



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Name: Iryna Didushok

Student ID: 2436149

Module Code: LCHS4008

Module: Introduction to Public Health

Lecturer: Dr Patronella Ganza

Assignment title: Report on a Health Issue

Table of Contents

1. Written Report on Whooping Cough - (Pertussis).	3
1.1 Introduction	3
1.2 Implications of Whooping Cough for Communities and the NHS	3
1.3 Factors Influencing the Health and Wellbeing of People Affected by Pertussis	4
1.4 Interprofessional Collaboration to Improve Outcomes	5
1.5 Conclusion	6
1.6 References	7

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

1.1 Introduction

Whooping cough, also known as pertussis, is an extremely contagious respiratory ailment caused by the bacterium *Bordetella pertussis*. In the beginning stage of the disease the symptoms of coughing may be mild, somewhat like the cold, then rapidly worsen to days or weeks of severe infection. According to the World Health Organization, pertussis is still an issue worldwide with intervals of increased cases particularly among children without vaccines and in infancy. Although vaccination campaigns to help immunise the general population have reduced cases, pertussis is a considerable public health challenge because the natural or vaccine-mediated immunity that comes with the disease declines progressively over time, resulting in repeated outbreaks. In the UK, recent surveillance data has shown substantial increases in confirmed cases, with 14,894 laboratory confirmed cases of pertussis recorded in 2024. Infants younger than three months are particularly susceptible to serious complications; there are also significant and persistent health gaps as related to vaccine uptake, access to care, and awareness. So this article is to analyse the social determinants of health of people with whooping cough and the way they can improve their health and wellbeing and how health and social care practitioners should work alongside each other if they want to improve the outcome around this disease.

1.2 Implications of Whooping Cough for Communities and the NHS

Whooping cough also poses serious health risks to those being infected, and to their families and the health system as a whole. Infants are especially susceptible to severe complications, which may include pneumonia, seizures, apnea, dehydration and death. There were 14,894 confirmed cases of pertussis reported in England in 2024 (UKHSA, 2024) with the highest prevalence and severity affecting infants as young as <3 months (UKHSA, 2025). The clinical consequences can be severe emotional distress to families as these parents endure long stays in hospital and are also faced with questions about the risk of future health problems. The National Health Service (NHS) finds itself under an enormous amount of pressure. Greater General Practitioner (GP) visits, diagnostic tests, ED visits, and hospital admissions add to the already overburdened pediatric and respiratory services. Many infants require inpatient surveillance or hospitalization for supportive therapies such as oxygen therapy or rehydration. These demands increase inpatient unit, public health

campaign, post-exposure prophylaxis and vaccine exposure costs. Public Health Dynamics Effects of Pertussis Outbreaks are also considered. Although adults are known to have milder symptoms, they may transmit infections unknowingly to infants at-risk for infections. The NICE Clinical Knowledge Summary (2023) shows that pertussis is still endemic to the UK and has a cyclical peak every three to five years. The current challenge adds pressure to NHS provision and the need for proactive planning through targeted communication programmes for both pregnant women and parents, as well as healthcare professionals. Moreover, the disease carries broader social and economic consequences. Chronic coughing breaks can interfere with sleep and day-to-day activities in adults who feel fatigued and less productive. Families could incur costs, whether from time for work lost or from costs for childcare or hospital visits. These impacts are further compounded in high-risk communities experienced by those vulnerable to socio-economic deprivation with inadequate healthcare access with lower vaccination rates. The ramifications of pertussis, however, are much wider still: they add to the continued pressure of NHS resources, add psychological distress for families and communities, and make for a period of continual surveillance and vaccination.

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

Various biological, social, and physical features influence whooping cough participants' experiences and results. Central to this is biological susceptibility. Infants younger than three months old are especially susceptible to serious complications due to their incomplete vaccination status and underdeveloped immune systems. Passive immunity given via maternal vaccination reduces risks significantly, but with low vaccination rates among pregnant women, protective gaps remain. Diminishing immunity, both among older children and in adults, is still impacting transmission patterns. Research shows that infection-induced immunity, as well as immunity from the vaccine, declines over lifetime periods (Leung et al., 2017), leading to seasonal upsurges, where asymptomatic infection is an important factor, and asymptomatic transmission, potentially hampering surveillance efforts. Social and behavioral variables are among the other important components in health. Factors, such as overcrowded homes, higher contact places -- like day care centers -- and poor availability of timely medical care, can add up to transmission risks. Vaccination hesitancy and misreading could also contribute to lower vaccination rates amongst parents and mothers when they become pregnant (Pharmaceutical Journal, 2025). Persons suffering mild symptoms are unaware of the potential risk to their babies. They don't know that they pose an infectious disease and so continue their activities anyway. There are profound health disparities driven by economic hardship. Financially struggling communities often find it very difficult to access healthcare because of both transportation barriers and language obstacles that limit health

literacy. Such structural disadvantages, in turn, lead to lower vaccination and delay of care, which increases the risk of disease severity (Althouse & Scarpino, 2014). According to the data published in public health, outbreaks hit disadvantaged communities hardest. The psychological strain from pertussis is considerable and parents of hospitalized newborn babies may suffer from fear, fatigue, and chronic anxiety based on the duration of the disease. Adults and other children who are symptomatic for persistent coughing also risk experience sleep deprivation, embarrassment, decreased involvement in both work or school activities and general life's decline in quality (NHS, 2023). In addition, people in proximity to people who are infected with pertussis can also suffer: family members may have to leave work or provide longer-term care because of a risk of exposure. These interruptions show how pertussis doesn't just disrupt individual patients like this one, but it ripples through families and communities. A multifaceted understanding of biological, behavioural, and environmental factors contributes to understanding the multifaceted health effects associated with whooping cough indicating that targeted interventions are required as well as public health activities.

1.4 Interprofessional Collaboration to Improve Outcomes

An effective strategy to manage whooping cough requires the collaboration of health and social care providers. In consideration of the high levels of risks for young children, effective prevention, early diagnosis and early care of babies require the joined up work of a number of practitioners which includes general practitioners (GPs), midwives, health visitors, paediatricians, members of public health teams and personnel from social care (NICE, 2023). Inter-professional collaboration lies at the heart of vaccination initiatives. Midwives will advocate for the vaccination of mothers with pertussis during pregnancy, and GPs and practice nurses will support transitions to standard childhood vaccination (UKHSA, 2024). Collaborating between maternity services, general practices and child health teams can facilitate the early detection of unvaccinated families and support closing coverage gaps. Quick coordination between primary care practitioners, hospitals, and public health agencies is imperative in cases of suspected or confirmed illness. GPs typically make initial assessments and arrange diagnostic tests; paediatricians deal with serious cases leading to hospitalisation of the infant. The UK Health Security Agency (UKHSA, 2025) implements surveillance and handling of outbreaks via direct instructions to practitioners and contact tracing. Shared information systems allow the quick exchange of laboratory findings,

exposure threats and follow-up suggestions. Care pathways are also about continuity for example when babies are discharged into the community and out of hospital; health visitors and community nurses assist in continuous monitoring while parents keep up with the management of medications (NHS, 2023). For families affected by financial difficulties, inability to express language and fears for the environment, intervention from social care workers is even more crucial. This holistic family-focused practice reduces complications and contributes to general family well-being. These health promotion efforts are embedded with collaboration. Community health education, health visitors and midwives deliver these targeted campaigns to raise vaccination rates among pregnant women and vulnerable communities. Transparent communication between services contributes to an amelioration of misinformation, trust between families, and early symptom recognition (Pharmaceutical Journal, 2025). Interprofessional collaboration is an advantage technology has in the field, telemedicine and electronic health records help in providing telecommunication to patients so that information may also be viewed in real time such that fragmented perspectives are diminished and there is some degree of coherence between a specialist group of professionals. Increased collaboration could be established by the regular multidisciplinary group meetings addressing mutual plans for care for high-risk infants, as well as communication strategies and public health messaging for health care professionals through more specific education. Community-based approaches to manage infectious diseases include collective vaccination and surveillance pathways have been shown to reduce admissions to hospital substantially as well as outcomes relative to infectious disease (NICE, 2023), as emphasised in the NHS Long Term Plan.

1.5 Conclusion

Whooping cough is still very much an acute public health issue, even though there are good vaccines on the market. The recent surge in UK cases is indicative that pertussis is still alive and well, and that severe case of infection is common in very vulnerable child patients. It has broader implications beyond the individual health of the victim families, communities and NHS services in terms of increased emotional stress, financial pressures and increased demand on clinical care. It is influenced by a variety of biological, social and environmental factors that demonstrate ongoing inequity in accessibility and outcomes. Well-trained professionals involved in healthcare, in association to the social care sector, can promote better health by working together through integrated vaccination programmes, shared

electronic records, coordinated discharge planning and services provided from the community. In future, continued public education, adequate surveillance for the risk of disease and fair accessibility of vaccination to protect those most at risk will be critical to reducing the long-term burden of pertussis.

1.6 References

Althouse, B.M. and Scarpino, S.V. (2014) Epidemiological consequences of an ineffective Bordetella pertussis vaccine. Available at: <https://arxiv.org> (Accessed: 5 December 2025).

Leung, T., Hughes, B.D., Frascoli, F. and McCaw, J. (2017) Infection-acquired versus vaccine-acquired immunity in an SIRWS model. Available at: <https://arxiv.org> (Accessed: 4 December 2025).

NHS (2023) Whooping cough. Available at: <https://www.nhs.uk> (Accessed: 20 November 2025).

NICE (2023) Whooping cough – background information. Available at: <https://cks.nice.org.uk> (Accessed: 20 November 2025).

Pharmaceutical Journal (2025) Whooping cough cases increase by 1,600% in a year. Available at: <https://pharmaceutical-journal.com> (Accessed: 1 December 2025).

UKHSA (2024) Prenatal pertussis vaccine change from July 2024. Available at: <https://www.gov.uk> (Accessed: 25 November 2025).

UKHSA (2025) Confirmed cases of pertussis in England, 2024. Available at: <https://www.gov.uk> (Accessed: 25 November 2025).

