Life-table equations

Transition matrix

At each time interval the distribution of patients over the disability categories changes through a transition matrix $A_0$: A fraction $\lambda_{ij}$ ($i=1...4$ and $j=1...4$) moves to a more disability category, while other remain in the same category, except in the worst mRS5 category in which people can only die.

$$
A_0 = \begin{bmatrix}
1 - \lambda_{1,2} - \lambda_{1,3} - \lambda_{1,4} & 0 & 0 & 0 \\
\lambda_{1,2} & 1 - \lambda_{2,3} - \lambda_{2,4} & 0 & 0 \\
\lambda_{1,3} & \lambda_{2,3} & 1 - \lambda_{3,4} & 0 \\
\lambda_{1,4} & \lambda_{2,4} & \lambda_{3,4} & 1 \\
\end{bmatrix}
$$

Here, $i$ and $j$ represent the disability categories mRS 0-1 through – mRS 5. The disability-stratification is also reflected in the columns ($i$), which is the disability category at period $t$ and the rows ($j$) which is the disability category in period $t+1$.

Quality of life and costs equations

Average quality adjusted life expectancy per 1,000 patients

$$
\frac{\sum_{mRS=0}^{6} \sum_{t=60}^{100} EQ_{mRS,t} \ast N_{mRS,t}}{1000}
$$

Average lifetime costs after stroke per 1,000 patients

$$
\frac{\sum_{mRS=0}^{6} \sum_{t=60}^{100} EQ_{mRS,t} \ast C_{mRS,t}}{1000}
$$

Where:  
mRS = stroke disability category  
t = age patient  
EQ = EuroQol-5D utility weight  
C = medical costs  
N = 1000. Number of people in the life-table