039 REGIONAL DISPARITIES IN CANCER SURVIVAL FOLLOWING THE NHS NATIONAL CANCER PLAN FOR ENGLAND: AN ANALYSIS BY CANCER NETWORK

doi:10.1136/jech.2010.120956.39

[1]S Walters, [1]M Quaresma, [1]B Rachet, [2]D Forman, [3]E Gordon, [1]M P Coleman. *[1]London School of Hygiene and Tropical Medicine, London, UK; [2]National Cancer Intelligence Network, London, UK; [3]Office for National Statistics, Newport, UK*

Objective Reducing geographic inequalities in survival from cancer in England was a key aim of the Calman-Hine Report (1995) and the NHS Cancer Plan (2000). In this paper we assess whether regional differences have diminished following these policy developments by analysing the trend in one-year relative survival from six cancers in the 28 Cancer Networks of England.
Methods We estimated population-based relative survival at one year for 1.4 million patients who were diagnosed with cancer of the breast (women), cervix, stomach, oesophagus, lung or colon in England during 1991-2006 and followed up to 31 December 2007. Relative survival is the ratio of the observed survival of cancer patients relative to the expected mortality in the general population (background mortality) and it can be interpreted as the survival of cancer patients after other causes of death have been taken into account. Background mortality was estimated by age, sex, calendar year, deprivation category and Government Office Region. Age-standardised relative survival was estimated by Cancer Network in three calendar periods: 1991–1995, 1996–2000 and 2001–2006. Funnel plots were used to display spatial and temporal variation in survival. The number of Cancer Network, sex and age combinations that were outside of the 99.8% control limits of the England-wide estimate of relative survival was charted over time.
Results One-year relative survival improved over time for all patients except those diagnosed with cervical cancer. There were large regional differences in relative survival for each of the six cancers. Cancer Networks that were low-survival outliers across several cancers were clustered across Northern England and the Midlands. The north-south divide became less marked over time although the overall number of lower outliers compared to the national value remained stable.
Conclusion Policy changes over the past two decades coincided with improved relative survival, without seeing an increase in regional disparity. The north-south divide in the distribution of low-survival Cancer Networks became less pronounced over time but regional disparities persist. Further methodological development is needed to obtain more robust estimates of age-standardised relative survival for small populations, in order to monitor these regional trends.

040 EARLY AND MID-ADULTHOOD BMI IN RELATION TO LATER CANCER MORTALITY: OVER YEARS OF FOLLOW-UP IN THE HARVARD ALUMNI HEALTH STUDY

doi:10.1136/jech.2010.120956.40

[1]L Gray, [2,3]I-M Lee, [2,3]H D Sesso, [1]G D Batty. *[1]Medical Research Council Social and Public Health Sciences Unit, Glasgow, UK; [2]Harvard School of Public Health, Boston, MA, USA; [3]Brigham and Women's Hospital, and Harvard Medical School, Boston, MA, USA*

Objective The association between adiposity in early adulthood and subsequent development of specific malignancies is still unclear. Additionally, the potential mediating role of adiposity in middle age has not been well examined. We investigated the association of body mass index (BMI; weight(kg)/height(m^2)) in early adulthood with later mortality from several cancers.
Design Cohort study of male Harvard University students who had a medical examination at university between 1914 and 1952 (mean age 18.4 years) when height and weight were measured. Data on smoking habits were recorded and physical activity details were ascertained from athletic records. Alumni were traced and mailed a health questionnaire in 1962 or 1966 (mean age 45.1 years) which included enquiries regarding height and weight. They were then followed for subsequent mortality experience – which is >99% complete—until the end of 1998 (mean age at follow-up 56.5 years). In Cox regression models, adjustment was made for university smoking and physical activity levels; joint models were used to explore mediation by BMI in middle age. Imputation was used to allow inclusion of 4040 men with missing data for at least one variable.
Setting US.
Participants 19 593 males in the Harvard Alumni Health Study cohort who had a medical examination at university and returned a mailed questionnaire in 1962 or 1966.
Main outcome measure Mortality from cancer.
Results There were 8445 deaths in total, 2395 of which were from cancer. A one SD increase in early adulthood BMI was associated with an increased risk of death from cancer from all sites combined (adjusted hazard ratio 1.11; 95% CI 1.05, 1.17), plus lung (1.24; 95% CI 1.10 to 1.40) and skin (1.29; 95% CI 0.96 to 1.75). Cancers of the pancreas, stomach, liver, brain, prostate, kidney, bladder, lymphatic and haematopoietic tissue were not associated with BMI in early adulthood. Results were equivalent when based on multiply imputed data and accounting for the role of middle age BMI.
Conclusion In this cohort, higher BMI in early adulthood appears to be a risk factor for some malignancies several decades later, and appeared to be neither confounded by lifestyle factors nor meditated via BMI in middle-age. These findings suggest that strategies to tackle obesity early in life may be important for the prevention of selected cancers.

Epidemiology

041 CHILDHOOD RESIDENTIAL STABILITY AND HEALTH STATUS IN EARLY ADULTHOOD AND MIDLIFE

doi:10.1136/jech.2010.120956.41

[1]D Brown, [2]D O'Reilly, [3]P J Boyle, [1]S Macintyre, [1]M Benzeval, [1]A H Leyland. *[1]MRC Social and Public Health Sciences Unit, Glasgow, UK; [2]Centre for Clinical and Population Sciences, Queen's University Belfast, UK; [3]School of Geography and Geosciences and Longitudinal Studies Centre, University of St Andrews, St Andrews, UK*

Background Previous studies have shown that making multiple residential moves in childhood leads to an increased risk of emotional and behavioural problems in early adulthood and to poorer self-reported health in midlife. Such studies tend to focus on one or two health variables, measured at one time point. This study examines health status in early adulthood and midlife across a wider range of measures.
Aim To compare subjects who were residentially stable in childhood with those who had moved more often in terms of a wide range of health measurements at 18 and 36.
Methods Analysis of the 1970s cohort of the West of Scotland Twenty-07 Study. In total, 850 respondents who participated in waves 1 (1987/88), 2 (1990/92) and 5 (2007/8) of the study, and whose childhood residential history was available, were included in regression analyses. Residential stability was derived from the number of addresses at which the respondent had lived between birth and age 15 and 18. We considered directly measured health variables (BMI, waist-hip ratio and lung function), self-reported health, psychological wellbeing (GHQ12) and self-reported health behaviours (smoking, drinking and trying drugs).
Results Twenty percent of respondents remained residentially stable during childhood, 59% had moved 1-2 times and 21% had moved at

J Epidemiol Community Health: first published as 10.1136/jech.2010.120956.40 on 16 November 2010. Downloaded from http://jech.bmj.com/ on April 10, 2024 by guest. Protected by copyright.