

## PRESENTATION 4

## Does Exposure to Environmental Tobacco Smoke lead to Increased Severity of Illness in Infants Hospitalised with Bronchiolitis?

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### Background

Bronchiolitis is the most common disease in infants under 1 year old. Although most cases are mild, hospitalisation for severe disease can occur. As hospital admissions are rising each year, understanding risk factors for severe bronchiolitis is becoming increasingly important. To date, there have been no reviews investigating the effects of smoke exposure on severity of bronchiolitis.

### Methods

In this review, systematic searches of databases were performed, in addition to reference lists and grey literature searches. Comprehensive exclusion criteria were used to identify suitable papers. Outcomes used to define severity included severity scores, clinical criteria, respiratory support, admission to ICU, and readmission following discharge. Following extraction of data, a narrative synthesis of results was performed

### Results

Of the 12 studies included, three studies found second hand smoke exposure was significantly associated with severe bronchiolitis. Another three studies found exposure significantly increased the risk of readmission. Although two studies suggested there is no effect on ICU admission, one study found postnatal smoke exposure further increases the risk of ICU admission in patients with prenatal smoke exposure. One study found smoke exposure results in a significant risk of requiring oxygen supplementation, however this was not reflected by the percentage of infants with smoke exposure in the most intensive treatment groups.

### Key messages

Postnatal smoke exposure increases the risk of severe bronchiolitis, whether this translates to an increase in the intensity of care required is unclear. Further research into effective smoking cessation methods is warranted to decrease the number of severe bronchiolitis cases.

