Delaware Public Health District
Dedicated to your health

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HEALTH ALERT

August 2024

Pertussis

- Recent significant increase in reported Pertussis cases within Delaware County that more closely aligns with pre-pandemic trends.
- According to CDC preliminary data as of June 1, 2024, reported cases of Pertussis across the country are more than double this year compared to the same time period last year.
- As of August 2024, Delaware County has 26 reported Pertussis cases – the majority of which have been immunized.
    - 2023: 7 cases
    - 2022: 6 cases
    - 2021: 6 cases
    - Average number of cases 2014-2023: 34.4

Background

Pertussis (whooping cough) is a highly contagious respiratory illness that usually starts with cold or flu-like symptoms such as runny nose, sneezing, fever, and mild cough. These symptoms may last up to two weeks and are often accompanied by increasingly severe coughing fits (paroxysmal cough). Symptom onset is usually 7 to 10 days after exposure but can be as late as 21 days.

It is important to remember that Pertussis can occur at any age. Among older children and adults, illness can often be mistaken for bronchitis and/or an upper respiratory infection. Pertussis illness should be considered in older children and adults who have a persistent cough lasting more than 7-14 days, that cannot be attributed to another specific illness. About 1 in 3 infants younger than 1 year old who get Pertussis will require treatment in the hospital. The most common complications among children in this age group who receive hospital treatment are:

- Apnea, life-threatening cessation of breathing (68%)
- Pneumonia (22%)

Those at risk for developing severe illness are individuals with pre-existing health conditions that may be exasperated by Pertussis (e.g. immunocompromised, moderate to severe medically treated asthma). Infants and young children, especially those who have not received all recommended vaccines, are at an even higher risk for more serious and potentially life-threatening complications due to Pertussis.

Vaccination is recommended for all infants, children, adolescents, adults, and anyone who is pregnant as it provides strong protection against Pertussis illness. Tdap vaccination during pregnancy protects 9 in 10 infants from being hospitalized if they contract the illness. Adults who have never received Tdap should get a dose, as well as receive a booster dose at least every 10 years.

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Pertussis Vaccination Schedule

- Infants: (3 doses) DTaP at 2, 4, and 6 months
- Children: (2 doses) DTaP at 15 to 18 months and at 4 to 6 years
- Adolescents: (1 dose) Tdap at 11 to 12 years
- Adults (non-pregnant): (1 dose) Tdap and a booster every 10 years
- Pregnant Individuals: (1 dose) Tdap between 27 to 36 weeks gestation during every pregnancy

Post Exposure Prophylaxis (PEP)

PEP via antimicrobial therapy is recommended to be started within 21 days of exposure to an infectious case because it helps prevent serious illness, complications, and potential death in people who are at high risk for Pertussis illness. Broader use of PEP may be appropriate in limited closed settings, when there is a small number of identified cases, and when a community-wide outbreak is not ongoing.

PEP is recommended for:

- Household contacts of a pertussis case
- Those at an increased risk for developing severe illness (infants, women in their third trimester of pregnancy, immunocompromised, other pre-existing health conditions)
- Those who will/may have contact with those at risk for severe illness
- Anyone in a high-risk setting (neonatal intensive care units, childcare settings, maternity wards)

Treatment

Treatment within the first 1-2 weeks is most effective at reducing symptom severity. The first line-choice for treatment and PEP is a 5-day course of Azithromycin. It should be noted that after onset of the paroxysmal cough, antimicrobial agents have no discernible effect on the course of illness – they simply help limit the spread of illness to others.

Clinicians should strongly consider treatment prior to confirmatory test results if any of the following are present:

- Clinical history strongly suggestive of Pertussis
- Risk for severe illness or complications is present (e.g. infants)
- Potential for routine contact with someone who is considered high risk of severe illness

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Treatment options may vary by age. For infants less than 1 month old, macrolides should be used with caution as there have been reports of an association between orally administered Erythromycin and Azithromycin with infantile hypertrophic pyloric stenosis (IHPS). For those 1 month of age and older, macrolides are the preferred treatment option. However, for those 2 months of age and older an alternative treatment could include Trimethoprim-Sulfamethoxazole.

Reasonable Treatment Timeline

- Infants younger than 1 year of age: within 6 weeks of cough onset
- 1 year of age and older: within 3 weeks of cough onset
- Pregnant women (especially if near term): within 6 weeks of cough onset

Ohio Administrative Code (OAC) 3701-3-13

Regarding isolation and school exclusion, OAC states, "a person with pertussis who is not treated with effective antimicrobial therapy shall be isolated, including exclusion from school or childcare center, until 3 weeks after the onset of paroxysms. If effective antimicrobial therapy is given, the person shall be isolated for 5 days after initiation of antimicrobial therapy."

Contacts of a confirmed case are not required to isolate. However, PEP and symptom monitoring are strongly recommended.

Additional Information

Please reach out to the Delaware Public Health District Disease Control and Response Unit with any questions or concerns regarding Pertussis illness.

Phone: 740-368-1700

Fax: 740-203-2044

Email: DCRU@delawarehealth.org

References:

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