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1. Written Report on Whooping Cough - (Pertussis).

1.1 Introduction

Whooping cough, also referred to as pertussis, is a highly contagious respiratory illness caused by the bacterium *Bordetella pertussis*. The initial phase of the disease typically presents with mild cold-like symptoms, which can escalate into severe bouts of coughing that may persist for several weeks. As reported by the World Health Organization, pertussis continues to circulate globally, with periodic spikes in incidence particularly affecting unvaccinated infants and young children. While routine vaccination programs have contributed to a reduction in cases among the population, pertussis remains a significant public health issue due to the gradual decline of immunity—whether from natural infection or vaccination—leading to recurring outbreaks. Recent surveillance data from the UK has indicated a notable rise in confirmed cases, with 14,894 laboratory-confirmed instances reported in 2024. Infants younger than three months are especially vulnerable to severe complications; additionally, persistent health disparities regarding vaccine uptake, access to care, and awareness have been observed. This article will explore the social determinants of health related to whooping cough and their implications for overall wellbeing, as well as how health and social care providers can collaborate effectively to enhance outcomes concerning this disease.

1.2 Implications of Whooping Cough for Communities and the NHS

Whooping cough poses considerable health risks not only to those infected but also to their families and the healthcare system overall. Infants are particularly vulnerable to severe complications, including pneumonia, seizures, apnea, dehydration, and in some instances, death. In 2024, the UK Health Security Agency (UKHSA, 2024) reported 14,894 confirmed cases of pertussis in England, with the highest prevalence and adverse outcomes observed in infants under three months old (UKHSA, 2025). The clinical repercussions often lead to significant emotional distress for families who may endure extended hospital stays while grappling with uncertainty about future health concerns.

The pressure on the National Health Service (NHS) is substantial. Increased visits to general practitioners (GPs), diagnostic tests, emergency room visits, and hospital admissions further strain already overloaded pediatric and respiratory services. Many infants necessitate

intensive monitoring or hospitalization for supportive treatments like oxygen therapy or rehydration. These requirements elevate costs related to inpatient care, public health initiatives, post-exposure prophylaxis, and vaccination campaigns.

Pertussis outbreaks also affect public health dynamics. While adults typically exhibit milder symptoms, they can inadvertently transmit the infection to at-risk infants. The NICE Clinical Knowledge Summary indicates that pertussis remains endemic in the UK with cyclical peaks occurring every three to five years (NICE, 2023). This ongoing challenge places additional demands on NHS services and underscores the necessity for proactive planning through targeted communication strategies aimed at pregnant women, parents, and healthcare professionals.

Additionally, the disease has wider social and economic implications. Prolonged coughing episodes can disrupt sleep patterns and daily activities among adults who may feel fatigued and less productive. Families may incur costs due to lost work time or expenses related to childcare or hospital visits. These effects are exacerbated in high-risk communities characterized by socio-economic deprivation where access to healthcare is limited and vaccination rates are lower. The ramifications of pertussis extend beyond individual cases; they contribute to ongoing strains on NHS resources, psychological stress for families, community instability, as well as an ongoing need for vigilant surveillance and effective vaccination efforts.

1.3 Factors Influencing the Health and Wellbeing of People Affected by Pertussis

Multiple biological, social, and environmental factors contribute to the experiences and outcomes of individuals affected by whooping cough. At the core of this issue is biological susceptibility. Infants younger than three months are particularly vulnerable to severe complications due to their incomplete vaccination status and underdeveloped immune systems. Maternal vaccination can provide passive immunity, significantly reducing risks; however, low vaccination rates among pregnant women have created protection gaps. In older children and adults, diminishing immunity continues to influence transmission patterns. Research indicates that both infection- and vaccine-induced immunity decrease over time, which can result in cyclical outbreaks and asymptomatic transmission, potentially compromising surveillance efforts (Leung et al., 2017).

Social and behavioral aspects also play a critical role in well-being. Factors such as overcrowded households, high-contact settings like daycares, and inadequate access to timely healthcare services can heighten transmission risks. Vaccine hesitancy and misinformation may further lower vaccination rates among parents and expectant mothers

(Pharmaceutical Journal, 2025). Adults with mild symptoms may be unaware of their potential threat to infants, continuing their regular activities while being infectious. Economic challenges lead to significant health disparities. Communities facing financial difficulties often struggle with accessing healthcare services due to issues such as transportation barriers or language obstacles that hinder health literacy. These structural disadvantages correlate with lower vaccination rates and delays in receiving care, which increase the risk of severe illness (Althouse and Scarpino, 2014).

Disadvantaged communities are disproportionately affected by outbreaks according to public health data. The psychological toll of pertussis is considerable, parents of hospitalized infants may experience fear, fatigue, and prolonged anxiety due to the illness's duration. Adults and older children suffering from persistent coughing might face sleep deprivation, embarrassment, decreased engagement in work or school activities, leading to an overall decline in quality of life (NHS, 2023).

Moreover, individuals close to those infected with pertussis may also be impacted: family members might need to leave work or provide extended care due to exposure risks. These disruptions illustrate how pertussis affects not just individual patients but also reverberates throughout families and communities. The interplay of biological factors, behavior patterns, and environmental influences underscores the complexity of health outcomes related to whooping cough and highlights the necessity for targeted interventions alongside public health initiatives.

1.4 Interprofessional Collaboration to Improve Outcomes

A successful approach to managing whooping cough necessitates the integration of health and social care services. Effective prevention, prompt diagnosis, and timely follow-up care for infants hinge on the seamless collaboration among various professionals, including general practitioners (GPs), midwives, health visitors, paediatricians, public health teams, and social care personnel, given the significant risks to young children (NICE, 2023). Vaccination initiatives are central to inter-professional collaboration. Midwives play a vital role in advocating for maternal pertussis vaccination during pregnancy, while GPs and practice nurses oversee the transition to standard childhood vaccinations (UKHSA, 2024).

Communication among maternity services, general practices, and child health teams can aid in the early detection of unvaccinated families and help close coverage gaps.

In instances of suspected or confirmed illness, prompt coordination between primary care providers, hospitals, and public health agencies is crucial. Typically, GPs conduct initial assessments and arrange diagnostic tests, while paediatricians manage severe cases requiring hospitalization for infants. The UK Health Security Agency (UKHSA, 2025) oversees surveillance and outbreak management by providing guidance to clinicians and conducting contact tracing. Shared information systems enable the rapid exchange of laboratory results, exposure risks, and follow-up recommendations. Integrated care pathways promote continuity for instance, when infants are discharged from the hospital to their homes, health visitors and community nurses provide ongoing oversight alongside parental support with medications (NHS, 2023).

In cases where families face financial hardship, language barriers, or safeguarding concerns, intervention from social care professionals is essential. This comprehensive family-centered approach mitigates complications and fosters overall family well-being. Collaboration is fundamental to these health promotion efforts. Targeted campaigns aimed at increasing vaccination rates among pregnant women and high-risk groups are delivered by community health educators, health visitors, and midwives. Transparent communication across services helps counter misinformation, builds trust within families, and enables early symptom recognition (Pharmaceutical Journal, 2025).

Technology aids interprofessional collaboration by providing real-time access to information through telemedicine and electronic health records; such tools help prevent fragmented approaches while ensuring coherence among specialists. Strengthening collaboration could be achieved through regular multidisciplinary meetings focusing on shared plans for caring for high-risk infants as well as enhanced education regarding communication strategies and public health messaging for healthcare workers.

The NHS Long Term Plan highlights the significance of holistic community-based strategies that incorporate collective vaccination efforts and surveillance pathways—these approaches have been shown to significantly lower admission rates while improving outcomes related to infectious diseases (NICE, 2023).

1.5 Conclusion

Whooping cough remains a significant public health challenge despite the availability of effective vaccines. The recent increase in UK cases demonstrates that pertussis continues to circulate and can cause severe illness, particularly in vulnerable infants. Its impact extends beyond individual health, affecting families, communities and NHS services through increased emotional stress, financial pressures and higher demand for clinical care. A range of biological, social and environmental factors influences wellbeing, highlighting persistent inequalities in access and outcomes. Effective collaboration between healthcare and social care professionals—through integrated vaccination programmes, shared electronic records, coordinated discharge planning and community-based support—plays a crucial role in reducing complications and improving recovery. Moving forward, sustained public education, strong surveillance systems and equitable access to vaccination are essential to protect the most vulnerable and reduce the long-term burden of pertussis.

1.6 References

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