

Carstairs scores for Scottish Postcode sectors from the 2001 Census

Executive Summary

Carstairs scores were originally developed by Vera Carstairs and Russell Morris as a measure which reflects access to those material resources which provide access to *"those goods and services, resources and amenities and of a physical environment which are customary in society"*. The scores were seen as a summary measure of relative disadvantage between populations contained within small geographic localities. The scores are derived by creating a composite index from selected Census variables. They are a method of quantifying levels of relative deprivation in different localities. The scores have generally been applied to the populations of postcode sectors in Scotland. A postcode sector is the set of unit postcodes that are the same apart from the last two characters (for example G12 8) and contains an average population of 5,000 individuals.

The scores were originally created from four variables from the 1981 Census. The scores have previously been replicated from output from the 1991 Census. Since then the scores have been widely used by health researchers and Health Boards throughout Scotland. This report replicates the scores from the 2001 Census.

The indicator variables employed in creating the scores were the same as in previous Censuses. The indicators relate to car-ownership, overcrowding, unemployment and low social class. The major difference for the 2001 scores was that the measure of low social class employed was based on the new National Statistics-Socioeconomic Classification (NS-SEC) rather than the Registrar General's Occupational Social Classes.

There was a good correspondence between area scores in 2001 and scores for areas derived from the 1991 Census. This suggests that there had only been a slight change in the relative ranking of areas in terms of deprivation since 1991. Areas which were most deprived in 1991 continued to be the most deprived areas in 2001.

The report highlights the continued concentration of deprived areas within the Greater Glasgow NHS Board (GGNHSB). Thirty percent of the population of GGNHSB belonged to the most deprived 7% of the Scottish population. In contrast only 2% of the population of Lothian Health Board fell into this extreme deprivation category.

The report considers the methodological difficulties in creating a deprivation score and provides a measure of uncertainty around the scores for each area. This allows users of the scores a degree of confidence in deciding whether areas are truly different from one another when comparing deprivation scores.

The report shows that there has been a continuing increase in mortality differentials between affluent and deprived areas since 1981. In 1981 the death rate (at ages less than 65) among the most deprived 7% of the Scottish population was 41% above the all Scotland death rate. By 2001 the death rate among the most deprived 7% of the Scottish population was 93% above the all Scotland average. In contrast the death rate in the most affluent areas in 2001 was 48% below the all Scotland average. During the 1990s the death rate under the age of 65 in the most deprived localities failed to fall. While death rates under the age of 65 in the most affluent areas of Scotland fell by over 20% between 1991 and 2001 there had been little change in the death rate in the most

deprived areas of Scotland since 1991. In 1991 the death rate in the most deprived areas was 522 per 100,000 population. In 2001 the death rate was 525 per 100,000.

The report concludes that while the continued inclusion of some of the indicator variables used to construct the Carstairs scores may be of questionable validity, the scores themselves continue to be a good predictor of small area mortality in Scotland. It is, however, worth remembering that there are other features of small areas such as their demography and urban/rural differences that are also important for explaining differences in health in Scotland.