Rural and Remote Health www.rrh.org.au
James Cook University ISSN 1445-6354

Abstract

Impact of breastfeeding on the incidence and severity of respiratory syncytial virus bronchiolitis in infants: systematic review

Part of Special Series: WONCA World Rural Health Conference Abstracts 2022

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PUBLISHED

10 January 2023 Volume 23 Issue 1

HISTORY

RECEIVED: 20 September 2022

ACCEPTED: 20 September 2022

CITATION

Mineva G, Philip R. Impact of breastfeeding on the incidence and severity of respiratory syncytial virus bronchiolitis in infants: systematic review. Rural and Remote Health 2023; 23: 8088. https://doi.org/10.22605/RRH8088

Abstract

Background and Aims: Breastfeeding practices have demonstrated a protective effect against severe respiratory syncytial virus (RSV) disease outcomes. RSV is the principal cause of lower respiratory tract infections in infants worldwide, and an important cause of morbidity, hospitalization, and mortality. The primary aim is to determine the impact of breastfeeding on the incidence and severity of RSV bronchiolitis in infants. Secondly, the study aims to determine if breastfeeding contributes to reduction of hospitalization rates, length of stay and oxygen use in confirmed cases.

Methods: A preliminary database search was conducted using agreed keywords and MeSH headings in MEDLINE, PubMed, Google Scholar, EMBASE, MedRχiv and Cochrane Reviews. Articles were screened based on inclusion/exclusion criteria for infants aged 0–12 months. Full text, abstract and conference articles published in English were included from 2000 to 2021. Covidence® software was used for evidence extraction using paired investigator agreement and PRISMA guidelines were followed.

Results: 1368 studies were screened and 217 were eligible for full text review. 188 were excluded. Twenty-nine articles were selected for data extraction: RSV-bronchiolitis (18) and viral bronchiolitis (13), with two articles discussing both. Results showed that non-breastfeeding practices are a significant risk factor for hospitalization. Exclusive breastfeeding for >4–6 months significantly lowered admission rates, length of stay and supplemental oxygen use, reducing unscheduled GP visits and emergency department presentation.

Discussion: Exclusive and partial breastfeeding reduce severity of RSV bronchiolitis, length of hospital stay and supplemental oxygen requirement. Breastfeeding practices should be supported and encouraged as a cost-effective method to prevent infant hospitalization and severe bronchiolitis infection.

Keywords: breastfeeding, infant, bronchiolitis, RSV, pre-term, breast milk.