Sunday 7 August 2011

| P1-1 | **WITHDRAWN** |

CUTTING EDGE METHODOLOGY

| P1-2 | **STRUCTURAL EQUATION MODELLING IN A FETAL MORTALITY CASE-CONTROL STUDY IN BRAZIL** |

G Alencar,* M Almeida. *Department of Epidemiology, Public Health School, University of São Paulo, Sao Paulo, Brazil*

Introduction The outcome in the categorical form is very common and broadly used in epidemiology, specially in case-control studies, where the outcome can be disease/death/health conditions of a Yes/No form. It is also common to measure binary or categorical covariates.

Methods Latent variables as constructs/factors are used with many binary indicators in a structural equation model framework. The estimation of structural equation model are based in the assumption of a covariance matrix structure with normal multivariate distribution to the measured variables (indicators). Maximum likelihood estimator or generalised least squares are usually employed. Mean and variance-adjusted weighted least squares and maximum likelihood estimators are also applied with binary variables, usual in case-control studies, and ORs estimates are presented.

Results The comparison of different estimation methods is evaluated and showed similar results in fetal mortality study based in Sao Paulo City, Brazil. ORs were available for ML only.

Conclusion The effect of socioeconomic situation and negative acceptance of pregnancy on fetal deaths is through prenatal care, after excluding the non-significant direct path from nSES to fetal deaths. There was also an effect of nAoP on fetal deaths. The model included also a direct effect of intra-uterine growth retardation to fetal death. Fit indexes for the final model were considered reasonable (CFI=0.95, TLI=0.95, RMSEA=0.05, WRMR=0.99).

| P1-3 | **WITHDRAWN** |

| P1-4 | **ALDH2 IS A VALID INSTRUMENT FOR MENDELIAN RANDOMISATION STUDIES IN ALCOHOL EPIDEMIOLOGY—THE GUANGZHOU BIOBANK COHORT STUDY** |

[1]S L A Yeung,* [2]C Jiang, [2]W Zhang, [1]T H Lam, [3]K K Cheng, [1]G M Leung, [1]C M Schooling. *[1]School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong; [2]Guangzhou Number 12 Hospital, Guangzhou, China; [3]Department of Public Health and Epidemiology, University of Birmingham, UK*

Introduction Western observational studies show moderate alcohol use positively associated with many health outcomes. Moderate alcohol users differ systematically from others, making these observations susceptible to residual confounding. A randomised controlled trial of moderate alcohol use is unlikely to be possible. A Mendelian randomisation design using a genetic polymorphism affecting alcohol use (*ALDH2*) as an instrumental variable offers an alternative approach for establishing causality. However, such an approach is only valid if *ALDH2* polymorphisms are unrelated to the relevant health outcomes. In a virtually non-drinking population where *ALDH2* polymorphisms are common, older Southern Chinese women, we examined the association of *ALDH2* with biological cardiovascular risk factors (blood pressure, HDL- and LDL-cholesterol and glucose) in the Framingham score.

Methods We used DNA from 833 women never or occasional alcohol users in the Guangzhou Biobank Cohort Study. We extracted DNA using TIANamp Blood DNA Kit and *ALDH2* (rs671) was genotyped externally using Sequenom MassARRAY system at CapitalBio. We used multivariable linear regression to assess the association of *ALDH2* polymorphisms with cardiovascular risk factors.

Results The genotype frequencies of *ALDH2* (*2*2,*1*2,*1*1) were 9.5%, 38.1%, and 52.5% as expected. Adjusted for age or additionally for education, job type, income, physical activity and smoking status, there was no association of *ALDH2* with these cardiovascular risk factors.

Conclusion The lack of association of *ALDH2* polymorphisms with cardiovascular risk factors suggests that *ALDH2* polymorphisms do not have independent effect on cardiovascular risk factors, hence *ALDH2* is a potential instrument for Mendelian randomisation studies of alcohol use.

| P1-5 | **SYSTEMATIC SOCIAL OBSERVATION: THE EXPERIENCE OF OBSERVATORY FOR URBAN HEALTH/EPIDEMIOLOGY RESEARCH GROUP, BELO HORIZONTE, BRAZIL** |

E D de Freitas, V P Camargos, T R R de Oliveira, J C D A Ornelas, C C Xavier, W T Caiaffa, F A Proietti.* *Federal University of Minas Gerais, Belo Horizonte, Minas Gerais, Brazil*

Introduction In recent years epidemiologists have recognised the impact of the physical and social environment on populations' health. To measure the social and physical characteristics of a neighbourhood is one of the more important conceptual, methodological, and operational challenges for the incorporation of such information in epidemiological studies. The number of instruments that use the systematic social observation (SSO) has been growing in recent years, with variations in the objective, target population and data collection methods. The design and implementation of studies using SSO in developing countries like Brazil is challenging, since most of the cities have disordered areas of occupation and high levels of violence. Most SSO tools published to date evaluate specific aspects of neighbourhoods. The Observatory for Urban Health/Epidemiology Research Group propose a broader toll for SSO, covering different aspects of the neighbourhood, which makes it possible to study several outcomes in the context of urban health.

Methods The instrument contains seven domains: physical, social and physical activity, characterisation of properties, aesthetic, services, safety and measurement of thoroughfare. The sample includes 1036 streets segments of 149 census tracts in the city of Belo Horizonte, Brazil. The study area is characterised by heterogeneity in demographic, socioeconomic and health indicators. Data collection will be finished until May 2011.

Results and Conclusion The methodology of the data collection—including details of the logistics and of instruments for data collection—and the main results will be presented.