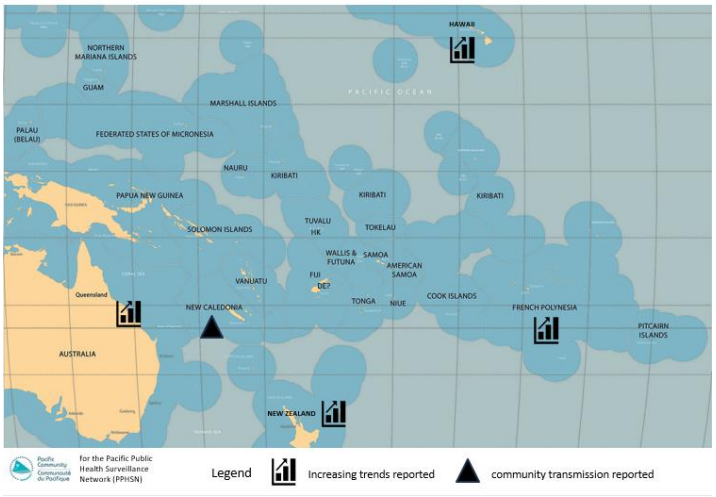
Increasing trends of pertussis (whooping cough)
Health advisory for Pacific Island health professionals, 1 August 2024

Epidemiological situation

The public health measures taken during the COVID-19 pandemic, from 2020 to 2022, also reduced transmission of other respiratory infections, including pertussis. Since 2023, a resurgence of pertussis cases started in many countries worldwide and continues to increase this year.

In the Pacific region, increasing trends in pertussis activity have recently been observed in **Australia, New Zealand, Hawai'i, French Polynesia** and community transmission has been reported in **New Caledonia**.

Pertussis trends in the Pacific region, as of 1 August 2024



In **Australia**, especially in Victoria, the Department of Health issued a health advisory on 11 July 2024. The number of infections in 2024 has quadrupled compared to 2023, with children aged 10-12 years the most affected. A similar increase has been observed in New South Wales (NSW) since February 2024 with highest rates of pertussis notifications observed in children 5-14 years. In Queensland (QLD), 5,899 cases were reported from 1 January to 21 July 2024 in comparison to an average of 293 cases for the same period between 2019 to 2023.

In **New Zealand**, monthly reported cases have been rising since March 2024, with 83 cases reported in June 2024 in comparison to 16 cases in March this year. The pertussis activity has returned to pre-pandemic baseline levels (i.e. an average of 80 cases per month). Children aged 5-14 years are primarily affected.

In **Hawaii**, community transmission of pertussis has been reported since April and reported cases continued to increase with 24 cases reported as of 19 June 2024.

Key facts

Pertussis, also known as whooping cough, is a very contagious respiratory infection, that can lead to complications and death.

The bacteria that cause pertussis, *Bordetella pertussis*, spread easily from person to person through droplets from coughing or sneezing or by direct contact with respiratory secretions.

Babies less than 6 months of age are at greatest risk of severe disease, hospitalisation, and death.

The first stage has a slow beginning, with an irritating cough and runny nose. This can gradually turn into coughing fits within 1–2 weeks and lasts for 1–2 months or longer.

Prompt diagnosis, isolation and treatment can help reduce transmission and severity of illness.

Vaccination remains the best way to reduce the risk of pertussis infection and severe disease.

Ensure all people (babies, children and adults) are up to date with pertussis immunisations, as per country schedules.

Cases occurring in immunised persons suggest declining immunity from previous immunisations.

French Polynesia[1] has reported fourteen pertussis cases since the beginning of the year, including thirteen locally acquired cases in the past two weeks, as of 30 July 2024. Children < 2-year-old are primarily affected.

New Caledonia[2] has notified a first locally acquired pertussis case on 27 July 2024, following two imported cases reported earlier this year, highlighting the start of community transmission.

Increasing trends have also been reported in Europe in the first quarter of 2024, including in France, and the United States, where pertussis is beginning to return to pre-pandemic patterns.

[1] Journal télévisé Polynésie 1ère, 30 July 2024 and personal communication with country officials on 31 July 2024 (Tahiti time).
[2] *Alerte DASS coqueluche – les lettres d'infos dédiées aux alertes, received on 26 July 2024.*

Immunisation coverage

Immunisation coverage with the diphtheria, tetanus toxoid and pertussis-containing vaccine (DTP3 vaccine) is uneven across the Western Pacific region, with un-immunized children documented in some Pacific Island countries and territories: the Federated States of Micronesia, Commonwealth of the Northern Mariana Islands, Samoa, Solomon Islands and Vanuatu[3].

The epidemiological situation and immunisation gaps, coupled with the forever growing travel globally and mass gathering events, **increase the risk of importation and circulation of pertussis in the Pacific region.**

Recommendations

Pacific health professionals are advised to:

- Increase pertussis **immunisation coverage** in their country/territory.
- **Ensure children and pregnant women are up to date with pertussis immunisations**, as per country schedules.
- **Enhance surveillance** for pertussis and **consider pertussis in all people** (babies, children and adults) who present with cough illness, with fits of cough, or 'whoop' when breathing in, or vomiting after coughing fits.
- **Laboratory diagnostics**:
    - **If available in-country**: collect nasopharyngeal swabs during the coughing and early coughing fit stages for BioFire testing or specific PCR testing.
    - **If unavailaible in-country,** collect nasopharyngeal swabs and place them on Cary-Blair medium for shipment to a reference laboratory for *culture* or PCR testing.
- **Clinical management**:
    - If you strongly suspect pertussis, treat the patient accordingly and do not wait for laboratory test results. Negative results do not necessarily rule out pertussis.
    - A macrolide antibiotic for 5–7 days will shorten the time the case is infectious and may reduce the severity of symptoms if given very early. Clarithromycin and azithromycin are better tolerated, if available, than erythromycin. Alternatively, cotrimoxazole (sulfamethoxazole-trimethoprime) for 7 days can also be used. Adequate respiratory support is required in severe cases. Refer to your national treatment guidelines and essential medicines list.
- Refer to your national notifiable disease protocol for **contact tracing** guidance.
- Consider **risk communications to the public**:
    - See a doctor immediately if you have pertussis symptoms
    - Ensure you and your family are up to date with your routine immunisations
    - Follow good hygiene practices (wearing a mask if you are sick/coughing, hand washing, etc.)

Further information about pertussis can be accessed via the following links:

- PPHSN Pacific Outbreak Manual – pertussis section: https://www.pphsn.net/resources/outbreak-manual/
- WHO – Pertussis: https://www.who.int/health-topics/pertussis
- CDC – Pertussis: https://www.cdc.gov/pertussis/about/index.html

The Surveillance, Preparedness and Response Programme, Public Health Division, Pacific Community (SPC)
Focal Point of the Pacific Public Health Surveillance Network (PPHSN) Coordinating Body
Email: FocalPointPPHSN-CB@spc.int

[3] WHO Meeting Report: 32nd Meeting of the Technical Advisory Group on immunization and vaccine-preventable diseases in the Western Pacific Region, Manilla, Philippines, 20-23 June 2023 .