in this relationship. With CS rates rising by 4% globally per year, we aimed to examine the relationship between mode of delivery and overweight/obesity in childhood.

Methods SLOPE is a linked population-based cohort of anonymised routine antenatal, birth and child healthcare records in Hampshire, UK (2003–2018). Delivery method was categorised into unassisted vaginal delivery, assisted vaginal delivery and CS (including elective and emergency). Child body mass index (BMI) was measured as part of the National Child Measurement Programme in England. Children were identified as overweight/obese if their age- and sex-adjusted BMI was above the 85th percentile. Generalised linear modelling for outcome at two time points; 4–5 years (n=30,229) and 10–11 years (n=14,305) was conducted, adjusting for clustering within families. Modelling was introduced in stages with the choice of covariates informed by a Directed Acyclic Graph, first adjusting for maternal BMI, then adding in confounders including maternal age, ethnicity, educational attainment, parity, smoking status at booking appointment, pre-eclampsia, and previous CS (model C) and then birthweight and gestational age at birth as potential mediators (model M). Analyses were also stratified by maternal BMI category (underweight: <18.5, normal weight: 18.5 to <25, overweight: 25 to <30, obese: ≥30 kg/m^2) at booking.

Results Of children delivered by CS, 25.0% and 33.7% were overweight/obese by 4–5 years and 10–11 years respectively, compared to 21.9% and 31.0% respectively with vaginal births. In unadjusted analysis, CS was associated with increased risk of overweight/obesity at 4–5 years (relative risk (RR) 1.13, 95% Confidence Interval (95% CI) 1.08–1.19), and at 10–11 years (RR 1.08, 95% CI 1.02–1.14), however both were attenuated by adjusting for maternal BMI. In stratified analyses, CS delivery was associated with increased risk of childhood overweight/obesity at 4–5 years only in normal weight women (model C: RR 1.15, 95% CI 1.04–1.27, model M: RR 1.14, 95% CI 1.02–1.26), but not in 10–11 year models.

Conclusion Maternal weight status at the start of pregnancy is a strong confounder in the relationship between mode of delivery and childhood overweight/obesity. In stratified analyses, this association was evident only for children of normal weight women. If this relationship is causal, the potential mechanisms need to be explored.

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Background The potential for harm to developing foetuses by tobacco products is well established. Studies have focused on cigarette smoking as a source of exposure. The use of electronic cigarettes (vaping devices) has increased in recent years. The Office for National Statistics (ONS) reports vaping data among the general public, with the most recent estimates showing a 5% prevalence among all women. However, there is no data on prevalence of vaping among pregnant women in the UK. This study sought to estimate the prevalence of vaping during pregnancy and to explore the factors and outcomes associated with vaping in a population-based sample of women giving birth in England.

Methods The study was a cross-sectional population-based postal survey of maternal and infant health and care, the National Maternity Survey (NMS) 2018. A total of 16,000 women aged 16+ years who were living in England and who had given birth in 2017 were invited to participate. They were identified at random from birth records by the ONS, and surveyed at 6 months post-partum. Demographic and clinical questions about their pregnancy, labour, birth, and postnatal period were sent to them on a questionnaire. We estimated the prevalence of vaping and patterns of cigarette smoking in this group of women, and conducted regression analysis to explore associations between maternal characteristics and vaping, and between vaping and birth outcomes. Survey data were weighted to reduce the potential for non-response bias.

Results The crude prevalence of vaping among pregnant women was 2.8%. This varied according to the pattern of cigarette smoking in pregnancy: 0.3% in never-smokers; 3.3% in ex-smokers; 7.7% in women who quit smoking when they became pregnant (pregnancy-inspired quitters); 9.5% in women who temporarily stopped smoking while pregnant but resumed smoking after the birth of their baby (temporary quitters); and 17.7% in women who continued to smoke during and after their pregnancy (persistent smokers). Younger women, unmarried women, women with fewer years of formal education, women living with a smoker, and persistent smokers (compared to quitters, ex- and never-smokers) were more likely to vape. Vaping was also associated with 3.2 weeks' reduction in the duration of breastfeeding and 10% reduction in the prevalence of breastfeeding for at least 8 weeks. However, there was no evidence of association between vaping and any of the maternal characteristics or birth outcomes after adjusting for the pattern of cigarette smoking in pregnancy.

Conclusion The prevalence of vaping among pregnant women in the NMS 2018 survey was low. Characteristics associated with vaping were broadly similar to those associated with smoking. Adverse birth outcomes and reduced breastfeeding among pregnant women who vape may be explained by their relatively higher prevalence of cigarette smoking.

Thursday 10 September
Hospital Admissions

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Background Children who are born preterm and those who are socially disadvantaged tend to have increased morbidity in childhood. Few studies are large enough and have