

# Overseas infectious diseases of priority concern

This surveillance report presents information on overseas infectious diseases of priority concern to border health. These diseases include Public Health Emergencies of International Concern (PHEICs) and other infectious diseases of priority concern to New Zealand. The data reported is the latest calendar year data available as at August 2024.

## Key facts

- While reported COVID-19 cases and deaths decreased in 2023, COVID-19 remains a global concern with the continued development of new subvariants.
- Poliovirus cases remained high in African countries in 2023, particularly the Democratic Republic of the Congo (223 cases), Nigeria (87 cases), Chad (55 cases) and Guinea (47 cases).
- Mpox cases at the global level dropped between 2022 (84,502 cases or 10.5 cases per million people) and 2023 (9,462 cases, or 1.2 cases per million people). A surge of cases, including the emergence of a new strain, led the WHO to declare Mpox as a PHEIC again in August 2024.
- Measles cases increased between 2021 (15.5 cases per million people) and 2022 (25.5 cases per million people), and vaccination rates remained lower than optimal.
- Non-seasonal influenza was reported in 11 countries in 2023, compared to 6 countries in 2022.

## Background information

High-risk exotic diseases, potentially harmful to New Zealand's health, are those which:

- spread easily
- New Zealand people are particularly vulnerable to (eg, non-immune)
- can cause severe illness
- are difficult to treat.

Exotic diseases overseas can be spread to New Zealand by New Zealand travellers, visitors, and immigrants. International air travel can spread diseases very quickly across borders. Monitoring high-risk exotic diseases overseas is important because it can inform about the possible exposures of New Zealand travellers, visitors, and immigrants to diseases, and help target our disease prevention and control work.

## Public Health Emergencies of International Concern

The World Health Organization (WHO) can declare Public Health Emergencies of International Concern (PHEICs) when public health events arise that have international reach and may require an internationally

coordinated response (WHO 2019). At the end of 2023 there were two active PHEICs, COVID-19 and Polio. After a global outbreak, Mpox was declared a PHEIC in July 2022. While this status was lifted in May 2023, cases remained high in some African countries, particularly the Democratic Republic of the Congo, and a surge of cases in mid-2024 led the WHO to declare Mpox as a PHEIC once again in August.

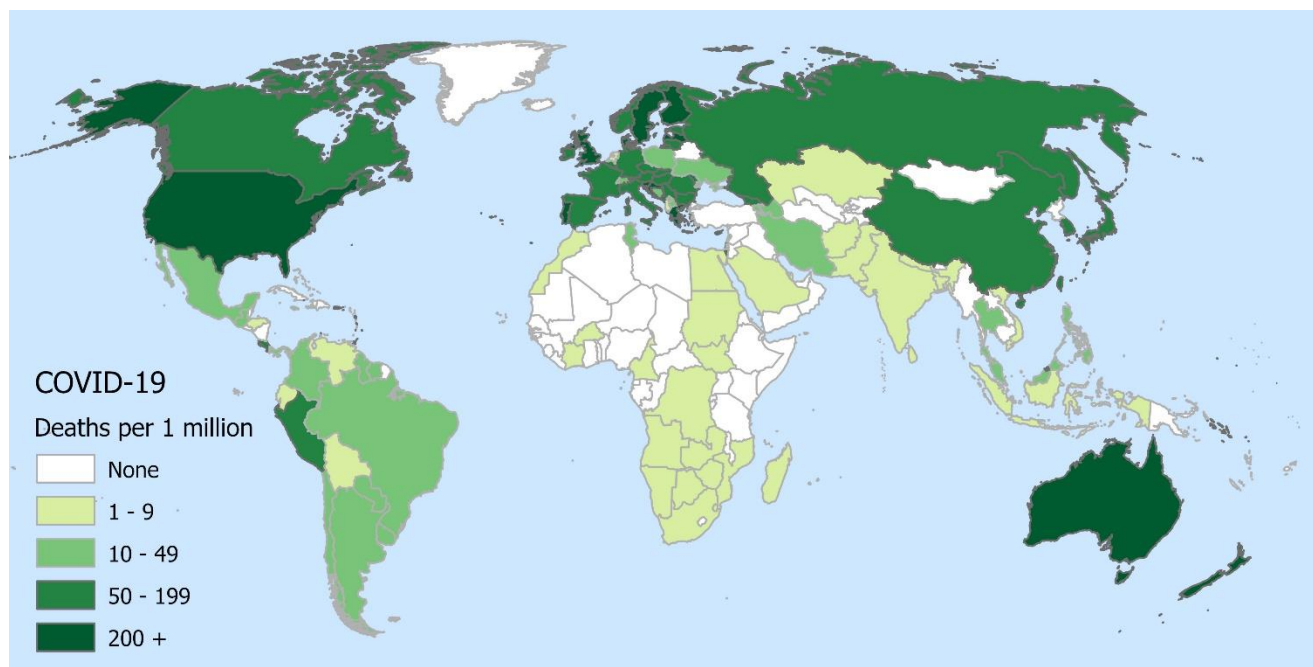
Respiratory illnesses including measles, non-seasonal influenzas and Middle Eastern Respiratory Syndrome (MERS) are also considered priority notifiable diseases to New Zealand. In addition, Dengue Fever, the most common arboviral disease (disease carried by insects) entering New Zealand, is also reported here.

## COVID-19 remains a global concern

Coronavirus Disease 2019 (COVID-19) is the respiratory illness responsible for the COVID-19 pandemic. Emerging first in Wuhan, China (PRC), in late 2019, it quickly spread to most countries and territories. The most common symptoms are fever, dry cough, and fatigue. The COVID-19 virus continues to evolve and develop new subvariants, and remains a global concern. For more information visit the [Ministry of Health website](#).

Cases increased from 80.3 million in 2020 to 424.0 million in 2022, before decreasing to 69.3 million in 2023. The number of deaths peaked earlier, at 3.5 million in 2021, compared to 320,251 deaths in 2023. Figure 1 presents the rate of COVID-19 deaths per million people in 2023. Globally, there were 39.8 deaths per million people, compared to 155.4 deaths per million people in 2022. The country with the highest rate of deaths was Slovenia (499.9 per million), followed by Finland (483.8) and Sweden (443.8). In New Zealand there were 258.1 deaths per million people in 2023, compared to 436.1 per million in 2022.

**Figure 1: COVID-19 deaths per million people by country, 2023**



Source: WHO 2024a

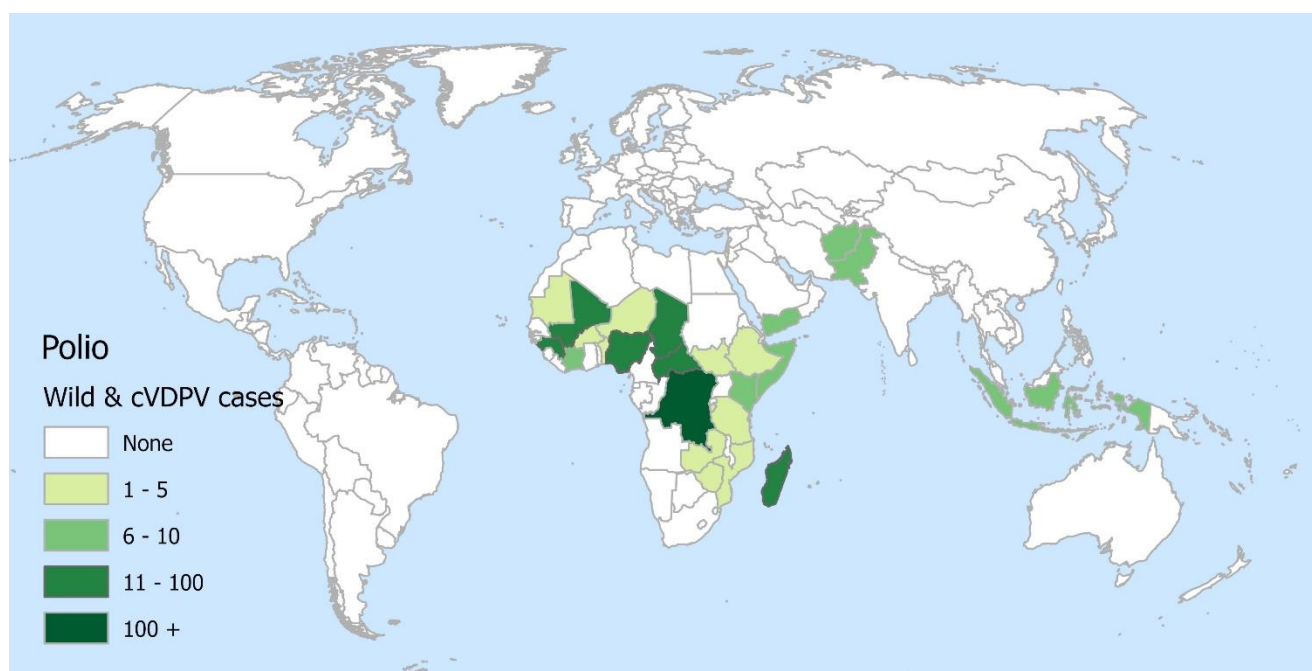
## Polio cases remain elevated globally

Poliomyelitis (polio) is a viral disease that can cause severe neurological disability and sometimes death. In addition to wild polio virus, a weakened form of polio from oral polio vaccine (circulating vaccine derived polio virus, or cVDPV) may cause polio in places where vaccination coverage is low (Venkatesan 2022). An injectable inactivated polio vaccine has replaced the oral polio vaccine in many countries including New Zealand. For more information visit the [Health New Zealand website](#).

From 2018–2023, four countries recorded cases of wild poliovirus; Pakistan (270 cases), Afghanistan (118 cases), Mozambique (8 cases) and Malawi (1 case), with all other cases being cVDPV.

The total combined number of reported cases of wild polio and cVDPV increased from 137 in 2018 to 1,253 in 2020. Although cases decreased in 2021, the number of cases remained high in 2023 at 538. African countries were most affected, with 714 cases in 2022 and 503 cases in 2023. In 2023 the highest case numbers were in the Democratic Republic of the Congo (223 cases) and Nigeria (87 cases), followed by Chad (55 cases) and Guinea (47 cases) (Figure 2).

**Figure 2: Reported cases of wild poliovirus and cVDPV by country, 2023**



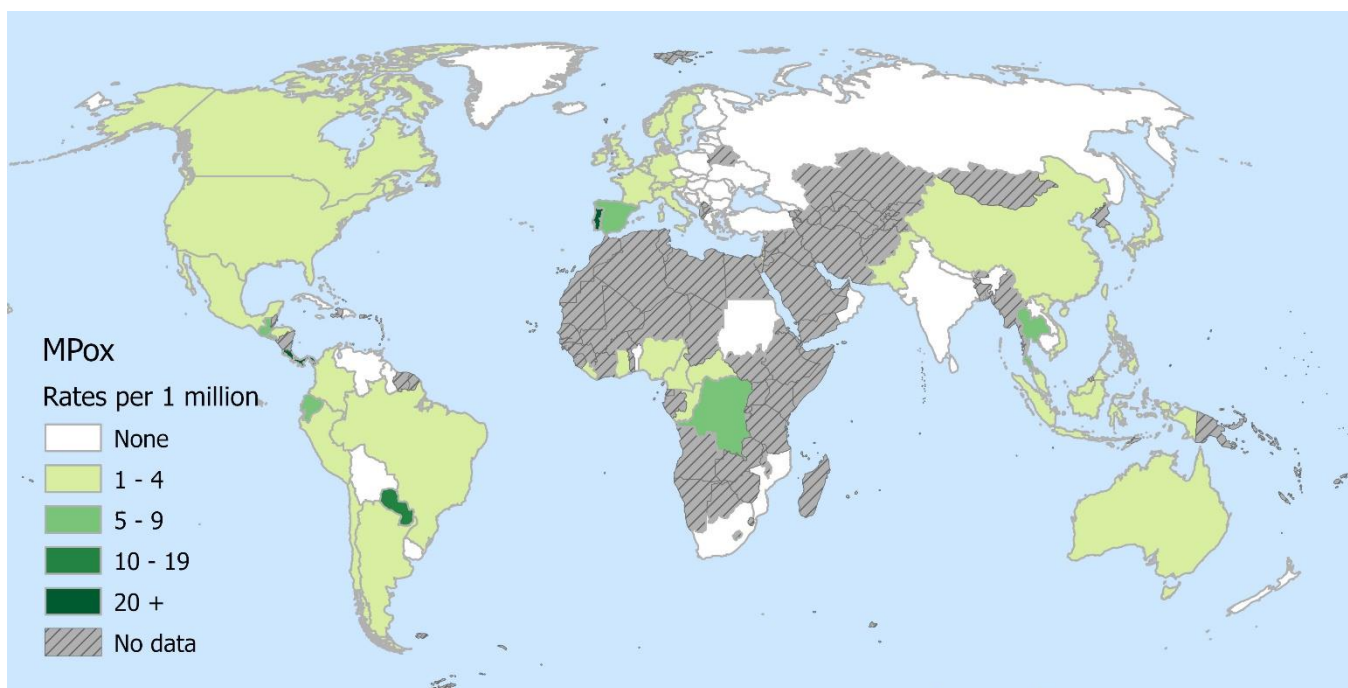
Source: WHO 2024b

## Mpox cases were confirmed in 72 countries in 2023

Mpox (formerly known as monkeypox) is a viral disease transmitted by contact with skin lesions, body fluids and respiratory droplets. Despite being endemic in Western and Central Africa since 1970, Mpox was a low priority disease until 2022 when an increase in global cases resulted in WHO classifying it as a PHEIC in July of that year. While this status was lifted in May 2023, cases remained high in some African countries, particularly the Democratic Republic of the Congo. A surge of cases, including the emergence of a new strain, led the WHO to declare Mpox as a PHEIC again in August 2024. For more information visit the [Health New Zealand website](#).

In 2023, 74 countries reported at least one case of Mpox (9,462 cases in total), compared to 109 countries in 2022 (84,502 cases in total). China recorded 22.4% of all 2023 cases (2,121), followed by the United States with 18% of all cases (1,699). There were 1.2 cases of Mpox per million people in 2023, down from 10.5 per million in 2022. Countries with the highest rates of Mpox in 2023 included Costa Rica (30.3 cases per million), Panama (35.7 per million) and Portugal (20.5 per million) (Figure 3). New Zealand recorded two cases in 2023.

**Figure 3: Mpox notification rates, by country, 2023**



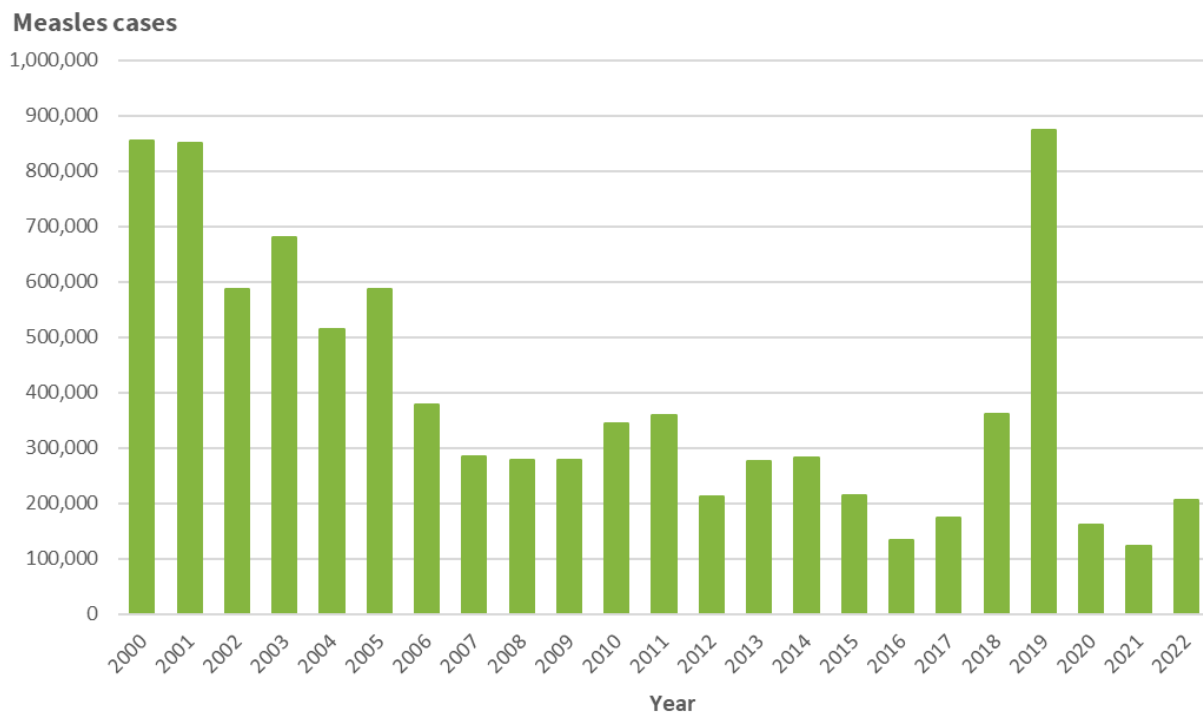
Source: WHO 2024c

## Measles cases increased in 2022

Measles is a highly contagious virus spread through droplets from the nose, throat or mouth and causes a fever, cough, and rash. For information visit the [Health New Zealand website](#).

Globally, measles cases reported to the WHO declined between 2000 and 2016 before increasing in 2017 and 2018 and spiking in 2019 (873,250 cases). Cases then declined during the first two years of the COVID-19 epidemic in 2020 (160,074 cases) and 2021 (123,185 cases) but increased again in 2022 (205,101 cases) (Figure 4).

**Figure 4: Global measles notifications, 2000–2021**



Source: WHO 2024d

In 2022, there were 25.5 reported cases of measles per million population globally, impacting 104 countries (Table 1). This is an increase from 84 countries in 2021 (15.5 cases per million population) but is lower than the 116 countries affected in 2020 (20.3 cases per million population) (WHO 2024d). New Zealand reported seven cases in 2020 but none in 2021 or 2022, likely due to COVID-19 travel restrictions.

**Table 1: Reported measles cases and rate per million population, 2018–2022**

Year	Total world cases reported to WHO		New Zealand cases reported to WHO	
	Cases	Per million population	Cases	Per million population
2018	360,296	46.6	30	6.1
2019	873,250	111.8	2,189	438.7
2020	160,074	20.3	7	1.4
2021	123,185	15.5	0	0
2022	205,101	25.5	0	0

Source: WHO 2024d

Lower than needed measles vaccination rates remain a threat to measles elimination goals (WHO 2024e). Vaccination coverage for the Western Pacific region, which includes New Zealand, was 92% in 2022, compared to 97% in 2010 (Minta 2023). In New Zealand itself, the percentage of children who received all age-appropriate vaccinations by two years of age (including the two vaccinations for measles) was only 77.8% as at 31 March 2024 (Health NZ 2024).

## Non-seasonal influenzas and MERS persist in parts of the world

As well as COVID-19, there have been several other highly infectious respiratory diseases that have persisted across the globe in recent years. These include non-seasonal influenzas and Middle Eastern Respiratory Syndrome (MERS). Non-seasonal influenzas are defined as any novel influenza strain that may have pandemic potential. These include avian influenzas, such as H5N1, H3N8 and H10N3, and swine influenzas, such as H1N2 and H3N2.

In 2023, human cases of avian and swine influenzas were identified in eleven countries across four regions. All events were contained with sources identified and spread limited to one or two known human cases. This is an increase over the six countries with cases in 2022 (Table 2).

**Table 2: Distribution of non-seasonal influenza cases by WHO region and country, 2018–2023**

WHO region	Country/ territory	2018	2019	2020	2021	2022	2023
Americas	Brazil			present	present		present
	Chile						present
	Ecuador						present
	USA				present	present	present
Eastern Mediterranean	Oman						present
	Saudi Arabia						present
	United Arab Emirates						present
Europe	Germany					present	
	Netherlands						present
	Spain					present	
	United Kingdom					present	present
South-East Asia	India				present		
	Cambodia						present
	China	present			present	present	present
	Laos			present			
Western Pacific	Pitcairn Islands					present	
Total countries/territories		1	0	2	4	6	11

Source: WHO 2024e

Middle East Respiratory Syndrome (MERS) is a lung disease caused by a coronavirus (MERS-CoV) with a high death rate that spreads to humans from camels and bats in the Eastern Mediterranean.

In 2023, MERS cases were identified in three Middle Eastern countries: Oman, Qatar and Saudi Arabia. This is similar to previous years with the last outbreak outside of the Middle East being in 2018 with cases reported in the United Kingdom, South Korea and Malaysia (Table 3).



**Table 3: Distribution of MERS cases by WHO region and country, 2018–2023**

WHO region	Country/territory	2018	2019	2020	2021	2022	2023
Eastern Mediterranean	Oman	present	present			present	present
	Qatar		present	present		present	
	Saudi Arabia	present	present	present	present	present	present
	United Arab Emirates	present	present	present	present		present
Europe	United Kingdom	present					
South-East Asia	South Korea	present					
Western Pacific	Malaysia	present					
Total countries/territories		6	4	3	2	3	3

Source: WHO 2024e

## Laboratory confirmed dengue in Pacific Island countries decreased during COVID-19 affected years

Dengue virus is an arboviral disease spread by mosquitoes which can be separated into four serotypes (DEN-1, DEN-2, DEN-3 and DEN-4), all of which can cause severe illness in humans. Dengue is the most common arboviral disease found to enter New Zealand. It accounted for 278 cases of the 361 arboviral diseases entering New Zealand between 2019 and 2021, with the majority of these originating from the Pacific Islands (EHINZ 2024). The primary vectors of dengue, *Aedes albopictus* and *Aedes aegypti*, are not established in New Zealand, so local transmission is not currently possible (EHINZ 2023). Table 4 presents Pacific Island with laboratory-confirmed dengue from 2018 to 2023. The number of countries with confirmed cases peaked at 13 in 2019 before decreasing to two countries in 2022.

**Table 4: Pacific Island countries with confirmed Dengue Virus cases, 2018-2023**

Country	2018	2019	2020	2021	2022	2023
American Samoa	present					
Cook Islands		present	present	present		
Fiji	present		present	present	present	present
French Polynesia	present	present	present			
Guam		present				
Kiribati	present	present				
Marshall Islands		present	present	present		
Micronesia		present	present			
Nauru		present				
New Caledonia	present	present				
Niue						
Palau	present	present	present			present
Papua New Guinea						
Samoa	present					
Solomon Islands		present				
Tokelau						present
Tonga	present					
Tuvalu		present				present
Vanuatu	present	present		present	present	
Wallis and Futuna	present	present	present	present		

Notes: countries with sporadic confirmed local cases (less than 10 cases) or confirmed imported cases only are excluded.

Source: Compiled by the Surveillance, Preparedness and Response Programme, Public Health Division, Pacific Community (SPC) 2024

## Data for this indicator

Priority notifiable diseases are selected from ESR’s annual notifiable disease list. All PHEICs, selected by WHO, are included as well as severe respiratory diseases. Information on vector-borne diseases is currently only investigated from a New Zealand context. Data was obtained from the WHO website for all diseases except for the dengue virus. Dengue virus data was compiled by the Surveillance, Preparedness and Response Programme, Public Health Division, Pacific Community (SPC) based on data and information received from Pacific Island countries and territories and/or collected from different sources through SPC Regional Epidemic Intelligence System.

For additional information, see the [Metadata](#) sheet.

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