

model indicated that for anti-HCV sero-positivity, only the length of employment was associated with an increased odds of being infected (OR 2.8;  $p < 0.006$ ). HCV prevalence in female patients was 0.4% (4/1118; 95% CI 0.1% to 0.9%), while in 801 female blood donors 0% (0/801; 95% CI 0% to 1.1%). Comparison of HCV prevalence with the patients' population and blood donors indicated an decreasing trend in this order: nurses/midwives, patients, blood donors.

**Conclusions** Surgical nurses and midwives show greater prevalence of anti-HCV than their female patients and blood donation candidates which may indicate an important occupational risk. Among those with positive serology, a factor of greatest risk was time in the job suggesting a dose-response effect. Much better recognition of possible consequences of blood exposures is needed regarding surgical and gynaecological staff in Poland.

**P1-429 TESTOSTERONE, CORTISOL: TESTOSTERONE RATIO AND PHYSICAL PERFORMANCE IN LATER LIFE: RESULTS FROM THE CAERPHILLY PROSPECTIVE STUDY (CAPS)**

doi:10.1136/jech.2011.142976g.19

<sup>1</sup>M Gardner,\* <sup>1,2</sup>G D Smith, <sup>3</sup>S Lightman, <sup>4</sup>J Gallacher, <sup>5</sup>D Kuh, <sup>6</sup>S Ebrahim, <sup>7</sup>T Bayer. <sup>1</sup>School of Social and Community Medicine, University of Bristol, Bristol, UK; <sup>2</sup>MRC CAITE Centre, University of Bristol, Bristol, UK; <sup>3</sup>Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology, Bristol, UK; <sup>4</sup>Department of Primary Care and Public Health, Cardiff University, Cardiff, UK; <sup>5</sup>MRC Unit for Lifelong Health and Ageing, University College London, London, UK; <sup>6</sup>London School of Hygiene & Tropical Medicine, London, UK; <sup>7</sup>Department of Geriatric Medicine, Cardiff University, Cardiff, UK

**Introduction** Testosterone levels fall with age hence men with higher levels may show better physical performance in later life, though current evidence is inconsistent. An elevated cortisol to testosterone ratio has been associated with metabolic dysfunction and may reflect chronic stress. No previous study has looked at the cortisol to testosterone (C/T) ratio and physical performance in later life. We examined the relationship between total testosterone, C/T ratio and physical performance in later life.

**Methods** Middle-aged men (45–59 years) were recruited between 1979 and 1983 as part of the Caerphilly Prospective Study and had cortisol and testosterone measured from morning fasting serum. They were followed-up for approximately 20 years and then had their walking speed and balance time measured. 748 and 848 participants had data on C/T ratio and testosterone respectively and physical performance measures.

**Results** Higher morning testosterone was associated with faster walking speed (0.56 metres/min, 95% CI 0.05 to 1.07; age-adjusted), though this was attenuated when fully adjusted (0.38 metres/min, 95% CI –0.19 to 0.95). Higher testosterone was weakly associated with the worst quintile of balance (OR 0.91, 95% CI 0.77 to 1.08). There was no evidence of an association between C/T ratio measures and either walking speed or balance.

**Conclusion** Higher total testosterone in mid-life was associated with faster walking speed in later life but this was not seen with the C/T ratio. These findings provide limited support for a role of testosterone levels in maintenance of mobility in older age but require replication in further studies.

**P1-430 SMOKING AMONG BRAZILIAN WORKERS: INFLUENCE OF EMPLOYMENT STATUS AND HOUSEHOLD CONTEXT**

doi:10.1136/jech.2011.142976g.20

L Giatti,\* S M Barreto. Federal University of Minas Gerais, Belo Horizonte, Minas Gerais, Brazil

Despite the overall decline in cigarette smoking prevalence in Brazil in past decades, social inequalities in smoking have persisted and

even widened. We investigated the effect of precarious work and household context on smoking prevalence among Brazilian workers.

**Methods** This study is based on the household Special Smoking Survey (PetTab) carried out in 2008 in a representative sample of the Brazilians. Studied sample included 7601 working individuals aged between 15 and 64 years, who lived in large metropolitan regions of Brazil. Participants were classified as formal or informal employee based on the presence of social insurance protection. Smoking prevalence was estimated according to employment status and Poisson regression used to investigate factors associated with smoking.

**Results** The prevalence of smoking was 18.5%, it was highest among informal employers (23.7% vs 15.7%,  $p < 0.005$ ). On both groups, the prevalence of smoking was greater among older workers, less educated, head of household, who lived with a smoking person and in households lacking rules about indoor smoking. Lack of workplaces rules concerning smoking was associated with smoking prevalence. In the multivariate analysis including all workers, smoking remained positively associated with precarious employment (PR: 1.28; 95% CI 1.09 to 1.41), male sex, older age, number of smoking persons in the same household (1–2 smokers: PR: 1.92; 95% CI 1.70 to 2.18; 3+ smokers: PR: 2.84; 95% CI 1.98 to 4.06); and absence of norms about smoking in the household (PR: 2.18 95% CI 1.89 to 2.52).

**Conclusion** The results reveal that smoking affects more individuals in precarious working relations and the importance of household cultural context on tobacco use.

**P1-431 SOCIAL SUPPORT NETWORKS AND MENTAL HEALTH: EVIDENCE FROM SHARE**

doi:10.1136/jech.2011.142976g.21

<sup>1,3</sup>S Gibney,\* <sup>2,3</sup>M McGovern. <sup>1</sup>School of Public Health, Physiotherapy & Population Science, University College Dublin, Dublin, Ireland; <sup>2</sup>School of Economics, University College Dublin, Dublin, Ireland; <sup>3</sup>Centre for Behaviour & Health, Geary Institute, University College Dublin, Dublin, Ireland

**Introduction** This study investigates whether the social support networks (SSNs) of older Europeans exert a causal influence on their mental health. The manner in which social support influences mental health has been characterised by two psychological models. The main effects hypothesis predicts that individuals with strong social support experience higher levels of well-being than those with weak social support. According to the stress-buffering hypothesis, it is only upon exposure to unexpected negative life events that individuals with weaker levels of social support are adversely affected.

**Methods** The dataset used comprises over 60 000 observations from adults aged 50+, from two waves of the Survey of Health, Ageing and Retirement in Europe (2004 & 2006), including the EURO-D scale of depressive mood. Cluster analysis of objective criteria such as proximity of family members and support-exchange identified four SSN types: self-contained; spouse-reliant; family-dependent; and family and community integrated. Networks differed in terms of socio-demographic indicators. Personal characteristics were controlled for and standard panel data techniques determined whether omitted variables such as personality were driving the relationship between network type and depressive mood.

**Results** Among women, weak SSNs were associated with higher EURO-D scores (main effects hypothesis). This relationship appears to be mediated through feelings of loneliness. We found no evidence that network membership either exacerbates or mitigates the effect of negative life events on depressive mood for either gender (buffer hypothesis).

**Conclusion** Enhanced social support provides a mechanism for alleviating depressive mood, which was found to be mediated through feelings of loneliness.