

RISK FACTORS FOR BRONCHIOLITIS HOSPITALIZATIONS IN CHILDREN WITH CHRONIC DISEASES

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Abstract

Background: Respiratory syncytial virus (RSV) bronchiolitis is the most common lower respiratory tract disorder causing hospitalization in infants. Palivizumab has shifted the profile of the hospitalized population away from premature infants and towards those with chronic morbidities who are not eligible for prophylaxis. **Aim:** To characterize RSV bronchiolitis hospitalizations in infants with chronic diseases, compared to otherwise healthy infants. **Methods:** A four consecutive RSV season retrospective analysis of patients younger than two years admitted with bronchiolitis. Background demographic and clinical data, including vital sign measurements, laboratory tests, and pediatric intensive care unit (PICU) admissions during hospitalization, were analyzed. **Results:** Of 1124 hospitalizations due to RSV bronchiolitis, 244 (22%) were in infants with chronic diseases. Although 20/1124 qualified for RSV prophylaxis, only 8 had been vaccinated. Compared to otherwise healthy infants, children with chronic diseases had longer hospitalizations, median 4 days (IQR 4-7) vs 3 days (2-5), $p < 0.001$; and higher PICU and readmission rates (9% vs 4.5%, $p = 0.007$ and 3% vs 1%, $p = 0.055$, respectively). Children with Down's syndrome comprised 2% of all hospitalizations, but 8% of PICU admissions; their median length of hospitalization was 11 days. Respiratory tract malformations were present in 2% of hospitalizations, and comprised 4% of PICU admissions. **Conclusion:** Infants with chronic diseases admitted with RSV bronchiolitis are prone to longer hospitalization and PICU admission. Children with Down's syndrome and respiratory tract malformations may benefit from RSV prophylaxis.

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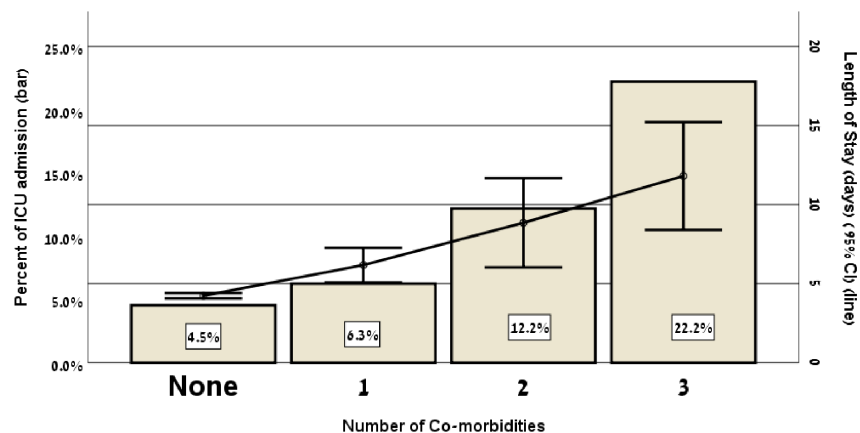
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Figure 1: The percentage of admission to the pediatric intensive care unit and the length of hospital stay, according the number of comorbidities in children hospitalized with RSV



The bars represent the percentages of patients admitted to the PICU.

The linear line represents the length of stay, with 95% confidence interval.