

sufficient follow-up to explore the size of these separate effects across childhood. We explored whether birth before full term (gestation 39–41 weeks) and social disadvantage represent a double jeopardy by comparing the size of these separate effects on rates of hospital admission from birth to 10 years.

Methods We linked routine data from birth registration and hospital admissions for all live, singleton births in England in 2005–2006. Children ($n=1,018,136$) were followed up from discharge from their birth admission to age 10 years, death or study end (31st March 2015). Negative binomial regression models were used to estimate adjusted rate ratios (aRR) with 95% confidence intervals (CI) for the effect of gestational age (<32, 32–33, 34–36, 37–38, 39–41, 42 weeks) and area deprivation (quintiles) at birth on hospital admissions rates, stratified by age (<1, 1–4, 5–10 years). Population attributable fractions (PAFs) were estimated using the aRR for gestational age and area deprivation. All analysis was conducted in Stata version 14.

Results Hospital admission rates increased strongly with prematurity and area deprivation, even after adjustment for other factors. The effect of gestation was most marked in infancy, when even being born at 'early term' (gestation 37–38 weeks) had a stronger effect than living in the most deprived areas (aRR=1.37, 95% CI 1.35–1.39 for 37–38 versus 39–41 weeks; aRR=1.26, 95% CI 1.24–1.28 for the most versus least deprived areas). The effect of gestation persisted though was less marked at age 5–10 years, although even being born 'late preterm' (gestation 34–36 weeks) had a stronger effect than living in the most deprived areas (aRR=1.39, 95% CI 1.35–1.43 for 34–36 versus 39–41 weeks; aRR=1.29, 95% CI 1.26–1.31 for the most versus least deprived areas). In infancy, the PAF for birth before full term (<39 weeks) was larger than the PAF for living in the poorest quintile. At age 5–10 years, the PAF for birth before full term was only slightly smaller than the PAF for living in the poorest quintile.

Conclusion Gestational age and social deprivation were independent risk factors for hospital admissions throughout childhood. The impact of being born even a few weeks early is of similar magnitude to living in the most deprived areas. Children born early and living in more deprived areas have a double jeopardy.

OP44

BORN TOO SOON: EVIDENCE FROM ONE MILLION CHILDREN ON HOW PREMATURITY AFFECTS HOSPITAL ADMISSIONS IN CHILDHOOD

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Background Preterm children are at increased risk of morbidity throughout childhood. However, few studies have investigated the long-term health consequences in relation to the full spectrum of gestational age, week-by-week. This study aimed to estimate the effect of gestational age on hospital admissions from birth up to 10 years of age, explore how rates of hospitalisation change throughout childhood.

Methods Birth registration and hospital admission records were linked for all live, singleton births occurring in England between in 2005 and 2006. Children ($n=1,018,136$) were followed up from birth admission hospital discharge to age 10, death or study end (31st March 2015). Generalised estimating equations were used to estimate rate ratios (RR) with 95% confidence intervals (CI). The analysis was repeated looking at infection-related hospital admissions only.

Results Compared to children born at 40 weeks, those born <28 weeks had the highest rates of hospital admission throughout childhood (aRR=4.89, 95%CI=4.55–5.26). Even children born at 38 weeks had a higher rate of hospital admission during childhood compared to those born at 40 weeks (aRR=1.19, 95%CI=1.16–1.22). However, the effect of gestational age on hospital admission decreased as the children became older (interaction $p<0.0001$). The most common cause of hospital admissions throughout childhood was infection and similar results were observed when the analysis was restricted to infection-related hospital admissions only e.g. <28 vs. 40 weeks, aRR=5.57, 95%CI=5.01–5.91. Gestational age had the strongest effect on rates of lower respiratory tract infections, invasive bacterial and viral infection-related admissions.

Conclusion Gestational age is a strong predictor of childhood morbidity, particularly infection-based morbidity, with those born the most preterm at the highest risk. Whilst the effect of gestational age on hospital admission rates decreases with age, an excess risk remained at age 7–10 years.

OP45

WHY DO PEOPLE ATTEND A&E? A CROSS-SECTIONAL STUDY OF EMERGENCY DEPARTMENTS IN GREATER GLASGOW AND CLYDE

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Background There has been a year-on-year rise in attendance at A&E departments (EDs) in Greater Glasgow and Clyde (GGC) since 2015/16, despite the opening of alternative units such as medical assessment units and minor injury units (MIUs), and subsequent falling emergency admission rates. This study aims to understand why people choose to attend EDs.

Methods All five EDs in GGC were surveyed over 3 weeks in November/December of 2019. Only those not in crisis were included in the survey. A total of 1196 people were surveyed. Qualitative methods were used to analyse the text data, while chi squared tests compared quantitative data between hospitals. Demographic representativeness was assessed using November/December 2018 attendance data.

Results Less than a third of survey respondents believed that they had a medical emergency. 42% were advised to attend by a health practitioner. Twelve per cent attended at A&E because they could not get a GP appointment with no significant difference between hospitals. Convenience was also cited as a factor and the feeling that this would be the quickest and best place for the person to attend. One third of the four ED respondents tried to get a GP appointment before coming to A&E, ranging between 28.7% and 42.2%