

CI: 1.56–3.07; OR=2.63, 95% CI: 1.81–3.81, respectively), after full-adjustment. In the BRHS, periodontal pocket depth greater >3.5 mm was associated with increased risk of being in the bottom quintile of grip strength (OR=1.59, 95%CI: 1.14–2.20). Moreover, dry mouth was associated with the top quintile of gait speed in the BRHS, and bottom quintile of grip strength in the HABC Study (OR=1.75, 95% CI: 1.22, 2.50; OR=2.43, 95%CI=1.47–4.01, respectively).

Conclusion Markers of poor oral health, particularly dry mouth, poor self-rated oral health and having more than one oral health problems were associated with higher risks of disability and impaired physical function in older populations. Investigations to assess these associations prospectively and the underlying pathways are needed.

Pregnancy/Maternal Health 2

OP98

EFFECTS OF DIFFERENT SMOKING PATTERNS DURING PREGNANCY ON PERINATAL OUTCOMES: AN ANALYSIS OF MATERNAL SMOKERS IN THE SOUTHAMPTON WOMEN'S SURVEY

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Background Maternal smoking during pregnancy has an established causal relationship with poor perinatal outcomes including low birthweight and preterm birth. Nonetheless, a significant minority of women, especially those in lower socio-economic groups, continue to smoke throughout their pregnancy despite current interventions to quit. In this group, it has been suggested that harm-reduction may be a more attainable goal. A previous study of low-income pregnant women in a Dublin maternity hospital (The Rotunda) showed that quitting smoking for even a part of pregnancy (partial quitting) resulted in higher birthweight than those who continued to smoke throughout. Further support for this strategy for harm-reduction is required. Our objective was to determine whether the relationship between different smoking patterns among pregnant smokers and perinatal outcomes could be replicated in the UK Southampton Women's Survey (SWS) cohort.

Methods Women who were smoking at the time of conception (taken as last menstrual period) were categorised according to their smoking status across pregnancy into sustained quitters, partial quitters (who quit smoking in either the first or third trimester alone) or sustained smokers (who continued to smoke throughout pregnancy). Linear regression analyses with birthweight and gestational age as the dependent variables, and smoking status as the exposure were performed. The choice of confounders (child sex, parity, maternal weight and prudent diet score) was guided by a Directed Acyclic Graph (DAG).

Results Of the 3,158 women who became pregnant, 768 were smokers at conception. Of these, 697 (91%) had complete smoking data with 355 (51%) being sustained smokers, 81

(12%) partial quitters and 261 (37%) sustained quitters. Compared with infants born to sustained smokers, infants born to sustained quitters and partial quitters were heavier at birth by 361 g (95% CI: 284 g, 438 g) and 203 g (92 g, 315 g), respectively, adjusted for confounders. Sustained quitters had a longer gestation by 3.5 days (1.7 days, 5.2 days) compared with sustained smokers, adjusted for confounders, but no difference was seen for partial quitters.

Conclusion These results from the SWS, after adjusting for a wide range of available confounders, closely replicated the findings in Dublin, providing further support for partial quitting by pregnant smokers as a harm-reduction strategy for offspring. While sustained quitting is clearly most desired, for women who cannot quit for the duration of their pregnancy, partial quitting should be encouraged as a strategy to reduce some of the harmful effects of smoking on offspring.

OP99

HYPERTENSIVE DISORDERS IN PREGNANCY AND CHILDHOOD DIAGNOSIS OF ASTHMA

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Background Hypertensive disorders of pregnancy (HDP), the most common pregnancy complication, have been linked to childhood morbidity. Few studies have investigated the relationship between HDP and asthma in the offspring, with existing research showing conflicting results. The primary aim of this study was to explore the association between HDP and the development of asthma at or before the age of seven years using the UK Millennium Cohort Study (MCS).

Methods Participants were born between 2000–2001 and recruited at 9 months, the first wave of the MCS, and subsequently participated in waves 2, 3 and 4 when they were three, five and seven years respectively. The study cohort consisted of singleton children, where the mother was the main respondent at the first wave and participated in the fourth wave at age seven years. HDP were self-reported by mothers at the first wave, where women were asked whether they had gestational hypertension, chronic hypertension, pre-eclampsia or eclampsia. The primary outcome was parent-reported diagnosis of asthma, based on responses to the International Study of Asthma and Allergies in Childhood (ISAAC) core questionnaire at age seven years. Crude and adjusted logistic regression models were used for data analysis. We adjusted for a range of potential confounders including socio-demographics (e.g. ethnicity, maternal age), obstetric factors (e.g. preterm delivery, parity), and established risk factors for asthma (e.g. parental smoking, family history of asthma, exposure to pollution). Moreover, we examined the risk of asthma among small for gestational age (SGA) children who were exposed to HDP compared to children not exposed to HDP.

Results At the first wave, 18,818 children were recruited and 13,061 (69%) participated in the fourth wave at age seven years and were included in the analysis. 984 women (8%) reported having HDP and 2151 (16%) of the children had developed asthma by age seven years. In the crude logistic model HDP was significantly associated with asthma (OR=1.37; (95% CI: 1.17–1.61)) and the association was almost unchanged in the adjusted model (OR=1.39; (95% CI:

1.15–1.68)). This association was further strengthened in relation to HDP and SGA (Adjusted OR=1.60; (95% CI: 1.06–2.29).

Conclusion This study suggests that HDP exposure may increase the risk of asthma in the offspring and the association was independent of several potential confounders. Considering that the association was larger in relation to HDP/SGA compared to HDP alone, placental pathology may be a common factor increasing the risk of asthma.

OP100 ASSOCIATION BETWEEN HYPERTENSIVE DISORDERS OF PREGNANCY AND ATTENTION DEFICIT HYPERACTIVITY DISORDER: A POPULATION-BASED AND SIBLING-MATCHED COHORT STUDY

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Background Hypertensive disorders of pregnancy (HDP) have been linked to adverse neurodevelopmental outcomes, including attention deficit hyperactivity disorder (ADHD). However, limitations of the literature such as residual confounding, and confounding due to shared genetics need to be addressed before more definitive conclusions can be reached. Therefore, the objective of this study was to examine the association between HDP and ADHD, using large Swedish-based registry data, allowing us to control for a wide range of confounding factors including confounding due to shared genetics.

Methods All singleton live births in Sweden from 1990 to 2010 were included in the study. Data on HDP were obtained from the Medical Birth Register, and included three exposures of interest: 1. Preeclampsia 2. Chronic hypertension (both of which were classified according to ICD-9 and ICD-10 coding) 3. Preeclampsia and small for gestational age (SGA) combined, used as a proxy for the recent inclusion of uteroplacental dysfunction in the definition of preeclampsia. Data on ADHD was obtained from the National Patient Register and Prescribed Drug Register. A diagnosis of ADHD was determined in one of two ways: 1. If a diagnosis of ADHD was present in the National Patient Register, using ICD-10 coding. 2. If an individual was in receipt of ADHD medication, classified according to Anatomical Therapeutic Chemical classification system. Multivariate Cox proportional hazards regression analysis was conducted, adjusting for several perinatal and sociodemographic factors, selected a priori from previous literature. Sibling-matched analysis further controlled for shared genetic and familial confounding when an association was present in the adjusted Cox model.

Results The cohort consisted of 2,047,619 children, with 114,934 (5.6%) cases of ADHD. In the adjusted Cox model, preeclampsia was associated with a 15% increase in the

likelihood of ADHD (Hazard Ratio (HR): 1.15, 95% CI: 1.12, 1.19) compared to those unexposed to preeclampsia. Result of the sibling-matched analysis did not change materially (HR: 1.13, 95% CI: 1.05, 1.22). The HR for preeclampsia and those born SGA was 1.43 (95% CI: 1.31, 1.55) in the adjusted model, and 1.55 (95% CI: 1.28, 1.88) in the sibling-matched analysis. The HR for chronic hypertension-ADHD was 1.07 (95% CI: 0.97, 1.18) in the adjusted Cox model.

Conclusion Exposure to preeclampsia or preeclampsia/SGA (i.e. SGA baby exposed to preeclampsia) was associated with ADHD, while chronic hypertension was not associated with ADHD. Placental pathology may be a common factor increasing the likelihood of ADHD given the stronger association with preeclampsia/SGA than preeclampsia alone.

OP101 THE IMPACT OF CAESAREAN SECTION ON BREASTFEEDING INDICATORS IN SUB-SAHARAN AFRICA: A META-ANALYSIS OF DEMOGRAPHIC AND HEALTH SURVEYS

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Background The association between caesarean section and breastfeeding is poorly understood in sub-Saharan Africa. We aimed to examine the impact of caesarean section on breastfeeding indicators—early initiation of breastfeeding, exclusive breastfeeding, and ever breastfeeding—in sub-Saharan Africa.

Methods We used the most recent data from 32 Demographic and Health Surveys (DHS) completed in sub-Saharan Africa. We analysed the data to examine the impact of caesarean section on breastfeeding indicators using log-Poisson regression models for each country adjusted for potential confounders. For each breastfeeding indicator, the within-country adjusted prevalence ratios were pooled in random effects meta-analysis.

Results The within-country adjusted analyses showed, compared with vaginal birth, caesarean section was associated with adjusted prevalence ratios (aPR) for early initiation of breastfeeding that ranged from 0.23 (95%CI, 0.16, 0.31) in Tanzania to 0.81 (95%CI, 0.64, 1.02) in Cameroon. Similarly, the aPR for exclusive breastfeeding ranged from 0.57 (95%CI; 0.33, 0.99) in Senegal to 1.60 (95%CI; 1.07, 2.39) in Mali, while the aPR for ever breastfeeding ranged from 0.90 (95% CI, 0.82, 0.99) in Liberia to 1.02 (95%CI, 0.98, 1.06) in Guinea. Meta-analysis combining the adjusted effects from 32 countries showed that caesarean section was associated with a 47% lower prevalence of early initiation of breastfeeding (pooled PR, 0.53 (95%CI, 0.48, 0.58)), but not with exclusive breastfeeding (pooled PR, 0.93 (95%CI; 0.86, 0.99)) nor ever breastfeeding (pooled PR, 0.98 (95%CI; 0.98, 0.99)).

Conclusion Caesarean section had a negative influence on early initiation of breastfeeding, but showed little difference in exclusive- and ever-breastfeeding between infants born by caesarean versus vaginal birth in sub-Saharan Africa.