

missing/filled in permanent teeth (DMF-T index) and in primary teeth (dmf-t index) and verify the association with oral health behaviours and socio-demographic factors in children aged 5–12 years old.

**Participants and methods** A sample of 605 children aged 5–12 years old, attending twenty-seven public schools in Sátão, Portugal, was enrolled in this cross-sectional study. Clinical examinations of oral health status were carried out according to WHO criteria to determine the prevalence of dental caries and the DMF-T and dmf-t. Structured questionnaires for interviewing children on oral health behaviours and socio-demographic factors were used.

**Results** Prevalence of dental caries is 72.1%. Dental caries experience was 0.93 DMF-T and 2.99 dmf-t, higher among the female sex (3.04 vs 2.93;  $p=0.02$ ). The total DMF index was associated with residence area (rural=4.18 vs urban=3.43;  $p<0.01$ ), parents' level of education (0–4 years=4.29; 5–6 years=4.15; 7–12 years=3.69; >12 years=1.73;  $p<0.01$ ) and dental appointments in the last twelve months (no=4.24 vs yes=3.33;  $p<0.01$ ).

**Conclusions** We found a high prevalence of dental caries in primary and permanent teeth, associated with socio-demographic factors. Oral health programmes and primary preventive strategies should be considered.

#### P2-489 RELATIVELY HIGH MORTALITY FOR MAORI AND PACIFIC PEOPLES IN THE 2009 INFLUENZA PANDEMIC AND COMPARISONS WITH PREVIOUS PANDEMICS

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**Introduction** There is evidence that indigenous peoples suffered disproportionately in the 2009 influenza pandemic, and we aimed to examine any such patterns for Māori and Pacific peoples in New Zealand (NZ).

**Methods** We analysed data from a national Mortality Review Committee and conducted analyses for datasets covering the 1918 and 1957 influenza pandemic periods.

**Results** In the 2009 pandemic the Māori mortality rate (2/100 000) was higher than the European New Zealander rate (1.7 and 2.6 times, depending on the method of age-standardisation and with only the latter result being statistically significant). Pacific peoples in NZ had a higher mortality rate (5/100 000) which was significantly higher than that for European New Zealanders (4.6–4.8 times). These mortality differentials for the 2009 pandemic were consistent with those seen for hospital and intensive care admissions. By comparison, the Māori mortality rate in the 1918 pandemic (4230/100 000 population) was 7.3 times the European settler rate. For NZ military personnel we estimated the mortality rate for Māori was 2.3 times the European rate. In the 1957 pandemic the Māori mortality rate (40/100 000) was 6.2 times the European rate.

**Conclusion** Mortality rates in the 2009 influenza pandemic for Māori and Pacific peoples were elevated compared to other New Zealanders. This pattern is consistent with previous pandemics, albeit with evidence for some decline in relative ethnic health inequalities over the past century. Nevertheless, the persistence of such inequalities in 2009 highlights the need for improved public health responses.

#### P2-490 YOUNG CENTRAL EUROPEANS SAY I'M JUST FINE: A MULTILEVEL EXPLORATION OF GENERATIONS AND THE INFLUENCE OF POLITICAL HISTORY ON PERSONAL HEALTH FROM A GLOBAL PERSPECTIVE

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**Introduction** Few studies have investigated the East-West health discrepancy within young adults who were children during this era. We study this phenomenon and its context globally, by examining variations between world regions in personal health within generations. Socioeconomic influence is also investigated.

**Methods** World Health Survey data were analysed on adults aged 18–34 ( $n=91\,823$ ), and their elders aged 35+ ( $n=132\,362$ ). Main outcome was personal health. Main predictor variable was regions. Multilevel logistic regression was used to assess associations between personal health and regions, while accounting for individual and country-level socioeconomic factors.

**Results** Citizens of the Former Soviet Union reported the highest prevalence of poor health, globally with OR being 3.29 (95% CI 1.92 to 5.64). Central Europeans also had high odds of reporting poor health as compared to Western Europeans, but not to the global south, (OR)=1.66 (95% CI 1.07 to 2.55). Age analyses showed that a generation effect was apparent. After full adjustments of socioeconomic factors, East-West health differences were small within young adults, and became larger at each increasing age interval. This pattern was opposite for the global south.

**Conclusion** The East-West health gap is more pronounced within the Former Soviet Union citizens, rather than Central Europeans. Although the public health concern within these regions cannot be denied, it seems as though young adults might have been insulated to some extent from the ill-health effects of the political transition. Unlike their elders, they have come of age within the new regime, and might not feel as displaced from society.

#### P2-491 UNDERSTANDING THE REASONS FOR FATAL DIARRHOEA: A MATCHED CASE-CONTROL STUDY ON HEALTHCARE SEEKING PATTERNS OF CARETAKER'S OF CHILDREN WITH SEVERE DIARRHOEA IN KARACHI, PAKISTAN

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Estimates place the global death toll from diarrhoeal diseases at about 1.3 million deaths in 2008, ranking second among all causes of deaths and in Pakistan alone 16% of the half million deaths in children who did not live to see their fifth birthday were caused by diarrhoea. We aimed to see the differences in the healthcare seeking behaviours of caretakers for children less than five year of age who died of severe diarrhoea compared to those with non-fatal severe diarrhoea. A mixed method study including a matched case-control study and focus group discussions was performed. Cases and their age and neighbourhood matched controls included 0–59 months old children who had fatal severe diarrhoea and non fatal severe diarrhoea respectively. Using statistical analysis system (SAS), conditional logistic regression showed that the odds of provision of appropriate care (going to a licensed doctor within 24 h from the recognition of the illness) were 80% (MORadj=0.2, 95% CI 0.05 to 0.91) less in children with fatal severe diarrhoea than in children with non-fatal severe diarrhoea. Supporting these qualitative results

showed switching and simultaneous treatment from traditional, spiritual and modern healers. Moreover refusal to hospital admission due to limited decision making or due to self treatment at home, delays in time to reach health facility, not boiling drinking water due to lack of awareness, inadequate knowledge and misconceptions regarding ORS, use of public sources of drinking water and presence of blood in stools were other factors found in our triangulated results.

**P2-492 PREDICTORS OF MALARIA IN INDIVIDUALS AGED 15 YEARS AND OVER IN INDONESIA, 2010**

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**Introduction** Malaria is global health problem. It is endemic in 10 of the 11 member countries of from the WHO South East-Asian Region, including Indonesia. In 2008 there were 2.4 million laboratory confirmed cases and 40 000 deaths from malaria in Indonesia. Based on the Basic Health Census, the national incidence of malaria in 2010 was 22.9 per 1000 population. This study aimed to describe the predictors of malaria occurrence in individuals aged 15 years and over.

**Methods** Data from the Basic Health Census for 177 920 respondents were analysed using cross-sectional methodology.

**Results** Multivariate analyses found that age, gender, home wall type, region type, home proximity to rivers, forests or beaches, residence in a high-human density area, proximity to farms or plantations, use of bed nets, use of repellent and chemo-prophylaxis predicted malaria occurrence.

**Conclusions** The findings from this study support the use of repellent by persons living in high risk areas, and argue for the Ministry of Health to improve coverage of malariologist in rural areas and enhance vector control. Further studies using a case-control design are needed to assess the association and interplay between the various factors.

## NEGLECTED CONDITIONS

**P2-493 COMPUTER VISION SYNDROME: THE ASSOCIATION WITH ERGONOMIC FACTORS**

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**Introduction** The "Computer Vision Syndrome" (CVS) is one of the health effect related to the activities while on computer work. This problem is commonly overlooked and neglected therefore this study was aimed to explore ergonomic risk factors that may contribute to CVS.

**Methods** Using a cross-sectional study, university staff (academician and support staff) that used computer at least 2 h per day at work was interviewed using guided questionnaire to get information on sociodemographic, eye symptoms and possible contributing factors. Respondent's workstations were assessed for ergonomic factors. Respondents were considered as having CVS if they reported at least one of the vision symptoms as in the questionnaire. Analysis was using SPSS version 15.0.

**Results** From 436 respondents, 68.1% of them reported Computer Vision Syndrome (CVS).  $\chi^2$  Test showed that CVS was significant with gender, education, duration of computer usage, position of monitor to user, computer screen glare and computer monitor level. Exploring the OR, significantly higher odds for CVS were found among respondents who used computer more than five hours per day (OR: 1.8, CI 1.2 to 2.3), not facing their computer screen while

computing (OR: 2.9, CI 1.9 to 4.4), computer screen glaring (OR: 2.7, CI 1.4 to 5.1) and high monitor level (OR: 1.5, CI 1.0 to 2.4).

**Conclusions** Prevalence of computer vision syndrome was high (two in every three). Using computer more than 5 h per day, not facing computer screen while computing, screen glaring and high monitor level may predispose someone to get CVS.

**P2-494 DIFFERENTIAL OUTCOME AND TREATMENT RATES FOR PERIPHERAL VASCULAR DISEASE IN THE BLACK, ASIAN AND WHITE BRITISH POPULATION: SECONDARY ANALYSIS OF ENGLISH HOSPITAL DATA 2003–2009**

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**Introduction** Peripheral vascular disease is under researched with no outcome data for the UK. It has the same underlying pathology and treatment modalities as coronary heart disease and is just as preventable.

**Aim** To document treatment and outcomes for lower limb peripheral vascular disease in those aged 50–84 by ethnic group.

**Method** Secondary analysis of Hospital Episode Statistics (2003–2009) patient data with 77 million admission episodes. Age standardised prevalence data calculated for major leg amputation, endovascular intervention, surgical revascularisation.

**Results** The prevalence rate, per 100 000 in the White British population is approximately double in males compared with females for: major leg amputation (m=9, f=5), endovascular intervention (m=150, f=72), elective surgical revascularisation (m=41, f=16). Proportional rates (White British=100) of amputation were significantly higher in Black men (242; 95% CI 199 to 286) and women (475; 95% CI 363 to 587) and lower in Asian men (91; 95% CI 72 to 110) and women (66; 95% CI 41 to 91). Rates for endovascular intervention were lower for both ethnic groups in men (Black 91; 95% CI 84 to 97; Asian 85; 95% CI 81 to 90) and Asian women (52; 95% CI 46 to 58) but not Black women (138; 95% CI 126 to 151). Elective surgical revascularisation rates were also significantly lower in men (Black 74; 95% CI 63 to 85; Asian 39; 95% CI 31 to 46) and women (Black 72; 95% CI 53 to 91; Asian 24; 95% CI 14 to 34).

**Conclusion** Blacks have significantly higher rates of leg amputation with significantly lower rates of both endovascular and surgical revascularisation. Asians have significantly lower rates of amputation and revascularisation. These variations warrant further investigation.

**P2-495 PREDICTIVE FACTORS FOR NON-REPETITION OF THE TUBERCULIN TEST IN PATIENTS WITH HIV/AIDS: A SURVIVAL ANALYSIS**

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**Introduction** Periodic repetition of the tuberculin skin (TST) test in individuals with HIV/AIDS with an initially non-reactive test should be carried out to identify those who should be treated for latent tuberculosis as recommended by the Brazilian Ministry of Health.