- <27 weeks gestational age and/or birthweight <1000 grams
- Born between 01/01/2013 – 30/06/2013 and 01/01/2018–30/06/2018
- Required mechanical ventilation during the same period.
- The use of the extubation checklist in 2018 group

Results Amongst the pre-checklist cohort, 24 babies met the GA/BW criteria, with 3 sets of notes unavailable. Of these, 15 patients received mechanical ventilation. There were 27 extubation attempts, 19 of these were unsuccessful and 8 of them were successful (29.6%).

In 2018, 31 babies met the GA/BW criteria, with 4 sets of notes unavailable, 17 patients needed ventilation, 30 extubation attempts using the extubation checklist, 16 of these were unsuccessful and 14 of them were successful (46.6%)

Conclusions

- It was noted that the proportion of unsuccessful extubation attempts dropped by 17% (from 70.4% to 53.4%) after implementing the extubation checklist.
- Extubation of extreme preterms is 1.6 more likely to be successful when extubation checklist is used.

139 DO NEURAMINIDASE INHIBITORS IMPROVE OUTCOMES IN CRITICALLY UNWELL CHILDREN WITH INFLUENZA?

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10.1136/bmjpo-2021-RCPCH.77

Background Influenza is a common seasonal acute respiratory viral illness. Children, especially those with co-morbidities, are at risk of complications and ICU admission. No specific guidelines have been formulated about starting neuraminidase inhibitors (NAI) in critically ill children with influenza, but the Health Protection Agency and American Academy of Pediatrics have both stated that antiviral therapy should be initiated as soon as possible in this cohort.

Objectives We aimed to evaluate the evidence supporting the early initiation of NAI in critically ill children with influenza, by conducting a literature search to establish whether NAI improved survival and shortened intensive care admissions in children critically ill with influenza.

Methods We searched the literature for articles on the use of NAI treatment in critically unwell children or children in PICU diagnosed with influenza. We excluded articles with adult patients only, or with a mixture of adults and children where the results were not stratified by age. We also excluded articles with children in outpatient settings, or hospitalised on low-dependency units.

Results Out of 369 articles (Cochrane Library: 2, PUBMED: 328, NHS Evidence: 39), twelve studies published between 2010 and 2017 were included, seven of which were cohort studies (Level 3 evidence) and five case series (Level 4 evidence), with a total of over 7,000 critically ill children with influenza worldwide.

Six cohort studies compared mortality in children receiving NAI and children who did not: five of these demonstrated a trend towards decreased mortality with the use of NAI, and one showed no difference between treated and untreated groups. Only one study reached statistical significance, with $p = 0.01$ for association of NAI treatment with survival. We noted that the two studies which reported on NAI-related adverse events reported none.

There is some evidence in our data that early NAI within 48 hours of symptom onset and/or admission has additional benefits compared to late NAI, although the largest cohort study did not demonstrate this effect.

The studies included here had limitations. Patient cohorts were heterogeneous, with some having had RT-PCR confirmed influenza and others just a clinical diagnosis. Few studies reported on concurrent treatment with antibiotics or steroids. Several studies stressed that patients receiving NAI were more likely to have co-morbidities and very severe influenza requiring mechanical ventilation at baseline, compared to patients who were not started on NAI.

Conclusions The current evidence on the use of NAI in critically ill children with influenza is weak (Level 3), but trends toward improved survival. The trend of improved survival is particularly salient if NAI treatment is initiated within 48 hours of symptom onset. This may mean starting oseltamivir on clinical suspicion of influenza, without waiting for a laboratory confirmation of the diagnosis, to avoid delay.

140 EARLY POSTNATAL MATERNAL DEPRESSIVE SYMPTOMS MAY PREDICT BEHAVIOURAL PROBLEMS AND AUTISM SYMPTOMS IN TODDLERS

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10.1136/bmjpo-2021-RCPCH.78

Background Maternal depression has been studied as a risk factor for child development and found to be associated with less secure attachment, worse cognitive and behavioural outcomes in childhood, and a possible increased risk of autism spectrum disorder (ASD). Despite the wealth of research investigating postnatal parental depression, most studies have small sample sizes, assess parental mood during later infancy, use a dichotomous measure of parental depression, or examine distant child behavioural and emotional outcomes, with limited focus on ASD.

Objectives This study examined the association between early maternal postnatal depressive symptoms and offspring's mental health in a large cohort of term and preterm toddlers.

Methods Participants were 509 children enrolled in the Developing Human Connectome Project; 412 (80.9%) were born at term, and 97 (19.1%) were born preterm (<37 weeks gestation). Maternal postnatal depressive symptoms were assessed with the Edinburgh Postnatal Depression Scale (EPDS) at term. Children were followed-up at a median corrected age of 18.4 months (range 17.3 – 24.3) for neurodevelopmental assessment. Primary outcome measures were toddlers' Child Behaviour Checklist $1^{1/2}$-5 Total (CBCL) and Quantitative Checklist for Autism in Toddlers (Q-CHAT) scores. Secondary outcome measures were the CBCL internalising and externalising sub-scores. Cognition was assessed with the Bayley Scales of Infant and Toddler Development – Third Edition (Bayley-III). Multiple imputation (n=40) was carried out to account for missing data. Data were analysed with multiple linear regression, including clinical and socio-demographic confounders.

Results Higher maternal EPDS scores were associated with toddlers' higher CBCL total scores (B=0.93, 95% CI 0.43–1.44, $p<0.001$, $f^2=0.05$) and higher Q-CHAT scores (B=0.27, 95% CI 0.03–0.52, $p<0.05$, $f^2=0.01$). Higher maternal EPDS