



Pan American
Health
Organization



World Health
Organization

Americas Region

Epidemiological alert Increased pertussis (Whooping Cough) in the Americas Region

10 June 2025¹

In light of the sustained decline in pertussis vaccination coverage, mainly during the COVID-19 pandemic, and in the context of the current global resurgence of pertussis cases—with significant increases in several countries in the Americas Region—the Pan American Health Organization/World Health Organization (PAHO/WHO) urges Member States to strengthen their epidemiological surveillance systems and maintain monitoring of continuous, detailed, and disaggregated vaccination coverage among children, with special attention to children under 1 year of age and under 5 years of age. It is a priority to identify in a timely manner population groups that do not receive pertussis vaccines with the recommended doses, in particular unvaccinated infants or infants with incomplete schedules, to implement corrective actions to close immunization gaps and prevent outbreaks (1-4).

Summary of the situation

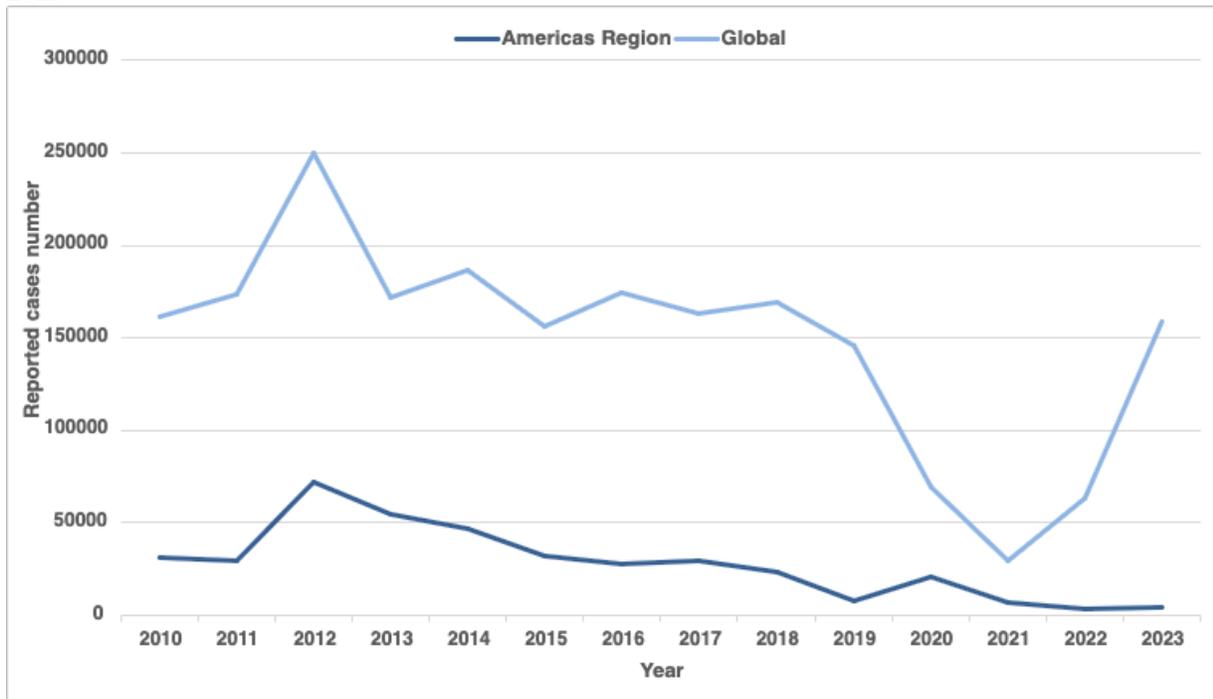
During the decade between 2010 and 2019, worldwide, an average of 170,000 cases of pertussis (whooping cough) were reported annually. However, during the COVID-19 pandemic, a significant decline was observed, with an average of 80,227 cases per year between 2020 and 2023, representing a reduction of approximately two times compared to the previous period. The year 2021 marked the recent historical low, with only 29,623 cases reported worldwide, and then increased in 2022 and 2023 with 63,024 and 158,910 cases respectively (**Figure 1**) (2).

In the Americas Region, 2012 saw the highest number of cases in the decade, with 72,328 reported cases of pertussis. Since 2013, there has been a progressive decrease in the number of cases reported annually in the Region until 2022, when it reached its lowest point with 3,283 cases, and then in 2023 it increased to 4,139 cases (**Figure 1**) (2). Currently, there is a provisional total of 43,751 cases in the Americas Region for the year 2024 (subject to change when all countries report their totals in June 2024) (3).

¹ This Epidemiological Alert replaces the version previously published on May 31, 2025, and includes changes to data reported by Brazil based on a retrospective adjustment request received from national authorities.

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Figure 1. Pertussis cases reported globally and in the Americas Region, between 2010 and 2023



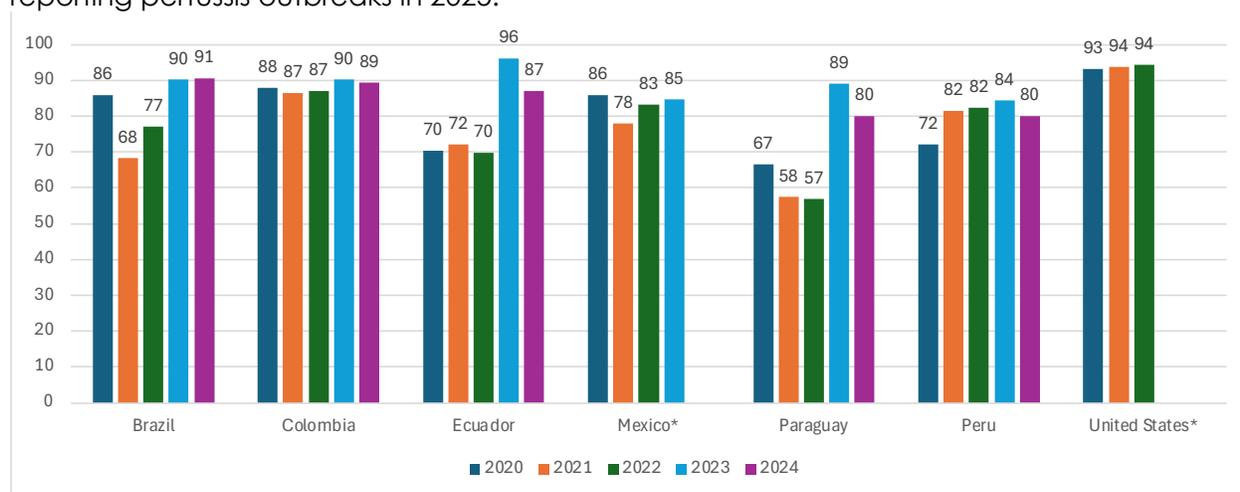
Source: Adapted from World Health Organization, The Global Health Observatory, Pertussis - number of reported cases. Geneva: WHO; 2024. Available from: <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/pertussis-number-of-reported-cases>

Vaccination coverage in the Americas Region

Vaccination coverage for the first and third doses of diphtheria, tetanus, and pertussis vaccine (DTP1 and DTP3) is commonly used as performance indicators for national immunization programs, both regionally and globally. During the COVID-19 pandemic, there was a significant decrease in this coverage. In 2021, the Americas Region reached its lowest level in two decades, with coverage of 87% for DTP1 and 81% DTP3. However, the 2023 data show a partial recovery with 90% for DTP1 and 88% for DTP3. It is important to note that there are significant disparities between and within countries at the subnational level (4).

In **Figure 2** the evolution of DTP3 coverage between 2020 and 2024 in the seven countries—Brazil, Colombia, Ecuador, Mexico, Paraguay, Peru, and the United States of America—of the Americas Region that currently have pertussis outbreaks in 2025 is presented (5). Four of the seven countries analyzed—Colombia, Ecuador, Paraguay, and Peru—show a decrease in DTP3 coverage in the last year with available data. Although the other countries have increased coverage, this information does not allow us to visualize coverage at the subnational level or identify possible immunity gaps in certain age groups, which could help explain the emergence of outbreaks, as discussed in the following section (4).

Figure 2. DTP3 vaccination coverage between 2020-2024* in countries in the Americas reporting pertussis outbreaks in 2025.



* There is no data for 2024 in Mexico and for 2023 and 2024 in the United States of America.

Source: Adapted from the Joint PAHO/WHO/UNICEF Report Form (JRF) on Immunization. Washington, D.C.: PAHO; 2025. Unpublished.

Summary of the situation of select countries in the Americas Region

Below is a summary of the situation in the seven selected countries in the Americas Region that reported an increase in pertussis cases during 2025 compared to previous years (listed in alphabetical order).

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In **Brazil**, between EW 1 and EW 19 of 2025, 1,634 confirmed cases of pertussis were reported, including five deaths (5). It is the second year with the most cases reported in the country since 2019, after 2024 (2, 5). Of the states with confirmed cases of pertussis, those with the highest number of cases are Mato Grosso do Sul (n = 318 cases, including one death), São Paulo (n = 274 cases, including one death), and Rio Grande do Sul (n = 234 cases, including one death). The most affected age group is children under one year of age (n= 452 cases) representing 27.7%, followed by the 1-to-4-year age group (n= 416) representing 25.5%. The distribution by sex shows a higher incidence in males (n= 739 cases) than in females (n= 894 cases). The identified outbreaks do not include special populations, but there was one outbreak in a daycare and five outbreaks in households were identified in 2025 (5).

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In **Colombia**, between EW 1 and EW 18 of 2025, 318 confirmed cases of pertussis were reported, including two deaths (6). The highest number of cases reported in Colombia since 2019 have been reported in 2025 (2, 6). Of the territorial entities with confirmed cases of pertussis, those with the highest number are Bogotá (n= 142 cases) and Antioquia (n= 63 cases, including one death). The most affected age group is children under one year of age (n= 137 cases) representing 43.1%, followed by the 1-to-4-year age group (n= 73 cases) representing 23%. The distribution by sex shows a higher incidence in males (n= 170 cases) than in females (n= 148 cases). In 2025, outbreaks have been reported in indigenous communities mainly in: Antioquia (n= 26 cases, including one death), Chocó (n= 6 cases), Cauca-Caloto (n= 1 case), Bogotá D.C. (n= 6 cases), and La Guajira (n= 9 cases) (6).

In **Ecuador**, between EW 1 and EW 19 of 2025, a total of 593 pertussis cases have been reported, including 15 deaths (7). The number of pertussis cases reported in 2025 is the highest number reported since 2002 in the country (2, 7). Of the provinces with confirmed cases of pertussis, those with the highest number of cases are Guayas (n= 147 cases, including six deaths), followed by Manabí (n= 141 cases), and Pichincha (n= 105 cases, including one death). The most affected age group are children under one year of age (n= 327 cases) representing 55.1%, followed by the 1-to-4-year age groups (n= 84 cases) representing 14.1%. The distribution by sex shows a higher incidence in males 51.7% (n= 307 cases) than in female 48.2% (n= 286 cases). In areas with indigenous populations, such as in the provinces of Napo and Santo Domingo, 16 and 39 cases are registered, respectively (7).

In **Mexico**, between EW 1 and EW 19 of 2025, 943 confirmed cases of pertussis were reported, including 51 deaths, distributed in 31 states of the country (8). The total number of cases for the year 2025 is the highest reported since 2016 in the country (2, 8). The jurisdictions with the highest number of confirmed cases of pertussis are Chihuahua (n= 99, including five deaths), Mexico City (n= 96 cases, including seven deaths), and the state of Aguascalientes (n= 96 cases, including two deaths). The most affected age group is children under one year of age (n= 482 cases) representing 51.1%, followed by the 1-to-4-year age group (n=127 cases) representing 13.4%. The distribution by sex shows a higher incidence in females (n= 538 cases) than in males (n= 405 cases) (8).

In **Paraguay**, between EW 1 and EW 19 of 2025, 37 confirmed cases of pertussis were reported, including two deaths of this total, 33 cases are confirmed by laboratory and four by epidemiological link (9). The total number of cases for the year 2025 is the highest reported since 2018 in the country (2, 9). The cases by area of residence correspond to seven departments plus the country's capital: Central (n= 13 cases, including one death), Alto Paraná (n= 8 cases), Asunción Capital (n= 7 cases), Paraguarí (n= 3 cases), Caaguazú (n= 2 cases), San Pedro (n= 2 cases, including one death), Guairá (n= 1 case), and Presidente Hayes (n= 1 case) (9). The cases range between one month to 59 years, with an average of 6 years, in terms of the distribution by sex it shows higher incidence in males (n = 20 cases) and in females (n = 17 cases). The largest number of cases is concentrated among children under 1 year of age (n= 11 cases) representing 30%, with this group being where the two deaths occurred in infants under 1 year of age, and among the 1-to-4-year age group (n= 11 cases) also representing 30%, they evolved favorably (9).

In **Peru**, between EW 1 and EW 19 of 2025, 404 confirmed cases and 219 probable pertussis cases have been reported, including 13 deaths (10). The number of pertussis cases reported in 2025 is the highest reported since 2013 in the country (2, 10). Of the departments with confirmed and probable cases of pertussis, those with the highest number of cases are Loreto (n= 462 cases, including 11 deaths), Lima (n= 42 cases, including one death), Callao (n= 24 cases), Cajamarca (n= 16 cases), and Cusco (n= 15 cases). The most affected age group is children among the 1-to-4-year age group (n= 199 cases) representing 31.9%, followed by children under one year of age (n= 145 cases) representing 23.3%, and those from 5 to 11 years of age (n= 136 cases) representing 21.8%. The distribution by sex shows a higher incidence in females (n= 314 cases) than in males (n= 309 cases) (10).

In the **United States of America**, between EW 1 and EW 18 of 2025, 10,062 confirmed and probable cases of pertussis, including five deaths (11), have been reported. This is the second year with the most cases reported since 2020, after 2024 in the country (2, 11). Of the states with confirmed and probable cases of pertussis, those with the highest number in 2025 are

Washington (n= 1,067 cases), Oregon (n= 723 cases), and California (n= 590 cases) (11). The most affected age groups are among the 11 to 19 years of age, representing 31% and the 1 to 6 years of age representing 24%. Deaths were mainly reported in children under 1 year of age (n= 4 fatal cases) (11).

Recommendations

PAHO/WHO reminds Member States of the following key recommendations for surveillance, diagnostics and laboratory, vaccination, clinical management and treatment, and risk communication:

Surveillance

Strengthen surveillance to monitor disease trends, identify outbreaks, control the burden of disease, and evaluate the impact of the vaccination strategy and control measures implemented. In addition, countries are encouraged to strengthen their laboratory diagnostic capacities, which will improve the reporting and characterization of pertussis outbreaks in the Americas Region. Each outbreak of pertussis should be carefully studied to improve understanding of the epidemiology of pertussis in the Americas Region. Member States should strengthen surveillance among children under one year of age who are hospitalized.

Diagnostics and laboratory

Laboratory confirmation is essential to ensure an accurate diagnosis and appropriate treatment. The diagnostic tests used in the laboratory for the detection of *Bordetella pertussis* infection are culture, polymerase chain reaction (PCR) and serology (12). The reference etiological diagnosis is the culture of *B. pertussis*, from nasopharyngeal samples extracted in the catarrhal phase and from the initial cough. It is a very specific test, but not very sensitive (less than 60%) and requires selective means. Culture positivity is higher in samples obtained during the first two weeks of cough onset. PCR for *Bordetella* is a more sensitive test and can be performed on the same types of samples used for culture. PCR is most sensitive in samples obtained within the first three or maximum four weeks of cough onset. Serological diagnosis is based on the detection of a significant increase in the concentration of specific antibodies in paired samples (catarrhal phase and convalescent phase) from infected people. Serological tests are not recommended in children under one year of age because of interference with maternal antibodies, an immature immune system, or interference with antibodies generated by recent vaccination. This test may not be used for diagnosis during the year following vaccination (13).

Vaccination

There are no vaccines available only against pertussis. Pertussis vaccines that exist have a combined presentation that includes other DTP (Diphtheria, Tetanus and Pertussis) antigens, Tdap, Hepatitis B, *Haemophilus influenzae* type b (Hib.) and poliovirus. Vaccines containing DTPs can be given after six weeks of age and three doses are required in the primary series. Booster doses are required to maintain levels of immunity against the disease (14).

Table 1. Recommended Vaccination Schedule for the Americas Region

Vaccination schedule	Primary			Booster		
	1 st (DTP1)	2 nd	3 rd (DTP3)	4 th	5 th	6 th
	2 months / 1 st contact	4 months	6 months	12-23 months**	4-7 years	9-15 years
	DTP-containing	DTP-containing	DTP-containing	DTP-containing	Td/DT	Td

** Pertussis booster dose: A booster dose is recommended for children ages 1 to 6, preferably during the second year of life.

Source: Adapted from the Technical Advisory Group (TAG) and WHO. Washington, D.C.: PAHO; 2025 [cited 15 May 2025]. Unpublished.

Analyzing vaccination coverage in children between 1 year and less than 5 years of age, with special emphasis on the identification of population groups with low coverage is important. Countries should ensure coverage with three doses of vaccines against *B. pertussis* per child greater than 95% in children (regional goal) (14).

It is recommended to vaccinate health workers with a booster, giving priority to maternity ward staff and caregivers of newborns and children under 1 year of age, to prevent nosocomial transmission to infants and immunocompromised people (14).

Immunizing pregnant women in the event of an outbreak provides optimal protection to newborns. For this vaccination strategy to be effective, it is important to achieve and maintain vaccination coverage above 50% (14).

Clinical Management

Respiratory isolation is recommended in identified cases. Suspected and confirmed cases should be kept separate from infants and young children, especially unimmunized infants, until patients have received antibiotics for at least five days. Suspected cases not receiving antibiotics should be kept in isolation for three weeks after the onset of paroxysmal cough or until the paroxysmal cough disappears, whichever occurs first (13).

Treatment

Antibiotics, such as macrolides (erythromycin, clarithromycin, and azithromycin) may shorten the period of transmissibility, but they are unlikely to reduce the severity or duration of the condition unless they are administered before the paroxysmal stage begins (13).

Risk Communication

It is recommended to promote the dissemination of public health messages aimed at doctors and the general population, in order to improve the early recognition, notification and rapid initiation of treatment of pertussis cases.

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