

# The prevalence of human bocavirus in < 2-year-old children with acute bronchiolitis

By: Falahi, S (Falahi, S.)<sup>[1]</sup>; Sayyadi, H (Sayyadi, H.)<sup>[2]</sup>; Abdoli, A (Abdoli, A.)<sup>[3,4]</sup>; Kenarkoohi, A (Kenarkoohi, A.)<sup>[5]</sup>; Mohammadi, S (Mohammadi, S.)<sup>[6]</sup>

## Abstract

Acute bronchiolitis is one of the most common lower respiratory tract infections in children with less than 2 years of age. Nowadays, molecular methods provide an opportunity to better understand the etiology of bronchiolitis. Several viral agents including Respiratory syncytial virus (RSV), Rhinovirus, Parainfluenza and Human bocavirus (HBoV) are responsible for acute bronchiolitis. There are growing studies on the prevalence of HBoV in patients with bronchiolitis. The present systematic review and meta-analysis were conducted to determine the pooled prevalence of HBoV in the respiratory samples of children with acute bronchiolitis.

A literature search was conducted in the databases of PubMed, Scopus and Web of Science to recruit studies reporting the frequency of HBoV in <2-year-old children with acute bronchiolitis from 2005 to 2019. Only studies that used polymerase chain reaction (PCR)-based methods to detect the virus in nasopharyngeal samples were included. A total of 22 studies assessing 6751 cases were analyzed. According to the meta-analysis based on the random-effects model, the overall prevalence of HBoV in children with <2 years old was obtained 13% (95% CI: 0.09-0.17). Additionally, the rates of single (as the sole organism) and mixed (in combination with other viruses) HBoV infections were 4% and 9%, respectively. This study showed a high rate of HBoV detection in children with acute bronchiolitis. This should be considered as part of a diagnostic test panel for respiratory infections in children with bronchiolitis. (C) 2020 The Authors. Published by Elsevier Ltd.

## Keywords

**Author Keywords:** Bronchiolitis; Children; Human bocavirus (HBoV); Prevalence; Respiratory virus