

# Instructions for Using the CDC Pertussis Surveillance Worksheet

## General

- Every effort should be made to reach both the medical provider and case-patient during a pertussis investigation.
- Every question should be answered, even if the information is unknown. Although “unknown” is an option for many questions, please make every effort to obtain the appropriate information.
- If the month and year for any date are known but the exact day is unknown, enter a 15 for the day (i.e. the middle of the month).
- If information is obtained after the record has been submitted to CDC, please update the record with the new information and resend the record during your next data transmission to CDC.

## Demographics

1. **CDC NETSS ID:** Your state’s unique alphanumeric identifier that will be reported to NNDSS for the pertussis case-patient under investigation.
2. **County:** County of case-patient’s residence at time of cough onset.
3. **State:** State of case-patient’s residence at time of cough onset.
4. **Zip:** Zip code corresponding with case-patient’s residence at time of cough onset.
5. **Birth Date:** Birth date of the case-patient.
6. **Age:** Age of case-patient at time of cough onset.
7. **Age Type:** Indicate whether Age is reported in Days, Weeks, Months, or Years.
8. **Race:** Self-reported race of case-patient; more than one option may be reported.
9. **Ethnicity:** Self-reported ethnicity of case-patient.
10. **Sex:** Indicate whether case-patient is Male, Female, or Unknown.
11. **Date:** Date of event reported in Event Type field. Date may reflect (listed in order of preference) cough onset, diagnosis, lab test, case reported to county, or case reported to state/MMWR report date.
12. **Event Type:** Type of event reported; may be one of the following (listed in order of preference): cough onset, diagnosis, lab test, case reported to county, or case reported to state/MMWR report date.
13. **Report Status:** Classification status of an investigated case of pertussis based on the CSTE/CDC pertussis case definition.

## Clinical Data

14. **Any Cough:** Indicate whether the case-patient ever experienced a cough of any duration during the course of illness.
15. **Cough Onset Date:** Date on which the case-patient experienced first cough during the course of illness.
16. **Paroxysmal Cough:** Indicate whether case-patient ever experienced sudden, uncontrollable bursts or spells of coughing where one cough follows the next without a break for breath.
17. **Whoop:** Indicate whether case-patient ever experienced a high-pitched noise heard on inhalation after paroxysms of cough.
18. **Posttussive Vomiting:** Indicate whether case-patient ever vomited immediately following a paroxysm.
19. **Apnea:** Indicate whether case-patient ever experienced prolonged failure to take a breath, possibly after a coughing spasm, or without prior coughing in an infant. Apnea may occur with or without cyanosis. *Patient or caregiver report is sufficient to confirm the presence of apnea.*
20. **Final Interview Date:** Date of the last interview conducted with the case-patient or medical provider to obtain case information.
21. **Cough at Final Interview:** Indicate whether case-patient still had cough at time of final interview.

22. **Duration of Cough at Final Interview:** The total number of days the case-patient coughed from the date of cough onset to the date of final interview. If a case-patient stopped coughing prior to final interview but cannot remember the date their cough stopped, duration of cough should be calculated using the date of the most recent interview during which case was actively coughing. For example, if a patient began coughing on January 1, was initially interviewed on January 12 (still coughing), and received a final call on January 30 (but was no longer coughing and could not remember when he/she had stopped), the cough duration at final interview should be recorded as 11 days (i.e., January 12–January 1.)

*Note: This variable is not intended to capture full cough duration and should not be used as such. If a case-patient has coughed <14 days on the first interview date, a follow-up interview should be conducted no earlier than 14 days after the date of cough onset. Every effort should be made to ensure confirmation of at least 14 days of cough.*

### Complications

23. **Chest X-Ray for Pneumonia:** Provide x-ray results for case-patients tested for pneumonia. If no x-ray was performed, select option “Not Done”. *Pneumonia only should be reported if diagnosed by a healthcare provider and should not be based on patient self-report.*
24. **Seizures Due to Pertussis:** Indicate whether case-patient ever experienced any seizures during course of illness not associated with another diagnosis. *Patient or caregiver report is sufficient to confirm the presence of seizures.*
25. **Acute Encephalopathy Due to Pertussis:** Indicate whether during the course of illness the case-patient experienced an acute illness of the brain manifesting as decreased level of consciousness (excluding altered consciousness following an unrelated seizure) and reduced level of nervous system functioning. Such patients are almost always hospitalized and have undergone extensive evaluation. *Acute encephalopathy should be reported only if diagnosed by a healthcare provider and should not be based on patient self-report.*
26. **Hospitalized:** Indicate whether the case-patient was hospitalized as a result of pertussis infection. Hospitalization typically refers to admission into an in-patient care facility; however, a case also would be considered hospitalized if admitted for 24 or more hours in an observation unit or ER. A case would not be considered hospitalized if admitted for a <24-hour observation period only.
27. **Days Hospitalized:** The number of days the case-patient was hospitalized for pertussis infection. The number of days should be calculated by subtracting the date of hospital discharge from the date of hospital admission. For instance, if a patient was admitted to the hospital on January 1st and was discharged on January 4th, the patient would have been hospitalized for 3 days.
28. **Died:** Indicate whether the case-patient died during the course of illness. If patient had pertussis at the time of death, even if the immediate or underlying cause of death was unknown or confirmed as something other than pertussis, enter ‘yes’.

### Treatment

29. **Were Antibiotics Given:** Indicate whether the case-patient was ever prescribed antibiotics during the course of their pertussis infection.
30. **1st Antibiotic Received:** Select the code that corresponds with the first antibiotic a case-patient was prescribed, specifically for treatment of pertussis.
31. **Date 1st Antibiotic Started:** Date the case-patient began taking initial dose of first antibiotic prescribed.
32. **Days 1st Antibiotic Actually Taken:** Based on case-patient self-report, the number of days the first prescribed antibiotic was taken.
33. **2nd Antibiotic Received:** Select the code that corresponds with the second antibiotic a case-patient was prescribed, specifically for treatment of pertussis.
34. **Date 2nd Antibiotic Started:** Date case-patient began taking initial dose of second antibiotic prescribed.
35. **Days 2nd Antibiotic Actually Taken:** Based on case-patient self-report, the number of days the second prescribed antibiotic was taken.

### Laboratory

36. **Was laboratory testing for pertussis done?** Indicate whether any laboratory test for pertussis was conducted on the case-patient during course of illness.
37. **Laboratory Testing:**
- Laboratory Test Results:** For each type of pertussis test result reported, select a single result code to indicate its outcome. The code for ‘Pending’ should not be transmitted to CDC for cases whose investigations have been completed.
  - Date Specimen Collected:** Although multiple tests may be performed on a single specimen, please indicate the date a specimen was collected from the case-patient for each test result reported (e.g. If a nasopharyngeal swab was collected for both PCR and culture, the same date of collection should be recorded for both test results.)

### Vaccine History

#### General Instructions:

- While a complete vaccination history is preferred for all case-patients, regardless of age, a significant effort should be made to obtain complete vaccination histories for case-patients who are <21 years of age, including DTaP and Tdap ( $\geq 7$  years) history. For adults 21 years and older, special emphasis should be placed on determination of Tdap and Td booster history. If Td or Tdap cannot be clearly distinguished based on medical records or case-patient report, do not assume the vaccine type. An unknown response is preferred.
  - Vaccination histories should be obtained from a verifiable source and should be collected using the following source hierarchy:
    1. Medical records or state immunization registries
    2. Patient shot cards or school vaccine records
    3. Patient self-report (without shot card verification)
  - When in doubt, do not simply select the most logical option for vaccine type. For example, DTaP should not be selected indiscriminately as the vaccine type for all doses administered to a case-patient prior to 10 years of age; an unknown response is preferable to a supposed one.
  - Doses of vaccine should be entered chronologically with respect to their numbered fields (i.e. the Dose 1 field should contain the earliest administered dose of vaccine, Dose 2 field should contain the next known dose by date, etc.).
  - If the vaccination history for a case-patient is incomplete, please enter all known doses of vaccine in chronological order by date of administration, regardless of whether age-specific doses are missing. For instance, if an adolescent case-patient has two doses administered at 2 and 4 months of age, and third dose administered at 5 years of age, please enter all three doses one after the other—even though the 6 month and 15–18 month doses of DTP/DTaP appear to be missing. Do not insert spaces for unknown or missing doses.
  - If multiple doses are known but do not have corresponding dates, ensure that the vaccine type, manufacturer, and lot number are linked with the appropriate dose number.
38. **Vaccinated:** Indicate whether the case-patient has ever received a dose of tetanus, diphtheria, and/or pertussis-containing vaccine during his or her lifetime, prior to cough onset (this includes doses of Td and DT). *This variable should include undocumented vaccination history if documented information is unavailable. **For example:** a mother does not have a shot card for her child but knows that he/she was given the primary DTaP series when they were under the care of a previous pediatrician. The “Vaccinated” variable could then be submitted as “yes” for the child in this scenario.*
39. **Vaccination History**
- Vaccination Date:** For each known dose of tetanus, diphtheria and/or pertussis-containing vaccine, please list the date of administration. If only month and year are available, fill in ‘15’ for the day portion of the date.

- d. **Vaccine Type:** For each known dose of tetanus, diphtheria and/or pertussis-containing vaccine, please select the appropriate vaccine type code from the list provided. Vaccine type should not be assumed based on case-patient's age at time of administration. For example, the code for DTaP should not be used if an actual vaccine type is not available for a case, solely because the case was 4 years of age when the dose was administered. If actual vaccine type is unlisted, select "Unknown".
  - e. **Vaccine Manufacturer:** For each known dose of tetanus, diphtheria and/or pertussis-containing vaccine, please select the appropriate vaccine manufacturer code from the list provided.
  - f. **Lot Number:** For each known dose of tetanus, diphtheria and/or pertussis-containing vaccine please fill in the corresponding lot number.
40. **Date of Last Pertussis-Containing Vaccine Prior to Illness Onset:** Record the last known date of pertussis-containing vaccine administration that occurred before the patient's pertussis illness began.
  41. **Number of Doses of Pertussis-Containing Vaccine Prior to Illness Onset:** Based on the information recorded in the vaccination history section, record the number of doses of pertussis-containing vaccine the patient received prior to his/her pertussis illness onset.
  42. **Reason Patient not Vaccinated with  $\geq 3$  Doses of Pertussis Vaccine:** Based on the information recorded in the vaccine history section, determine whether the case-patient was appropriately vaccinated at the time of cough onset. If not appropriately vaccinated, please indicate why.

#### *Epidemiologic Information*

43. **Date First Reported to a Health Department:** Date the first report of the case was received by either the local or state health department.
44. **Date Case Investigation Started:** Date on which the first contact was made with either a medical provider or the case-patient.
45. **Outbreak Related:** Indicate whether the case-patient was associated with a known pertussis outbreak. *Note: This variable is used differently across sites, as the definition of a pertussis outbreak varies. While an outbreak has been generically described as two or more cases occurring in separate households within a community, some states require a minimum of 3 cases before declaring an outbreak.*
46. **Epi-Linked:** Indicate whether the case-patient was epidemiologically-linked to another laboratory-confirmed case of pertussis, which was identified by either culture or PCR.
47. **Mother's Age at Infant Birth:** If case-patient <1 year of age, please indicate the 3-digit age of the mother, in years, at time of case-patient's birth.
48. **Weight of Infant at Birth:** If case-patient <1 year of age, please list his or her weight at birth in pounds and ounces, or kilograms and grams. *Note: Sites should select a **single** weight measurement unit (i.e. kg/g OR lbs/oz) for recording infant weights. Data should be recorded with NUMERIC, non-decimal values only.*
49. **Transmission Setting:** The setting in which the case-patient most likely acquired his or her pertussis infection.
50. **Setting of Further Documented Spread:** Any setting in which pertussis was documented as a result of contact with the case-patient. This should only be completed if additional pertussis cases are known to be epidemiologically-linked or outbreak-related to the case-patient. Further spread should be determined based on the patient's infectious period. Case-patients not treated with antibiotics prior to 21 days of cough should be considered infectious for the three weeks following cough onset. Patients treated with antibiotics prior to three weeks of cough should be considered infectious from cough onset until 5 days after consistently taking prescribed antibiotics.
51. **Number of Contacts Recommended Antibiotics:** The number of individuals the case-patient came into contact with during his or her illness that were recommended antibiotic treatment or prophylaxis.