



1. Introduction

- ❑ Pneumonia is a severe respiratory infection that affects the lungs, causing inflammation of the air sacs (alveoli), which can fill with fluid or pus, leading to coughing, fever, and difficulty breathing (Mani, 2017; Kim et al, 2021).
- ❑ It remains one of the leading causes of morbidity and mortality among children under five globally, despite being largely preventable and treatable (McAllister et al, 2019; Kulkarni et al, 2022).
- ❑ In children, pneumonia can result from various pathogens, including bacteria (such as *Streptococcus pneumoniae*), viruses, and fungi, often aggravated by underlying conditions and environmental factors (Perret et al, 2021).
- ❑ Young children are particularly vulnerable due to their developing immune systems and greater exposure to risk factors such as poor nutrition, air pollution, and inadequate access to healthcare (Nguyen et al, 2017).
- ❑ Early diagnosis, vaccination, and improved living conditions play a critical role in reducing the burden of pneumonia in this age group (Shahid et al, 2023; Selvi et al, 2024).

2. Prevalence of Pneumonia in UK

- ❑ In the UK, pneumonia continues to pose a significant public health challenge, particularly among children under five, who account for a notable proportion of hospital admissions for respiratory illnesses (Allinson et al, 2023).
- ❑ According to UNICEF England (2019), 56000 young children are diagnosed with pneumonia annually, with seasonal peaks during winter months.
- ❑ 96% of people in the UK are unaware that pneumonia remains the leading cause of death among children worldwide. In 2018 alone, 27 children in England lost their lives to pneumonia, highlighting the ongoing need for greater public awareness and strengthened preventive measures (UNICEF England, 2019).
- ❑ Socioeconomic disparities, overcrowded living conditions, exposure to second-hand smoke, and air pollution are key contributors to the incidence of pneumonia among UK children (Nguyen et al, 2017).
- ❑ Continuous surveillance and updated risk assessments are essential to understand changing epidemiological patterns and guide effective prevention strategies (Shahid et al, 2023).

3. Rationale for Research

Public Health Importance: Pneumonia remains a leading cause of child illness in the UK, highlighting the need for up-to-date, evidence-based evaluation of its incidence and determinants (Kevat et al, 2022).

Identifying Modifiable Risks: Understanding environmental, biological, and social risk factors can support interventions that target preventable causes (Reynard et al, 2024).

Support for Early Intervention: Early identification of at-risk children can reduce complications, hospitalisations, and long-term respiratory issues (Crame et al, 2021).

Policy and Program Development: The findings will inform policymakers and health authorities to strengthen preventive healthcare systems and vaccination initiatives (Lansbury et al, 2024).

Reducing Health Inequalities: The research will shed light on socioeconomic disparities contributing to pneumonia risk, supporting targeted actions for vulnerable families (Kevat et al, 2022).

Global and National Alignment: The study supports national and WHO goals to reduce child mortality and improve respiratory health outcomes through preventive public health measures (Hayat et al, 2024).

4. Research Question, Aim, and Objectives

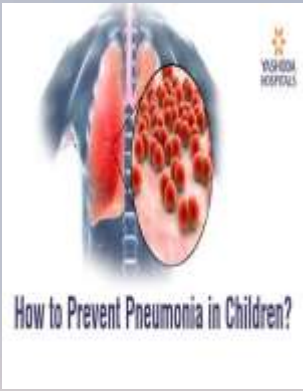
Research Question: What are the primary risk factors contributing to pneumonia, and what is the incidence of pneumonia in children under five years in the United Kingdom?

Aim: To systematically assess the incidence and major risk factors of pneumonia among children under five years in the United Kingdom and develop evidence-based recommendations to enhance its prevention, early detection, and clinical management.

Objectives:

- ❑ To analyse studies reporting the incidence of pneumonia in children under five in the UK.
- ❑ To examine and summarise the key risk factors associated with pneumonia in children under five in the UK.
- ❑ To synthesise current evidence to inform prevention strategies and public health interventions for pneumonia in children under five in the UK.
- ❑ To provide professional and public health recommendations aimed at strengthening preventive measures, early detection, and evidence-based clinical practices for reducing pneumonia incidence in young children.

(Yashoda Hospital, 2021)



(Rainbow, 2025)



(Global Data, 2025)

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