

**Background** 'Time preference' is an economic concept that describes the trade-offs that individuals make between costs and benefits occurring at different points of time. Related psychological concepts include time perspective, impulsivity and delay of gratification. Present orientated people prefer immediate over future gains and place more value on these. Differences in how much value different individuals place on future outcomes are likely to play some role in present day behavioural decisions.

There is substantial cross-sectional evidence that smokers tend to have shorter term time preferences than non-smokers. However, few studies have explored the longitudinal relationship between time preference and smoking cessation.

We explored the relationship between time preference and smoking cessation in a general adult cohort using data from a large Australian longitudinal panel study: the Household Income and Labour Dynamics of Australia (HILDA) survey.

**Methods** HILDA is a longitudinal, nationally representative, household survey which began in 2001. The focus of the survey is on economic and subjective well-being, and labour market and family dynamics. Data is collected by annual interview and self-complete questionnaire.

Members of the HILDA panel, aged 15–64, who responded to at least four waves of data collection between 2001 and 2008, and reported any level of tobacco consumption at any wave were included in the analyses.

Smoking cessation was measured using self-report questions. Time preference was measured using self-reported time period for financial planning. A range of sociodemographic (age, number of children, various markers of socio-economic position) and smoking-related (previous quit attempts, years smoked) co-variables were controlled for.

**Results** 1,817 individuals (representing 7,913 unique observations) were included in the analyses. In univariable analyses, both men and women who reported quitting smoking were more likely to have a longer term time preference in the data collection period immediately prior to quitting than those who did not quit (men:  $t(4,126)=4.59$ ,  $p<0.001$ ; women:  $t(3,783)=7.18$ ,  $p<0.001$ ). These relationships persisted after control for socio-demographic and smoking-related covariates (hazard ratio of quitting in those with longer vs shorter term time preference (95% confidence intervals) = 1.27 (1.03 – 1.57) in men; 1.31 (1.05 – 1.63) in women).

**Conclusion** Adult smokers with a longer term time preference are more likely to quit smoking. This does not exclude the possibility that quitting smoking simultaneously leads to development of longer term time preference. Interventions that encourage development of longer term time preference may enable smoking cessation.

PS36

### PROBATION AND NHS WORKING TOGETHER TO REDUCE HEALTH INEQUALITIES: GREAT EXPECTATIONS OR A TALE OF TWO SERVICES

doi:10.1136/jech-2012-201753.135

J Parkes, P Roderick, S Panozzo. *Public Health Sciences & Medical Statistics, University of Southampton, Southampton, UK*

**Background** Offenders within the community are considered a socially excluded population experiencing poorer health than the general population and difficulties in accessing health care. There is little research focused on Community based offenders supervised by Probation. This study explored probation staff's knowledge, perceptions and attitudes to offender health needs and access to health services.

**Methods** Using information derived from qualitative research with probation staff and following a pilot, a national on-line questionnaire survey was conducted of probation staff involved in the management of offenders from a geographically representative

sample of Probation Trusts in England and Wales. The questionnaire covered: offender health issues, enablers and barriers to health service access, and the NHS/CJS partnership. Models of good/innovative practice were sought.

**Results** Sixteen Probation Trusts participated and 611/2810 (22%) responses were obtained. 72% were female, 58% had 6–15 years of experience in probation service. The main offender health issues were substance misuse, mental health (MH), learning disabilities and chronic disease, with alcohol misuse the most important. Provision of easily accessible mental health (for mild–moderate severity) and alcohol treatment services were considered to be inadequate (often/occasional lack of adequate provision 65% alcohol treatment vs 42% drug treatment vs 90% MH).

The main barrier reported was poor communication between probation and the NHS in particular with Primary Care services. It was felt that many offenders had not registered with a GP and that there was little joint working, understanding and education between primary care and probation. In addition the chaotic lifestyle of offenders lead to them having difficulties in negotiating health services and having appropriate health seeking behaviours, often accessing health services at a point of crisis (A&E). Responsiveness of health services was perceived to be lacking. Provision of in-house services (particularly mental health) was considered to be very useful where available.

Suggested improvements included undertaking health needs assessments to inform joint strategic planning, focus on improvement of alcohol treatment provision; joint education sessions for GPs and Offender Managers, exploration of in-house mental health services; increased access to health trainers, and greater health focus in probation staff training.

**Conclusion** Probation staff participants were very supportive of improving health of offenders. This study identified some key barriers to addressing the health needs of offenders and their access to services, with practical solutions identified by participants providing implications for policy within the 'new' NHS, health service commissioning, and future research.

PS37

### DOES THE ROUTE TO DIAGNOSIS AFFECT OUTCOMES FOR OESOPHAGO-GASTRIC CANCER PATIENTS

doi:10.1136/jech-2012-201753.136

<sup>1</sup>T Palser, <sup>2</sup>D Cromwell, <sup>3</sup>R Hardwick, <sup>4</sup>S Riley, <sup>5</sup>K Greenaway, <sup>2</sup>J van der Meulen. <sup>1</sup>*Clinical Effectiveness Unit, Royal College of Surgeons of UK, London, UK;* <sup>2</sup>*Department of Health Services Research and Policy, LSHTM, London, UK;* <sup>3</sup>*Addenbrookes Hospital, Cambridge, UK;* <sup>4</sup>*Northern General Hospital, Sheffield, UK;* <sup>5</sup>*The Information Centre for Health and Social Care, Leeds, UK*

**Background** The UK Cancer Reform strategy aims to improve early diagnosis but there is little evidence on how the route to diagnosis and affects outcomes for patients with oesophago-gastric (O-G) cancer. We investigated the relationship between the route to diagnosis, patient characteristics, treatment intent and one-year survival among O-G cancer patients

**Methods** The study was undertaken in 142 English NHS trusts and 30 cancer networks, with data being prospectively collected on patients diagnosed with O-G cancer between October 2007 and June 2009. Route to diagnosis was defined as general practitioner (GP) referral - urgent or non-urgent, hospital consultant referral, or after an emergency admission. The association between patients' route of diagnosis, treatment intent and survival was estimated using logistic regression.

**Results** Among 14,102 cancer patients, 66.3% were diagnosed after a general practitioner (GP) referral, 16.4% after an emergency admission, and 17.4% after hospital consultant referral. Of the 9,351 GP referrals, 68.8% were urgent. Compared to urgent GP referrals, a markedly lower proportion of patients diagnosed after emergency admission had a curative treatment plan (36% v 16%;

adjusted odds ratio (OR) = 0.62, 95% CI: 0.52 to 0.74) and a lower proportion of survived one year (43% v 27%; OR=0.78; 0.68 to 0.89). Urgency of GP referral did not affect treatment intent or survival. Routes to diagnosis varied across the 30 cancer networks, with the proportion of patients diagnosed after emergency admission ranging from 8.7% to 32.3%.

**Conclusion** Outcomes for cancer patients are worse if diagnosed after emergency admission. Networks should examine the causes of large regional variations to reduce rates of diagnosis after emergency admission.

**PS38 SARCOPENIC OBESITY AND RISK OF ALL-CAUSE AND CARDIOVASCULAR MORTALITY IN OLDER MEN**

doi:10.1136/jech-2012-201753.137

<sup>1</sup>JL Atkins, <sup>2</sup>PH Whincup, <sup>1</sup>RW Morris, <sup>1</sup>SG Wannamethee. <sup>1</sup>Department of Primary Care and Population Health, UCL, London, UK; <sup>2</sup>Division of Population Health Sciences and Education, St George's University of London, London, UK

**Background** Sarcopenic obesity refers to the age-associated loss of muscle mass coupled with high adiposity levels. Although it is known that both obesity and low muscle mass are associated with increased mortality, few studies to date have examined the combined effects of sarcopenia and obesity on all-cause or cardiovascular mortality. We examined the relationship between sarcopenic obesity and all-cause and cardiovascular mortality in older men.

**Methods** 4,252 men from the British Regional Heart Study, aged 60–79 years in 1998–2000, were followed prospectively until 2011 for mortality. At baseline, midarm muscle circumference (MAMC) measurement was used to provide information on muscle mass and measurement of bioelectrical impedance analysis (BIA) to provide fat free mass index. Obesity was assessed by measurement of body mass index (BMI), waist circumference (WC), and BIA (providing fat mass, FM, index). Participants were classified as either normal, sarcopenic, obese, or sarcopenic obese using varying measures of adiposity and muscle mass, since no consensus definition for sarcopenic obesity exists. Associations between the four sarcopenic obesity groups and mortality rates (all-cause and cardiovascular) were examined using Cox regression, adjusting for age, smoking, alcohol intake, social class and physical activity.

**Results** There were 1,456 deaths during follow-up (mean=10.1years), 578 (40%) of which were cardiovascular. Obesity (assessed by BMI, WC and FM index) was not significantly associated with all-cause mortality, but BMI and WC were significantly associated with cardiovascular mortality ( $p<0.05$ ). Low muscle mass (MAMC only) was significantly associated with all-cause mortality ( $p<0.001$ ) but not with cardiovascular mortality. Sarcopenic obese men (MAMC  $\leq 24.95$ cm; WC  $> 102$ cm) had the greatest relative risk of all-cause mortality (RR: 1.66, 95% CI: 1.23–2.25). Risks of all-cause mortality were also increased among men who were sarcopenic only (RR: 1.25, 95% CI: 1.09–1.43) and obese only (RR: 1.44, 95% CI: 1.25–1.64) compared with normal men. Similar, though weaker, relationships were seen using MAMC and BMI to define sarcopenic obesity, but not when using combined BIA measures. Sarcopenic obese men had a less marked excess cardiovascular mortality risk (RR: 1.20, 95% CI: 0.69–2.08), compared with obese men (RR: 1.35, 95% CI: 1.09–1.67).

**Conclusion** Sarcopenic obese older men are at an increased risk of all-cause mortality compared with those with only sarcopenia or obesity or normal body composition. MAMC and WC appeared to be the best markers of muscle mass and obesity for predicting all-cause mortality, compared with BMI and BIA measures. The added effect of sarcopenia and obesity, however, did not have a synergistic effect on cardiovascular mortality. Efforts to promote healthy ageing in the elderly should focus on both preventing obesity and maintaining muscle mass.

**PS39 ALCOHOL AND HARM TO OTHERS IN RUSSIA: LONGITUDINAL ANALYSIS OF COUPLE DRINKING AND SUBSEQUENT DIVORCE**

doi:10.1136/jech-2012-201753.138

<sup>1</sup>K Keenan, <sup>2</sup>E Grundy, <sup>3</sup>MG Kenward, <sup>4</sup>DA Leon. <sup>1</sup>Department of Non-communicable Disease Epidemiology, LSHTM, London, UK; <sup>2</sup>Department of Population Studies, LSHTM, London, UK; <sup>3</sup>Department of Medical Statistics, LSHTM, London, UK; <sup>4</sup>Department of Non-communicable Disease Epidemiology, LSHTM, London, UK

**Background** In Russia male drinking patterns have serious negative health effects; however the impact of alcohol on divorce is relatively unexplored. In other settings heavy drinking and discrepant drinking within couples increases the probability of marital breakdown. Longitudinal data, rather than cross-sectional, is preferable to establish the direction of any causal link.

**Methods** The association between married couple drinking patterns and subsequent divorce was investigated in a national population-based panel study in Russia. Follow-up data on 4,266 married couples was extracted from 14 consecutive annual rounds (1994–2009) of the Russian Longitudinal Monitoring Survey. The overall follow-up rate of couples was 90%, and loss to follow-up was unrelated to drinking behaviour. At interview couples provided information about family relationships, drinking habits in the last 30 days and socio-demographic variables. Discrete time hazard models were fitted using pooled logistic regression to estimate the probability of divorce among married couples as a function of the previous round's drinking patterns and other covariates.

**Results** Increased odds of divorce were associated with greater frequency of husband drinking ( $P<0.001$ ) and greater frequency of wife drinking ( $P<0.001$ ), and remained significant after mutual adjustment. Wife's hazardous drinking was also associated with a higher risk of divorce (OR 1.45, 95% CI 1.06–1.92) after adjustment for husband's drinking. Husbands who were abstainers also had raised odds of divorce compared to moderate drinkers (OR 1.36, CI 1.01–1.84). There was a significant positive relationship between husband's maximum daily volume of ethanol from vodka and divorce, after adjustment for frequency. After testing for interaction between husband's and wife's drinking, there was no evidence that couples with discrepant drinking frequencies had increased risk of divorce.

**Conclusion** This study adds to the very sparse literature investigating the association of drinking with divorce using longitudinal data. The results suggest that in Russia heavy and frequent drinking of both husbands and wives put couples at greater risk of future divorce. The thresholds where frequency and volume adversely affect marital stability are higher in husbands, than in wives. Male abstainers have a higher degree of marital dysfunction, lending support to the idea that many Russian male abstainers are ex-drinkers. More research is needed to understand the causal pathways from drinking to marital breakdown in Russia, and the overall population-level impact of drinking on partnerships.

**PS40 PROFILES OF POLYDRUG USE AT A LOCAL AND A NATIONAL LEVEL: RISK FACTORS AND ASSOCIATIONS WITH MENTAL HEALTH AND FUNCTIONING**

doi:10.1136/jech-2012-201753.139

JL Clark, S Frissa, S Hatch, M Hotopf. *Psychological Medicine, Institute of Psychiatry, King's College London, London, UK*

**Background** Polydrug use is an understudied phenomenon with potential implications for individual functioning and health. Its frequency within the general public and its individual costs thus need to be documented. This study's aims were to compare the types of polydrug users in the general public at a national and a local level, and to examine how risk factors and impairments differed between them.