## **Severity of Respiratory Failure Pre-intubation in infants with bronchiolitis**



Anuj Khatri, Aravind Anand, Amira Zahari, Linda Chigaru, Andrew Jones Children's Acute Transport Service London, UK



Children's Acute Transport Service



♦ Intubating an infant with Bronchiolitis requires a multidisciplinary team approach fro decision making. Guidelines suggest an FiO<sub>2</sub> >0.6 to maintain oxygen



 $\diamond$  We aimed to describe the degree of respiratory failure pre-intubation as defined by FiO<sub>2</sub> and pCO<sub>2</sub> in infants with bronchiolitis in the referring hospitals in addition to

saturations >90% as a threshold, however there appears to be a significant varation in practice.



♦ A retrospective database and casenote review of all infants <1 year with a diagnosis of bronchiolitis referred to The Children's Acute Transport Service between October 2019 and January 2020 (epoch 1), and between October 2021 and January 2022 (epoch 2) was performed. capturing the indications for intubation.



♦ We identified 232 infants transported from 30 hospitals.
♦ Between epochs 1 and 2 there were statistically significant differences in median pre-intubation pCO2 (8.6 vs 7.2kPa, p 0.05), and in the proportion of children where Work Of Breathing (WOB) was the indication for intubation (30 vs 57%, p 0.0003).

Infants with Bronchiolitis	Transported	Intubated
EPOCH 1	124	120
EPOCH 2	108	104
Total	232	224





♦ Infants with bronchiolitis are intubated for a number of indications, with a statiscally significant increase in the number of patients being intubated for work of breathing across these two cohorts of patients. Patients were also intubated at lower Fio2 and pCO2 thresholds than guidelines recommend. Further work exploring the short and long term ICU outcomes of these patient is required.



1. Evelina London Children's Hospital / STRS Bronchiolitis guideline https://www.evelinalondon.nhs.uk/resources/our-services/hospital/south-thames-retrieval-service/Severebronchiolitis.pdf Last accessed 10/06/2022

2. Children's Acute Transport Service Bronchiolitis guideline https://cats.nhs.uk/wp-content/uploads/cats\_bronchiolitis\_2022.pdf Last accessed 10/06/2022