




Early childhood respiratory morbidity and antibiotic use in ex-preterm infants: a primary care population-based cohort study

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This English population-based cohort study in early childhood highlights the significant respiratory morbidity, antibiotic use and increased primary healthcare utilisation in ex-preterm infants, particularly those who were discharged home with oxygen <https://bit.ly/2wLeK0g>

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ABSTRACT

Background: Globally, bronchopulmonary dysplasia (BPD) continues to increase in preterm infants. Recent studies exploring subsequent early childhood respiratory morbidity have been small or focused on hospital admissions.

Aims: To examine early childhood rates of primary care consultations for respiratory tract infections (RTI), lower respiratory tract infections (LRTI), wheeze and antibiotic prescriptions in ex-preterm and term children. A secondary aim was to examine differences between preterm infants discharged home with or without oxygen.

Methods: Retrospective cohort study using linked electronic primary care and hospital databases of children born between 1997 and 2014. We included 253 277 eligible children, with 1666 born preterm at <32 weeks' gestation, followed-up from primary care registration to age 5 years. Adjusted incidence rate ratios (aIRRs) were calculated.

Results: Ex-preterm infants had higher rates of morbidity across all respiratory outcomes. After adjusting for confounders, aIRRs for RTI (1.37, 95% CI 1.33–1.42), LRTI (2.79, 95% CI 2.59–3.01), wheeze (3.05, 95% CI 2.64–3.52) and antibiotic prescriptions (1.49, 95% CI 1.44–1.55) were higher for ex-preterm infants. Ex-preterm infants discharged home on oxygen had significantly greater morbidity across all respiratory diagnoses and antibiotic prescriptions compared to those without home oxygen. The highest rates of respiratory morbidity were observed in children from the most deprived socioeconomic groups.

Conclusion: Ex-preterm infants, particularly those with BPD requiring home oxygen, have significant respiratory morbidity and antibiotic prescriptions in early childhood. With the increasing prevalence of BPD, further research should focus on strategies to reduce the burden of respiratory morbidity in these high-risk infants after hospital discharge.