

Model for estimating the prevalence of Obesity

The Public Health Intelligence Unit developed an obesity prevalence model to support Doncaster's PCTs development of the Quality and Outcomes Framework (QOF). The model estimates the prevalence of people aged 16 and over who are obese within practice populations. Obesity is defined as having a Body Mass Index¹ greater than or equal to 30.

The Office of National Statistics (ONS) has produced synthetic estimates of the prevalence of obesity among people aged 16 and over by standard ward. These estimates are based on the results of the Health Survey for England (HSE), 2003², with further adjustments to account for socio-economic factors³. The model uses the age and sex prevalence rates from the HSE 2003, and then makes a further adjustment based on the relationship between the socio-economic factors used by ONS and the UV67 deprivation indicator. The following prevalence rates are from the HSE 2003.

Estimated percentage prevalence by age and sex

	16-24	25-34	35-44	45-54	55-64	65-74	75+
Men	8.6	17.5	25.3	28.2	26.7	28.7	20.9
Women	13.1	18.1	22.2	26.4	27.9	30.1	26.3

The adjustment calculates a 'standardised prevalence ratio' for obesity, and is:

$$\text{Obesity SPR} = (1.86 \times \text{UV67}) + 48.77$$

This SPR is used to make an adjust at both the both local authority level and at practice level. The methods used in making these adjustments are identical to those used for the CHD model, so for more information refer to the CHD model documentation.

No further adjustments were made to the data

¹ BMI = Height (m)² / Weight (Kg)

² National Statistics, 2004, Health Survey for England – 2003, TSO, London

³ Heady p & Clark P, 2003, Model-Based Small area Estimation Series No. 2: Small Area Estimation Project Report, ONS, London
(http://www.statistics.gov.uk/methods_quality/downloads/small_area_est_report/SAEP1_Prelims&Ch1&2_v2.pdf)