

## Substance use

## 082 A RETROSPECTIVE ANALYSIS OF CHANGING OUTCOMES FOR PREGNANT SUBSTANCE USERS WITH THE ESTABLISHMENT OF SPECIALIST ANTENATAL SERVICES

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**Objective:** The misuse of substances (alcohol and illicit drugs) during pregnancy is increasingly common in the UK and is associated with poor maternal and foetal outcomes. Current estimates are that 2–3% of children have a substance misusing parent. There is a poor understanding of the demographics of pregnant substance misusers, of the patterns of antenatal service provision and little evidence about which service model is most effective at optimising care. The aim of this work is to inform clinical practice and further research by studying the health, social context and obstetric outcomes of substance misusing pregnant women.

**Design:** Retrospective case note analysis of medical records in 2002 and 2006.

**Setting:** Newcastle upon Tyne.

**Participants:** Pregnant women attending a specialist antenatal addiction clinic.

**Main Outcome Measures:** Information extracted on demographics, substance misuse histories and key obstetric outcomes.

**Results:** Between 2002 and 2006, there was an increase in average monthly referral rate to the clinic from 14 to 23 women. The age range of both cohorts was similar (17–39 years). In 2002, the primary drugs used were heroin (65%), alcohol (23%) and benzodiazepines (13%). In 2006, they were heroin (50%), alcohol (24%), stimulants (15%) and cannabis (11%). Mean gestational age at booking for opiate users improved from 18 to 16 weeks and from 28 to 15 weeks for non-opiate users. Between 2002 and 2006, there were fewer neonatal admissions to special care (26% to 20%) but similar rates of neonatal abstinence syndrome “NAS” (both 23%). In 2002, 22% women delivered before 37 weeks compared to 5% in 2006. In 2002, 95% babies born to alcohol and opiate users were below the 50<sup>th</sup> centile for birth-weight compared to 81% in 2006.

**Conclusion:** This study represents one of the first attempts to analyse changing demographics, substance misuse patterns and obstetric outcomes in pregnant substance misusers in the UK. Pregnant substance misusers presented earlier to the clinic and accessed more antenatal care. Preterm delivery rates and infant birth-weights were improved, highlighting the benefit of specialist antenatal care. Our data show an increasing variety of substances misused, however the limited work on substance use in pregnancy in the UK has focused on opiate misusers. If the needs of all pregnant substance users are to be effectively met by services it is important to understand and adapt to changing patterns of substance misuse.

## 083 EARLY ADOLESCENT SUBSTANCE USE AND PARENTAL SOCIO-ECONOMIC POSITION EARLIER IN LIFE: BIRTH COHORT ANALYSES

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**Objective:** To examine the association between different indicators of parental socio-economic position (SEP) and a range of substance use in their adolescent offspring.

**Design:** Longitudinal observational study.

**Setting:** Population based birth-cohort from the early 90s in the Avon region (ALSPAC, UK).

**Participants:** The sample consists of 5837 children (2877 boys and 2960 girls), who attended a face-to-face interview when they were aged 13 (80.5%) or 14.

**Measures:** Alcohol consumption without parental permission, recent consumption of a whole drink, binge drinking (3+ drinks/24 hrs), ever and recent cigarettes and cannabis use. Information on parental SEP in the perinatal and early childhood period from self-administered questionnaires to the mother: both maternal and paternal registrar general social class, education and equivalised household disposable income accounting for family size, composition and housing benefits. The association between the SEP indicators and substance use was assessed using logistic regression models adjusting for child's gender and age at attendance.

**Results:** 26.1% (95% CI 25.0 to 27.3) reported using alcohol without parental permission and 20.7% (19.6 to 21.8) had ever drunk 3 or more drinks on one occasion. Smoking was reported in 19.2% (18.2 to 20.3) and cannabis use in 4.6% (4.1 to 5.2). Smoking was more prevalent in lower SEP groups irrespective of the SEP measure used. In contrast, there was a complex pattern of association between the different SEP measures and the alcohol and cannabis outcomes. For example, adolescents from the lowest quintile of income households reported less recent use of alcohol than those in the middle households (OR 0.76; 0.63 to 0.93). Binge drinking was more common in groups whose parents had lower educational levels. Children with mothers from higher social classes were at increased risk of alcohol use without parental permission. A consistent association between reported cannabis use and either social advantage or disadvantage was not apparent.

**Conclusion:** Most health related behaviours, including smoking, are socially patterned and unhealthy behaviour is more prevalent in lower socioeconomic groups. Our results indicate a complex relationship between SEP and alcohol in a cohort of UK adolescents. Relatively low prevalence of cannabis use at this age precludes drawing any firm conclusions regarding its social patterning. The results might be explained by two contrasting influences. Higher income might increase the availability and therefore use of substances. In contrast, lower SEP groups might be more likely to engage in unhealthy behaviours.

## 084 THE EDINBURGH ADDICTION COHORT: A LONGITUDINAL STUDY OF SURVIVAL AND LONG TERM INJECTING CESSATION

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**Objective:** To examine survival and long term injecting cessation (LTC) in a cohort of drug users recruited in a primary care setting. **Design:** Open cohort with a mean of 10.2 years (SD 6.8, range <1–25) follow-up. Data sources were primary care notes, participant interviews and linkage to the national mortality register.

**Setting:** A large general practice surgery in Edinburgh.

**Participants:** 794 patients with a history of injecting drug use recruited between 1980 and 2007. Their mean age at first injection was 19.9 years (SD 5.1, range 11–41). At the study endpoint, 228 (29%) were dead and 75% of survivors were followed up.

**Main Outcome Measures:** Time from first injection to: death; and last injection beginning a period of LTC  $\geq$ 5 year's duration.

**Results:** Based on a competing risks multinomial logistic regression model (n = 566), 35% of survivors did not achieve LTC, 16% died

before achieving LTC, and 49% achieved LTC. The relative hazard of death before achieving LTC compared to surviving without achieving LTC decreased for those with a history of opiate substitution therapy (OST) (HR 0.19, CI 0.10 to 0.34) and increased for HIV positive participants (HR 6.2, CI 3.6 to 10.6), those who started injecting after 1985 (HR 2.5, CI 1.3 to 4.8), those aged over 18 years at first injection (HR 2.2, CI 1.4 to 3.6), and those with a history of overdose (HR 2.0, CI 1.3 to 3.2). The relative hazard of achieving LTC compared to surviving without achieving LTC decreased for those with a history of OST (HR 0.39, CI 0.27 to 0.56), those who started injecting after 1985 (HR 0.56, CI 0.39 to 0.79) and those with a prison history (HR 0.69, CI 0.54 to 0.89); and increased for those aged over 18 years at first injection (HR 1.6, CI 1.2 to 2.1).

**Conclusions:** Few cohorts have sufficient follow-up to measure long-term cessation. The Edinburgh Addiction Cohort (EAC) suggests that exposure to OST is protective, reducing the risk of death before long term cessation, but OST also seems to increase duration of injecting drug use, reducing the likelihood of long term cessation.

## CVD and metabolic syndrome

### 085 STATINS FOR THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE: CAUTION REQUIRED

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**Background:** Reviews of the effects of statins highlight the benefits of their use, leading expert committees to promote statin treatment on a global scale. However, most reviews have not distinguished between findings in primary and secondary prevention. Of the reviews which have attempted to look at the evidence for primary prevention, the role of statins is contradictory, leading to some scepticism among the cardiovascular community.

**Objectives:** To assess the effects, both benefits and harms, of statins in people without a history of CVD.

**Methods:** Systematic review of randomised trials comparing statins with usual care or placebo where duration of treatment was one year and follow up was six months. We searched Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and EMBASE, until 2007. Data were extracted by two reviewers independently. Relative risk (RR) was calculated for dichotomous data and we used random effects models.

**Results:** Thirteen trials (14 arms) dating from 1995–2005 were located. A total of 43 150 participants were observed for up to 5.3 years; the mean age was 57 years (range 28–50 years), 71.7% were male, 92.8% were Caucasian. Three of the larger trials were stopped prematurely because significant reductions in primary outcomes between the intervention and placebo had been observed. Total mortality was reduced with the use of statins RR 0.84 (95% CI 0.75 to 0.94) as were all of the combined outcomes: fatal and nonfatal CVD events; RR 0.80 (95% CI 0.71 to 0.90); fatal and non-fatal CHD events RR 0.72 (95% CI 0.66 to 0.79) fatal and nonfatal stroke events RR 0.78 (95% CI 0.67 to 0.91). However, there was no strong evidence of benefit when single outcomes were evaluated. Of the seven trials reporting on adverse events, statins posed little harm. The majority of trials received industry sponsorship.

**Conclusion:** Composite endpoints were reported in preference to single end points and adverse events outcomes were not fully reported. Trials that were stopped prematurely may have contributed to an over-estimation of treatment effects. It is possible but unlikely that the results may not be generalisable to women, non-white people and those in old age. Caution in interpreting the results is required.

### 086 METABOLIC HEALTH CHANGES IN MIGRANTS MOVING FROM A RURAL TO AN URBAN ENVIRONMENT IN TANZANIA

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**Background:** High levels of rural to urban migration are a feature of most developing countries, and are thought to be associated with an increased risk of chronic non communicable diseases.

**Aim:** To investigate in adult rural to urban migrants in Tanzania changes in health related behaviours, BMI, lipids and blood pressure in the first 12 months following migration.

**Methods:** Through village key informants, men and women, aged 15 to 59, from Morogoro rural region intending to migrate to Dar es Salaam for at least 6 months were identified. Prior to migration and regularly (1 to 3 monthly) after migration, measurements were made, blood taken for lipids, and data on socio economic circumstances and aspects of life style collected by interview. For each migrant an age, sex and village matched non migrant was also assessed at baseline and 12 months later.

**Results:** Two hundred and nine migrants, 103 men and 106 women, had measurements prior to migration, mean age 28.0 (SD 11) and 29.5 (11) years respectively. At 12 months contact was maintained with 132 (63.2%) of the migrants. Following migration there were significant changes in diet, with migrants consuming more meat, fresh vegetables, coconut oil and margarine. Self reported regular physical activity declined, from 79% of men to 27% (95% CIs 39% to 58%) and 38% of women to 14% (7% to 36%). At 12 months migrants, compared to the non-migrants, had a higher BMI (by 0.64 kgm<sup>-2</sup>, 95% CIs 0.28 to 1.0) and serum cholesterol (0.57 mmol l<sup>-1</sup>, 0.27 to 0.88), but lower systolic (5.2 mm Hg, 1.7 to 8.5) and diastolic blood pressure (7.4 mm Hg, 5.1 to 9.7). Triglycerides were lower in migrants at 6 months (0.31 mmol l<sup>-1</sup>, 0.06 to 0.58) but not at 12 months. Multiple linear regression was used to identify predictors of change in biological variables following migration. Associations (p<0.05) were found with aspects of diet for BMI, blood pressure, cholesterol and triglycerides, and increasing BMI predicting increasing triglycerides.

**Conclusion:** This relatively small study of rural to urban migrants in Tanzania found changes with mixed consequences for health following migration. Despite falls in physical activity and an overall tendency to increasing weight and cholesterol, there were apparently significant falls in blood pressure and (over the first 6 months) in triglycerides. Our tentative hypothesis is that changes in diet, from one dominated by carbohydrate to one of greater diversity, lead to favourable triglyceride and blood pressure changes, but that as weight increases these changes will be reversed.

### 087 HIGH BURDEN OF CARDIOVASCULAR DISEASE AND RISK PROFILE IN AN ELDERLY EASTERN GERMAN GENERAL POPULATION—POTENTIAL EXPLANATION FOR AN EAST–WEST GRADIENT OF CARDIOVASCULAR MORTALITY: THE CARLA STUDY 2002–2006

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**Background:** For cardiovascular diseases (CVD), an east-west mortality gradient across Europe has been described, which could not fully be explained by established risk factors. Likewise, the cause of the higher CVD mortality in eastern as compared to