Abstracts

CONCURRENT SESSION 13
Cardiovascular

Friday 1100 – 1230

Room 102

Chair: Monica Robotin

Intergenerational educational mobility and its association with healthy lifestyle behaviours in a cohort of young Australian adults

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Background

Although educational disparity has been linked to individual risk behaviours, it has not been studied in relation to summary measures of a healthy lifestyle. A simple healthy lifestyle score has been shown to predict survival in elderly men and to be associated with cardio-metabolic risk factors in young adults.

Aim

To examine whether education level, parental education, or educational mobility between generations was associated with a healthy lifestyle in young Australians.

Methods

In 2004-06, participant and parental education (high [bachelor degree or higher], intermediate [vocational training], low [secondary school only]) were assessed in the Childhood Determinants of Adult Health Study. Educational mobility was defined as: stable high (participant and parent in high group), stable intermediate (participant and parent in intermediate group), stable low (participant and parent in low group), downwardly (lower group than parent) and upwardly (higher group than parent) mobile. The healthy lifestyle score summed 10 healthy behaviours derived from BMI, non-smoking, alcohol consumption, leisure time physical activity and six components of diet. Scores ≥4 indicated a high healthy lifestyle score. We estimated the likelihood of having a high healthy lifestyle score by education (participant and parent) and educational mobility.

Results

Complete data were available for 1,973 participants (53% female, age range 26 to 36 years). Those with lower education were less likely to have a healthy lifestyle. Parental education was not associated with high healthy lifestyle score after adjustment for participant's education. Those who moved upward or downward were as likely to have a high healthy lifestyle score as those in the group they attained.

Conclusions

We found clear disparities in health behaviour by educational attainment. People attaining a higher level of education than their parents appeared protected from adopting an unhealthy lifestyle suggesting that population-wide improvements in education may be important for health.

An Australian risk model for determining 30-day mortality following aortic valve replacement

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Background

Recent reports reveal that around 32% to 38% patients with severe Aortic Stenosis are not referred to Aortic Valve Replacement (AVR) due to factors such as old age, severe comorbidities and patient refusal. Preoperative risk associated with AVR can be ascertained through a variety of risk prediction models, none of which are specific to the Australian population.

Aim

To identify risk factors associated with 30-day mortality following AVR in Australian patients, and to develop a multivariable logistic model for pre-operative risk prediction.

Methods

Prospectively collected data from the Australasian Society for Cardiac and Thoracic Surgeons (ASCTS) database project was used. All AVR surgeries performed between 01 July 2001 and 30 June 2008 were included for analysis. Preoperative variables with a p-value of < 0.10 in chi-squared analysis were considered for multiple logistic regression analysis. Using bootstrap re-sampling technique, five plausible models were identified based on variables that were significant predictors of mortality. All models were validated internally using average receiver operating characteristic (ROC) curve and p-value of Hosmer Lemeshow (H-L) goodness-of-fit test via bootstrap n-fold (n=100) validation method on 70% of data. The Akaike Information Criterion (AIC) and prediction mean square error (MSE), the ROC and H-L p-value were used to select the final model (AVR-Score) from the five plausible models.

Results

Between July 2001 and June 2008 a total of 3544 AVR procedures were performed, of which 147 (4.15%) reported a fatal outcome within 30-days. The final model, the

AVR-Score (ROC:0.779; H-L p-value=0.042), comprised the following independent predictors of 30-day mortality following AVR: age, New York Heart Association class (NYHA), left main disease, infective endocarditis, cerebrovascular disease, renal dysfunction, previous cardiac surgery, arrhythmia, and estimated ejection fraction.

Conclusions

We have identified 8 key predictors of early AVR mortality in Australian patients and developed a preoperative risk prediction model for 30-day mortality.

Use of linked hospital data to assess the impact of the introduction of tissue plasminogen activator (tPA) therapy on stroke outcomes in NSW

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Background

Tissue plasminogen activator (tPA) is a thrombolytic agent which reduces stroke dependency and death when administered to eligible acute ischaemic stroke patients (estimated to be up to 20% of patients in this category).

Aim

The aims of this study were to compare stroke outcomes in patients in hospitals in NSW which had tPA-capable stroke units and those that did not and also to compare outcomes in rural and urban hospitals.

Methods

All admissions involving an acute diagnosis of ischaemic stroke in NSW hospitals were identified in the linked Admitted Patients Data Collection from 2000-01 to 2007-08. Dates of introduction of stroke units and tPA were obtained directly from hospitals. The impact of the introduction of tPA therapy in hospitals on the total length of stay of stroke patients was assessed in a multiple regression model.

Results

Being admitted to a hospital with a tPA-capable stroke unit was significantly associated with the total length of stay (p=0.0197) (after adjusting for the presence of a stroke unit, age, sex, year, hospital, co-morbidities, and discharge to nursing home). This significant association was observed in metropolitan hospitals (p=0.0024) but not in non-metropolitan hospitals (p=0.8814). For ischaemic stroke patients admitted to a hospital with a tPA-capable stroke unit, the length of stay is 6% shorter than for patients admitted to a hospital without a tPA-capable stroke unit.

Conclusions

Being admitted to a hospital with tPA therapy appears to reduce length of stay in metropolitan hospitals over and above the effect of the stroke unit itself, but not in non-metropolitan hospitals. The number of non-metropolitan hospitals with tPA access is small and implementation may also be insufficient to show an effect on a population basis.

Developing evidence to support the National Male Health Policy: the case for a longitudinal study of Australian men

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Background

The first National Male Health Policy was recently launched, with recognition of the need for a strong evidence base in male health. In 2003, Andrology Australia conducted a nation-wide prevalence study of male reproductive and associated health conditions (Men in Australia Telephone Survey – MATeS), as a first step in collecting Australia-wide data on men's health and highlighting the need for a comprehensive longitudinal study.

Methods

MATeS used a CATI survey of a representative sample (n=5990) of Australian men aged 40+ years (response rate 78%). Self-reported general and reproductive health data were collected using validated instruments where available.

Results

High rates of reproductive health disorders were reported: 34% of men reported one or more reproductive health disorders including erectile dysfunction (ED), lower urinary tract symptoms (LUTS) and prostate disease (PD), increasing sharply with age. Only 30% of men with ED sought medical help. Controlling for several variables, sedentary lifestyle (odds ratio 1.4; 95% CI 1.1-1.8) and being underweight (OR 2.9; 1.5-5.8) were associated with ED. Diabetes and cardiovascular disease were associated with ED; hypertension with LUTS. All disorders were associated with depression.

Conclusions

The MATeS findings, other research, and routine population data provided the impetus for establishing a working group with representatives from Australian men's health organisations, to develop a proposal for a longitudinal study to track the life-course trajectories of Australian men (30,000 men, 18+ years). It includes general, mental, and reproductive health measures, and social and biological determinants. The design allows elucidation of causal pathways for associations found in MATeS and will address many other questions related to men's health. In addition