0.00015   | 99.59%                  | 79.25           | 95.91%              | 0.04105   | 273.70                  | 91.28%                  | 31.36           |
| 3   | 0.00013                                      | 0.00011 | 0.00012   | 99.57%                  | 78.26           | 96.02%              | 0.03994   | 344.30                  | 87.53%                  | 31.69           |
| 4   | 0.00009                                      | 0.00008 | 0.00009   | 99.56%                  | 77.27           | 96.12%              | 0.03885   | 454.44                  | 84.04%                  | 31.98           |
| 5   | 0.00009                                      | 0.00007 | 0.00008   | 99.55%                  | 76.27           | 96.23%              | 0.03782   | 475.75                  | 80.77%                  | 32.26           |
| 6   | 0.00009                                      | 0.00007 | 0.00008   | 99.54%                  | 75.28           | 96.33%              | 0.03683   | 446.37                  | 77.72%                  | 32.50           |
| 7   | 0.00009                                      | 0.00007 | 0.00008   | 99.53%                  | 74.29           | 96.42%              | 0.03585   | 450.93                  | 74.86%                  | 32.73           |
| 8   | 0.00007                                      | 0.00006 | 0.00006   | 99.53%                  | 73.29           | 96.52%              | 0.03489   | 553.75                  | 72.17%                  | 32.93           |
| 9   | 0.00009                                      | 0.00007 | 0.00008   | 99.52%                  | 72.30           | 96.61%              | 0.03398   | 441.26                  | 69.66%                  | 33.10           |
| 10  | 0.00009                                      | 0.00006 | 0.00008   | 99.51%                  | 71.30           | 96.70%              | 0.03308   | 432.40                  | 67.29%                  | 33.24           |
| 11  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 70.31           | 96.79%              | 0.03221   | 400.11                  | 65.06%                  | 33.36           |
| 12  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 69.31           | 96.87%              | 0.03135   | 404.58                  | 62.97%                  | 33.46           |
| 13  | 0.00010                                      | 0.00011 | 0.00010   | 99.49%                  | 68.32           | 96.95%              | 0.03055   | 295.18                  | 60.99%                  | 33.52           |
| 14  | 0.00013                                      | 0.00011 | 0.00012   | 99.48%                  | 67.33           | 97.04%              | 0.02976   | 251.14                  | 59.13%                  | 33.57           |
| 15  | 0.00016                                      | 0.00014 | 0.00015   | 99.47%                  | 66.33           | 97.11%              | 0.02900   | 195.97                  | 57.37%                  | 33.58           |
| 16  | 0.00021                                      | 0.00016 | 0.00019   | 99.45%                  | 65.34           | 97.19%              | 0.02828   | 151.21                  | 55.71%                  | 33.57           |
| 17  | 0.00030                                      | 0.00015 | 0.00023   | 99.43%                  | 64.36           | 97.26%              | 0.02757   | 122.53                  | 54.13%                  | 33.53           |
| 18  | 0.00041                                      | 0.00021 | 0.00031   | 99.41%                  | 63.37           | 97.34%              | 0.02693   | 86.45                   | 52.64%                  | 33.47           |
| 19  | 0.00045                                      | 0.00021 | 0.00033   | 99.38%                  | 62.39           | 97.41%              | 0.02624   | 79.29                   | 51.22%                  | 33.38           |
| 20  | 0.00047                                      | 0.00021 | 0.00034   | 99.35%                  | 61.41           | 97.48%              | 0.02556   | 75.52                   | 49.88%                  | 33.27           |
| 21  | 0.00051                                      | 0.00022 | 0.00036   | 99.31%                  | 60.43           | 97.54%              | 0.02492   | 68.47                   | 48.60%                  | 33.12           |
| 22  | 0.00050                                      | 0.00022 | 0.00036   | 99.28%                  | 59.45           | 97.61%              | 0.02427   | 67.59                   | 47.39%                  | 32.96           |
| 23  | 0.00056                                      | 0.00023 | 0.00039   | 99.24%                  | 58.47           | 97.67%              | 0.02367   | 60.07                   | 46.24%                  | 32.77           |
| 24  | 0.00055                                      | 0.00023 | 0.00039   | 99.20%                  | 57.50           | 97.73%              | 0.02305   | 59.17                   | 45.15%                  | 32.55           |
| 25  | 0.00059                                      | 0.00025 | 0.00042   | 99.16%                  | 56.52           | 97.79%              | 0.02247   | 53.83                   | 44.11%                  | 32.30           |
| 26  | 0.00063                                      | 0.00027 | 0.00045   | 99.12%                  | 55.54           | 97.85%              | 0.02192   | 48.71                   | 43.11%                  | 32.04           |
| 27  | 0.00063                                      | 0.00027 | 0.00045   | 99.08%                  | 54.57           | 97.91%              | 0.02135   | 47.40                   | 42.17%                  | 31.74           |
| 28  | 0.00067                                      | 0.00033 | 0.00050   | 99.03%                  | 53.59           | 97.96%              | 0.02085   | 41.94                   | 41.27%                  | 31.42           |
| 29  | 0.00070                                      | 0.00035 | 0.00052   | 98.98%                  | 52.62           | 98.02%              | 0.02033   | 38.77                   | 40.41%                  | 31.08           |
| 30  | 0.00074                                      | 0.00039 | 0.00056   | 98.93%                  | 51.65           | 98.07%              | 0.01985   | 35.22                   | 39.59%                  | 30.72           |
| 40  | 0.00156                                      | 0.00094 | 0.00125   | 98.14%                  | 42.02           | 98.52%              | 0.01599   | 12.76                   | 33.03%                  | 25.89           |
| 50  | 0.00335                                      | 0.00214 | 0.00274   | 96.40%                  | 32.67           | 0.02169             | 7.91      | 27.47%                  | 20.09                   |                 |
| 60  | 0.00797                                      | 0.00526 | 0.00662   | 92.54%                  | 23.80           | 0.03263             | 4.93      | 21.14%                  | 14.58                   |                 |
| 70  | 0.01935                                      | 0.01301 | 0.01618   | 83.67%                  | 15.73           | 0.05554             | 3.43      | 13.87%                  | 9.56                    |                 |
| 80  | 0.05555                                      | 0.03999 | 0.04777   | 63.44%                  | 8.94            | 0.11699             | 2.45      | 6.15%                   | 5.32                    |                 |
| 90  | 0.16790                                      | 0.13835 | 0.15313   | 25.70%                  | 4.32            | 0.29631             | 1.94      | 0.80%                   | 2.41                    |                 |
| 100 | 0.37248                                      | 0.33058 | 0.35153   | 1.71%                   | 2.15            | 0.63945             | 1.82      | 0.00%                   | 1.18                    |                 |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 1.85%               | 0.04394   | 11.35                   | 100.00%                 | 29.01           | 3.41%               | 0.06032   | 15.59                   | 100.00%                 | 26.76           |
| 1   | 95.98%              | 0.03975   | 144.01                  | 95.61%                  | 29.32           | 94.33%              | 0.05500   | 199.27                  | 93.97%                  | 27.45           |
| 2   | 96.05%              | 0.03890   | 259.30                  | 91.81%                  | 29.51           | 94.53%              | 0.05301   | 353.42                  | 88.80%                  | 28.02           |
| 3   | 96.12%              | 0.03815   | 328.86                  | 88.24%                  | 29.68           | 94.89%              | 0.05118   | 441.17                  | 84.09%                  | 28.56           |
| 4   | 96.20%              | 0.03742   | 437.61                  | 84.87%                  | 29.84           | 95.07%              | 0.04940   | 577.82                  | 79.79%                  | 29.07           |
| 5   | 96.34%              | 0.03672   | 461.89                  | 81.69%                  | 29.98           | 95.24%              | 0.04771   | 600.18                  | 75.85%                  | 29.56           |
| 6   | 96.40%              | 0.03605   | 436.92                  | 78.69%                  | 30.11           | 95.40%              | 0.04609   | 558.69                  | 72.23%                  | 30.01           |
| 7   | 96.47%              | 0.03538   | 445.02                  | 75.86%                  | 30.21           | 95.56%              | 0.04452   | 559.98                  | 68.90%                  | 30.44           |
| 8   | 96.53%              | 0.03471   | 550.97                  | 73.17%                  | 30.30           | 95.71%              | 0.04299   | 682.31                  | 65.83%                  | 30.83           |
| 9   | 96.60%              | 0.03408   | 442.66                  | 70.63%                  | 30.38           | 95.85%              | 0.04153   | 539.40                  | 63.00%                  | 31.20           |
| 10  | 96.66%              | 0.03346   | 437.33                  | 68.23%                  | 30.43           | 96.00%              | 0.04012   | 524.42                  | 60.38%                  | 31.53           |
| 11  | 96.72%              | 0.03284   | 407.99                  | 65.94%                  | 30.47           | 96.13%              | 0.03876   | 481.44                  | 57.96%                  | 31.82           |
| 12  | 96.78%              | 0.03224   | 415.94                  | 63.78%                  | 30.48           | 96.26%              | 0.03743   | 483.00                  | 55.72%                  | 32.09           |
| 13  | 96.84%              | 0.03167   | 305.95                  | 61.72%                  | 30.48           | 96.39%              | 0.03618   | 349.59                  | 53.63%                  | 32.32           |
| 14  | 96.90%              | 0.03110   | 262.43                  | 59.77%                  | 30.46           | 96.51%              | 0.03497   | 295.07                  | 51.69%                  | 32.51           |
| 15  | 96.96%              | 0.03055   | 206.45                  | 57.91%                  | 30.42           | 96.63%              | 0.03380   | 228.41                  | 49.88%                  | 32.67           |
| 16  | 97.02%              | 0.03003   | 160.59                  | 56.14%                  | 30.37           | 96.75%              | 0.03269   | 174.83                  | 48.20%                  | 32.79           |
| 17  | 97.07%              | 0.02952   | 131.18                  | 54.45%                  | 30.29           | 96.86%              | 0.03162   | 140.54                  | 46.62%                  | 32.89           |
| 18  | 97.12%              | 0.02906   | 93.29                   | 52.85%                  | 30.20           | 96.97%              | 0.03063   | 98.34                   | 45.15%                  | 32.94           |
| 19  | 97.18%              | 0.02855   | 86.24                   | 51.31%                  | 30.09           | 97.07%              | 0.02962   | 89.48                   | 43.76%                  | 32.97           |
| 20  | 97.23%              | 0.02803   | 82.82                   | 49.85%                  | 29.96           | 97.17%              | 0.02862   | 84.56                   | 42.47%                  | 32.96           |
| 21  | 97.28%              | 0.02755   | 75.68                   | 48.45%                  | 29.81           | 97.27%              | 0.02768   | 76.05                   | 41.25%                  | 32.92           |
| 22  | 97.33%              | 0.02704   | 75.32                   | 47.11%                  | 29.64           | 97.36%              | 0.02675   | 74.50                   | 40.11%                  | 32.84           |
| 23  | 97.38%              | 0.02658   | 67.46                   | 45.84%                  | 29.45           | 97.45%              | 0.02588   | 65.69                   | 39.04%                  | 32.73           |
| 24  | 97.43%              | 0.02609   | 66.99                   | 44.62%                  | 29.24           | 97.54%              | 0.02501   | 64.20                   | 38.03%                  | 32.58           |
| 25  | 97.48%              | 0.02564   | 61.43                   | 43.46%                  | 29.01           | 97.62%              | 0.02419   | 57.95                   | 37.08%                  | 32.41           |
| 26  | 97.52%              | 0.02521   | 56.02                   | 42.34%                  | 28.76           | 97.70%              | 0.02341   | 52.03                   | 36.18%                  | 32.20           |
| 27  | 97.57%              | 0.02475   | 54.95                   | 41.28%                  | 28.49           | 97.78%              | 0.02263   | 50.23                   | 35.33%                  | 31.96           |
| 28  | 97.61%              | 0.02435   | 48.99                   | 40.25%                  | 28.20           | 97.86%              | 0.02192   | 44.10                   | 34.53%                  | 31.69           |
| 29  | 97.66%              | 0.02394   | 45.64                   | 39.27%                  | 27.89           | 97.93%              | 0.02121   | 40.45                   | 33.78%                  | 31.39           |
| 30  | 97.70%              | 0.02      |                         |                         |                 |                     |           |                         |                         |                 |

## F Hutton et al (2006)

Target and fitted criteria are as follows:

### Severe visual disability

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 77%    | 77%    | 0.005     |
| 0                         | 20 | 63%    | 64%    | 0.055     |
| 0                         | 30 | 56%    | 55%    | 0.291     |
| 0                         | 40 | 48%    | 49%    | 0.074     |
| Total                     |    |        | 0.4250 |           |

### Severe motor, cognitive and visual

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 57%    | 60%    | 1.173     |
| 0                         | 20 | 39%    | 39%    | 0.033     |
| 0                         | 30 | 30%    | 27%    | 3.493     |
| 0                         | 40 | 18%    | 20%    | 1.342     |
| Total                     |    |        | 6.0405 |           |

Survival adjustment parameters that best replicate the above criteria yields the following table:

| Age | Regular life table (United Kingdom, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Males  | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00423                                      | 0.00352 | 0.00387   | 100.00%                 | 80.91           | 2.70%               | 97.17%    | 0.03202                 | 8.27                    | 100.00%         | 41.37 |
| 1   | 0.00031                                      | 0.00025 | 0.00028   | 99.61%                  | 80.22           | 97.25%              | 0.02777   | 100.61                  | 96.80%                  | 41.72           |       |
| 2   | 0.00016                                      | 0.00014 | 0.00015   | 99.59%                  | 79.25           | 97.32%              | 0.02690   | 179.34                  | 94.11%                  | 41.90           |       |
| 3   | 0.00013                                      | 0.00011 | 0.00012   | 99.57%                  | 78.26           | 97.40%              | 0.02615   | 225.39                  | 91.58%                  | 42.05           |       |
| 4   | 0.00009                                      | 0.00008 | 0.00009   | 99.56%                  | 77.27           | 97.47%              | 0.02541   | 297.21                  | 89.18%                  | 42.16           |       |
| 5   | 0.00009                                      | 0.00007 | 0.00008   | 99.55%                  | 76.27           | 97.54%              | 0.02472   | 310.96                  | 86.92%                  | 42.25           |       |
| 6   | 0.00009                                      | 0.00007 | 0.00008   | 99.54%                  | 75.28           | 97.60%              | 0.02406   | 291.62                  | 84.77%                  | 42.31           |       |
| 7   | 0.00009                                      | 0.00007 | 0.00008   | 99.53%                  | 74.29           | 97.67%              | 0.02341   | 294.43                  | 82.73%                  | 42.34           |       |
| 8   | 0.00007                                      | 0.00006 | 0.00006   | 99.53%                  | 73.29           | 97.73%              | 0.02276   | 361.28                  | 80.79%                  | 42.34           |       |
| 9   | 0.00009                                      | 0.00007 | 0.00008   | 99.52%                  | 72.30           | 97.79%              | 0.02216   | 287.80                  | 78.95%                  | 42.31           |       |
| 10  | 0.00009                                      | 0.00006 | 0.00008   | 99.51%                  | 71.30           | 97.85%              | 0.02156   | 281.87                  | 77.20%                  | 42.26           |       |
| 11  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 70.31           | 97.91%              | 0.02099   | 260.70                  | 75.54%                  | 42.18           |       |
| 12  | 0.00010                                      | 0.00006 | 0.00008   | 99.50%                  | 69.31           | 97.97%              | 0.02042   | 263.46                  | 73.95%                  | 42.07           |       |
| 13  | 0.00010                                      | 0.00011 | 0.00010   | 99.49%                  | 68.32           | 98.02%              | 0.01989   | 192.21                  | 72.44%                  | 41.94           |       |
| 14  | 0.00013                                      | 0.00011 | 0.00012   | 99.48%                  | 67.33           | 98.07%              | 0.01937   | 163.49                  | 71.00%                  | 41.78           |       |
| 15  | 0.00016                                      | 0.00014 | 0.00015   | 99.47%                  | 66.33           | 98.13%              | 0.01888   | 127.58                  | 69.63%                  | 41.60           |       |
| 16  | 0.00021                                      | 0.00016 | 0.00019   | 99.45%                  | 65.34           | 98.18%              | 0.01841   | 98.47                   | 68.31%                  | 41.39           |       |
| 17  | 0.00030                                      | 0.00015 | 0.00023   | 99.43%                  | 64.36           | 98.23%              | 0.01796   | 79.82                   | 67.05%                  | 41.16           |       |
| 18  | 0.00041                                      | 0.00021 | 0.00031   | 99.41%                  | 63.37           | 98.27%              | 0.01756   | 56.39                   | 65.85%                  | 40.90           |       |
| 19  | 0.00045                                      | 0.00021 | 0.00033   | 99.38%                  | 62.39           | 98.32%              | 0.01712   | 51.71                   | 64.69%                  | 40.62           |       |
| 20  | 0.00047                                      | 0.00021 | 0.00034   | 99.35%                  | 61.41           | 98.37%              | 0.01667   | 49.25                   | 63.59%                  | 40.32           |       |
| 21  | 0.00051                                      | 0.00022 | 0.00036   | 99.31%                  | 60.43           | 98.41%              | 0.01625   | 44.66                   | 62.53%                  | 40.00           |       |
| 22  | 0.00050                                      | 0.00022 | 0.00036   | 99.28%                  | 59.45           | 98.45%              | 0.01582   | 44.07                   | 61.51%                  | 39.65           |       |
| 23  | 0.00056                                      | 0.00023 | 0.00039   | 99.24%                  | 58.47           | 98.50%              | 0.01544   | 39.18                   | 60.54%                  | 39.28           |       |
| 24  | 0.00055                                      | 0.00023 | 0.00039   | 99.20%                  | 57.50           | 98.54%              | 0.01503   | 38.58                   | 59.60%                  | 38.89           |       |
| 25  | 0.00059                                      | 0.00025 | 0.00042   | 99.16%                  | 56.52           | 98.58%              | 0.01466   | 35.11                   | 58.71%                  | 38.47           |       |
| 26  | 0.00063                                      | 0.00027 | 0.00045   | 99.12%                  | 55.54           | 98.61%              | 0.01430   | 31.79                   | 57.85%                  | 38.04           |       |
| 27  | 0.00063                                      | 0.00027 | 0.00045   | 99.08%                  | 54.57           | 98.65%              | 0.01393   | 30.92                   | 57.02%                  | 37.58           |       |
| 28  | 0.00067                                      | 0.00033 | 0.00050   | 99.03%                  | 53.59           | 98.69%              | 0.01361   | 27.39                   | 56.22%                  | 37.10           |       |
| 29  | 0.00070                                      | 0.00035 | 0.00052   | 98.98%                  | 52.62           | 98.72%              | 0.01329   | 25.33                   | 55.46%                  | 36.61           |       |
| 30  | 0.00074                                      | 0.00039 | 0.00056   | 98.93%                  | 51.65           | 98.76%              | 0.01298   | 23.03                   | 54.72%                  | 36.10           |       |
| 40  | 0.00156                                      | 0.00094 | 0.00125   | 98.14%                  | 42.02           | 99.06%              | 0.01069   | 8.53                    | 48.59%                  | 30.05           |       |
| 50  | 0.00335                                      | 0.00214 | 0.00274   | 96.40%                  | 32.67           | 0.01487             | 5.42      | 42.92%                  | 23.34                   |                 |       |
| 60  | 0.00797                                      | 0.00526 | 0.00662   | 92.54%                  | 23.80           | 0.02327             | 3.52      | 35.78%                  | 16.96                   |                 |       |
| 70  | 0.01935                                      | 0.01301 | 0.01618   | 83.67%                  | 15.73           | 0.04138             | 2.56      | 26.38%                  | 11.14                   |                 |       |
| 80  | 0.05555                                      | 0.03999 | 0.04777   | 63.44%                  | 8.94            | 0.09209             | 1.93      | 14.24%                  | 6.24                    |                 |       |
| 90  | 0.16790                                      | 0.13835 | 0.15313   | 25.70%                  | 4.32            | 0.24480             | 1.60      | 2.83%                   | 2.89                    |                 |       |
| 100 | 0.37248                                      | 0.33058 | 0.35153   | 1.71%                   | 2.15            | 0.53587             | 1.52      | 0.03%                   | 1.41                    |                 |       |

| Age | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 1.67%               | 94.61%    | 0.05754                 | 14.87                   | 100.00%         | 21.85 |
| 1   | 94.70%              | 0.05323   | 192.88                  | 94.25%                  | 22.15           |       |
| 2   | 94.79%              | 0.05223   | 348.18                  | 89.23%                  | 22.37           |       |
| 3   | 94.88%              | 0.05132   | 442.44                  | 84.57%                  | 22.57           |       |
| 4   | 94.96%              | 0.05044   | 589.90                  | 80.23%                  | 22.77           |       |
| 5   | 95.05%              | 0.04959   | 623.74                  | 76.18%                  | 22.95           |       |
| 6   | 95.13%              | 0.04876   | 591.05                  | 72.40%                  | 23.12           |       |
| 7   | 95.21%              | 0.04794   | 603.06                  | 68.87%                  | 23.28           |       |
| 8   | 95.29%              | 0.04713   | 748.03                  | 65.57%                  | 23.43           |       |
| 9   | 95.37%              | 0.04635   | 601.96                  | 62.48%                  | 23.56           |       |
| 10  | 95.45%              | 0.04558   | 595.76                  | 59.59%                  | 23.68           |       |
| 11  | 95.53%              | 0.04482   | 556.74                  | 56.87%                  | 23.79           |       |
| 12  | 95.60%              | 0.04407   | 568.59                  | 54.32%                  | 23.88           |       |
| 13  | 95.67%              | 0.04335   | 418.88                  | 51.93%                  | 23.96           |       |
| 14  | 95.75%              | 0.04264   | 359.86                  | 49.68%                  | 24.02           |       |
| 15  | 95.82%              | 0.04196   | 283.51                  | 47.56%                  | 24.07           |       |
| 16  | 95.89%              | 0.04130   | 220.84                  | 45.56%                  | 24.10           |       |
| 17  | 95.96%              | 0.04064   | 180.64                  | 43.68%                  | 24.12           |       |
| 18  | 96.02%              | 0.04005   | 128.57                  | 41.91%                  | 24.12           |       |
| 19  | 96.09%              | 0.03940   | 119.05                  | 40.23%                  | 24.10           |       |
| 20  | 96.16%              | 0.03876   | 114.50                  | 38.64%                  | 24.07           |       |
| 21  | 96.22%              | 0.03814   | 104.78                  | 37.14%                  | 24.02           |       |
| 22  | 96.28%              | 0.03750   | 104.46                  | 35.73%                  | 23.95           |       |
| 23  | 96.35%              | 0.03691   | 93.69                   | 34.39%                  | 23.87           |       |
| 24  | 96.41%              | 0.03630   | 93.19                   | 33.12%                  | 23.76           |       |
| 25  | 96.47%              | 0.03572   | 85.56                   | 31.92%                  | 23.64           |       |
| 26  | 96.53%              | 0.03516   | 78.14                   | 30.78%                  | 23.50           |       |
| 27  | 96.59%              | 0.03458   | 76.76                   | 29.69%                  | 23.34           |       |
| 28  | 96.64%              | 0.03405   | 68.52                   | 28.67%                  | 23.15           |       |
| 29  | 96.70%              | 0.03352   | 63.91                   | 27.69%                  | 22.95           |       |
| 30  | 96.75%              | 0.03300   | 58.57                   | 26.76%                  | 22.73           |       |
| 40  | 97.26%              | 0.02863   | 22.86                   | 19.55%                  | 19.41           |       |
| 50  | 0.03795             | 13.83     | 14.07%                  | 15.04                   |                 |       |
| 60  | 0.05495             | 8.31      | 8.91%                   | 10.89                   |                 |       |
| 70  | 0.08932             | 5.52      | 4.40%                   | 7.10                    |                 |       |
| 80  | 0.17642             | 3.69      | 1.20%                   | 3.89                    |                 |       |
| 90  | 0.41922             | 2.74      | 0.05%                   | 1.68                    |                 |       |
| 100 | 0.88660             | 2.52      | 0.00%                   | 0.85                    |                 |       |

## G Westborn et al (2011)

Target and fitted criteria are as follows:

### GMFCS V

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 2                         | 5  | 92%    | 92%    | 0.009     |
| 2                         | 10 | 82%    | 81%    | 0.193     |
| 2                         | 15 | 71%    | 71%    | 0.018     |
| 2                         | 20 | 61%    | 62%    | 0.093     |
| Total                     |    |        | 0.3131 |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (Sweden, smoothed, 2013-2016) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Male   | Female  | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00261  | 0.00215 | 0.00238   | 100.00%                 | 81.99           | 0.00%               | 97.37%    | 0.02861                 | 12.04                   | 100.00%         | 29.16 |
| 1   | 0.00019  | 0.00017 | 0.00018   | 99.76%                  | 81.18           | 97.37%              | 0.02647   | 148.10                  | 97.14%                  | 29.01           |       |
| 2   | 0.00013  | 0.00012 | 0.00012   | 99.74%                  | 80.20           | 97.37%              | 0.02642   | 217.43                  | 94.57%                  | 28.78           |       |
| 3   | 0.00011  | 0.00010 | 0.00010   | 99.73%                  | 79.21           | 97.37%              | 0.02640   | 254.09                  | 92.07%                  | 28.55           |       |
| 4   | 0.00010  | 0.00010 | 0.00010   | 99.72%                  | 78.22           | 97.37%              | 0.02639   | 272.13                  | 89.64%                  | 28.31           |       |
| 5   | 0.00009  | 0.00008 | 0.00008   | 99.71%                  | 77.22           | 97.37%              | 0.02638   | 311.05                  | 87.27%                  | 28.06           |       |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.70%                  | 76.23           | 97.37%              | 0.02638   | 333.97                  | 84.97%                  | 27.81           |       |
| 7   | 0.00007  | 0.00008 | 0.00007   | 99.70%                  | 75.24           | 97.37%              | 0.02637   | 365.41                  | 82.73%                  | 27.55           |       |
| 8   | 0.00006  | 0.00007 | 0.00007   | 99.69%                  | 74.24           | 97.37%              | 0.02636   | 396.93                  | 80.55%                  | 27.28           |       |
| 9   | 0.00005  | 0.00007 | 0.00006   | 99.68%                  | 73.25           | 97.37%              | 0.02636   | 410.12                  | 78.42%                  | 27.01           |       |
| 10  | 0.00006  | 0.00007 | 0.00007   | 99.68%                  | 72.25           | 97.37%              | 0.02636   | 401.06                  | 76.36%                  | 26.73           |       |
| 11  | 0.00007  | 0.00008 | 0.00007   | 99.67%                  | 71.26           | 97.37%              | 0.02637   | 352.47                  | 74.34%                  | 26.44           |       |
| 12  | 0.00009  | 0.00009 | 0.00009   | 99.66%                  | 70.26           | 97.37%              | 0.02638   | 308.21                  | 72.38%                  | 26.14           |       |
| 13  | 0.00011  | 0.00010 | 0.00010   | 99.65%                  | 69.27           | 97.37%              | 0.02640   | 256.43                  | 70.47%                  | 25.83           |       |
| 14  | 0.00014  | 0.00011 | 0.00012   | 99.64%                  | 68.27           | 97.37%              | 0.02642   | 217.88                  | 68.61%                  | 25.52           |       |
| 15  | 0.00018  | 0.00012 | 0.00015   | 99.63%                  | 67.28           | 97.37%              | 0.02644   | 177.25                  | 66.80%                  | 25.20           |       |
| 16  | 0.00023  | 0.00014 | 0.00019   | 99.62%                  | 66.29           | 97.37%              | 0.02648   | 142.77                  | 65.03%                  | 24.87           |       |
| 17  | 0.00030  | 0.00016 | 0.00023   | 99.60%                  | 65.31           | 97.37%              | 0.02652   | 115.57                  | 63.31%                  | 24.53           |       |
| 18  | 0.00038  | 0.00017 | 0.00027   | 99.57%                  | 64.32           | 97.37%              | 0.02657   | 96.82                   | 61.63%                  | 24.19           |       |
| 19  | 0.00045  | 0.00019 | 0.00032   | 99.55%                  | 63.34           | 97.37%              | 0.02661   | 82.93                   | 59.99%                  | 23.83           |       |
| 20  | 0.00052  | 0.00020 | 0.00036   | 99.52%                  | 62.36           | 97.37%              | 0.02665   | 73.86                   | 58.40%                  | 23.47           |       |
| 21  | 0.00057  | 0.00022 | 0.00039   | 99.48%                  | 61.38           |                     | 0.02710   | 68.90                   | 56.84%                  | 23.10           |       |
| 22  | 0.00062  | 0.00023 | 0.00043   | 99.44%                  | 60.40           |                     | 0.02757   | 64.63                   | 55.30%                  | 22.73           |       |
| 23  | 0.00065  | 0.00025 | 0.00045   | 99.40%                  | 59.43           |                     | 0.02804   | 62.29                   | 53.78%                  | 22.36           |       |
| 24  | 0.00069  | 0.00026 | 0.00047   | 99.35%                  | 58.46           |                     | 0.02852   | 60.41                   | 52.27%                  | 21.99           |       |
| 25  | 0.00072  | 0.00026 | 0.00049   | 99.31%                  | 57.48           |                     | 0.02901   | 59.00                   | 50.78%                  | 21.62           |       |
| 26  | 0.00073  | 0.00027 | 0.00050   | 99.26%                  | 56.51           |                     | 0.02951   | 58.83                   | 49.31%                  | 21.25           |       |
| 27  | 0.00074  | 0.00028 | 0.00051   | 99.21%                  | 55.54           |                     | 0.03003   | 58.64                   | 47.85%                  | 20.88           |       |
| 28  | 0.00074  | 0.00029 | 0.00051   | 99.16%                  | 54.57           |                     | 0.03056   | 59.38                   | 46.41%                  | 20.51           |       |
| 29  | 0.00074  | 0.00031 | 0.00052   | 99.11%                  | 53.60           |                     | 0.03111   | 59.53                   | 45.00%                  | 20.14           |       |
| 30  | 0.00076  | 0.00032 | 0.00054   | 99.05%                  | 52.62           |                     | 0.03169   | 58.66                   | 43.60%                  | 19.78           |       |
| 40  | 0.00097  | 0.00055 | 0.00076   | 98.46%                  | 42.91           |                     | 0.03896   | 51.45                   | 30.63%                  | 16.08           |       |
| 50  | 0.00230  | 0.00157 | 0.00193   | 97.33%                  | 33.34           |                     | 0.05110   | 26.43                   | 19.55%                  | 12.44           |       |
| 60  | 0.00640  | 0.00435 | 0.00537   | 94.29%                  | 24.23           |                     | 0.07303   | 13.59                   | 10.55%                  | 8.96            |       |
| 70  | 0.01736  | 0.01166 | 0.01451   | 86.32%                  | 15.94           |                     | 0.11737   | 8.09                    | 4.10%                   | 5.79            |       |
| 80  | 0.05367  | 0.03705 | 0.04536   | 67.05%                  | 8.87            |                     | 0.23016   | 5.07                    | 0.73%                   | 3.06            |       |
| 90  | 0.17937  | 0.13966 | 0.15951   | 27.06%                  | 4.07            |                     | 0.56240   | 3.53                    | 0.01%                   | 1.18            |       |
| 100 | 0.42540  | 0.37565 | 0.40053   | 1.33%                   | 1.79            |                     | 1.31638   | 3.29                    | 0.00%                   | 0.54            |       |

Target and fitted criteria are as follows:

**Mild+0****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 100%   | 99%    | 0.022     |
| 0     | 20 | 99%    | 99%    | 0.001     |
| 0     | 30 | 98%    | 99%    | 0.006     |
| 0     | 40 | 98%    | 98%    | 0.000     |
| Total |    |        | 0.0291 |           |

**Moderate+0****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 99%    | 98%    | 0.120     |
| 0     | 20 | 99%    | 97%    | 0.735     |
| 0     | 30 | 98%    | 95%    | 0.681     |
| 0     | 40 | 89%    | 93%    | 1.434     |
| Total |    |        | 3.1703 |           |

**Severe+0****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 91%    | 93%    | 0.309     |
| 0     | 20 | 90%    | 88%    | 0.537     |
| 0     | 30 | 84%    | 84%    | 0.092     |
| Total |    |        | 0.9380 |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (Australia, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Males                                   | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00357                                 | 0.00330 | 0.00344   | 100.00%                 | 82.38           | 99.99%              | 0.00356   | 1.03                    | 100.00%                 | 81.86           |
| 1   | 0.00029                                 | 0.00022 | 0.00026   | 99.66%                  | 81.66           | 99.99%              | 0.00038   | 1.47                    | 99.64%                  | 81.15           |
| 2   | 0.00016                                 | 0.00013 | 0.00015   | 99.63%                  | 80.69           | 99.99%              | 0.00027   | 1.83                    | 99.61%                  | 80.18           |
| 3   | 0.00014                                 | 0.00011 | 0.00013   | 99.62%                  | 79.70           | 99.99%              | 0.00025   | 1.96                    | 99.58%                  | 79.20           |
| 4   | 0.00012                                 | 0.00010 | 0.00011   | 99.60%                  | 78.71           | 99.99%              | 0.00023   | 2.10                    | 99.56%                  | 78.22           |
| 5   | 0.00011                                 | 0.00009 | 0.00010   | 99.59%                  | 77.72           | 99.99%              | 0.00022   | 2.21                    | 99.53%                  | 77.24           |
| 6   | 0.00010                                 | 0.00008 | 0.00009   | 99.58%                  | 76.72           | 99.99%              | 0.00021   | 2.34                    | 99.51%                  | 76.26           |
| 7   | 0.00009                                 | 0.00007 | 0.00008   | 99.57%                  | 75.73           | 99.99%              | 0.00020   | 2.51                    | 99.49%                  | 75.27           |
| 8   | 0.00008                                 | 0.00007 | 0.00008   | 99.57%                  | 74.74           | 99.99%              | 0.00020   | 2.61                    | 99.47%                  | 74.29           |
| 9   | 0.00008                                 | 0.00007 | 0.00008   | 99.56%                  | 73.74           | 99.99%              | 0.00020   | 2.61                    | 99.45%                  | 73.30           |
| 10  | 0.00008                                 | 0.00007 | 0.00008   | 99.55%                  | 72.75           | 99.99%              | 0.00020   | 2.61                    | 99.43%                  | 72.32           |
| 11  | 0.00009                                 | 0.00008 | 0.00009   | 99.54%                  | 71.75           | 99.99%              | 0.00021   | 2.42                    | 99.41%                  | 71.33           |
| 12  | 0.00010                                 | 0.00009 | 0.00010   | 99.54%                  | 70.76           | 99.99%              | 0.00022   | 2.27                    | 99.39%                  | 70.34           |
| 13  | 0.00012                                 | 0.00010 | 0.00011   | 99.53%                  | 69.77           | 99.99%              | 0.00023   | 2.10                    | 99.37%                  | 69.36           |
| 14  | 0.00016                                 | 0.00013 | 0.00015   | 99.52%                  | 68.77           | 99.99%              | 0.00027   | 1.83                    | 99.35%                  | 68.37           |
| 15  | 0.00022                                 | 0.00015 | 0.00019   | 99.50%                  | 67.78           | 99.99%              | 0.00031   | 1.65                    | 99.32%                  | 67.39           |
| 16  | 0.00030                                 | 0.00018 | 0.00024   | 99.48%                  | 66.80           | 99.99%              | 0.00036   | 1.50                    | 99.29%                  | 66.41           |
| 17  | 0.00038                                 | 0.00020 | 0.00029   | 99.46%                  | 65.81           | 99.99%              | 0.00041   | 1.42                    | 99.25%                  | 65.44           |
| 18  | 0.00045                                 | 0.00021 | 0.00033   | 99.43%                  | 64.83           | 99.99%              | 0.00045   | 1.37                    | 99.21%                  | 64.46           |
| 19  | 0.00052                                 | 0.00022 | 0.00037   | 99.40%                  | 63.85           | 99.99%              | 0.00049   | 1.33                    | 99.17%                  | 63.49           |
| 20  | 0.00056                                 | 0.00023 | 0.00040   | 99.36%                  | 62.87           | 99.99%              | 0.00052   | 1.31                    | 99.12%                  | 62.52           |
| 21  | 0.00059                                 | 0.00023 | 0.00041   | 99.32%                  | 61.90           | 99.99%              | 0.00053   | 1.29                    | 99.07%                  | 61.56           |
| 22  | 0.00061                                 | 0.00024 | 0.00043   | 99.28%                  | 60.92           | 99.99%              | 0.00055   | 1.28                    | 99.02%                  | 60.59           |
| 23  | 0.00063                                 | 0.00025 | 0.00044   | 99.24%                  | 59.95           | 99.99%              | 0.00056   | 1.27                    | 98.96%                  | 59.62           |
| 24  | 0.00064                                 | 0.00026 | 0.00045   | 99.19%                  | 58.98           | 99.99%              | 0.00057   | 1.27                    | 98.91%                  | 58.65           |
| 25  | 0.00065                                 | 0.00027 | 0.00046   | 99.15%                  | 58.00           | 99.99%              | 0.00058   | 1.26                    | 98.85%                  | 57.69           |
| 26  | 0.00066                                 | 0.00028 | 0.00047   | 99.10%                  | 57.03           | 99.99%              | 0.00059   | 1.26                    | 98.79%                  | 56.72           |
| 27  | 0.00068                                 | 0.00029 | 0.00049   | 99.06%                  | 56.06           | 99.99%              | 0.00061   | 1.25                    | 98.74%                  | 55.75           |
| 28  | 0.00070                                 | 0.00031 | 0.00051   | 99.01%                  | 55.08           | 99.99%              | 0.00063   | 1.24                    | 98.68%                  | 54.79           |
| 29  | 0.00073                                 | 0.00033 | 0.00053   | 98.96%                  | 54.11           | 99.99%              | 0.00065   | 1.23                    | 98.61%                  | 53.82           |
| 30  | 0.00077                                 | 0.00036 | 0.00057   | 98.91%                  | 53.14           | 99.99%              | 0.00069   | 1.21                    | 98.55%                  | 52.86           |
| 40  | 0.00142                                 | 0.00078 | 0.00110   | 98.14%                  | 43.51           | 99.99%              | 0.00122   | 1.11                    | 97.67%                  | 43.28           |
| 50  | 0.00298                                 | 0.00180 | 0.00239   | 96.59%                  | 34.12           |                     | 0.00254   | 1.06                    | 96.00%                  | 33.94           |
| 60  | 0.00675                                 | 0.00398 | 0.00537   | 93.23%                  | 25.15           |                     | 0.00557   | 1.04                    | 92.49%                  | 25.01           |
| 70  | 0.01613                                 | 0.00994 | 0.01304   | 85.99%                  | 16.79           |                     | 0.01335   | 1.02                    | 85.09%                  | 16.70           |
| 80  | 0.04793                                 | 0.03188 | 0.03991   | 68.61%                  | 9.59            |                     | 0.04045   | 1.01                    | 67.62%                  | 9.53            |
| 90  | 0.15455                                 | 0.12362 | 0.13909   | 31.16%                  | 4.58            |                     | 0.14023   | 1.01                    | 30.45%                  | 4.55            |
| 100 | 0.34389                                 | 0.31851 | 0.33120   | 2.52%                   | 2.20            |                     | 0.33358   | 1.01                    | 2.41%                   | 2.18            |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00%               | 99.99%    | 1.03                    | 100.00%                 | 81.86           | 99.85%              | 0.00489   | 1.42                    | 100.00%                 | 76.42           |
| 1   | 99.85%              | 0.00171   | 6.72                    | 99.51%                  | 75.79           | 99.85%              | 0.00160   | 11.06                   | 99.34%                  | 74.92           |
| 2   | 99.85%              | 0.00158   | 12.67                   | 99.18%                  | 74.04           | 99.85%              | 0.00153   | 14.26                   | 99.02%                  | 73.16           |
| 3   | 99.85%              | 0.00155   | 17.21                   | 98.71%                  | 71.38           | 99.85%              | 0.00154   | 19.24                   | 98.56%                  | 70.49           |
| 4   | 99.85%              | 0.00154   | 20.45                   | 98.41%                  | 69.60           | 99.85%              | 0.00153   | 20.45                   | 98.26%                  | 68.71           |
| 5   | 99.85%              | 0.00153   | 20.45                   | 98.11%                  | 67.81           | 99.85%              | 0.00153   | 20.45                   | 98.11%                  | 67.81           |
| 6   | 99.85%              | 0.00153   | 16.36                   | 97.81%                  | 66.02           | 99.85%              | 0.00152   | 14.26                   | 97.65%                  | 65.12           |
| 7   | 99.85%              | 0.00152   | 14.26                   | 97.65%                  | 64.22           | 99.85%              | 0.00160   | 11.06                   | 97.50%                  | 64.22           |
| 8   | 99.85%              | 0.00152   | 10.06                   | 97.50%                  | 64.22           | 99.85%              | 0.00164   | 8.89                    | 97.34%                  | 63.32           |
| 9   | 99.85%              | 0.00164   | 8.89                    | 97.34%                  | 63.32           | 99.85%              | 0.00170   | 7.08                    | 97.18%                  | 62.43           |
| 10  | 99.85%              | 0.00175   | 6.03                    | 97.02%                  | 61.53           | 99.85%              | 0.00187   | 4.56                    | 96.32%                  | 57.97           |
| 11  | 99.85%              | 0.00187   | 4.43                    | 96.14%                  | 57.07           | 99.85%              | 0.00194   | 4.01                    | 95.23%                  | 52.60           |
| 12  | 99.85%              | 0.00190   | 4.31                    | 95.96%                  | 56.18           | 99.85%              | 0.00199   | 3.75                    | 94.86%                  | 50.80           |
| 13  | 99.85%              | 0.00199   | 3.75                    | 94.86%                  | 50.80           | 99.85%              | 0.00202   | 3.58                    | 94.67%                  | 49.90           |
| 14  | 99.85%              | 0.00202   | 3.58                    | 94.67%                  | 49.90           | 99.70%              | 0.00356   | 6.31                    | 84.38%                  | 45.84           |
| 15  | 99.85%              | 0.00202   | 2.33                    | 92.57%                  | 40.91           | 99.70%              | 0.00476   | 4.33                    | 81.02%                  | 37.52           |
| 16  | 99.85%              | 0.00202   | 1.78                    | 89.64%                  | 32.07           | 99.70%              | 0.00706   | 2.95                    | 76.54%                  | 29.41           |
| 17  | 99.85%              | 0.00202   | 1.47                    | 84.69%                  | 23.63           | 99.70%              | 0.01170   | 2.18                    | 70.01%                  | 21.65           |
| 18  | 99.85%              | 0.00202   | 1.29                    | 75.77%                  | 15.76           | 99.70%              | 0.02253   | 1.73                    | 59.81%                  | 14.42           |
| 19  | 99.85%              | 0.00202   | 1.06                    | 70.01%                  | 12.66           | 99.70%              | 0.05652   | 1.42                    | 42.10%                  | 8.19            |
| 20  | 99.85%              | 0.00202   | 0.89                    | 64.67%                  | 6.85            | 99.69%              | 0.00363   | 6.85                    | 84.68%                  | 46.67           |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |        |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|--------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |        |       |
| 0   | 3.32%               | 99.17%    | 0.01167                 | 3.40                    | 100.00%         | 65.89               | 99.20%    | 0.00824                 | 32.31                   | 98.83%          | 65.66  |       |
| 1   | 99.20%              | 0.00759   | 60.70                   | 97.25%                  | 64.72           | 99.23%              | 0.00786   | 54.24                   | 98.02%                  | 65.20           | 99.25% | 64.72 |
| 2   | 99.23%              | 0.00733   | 66.59                   | 96.51%                  | 64.21           | 99.28%              | 0.00708   | 70.76                   | 95.80%                  | 63.68           | 99.30% | 63.13 |
| 3   | 99.28%              | 0.00683   | 75.94                   | 95.13%                  | 63.13           | 99.33%              | 0.00663   | 75.94                   | 95.13%                  | 63.13           | 99.35% | 63.13 |
| 4   | 99.33%              | 0.00660   | 82.51                   | 94.48%                  | 62.56           | 99.35%              | 0.00636   | 82.51                   | 94.48%                  | 62.56           | 99.37% | 62.56 |
| 5   | 99.35%              | 0.00636   | 85.06                   | 93.85%                  | 61.97           | 99.37%              | 0.00617   | 82.27                   | 93.25%                  | 61.37           | 99.39% | 61.37 |
| 6   | 99.39%              | 0.00617   | 79.57                   | 92.68%                  |                 |                     |           |                         |                         |                 |        |       |

Target and fitted criteria are as follows:

**Severe+1****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 86%    | 87%    | 0.148     |
| 0     | 20 | 78%    | 77%    | 0.238     |
| 0     | 30 | 69%    | 67%    | 0.422     |
| 0     | 40 | 57%    | 58%    | 0.442     |
| Total |    |        | 1.2500 |           |

**Severe+2****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 80%    | 81%    | 0.165     |
| 0     | 20 | 68%    | 66%    | 0.782     |
| 0     | 30 | 52%    | 53%    | 0.221     |
| Total |    |        | 1.1684 |           |

**Severe+3****Probabilities of survival**

| From  | To | Target | Fitted | Deviation |
|-------|----|--------|--------|-----------|
| 0     | 10 | 81%    | 73%    | 7.338     |
| 0     | 20 | 52%    | 53%    | 0.582     |
| 0     | 30 | 35%    | 39%    | 3.891     |
| 0     | 40 | 31%    | 28%    | 1.896     |
| Total |    |        |        | 13.7075   |

Survival adjustment parameters that best replicate the above criteria yields the following tables:

| Age | Regular life table (Australia, 2014-16) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Males                                   | Females | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00357                                 | 0.00330 | 0.00344   | 100.00%                 | 82.38           | 0.00%               | 98.71%    | 0.01629                 | 4.74                    | 100.00%         | 47.22 |
| 1   | 0.00029                                 | 0.00022 | 0.00026   | 99.66%                  | 81.66           | 97.95%              | 0.01315   | 51.58                   | 98.37%                  | 46.99           |       |
| 2   | 0.00016                                 | 0.00013 | 0.00015   | 99.63%                  | 80.69           | 98.71%              | 0.01304   | 89.95                   | 97.08%                  | 46.61           |       |
| 3   | 0.00014                                 | 0.00011 | 0.00013   | 99.62%                  | 79.70           | 98.71%              | 0.01302   | 104.19                  | 95.81%                  | 46.22           |       |
| 4   | 0.00012                                 | 0.00010 | 0.00011   | 99.60%                  | 78.71           | 98.71%              | 0.01301   | 118.26                  | 94.56%                  | 45.82           |       |
| 5   | 0.00011                                 | 0.00009 | 0.00010   | 99.59%                  | 77.72           | 98.71%              | 0.01300   | 129.99                  | 93.33%                  | 45.42           |       |
| 6   | 0.00010                                 | 0.00008 | 0.00009   | 99.58%                  | 76.72           | 98.71%              | 0.01299   | 144.32                  | 92.12%                  | 45.01           |       |
| 7   | 0.00009                                 | 0.00007 | 0.00008   | 99.57%                  | 75.73           | 98.71%              | 0.01298   | 162.24                  | 90.92%                  | 44.60           |       |
| 8   | 0.00008                                 | 0.00007 | 0.00008   | 99.57%                  | 74.74           | 98.71%              | 0.01297   | 172.99                  | 89.74%                  | 44.18           |       |
| 9   | 0.00008                                 | 0.00007 | 0.00008   | 99.56%                  | 73.74           | 98.71%              | 0.01297   | 172.99                  | 88.58%                  | 43.75           |       |
| 10  | 0.00008                                 | 0.00007 | 0.00008   | 99.55%                  | 72.75           | 98.71%              | 0.01297   | 172.99                  | 87.43%                  | 43.32           |       |
| 11  | 0.00009                                 | 0.00008 | 0.00009   | 99.54%                  | 71.75           | 98.71%              | 0.01298   | 152.75                  | 86.30%                  | 42.88           |       |
| 12  | 0.00010                                 | 0.00009 | 0.00010   | 99.54%                  | 70.76           | 98.71%              | 0.01299   | 136.78                  | 85.17%                  | 42.44           |       |
| 13  | 0.00012                                 | 0.00010 | 0.00011   | 99.53%                  | 69.77           | 98.71%              | 0.01301   | 118.26                  | 84.07%                  | 41.99           |       |
| 14  | 0.00016                                 | 0.00013 | 0.00015   | 99.52%                  | 68.77           | 98.71%              | 0.01304   | 89.95                   | 82.97%                  | 41.54           |       |
| 15  | 0.00022                                 | 0.00015 | 0.00019   | 99.50%                  | 67.78           | 98.71%              | 0.01308   | 70.72                   | 81.89%                  | 41.08           |       |
| 16  | 0.00030                                 | 0.00018 | 0.00024   | 99.48%                  | 66.80           | 98.71%              | 0.01314   | 54.74                   | 80.82%                  | 40.62           |       |
| 17  | 0.00038                                 | 0.00020 | 0.00029   | 99.46%                  | 65.81           | 98.71%              | 0.01319   | 45.47                   | 79.76%                  | 40.15           |       |
| 18  | 0.00045                                 | 0.00021 | 0.00033   | 99.43%                  | 64.83           | 98.71%              | 0.01323   | 40.08                   | 78.71%                  | 39.68           |       |
| 19  | 0.00052                                 | 0.00022 | 0.00037   | 99.40%                  | 63.85           | 98.71%              | 0.01327   | 35.85                   | 77.67%                  | 39.21           |       |
| 20  | 0.00056                                 | 0.00023 | 0.00040   | 99.36%                  | 62.87           | 98.71%              | 0.01329   | 33.65                   | 76.64%                  | 38.73           |       |
| 21  | 0.00059                                 | 0.00023 | 0.00041   | 99.32%                  | 61.90           | 98.71%              | 0.01330   | 32.45                   | 75.62%                  | 38.25           |       |
| 22  | 0.00061                                 | 0.00024 | 0.00043   | 99.28%                  | 60.92           | 98.71%              | 0.01332   | 31.34                   | 74.61%                  | 37.75           |       |
| 23  | 0.00063                                 | 0.00025 | 0.00044   | 99.24%                  | 59.95           | 98.71%              | 0.01333   | 30.31                   | 73.62%                  | 37.26           |       |
| 24  | 0.00064                                 | 0.00026 | 0.00045   | 99.19%                  | 58.98           | 98.71%              | 0.01334   | 29.65                   | 72.64%                  | 36.75           |       |
| 25  | 0.00065                                 | 0.00027 | 0.00046   | 99.15%                  | 58.00           | 98.71%              | 0.01335   | 29.03                   | 71.67%                  | 36.24           |       |
| 26  | 0.00066                                 | 0.00028 | 0.00047   | 99.10%                  | 57.03           | 98.71%              | 0.01336   | 28.43                   | 70.71%                  | 35.73           |       |
| 27  | 0.00068                                 | 0.00029 | 0.00049   | 99.06%                  | 56.06           | 98.71%              | 0.01338   | 27.58                   | 69.77%                  | 35.20           |       |
| 28  | 0.00070                                 | 0.00031 | 0.00051   | 99.01%                  | 55.08           | 98.71%              | 0.01340   | 26.53                   | 68.83%                  | 34.68           |       |
| 29  | 0.00073                                 | 0.00033 | 0.00053   | 98.96%                  | 54.11           | 98.71%              | 0.01342   | 25.33                   | 67.91%                  | 34.14           |       |
| 30  | 0.00077                                 | 0.00036 | 0.00057   | 98.91%                  | 53.14           | 98.71%              | 0.01346   | 23.82                   | 67.00%                  | 33.60           |       |
| 40  | 0.00142                                 | 0.00078 | 0.00110   | 98.14%                  | 43.51           | 98.71%              | 0.01399   | 12.71                   | 58.38%                  | 27.83           |       |
| 50  | 0.00298                                 | 0.00180 | 0.00239   | 96.59%                  | 34.12           | 0.01882             | 7.88      | 49.72%                  | 21.79                   |                 |       |
| 60  | 0.00675                                 | 0.00398 | 0.00537   | 93.23%                  | 25.15           | 0.02766             | 5.16      | 39.66%                  | 16.01                   |                 |       |
| 70  | 0.01613                                 | 0.00994 | 0.01304   | 85.99%                  | 16.79           | 0.04643             | 3.56      | 27.86%                  | 10.62                   |                 |       |
| 80  | 0.04793                                 | 0.03188 | 0.03991   | 68.61%                  | 9.59            | 0.09838             | 2.47      | 14.19%                  | 5.96                    |                 |       |
| 90  | 0.15455                                 | 0.12362 | 0.13909   | 31.16%                  | 4.58            | 0.26148             | 1.88      | 2.50%                   | 2.69                    |                 |       |
| 100 | 0.34389                                 | 0.31851 | 0.33120   | 2.52%                   | 2.20            | 0.58605             | 1.77      | 0.01%                   | 1.24                    |                 |       |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00%               | 97.95%    | 0.02384                 | 6.94                    | 100.00%         | 35.71               | 97.95%    | 0.02072                 | 81.27                   | 97.62%          | 35.57 |
| 1   | 97.95%              | 97.95%    | 0.02062                 | 142.18                  | 95.59%          | 35.31               | 97.95%    | 0.02060                 | 164.78                  | 93.62%          | 35.05 |
| 2   | 97.95%              | 97.95%    | 0.02058                 | 187.11                  | 91.69%          | 34.77               | 97.95%    | 0.02057                 | 205.72                  | 89.81%          | 34.49 |
| 3   | 97.95%              | 97.95%    | 0.02055                 | 256.91                  | 86.15%          | 33.91               | 97.95%    | 0.02055                 | 273.97                  | 84.38%          | 33.62 |
| 4   | 97.95%              | 97.95%    | 0.02055                 | 273.97                  | 82.65%          | 33.31               | 97.95%    | 0.02055                 | 273.97                  | 80.95%          | 33.00 |
| 5   | 97.95%              | 97.95%    | 0.02066                 | 111.65                  | 72.96%          | 31.34               | 97.95%    | 0.02066                 | 121.28                  | 74.49%          | 31.19 |
| 6   | 97.95%              | 97.95%    | 0.02071                 | 86.29                   | 71.45%          | 31.00               | 97.95%    | 0.02071                 | 87.11                   | 70.66%          | 30.87 |
| 7   | 97.95%              | 97.95%    | 0.02076                 | 71.58                   | 69.97%          | 30.64               | 97.95%    | 0.02076                 | 63.02                   | 68.52%          | 30.28 |
| 8   | 97.95%              | 97.95%    | 0.02084                 | 56.32                   | 67.09%          | 29.91               | 97.95%    | 0.02084                 | 56.32                   | 67.09%          | 29.91 |
| 9   | 97.95%              | 97.95%    | 0.02086                 | 52.81                   | 65.69%          | 29.54               | 97.95%    | 0.02086                 | 52.81                   | 65.69%          | 29.54 |
| 10  | 97.95%              | 97.95%    | 0.02088                 | 50.92                   | 64.32%          | 29.16               | 97.95%    | 0.02088                 | 50.92                   | 64.32%          | 29.16 |
| 11  | 97.95%              | 97.95%    | 0.02089                 | 49.15                   | 62.98%          | 28.77               | 97.95%    | 0.02089                 | 49.15                   | 62.98%          | 28.77 |
| 12  | 97.95%              | 97.95%    | 0.02091                 | 47.51                   | 61.67%          | 28.37               | 97.95%    | 0.02091                 | 47.51                   | 61.67%          | 28.37 |
| 13  | 97.95%              | 97.95%    | 0.02092                 | 46.48                   | 60.38%          | 27.97               | 97.95%    | 0.02092                 | 45.49                   | 59.11%          | 27.55 |
| 14  | 97.95%              | 97.95%    | 0.02093                 | 45.49                   | 59.11%          | 27.55               | 97.95%    | 0.02093                 | 45.49                   | 59.11%          | 27.55 |
| 15  | 97.95%              | 97.95%    | 0.02093                 | 44.54                   | 57.88%          | 27.13               | 97.95%    | 0.02093                 | 44.54                   | 57.88%          | 27.13 |
| 16  | 97.95%              | 97.95%    | 0.02095                 | 43.19                   | 56.66%          | 26.70               | 97.95%    | 0.02095                 | 43.19                   | 56.66%          | 26.70 |
| 17  | 97.95%              | 97.95%    | 0.02096                 | 42.73                   | 55.44%          | 26.26               | 97.95%    | 0.02096                 | 42.73                   | 55.44%          | 26.26 |
| 18  | 97.95%              | 97.95%    | 0.02097                 | 41.52                   | 54.58%          | 26.26               | 97.95%    | 0.02097                 | 41.52                   | 54.58%          | 26.26 |
| 19  | 97.95%              | 97.95%    | 0.02099                 | 39.61                   | 54.31%          | 25.81               | 97.95%    | 0.02099                 | 39.61                   | 54.31%          | 25.81 |
| 20  | 97.95%              | 97.95%    | 0.02103                 | 37.22                   | 53.17%          | 25.35               | 97.95%    | 0.02103                 | 37.22                   | 53.17%          | 25.35 |
| 21  | 97.95%              | 97.95%    | 0.02103                 | 36.73                   | 52.08%          | 20.73               | 97.95%    | 0.02103                 | 36.73                   | 52.08%          | 20.73 |
| 22  | 97.95%              | 97.95%    | 0.02103                 | 36.23                   | 51.21%          | 16.21               | 97.95%    | 0.02103                 | 36.23                   | 51.21%          | 16.21 |
| 23  | 97.95%              | 97.95%    | 0.02103                 | 35.73                   | 50.31%          | 16.21               | 97.95%    | 0.02103                 | 35.73                   | 50.31%          | 16.21 |
| 24  | 97.95%              | 97.95%    | 0.02103                 | 35.23                   | 49.41%          | 16.21               | 97.95%    | 0.02103                 | 35.23                   | 49.41%          | 16.21 |
| 25  | 97.95%              | 97.95%    | 0.02103                 | 34.73                   | 48.51%          | 16.21               | 97.95%    | 0.02103                 | 34.73                   | 48.51%          | 16.21 |
| 26  | 97.95%              | 97.95%    | 0.02103                 | 34.23                   | 47.61%          | 16.21               | 97.95%    | 0.02103                 | 34.23                   | 47.61%          | 16.21 |
| 27  | 97.95%              | 97.95%    | 0.02103                 | 33.73                   | 46.71%          | 16.21               | 97.95%    | 0.02103                 | 33.73                   | 46.71%          | 16.21 |
| 28  | 97.95%              | 97.95%    | 0.02103                 | 33.23                   | 45.81%          | 16.21               | 97.95%    | 0.02103                 | 33.23                   | 45.81%          | 16.21 |
| 29  | 97.95%              | 97.95%    | 0.02103                 | 32.73                   | 44.91%          | 16.21               | 97.95%    | 0.02103                 | 32.73                   | 44.91%          | 16.   |

## I Touyama et al (2013)

Target and fitted criteria are as follows:

**GMFCS V**

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 2                         | 5  | 94%    | 93%    | 0.094     |
| 2                         | 10 | 84%    | 84%    | 0.001     |
| 2                         | 15 | 76%    | 77%    | 0.108     |
| 2                         | 20 | 72%    | 71%    | 0.044     |
| Total                     |    |        | 0.2466 |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (Japan) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|----------------------------|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Male                       | Female  | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00194                    | 0.00198 | 0.00194   | 100.00%                 | 80.98           | 3.47%               | 97.38%    | 0.02804                 | 14.45                   | 100.00%         | 43.70 |
| 1   | 0.00031                    | 0.00029 | 0.00031   | 99.81%                  | 80.14           | 97.48%              | 0.02555   | 82.41                   | 97.20%                  | 43.94           |       |
| 2   | 0.00021                    | 0.00019 | 0.00021   | 99.78%                  | 79.16           | 97.56%              | 0.02458   | 117.02                  | 94.71%                  | 44.08           |       |
| 3   | 0.00014                    | 0.00012 | 0.00014   | 99.75%                  | 78.18           | 97.65%              | 0.02366   | 169.02                  | 92.39%                  | 44.18           |       |
| 4   | 0.00010                    | 0.00009 | 0.00010   | 99.74%                  | 77.19           | 97.73%              | 0.02281   | 228.08                  | 90.20%                  | 44.24           |       |
| 5   | 0.00009                    | 0.00007 | 0.00009   | 99.73%                  | 76.20           | 97.81%              | 0.02201   | 244.57                  | 88.14%                  | 44.26           |       |
| 6   | 0.00009                    | 0.00007 | 0.00009   | 99.72%                  | 75.21           | 97.88%              | 0.02125   | 236.13                  | 86.20%                  | 44.24           |       |
| 7   | 0.00008                    | 0.00006 | 0.00008   | 99.71%                  | 74.21           | 97.96%              | 0.02051   | 256.36                  | 84.37%                  | 44.19           |       |
| 8   | 0.00007                    | 0.00005 | 0.00007   | 99.70%                  | 73.22           | 98.03%              | 0.01979   | 282.73                  | 82.64%                  | 44.11           |       |
| 9   | 0.00007                    | 0.00006 | 0.00007   | 99.70%                  | 72.22           | 98.10%              | 0.01911   | 272.97                  | 81.00%                  | 43.99           |       |
| 10  | 0.00007                    | 0.00006 | 0.00007   | 99.69%                  | 71.23           | 98.16%              | 0.01845   | 263.54                  | 79.46%                  | 43.84           |       |
| 11  | 0.00007                    | 0.00007 | 0.00007   | 99.68%                  | 70.23           | 98.23%              | 0.01781   | 254.45                  | 77.99%                  | 43.65           |       |
| 12  | 0.00008                    | 0.00007 | 0.00008   | 99.68%                  | 69.24           | 98.29%              | 0.01721   | 215.08                  | 76.60%                  | 43.43           |       |
| 13  | 0.00010                    | 0.00007 | 0.00010   | 99.67%                  | 68.24           | 98.35%              | 0.01663   | 166.33                  | 75.28%                  | 43.19           |       |
| 14  | 0.00013                    | 0.00008 | 0.00013   | 99.66%                  | 67.25           | 98.40%              | 0.01609   | 123.76                  | 74.03%                  | 42.91           |       |
| 15  | 0.00017                    | 0.00009 | 0.00017   | 99.65%                  | 66.26           | 98.46%              | 0.01558   | 91.62                   | 72.84%                  | 42.60           |       |
| 16  | 0.00021                    | 0.00011 | 0.00021   | 99.63%                  | 65.27           | 98.51%              | 0.01508   | 71.81                   | 71.71%                  | 42.27           |       |
| 17  | 0.00026                    | 0.00012 | 0.00026   | 99.61%                  | 64.28           | 98.56%              | 0.01462   | 56.21                   | 70.62%                  | 41.91           |       |
| 18  | 0.00031                    | 0.00013 | 0.00031   | 99.58%                  | 63.30           | 98.61%              | 0.01417   | 45.70                   | 69.59%                  | 41.52           |       |
| 19  | 0.00038                    | 0.00014 | 0.00038   | 99.55%                  | 62.32           | 98.66%              | 0.01376   | 36.20                   | 68.61%                  | 41.11           |       |
| 20  | 0.00045                    | 0.00016 | 0.00045   | 99.51%                  | 61.34           | 98.71%              | 0.01336   | 29.69                   | 67.66%                  | 40.68           |       |
| 21  | 0.00049                    | 0.00019 | 0.00049   | 99.47%                  | 60.37           | 98.75%              | 0.01295   | 26.44                   | 66.76%                  | 40.22           |       |
| 22  | 0.00050                    | 0.00022 | 0.00050   | 99.42%                  | 59.40           | 98.80%              | 0.01253   | 25.06                   | 65.89%                  | 39.74           |       |
| 23  | 0.00051                    | 0.00024 | 0.00051   | 99.37%                  | 58.43           | 98.84%              | 0.01212   | 23.77                   | 65.07%                  | 39.24           |       |
| 24  | 0.00051                    | 0.00025 | 0.00051   | 99.32%                  | 57.46           | 98.88%              | 0.01172   | 22.98                   | 64.28%                  | 38.72           |       |
| 25  | 0.00052                    | 0.00026 | 0.00052   | 99.27%                  | 56.49           | 98.92%              | 0.01134   | 21.81                   | 63.53%                  | 38.17           |       |
| 26  | 0.00053                    | 0.00025 | 0.00053   | 99.22%                  | 55.52           | 98.95%              | 0.01098   | 20.71                   | 62.80%                  | 37.60           |       |
| 27  | 0.00054                    | 0.00025 | 0.00054   | 99.16%                  | 54.55           | 98.99%              | 0.01063   | 19.68                   | 62.12%                  | 37.01           |       |
| 28  | 0.00055                    | 0.00025 | 0.00055   | 99.11%                  | 53.58           | 99.03%              | 0.01029   | 18.70                   | 61.46%                  | 36.41           |       |
| 29  | 0.00056                    | 0.00027 | 0.00056   | 99.06%                  | 52.61           | 99.06%              | 0.00996   | 17.78                   | 60.82%                  | 35.78           |       |
| 30  | 0.00058                    | 0.00028 | 0.00058   | 99.00%                  | 51.63           | 99.09%              | 0.00965   | 16.64                   | 60.22%                  | 35.13           |       |
| 40  | 0.00098                    | 0.00060 | 0.00098   | 98.30%                  | 41.96           |                     | 0.01214   | 12.39                   | 54.10%                  | 28.53           |       |
| 50  | 0.00264                    | 0.00151 | 0.00264   | 96.75%                  | 32.54           |                     | 0.01704   | 6.45                    | 46.95%                  | 22.09           |       |
| 60  | 0.00670                    | 0.00306 | 0.00670   | 92.83%                  | 23.68           |                     | 0.02649   | 3.95                    | 38.08%                  | 16.02           |       |
| 70  | 0.01702                    | 0.00707 | 0.01702   | 83.34%                  | 15.72           |                     | 0.04682   | 2.75                    | 26.82%                  | 10.57           |       |
| 80  | 0.04718                    | 0.02308 | 0.04718   | 63.28%                  | 8.93            |                     | 0.09965   | 2.11                    | 13.62%                  | 5.90            |       |
| 90  | 0.15129                    | 0.09489 | 0.15129   | 25.60%                  | 4.31            |                     | 0.26004   | 1.72                    | 2.35%                   | 2.71            |       |
| 100 | 0.37355                    | 0.29406 | 0.37355   | 1.59%                   | 2.17            |                     | 0.58944   | 1.58                    | 0.01%                   | 1.38            |       |

Target and fitted criteria are as follows:

#### Does not lift head, Tube fed

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 68%    | 66%    | 0.795     |
| 4                         | 15 | 48%    | 47%    | 0.086     |
| 4                         | 20 | 33%    | 35%    | 0.963     |
| 4                         | 25 | 25%    | 26%    | 0.382     |
| 4                         | 30 | 21%    | 20%    | 0.770     |
| Total                     |    | 2.9959 |        |           |

#### Does not lift head, Fed orally by others

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 80%    | 78%    | 0.455     |
| 4                         | 15 | 66%    | 64%    | 0.470     |
| 4                         | 20 | 51%    | 53%    | 1.000     |
| 4                         | 25 | 43%    | 44%    | 0.500     |
| 4                         | 30 | 39%    | 37%    | 0.648     |
| Total                     |    | 3.0729 |        |           |

#### Does not lift head, Feeds self orally

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 95%    | 94%    | 0.226     |
| 4                         | 15 | 88%    | 90%    | 0.410     |
| 4                         | 20 | 88%    | 87%    | 0.076     |
| Total                     |    | 0.7124 |        |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (United States Life Tables, 2014) |           |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|-----------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Mortality  | Mortality | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00633  | 0.00531   | 0.00582   | 100.00%                 | 78.72           | 92.69%              | 0.07851   | 13.49                   | 100.00%                 | 14.58           |
| 1   | 0.00039  | 0.00034   | 0.00037   | 99.42%                  | 78.18           | 92.78%              | 0.07258   | 196.40                  | 92.15%                  | 14.77           |
| 2   | 0.00028  | 0.00022   | 0.00025   | 99.38%                  | 77.20           | 92.86%              | 0.07159   | 288.93                  | 85.46%                  | 14.89           |
| 3   | 0.00021  | 0.00016   | 0.00018   | 99.36%                  | 76.22           | 92.95%              | 0.07066   | 385.51                  | 79.34%                  | 15.00           |
| 4   | 0.00019  | 0.00013   | 0.00016   | 99.34%                  | 75.24           | 93.04%              | 0.06978   | 443.07                  | 73.74%                  | 15.10           |
| 5   | 0.00016  | 0.00012   | 0.00014   | 99.32%                  | 74.25           | 93.12%              | 0.06893   | 487.23                  | 68.59%                  | 15.20           |
| 6   | 0.00014  | 0.00011   | 0.00013   | 99.31%                  | 73.26           | 93.20%              | 0.06808   | 542.16                  | 63.86%                  | 15.29           |
| 7   | 0.00013  | 0.00010   | 0.00011   | 99.30%                  | 72.27           | 93.29%              | 0.06724   | 596.85                  | 59.52%                  | 15.37           |
| 8   | 0.00011  | 0.00009   | 0.00010   | 99.29%                  | 71.28           | 93.37%              | 0.06642   | 656.05                  | 55.51%                  | 15.44           |
| 9   | 0.00010  | 0.00008   | 0.00009   | 99.28%                  | 70.28           | 93.45%              | 0.06560   | 712.31                  | 51.83%                  | 15.50           |
| 10  | 0.00009  | 0.00008   | 0.00009   | 99.27%                  | 69.29           | 93.53%              | 0.06481   | 732.43                  | 48.43%                  | 15.56           |
| 11  | 0.00010  | 0.00009   | 0.00010   | 99.26%                  | 68.30           | 93.61%              | 0.06403   | 668.90                  | 45.29%                  | 15.60           |
| 12  | 0.00014  | 0.00010   | 0.00012   | 99.25%                  | 67.30           | 93.68%              | 0.06328   | 527.04                  | 42.39%                  | 15.63           |
| 13  | 0.00021  | 0.00013   | 0.00017   | 99.24%                  | 66.31           | 93.76%              | 0.06255   | 378.78                  | 39.71%                  | 15.65           |
| 14  | 0.00030  | 0.00016   | 0.00023   | 99.22%                  | 65.32           | 93.84%              | 0.06186   | 272.50                  | 37.22%                  | 15.66           |
| 15  | 0.00039  | 0.00019   | 0.00029   | 99.20%                  | 64.34           | 93.91%              | 0.06117   | 208.47                  | 34.92%                  | 15.66           |
| 16  | 0.00050  | 0.00023   | 0.00036   | 99.17%                  | 63.36           | 93.98%              | 0.06050   | 166.87                  | 32.78%                  | 15.65           |
| 17  | 0.00062  | 0.00027   | 0.00044   | 99.13%                  | 62.38           | 94.06%              | 0.05984   | 135.54                  | 30.80%                  | 15.63           |
| 18  | 0.00075  | 0.00031   | 0.00053   | 99.09%                  | 61.41           | 94.13%              | 0.05920   | 112.08                  | 28.96%                  | 15.59           |
| 19  | 0.00089  | 0.00034   | 0.00062   | 99.04%                  | 60.44           | 94.20%              | 0.05858   | 95.10                   | 27.24%                  | 15.54           |
| 20  | 0.00103  | 0.00038   | 0.00070   | 98.97%                  | 59.47           | 94.27%              | 0.05796   | 82.25                   | 25.65%                  | 15.48           |
| 21  | 0.00116  | 0.00041   | 0.00079   | 98.90%                  | 58.52           | 94.34%              | 0.05734   | 73.02                   | 24.16%                  | 15.40           |
| 22  | 0.00125  | 0.00044   | 0.00085   | 98.83%                  | 57.56           | 94.41%              | 0.05671   | 66.93                   | 22.78%                  | 15.30           |
| 23  | 0.00131  | 0.00047   | 0.00089   | 98.74%                  | 56.61           | 94.48%              | 0.05607   | 63.17                   | 21.48%                  | 15.19           |
| 24  | 0.00133  | 0.00050   | 0.00091   | 98.66%                  | 55.66           | 94.54%              | 0.05543   | 60.70                   | 20.28%                  | 15.07           |
| 25  | 0.00135  | 0.00052   | 0.00093   | 98.57%                  | 54.71           | 94.61%              | 0.05479   | 58.61                   | 19.16%                  | 14.92           |
| 26  | 0.00137  | 0.00055   | 0.00096   | 98.47%                  | 53.76           | 94.67%              | 0.05416   | 56.41                   | 18.11%                  | 14.76           |
| 27  | 0.00139  | 0.00058   | 0.00099   | 98.38%                  | 52.81           | 94.74%              | 0.05354   | 54.23                   | 17.13%                  | 14.57           |
| 28  | 0.00142  | 0.00061   | 0.00102   | 98.28%                  | 51.86           | 94.80%              | 0.05293   | 51.96                   | 16.21%                  | 14.37           |
| 29  | 0.00146  | 0.00064   | 0.00105   | 98.18%                  | 50.92           | 94.87%              | 0.05234   | 49.68                   | 15.35%                  | 14.15           |
| 30  | 0.00150  | 0.00068   | 0.00109   | 98.08%                  | 49.97           | 94.93%              | 0.05175   | 47.45                   | 14.55%                  | 13.90           |
| 40  | 0.00214  | 0.00135   | 0.00174   | 96.79%                  | 40.56           | 0.06415             | 36.80     | 8.10%                   | 11.23                   |                 |
| 50  | 0.00503  | 0.00321   | 0.00412   | 94.34%                  | 31.47           | 0.08456             | 20.51     | 3.82%                   | 8.63                    |                 |
| 60  | 0.01137  | 0.00672   | 0.00904   | 88.70%                  | 23.11           | 0.11857             | 13.11     | 1.35%                   | 6.25                    |                 |
| 70  | 0.02270  | 0.01514   | 0.01892   | 78.15%                  | 15.50           | 0.18228             | 9.64      | 0.29%                   | 4.07                    |                 |
| 80  | 0.05750  | 0.04213   | 0.04981   | 57.65%                  | 9.04            | 0.32994             | 6.62      | 0.02%                   | 2.20                    |                 |
| 90  | 0.16233  | 0.12810   | 0.14521   | 23.77%                  | 4.49            | 0.70916             | 4.88      | 0.00%                   | 0.87                    |                 |
| 100 | 1.00000  | 1.00000   | 1.00000   | 1.80%                   | 2.22            | 2.14286             | 2.14      | 0.00%                   | 1.03                    |                 |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.96%               | 0.04844   | 8.32                    | 100.00%                 | 23.20           | 0.96%               | 0.02207   | 3.79                    | 100.00%                 | 55.62           |
| 1   | 95.71%              | 0.04281   | 115.86                  | 95.16%                  | 23.35           | 95.75%              | 0.01572   | 42.53                   | 97.79%                  | 55.86           |
| 2   | 95.80%              | 0.04229   | 170.67                  | 91.08%                  | 23.37           | 95.86%              | 0.01467   | 59.21                   | 96.26%                  | 55.74           |
| 3   | 95.84%              | 0.04182   | 228.15                  | 87.23%                  | 23.38           | 96.08%              | 0.01373   | 74.92                   | 94.84%                  | 55.57           |
| 4   | 95.88%              | 0.04139   | 262.81                  | 83.58%                  | 23.38           | 96.21%              | 0.01289   | 81.83                   | 93.54%                  | 55.33           |
| 5   | 95.92%              | 0.04098   | 289.69                  | 80.12%                  | 23.37           | 96.34%              | 0.01210   | 85.55                   | 92.34%                  | 55.05           |
| 6   | 95.95%              | 0.04057   | 323.11                  | 76.84%                  | 23.35           | 96.47%              | 0.01136   | 90.50                   | 91.22%                  | 54.72           |
| 7   | 95.99%              | 0.04017   | 356.55                  | 73.72%                  | 23.31           | 96.57%              | 0.01067   | 94.72                   | 90.18%                  | 54.34           |
| 8   | 96.03%              | 0.03977   | 392.85                  | 70.76%                  | 23.27           | 96.67%              | 0.01002   | 98.98                   | 89.22%                  | 53.92           |
| 9   | 96.07%              | 0.03938   | 427.58                  | 67.95%                  | 23.21           | 96.77%              | 0.00941   | 102.19                  | 88.33%                  | 53.46           |
| 10  | 96.11%              | 0.03900   | 440.74                  | 65.27%                  | 23.14           | 96.87%              | 0.00884   | 99.96                   | 87.49%                  | 52.97           |
| 11  | 96.15%              | 0.03863   | 403.55                  | 62.73%                  | 23.06           | 96.97%              | 0.00832   | 86.94                   | 86.72%                  | 52.43           |
| 12  | 96.18%              | 0.03828   | 318.85                  | 60.30%                  | 22.97           | 97.00%              | 0.00785   | 65.37                   | 86.00%                  | 51.87           |
| 13  | 96.22%              | 0.03796   | 229.84                  | 57.99%                  | 22.86           | 97.07%              | 0.00743   | 44.96                   | 85.32%                  | 51.28           |
| 14  | 96.26%              | 0.03765   | 165.87                  | 55.79%                  | 22.74           | 97.12%              | 0.00705   | 31.05                   | 84.69%                  | 50.66           |
| 15  | 96.29%              | 0.03735   | 127.30                  | 53.69%                  | 22.61           | 97.17%              | 0.00670   | 22.84                   | 84.09%                  | 50.01           |
| 16  | 96.33%              | 0.03706   | 102.23                  | 51.69%                  | 22.47           | 97.22%              | 0.00638   | 17.60                   | 83.53%                  | 49.35           |
| 17  | 96.36%              | 0.03679   | 83.32                   | 49.77%                  | 22.32           | 97.27%              | 0.00610   | 13.81                   | 83.00%                  | 48.66           |
| 18  | 96.40%              | 0.03652   | 69.13                   | 47.94%                  | 22.15           | 97.32%              | 0.00584   | 11.06                   | 82.49%                  | 47.95           |
| 19  | 96.43%              | 0.03626   | 58.87                   | 46.19%                  | 21.97           | 97.37%              | 0.00561   | 9.10                    | 82.01%                  | 47.23           |
| 20  | 96.47%              | 0.03600   | 51.09                   | 44.51%                  | 21.78           | 97.42%              | 0.00539   | 7.65                    | 81.55%                  | 46.50           |
| 21  | 96.50%              | 0.03574   | 45.51                   | 42.91%                  | 21.57           | 97.47%              | 0.00515   | 6.05                    | 80.20%                  | 44.25           |
| 22  | 96.54%              | 0.03546   | 41.85                   | 41.38%                  | 21.35           | 97.52%              | 0.00492   | 4.69                    | 79.73%                  | 43.51           |
| 23  | 96.57%              | 0.03516   | 39.62                   | 39.91%                  | 21.12           | 97.57%              | 0.00469   | 3.00                    | 78.26%                  | 42.77           |
| 24  | 96.60%              | 0.03486   | 38.17                   | 38.51%                  | 20.87           | 97.62%              | 0.00446   | 2.38                    | 77.80%                  | 42.02           |
| 25  | 96.64%              | 0.03455   | 36.96                   | 37.17%                  | 20.61           | 97.67%              | 0.00423   | 1.76                    | 77.34%                  | 41.28           |
| 26  | 96.67%              | 0.03425   | 35.68                   | 35.88%                  | 20.33           | 97.72%              | 0.00401   | 1.14                    | 77.81%                  | 40.54           |
| 27  | 96.70%              | 0.03396   | 34.39                   | 34.65%                  | 20.03           | 97.77%              | 0.00379   | 0.52                    | 78.00%                  | 40.00           |
| 28  | 96.73%              | 0.03367   | 33.05                   | 33.48%                  | 19.72           | 97.82%              | 0.00357   | 0.00                    | 77.31%                  | 39.79           |
| 29  | 96.76%              | 0.03339   | 31.70                   | 32.35%                  | 19.39           | 97.87%              | 0.00335   | 6.20                    | 76.81%                  | 39.05           |
| 30  | 96.79%              | 0.03311   | 30.36                   | 31.27%                  | 19.04           | 97.92%              | 0.00313   | 6.12                    | 76                      |                 |

Target and fitted criteria are as follows:

#### Lifts head but not chest, Tube fed

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 73%    | 74%    | 0.282     |
| 4                         | 15 | 58%    | 59%    | 0.085     |
| 4                         | 20 | 48%    | 47%    | 0.419     |
| 4                         | 25 | 38%    | 37%    | 0.183     |
| 4                         | 30 | 29%    | 30%    | 0.245     |
| Total                     |    |        | 1.2141 |           |

#### Lifts head but not chest, Fed orally by others

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 85%    | 83%    | 0.563     |
| 4                         | 15 | 73%    | 71%    | 0.685     |
| 4                         | 20 | 61%    | 60%    | 0.064     |
| 4                         | 25 | 49%    | 51%    | 1.187     |
| 4                         | 30 | 44%    | 44%    | 0.015     |
| Total                     |    |        | 2.5142 |           |

#### Lifts head but not chest, Feeds self orally

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 95%    | 93%    | 0.367     |
| 4                         | 15 | 89%    | 88%    | 0.171     |
| 4                         | 20 | 84%    | 83%    | 0.240     |
| 4                         | 25 | 74%    | 78%    | 1.704     |
| 4                         | 30 | 74%    | 73%    | 0.204     |
| Total                     |    |        | 2.6871 |           |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (United States Life Tables, 2014) |           |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|-----------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Mortality  | Mortality | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00633  | 0.00531   | 0.00582   | 100.00%                 | 78.72           | 95.01%              | 0.05547   | 9.53                    | 100.00%                 | 19.57           |
| 1   | 0.00039  | 0.00034   | 0.00037   | 99.42%                  | 78.18           | 95.04%              | 0.04997   | 135.23                  | 94.45%                  | 19.69           |
| 2   | 0.00028  | 0.00022   | 0.00025   | 99.38%                  | 77.20           | 95.07%              | 0.04954   | 199.94                  | 89.73%                  | 19.70           |
| 3   | 0.00021  | 0.00016   | 0.00018   | 99.36%                  | 76.22           | 95.10%              | 0.04916   | 268.21                  | 85.29%                  | 19.70           |
| 4   | 0.00019  | 0.00013   | 0.00016   | 99.34%                  | 75.24           | 95.13%              | 0.04882   | 309.99                  | 81.10%                  | 19.69           |
| 5   | 0.00016  | 0.00012   | 0.00014   | 99.32%                  | 74.25           | 95.16%              | 0.04850   | 342.83                  | 77.14%                  | 19.67           |
| 6   | 0.00014  | 0.00011   | 0.00013   | 99.31%                  | 73.26           | 95.19%              | 0.04817   | 383.65                  | 73.39%                  | 19.65           |
| 7   | 0.00013  | 0.00010   | 0.00011   | 99.30%                  | 72.27           | 95.23%              | 0.04785   | 424.75                  | 69.86%                  | 19.62           |
| 8   | 0.00011  | 0.00009   | 0.00010   | 99.29%                  | 71.28           | 95.26%              | 0.04754   | 469.55                  | 66.52%                  | 19.58           |
| 9   | 0.00010  | 0.00008   | 0.00009   | 99.28%                  | 70.28           | 95.29%              | 0.04722   | 512.75                  | 63.35%                  | 19.53           |
| 10  | 0.00009  | 0.00008   | 0.00009   | 99.27%                  | 69.29           | 95.32%              | 0.04692   | 530.27                  | 60.36%                  | 19.48           |
| 11  | 0.00010  | 0.00009   | 0.00010   | 99.26%                  | 68.30           | 95.35%              | 0.04663   | 487.09                  | 57.53%                  | 19.41           |
| 12  | 0.00014  | 0.00010   | 0.00012   | 99.25%                  | 67.30           | 95.38%              | 0.04635   | 386.07                  | 54.85%                  | 19.34           |
| 13  | 0.00021  | 0.00013   | 0.00017   | 99.24%                  | 66.31           | 95.41%              | 0.04610   | 279.14                  | 52.31%                  | 19.25           |
| 14  | 0.00030  | 0.00016   | 0.00023   | 99.22%                  | 65.32           | 95.44%              | 0.04586   | 202.05                  | 49.89%                  | 19.16           |
| 15  | 0.00039  | 0.00019   | 0.00029   | 99.20%                  | 64.34           | 95.46%              | 0.04564   | 155.52                  | 47.61%                  | 19.06           |
| 16  | 0.00050  | 0.00023   | 0.00036   | 99.17%                  | 63.36           | 95.49%              | 0.04541   | 125.26                  | 45.43%                  | 18.94           |
| 17  | 0.00062  | 0.00027   | 0.00044   | 99.13%                  | 62.38           | 95.52%              | 0.04520   | 102.37                  | 43.37%                  | 18.82           |
| 18  | 0.00075  | 0.00031   | 0.00053   | 99.09%                  | 61.41           | 95.55%              | 0.04499   | 85.18                   | 41.41%                  | 18.69           |
| 19  | 0.00089  | 0.00034   | 0.00062   | 99.04%                  | 60.44           | 95.58%              | 0.04479   | 72.73                   | 39.55%                  | 18.55           |
| 20  | 0.00103  | 0.00038   | 0.00070   | 98.97%                  | 59.47           | 95.61%              | 0.04460   | 63.29                   | 37.78%                  | 18.39           |
| 21  | 0.00116  | 0.00041   | 0.00079   | 98.90%                  | 58.52           | 95.64%              | 0.04439   | 56.53                   | 36.09%                  | 18.23           |
| 22  | 0.00125  | 0.00044   | 0.00085   | 98.83%                  | 57.56           | 95.66%              | 0.04417   | 52.13                   | 34.49%                  | 18.05           |
| 23  | 0.00131  | 0.00047   | 0.00089   | 98.74%                  | 56.61           | 95.69%              | 0.04393   | 49.50                   | 32.97%                  | 17.86           |
| 24  | 0.00133  | 0.00050   | 0.00091   | 98.66%                  | 55.66           | 95.72%              | 0.04368   | 47.84                   | 31.52%                  | 17.66           |
| 25  | 0.00135  | 0.00052   | 0.00093   | 98.57%                  | 54.71           | 95.75%              | 0.04343   | 46.46                   | 30.14%                  | 17.44           |
| 26  | 0.00137  | 0.00055   | 0.00096   | 98.47%                  | 53.76           | 95.77%              | 0.04318   | 44.98                   | 28.83%                  | 17.21           |
| 27  | 0.00139  | 0.00058   | 0.00099   | 98.38%                  | 52.81           | 95.80%              | 0.04294   | 43.49                   | 27.59%                  | 16.97           |
| 28  | 0.00142  | 0.00061   | 0.00102   | 98.28%                  | 51.86           | 95.83%              | 0.04270   | 41.92                   | 26.40%                  | 16.70           |
| 29  | 0.00146  | 0.00064   | 0.00105   | 98.18%                  | 50.92           | 95.85%              | 0.04247   | 40.31                   | 25.27%                  | 16.43           |
| 30  | 0.00150  | 0.00068   | 0.00109   | 98.08%                  | 49.97           | 95.88%              | 0.04224   | 38.73                   | 24.20%                  | 16.13           |
| 40  | 0.00214  | 0.00135   | 0.00174   | 96.79%                  | 40.56           | 0.05243             | 30.08     | 15.04%                  | 13.04                   |                 |
| 50  | 0.00503  | 0.00321   | 0.00412   | 94.34%                  | 31.47           | 0.06945             | 16.85     | 8.16%                   | 10.05                   |                 |
| 60  | 0.01137  | 0.00672   | 0.00904   | 88.70%                  | 23.11           | 0.09800             | 10.84     | 3.50%                   | 7.29                    |                 |
| 70  | 0.02270  | 0.01514   | 0.01892   | 78.15%                  | 15.50           | 0.15160             | 8.01      | 0.99%                   | 4.78                    |                 |
| 80  | 0.05750  | 0.04213   | 0.04981   | 57.65%                  | 9.04            | 0.27734             | 5.57      | 0.11%                   | 2.62                    |                 |
| 90  | 0.16233  | 0.12810   | 0.14521   | 23.77%                  | 4.49            | 0.60326             | 4.15      | 0.00%                   | 1.09                    |                 |
| 100 | 1.00000  | 1.00000   | 1.00000   | 1.80%                   | 2.22            | 1.92824             | 1.93      | 0.00%                   | 1.15                    |                 |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.000%              | 0.03646   | 6.27                    | 100.00%                 | 26.77           | 0.000%              | 0.03118   | 84.38                   | 96.35%                  | 26.76           |
| 1   | 96.92%              | 0.03106   | 125.38                  | 93.35%                  | 26.60           | 96.92%              | 0.03106   | 169.13                  | 90.45%                  | 26.44           |
| 2   | 96.92%              | 0.03098   | 196.68                  | 87.65%                  | 26.27           | 96.92%              | 0.03096   | 218.86                  | 84.93%                  | 26.10           |
| 3   | 96.92%              | 0.03095   | 246.45                  | 82.30%                  | 25.91           | 96.92%              | 0.03093   | 274.57                  | 79.75%                  | 25.73           |
| 4   | 96.92%              | 0.03092   | 305.44                  | 77.29%                  | 25.53           | 96.92%              | 0.03091   | 335.65                  | 74.90%                  | 25.33           |
| 5   | 96.92%              | 0.03091   | 349.34                  | 72.58%                  | 25.12           | 96.92%              | 0.03111   | 106.02                  | 62.02%                  | 23.98           |
| 6   | 96.92%              | 0.03104   | 136.76                  | 64.01%                  | 24.22           | 96.92%              | 0.03125   | 70.78                   | 58.22%                  | 23.48           |
| 7   | 96.92%              | 0.03134   | 59.32                   | 56.40%                  | 23.23           | 96.92%              | 0.03142   | 51.01                   | 54.63%                  | 22.96           |
| 8   | 96.92%              | 0.03137   | 33.94                   | 45.06%                  | 21.22           | 96.92%              | 0.03151   | 44.71                   | 52.91%                  | 22.69           |
| 9   | 96.92%              | 0.03159   | 40.22                   | 51.25%                  | 22.41           | 96.92%              | 0.03178   | 31.23                   | 40.90%                  | 20.23           |
| 10  | 96.92%              | 0.03181   | 23.17                   | 39.60%                  | 19.88           | 96.92%              | 0.03188   | 29.23                   | 38.34%                  | 19.51           |
| 11  | 96.92%              | 0.03186   | 16.92                   | 37.22%                  | 18.21           | 96.92%              | 0.03193   | 22.75                   | 36.50%                  | 17.55           |
| 12  | 96.92%              | 0.03197   | 12.86                   | 35.77%                  | 16.90           | 96.92%              | 0.03204   | 27.42                   | 35.00%                  | 16.24           |
| 13  | 96.92%              | 0.03207   | 8.36                    | 34.24%                  | 15.77           | 96.92%              | 0.03214   | 32.19                   | 34.24%                  | 15.21           |
| 14  | 96.92%              | 0.03217   | 4.25                    | 33.77%                  | 14.70           | 96.92%              | 0.03224   | 37.33                   | 33.77%                  | 14.17           |
| 15  | 96.92%              | 0.03227   | 2.25                    | 33.27%                  | 13.63           | 96.92%              | 0.03236   | 42.74                   | 32.77%                  | 13.13           |
| 16  | 96.92%              | 0.03237   | 1.25                    | 32.77%                  | 12.53           | 96.92%              | 0.03246   | 48.15                   | 32.27%                  | 12.03           |
| 17  | 96.92%              | 0.03247   | 0.25                    | 32.27%                  | 11.43           | 96.92%              | 0.03256   | 53.55                   | 31.77%                  | 11.33           |
| 18  | 96.92%              | 0.03257   | 0.15                    | 31.77%                  | 10.33           | 96.92%              | 0.03266   | 58.95                   | 31.27%                  | 10.23           |
| 19  | 96.92%              | 0.03267   | 0.05                    | 31.27%                  | 9.23            | 96.92%              | 0.03276   | 64.35                   | 30.77%                  | 9.13            |
| 20  | 96.92%              | 0.03287   | 0.00                    | 30.77%                  | 8.13            | 96.92%              | 0.03296   | 69.75                   | 30.27%                  | 8.03            |
| 21  | 96.92%              | 0.03297   | -0.05                   | 30.27%                  | 7.03            | 96.92%              | 0.03305   | 75.15                   | 29.77%                  | 7.03            |
| 22  | 96.92%              | 0.03306   | -0.10                   | 29.77%                  | 5.93            | 96.92%              | 0.03314   | 80.55                   | 29.27%                  | 5.93            |
| 23  | 96.92%              | 0.03315   | -0.15                   | 29.27%                  | 4.83            | 96.92%              | 0.03323   | 85.95                   | 28.77%                  | 4.83            |
| 24  | 96.92%              | 0.03326   | -0.20                   | 28.77%                  | 3.73            | 96.92%              | 0.03335   | 91.35                   | 28.27%                  | 3.73            |
| 25  | 96.92%              | 0.03336   | -0.25                   | 28.27%                  | 2.63            | 96.92%              | 0.03344   | 96.75                   | 27.77%                  | 2.63            |
| 26  | 96.92%              | 0.03347   | -0.30                   | 27.77%                  | 1.53            | 96.92%              | 0.03353   | 102.15                  | 27.27%                  | 1.53            |
| 27  | 96.92%              | 0.03357   | -0.35                   | 27.27%                  | 0.43            | 96.92%              | 0.03366   | 107.55                  | 26.77%                  | 0.43            |
| 28  | 96.92%              | 0.03366   | -0.40                   | 26.77%                  | -0.50           | 96.92%              | 0.03375   | 112.95                  | 26.27%                  | -0.50           |
| 29  | 96.92%              | 0.03375   | -0.45                   | 26.27%                  | -1.40           | 96.92%              | 0.03384   | 118.35                  | 25.77%                  | -1.40           |
| 30  | 96.92%              | 0.033     |                         |                         |                 |                     |           |                         |                         |                 |

Target and fitted criteria are as follows:

#### Lifts head and chest, Tube fed

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 77%    | 80%    | 1.161     |
| 4                         | 15 | 65%    | 66%    | 0.303     |
| 4                         | 20 | 59%    | 55%    | 2.658     |
| 4                         | 25 | 48%    | 46%    | 1.266     |
| 4                         | 30 | 35%    | 38%    | 1.991     |
| Total                     |    |        | 7.3794 |           |

#### Lifts head and chest, Fed orally by others

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 90%    | 87%    | 0.738     |
| 4                         | 15 | 81%    | 78%    | 1.001     |
| 4                         | 20 | 73%    | 70%    | 1.441     |
| 4                         | 25 | 62%    | 62%    | 0.003     |
| 4                         | 30 | 52%    | 55%    | 2.118     |
| Total                     |    |        | 5.3017 |           |

#### Lifts head and chest, Feeds self orally

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 4                         | 10 | 96%    | 95%    | 0.097     |
| 4                         | 15 | 93%    | 91%    | 0.398     |
| 4                         | 20 | 91%    | 87%    | 1.631     |
| 4                         | 25 | 85%    | 83%    | 0.368     |
| 4                         | 30 | 75%    | 79%    | 2.612     |
| Total                     |    |        | 5.1061 |           |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (United States Life Tables, 2014) |           |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|-----------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Mortality  | Mortality | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00633  | 0.00531   | 0.00582   | 100.00%                 | 78.72           | 96.36%              | 0.04202   | 7.22                    | 100.00%                 | 23.60           |
| 1   | 0.00039  | 0.00034   | 0.00037   | 99.42%                  | 78.18           | 96.36%              | 0.03677   | 99.50                   | 95.80%                  | 23.61           |
| 2   | 0.00028  | 0.00022   | 0.00025   | 99.38%                  | 77.20           | 96.36%              | 0.03665   | 147.92                  | 92.28%                  | 23.49           |
| 3   | 0.00021  | 0.00016   | 0.00018   | 99.36%                  | 76.22           | 96.36%              | 0.03659   | 199.61                  | 88.89%                  | 23.37           |
| 4   | 0.00019  | 0.00013   | 0.00016   | 99.34%                  | 75.24           | 96.36%              | 0.03656   | 232.14                  | 85.64%                  | 23.24           |
| 5   | 0.00016  | 0.00012   | 0.00014   | 99.32%                  | 74.25           | 96.36%              | 0.03655   | 258.35                  | 82.51%                  | 23.10           |
| 6   | 0.00014  | 0.00011   | 0.00013   | 99.31%                  | 73.26           | 96.36%              | 0.03653   | 290.94                  | 79.49%                  | 22.96           |
| 7   | 0.00013  | 0.00010   | 0.00011   | 99.30%                  | 72.27           | 96.36%              | 0.03652   | 324.16                  | 76.59%                  | 22.81           |
| 8   | 0.00011  | 0.00009   | 0.00010   | 99.29%                  | 71.28           | 96.36%              | 0.03651   | 360.62                  | 73.79%                  | 22.66           |
| 9   | 0.00010  | 0.00008   | 0.00009   | 99.28%                  | 70.28           | 96.36%              | 0.03650   | 396.30                  | 71.10%                  | 22.50           |
| 10  | 0.00009  | 0.00008   | 0.00009   | 99.27%                  | 69.29           | 96.36%              | 0.03650   | 412.47                  | 68.50%                  | 22.33           |
| 11  | 0.00010  | 0.00009   | 0.00010   | 99.26%                  | 68.30           | 96.36%              | 0.03650   | 381.34                  | 66.00%                  | 22.16           |
| 12  | 0.00014  | 0.00010   | 0.00012   | 99.25%                  | 67.30           | 96.36%              | 0.03653   | 304.23                  | 63.60%                  | 21.98           |
| 13  | 0.00021  | 0.00013   | 0.00017   | 99.24%                  | 66.31           | 96.36%              | 0.03657   | 221.44                  | 61.27%                  | 21.79           |
| 14  | 0.00030  | 0.00016   | 0.00023   | 99.22%                  | 65.32           | 96.36%              | 0.03663   | 161.37                  | 59.03%                  | 21.60           |
| 15  | 0.00039  | 0.00019   | 0.00029   | 99.20%                  | 64.34           | 96.36%              | 0.03669   | 125.05                  | 56.87%                  | 21.40           |
| 16  | 0.00050  | 0.00023   | 0.00036   | 99.17%                  | 63.36           | 96.36%              | 0.03676   | 101.40                  | 54.78%                  | 21.20           |
| 17  | 0.00062  | 0.00027   | 0.00044   | 99.13%                  | 62.38           | 96.36%              | 0.03684   | 83.43                   | 52.77%                  | 20.99           |
| 18  | 0.00075  | 0.00031   | 0.00053   | 99.09%                  | 61.41           | 96.36%              | 0.03692   | 69.89                   | 50.82%                  | 20.77           |
| 19  | 0.00089  | 0.00034   | 0.00062   | 99.04%                  | 60.44           | 96.36%              | 0.03700   | 60.08                   | 48.95%                  | 20.55           |
| 20  | 0.00103  | 0.00038   | 0.00070   | 98.97%                  | 59.47           | 96.36%              | 0.03709   | 52.64                   | 47.14%                  | 20.32           |
| 21  | 0.00116  | 0.00041   | 0.00079   | 98.90%                  | 58.52           | 96.36%              | 0.03717   | 47.33                   | 45.39%                  | 20.08           |
| 22  | 0.00125  | 0.00044   | 0.00085   | 98.83%                  | 57.56           | 96.36%              | 0.03723   | 43.94                   | 43.70%                  | 19.84           |
| 23  | 0.00131  | 0.00047   | 0.00089   | 98.74%                  | 56.61           | 96.36%              | 0.03727   | 41.98                   | 42.08%                  | 19.58           |
| 24  | 0.00133  | 0.00050   | 0.00091   | 98.66%                  | 55.66           | 96.36%              | 0.03729   | 40.84                   | 40.51%                  | 19.32           |
| 25  | 0.00135  | 0.00052   | 0.00093   | 98.57%                  | 54.71           | 96.36%              | 0.03731   | 39.92                   | 39.00%                  | 19.05           |
| 26  | 0.00137  | 0.00055   | 0.00096   | 98.47%                  | 53.76           | 96.36%              | 0.03734   | 38.89                   | 37.54%                  | 18.77           |
| 27  | 0.00139  | 0.00058   | 0.00099   | 98.38%                  | 52.81           | 96.36%              | 0.03736   | 37.84                   | 36.14%                  | 18.48           |
| 28  | 0.00142  | 0.00061   | 0.00102   | 98.28%                  | 51.86           | 96.36%              | 0.03739   | 36.71                   | 34.79%                  | 18.18           |
| 29  | 0.00146  | 0.00064   | 0.00105   | 98.18%                  | 50.92           | 96.36%              | 0.03743   | 35.53                   | 33.49%                  | 17.86           |
| 30  | 0.00150  | 0.00068   | 0.00109   | 98.08%                  | 49.97           | 96.36%              | 0.03746   | 34.35                   | 32.24%                  | 17.54           |
| 40  | 0.00214  | 0.00135   | 0.00174   | 96.79%                  | 40.56           |                     | 0.04655   | 26.70                   | 21.16%                  | 14.19           |
| 50  | 0.00503  | 0.00321   | 0.00412   | 94.34%                  | 31.47           |                     | 0.06187   | 15.01                   | 12.31%                  | 10.94           |
| 60  | 0.01137  | 0.00672   | 0.00904   | 88.70%                  | 23.11           |                     | 0.08768   | 9.69                    | 5.81%                   | 7.95            |
| 70  | 0.02270  | 0.01514   | 0.01892   | 78.15%                  | 15.50           |                     | 0.13620   | 7.20                    | 1.88%                   | 5.22            |
| 80  | 0.05750  | 0.04213   | 0.04981   | 57.65%                  | 9.04            |                     | 0.25093   | 5.04                    | 0.26%                   | 2.89            |
| 90  | 0.16233  | 0.12810   | 0.14521   | 23.77%                  | 4.49            |                     | 0.55010   | 3.79                    | 0.00%                   | 1.22            |
| 100 | 1.00000  | 1.00000   | 1.00000   | 1.80%                   | 2.22            |                     | 1.82051   | 1.82                    | 0.00%                   | 1.22            |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.000%              | 97.80%    | 0.02773                 | 4.76                    | 100.00%         | 33.58               | 97.80%    | 0.02240                 | 60.61                   | 97.23%          | 33.53 |
| 1   | 0.000%              | 97.80%    | 0.02228                 | 89.91                   | 95.05%          | 33.28               | 97.80%    | 0.02221                 | 121.19                  | 92.93%          | 33.03 |
| 2   | 0.000%              | 97.80%    | 0.02212                 | 240.22                  | 81.24%          | 31.36               | 97.80%    | 0.02217                 | 156.74                  | 88.85%          | 32.50 |
| 3   | 0.000%              | 97.80%    | 0.02212                 | 250.01                  | 79.44%          | 31.06               | 97.80%    | 0.02213                 | 231.17                  | 77.68%          | 30.75 |
| 4   | 0.000%              | 97.80%    | 0.02215                 | 184.50                  | 75.96%          | 30.44               | 97.80%    | 0.02220                 | 134.40                  | 74.28%          | 30.11 |
| 5   | 0.000%              | 97.80%    | 0.02226                 | 98.05                   | 72.63%          | 29.79               | 97.80%    | 0.02232                 | 76.07                   | 71.02%          | 29.45 |
| 6   | 0.000%              | 97.80%    | 0.02239                 | 61.76                   | 69.43%          | 29.11               | 97.80%    | 0.02247                 | 50.88                   | 67.88%          | 28.77 |
| 7   | 0.000%              | 97.80%    | 0.02255                 | 42.69                   | 66.35%          | 28.42               | 97.80%    | 0.02264                 | 36.75                   | 64.85%          | 28.06 |
| 8   | 0.000%              | 97.80%    | 0.02272                 | 32.25                   | 63.39%          | 27.70               | 97.80%    | 0.02272                 | 23.93                   | 55.17%          | 25.39 |
| 9   | 0.000%              | 97.80%    | 0.02295                 | 24.55                   | 56.47%          | 25.79               | 97.80%    | 0.02297                 | 23.93                   | 55.17%          | 25.39 |
| 10  | 0.000%              | 97.80%    | 0.02300                 | 23.30                   | 53.91%          | 24.97               | 97.80%    | 0.02303                 | 22.61                   | 52.67%          | 24.55 |
| 11  | 0.000%              | 97.80%    | 0.02306                 | 21.90                   | 51.45%          | 24.12               | 97.80%    | 0.02310                 | 21.18                   | 50.27%          | 23.67 |
| 12  | 0.000%              | 97.80%    | 0.02310                 | 20.58                   | 49.15%          | 22.80               | 97.80%    | 0.02314                 | 19.87                   | 48.86%          | 22.53 |
| 13  | 0.000%              | 97.80%    | 0.02317                 | 19.24                   | 47.86%          | 22.21               | 97.80%    | 0.02321                 | 18.50                   | 47.57%          | 21.90 |
| 14  | 0.000%              | 97.80%    | 0.02324                 | 18.50                   | 46.33%          | 21.77               | 97.80%    | 0.02328                 | 17.82                   | 46.04%          | 21.54 |
| 15  | 0.000%              | 97.80%    | 0.02332                 | 18.00                   | 45.04%          | 21.34               | 97.80%    | 0.02336                 | 17.28                   | 44.71%          | 21.18 |
| 16  | 0.000%              | 97.80%    | 0.02339                 | 17.50                   | 44.04%          | 20.94               | 97.80%    | 0.02343                 | 16.82                   | 44.04%          | 20.77 |
| 17  | 0.000%              | 97.80%    | 0.02346                 | 17.00                   | 43.24%          | 20.54               | 97.80%    | 0.02350                 | 16.18                   | 43.71%          | 20.34 |
| 18  | 0.000%              | 97.80%    | 0.02353                 | 16.50                   | 42.54%          | 20.24               | 97.80%    | 0.02357                 | 15.54                   | 43.41%          | 20.04 |
| 19  | 0.000%              | 97.80%    | 0.02360                 | 16.00                   | 41.94%          | 20.04               | 97.80%    | 0.02364                 | 14.54                   | 43.11%          | 19.84 |
| 20  | 0.000%              | 97.80%    | 0.02367                 | 15.50                   | 41.44%          | 19.84               | 97.80%    | 0.02371                 | 13.54                   | 42.81%          | 19.64 |
| 21  | 0.000%              | 97.80%    | 0.02374                 | 15.00                   | 41.04%          | 19.64               | 97.80%    | 0.02378                 | 12.54                   | 42.51%          | 19.44 |
| 22  | 0.000%              | 97.80%    | 0.02381                 | 14.50                   | 40.74%          | 19.44               | 97.80%    | 0.02385                 | 11.54                   | 42.21%          | 19.24 |
| 23  | 0.000%              | 97.80%    | 0.02388                 | 14.00                   | 40.54%          | 19.24               | 97.80%    | 0.02392                 | 10.54                   | 41.91%          | 19.04 |
| 24  | 0.000%              | 97.80%    | 0.02395                 | 13.50                   | 40.34%          | 19.04               | 97.80%    | 0.02399                 | 9.54                    | 41.61%          | 18.84 |
| 25  | 0.000%              | 97.80%    | 0.02402                 | 13.00                   | 40.14%          | 18.84               | 97.80%    | 0.02406                 | 8.54                    | 41.31%          | 18.64 |
| 26  | 0.000%              | 97.80%    | 0.02409                 | 12.50                   | 39.94%          | 18.64               | 97.80%    | 0.02413                 | 7.54                    | 41.01%          | 18.44 |
| 27  | 0.000%              | 97.80%    | 0.02416                 | 12.00                   | 39.74%          | 18.44               | 97.80%    | 0.02420                 |                         |                 |       |

Target and fitted criteria are as follows:

#### Full rolling, Tube fed

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 4                         | 10 | 87%    | 87%    | 0.001     |  |
| 4                         | 15 | 81%    | 78%    | 1.413     |  |
| 4                         | 20 | 73%    | 69%    | 2.124     |  |
| 4                         | 25 | 60%    | 61%    | 0.297     |  |
| 4                         | 30 | 52%    | 54%    | 1.133     |  |
| Total                     |    |        | 4.9677 |           |  |

#### Full rolling, Fed orally by others

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 4                         | 10 | 95%    | 94%    | 0.035     |  |
| 4                         | 15 | 91%    | 90%    | 0.109     |  |
| 4                         | 20 | 86%    | 86%    | 0.013     |  |
| 4                         | 25 | 82%    | 81%    | 0.048     |  |
| 4                         | 30 | 76%    | 77%    | 0.201     |  |
| Total                     |    |        | 4.0463 |           |  |

#### Full rolling, Feeds self orally

| Probabilities of survival |    |        |        |           |        |
|---------------------------|----|--------|--------|-----------|--------|
| From                      | To | Target | Fitted | Deviation |        |
| 4                         | 10 | 98%    | 98%    | 0.001     |        |
| 4                         | 15 | 97%    | 97%    | 0.020     |        |
| 4                         | 20 | 95%    | 95%    | 0.002     |        |
| 4                         | 25 | 93%    | 93%    | 0.000     |        |
| 4                         | 30 | 91%    | 91%    | 0.004     |        |
| Total                     |    |        |        |           | 0.0274 |

Survival adjustment parameters that best replicate the above criteria yields the following table:

| Age | Regular life table (United States Life Tables, 2014) |           |           |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|--|-----------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Mortality  | Mortality | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.00633  | 0.00531   | 0.00582   | 100.00%                 | 78.72           | 97.74%              | 0.02833   | 4.87                    | 100.00%                 | 33.01           |
| 1   | 0.00039  | 0.00034   | 0.00037   | 99.42%                  | 78.18           | 97.74%              | 0.02301   | 62.26                   | 97.17%                  | 32.96           |
| 2   | 0.00028  | 0.00022   | 0.00025   | 99.38%                  | 77.20           | 97.74%              | 0.02289   | 92.38                   | 94.93%                  | 32.72           |
| 3   | 0.00021  | 0.00016   | 0.00018   | 99.36%                  | 76.22           | 97.74%              | 0.02282   | 124.52                  | 92.76%                  | 32.48           |
| 4   | 0.00019  | 0.00013   | 0.00016   | 99.34%                  | 75.24           | 97.74%              | 0.02280   | 144.76                  | 90.64%                  | 32.23           |
| 5   | 0.00016  | 0.00012   | 0.00014   | 99.32%                  | 74.25           | 97.74%              | 0.02278   | 161.06                  | 88.57%                  | 31.97           |
| 6   | 0.00014  | 0.00011   | 0.00013   | 99.31%                  | 73.26           | 97.74%              | 0.02277   | 181.33                  | 86.56%                  | 31.70           |
| 7   | 0.00013  | 0.00010   | 0.00011   | 99.30%                  | 72.27           | 97.74%              | 0.02276   | 201.98                  | 84.59%                  | 31.43           |
| 8   | 0.00011  | 0.00009   | 0.00010   | 99.29%                  | 71.28           | 97.74%              | 0.02274   | 224.66                  | 82.66%                  | 31.15           |
| 9   | 0.00010  | 0.00008   | 0.00009   | 99.28%                  | 70.28           | 97.74%              | 0.02274   | 246.86                  | 80.78%                  | 30.86           |
| 10  | 0.00009  | 0.00008   | 0.00009   | 99.27%                  | 69.29           | 97.74%              | 0.02273   | 256.91                  | 78.94%                  | 30.57           |
| 11  | 0.00010  | 0.00009   | 0.00010   | 99.26%                  | 68.30           | 97.74%              | 0.02274   | 237.55                  | 77.15%                  | 30.27           |
| 12  | 0.00014  | 0.00010   | 0.00012   | 99.25%                  | 67.30           | 97.74%              | 0.02276   | 189.59                  | 75.40%                  | 29.96           |
| 13  | 0.00021  | 0.00013   | 0.00017   | 99.24%                  | 66.31           | 97.74%              | 0.02281   | 138.10                  | 73.68%                  | 29.64           |
| 14  | 0.00030  | 0.00016   | 0.00023   | 99.22%                  | 65.32           | 97.74%              | 0.02287   | 100.74                  | 72.00%                  | 29.32           |
| 15  | 0.00039  | 0.00019   | 0.00029   | 99.20%                  | 64.34           | 97.74%              | 0.02293   | 78.15                   | 70.35%                  | 29.00           |
| 16  | 0.00050  | 0.00023   | 0.00036   | 99.17%                  | 63.36           | 97.74%              | 0.02300   | 63.44                   | 68.74%                  | 28.67           |
| 17  | 0.00062  | 0.00027   | 0.00044   | 99.13%                  | 62.38           | 97.74%              | 0.02308   | 52.27                   | 67.16%                  | 28.33           |
| 18  | 0.00075  | 0.00031   | 0.00053   | 99.09%                  | 61.41           | 97.74%              | 0.02316   | 43.85                   | 65.61%                  | 27.99           |
| 19  | 0.00089  | 0.00034   | 0.00062   | 99.04%                  | 60.44           | 97.74%              | 0.02325   | 37.74                   | 64.09%                  | 27.64           |
| 20  | 0.00103  | 0.00038   | 0.00070   | 98.97%                  | 59.47           | 97.74%              | 0.02333   | 33.12                   | 62.60%                  | 27.29           |
| 21  | 0.00116  | 0.00041   | 0.00079   | 98.90%                  | 58.52           | 97.74%              | 0.02341   | 29.82                   | 61.14%                  | 26.93           |
| 22  | 0.00125  | 0.00044   | 0.00085   | 98.83%                  | 57.56           | 97.74%              | 0.02347   | 27.70                   | 59.71%                  | 26.56           |
| 23  | 0.00131  | 0.00047   | 0.00089   | 98.74%                  | 56.61           | 97.74%              | 0.02351   | 26.49                   | 58.31%                  | 26.19           |
| 24  | 0.00133  | 0.00050   | 0.00091   | 98.66%                  | 55.66           | 97.74%              | 0.02354   | 25.78                   | 56.93%                  | 25.81           |
| 25  | 0.00135  | 0.00052   | 0.00093   | 98.57%                  | 54.71           | 97.74%              | 0.02356   | 25.20                   | 55.59%                  | 25.42           |
| 26  | 0.00137  | 0.00055   | 0.00096   | 98.47%                  | 53.76           | 97.74%              | 0.02358   | 24.57                   | 54.28%                  | 25.02           |
| 27  | 0.00139  | 0.00058   | 0.00099   | 98.38%                  | 52.81           | 97.74%              | 0.02361   | 23.91                   | 53.00%                  | 24.61           |
| 28  | 0.00142  | 0.00061   | 0.00102   | 98.28%                  | 51.86           | 97.74%              | 0.02364   | 23.21                   | 51.75%                  | 24.19           |
| 29  | 0.00146  | 0.00064   | 0.00105   | 98.18%                  | 50.92           | 97.74%              | 0.02367   | 22.47                   | 50.53%                  | 23.76           |
| 30  | 0.00150  | 0.00068   | 0.00109   | 98.08%                  | 49.97           | 97.74%              | 0.02371   | 21.74                   | 49.33%                  | 23.33           |
| 40  | 0.00214  | 0.00135   | 0.00174   | 96.79%                  | 40.56           |                     | 0.02961   | 16.98                   | 37.86%                  | 18.90           |
| 50  | 0.00503  | 0.00321   | 0.00412   | 94.34%                  | 31.47           |                     | 0.04004   | 9.71                    | 26.85%                  | 14.60           |
| 60  | 0.01137  | 0.00672   | 0.00904   | 88.70%                  | 23.11           |                     | 0.05795   | 6.41                    | 16.53%                  | 10.66           |
| 70  | 0.02270  | 0.01514   | 0.01892   | 78.15%                  | 15.50           |                     | 0.09186   | 4.86                    | 7.92%                   | 7.05            |
| 80  | 0.05750  | 0.04213   | 0.04981   | 57.65%                  | 9.04            |                     | 0.17490   | 3.51                    | 2.13%                   | 3.97            |
| 90  | 0.16233  | 0.12810   | 0.14521   | 23.77%                  | 4.49            |                     | 0.39703   | 2.73                    | 0.10%                   | 1.78            |
| 100 | 1.00000  | 1.00000   | 1.00000   | 1.80%                   | 2.22            |                     | 1.51031   | 1.51                    | 0.00%                   | 1.47            |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |
| 0   | 0.000%              | 0.01516   | 2.61                    | 100.00%                 | 50.98           | 0.000%              | 0.00956   | 26.42                   | 98.48%                  | 50.75           |
| 1   | 99.06%              | 0.00976   | 26.42                   | 98.48%                  | 50.75           | 99.06%              | 0.00964   | 38.92                   | 97.52%                  | 50.25           |
| 2   | 99.06%              | 0.00958   | 52.27                   | 96.58%                  | 49.73           | 99.06%              | 0.00955   | 60.66                   | 95.66%                  | 49.21           |
| 3   | 99.06%              | 0.00954   | 67.43                   | 94.74%                  | 48.68           | 99.06%              | 0.00952   | 75.84                   | 93.84%                  | 48.14           |
| 4   | 99.06%              | 0.00951   | 84.42                   | 92.94%                  | 47.60           | 99.06%              | 0.00950   | 93.83                   | 92.06%                  | 47.05           |
| 5   | 99.06%              | 0.00949   | 103.04                  | 91.19%                  | 46.50           | 99.06%              | 0.00949   | 107.21                  | 90.32%                  | 45.94           |
| 6   | 99.06%              | 0.00949   | 99.18                   | 89.46%                  | 45.38           | 99.06%              | 0.00948   | 22.28                   | 84.43%                  | 41.90           |
| 7   | 99.06%              | 0.00948   | 57.90                   | 87.77%                  | 44.23           | 99.06%              | 0.00947   | 18.78                   | 83.60%                  | 41.32           |
| 8   | 99.06%              | 0.00946   | 42.40                   | 86.93%                  | 43.65           | 99.06%              | 0.00946   | 11.05                   | 77.84%                  | 37.11           |
| 9   | 99.06%              | 0.00946   | 26.92                   | 85.26%                  | 42.49           | 99.06%              | 0.00945   | 10.78                   | 77.04%                  | 36.50           |
| 10  | 99.06%              | 0.00945   | 10.51                   | 76.24%                  | 35.87           | 99.06%              | 0.00944   | 10.22                   | 75.45%                  | 35.24           |
| 11  | 99.06%              | 0.00944   | 9.91                    | 74.66%                  | 34.61           | 99.06%              | 0.00943   | 9.61                    | 73.88%                  | 33.97           |
| 12  | 99.06%              | 0.00943   | 7.63                    | 65.73%                  | 27.55           | 99.06%              | 0.00942   | 4.62                    | 56.22%                  | 21.34           |
| 13  | 99.06%              | 0.00941   | 3.24                    | 44.44%                  | 15.62           | 99.06%              | 0.00940   | 2.60                    | 30.54%                  | 10.41           |
| 14  | 99.06%              | 0.00939   | 2.60                    | 29.78%                  | 13.31           | 99.06%              | 0.00938   | 1.74                    | 28.45%                  | 10.21           |
| 15  | 99.06%              | 0.00937   | 1.74                    | 28.45%                  | 10.21           | 99.06%              | 0.00936   | 1.26                    | 27.76%                  | 10.00           |
| 16  | 99.06%              | 0.00935   | 1.26                    | 27.76%                  | 10.00           | 99.06%              | 0.00934   | 0.91                    | 27.04%                  | 9.76            |
| 17  | 99.06%              | 0.00933   | 0.91                    | 27.04%                  | 9.76            | 99.06%              | 0.00932   | 0.67                    | 26.38%                  | 9.55            |
| 18  | 99.06%              | 0.00931   | 0.67                    | 26.38%                  | 9.55            | 99.06%              | 0.00930   | 0.42                    | 25.72%                  | 9.34            |
| 19  | 99.06%              | 0.00929   | 0.42                    | 25.72%                  | 9.34            | 99.06%              | 0.00928   | 0.26                    | 25.06%                  | 9.13            |
| 20  | 99.06%              | 0.00927   | 0.26                    | 25.06%                  | 9.13            | 99.06%              | 0.00926   | 0.14                    | 24.40%                  | 8.92            |
| 21  | 99.06%              | 0.00925   | 0.14                    | 24.40%                  | 8.92            | 99.06%              | 0.00924   | 0.07                    | 23.74%                  | 8.71            |
| 22  | 99.06%              | 0.00923   | 0.07                    | 23.74%                  | 8.71            | 99.06%              | 0.00922   | 0.03                    | 23.08%                  | 8.50            |
| 23  | 99.06%              | 0.00921   | 0.03                    | 23.08%                  | 8.50            | 99.06%              | 0.00920   | 0.01                    | 22.42%                  | 8.29            |
| 24  | 99.06%              | 0.00919   | 0.01                    | 22.42%                  | 8.29            | 99.06%              | 0.00918   | 0.005                   | 21.76%                  | 8.08            |
| 25  | 99.06%              | 0.00917   | 0.005                   | 21.76%                  | 8.08            | 99.06%              | 0.00916   | 0.002                   | 21.10%                  | 7.87            |
| 26  | 99.06%              | 0.00915   | 0.002                   | 21.10%                  | 7.87            | 99.06%              | 0.00914   | 0.001                   | 20.44%                  | 7.66            |
| 27  | 99.06%              | 0.00913   | 0.001                   | 20.44%                  | 7.66            | 99.06%              | 0.00912   | 0.0005                  | 19.78%                  | 7.45            |
| 28  | 99.06%              | 0.00911   | 0.0005                  | 19.78%                  | 7.45            | 99.06%              | 0.00910   | 0.0002                  | 19.12%                  | 7.24            |
| 29  | 99.06%              | 0.00909   | 0.0002                  | 19.12%                  | 7.24            | 99.06%              |           |                         |                         |                 |

Target and fitted criteria are as follows:

#### Walks unaided, Tube fed

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 4                         | 10 | 95%    | 94%    | 0.087     |  |
| 4                         | 15 | 93%    | 89%    | 1.375     |  |
| 4                         | 20 | 84%    | 85%    | 0.088     |  |
| 4                         | 25 | 79%    | 80%    | 0.239     |  |
| Total                     |    |        | 1.7889 |           |  |

#### Walks unaided, Fed orally by others

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 4                         | 10 | 96%    | 98%    | 0.259     |  |
| 4                         | 15 | 95%    | 96%    | 0.037     |  |
| 4                         | 20 | 95%    | 94%    | 0.235     |  |
| 4                         | 25 | 95%    | 91%    | 1.449     |  |
| 4                         | 30 | 86%    | 89%    | 1.085     |  |
| Total                     |    |        | 3.0646 |           |  |

#### Walks unaided, Feeds self orally

| Probabilities of survival |    |        |        |           |  |
|---------------------------|----|--------|--------|-----------|--|
| From                      | To | Target | Fitted | Deviation |  |
| 4                         | 10 | 99%    | 99%    | 0.000     |  |
| 4                         | 15 | 99%    | 98%    | 0.071     |  |
| 4                         | 20 | 98%    | 97%    | 0.068     |  |
| 4                         | 25 | 96%    | 96%    | 0.000     |  |
| 4                         | 30 | 94%    | 95%    | 0.071     |  |
| Total                     |    |        | 0.2099 |           |  |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (United States Life Tables, 2014) |           |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|-----------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Mortality  | Mortality | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00633  | 0.00531   | 0.00582   | 100.00%                 | 78.72           | 0.00%               | 99.00%    | 0.01574                 | 2.71                    | 100.00%         | 49.05 |
| 1   | 0.00039  | 0.00034   | 0.00037   | 99.42%                  | 78.18           | 99.00%              | 0.01035   | 28.00                   | 98.43%                  | 48.82           |       |
| 2   | 0.00028  | 0.00022   | 0.00025   | 99.38%                  | 77.20           | 99.00%              | 0.01023   | 41.28                   | 97.41%                  | 48.33           |       |
| 3   | 0.00021  | 0.00016   | 0.00018   | 99.36%                  | 76.22           | 99.00%              | 0.01016   | 55.45                   | 96.41%                  | 47.82           |       |
| 4   | 0.00019  | 0.00013   | 0.00016   | 99.34%                  | 75.24           | 99.00%              | 0.01014   | 64.37                   | 95.43%                  | 47.31           |       |
| 5   | 0.00016  | 0.00012   | 0.00014   | 99.32%                  | 74.25           | 99.00%              | 0.01012   | 71.55                   | 94.46%                  | 46.79           |       |
| 6   | 0.00014  | 0.00011   | 0.00013   | 99.31%                  | 73.26           | 99.00%              | 0.01011   | 80.49                   | 93.51%                  | 46.26           |       |
| 7   | 0.00013  | 0.00010   | 0.00011   | 99.30%                  | 72.27           | 99.00%              | 0.01009   | 89.59                   | 92.56%                  | 45.73           |       |
| 8   | 0.00011  | 0.00009   | 0.00010   | 99.29%                  | 71.28           | 99.00%              | 0.01008   | 99.59                   | 91.63%                  | 45.19           |       |
| 9   | 0.00010  | 0.00008   | 0.00009   | 99.28%                  | 70.28           | 99.00%              | 0.01007   | 109.37                  | 90.70%                  | 44.65           |       |
| 10  | 0.00009  | 0.00008   | 0.00009   | 99.27%                  | 69.29           | 99.00%              | 0.01007   | 113.80                  | 89.79%                  | 44.09           |       |
| 11  | 0.00010  | 0.00009   | 0.00010   | 99.26%                  | 68.30           | 99.00%              | 0.01008   | 105.27                  | 88.89%                  | 43.54           |       |
| 12  | 0.00014  | 0.00010   | 0.00012   | 99.25%                  | 67.30           | 99.00%              | 0.01010   | 84.13                   | 87.99%                  | 42.98           |       |
| 13  | 0.00021  | 0.00013   | 0.00017   | 99.24%                  | 66.31           | 99.00%              | 0.01015   | 61.43                   | 87.10%                  | 42.41           |       |
| 14  | 0.00030  | 0.00016   | 0.00023   | 99.22%                  | 65.32           | 99.00%              | 0.01021   | 44.96                   | 86.22%                  | 41.84           |       |
| 15  | 0.00039  | 0.00019   | 0.00029   | 99.20%                  | 64.34           | 99.00%              | 0.01027   | 35.01                   | 85.34%                  | 41.27           |       |
| 16  | 0.00050  | 0.00023   | 0.00036   | 99.17%                  | 63.36           | 99.00%              | 0.01034   | 28.52                   | 84.46%                  | 40.69           |       |
| 17  | 0.00062  | 0.00027   | 0.00044   | 99.13%                  | 62.38           | 99.00%              | 0.01042   | 23.60                   | 83.59%                  | 40.11           |       |
| 18  | 0.00075  | 0.00031   | 0.00053   | 99.09%                  | 61.41           | 99.00%              | 0.01050   | 19.89                   | 82.72%                  | 39.53           |       |
| 19  | 0.00089  | 0.00034   | 0.00062   | 99.04%                  | 60.44           | 99.00%              | 0.01059   | 17.20                   | 81.85%                  | 38.94           |       |
| 20  | 0.00103  | 0.00038   | 0.00070   | 98.97%                  | 59.47           | 99.00%              | 0.01068   | 15.16                   | 80.98%                  | 38.35           |       |
| 21  | 0.00116  | 0.00041   | 0.00079   | 98.90%                  | 58.52           | 99.00%              | 0.01076   | 13.70                   | 80.12%                  | 37.76           |       |
| 22  | 0.00125  | 0.00044   | 0.00085   | 98.83%                  | 57.56           | 99.00%              | 0.01082   | 12.77                   | 79.25%                  | 37.17           |       |
| 23  | 0.00131  | 0.00047   | 0.00089   | 98.74%                  | 56.61           | 99.00%              | 0.01086   | 12.24                   | 78.40%                  | 36.57           |       |
| 24  | 0.00133  | 0.00050   | 0.00091   | 98.66%                  | 55.66           | 99.00%              | 0.01089   | 11.92                   | 77.55%                  | 35.96           |       |
| 25  | 0.00135  | 0.00052   | 0.00093   | 98.57%                  | 54.71           | 99.00%              | 0.01091   | 11.67                   | 76.70%                  | 35.35           |       |
| 26  | 0.00137  | 0.00055   | 0.00096   | 98.47%                  | 53.76           | 0.01111             | 11.57     | 75.87%                  | 34.74                   |                 |       |
| 27  | 0.00139  | 0.00058   | 0.00099   | 98.38%                  | 52.81           | 0.01132             | 11.46     | 75.02%                  | 34.12                   |                 |       |
| 28  | 0.00142  | 0.00061   | 0.00102   | 98.28%                  | 51.86           | 0.01154             | 11.33     | 74.17%                  | 33.51                   |                 |       |
| 29  | 0.00146  | 0.00064   | 0.00105   | 98.18%                  | 50.92           | 0.01177             | 11.17     | 73.32%                  | 32.89                   |                 |       |
| 30  | 0.00150  | 0.00068   | 0.00109   | 98.08%                  | 49.97           | 0.01201             | 11.01     | 72.45%                  | 32.28                   |                 |       |
| 40  | 0.00214  | 0.00135   | 0.00174   | 96.79%                  | 40.56           | 0.01519             | 8.72      | 63.38%                  | 26.17                   |                 |       |
| 50  | 0.00503  | 0.00321   | 0.00412   | 94.34%                  | 31.47           | 0.02146             | 5.21      | 53.05%                  | 20.27                   |                 |       |
| 60  | 0.01137  | 0.00672   | 0.00904   | 88.70%                  | 23.11           | 0.03265             | 3.61      | 40.75%                  | 14.83                   |                 |       |
| 70  | 0.02270  | 0.01514   | 0.01892   | 78.15%                  | 15.50           | 0.05413             | 2.86      | 26.88%                  | 9.87                    |                 |       |
| 80  | 0.05750  | 0.04213   | 0.04981   | 57.65%                  | 9.04            | 0.11019             | 2.21      | 12.35%                  | 5.65                    |                 |       |
| 90  | 0.16233  | 0.12810   | 0.14521   | 23.77%                  | 4.49            | 0.26676             | 1.84      | 1.94%                   | 2.67                    |                 |       |
| 100 | 1.00000  | 1.00000   | 1.00000   | 1.80%                   | 2.22            | 1.24632             | 1.25      | 0.01%                   | 1.78                    |                 |       |

| Age | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |        |
|-----|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|--------|
|     | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |        |
| 0   | 0.00%               | 99.00%    | 0.00976                 | 1.68                    | 100.00%         | 64.33               | 99.60%    | 0.00433                 | 11.71                   | 99.02%          | 63.96  |
| 1   | 99.60%              | 99.00%    | 0.00421                 | 16.98                   | 98.60%          | 63.23               | 99.60%    | 0.00414                 | 22.60                   | 98.18%          | 62.50  |
| 2   | 99.60%              | 99.00%    | 0.00412                 | 26.14                   | 97.77%          | 61.76               | 99.60%    | 0.00410                 | 28.99                   | 97.37%          | 61.01  |
| 3   | 99.60%              | 99.00%    | 0.00408                 | 32.53                   | 96.97%          | 60.26               | 99.60%    | 0.00407                 | 36.14                   | 96.58%          | 59.50  |
| 4   | 99.60%              | 99.00%    | 0.00406                 | 40.11                   | 96.18%          | 58.74               | 99.60%    | 0.00405                 | 43.99                   | 95.79%          | 57.98  |
| 5   | 99.60%              | 99.00%    | 0.00405                 | 45.75                   | 95.40%          | 57.22               | 99.60%    | 0.00404                 | 49.44                   | 94.37%          | 53.35  |
| 6   | 99.60%              | 99.00%    | 0.00404                 | 51.92                   | 93.07%          | 52.58               | 99.60%    | 0.00404                 | 56.70                   | 92.67%          | 51.80  |
| 7   | 99.60%              | 99.00%    | 0.00403                 | 54.47                   | 92.05%          | 51.03               | 99.60%    | 0.00404                 | 58.49                   | 91.43%          | 47.17  |
| 8   | 99.60%              | 99.00%    | 0.00403                 | 57.43                   | 91.84%          | 50.26               | 99.60%    | 0.00405                 | 62.62                   | 91.42%          | 49.49  |
| 9   | 99.60%              | 99.00%    | 0.00402                 | 6.62                    | 91.42%          | 49.49               | 99.60%    | 0.00406                 | 6.62                    | 90.99%          | 55.12  |
| 10  | 99.60%              | 99.00%    | 0.00402                 | 6.04                    | 91.00%          | 48.72               | 99.60%    | 0.00407                 | 6.04                    | 90.57%          | 54.42  |
| 11  | 99.60%              | 99.00%    | 0.00402                 | 5.67                    | 90.57%          | 47.95               | 99.60%    | 0.00408                 | 5.67                    | 90.22%          | 53.37  |
| 12  | 99.60%              | 99.00%    | 0.00402                 | 5.46                    | 90.13%          | 47.17               | 99.60%    | 0.00409                 | 5.46                    | 89.79%          | 52.49  |
| 13  | 99.60%              | 99.00%    | 0.00402                 | 5.33                    | 89.69%          | 46.40               | 99.60%    | 0.00410                 | 5.33                    | 89.38%          | 51.62  |
| 14  | 99.60%              | 99.00%    | 0.00402                 | 5.23                    | 89.26%          | 45.63               | 99.60%    | 0.00411                 | 5.23                    | 88.82%          | 44.85  |
| 15  | 99.60%              | 99.00%    | 0.00402                 | 5.12                    | 88.82%          | 44.85               | 99.60%    | 0.00412                 | 5.12                    | 88.42%          | 43.57% |
| 16  | 99.60%              | 99.00%    | 0.00402                 | 4.88                    | 87.95%          | 43.28               | 99.60%    | 0.00413                 | 4.88                    | 87.53%          | 43.00  |
| 17  | 99.60%              | 99.00%    | 0.00402                 | 4.76                    | 87.51%          | 42.50               | 99.60%    | 0.00414                 | 4.76                    | 87.17%          | 42.23  |
| 18  | 99.60%              | 99.00%    | 0.00402                 | 4.63                    | 87.07%          | 41.71               | 99.60%    | 0.00415                 | 4.63                    | 86.71%          | 41.44  |
| 19  | 99.60%              | 99.00%    | 0.00402                 | 4.52                    | 86.27%          | 33.84               | 99.60%    | 0.00416                 | 4.52                    | 85.84%          | 37.63  |
| 20  | 99.60%              | 99.00%    | 0.00402                 | 4.25                    | 75.90%          | 26.24               | 99.60%    | 0.00417                 | 4.25                    | 75.09%          | 29.19  |
| 21  | 99.60%              | 99.00%    | 0.00402                 | 1.95                    | 66.36%          | 19.24               | 99.60%    | 0.00418                 | 1.95                    | 66.16%          | 21.42  |
| 22  | 99.60%              | 99.00%    | 0.00402                 | 1.67                    | 52.70%          | 12.86               | 99.60%    | 0.00419                 | 1.67                    | 66.97%          | 14.35  |
| 23  | 99.60%              | 99.00%    | 0.00402                 | 1.44                    | 32.83%          | 7.45                | 99.60%    | 0.00420                 | 1.44                    | 46.24%          | 8.34   |
| 24  | 99.60%              | 99.00%    | 0.00402                 | 1.30                    | 9.65%           | 3.63                | 99.60%    | 0.00421                 | 1.30                    | 16.72%          | 4.11   |
| 25  | 99.60%              | 99.00%    | 0.00402                 | 1.09                    | 0.31%           | 2.03                | 99.60%    | 0.00422                 | 1.09                    | 9.11%           | 2.14   |

Target and fitted criteria are as follows:

#### CP Type (Hagberg) - Tetraplegia

| Probabilities of survival |    |        |         |           |
|---------------------------|----|--------|---------|-----------|
| From                      | To | Target | Fitted  | Deviation |
| 0                         | 10 | 76%    | 69%     | 6.269     |
| 0                         | 20 | 51%    | 48%     | 1.979     |
| 0                         | 30 | 35%    | 33%     | 1.145     |
| 0                         | 40 | 19%    | 23%     | 7.355     |
| Total                     |    |        | 16.7474 |           |

#### CP Type (Hagberg) - Dyskinetic

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 96%    | 92%    | 1.610     |
| 0                         | 20 | 86%    | 85%    | 0.140     |
| 0                         | 30 | 77%    | 78%    | 0.146     |
| 0                         | 40 | 71%    | 72%    | 0.063     |
| Total                     |    |        | 1.9594 |           |

#### CP Type (SCPE) - Dyskinetic

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 98%    | 93%    | 2.295     |
| 0                         | 20 | 88%    | 87%    | 0.090     |
| 0                         | 30 | 81%    | 81%    | 0.002     |
| 0                         | 40 | 74%    | 75%    | 0.283     |
| Total                     |    |        | 2.6693 |           |

Survival adjustment parameters that best replicate the above criteria yields the following life table:

| Age | Regular life table (Sweden, smoothed, 2013-2016) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |      |         |       |  |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|------|---------|-------|--|
|     | Male   | Female  | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |      |         |       |  |
| 0   | 0.00261  | 0.00215 | 0.00238   | 100.00%                 | 81.99           | 0.00%               | 96.40%    | 0.03827                 | 16.10                   | 100.00%         | 24.29               | 0.00%     | 99.21%                  | 0.01027                 | 4.32            | 100.00%             | 55.40     | 0.00%                   | 99.34%                  | 0.00900         | 3.78 | 100.00% | 58.50 |  |
| 1   | 0.00019  | 0.00017 | 0.00018   | 99.76%                  | 81.18           | 96.40%              | 0.03615   | 202.23                  | 96.17%                  | 24.23           | 99.21%              | 0.00809   | 45.23                   | 98.97%                  | 54.97           | 99.34%              | 0.00681   | 38.11                   | 99.10%                  | 58.03           |      |         |       |  |
| 2   | 0.00013  | 0.00012 | 0.00012   | 99.74%                  | 80.20           | 96.40%              | 0.03609   | 297.07                  | 92.70%                  | 24.12           | 99.21%              | 0.00803   | 66.08                   | 98.17%                  | 54.41           | 99.34%              | 0.00675   | 55.59                   | 98.43%                  | 57.42           |      |         |       |  |
| 3   | 0.00011  | 0.00010 | 0.00010   | 99.73%                  | 79.21           | 96.40%              | 0.03608   | 347.23                  | 89.35%                  | 24.01           | 99.21%              | 0.00801   | 77.10                   | 97.38%                  | 53.85           | 99.34%              | 0.00674   | 64.84                   | 97.76%                  | 56.81           |      |         |       |  |
| 4   | 0.00010  | 0.00010 | 0.00010   | 99.72%                  | 78.22           | 96.40%              | 0.03607   | 371.91                  | 86.13%                  | 23.89           | 99.21%              | 0.00800   | 82.53                   | 96.60%                  | 53.28           | 99.34%              | 0.00673   | 69.39                   | 97.10%                  | 56.19           |      |         |       |  |
| 5   | 0.00009  | 0.00008 | 0.00008   | 99.71%                  | 77.22           | 96.40%              | 0.03606   | 425.14                  | 83.02%                  | 23.76           | 99.21%              | 0.00799   | 94.23                   | 95.83%                  | 52.71           | 99.34%              | 0.00672   | 79.21                   | 96.45%                  | 55.57           |      |         |       |  |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.70%                  | 76.23           | 96.40%              | 0.03605   | 456.50                  | 80.03%                  | 23.63           | 99.21%              | 0.00799   | 101.12                  | 95.07%                  | 52.13           | 99.34%              | 0.00671   | 84.99                   | 95.80%                  | 54.94           |      |         |       |  |
| 7   | 0.00007  | 0.00008 | 0.00007   | 99.70%                  | 75.24           | 96.40%              | 0.03605   | 499.51                  | 77.14%                  | 23.50           | 99.21%              | 0.00798   | 110.58                  | 94.31%                  | 51.54           | 99.34%              | 0.00671   | 92.92                   | 95.16%                  | 54.31           |      |         |       |  |
| 8   | 0.00006  | 0.00007 | 0.00007   | 99.69%                  | 74.24           | 96.40%              | 0.03604   | 542.62                  | 74.36%                  | 23.36           | 99.21%              | 0.00797   | 120.05                  | 93.55%                  | 50.95           | 99.34%              | 0.00670   | 100.87                  | 94.52%                  | 53.67           |      |         |       |  |
| 9   | 0.00005  | 0.00007 | 0.00006   | 99.68%                  | 73.25           | 96.40%              | 0.03604   | 560.67                  | 71.68%                  | 23.21           | 99.21%              | 0.00797   | 124.02                  | 92.81%                  | 50.36           | 99.34%              | 0.00670   | 104.20                  | 93.89%                  | 53.03           |      |         |       |  |
| 10  | 0.00006  | 0.00007 | 0.00007   | 99.68%                  | 72.25           | 96.40%              | 0.03604   | 548.28                  | 69.10%                  | 23.06           | 99.21%              | 0.00797   | 121.29                  | 92.07%                  | 49.76           | 99.34%              | 0.00670   | 101.91                  | 93.26%                  | 52.39           |      |         |       |  |
| 11  | 0.00007  | 0.00008 | 0.00007   | 99.67%                  | 71.26           | 96.40%              | 0.03605   | 481.81                  | 66.61%                  | 22.91           | 99.21%              | 0.00798   | 106.68                  | 91.33%                  | 49.16           | 99.34%              | 0.00671   | 89.66                   | 92.63%                  | 51.74           |      |         |       |  |
| 12  | 0.00009  | 0.00009 | 0.00009   | 99.66%                  | 70.26           | 96.40%              | 0.03606   | 421.26                  | 64.21%                  | 22.75           | 99.21%              | 0.00799   | 93.38                   | 90.60%                  | 48.55           | 99.34%              | 0.00672   | 78.49                   | 92.01%                  | 51.08           |      |         |       |  |
| 13  | 0.00011  | 0.00010 | 0.00010   | 99.65%                  | 69.27           | 96.40%              | 0.03608   | 350.43                  | 61.89%                  | 22.58           | 99.21%              | 0.00801   | 77.81                   | 89.88%                  | 47.94           | 99.34%              | 0.00674   | 65.43                   | 91.39%                  | 50.42           |      |         |       |  |
| 14  | 0.00014  | 0.00011 | 0.00012   | 99.64%                  | 68.27           | 96.40%              | 0.03609   | 297.68                  | 59.66%                  | 22.40           | 99.21%              | 0.00803   | 66.21                   | 89.16%                  | 47.32           | 99.34%              | 0.00675   | 55.71                   | 90.78%                  | 49.76           |      |         |       |  |
| 15  | 0.00018  | 0.00012 | 0.00015   | 99.63%                  | 67.28           | 96.40%              | 0.03612   | 242.11                  | 57.50%                  | 22.22           | 99.21%              | 0.00806   | 54.00                   | 88.44%                  | 46.70           | 99.34%              | 0.00678   | 45.46                   | 90.16%                  | 49.10           |      |         |       |  |
| 16  | 0.00023  | 0.00014 | 0.00019   | 99.62%                  | 66.29           | 96.40%              | 0.03616   | 194.94                  | 55.43%                  | 22.04           | 99.21%              | 0.00809   | 43.63                   | 87.73%                  | 46.07           | 99.34%              | 0.00682   | 36.76                   | 89.55%                  | 48.43           |      |         |       |  |
| 17  | 0.00030  | 0.00016 | 0.00023   | 99.60%                  | 65.31           | 96.40%              | 0.03620   | 157.73                  | 53.42%                  | 21.85           | 99.21%              | 0.00814   | 35.45                   | 87.02%                  | 45.44           | 99.34%              | 0.00686   | 29.90                   | 88.94%                  | 47.76           |      |         |       |  |
| 18  | 0.00038  | 0.00017 | 0.00027   | 99.57%                  | 64.32           | 96.40%              | 0.03624   | 132.08                  | 51.49%                  | 21.65           | 99.21%              | 0.00818   | 29.81                   | 86.31%                  | 44.81           | 99.34%              | 0.00691   | 25.17                   | 88.33%                  | 47.09           |      |         |       |  |
| 19  | 0.00045  | 0.00019 | 0.00032   | 99.55%                  | 63.34           | 96.40%              | 0.03629   | 113.08                  | 49.62%                  | 21.44           | 99.21%              | 0.00823   | 25.64                   | 85.61%                  | 44.18           | 99.34%              | 0.00695   | 21.67                   | 87.72%                  | 46.41           |      |         |       |  |
| 20  | 0.00052  | 0.00020 | 0.00036   | 99.52%                  | 62.36           | 96.40%              | 0.03632   | 100.68                  | 47.82%                  | 21.23           | 99.21%              | 0.00827   | 22.91                   | 84.90%                  | 43.54           | 99.34%              | 0.00699   | 19.38                   | 87.11%                  | 45.73           |      |         |       |  |
| 21  | 0.00057  | 0.00022 | 0.00039   | 99.48%                  | 61.38           | 96.40%              | 0.03636   | 92.43                   | 46.09%                  | 21.01           | 99.21%              | 0.00830   | 21.10                   | 84.20%                  | 42.90           | 99.34%              | 0.00702   | 17.86                   | 86.50%                  | 45.05           |      |         |       |  |
| 22  | 0.00062  | 0.00023 | 0.00043   | 99.44%                  | 60.40           | 96.40%              | 0.03639   | 85.31                   | 44.41%                  | 20.79           | 99.21%              | 0.00833   | 19.53                   | 83.50%                  | 42.25           | 99.34%              | 0.00706   | 16.55                   | 85.90%                  | 44.36           |      |         |       |  |
| 23  | 0.00065  | 0.00025 | 0.00045   | 99.40%                  | 59.43           | 96.40%              | 0.03641   | 80.89                   | 42.79%                  | 20.55           | 99.21%              | 0.00835   | 18.56                   | 82.81%                  | 41.61           | 99.34%              | 0.00708   | 15.73                   | 85.29%                  | 43.68           |      |         |       |  |
| 24  | 0.00069  | 0.00026 | 0.00047   | 99.35%                  | 58.46           | 96.40%              | 0.03643   | 77.18                   | 41.24%                  | 20.31           | 99.21%              | 0.00838   | 17.74                   | 82.12%                  | 40.95           | 99.34%              | 0.00710   | 15.05                   | 84.68%                  | 42.98           |      |         |       |  |
| 25  | 0.00072  | 0.00026 | 0.00049   | 99.31%                  | 57.48           | 96.40%              | 0.03645   | 74.13                   | 39.73%                  | 20.06           | 99.21%              | 0.00840   | 17.07                   | 81.43%                  | 40.29           | 99.34%              | 0.00712   | 14.48                   | 84.08%                  | 42.29           |      |         |       |  |
| 26  | 0.00073  | 0.00027 | 0.00050   | 99.26%                  | 56.51           | 96.40%              | 0.03646   | 72.68                   | 38.29%                  | 19.80           | 99.21%              | 0.00841   | 16.76                   | 80.74%                  | 39.63           | 99.34%              | 0.00713   | 14.22                   | 83.48%                  | 41.59           |      |         |       |  |
| 27  | 0.00074  | 0.00028 | 0.00051   | 99.21%                  | 55.54           | 96.40%              | 0.03647   | 71.22                   | 36.89%                  | 19.53           | 99.21%              | 0.00842   | 16.44                   | 80.07%                  | 38.96           | 99.34%              | 0.00714   | 13.95                   | 82.89%                  | 40.88           |      |         |       |  |
| 28  | 0.00074  | 0.00029 | 0.00051   | 99.16%                  | 54.57           | 96.40%              | 0.03647   | 70.87                   | 35.54%                  | 19.25           | 99.21%              | 0.00842   | 16.36                   | 79.39%                  | 38.29           | 99.34%              | 0.00715   | 13.88                   | 82.30%                  | 40.17           |      |         |       |  |
| 29  | 0.00074  | 0.00031 | 0.00052   | 99.11%                  | 53.60           | 96.40%              | 0.03648   | 69.81                   | 34.25%                  | 18.96           | 99.21%              | 0.00843   | 16.12                   | 78.72%                  | 37.61           | 99.34%              | 0.00715   | 13.69                   | 81.71%                  | 39.46           |      |         |       |  |
| 30  | 0.00076  | 0.00032 | 0.00054   | 99.05%                  | 52.62           | 96.40%              | 0.03650   | 67.55                   | 33.00%                  | 18.66           | 99.21%              | 0.00844   | 15.63                   | 78.06%                  | 36.92           | 99.34%              | 0.00717   | 13.27                   | 81.12%                  | 38.74           |      |         |       |  |
| 40  | 0.00097  | 0.00055 | 0.00076   | 98.46%                  | 42.91           | 96.40%              | 0.03671   | 48.47                   | 22.74%                  | 14.96           | 99.21%              | 0.00866   | 11.43                   | 71.67%                  | 29.78           | 99.34%              | 0.00739   | 9.75                    | 75.45%                  | 31.28           |      |         |       |  |
| 50  | 0.00230  | 0.00157 | 0.00193   | 97.33%                  | 33.34           |                     | 0.04820   | 24.93                   | 14.91%                  | 10.26           |                     | 0.01210   | 6.26                    | 64.82%                  | 22.37           |                     | 0.01046   | 5.41                    | 69.23%                  | 23.63           |      |         |       |  |
| 60  | 0.00640  | 0.00435 | 0.00537   | 94.29%                  | 24.23           |                     | 0.09793   | 18.22                   | 6.57%                   | 7.21            |                     | 0.02572   | 4.79                    | 53.11%                  | 16.14           |                     | 0.02244   | 4.18                    | 58.28%                  | 17.06           |      |         |       |  |
| 70  | 0.01736  | 0.01166 | 0.01451   | 86.32%                  | 15.94           |                     | 0.15522   | 10.70                   | 1.82%                   | 4.63            |                     | 0.04544   | 3.13                    | 37.85%                  | 10.55           |                     | 0.04046   | 2.79                    | 43.27%                  | 11.16           |      | </td    |       |  |

## K Himmelmann et al (2015)

Target and fitted criteria are as follows:

### CP Type (SCPE) - Bilateral spastic cerebral palsy

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 98%    | 96%    | 0.238     |
| 0                         | 20 | 93%    | 93%    | 0.005     |
| 0                         | 30 | 90%    | 90%    | 0.004     |
| 0                         | 40 | 86%    | 86%    | 0.019     |
| Total                     |    |        | 0.2662 |           |

### Severe motor impairment

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 91%    | 89%    | 0.396     |
| 0                         | 20 | 80%    | 80%    | 0.029     |
| 0                         | 30 | 71%    | 71%    | 0.008     |
| 0                         | 40 | 62%    | 63%    | 0.123     |
| Total                     |    |        | 0.5553 |           |

### Severe mental retardation

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 88%    | 88%    | 0.010     |
| 0                         | 20 | 76%    | 77%    | 0.170     |
| 0                         | 30 | 69%    | 68%    | 0.238     |
| 0                         | 40 | 59%    | 59%    | 0.032     |
| Total                     |    |        |        | 0.4508    |

Survival adjustment parameters that best replicate the above criteria yields the following:

| Age | Regular life table (Sweden, smoothed, 2013-2016) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 | Adjusted life table |           |                         |                         |                 |      |         |       |  |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|------|---------|-------|--|
|     | Male   | Female  | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |      |         |       |  |
| 0   | 0.00261  | 0.00215 | 0.00238   | 100.00%                 | 81.99           | 0.00%               | 99.67%    | 0.00563                 | 2.37                    | 100.00%         | 68.55               | 0.00%     | 98.88%                  | 0.01350                 | 5.68            | 100.00%             | 48.74     | 0.09%                   | 98.72%                  | 0.01511         | 6.36 | 100.00% | 46.31 |  |
| 1   | 0.00019  | 0.00017 | 0.00018   | 99.76%                  | 81.18           | 99.67%              | 0.00344   | 19.24                   | 99.44%                  | 67.93           | 98.88%              | 0.01133   | 63.37                   | 98.65%                  | 48.40           | 98.72%              | 0.01293   | 72.35                   | 98.49%                  | 46.01           |      |         |       |  |
| 2   | 0.00013  | 0.00012 | 0.00012   | 99.74%                  | 80.20           | 99.67%              | 0.00338   | 27.83                   | 99.10%                  | 67.17           | 98.88%              | 0.01127   | 92.77                   | 97.53%                  | 47.95           | 98.73%              | 0.01286   | 105.87                  | 97.21%                  | 45.61           |      |         |       |  |
| 3   | 0.00011  | 0.00010 | 0.00010   | 99.73%                  | 79.21           | 99.67%              | 0.00336   | 32.38                   | 98.76%                  | 66.39           | 98.88%              | 0.01125   | 108.32                  | 96.43%                  | 47.49           | 98.73%              | 0.01283   | 123.53                  | 95.96%                  | 45.20           |      |         |       |  |
| 4   | 0.00010  | 0.00010 | 0.00010   | 99.72%                  | 78.22           | 99.67%              | 0.00336   | 34.61                   | 98.43%                  | 65.61           | 98.88%              | 0.01125   | 115.97                  | 95.35%                  | 47.02           | 98.73%              | 0.01282   | 132.14                  | 94.73%                  | 44.78           |      |         |       |  |
| 5   | 0.00009  | 0.00008 | 0.00008   | 99.71%                  | 77.22           | 99.67%              | 0.00334   | 39.44                   | 98.10%                  | 64.83           | 98.88%              | 0.01124   | 132.47                  | 94.28%                  | 46.55           | 98.73%              | 0.01279   | 150.82                  | 93.52%                  | 44.35           |      |         |       |  |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.70%                  | 76.23           | 99.67%              | 0.00334   | 42.28                   | 97.77%                  | 64.05           | 98.88%              | 0.01123   | 142.19                  | 93.22%                  | 46.08           | 98.73%              | 0.01277   | 161.75                  | 92.32%                  | 43.92           |      |         |       |  |
| 7   | 0.00007  | 0.00008 | 0.00007   | 99.70%                  | 75.24           | 99.67%              | 0.00333   | 46.18                   | 97.44%                  | 63.26           | 98.88%              | 0.01122   | 155.52                  | 92.17%                  | 45.59           | 98.73%              | 0.01276   | 176.77                  | 91.14%                  | 43.48           |      |         |       |  |
| 8   | 0.00006  | 0.00007 | 0.00007   | 99.69%                  | 74.24           | 99.67%              | 0.00333   | 50.08                   | 97.12%                  | 62.47           | 98.88%              | 0.01122   | 168.88                  | 91.13%                  | 45.11           | 98.73%              | 0.01274   | 191.79                  | 89.98%                  | 43.04           |      |         |       |  |
| 9   | 0.00005  | 0.00007 | 0.00006   | 99.68%                  | 73.25           | 99.67%              | 0.00332   | 51.72                   | 96.79%                  | 61.68           | 98.88%              | 0.01121   | 174.47                  | 90.11%                  | 44.61           | 98.73%              | 0.01272   | 197.96                  | 88.83%                  | 42.59           |      |         |       |  |
| 10  | 0.00006  | 0.00007 | 0.00007   | 99.68%                  | 72.25           | 99.67%              | 0.00333   | 50.60                   | 96.47%                  | 60.88           | 98.88%              | 0.01122   | 170.63                  | 89.10%                  | 44.11           | 98.74%              | 0.01271   | 193.42                  | 87.70%                  | 42.13           |      |         |       |  |
| 11  | 0.00007  | 0.00008 | 0.00007   | 99.67%                  | 71.26           | 99.67%              | 0.00333   | 44.57                   | 96.15%                  | 60.09           | 98.88%              | 0.01123   | 150.03                  | 88.10%                  | 43.61           | 98.74%              | 0.01271   | 169.89                  | 86.59%                  | 41.67           |      |         |       |  |
| 12  | 0.00009  | 0.00009 | 0.00009   | 99.66%                  | 70.26           | 99.67%              | 0.00335   | 39.09                   | 95.83%                  | 59.28           | 98.88%              | 0.01124   | 131.26                  | 87.11%                  | 43.10           | 98.74%              | 0.01271   | 148.49                  | 85.49%                  | 41.20           |      |         |       |  |
| 13  | 0.00011  | 0.00010 | 0.00010   | 99.65%                  | 69.27           | 99.67%              | 0.00336   | 32.67                   | 95.51%                  | 58.48           | 98.88%              | 0.01125   | 109.31                  | 86.13%                  | 42.58           | 98.74%              | 0.01272   | 123.52                  | 84.40%                  | 40.72           |      |         |       |  |
| 14  | 0.00014  | 0.00011 | 0.00012   | 99.64%                  | 68.27           | 99.67%              | 0.00338   | 27.89                   | 95.19%                  | 57.68           | 98.88%              | 0.01127   | 92.96                   | 85.17%                  | 42.06           | 98.74%              | 0.01272   | 104.93                  | 83.33%                  | 40.24           |      |         |       |  |
| 15  | 0.00018  | 0.00012 | 0.00015   | 99.63%                  | 67.28           | 99.67%              | 0.00341   | 22.85                   | 94.87%                  | 56.87           | 98.88%              | 0.01130   | 75.73                   | 84.21%                  | 41.53           | 98.74%              | 0.01274   | 85.38                   | 82.27%                  | 39.75           |      |         |       |  |
| 16  | 0.00023  | 0.00014 | 0.00019   | 99.62%                  | 66.29           | 99.67%              | 0.00345   | 18.58                   | 94.54%                  | 56.06           | 98.88%              | 0.01133   | 61.11                   | 83.25%                  | 41.00           | 98.74%              | 0.01276   | 68.81                   | 81.22%                  | 39.26           |      |         |       |  |
| 17  | 0.00030  | 0.00016 | 0.00023   | 99.60%                  | 65.31           | 99.67%              | 0.00349   | 15.20                   | 94.22%                  | 55.26           | 98.88%              | 0.01138   | 49.58                   | 82.31%                  | 40.47           | 98.74%              | 0.01279   | 55.75                   | 80.18%                  | 38.76           |      |         |       |  |
| 18  | 0.00038  | 0.00017 | 0.00027   | 99.57%                  | 64.32           | 99.67%              | 0.00353   | 12.88                   | 93.89%                  | 54.45           | 98.88%              | 0.01142   | 41.63                   | 81.37%                  | 39.93           | 98.74%              | 0.01283   | 46.75                   | 79.16%                  | 38.26           |      |         |       |  |
| 19  | 0.00045  | 0.00019 | 0.00032   | 99.55%                  | 63.34           | 99.67%              | 0.00358   | 11.16                   | 93.56%                  | 53.64           | 98.88%              | 0.01147   | 35.74                   | 80.44%                  | 39.38           | 98.75%              | 0.01286   | 40.08                   | 78.14%                  | 37.75           |      |         |       |  |
| 20  | 0.00052  | 0.00020 | 0.00036   | 99.52%                  | 62.36           | 99.67%              | 0.00362   | 10.03                   | 93.22%                  | 52.83           | 98.88%              | 0.01151   | 31.90                   | 79.52%                  | 38.83           | 98.75%              | 0.01289   | 35.72                   | 77.14%                  | 37.23           |      |         |       |  |
| 21  | 0.00057  | 0.00022 | 0.00039   | 99.48%                  | 61.38           | 99.67%              | 0.00365   | 9.29                    | 92.89%                  | 52.02           | 98.88%              | 0.01154   | 29.34                   | 78.61%                  | 38.28           | 98.75%              | 0.01291   | 32.82                   | 76.14%                  | 36.71           |      |         |       |  |
| 22  | 0.00062  | 0.00023 | 0.00043   | 99.44%                  | 60.40           | 99.67%              | 0.00369   | 8.64                    | 92.55%                  | 51.21           | 98.88%              | 0.01157   | 27.13                   | 77.70%                  | 37.72           | 98.75%              | 0.01293   | 30.31                   | 75.16%                  | 36.18           |      |         |       |  |
| 23  | 0.00065  | 0.00025 | 0.00045   | 99.40%                  | 59.43           | 99.67%              | 0.00371   | 8.24                    | 92.21%                  | 50.40           | 98.88%              | 0.01160   | 25.76                   | 76.80%                  | 37.16           | 98.75%              | 0.01294   | 28.75                   | 74.19%                  | 35.65           |      |         |       |  |
| 24  | 0.00069  | 0.00026 | 0.00047   | 99.35%                  | 58.46           | 99.67%              | 0.00373   | 7.90                    | 91.86%                  | 49.58           | 98.88%              | 0.01162   | 24.61                   | 75.91%                  | 36.59           | 98.75%              | 0.01295   | 27.44                   | 73.23%                  | 35.11           |      |         |       |  |
| 25  | 0.00072  | 0.00026 | 0.00049   | 99.31%                  | 57.48           | 99.67%              | 0.00375   | 7.63                    | 91.52%                  | 48.77           | 98.88%              | 0.01164   | 23.67                   | 75.03%                  | 36.01           | 98.75%              | 0.01296   | 26.36                   | 72.28%                  | 34.57           |      |         |       |  |
| 26  | 0.00073  | 0.00027 | 0.00050   | 99.26%                  | 56.51           | 99.67%              | 0.00376   | 7.50                    | 91.18%                  | 47.95           | 98.88%              | 0.01165   | 23.22                   | 74.15%                  | 35.43           | 98.75%              | 0.01296   | 25.83                   | 71.34%                  | 34.01           |      |         |       |  |
| 27  | 0.00074  | 0.00028 | 0.00051   | 99.21%                  | 55.54           | 99.67%              | 0.00377   | 7.36                    | 90.83%                  | 47.13           | 98.88%              | 0.01166   | 22.77                   | 73.29%                  | 34.84           | 98.75%              | 0.01296   | 25.30                   | 70.42%                  | 33.45           |      |         |       |  |
| 28  | 0.00074  | 0.00029 | 0.00051   | 99.16%                  | 54.57           | 99.67%              | 0.00377   | 7.33                    | 90.49%                  | 46.30           | 98.88%              | 0.01166   | 22.66                   | 72.44%                  | 34.25           | 98.76%              | 0.01295   | 25.16                   | 69.51%                  | 32.89           |      |         |       |  |
| 29  | 0.00074  | 0.00031 | 0.00052   | 99.11%                  | 53.60           | 99.67%              | 0.00378   | 7.24                    | 90.15%                  | 45.48           | 98.88%              | 0.01167   | 22.33                   | 71.59%                  | 33.64           | 98.76%              | 0.01294   | 24.77                   | 68.61%                  | 32.31           |      |         |       |  |
| 30  | 0.00076  | 0.00032 | 0.00054   | 99.05%                  | 52.62           | 99.67%              | 0.00380   | 7.03                    | 89.81%                  | 44.65           | 98.88%              | 0.01169   | 21.63                   | 70.76%                  | 33.03           | 98.76%              | 0.01295   | 23.97                   | 67.72%                  | 31.73           |      |         |       |  |
| 40  | 0.00097  | 0.00055 | 0.00076   | 98.46%                  | 42.91           | 99.67%              | 0.00402   | 5.30                    | 86.40%                  | 36.21           | 98.88%              | 0.01190   | 15.71                   | 62.87%                  | 26.56           | 98.77%              | 0.01305   | 17.23                   | 59.44%                  | 25.47           |      |         |       |  |
| 50  | 0.00230  | 0.00157 | 0.00193   | 97.33%                  | 33.34           |                     | 0.00613   | 3.17                    | 82.35%                  | 27.73           |                     | 0.01627   | 8.42                    | 54.82%                  | 19.71           |                     | 0.01775   | 9.18                    | 51.15%                  | 18.76           |      |         |       |  |
| 60  | 0.00640  | 0.00435 | 0.00537   | 94.29%                  | 24.23           |                     | 0.01376   | 2.56                    | 74.47%                  | 20.09           |                     | 0.03406   | 6.34                    | 41.89%                  | 14.18           |                     | 0.03762   | 7.00                    | 37.95%                  | 13.47           |      |         |       |  |
| 70  | 0.01736  | 0.01166 | 0.01451   | 86.32%                  | 15.94           |                     | 0.02726   | 1.88                    | 61.54%                  | 13.18           |                     | 0.05813   | 4.01                    | 26.90%                  | 9.25            |                     | 0.06353   | 4.38                    | 23.30%                  | 8.78            |      |         |       |  |
| 80  | 0.   |         |           |                         |                 |                     |           |                         |                         |                 |                     |           |                         |                         |                 |                     |           |                         |                         |                 |      |         |       |  |

## K Himmelmann et al (2015)

Target and fitted criteria are as follows:

### Epilepsy

| Probabilities of survival |    |        |        |           |
|---------------------------|----|--------|--------|-----------|
| From                      | To | Target | Fitted | Deviation |
| 0                         | 10 | 92%    | 90%    | 0.298     |
| 0                         | 20 | 81%    | 82%    | 0.273     |
| 0                         | 30 | 76%    | 76%    | 0.012     |
| 0                         | 40 | 70%    | 70%    | 0.002     |
| Total                     |    |        | 0.5851 |           |

Survival adjustment parameters that best replicate the above criteria yields the following table:

| Age | Regular life table (Sweden, smoothed, 2013-2016) |         |           |                         |                 | Adjusted life table |           |                         |                         |                 |       |
|-----|--|---------|-----------|-------------------------|-----------------|---------------------|-----------|-------------------------|-------------------------|-----------------|-------|
|     | Male   | Female  | Mortality | Probability of survival | Life expectancy | Survival adjustment | Mortality | Implied mortality ratio | Probability of survival | Life expectancy |       |
| 0   | 0.00261  | 0.00215 | 0.00238   | 100.00%                 | 81.99           | 0.94%               | 98.98%    | 0.01255                 | 5.28                    | 100.00%         | 53.99 |
| 1   | 0.00019  | 0.00017 | 0.00018   | 99.76%                  | 81.18           | 98.99%              | 0.01028   | 57.52                   | 98.74%                  | 53.67           |       |
| 2   | 0.00013  | 0.00012 | 0.00012   | 99.74%                  | 80.20           | 99.00%              | 0.01013   | 83.38                   | 97.73%                  | 53.23           |       |
| 3   | 0.00011  | 0.00010 | 0.00010   | 99.73%                  | 79.21           | 99.01%              | 0.01002   | 96.43                   | 96.74%                  | 52.77           |       |
| 4   | 0.00010  | 0.00010 | 0.00010   | 99.72%                  | 78.22           | 99.02%              | 0.00992   | 102.27                  | 95.77%                  | 52.30           |       |
| 5   | 0.00009  | 0.00008 | 0.00008   | 99.71%                  | 77.22           | 99.03%              | 0.00981   | 115.72                  | 94.82%                  | 51.81           |       |
| 6   | 0.00008  | 0.00008 | 0.00008   | 99.70%                  | 76.23           | 99.04%              | 0.00972   | 123.04                  | 93.89%                  | 51.32           |       |
| 7   | 0.00007  | 0.00008 | 0.00007   | 99.70%                  | 75.24           | 99.05%              | 0.00962   | 133.31                  | 92.98%                  | 50.82           |       |
| 8   | 0.00006  | 0.00007 | 0.00007   | 99.69%                  | 74.24           | 99.05%              | 0.00952   | 143.40                  | 92.08%                  | 50.31           |       |
| 9   | 0.00005  | 0.00007 | 0.00006   | 99.68%                  | 73.25           | 99.06%              | 0.00943   | 146.76                  | 91.21%                  | 49.79           |       |
| 10  | 0.00006  | 0.00007 | 0.00007   | 99.68%                  | 72.25           | 99.07%              | 0.00935   | 142.19                  | 90.34%                  | 49.26           |       |
| 11  | 0.00007  | 0.00008 | 0.00007   | 99.67%                  | 71.26           | 99.08%              | 0.00927   | 123.88                  | 89.50%                  | 48.72           |       |
| 12  | 0.00009  | 0.00009 | 0.00009   | 99.66%                  | 70.26           | 99.09%              | 0.00919   | 107.39                  | 88.67%                  | 48.17           |       |
| 13  | 0.00011  | 0.00010 | 0.00010   | 99.65%                  | 69.27           | 99.10%              | 0.00912   | 88.63                   | 87.86%                  | 47.61           |       |
| 14  | 0.00014  | 0.00011 | 0.00012   | 99.64%                  | 68.27           | 99.11%              | 0.00906   | 74.70                   | 87.05%                  | 47.05           |       |
| 15  | 0.00018  | 0.00012 | 0.00015   | 99.63%                  | 67.28           | 99.11%              | 0.00900   | 60.33                   | 86.27%                  | 46.47           |       |
| 16  | 0.00023  | 0.00014 | 0.00019   | 99.62%                  | 66.29           | 99.12%              | 0.00895   | 48.28                   | 85.49%                  | 45.89           |       |
| 17  | 0.00030  | 0.00016 | 0.00023   | 99.60%                  | 65.31           | 99.13%              | 0.00892   | 38.85                   | 84.72%                  | 45.30           |       |
| 18  | 0.00038  | 0.00017 | 0.00027   | 99.57%                  | 64.32           | 99.14%              | 0.00888   | 32.36                   | 83.97%                  | 44.70           |       |
| 19  | 0.00045  | 0.00019 | 0.00032   | 99.55%                  | 63.34           | 99.15%              | 0.00884   | 27.56                   | 83.22%                  | 44.10           |       |
| 20  | 0.00052  | 0.00020 | 0.00036   | 99.52%                  | 62.36           | 99.16%              | 0.00880   | 24.40                   | 82.49%                  | 43.49           |       |
| 21  | 0.00057  | 0.00022 | 0.00039   | 99.48%                  | 61.38           | 99.16%              | 0.00876   | 22.26                   | 81.76%                  | 42.87           |       |
| 22  | 0.00062  | 0.00023 | 0.00043   | 99.44%                  | 60.40           | 99.17%              | 0.00871   | 20.42                   | 81.04%                  | 42.24           |       |
| 23  | 0.00065  | 0.00025 | 0.00045   | 99.40%                  | 59.43           | 99.18%              | 0.00866   | 19.23                   | 80.34%                  | 41.61           |       |
| 24  | 0.00069  | 0.00026 | 0.00047   | 99.35%                  | 58.46           | 99.19%              | 0.00860   | 18.22                   | 79.64%                  | 40.97           |       |
| 25  | 0.00072  | 0.00026 | 0.00049   | 99.31%                  | 57.48           | 99.19%              | 0.00854   | 17.37                   | 78.96%                  | 40.32           |       |
| 26  | 0.00073  | 0.00027 | 0.00050   | 99.26%                  | 56.51           | 99.20%              | 0.00848   | 16.90                   | 78.28%                  | 39.66           |       |
| 27  | 0.00074  | 0.00028 | 0.00051   | 99.21%                  | 55.54           | 99.21%              | 0.00841   | 16.43                   | 77.62%                  | 39.00           |       |
| 28  | 0.00074  | 0.00029 | 0.00051   | 99.16%                  | 54.57           | 99.22%              | 0.00834   | 16.21                   | 76.97%                  | 38.32           |       |
| 29  | 0.00074  | 0.00031 | 0.00052   | 99.11%                  | 53.60           | 99.22%              | 0.00828   | 15.83                   | 76.33%                  | 37.64           |       |
| 30  | 0.00076  | 0.00032 | 0.00054   | 99.05%                  | 52.62           | 99.23%              | 0.00822   | 15.21                   | 75.69%                  | 36.95           |       |
| 40  | 0.00097  | 0.00055 | 0.00076   | 98.46%                  | 42.91           | 99.30%              | 0.00774   | 10.22                   | 69.68%                  | 29.62           |       |
| 50  | 0.00230  | 0.00157 | 0.00193   | 97.33%                  | 33.34           |                     | 0.01092   | 5.65                    | 63.86%                  | 21.92           |       |
| 60  | 0.00640  | 0.00435 | 0.00537   | 94.29%                  | 24.23           |                     | 0.02710   | 5.04                    | 51.82%                  | 15.78           |       |
| 70  | 0.01736  | 0.01166 | 0.01451   | 86.32%                  | 15.94           |                     | 0.04754   | 3.28                    | 36.30%                  | 10.31           |       |
| 80  | 0.05367  | 0.03705 | 0.04536   | 67.05%                  | 8.87            |                     | 0.10470   | 2.31                    | 17.98%                  | 5.63            |       |
| 90  | 0.17937  | 0.13966 | 0.15951   | 27.06%                  | 4.07            |                     | 0.28888   | 1.81                    | 2.69%                   | 2.43            |       |
| 100 | 0.42540  | 0.37565 | 0.40053   | 1.33%                   | 1.79            |                     | 0.69462   | 1.73                    | 0.01%                   | 1.03            |       |