P57 INEQUALITIES IN SCREEN TIME DURING THE EARLY YEARS: FINDINGS FROM A PROSPECTIVE COHORT STUDY

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Background It is well understood that the first five years of life are crucial to future health, wellbeing and success, and that large inequalities are evident early in life. While research into inequalities amongst families is not new, understanding how a child's access to mobile technology may impact the transmission of inequality from parent to child is. Scientific literature exploring screen time exposure mainly predates the current reality of mobile technology being ubiquitous household items. It also predominantly relies on parent reports of children's screen use. Leveraging off an existing prospective cohort study which began in 2017, this study aims to quantify the amount of screen time children are exposed to during the early years, understand socioeconomic disparities and whether screen exposure makes a difference to child development.
Methods This study utilises innovative speech recognition technology called Language Environment Analysis (LENA), which can quantify the amount of electronic noise heard by a child over a 16-hour day. LENA data is collected once every six months from 6 – 48 months of age, with children stratified by two levels of maternal education (secondary school only, university degree plus). Descriptive statistics of screen use will be presented cross-sectionally by age and maternal education groups.
Results At 6 months children within the low education grouping heard 64.23 (SD 67.63) minutes of electronic noise and 58.10 (SD 51.16) at 12 months. This compares with 31.34 (SD 43.36) at 6 months and 41.93 (SD 50.10) minutes at 12 months for those in the high education grouping. Limitations in understanding screen use through the categorisation of 'electronic noise' through the LENA sound recognition software will be overcome through manual transcription of audio recordings by human transcribers. Comparisons of LENA data and human transcription will be presented.
Conclusion This is the first study to objectively quantify children's screen use in the first year of life within a contemporary sample. Current screen time guidelines recommend under the age of 2 years children should not be exposed to any screens. Our data indicates, for the majority of families this is simply not the case. The results from the current study also highlight inequalities in screen use, raising questions of whether screen use is contributing to the continuing disparities in developmental outcomes by school entry, something our study aims to investigate as it progresses.

P58 UNDERSTANDING PATHWAYS TO INEQUALITIES IN CHILD MORTALITY: A MEDIATION ANALYSIS USING WHOLE POPULATION LINKED DATA IN WALES

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Background There has been an unprecedented rise in infant mortality rates in the UK since 2014, especially in disadvantaged areas. This trend is concerning since infant mortality is a sensitive indicator of the prevailing social conditions affecting health across the life course. Identifying potentially modifiable factors on the pathway linking childhood socio-economic conditions (SECs) to child mortality is important to inform public health policies to reduce health inequalities. The aim of this study was to assess the extent to which intervening on maternal health, perinatal factors and/or birth outcomes might reduce inequalities in child mortality.
Methods We conducted a causal analysis of linked population level data from the SAIL Databank on all singletons born in Wales between 2000 and 2019 and their mothers. The exposure of interest was mother's quintile of small area deprivation 3-years prior to pregnancy; the outcome was child mortality between birth and age 15-years. The data included gestational age, birthweight, parity, maternal age, maternal health conditions before and during pregnancy, pregnancy complications, congenital anomalies, smoking during pregnancy and perinatal maternal mental health. Using the framework of interventional disparity measures, we estimated the contribution of factors relating to maternal health, perinatal factors and birth outcomes to inequalities in child mortality adjusting for potential confounding by parity. Confidence intervals will be calculated by non-parametric bootstrap.
Results There were 763,241 singleton live births in Wales between 2000 and 2019 and of these, 3,289 children died within the first 15 years of life. Initial results are based on a complete-case analysis of data on 463,200 births out of which 1,719 died by age 15. The probability to have died by age 15 was 1.37 times as high in the most deprived quintile compared to the least. After shifting the distribution of maternal health, perinatal factors and birth outcomes in the most deprived population quintile to that in the least deprived quintile, the survival probability ratio between the most and least deprived children was reduced to 1.09.
Conclusion Child mortality is a rare event but with clear socio-economic patterning. Initial results indicate that maternal health, perinatal factors and birth outcomes may explain most of the observed inequalities. Further analyses will aim to disentangle the contribution of these mediating blocks to identify potential public health policy entry points.

P59 DO THE RISKS OF PRETERM BIRTH AND SOCIOECONOMIC STATUS ACCUMULATE? A SYSTEMATIC REVIEW OF INTERACTION AND EFFECT MODIFICATION

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Background Preterm birth is a major public health problem, affecting 8% of births in the UK overall with significant socioeconomic inequalities observed. Children who are born preterm have an increased risk of negative health and education outcomes. These outcomes are socially patterned but it is not clear how the effects of preterm birth are modified by socioeconomic circumstances (SEC).