

## Pertussis in Children: An Overview of the Disease and its Management

Alberto Papi\*

Department of Medicine, University of Ferrara, Ferrara, Italy

\*Corresponding author: Alberto Papi, Department of Medicine, University of Ferrara, Ferrara, Italy, E-mail: alberto@mic.it

Received: 25-Jan-2023, Manuscript No. JIDT-23-91304; Editor assigned: 30-Jan-2023, Pre QC No. JIDT-23-91304 (PQ); Reviewed: 14-Feb-2023, QC No. JIDT-23-91304; Revised: 21-Feb-2023, Manuscript No. JIDT-23-91304 (R); Published: 28-Feb-2023, DOI:10.4173/2332-0877.23.S1.002.

Citation: Papi A (2023) Pertussis in Children: An Overview of the Disease and its Management. J infect Dis Ther S1:002.

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### Description

Pertussis also known as whooping cough is a highly contagious respiratory illness caused by the bacteria *Bordetella pertussis*. It is named because of the whooping sound made when patients try to breathe in air after coughing. Pertussis is primarily spread through droplets in the air when an infected person coughs or sneezes. It affects young children, and people with weakened immune systems. While most people recover from pertussis without complications, the disease can be fatal in some cases, particularly in infants under 1 year of age. The disease is most severe in infants, and vaccination is the most effective way to prevent it. Symptoms of pertussis typically develop within 5-10 days of exposure to the bacteria. The initial symptoms are similar to those of a common cold, including a running nose, low-grade fever, and mild cough. After about 1-2 weeks, the cough becomes more severe and develops into paroxysms, or rapid coughing, which can last for several minutes. During these days, patients may turn blue or purple from lack of oxygen and may even vomit. While rapid coughing patients may appear normal and healthy. However, if continues coughing occurs then it leads to complications such as rib fractures, hernias, and loss of consciousness. Pertussis can be particularly dangerous for infants, who are at a higher risk of complications such as pneumonia, seizures, and brain damage. Infants under 6 months of age are particularly vulnerable because they have not yet received the full series of vaccinations, and their immune systems are not fully developed. The disease can be fatal in some cases, with death most commonly occurring in infants under 3 months of age.

Vaccination is the most effective way to prevent pertussis. The pertussis vaccine is typically given as part of a combination vaccine,

known as the DTaP vaccine (Diphtheria, Tetanus, and acellular Pertussis vaccine), which also protects against diphtheria and tetanus. The vaccine is recommended for all children starting at 2 months of age, with booster doses given at regular intervals through childhood. In addition, adults are also recommended to receive a booster dose of the vaccine, known as Tdap (combined Tetanus, Diphtheria and acellular Pertussis) every 10 years. Despite the availability of a vaccine, pertussis remains a significant public health concern. The disease continues to circulate, and outbreaks are common in communities with low vaccination rates. This is due in part to the effectiveness of the vaccine, as well as the relatively low vaccination rates in some communities. In addition, there are also concerns about the safety of vaccines, particularly among those who believe that vaccines are linked to autism, despite extensive research showing no such link. Efforts to improve vaccination rates and prevent outbreaks of pertussis include public education campaigns, healthcare provider education, and improved access to vaccines. The Centers for Disease Control and Prevention (CDC) recommends that pregnant women receive the Tdap vaccine during each pregnancy, ideally between 27 and 36 weeks of gestation, to protect both the mother and newborn from pertussis. In addition, healthcare providers are encouraged to be vigilant for signs of pertussis and to promptly diagnose and treat cases to prevent the spread of the disease. According to the Centers for Disease Control and Prevention (CDC), in the United States, pertussis is associated with an average of 20 deaths per year, most of which occur in infants younger than 3 months old who are too young to be fully vaccinated.