**Pertussis**

This is an incredibly infectious upper respiratory tract infection caused by *Bordetella pertussis* bacteria that adhere to the cilia. These bacteria injure the cilia and discharge contagions that induce swelling and irritation of the airways. Symptoms including slight fever, runny nose and severe cough spasms that are usually followed by a whooping sound often appear from one week to ten days after infection. The primary mode of transmission is from a person to another through tiny droplets in the air from sneezing or coughing and through direct contact with infected nasal and throat discharge. Complications can arise in severe cases of this infection; they include Pneumonia, middle ear infection, hernia of the groin and apnoea in infants. Antibiotics are effective in lessening the severity of the condition and are also crucial in the management of secondary infections. In severe cases, hospitalisation may be necessary (Feld, Mahan, & Jackson, 2017).

According to CDC, state departments of health reported 20,672 incidences in 2015; this is a 37% decline from 2014. The prevalence rates in adolescents increased in 2015, but the rates in infants exceeded all the other groups. Mortality rates are highest in infants and children below five years. On a global scale, the World Health Organization reported 142,512 cases with approximately 89,000 deaths in 2015. Nevertheless, a current publication modelling cases and mortality showed 24.1 million cases globally in 2014 and 160,700 deaths in children below 5years (Yeung, Nelson, Duclos, & Hutubessy, 2017).

**Determinants of Health**

These are factors that govern the health stature of an individual. The school calendar pattern influences the rate of occurrence; elementary school children are particularly susceptible as a result of constant contact in the playground. A coughing member in a full household increases the chance of infecting the others; this relates to the socioeconomic index for an area. Transmission of this infection is remarkably related to environmental conditions such as minimum temperature; increase in temperature significantly reduces monthly Pertussis incidents (Huang et al., 2017).

**Host Factors**

  Adults and children who have not received immunisation and infants who have not finished the series of immunisation are at high risk of acquiring and spreading the infection. Also, those adolescents or adults with diminished immunity to the infection are susceptible. An infected person can transmit to others even before the onset of clinical symptoms. The causative agent *Bordetella pertussis* is an exclusively human pathogen of the upper respiratory tract that evolved from *Bordetella bronchiseptica*. It is severe in children and fatal in infants especially those yet to receive or complete immunisation. Congested environments significantly increase chances of this airborne infection (Dorji et al., 2017).

**Role of a Community Health FNP**

The FNP is tasked with diagnosis, treatment of Pertussis and management and prevention of secondary infections. The standard criterion for diagnosis is the isolation of *Bordetella pertussis* in culture, but this is a slow and challenging procedure, FNPs, therefore, make diagnosis speculatively in patients with a record of severe paroxysmal cough with or without whooping, incomplete or complete lack of vaccination, vomiting and laboratory findings that indicate lymphocytosis. Notifying the relevant health department is compulsory for all the suspected cases. Collection and analysis data concerning clinical symptoms, patient history and laboratory findings are essential in reporting suspected and confirmed cases. Management involves antibiotic treatment, close monitoring to prevent and manage secondary infections to reduce the risk of complications, hospitalisation in severe cases and later post-exposure prophylaxis (Feld, Mahan, & Jackson, 2017).

**Conclusion**

Pertussis is a highly communicable disease that can be transmitted even before onset of clinical symptoms. Prevalence and mortality rates are highest in children under the age of 5 years and infants. Adults and children who have not received any immunization at all or those who have not finished the immunization series are more susceptible to the infection. It is a requirement for suspected cases and confirmed laboratory diagnoses to be reported to the relevant state health departments. Despite the world wide coverage of vaccination, outbreaks keep occurring in several parts of the continent.

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