

Increase of Pertussis Cases in New Jersey and the United States

Date: August 22, 2024

Public Health Message Type: Alert Advisory Update Information

Intended Audience: All public health partners Healthcare providers Infection preventionists
 Local health departments Schools/childcare centers ACOs
 Animal health professionals Other

Key Points

- An increase in the number of pertussis cases has been noted in the United States and New Jersey.
- Obtain appropriate diagnostic testing.
- Ensure best practices are in place when collecting clinical specimens for diagnostic testing.
- Report clinically suspect cases promptly to the local health department in the jurisdiction where the patient resides. Do not wait for confirmation!
 - NJ Communicable Disease reporting requirements are available [here](#).
 - If you are unsure which local health department should be contacted, use the [locator tool](#).
- Provide early appropriate treatment and targeted post-exposure prophylaxis to prevent ongoing transmission.
- Ensure suspect/confirmed cases remain at home while potentially infectious.
- Ensure pediatric and adult patients are up to date with pertussis-containing vaccines and doses are documented in the New Jersey Immunization Information System (NJIS).
- Ensure all pregnant patients are vaccinated with Tdap during every pregnancy.

The number of [pertussis](#) cases has been increasing in the United States (US). Reports were lower than usual over the past few years, during and following the COVID-19 pandemic due to mitigation practices (e.g., [good hygiene](#), [distancing](#), [masking](#)). However, cases are beginning to [return to pre-pandemic patterns](#) where more than 10,000 cases are typically reported each year. Pertussis is an endemic disease in the US, with peaks in reported disease every 3 to 5 years and frequent outbreaks.

In 2024, reported cases of pertussis increased across the US, indicating a return to more typical trends. [Preliminary data](#) show that more than **three times as many cases** have been reported as of week 32, reported on August 10, 2024, compared to the same time in 2023. The number of reported cases this year is higher than what was seen at the same time in 2019, prior to the pandemic.

New Jersey is experiencing a similar increase in pertussis cases. Cases have occurred across the state, in multiple schools, and have included a mix of unvaccinated individuals (mostly infants), vaccinated individuals (school-aged children), and individuals with unknown vaccination history (mostly adults).

As the 2024-2025 school year is fast approaching, the New Jersey Department of Health (NJDOH) would like to remind providers to consider pertussis in the diagnosis differential in persons with prolonged cough, [regardless](#) of vaccination status. Please review the following reminders, recommendations, and resources to help keep your patients and community safe. To prevent further spread of pertussis within the community,

healthcare providers and public health officials must work together to ensure that persons suspected to have pertussis remain at home until they are no longer infectious. Help us keep ill individuals at home and well children and teachers in school!

Diagnose

[Classic pertussis](#) cough includes persistent paroxysms (coughing fits), an inspiratory "whoop", apnea, and/or post-tussive vomiting. Persons with prior history of disease or vaccination may have milder symptoms and lack classic features of disease, making diagnosis more difficult. Pertussis and other respiratory pathogens can be difficult to distinguish based on clinical symptoms alone, highlighting the importance of appropriate diagnostic testing.

Test

When there is a high index of suspicion for pertussis based on clinical presentation, perform [appropriate laboratory testing](#). Specimens are most likely to be positive when patients have a clinically compatible illness and specimens are collected within the first three weeks of cough onset and before completion of antibiotics.

- Culture is still considered the gold standard because it is the only 100% specific method for identification.
- [Polymerase Chain Reaction](#) (PCR) testing of a nasopharyngeal (NP) swab is offered by many commercial laboratories, alone or as part of multiplex respiratory virus panel testing. Please refer to specific laboratory's specimen requirements for appropriate collection materials and storage instructions.
 - Reminder: False-positive and false-negative results due occur. False-positive results may occur due to environmental contamination. False-negative results may occur if not collected/handled correctly or collected too late in course of illness. Results should be interpreted with these considerations in mind.
 - To avoid contamination:
 - specimen collection for *B. pertussis* should never be done in an area used for vaccine preparation and administration;
 - gloves should be worn during specimen collection or vaccine administration and discarded immediately;
 - supplies must be opened only at the time of use; and
 - clinic surfaces should be cleaned using a 10% bleach solution.
 - Testing asymptomatic persons should be avoided as it increases the likelihood of obtaining falsely positive results.
- Serologic testing for pertussis is NOT recommended because standardized tests are not available, making the results of commercially available tests difficult to interpret.

Please note, since 2022 the NJDOH has observed a significant number PCR-positive pertussis cases that were **also positive for multiple other pathogens** (up to 4 additional). The NJDOH continues to evaluate the data and is engaged in on-going discussions with the Centers for Disease Control and Prevention (CDC) and other jurisdictions regarding this finding and whether it represents true infection vs other causes (e.g., carriage, cross-reactivity, environmental contamination, etc.).

Treat

Potentially infectious patients should be placed on droplet precautions. Persons with pertussis are infectious for up to 21 days from cough onset or until completion 5 days of [effective antimicrobial treatment](#). Treatment beyond 3 weeks is not thought to alter the duration of cough nor transmission to others and is not recommended.

- Provide treatment after collecting diagnostic specimens. Do not wait for test results in those for whom pertussis is highly suspected.

- Persons aged ≥ 1 year should be treated within 3 weeks of cough onset. Infants < 1 year and pregnant women should be treated within 6 weeks of cough onset.
- Prescribe either a macrolide or, for macrolide allergic patients, trimethoprim-sulfamethoxazole.
- Advise patients with pertussis to remain home from school, work, and activities for 5 days from initiation of appropriate antibiotics or 21 days for untreated infections (or until a reasonable alternate diagnosis has been determined).
- Antibiotics should also be provided to close contacts (e.g. household members) of confirmed pertussis cases as [post-exposure prophylaxis \(PEP\)](#) to prevent illness and transmission. The antibiotics and dosing for treatment and prophylaxis are the same.
- For additional details, see Table 4 at <https://www.cdc.gov/mmwr/PDF/rr/rr5414.pdf>

Report

All suspect pertussis cases must be reported to the [local health department](#) in the jurisdiction in which the patient resides. Do not wait until laboratory confirmation to report. Early reporting allows public health officials to investigate cases and assist the facility in identifying those who need post-exposure prophylaxis to prevent further infections. [Public health reporting is mandated by law](#) and is not affected by the Health Insurance Portability and Accountability Act ([HIPAA](#)). HIPAA specifically provides for public health reporting without a patient's authorization or consent.

Vaccinate

[Vaccination](#) is the **is the most important way to prevent serious complications of pertussis**. However, as typical infection patterns return to the US, CDC expects pertussis cases to increase both in unvaccinated and vaccinated populations. Pertussis occurs in vaccinated persons since [protection from vaccination wanes over time](#). **Pertussis serology should NOT be used for the purpose of demonstrating immunity because, as of 2024, no protective levels of immunity have been established.**

- In healthcare facilities, a dose of Tdap is routinely recommended for all healthcare personnel.
- Children should complete the routine five-dose DTaP vaccine series along with an adolescent Tdap booster.
- Adults, especially teachers, who have not received Tdap should get one dose of Tdap, followed thereafter by a Td or Tdap booster shot every 10 years.
- Providers, including primary care, OB/GYN, family practice and midwives, should ensure that pregnant women receive [Tdap during every pregnancy](#), preferably between 27 - 36 weeks gestation. Providers who care for pregnant women but do not stock Tdap vaccine should refer women for vaccination and follow up to ensure they were vaccinated.
- Providers should recall patients who are not up to date with DTaP and Tdap vaccines.
- A [strong provider recommendation](#) is the most important factor associated with vaccination and is critical to achieving high rates of vaccination coverage.
- Vaccinations administered to children less than the age of 7 are **required** to be entered in NJIIS. All providers who administer vaccines to NJ residents are strongly encouraged to enter those doses in [NJIIS](#), regardless of age.

Resources

[NJDOH Pertussis Website](#)

[NJDOH Immunization Requirements](#)

[NJDOH School Health](#)

[NJDOH Daycares, Schools, and Higher Education \(DSH\) Team](#)

[CDC Best Practices for Use of Polymerase Chain Reaction for Diagnosing Pertussis](#)

[CDC Pertussis from the Infection Control in Healthcare Personnel](#)