

Life-expectancy projection by modelling and computer simulation (UKPDS 46).

Stevens,R; Adler,A; Gray,A; Briggs,A; Holman,R

Diabetes Res Clin Pract. 2000 Nov; 50 Suppl 3: S5-13.

A method is described for estimating the life-expectancy of cohorts of type 2 diabetic patients, based on computer simulation from a parametric model. The method can be used where non-parametric methods, such as the Kaplan-Meier estimate, fail due to lack of the data. The simulation algorithm combines observed and modelled information to estimate the life-expectancy implications of event rates observed within a study. The use of bootstrap methods to estimate confidence intervals is discussed. The methods are illustrated with results that have been previously published, without derivation, in a health economic analysis of tight blood pressure (BP) control in the UK Prospective Diabetes Study (UKPDS), and the application to other health economic analyses of UKPDS data is discussed.