

Model for estimating the prevalence of Palliative Care

The Public Health Intelligence Unit developed the Palliative Care prevalence model to support Doncaster PCT's development of the Quality and Outcomes Framework (QOF). The model uses a three-stage process to estimate the prevalence of people above the age of eighteen who are defined as "in their last year of life" within practice populations.

Stage 1 predicts the number of people in their last year of life within the practice, taking account only of the demographic distribution of the population. To achieve this, the model starts with 2004 death rates from the Office of National Statistics website¹. They are then adjusted so that the rates for people below the age of eighteen are zero (for the given age band of 15 to 19 the rates were multiplied by two fifths). The resulting rates were then multiplied by eleven twelfths to account for the fact that "About a twelfth [of the population] will die suddenly with little or no warning"².

		Prevalence per 1,000 by age and sex									
		0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44
Men		0	0	0	0	0.1687	0.6142	0.8433	0.8433	1.4575	1.4575
Women		0	0	0	0	0.0990	0.2933	0.3850	0.3850	0.8708	0.8708
		45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	
Men		3.4925	3.4925	8.6167	8.6167	24.3833	24.3833	70.4917	70.4917	182.6917	
Women		2.2917	2.2917	5.5000	5.5000	15.6750	15.6750	49.4083	49.4083	162.2500	

Stage 2 takes account of inequalities between different local authorities in England by using their indirectly standardised mortality rates (all causes)³.

Stage 3 takes account of inequalities between practices within the local authority area. Using data for all local authorities in England, a linear relationship between 2002-04 SMRs for all causes and a deprivation score (UV67) derived from the 2001 Census Classification of Deprivation, a linear relationship was calculated:

$$\text{All cause SMR} = (1.7809 \times \text{UV67}) + 48.99$$

Using UV67 scores calculated for each practice, the above formula gives a multiplying factor for each practice. Further details on the technical details behind stages one and two, along with more in-depth referencing can be found in the CHD model documentation.

1. Deaths: age and sex, numbers and rates, 1976 onwards (England and Wales): Population Trends 126 <http://www.statistics.gov.uk/StatBase/ssdataset.asp?vlnk=9552&Pos=1&ColRank=1&Rank=80>

Rates are available for 2005 and 2006, but were not used at they are only provisional.

2. Palliative Care and the GMS Contract Quality and Outcomes Framework (QOF) Guidance Paper – 1st March 06 Version 1.10 For more details see <http://www.goldstandardsframework.nhs.uk>

3. National Clinical and Health Outcomes Database (2005). *Compendium of Clinical and Health Indicators*.