

population in 1985–2005 and to quantify the contribution of variation in population's size and age structure, and risk to the change in number of deaths.

Methods The number of deaths from CVD (CID10: I00–I99) and all malignant tumours (CID10: C00–C99) and the population, by sex and age, were obtained from official statistics. We standardised mortality rates (direct method, European population) and used *joinpoint* analysis to identify changes in trends and to estimate the annual percent change (APC) of the standardised rate. We used the tool RiskDiff to quantify the contribution of risk, size and structure of the population during the periods with constant log-linear trend.

Results Mortality from CVD declined since 1985, most sharply since 1993 (men: APC=−4.0%, 95% CI −3.5 to −4.6; women: APC=−3.8%, 95% CI −3.1 to −4.4). The increasing population and its ageing explain a 30% increase in the number of deaths. The risk reduction explains a reduction by half, resulting in fewer deaths from CVD (men: −24%, women: −17%). Mortality from malignant tumours significantly increased until 1996 in men (APC=0.8%, 95% CI 0.5 to 1.1). Since 1996 in men and 1991 in women, despite the growing number of deaths (men: 13%, women: 16%), the risk is declining as illustrated by decreasing standardised mortality rates (men: APC=−0.4%, 95% CI −0.7 to −0.1; women: APC=−0.8%, 95% CI −0.9 to −0.6).

Conclusion In Portugal, the risk of death from CVD and cancer is decreasing, although this is reflected in fewer deaths only for CVD.

P2-241 EVALUATION OF THE NATIONAL CERVICAL SCREENING PROGRAMME IN CHILE

doi:10.1136/jech.2011.142976j.74

¹A Pereira,* ²J Silva, ²J Peto. ¹School of Public Health, University of Chile, Santiago, Chile; ²London School of Hygiene and Tropical Medicine, London, UK

Introduction The Chilean Cervical Screening Programme (CCSP) was implemented nationally in 1994, but its performance and effectiveness in reducing mortality from cervical cancer (CC) have not been assessed at an individual level. This is the first comprehensive evaluation of a national screening programme in a developing country based on individual record-linkage.

Methods We linked three Chilean national datasets using the unique personal identification number: (1) the National Health Service (NHS) dataset, which holds data on all women registered in the public health sector; (2) the Cito-Expert dataset, which contains all NHS screening records; and (3) national data on underlying causes of all deaths. This linkage provided a retrospective cohort of 2.8 million women aged 25–64 years followed from 1997 to 2007. The CCSP was assessed in terms of its performance and effectiveness in reducing CC mortality.

Results About 30% of the women in the cohort were never screened during the study period in the public health sector. The 5-year coverage was ~60%, with over-screening in specific subgroups, and ~60–70% of LSIL+ smears had three following normal smears within 48 months. Women ever screened had a 30% reduction in CC mortality relative to those who had never been screened (adjusted rate ratio: 0.7, 95% CI 0.6 to 0.8). The effectiveness of the programme was higher in middle-aged women (35–54 years) and in the lowest socioeconomic group.

Discussion The CCSP has reduced CC mortality during the last decade, but its impact could be increased by improving coverage and follow-up of abnormal smears.

P2-242 TOOTH LOSS IS ASSOCIATED WITH INCREASED BLOOD PRESSURE IN ADULTS: A BRAZILIAN POPULATION-BASED STUDY

doi:10.1136/jech.2011.142976j.75

¹M Peres,* ²G Tsakos, ¹P Barbatto, ³D Silva, ¹K Peres. ¹Post-Graduate Program in Public Health, Federal University of Santa Catarina, Florianópolis, Santa Catarina, Brazil; ²Department of Epidemiology and Public Health, University College London, London, UK; ³Post-Graduate Program in Physical Education, Federal University of Santa Catarina, Florianópolis, Santa Catarina, Brazil

Introduction In addition to well-known risk factors, markers of dental disease and inflammation, such as tooth loss, are suggested to be also independently associated with blood pressure.

Objectives To investigate whether tooth loss is associated with increased blood pressure among adults, independently of the established risk factors.

Methods A population-based cross-sectional study was carried out with a sample of 1720 adults from Florianópolis, Brazil. Data collection included blood pressure, anthropometric measures and a questionnaire on socio-demographics, self-rated health, diabetes, self-reported number of natural teeth and dental prosthesis. We used multivariable regression models for the association between systolic blood pressure (SBP), diastolic blood pressure (DBP) and high levels of blood pressure (HBP) and tooth loss, sequentially adjusting for socio-demographic, behavioural and health related confounders.

Results Adjusted analysis revealed a Prevalence Ratio of HBP of 1.42 (95% CI 1.15 to 1.75) and 1.06 (95% CI 0.91 to 1.24) for edentate adults and adults with <10 teeth in at least one arch respectively, compared to those with 10 or more teeth in both arches. An association between edentate men and SBP was observed in the unadjusted but not the adjusted analysis. However, among women, edentate participants showed significantly higher SBP when compared with those with 10 or more teeth in both arches, after adjusting for potential confounders.

Conclusions There is an association between tooth loss and increased blood pressure and high levels of blood pressure in the general adult population of Florianópolis, especially among women, in addition to well-known hypertension risk factors.

P2-243 THE PROTECTIVE EFFECT OF PREDOMINANT AND EXCLUSIVE BREASTFEEDING ON MALOCCLUSION: RESULTS FROM A BRAZILIAN BIRTH COHORT

doi:10.1136/jech.2011.142976j.76

¹K Peres,* ¹M Peres, ²A Cascaes, ²F Demarco, ²A Matijasevich, ¹I Santos, ²A Barros. ¹Universidade Federal de Santa Catarina, Florianópolis, Brazil; ²Universidade Federal de Pelotas, Pelotas, Brazil

Introduction There is a lack of evidence supporting the protective effect of breastfeeding on occlusion in primary dentition. The aim of this study was to examine the effects of predominant (PB) and exclusive breastfeeding (EB) on malocclusion adjusting for recognised risk factors.

Methods A cross-sectional study was carried out nested in a population-based birth cohort from Pelotas, Brazil which started in 2004. A sample of 1129 children aged 5 years old underwent dental examination. Anterior open bite, posterior cross bite, canines relationship, and overjet, were recorded according (1) Foster-Hamilton criteria and (2) WHO criteria. A history of breastfeeding and non-nutritive sucking habits was collected at interview with the child's mother. Data were analysed using multivariable Poisson regression controlling for potential confounders.

Results The mean duration of EB and PB were higher among children free of malocclusions; the longer the duration of breastfeeding,