

**Results** There was co-occurrence between adversities, and particularly for retrospectively reported adversities. Three latent classes were identified in the prospective data – ‘Low ACEs’, ‘Household dysfunction’ (2.8%) and ‘Parental loss’ (1.5%) which were related to increased inflammation in mid-life, as were high cumulative risk scores and individual measures of offending, death, divorce, physical neglect and family conflict. Four latent classes were identified in the retrospective data – ‘Low ACEs’, ‘Parental mental health and substance misuse’, ‘Maltreatment and conflict’ and ‘Polyadversity.’ The latter two (5.2%) were related to raised inflammation in mid-life, as was a retrospective ACE score of 4+ (8.3%) and individual measures of family conflict, psychological and physical abuse, emotional neglect and witnessing abuse.

**Discussion** Specific ACEs or ACE combinations might be important for chronic inflammation. LCA is an alternative approach to operationalising ACEs data but further research is needed. Identifying the specific ACEs or combinations of ACEs which are most strongly related to inflammation is important for investigating the mechanisms involved and the planning of effective interventions.

OP48

#### IS STATE SCHOOL EDUCATION REALLY FREE? LISTENING TO CHILDREN’S VIEWS ON THE COSTS OF THE SCHOOL DAY

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10.1136/jech-2020-SSMabstracts.48

**Background** In the context of child poverty and educational attainment in Scotland, the Cost of the School Day (CoSD) project privileged children’s voices to examine the potential influence of school policies and practices on the ability of children from low-income families to participate fully in the school day.

**Methods** A purposive sample of Glasgow schools (4 primaries and 2 secondaries) was chosen, to ensure representation across the socio-economic spectrum using the Scottish Index of Multiple Deprivation. Pupils over 16 years could opt in to focus group sessions, and consent was sought from parents/carers of pupils under 16. Sessions used a vignette of a fictional character from a low-income household, allowing a safe degree of personal distance for pupils to explore sensitive topics. Groups, comprising pupils of mixed gender and free school meal entitlement, took part in two sessions. Initial sessions identified costs involved in attending school, and follow-up sessions considered potential actions needed by schools. 71 focus group sessions with 282 pupils were carried out. Deductive thematic analysis was carried out using QSR NVivo software.

**Results** Pupils identified substantial barriers to participation in the school day and suggested potential solutions. Key themes centered around transport costs, access to after-school activities and fun events, curriculum costs for subjects and textbooks, home schoolwork resources and school uniform costs.

Pupils highlighted that transport costs present barriers to holiday revision classes and after-school clubs and activities, and suggested providing clubs and supported study at

different times of the school day to ensure transport is not an issue.

Curriculum costs for subjects, textbooks and specimen papers were raised, as well as internet and computing requirements for homework. Groups felt that schools should offer more than one way of completing homework.

School uniform emerged as a major cost leading to stigma and embarrassment, absence, or exclusions for non-compliance. Pupils felt more support is needed to ensure affordability, schools should signpost to the cheapest uniform suppliers, and systems are needed to avoid pupils feeling embarrassed.

**Conclusion** The findings support the argument that the way the curriculum is structured and implemented is more advantageous to pupils from higher-income households. The CoSD tapped into the Scottish Government policy cycle and resulted in changes to increase the school clothing grant across Scotland, and, at Glasgow level, to automate clothing grant payments to ensure uptake. The CoSD lessons are transferrable across education systems and are being further rolled out in 128 schools across the UK.

OP49

#### PERCEPTIONS OF ADOLESCENT HEALTH RISK BEHAVIOUR AND SOCIOECONOMIC POSITION: A GROUNDED THEORY STUDY OF YOUNG ADULTS IN BRISTOL

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10.1136/jech-2020-SSMabstracts.49

**Background** Health risk behaviours such as tobacco smoking, alcohol consumption, drug misuse, unhealthy diet and unprotected sexual intercourse are global health issues, often initiated in adolescence. There is contrasting evidence on the association between health risk behaviours and socioeconomic position in adolescence and young adulthood, with little qualitative evidence to illuminate the relationship. The aim of the study was to examine to what extent young people perceive health risk behaviours to shape socioeconomic inequalities while transitioning into adulthood.

**Methods** We undertook a nested qualitative study within The Avon Longitudinal Study of Parents and Children (ALSPAC) birth cohort using semi-structured interviews of 25 young adults aged 26–28 years. A grounded theory approach was adopted. Theoretical sampling was conducted based on participants’ early life socioeconomic background and engagement in health risk behaviours when they were adolescents. Data collection and analysis were undertaken iteratively to aid constant comparison.

**Results** Categories of peer influence, family influence, ‘drive to succeed’ and personal responsibility were identified. These data underline the importance of family and peers in relation to both health risk behaviours and socioeconomic life chances as young people transition into adulthood. Engaging in some level of health risk behaviour allowed young people to gain experiences and bond with peers but avoiding certain behaviours helped construct their identity and self-security. Some participants adopted a moralistic or neoliberal perspective in labelling peers who engaged in certain risk behaviours, such as drug use, as irresponsible or immature. Adolescent alcohol use was seen as normative

during adolescence and therefore less tied to socioeconomic position. Many participants saw the individualised concept of ‘drive to succeed’ as pivotal for the transition to adulthood, claiming the possessing this quality made it possible to achieve in education or employment regardless of upbringing or structural factors. The study highlighted class stigma, with some young people from low socioeconomic backgrounds avoiding health risk behaviours such as tobacco smoking or hazardous alcohol consumption as a strategy to evade further stigmatisation.

**Conclusion** While individual agency was highlighted by many participants, family support was recognised as essential for navigating adolescence in relation to health behaviours and socioeconomic life trajectories. Class stigma related to health risk behaviours was either experienced or witnessed by young people throughout their adolescence. Therefore, while quantitative data suggest that youth from low SES backgrounds engage in more health risk behaviours, public health interventions should adopt measures to avoid further stigmatising these young people.

OP50

ABSTRACT WITHDRAWN

Thursday 10 September

Non-Communicable Disease: Risk Factors

OP51

PREDICTORS OF CARDIOVASCULAR DISEASE IN WOMEN WITH HYPERTENSIVE DISORDERS OF PREGNANCY

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10.1136/jech-2020-SSMabstracts.50

**Background** Whilst international guidelines recognise hypertensive disorders of pregnancy (HDP) as a major risk factor for premature cardiovascular disease (CVD) in women, there is a paucity of recommendations for how to identify those with such high risk. We aimed to determine the predictors of CVD in women with a history of HDP.

**Methods** Eligible women were identified from the Aberdeen Study of Cardiovascular Health in Women (ASCHW) and European Prospective Investigation into Cancer (EPIC)-Norfolk prospective cohorts and they were followed for incident CVD events through record linkage using ICD 9/10 in both cohorts. Of 4,186 women with a history of HDP identified, 3,468 attended clinic assessment. Missing data were handled using multiple imputation. We examined the relationship between HDP and incident cardiovascular events by carrying out three separate univariate and multivariable logistic regression analyses: lifestyle questionnaire variable analysis, analysis including examination variables and plasma cardiovascular biomarker analysis. The final model consisted of statistically significant predictors (p-value<0.05) derived from the three analyses. Validity of the model was assessed by discrimination (c-statistic) and calibration (Hosmer-and-Lemeshow test).

**Results** Selected predictors for CVD in women with HDP in the final model were age over 49 years, no university education, high BMI, total cholesterol, triglyceride and plasma fibrinogen; usage of aspirin and lipid lowering medications; hypertension, family history of heart disease, repeated HDP exposure, and the cohort population. All predictors in the final model were statistically significant except total cholesterol levels. The risk factors which conferred the greatest odds ratios of CVD ( $\geq 2$ -fold odds) were: age beyond 49 years (1.99; 95% CI 1.57–2.54), hypertension (2.84; 95% CI 2.36–3.41), aspirin users (2.18; 95% CI 1.54–3.08), having morbidly obese BMI (2.16; 95% CI 1.54–3.04) and the EPIC-Norfolk population (12.57; 95% CI 9.85–16.04). Median AUC was 0.82 and calibration ranged from <0.001 to 0.003 in imputed datasets.

**Conclusion** We have identified significant predictors of CVD in women with a history of HDP. This suggests that women with a history of HDP should be followed up from the age of 49 years. Biomarkers such as triglyceride and fibrinogen should be monitored, particularly if women have hypertension, high BMI, a family history of CVD or have had repeated exposure to HDP. Further external validation work is recommended to confirm the clinical utility of the proposed predictors of CVD.

OP52

ASSOCIATION BETWEEN CARDIOVASCULAR HEALTH AND STROKE IN OLDER BRITISH MEN: FINDINGS FROM THE BRITISH REGIONAL HEART STUDY

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10.1136/jech-2020-SSMabstracts.51

**Background** The American Heart Association's model of ideal cardiovascular health (CVH), based on 7 well-known and modifiable health factors (body mass index, blood pressure (BP), glucose, cholesterol, physical activity, smoking and diet - Life's Simple 7 or LS7) was developed to promote primordial prevention of cardiovascular disease (CVD), including stroke. Stroke burden rises sharply with age. However most research exploring CVH has been conducted in middle-aged participants. In the British Regional Heart Study (BRHS), we prospectively explored associations of each LS7 factor and composite CVH scores with stroke in middle and older age; and associations between CVH trajectories and stroke incidence in later life.

**Methods** The BRHS is a prospective study of men recruited in 1978–1980 (aged 40–59y, baseline) and followed up for CVD events. The men were re-examined at 20 years (Q20). All components of LS7 were measured at both time points except baseline diet. Men without pre-existing CVD were followed from baseline (mean age 50y, n=6612) and again from Q20 (mean age 69y, n=3798) for a median period of 20y and 16y respectively. Cox models estimated risk of stroke as adjusted hazard ratios (HRs) for ideal and intermediate vs poor levels of LS7 factors; for composite CVH scores; and for 4 CVH trajectory groups based on transitions in CVH status (low/high) from baseline to Q20 - Low-Low, Low-High, High-Low and High-High.