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A model for geographical variation in health and total life expectancy

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Abstract

This paper develops a joint approach to life and health expectancy based on 2001 UK Census data for limiting long term illness and general health status, and on registered death occurrences in 2001. The model takes account of the interdependence of different outcomes (e.g. ill health and mortality) as well as spatial correlation in their patterns. A particular focus is on the proportionality assumption or 'multiplicative model' whereby separate age and area effects multiply to produce age-area mortality rates. Alternative non-proportional models are developed and shown to be more parsimonious as well as more appropriate to actual area-age interdependence. The application involves mortality and health status in the 33 London Boroughs.

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