TRENDS AND INEQUALITIES IN CARDIOVASCULAR DISEASE MORTALITY IN SCOTLAND, 1974–2009

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Background Cardiovascular disease (CVD) is the leading cause of death in Scotland, and mortality are among the highest in Western Europe. Coronary heart disease (CHD) and stroke mortality has steadily declined since the early 1970s in Scotland, however socioeconomic inequalities remain. Further, CHD rates have been shown to plateau at younger ages in the early-mid 2000s.


Design Death rates were standardised to the European standard population and time trends analysed. Inequalities were assessed, using the relative index of inequality (RII), by quintiles of area deprivation (Carstairs and Scottish Index of Multiple Deprivation (SIMD)).

Main outcome measures Age, sex, and deprivation specific CVD mortality.

Results Between 1974 and 2009, age-adjusted CVD mortality dropped by 71% in men and 70% in women. Declines varied by age and cause; for example, acute myocardial infarction (AMI) 5-year declines increased from 17% between 1990 and 1994 to 29% between 2005 and 2009 for men aged 65+ and from 16% to 30% in women. Other coronary heart disease (OCHD) 5-year declines rose from −8% to 23% in men 65+ and −6% to 26% in women, respectively. Stroke declines rose from 7% to 24% in men and 6% to 22% in women. For men aged 35–44, AMI declines were 35%, 13%, 35% and 22% in 1990–1994, 1995–1999, 2000–2004 and 2005–2009; OCHD were 13%, −17%, −20% and 26%; and stroke were 17%, 4%, 0% and −14%. Socioeconomic inequalities in AMI mortality increased; for example, for men 30–64, RII by Carstairs’ quintile increased from 1.6 in 1981 to 3.2 in 2001 and RII by SIMD quintile increased from 3.7 in 2002 to 5.4 in 2008. Respective RIIs for women were 2.1, 4.1, 6.2 and 7.2. For stroke the respective RIIs for men were 1.7, 2.3, 3.3 and 3.7; and for women 2.1, 2.6, 3.9, 2.8.

Conclusions CVD mortality have been falling more rapidly over recent years in older age groups. This pattern has not been evident at younger ages; there is evidence of an attenuation in the decline of CVD mortality, however, for CHD, there appears to be a further period of decline after this attenuation. For stroke, the flattening of mortality remains over recent years. Socioeconomic inequalities are increasing or persisting for all types of CVD mortality at younger ages due to more rapid declines in affluent areas.