MEASLES – THE AMERICAS 2025

MORBIDITY AND MORTALITY					
COUNTRY	CONFIRMED CASES	DEATHS			
NORTH AMERICA -3 ACTIVE OUTBREAKS					
US	1,409	3			
CANADA	4,499	1			
MEXICO	4,331	17			
CENTRAL AMERI	CA - NO ACTIVE OUTBRE	AKS			
BELIZE (JULY 2025- OUTBREAK OVER)	34	0			
COSTA RICA	1	0			
SOUTH AMERICA – 2 ACTIVE OUTBREAKS					
<u>BOLIVIA</u>	269	0			
ARGENTINA (NO NEW CASES)	35	0			
BRAZIL (NO NEW CASES)	23	0			
<u>PARAGUAY</u>	24	0			
PERU (NO NEW CASES)	4	0			
THE CARRIBEAN (NO NEW CASES)	34	0			
TOTAL	10,661	21			

BACKGROUND	
UNITED STATES	
CANADA	
MEXICO	U CI TI
BOLIVIA	0
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Yale SCHOOL OF PUBLIC HEALTH

PARAGUAY

8/31/2025 2300 HRS EDT

RISK ASSESSIMENT IN OUTBREAK AREAS				
Risk for Localized Spread	Risk to unvaccinated populations in and around the outbreak areas	Risk to Children	Potential for sustained transmission	
MODERATE	HIGH	HIGH	MODERATE	

LINKS

UNITED STATES

CDC

EXAS LINKS

• TEXAS DEPARTMENT OF STATE HEALTH SERVICES

NEW MEXICO LINKS

NEW MEXICO DEPARTMENT OF HEALTH

OKLAHOMA LINKS

OKLAHOMA STATE DEPARTMENT OF HEALTH

KANSAS

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

CANADA

- MEASLES AND RUBELLA WEEKLY MONITORING
 PEDORT
- ALBERTA DASHBOARD
- BRITISH COLOMBIA
- MANITOBA HEALTH
- NEW BRUNSWICK
- NOVA SCOTIA
- PUBLIC HEALTH ONTARIO
- PRINCE EDWARDS ISLAND
- QUEBEC
- SASKATCHEWAN

MEXICO

INFORME DIARIO DEL BROTE DE SARAMPIÓN EN MÉXICO, 2025

BOLIVIA

Estamos Salud

PARAGUAY

Salus Publica

WHO

Immunization data

MEASLES TESTING LABORATORIES

CDC MEASLES VIRUS LABORATORY

RESOURCES FOR THE PUBLIC

- CDC MEASLES
- MEASLES CASES AND OUTBREAKS
- NYSDOH: YOU CAN PREVENT MEASLES
- CDC VIDEO: GET VACCINATED AND
- PREVENT MEASLES
 CDC VACCINE SHOT FOR MEASLES
- DIRECTORY FOR LOCAL HEALTH
 DEPARTMENTS

RESOURCES FOR EMS PROVIDERS

- GUIDANCE FOR SUSPECTED MEASLES
 PATIENT
- NYSDOH POLICY STATEMENT

PORTALS, BLOGS, AND RESOURCES

- <u>CIDRA</u>P
- CORI
- FORCE OF INFECTION
- IVAC
- KAISER HEALTH NEWS
- MEDPAGE TODAY
- NY STATE GLOBAL HEALTH UPDATE
- THE PANDEMIC CENTER TRACKING REPORT
- YOUR LOCAL EPIDEMIOLOGIST

BACKGROUND

TYPE OF PUBLIC HEALTH EMERGENCY: LARGE MULTINATIONAL MEASLES OUTBREAK

OVERVIEW: The Americas have experienced a rate of measles infections 34 times higher than one year ago. In 2025, a total of 10,648 cases and 21 deaths have been reported across the region. Ten countries account for these cases, with Canada having 4,499 cases (1 death), Mexico (4,331 cases, 17 deaths), and the United States (1,409 cases, 3 deaths) representing the vast majority. Other affected countries include Bolivia (269 cases), Argentina (35), Belize (34), Brazil (23), Paraguay (21), Peru (4), and Costa Rica (1). Additionally, 34 cases have been reported in the Caribbean, although PAHO has not specified the countries involved. This sharp rise underscores the urgent need to close gaps in routine immunization, improve access to healthcare, and address vaccine hesitancy.

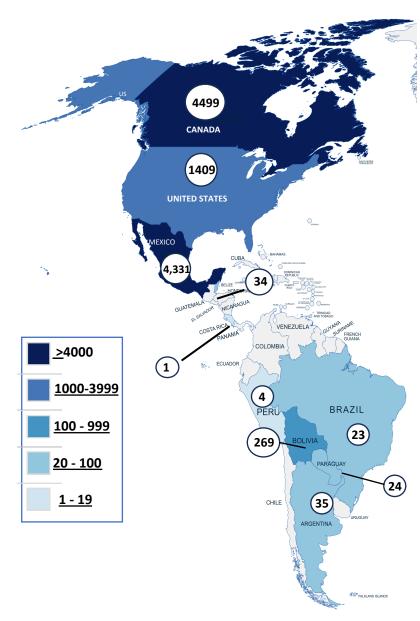
GENOTYPES: Genotype D8 is the primary driver of the current outbreaks and has been identified in cases across eight countries—particularly within Mennonite communities in Canada, the United States, Mexico, Belize, Argentina, Bolivia, Brazil, and Paraguay. In Brazil, transmission has been concentrated among members of a small Russian Orthodox community in Tocantins state. Genotype B3 has also been detected, though far less frequently, and across a wider geographic area. These B3 detections are likely linked to sporadic introductions rather than the sustained local transmission seen with D8.

VACCINATION: Although entirely preventable through the MMR (measles, mumps, and rubella) vaccine, outbreaks continue to occur in under-vaccinated communities, leading to serious health outcomes and increased transmission risk (CDC). Since 2019, vaccination rates have declined globally, leading to a worldwide increase in measles cases.

- Contributing factors:
 - Socioeconomic inequities
 - Limited healthcare access
 - Under-resourced public health systems
 - Localized vaccine hesitancy
- Coverage in The Americas
 - First dose: 88%
 - Second dose: 77%
 - Target threshold to prevent outbreaks: ≥95%

REGIONAL TRENDS:

- Canadian and Mexican outbreaks continue to grow rapidly.
- The outbreaks in the United States continue to occur, with the school year resuming in August/ September.
- Smaller outbreaks in other countries have been contained, including Belize.
- Countries are launching vaccination campaigns in response to the outbreak.
- The most affected age groups are children under 5 years and adolescents aged 10–19 years.



UNITED STATES

BACKGROUND

Measles, declared eliminated in the U.S. in 2000, has made a troubling return. As of September 26, 2025, the U.S. has recorded **1,408 confirmed cases across 42 states**—already exceeding the totals from both 2019 and 1992 and marking the highest number since the disease was eliminated. This represents a sharp rise from just 285 cases in all of 2024. In 2025 alone, **35 outbreaks** have been reported, with **86% of confirmed cases (1,214 of 1,408)** outbreak-associated. By comparison, 2024 saw only 16 outbreaks, and 69% of cases (198 of 285) were outbreak-linked.

VACCINATION GAPS - Immunization rates have fallen below the 95% herd immunity threshold in many communities. Key drivers include:

- · Public mistrust and misinformation, amplified by social media.
- Pandemic-era disruptions to routine immunization programs.
- Cuts to NIH and CDC funding for vaccine-hesitancy research and the sidelining of expert voices. These gaps have fueled localized outbreaks, enabling broader chains of transmission.

SURVEILLANCE & INTERVENTION - Public health responses are evolving:

- Wastewater surveillance in Maryland, California, New Mexico, Texas, and Connecticut is detecting measles circulation—sometimes before clinical symptoms emerge.
- **Community-based vaccination drives** (door-to-door outreach, rapid-response brigades, and culturally tailored education) are raising local uptake.
- **Targeted interventions** in close-knit, under-vaccinated populations (Mennonite, Amish, and select religious or rural communities) remain central to outbreak control.

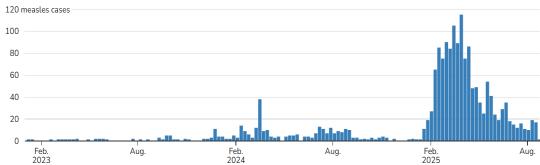
THE ROAD FORWARD

To re-secure measles elimination, the U.S. must:

- Reinforce Vaccination Coverage Push childhood coverage back above 95%.
- Invest in Public Health Infrastructure Restore outbreak response capacity weakened by funding cuts.
- **Rebuild Trust** Partner with community leaders to deliver empathetic, accurate communication.
- Scale Surveillance Innovations Expand wastewater monitoring and integrated early-warning systems.
- Align Policy with Science Ensure state and national health policies follow evidence-based guidance.

MEASLES CASES IN 2025 - CDC

1,408 (+33) CONFIRMED MEASLES CASES (AS OF 8/26/2025)



As of August 26, 2025, a total of 1,408 confirmed* measles cases were reported by 43 jurisdictions: Alabama, Alaska, Arkansas, Arizona, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York City, New York State, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming.

Age

Under 5 years: 388 (28%) Under 5 years: 393 (28%) 5-19 years: 531 (38%) 20+ years: 477 (34%) Age unknown: 7 (0%)

Percent Hospitalized: 13%

Under 5 years: 21% (84 of 393) 5-19 years: 8% (40 of 531) 20+ years: 11% (52 of 477) Age unknown: 0% (0 of 7)

Vaccination Status

Unvaccinated or Unknown: 92% One MMR dose: 4%

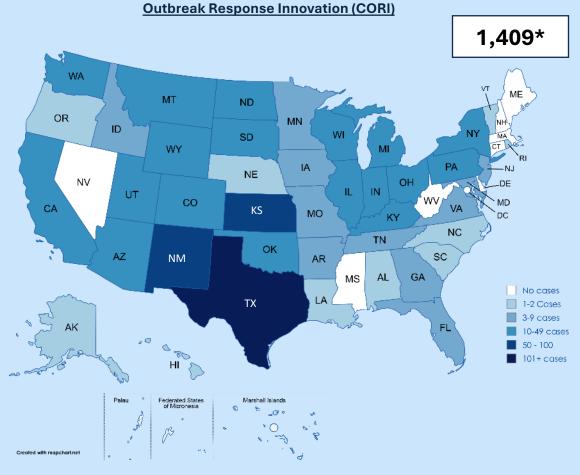
Two MMR doses: 4%

Deaths: 3

There have been 3 confirmed deaths from measles.

MEASLES CASES - 2025

* NOTE: The information on this page has been gathered by reviewing data from state and local health departments, news media sources, and the Center for



The increase in measles cases can be attributed to falling vaccination rates and increased importation of travel-related cases, which occur when unvaccinated people acquire measles abroad and bring it back to the U.S.

STATE	CASES
TEXAS **	801
NEW MEXICO	100
<u>KANSAS</u>	90
NORTH DAKOTA	36
<u>OHIO</u>	35
<u>MONTANA</u>	31
MICHIGAN	27
WISCONSIN+	23
COLORADO+	22
<u>OKLAHOMA</u>	20
<u>CALIFORNIA</u>	20
NEW YORK+	17
ARIZONA+	16
<u>PENNSYLVANIA</u>	15
<u>KENTUCKY</u>	14
<u>UTAH+</u>	14
SOUTH DAKOTA	12
WASHINGTON+	11
<u>ILLINOIS</u>	10
<u>INDIANA</u>	9
WYOMING	9
<u>ARKANSAS</u>	8
<u>IOWA</u>	8
MISSOURI	7
NEW JERSEY+	7
<u>FLORIDA</u>	6
<u>GEORGIA</u>	6
<u>TENNESSEE</u>	6
MINNESOTA	5
<u>IDAHO</u>	3
MARYLAND	3
<u>VIRGINIA</u>	3
ALASKA	2
HAWAII	2
LOUISIANA	2
SOUTH CAROLINA+	2
ALABAMA+	1
NEBRASKA	1
NORTH CAROLINA	1
OREGON	1
RHODE ISLAND	1
VERMONT	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
TOTAL	1409

OUTBREAKS

SMALL OUTBREAK (3-9)

MEDIUM OUTBREAK (10 - 49)



An outbreak of measles is defined as three or more laboratory-confirmed cases that are temporally related and epidemiologically or virologically linked.

As of 1800 hours on 29 August 2025, EDT, there are approximately 1,409 measles cases (including confirmed and suspected cases) across 42 states. There have been 36 Outbreaks in the US this year this includes the following:

- Arizona Navajo County, Mohave County
- Arkansas Faulkner County
- **Colorado** 10 cases linked to an infectious traveler
- Georgia Metro Atlanta
- Illinois Southern Illinois (Franklin— Williamson region)
- Indiana Allen County
- **Iowa** Johnson County
- Kansas 9 counties
- Kentucky Woodford, Fayette, and Jefferson Counties
- Montana, Gallatin, Hill, and Yellowstone Counties.
- Michigan Montcalm County (linked to Ontario Outbreak) and a 2nd outbreak in Grand Traverse County

- Missouri Cedar County
- Oklahoma and the <u>Cherokee</u> <u>Nation</u>
- Ohio Ashtabula and Knox Counties
- Pennsylvania Erie County
- New Jersey Bergen County
- New Mexico 6 counties
- North Dakota Williams County, Grand Rapids
- Texas 37 counties
- **Tennessee** Upper Cumberland Region
- Utah Utah County
- Wisconsin Oconto County
- Wyoming Carbon County

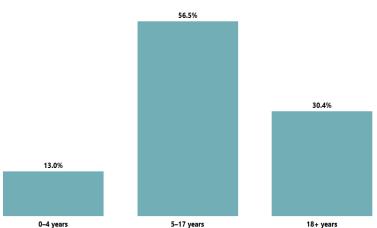
** TEXAS CASES NOT ASSOCIATED WITH OUTBREAK: 39

- 1 case Bell County
- 1 case Bexar
- 1 case Brazoria County
- 3 cases— Collin County
- 1 case Dallas County
- 2 cases Denton County
- 2 cases Defitori County
- 2 cases El Paso County
- 1 Case Adult, Fort Bend (travel-related)
- 5 cases Harris County
- 1 case Harrison County
- 1 case Hays County
- 1 case Trays co
- case ivilaidia
- 2 cases Randall County
- 1 case Adults, Rockwall County (travel-related)
- 1 Case Scurry County
- 1 case Shackelford
- 4 cases Tarrant
- 2 cases Travis County
- 8 cases Williamson

TEXAS CASES ASSOCIATED WITH THE OUTBREAK: 762

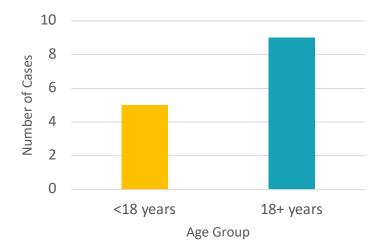
UNITED STATES – OUTBREAKS AND NEW CASES

WISCONSIN: As of August 29, 2025, the Wisconsin Department of Health Services (DHS) and Oconto County Public Health have confirmed 23 measles cases in Oconto County. Two hospitalizations have been reported. The ongoing investigation indicates that measles is spreading locally. DHS is coordinating with Oconto County and neighboring local health departments to identify and directly notify individuals with known exposures. Health officials previously reported that the original cases were linked to travel to another state. Among youth ages 5-18 in Oconto County, about 87% have received both doses of the MMR vaccine, according to DHS data. While higher than most other counties in the state, this remains below the 95% vaccination threshold recommended by public health experts to prevent measles outbreaks.



UTAH: Two school-aged children in Washington County are the latest in Utah to have tested positive for measles. Parents of all students at Water Canyon Elementary School and Water Canyon High School, where the children attend, have been notified of the exposure. Neither child was vaccinated, according to the Utah Department of Health and Human Services' Measles Dashboard. This brings Utah's total to **14 cases** as of 8/28/2025. Thirteen of the cases are unvaccinated, and the status of one is unknown. Nine of the cases involve adults, and five involve children.

Measles cases by age group, 2025



ARIZONA: Arizona is currently experiencing an outbreak of measles along the Arizona-Utah border. Colorado City is a town of about 2,500 people on the Utah border in northwest Arizona. Many residents of the town are members of the Fundamentalist Church of Jesus Christ of Latter-day Saints (FLDS), and the community has very low measles vaccination rates. Records from the Arizona Department of Health Services show that no schools in Mohave County have achieved a 95% MMR vaccination rate. In Colorado City, one elementary school reported a kindergarten MMR vaccination rate of just 7% last year, while the other school in the town reported a 40% kindergarten MMR vaccination rate. The outbreak is expected to continue growing in Mohave County in the coming weeks. But since Colorado City is somewhat geographically isolated, he said the virus may not spread easily to other parts of Arizona. As of 8/27/2025, there were a total of **16 measles cases** in Arizona.

ALABAMA: A child under 5 years of age living in north Alabama has a confirmed case of measles, the Alabama Department of Public Health announced Aug. 25. The unvaccinated child contracted measles while traveling out of the United States, the agency said. The child did not attend daycare or school, and entities involved in the management and treatment of the patient have been notified. The siblings of the child have been vaccinated and have not had any symptoms of measles, according to the ADPH. It's the state's first confirmed case of measles since 2002, state officials said.

CANADA

BACKGROUND: The 2025 measles outbreak in Canada is the product of a perfect storm: a sparking importation event, weakening population immunity, rising hesitancy and misinformation, structural vulnerabilities in public health and healthcare access, and social dynamics that allowed the virus to spread through susceptible networks.

IMPORTATION AND INITIAL SPARK: The current outbreak began in **October 2024** when an imported case attending a large gathering in New Brunswick — which included attendees from multiple provinces — introduced the measles virus into Canada.

MULTI-JURISDICTION SPREAD: From late 2024 into 2025, the outbreak continued to spread across several provinces— Ontario, Alberta, Manitoba, British Columbia, Saskatchewan, Nova Scotia, New Brunswick, Prince Edward Island, the Northwest Territories, and Quebec.

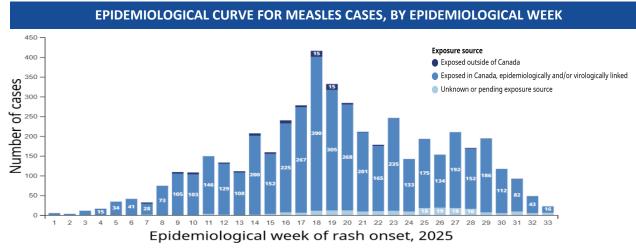
CONTRIBUTING FACTORS

- Low Vaccination Coverage
 - o **Erosion of herd immunity:** National first-dose measles vaccination coverage fell from 90% in 2019 to around 83% by 2023—well below the 95% threshold.
 - Concentration in under-vaccinated communities: The majority of cases are among unvaccinated individuals, with many arising within close-knit communities and groups with limited engagement with public health.
- Vaccine Hesitancy & Misinformation
 - Lingering hesitancy and misinformation: Distrust in public health, fueled partly by the COVID-19 pandemic and growing anti-vaccine movements, has played a role in lower vaccination rates.
 - Attitudinal challenges: Studies show that declining familiarity with vaccinepreventable diseases can reduce perceived threat, leading to complacency or skepticism toward vaccination.

Public Health System and Access Gaps

- **Disrupted immunization services**: COVID-19 strained public health infrastructure, leading to missed routine vaccinations.
- Gaps in healthcare access and systems:
 - About **20% of Canadians lack a consistent family doctor**, reducing opportunities for routine vaccine discussions.
 - There's no comprehensive national vaccine registry, making it hard to track immunization status.
- **Looser exemption policies**: In some regions like Alberta, religious and personal exemptions for school-entry vaccination are common and hard to challenge

Community Dynamics: The outbreak spread swiftly among tightly interlinked religious groups—such as Mennonite communities—that span Canada, the U.S., and Mexico.



SOURCES:

Measles and rubella weekly monitoring report – Week 33

Updated Public Health Risk Assessment: Measles In Canada - 26 July 2025

WHO - Measles - Region of the Americas

Measles jumps borders in North America with outbreaks in Canada, Mexico, and the US

PAHO - Measles cases rise in the Americas in 2025

PAHO - Epidemiological Update - Measles in the Americas Region - 1 July 2025

PAHO - Ten countries in the Americas report measles outbreaks in 2025- 15 August 2025

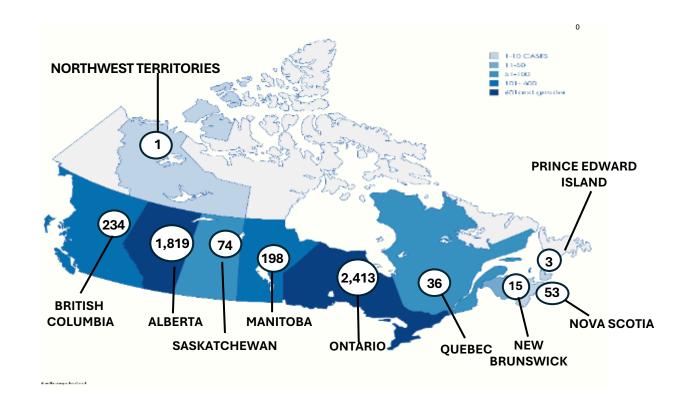
CANADA – CURRENT SITUATION

Brief Timeline of Outbreak

Measles cases in Ontario are linked to exposure to a travel-related case in New Brunswick. New Brunswick declares its measles outbreak over. A multijurisdictional measles outbreak is ongoing in Canada, with 4,568 cases, including 4,240 confirmed and 328 probable cases linked to this outbreak

MEASLES 2025						
PROVINCE	CONFIRMED CASES	PROBABLE CASES	TOTALS			
ONTARIO	2,096 (+3)*	317 (+5)	2413			
ALBERTA	1,819 (+20)	0	1,819			
MANITOBA	187 (+10)	11	198			
BRITISH COLUMBIA	215 (+18)	19 (+2)	234			
SASKATCHEWAN	74	0	74			
QUEBEC	36	0	36			
PRINCE EDWARD ISLAND	3	0	3			
NOVA SCOTIA	53	0	53			
NORTHWEST TERRITORIES	1	0	1			
NEW BRUNSWICK	15	0	15			
TOTAL	4,499 (+51)	347 (+7)	4846 (+58)			

As of 8/30/2025



4,846 Cases (4,499 Confirmed, 347 Probable)
1 Death

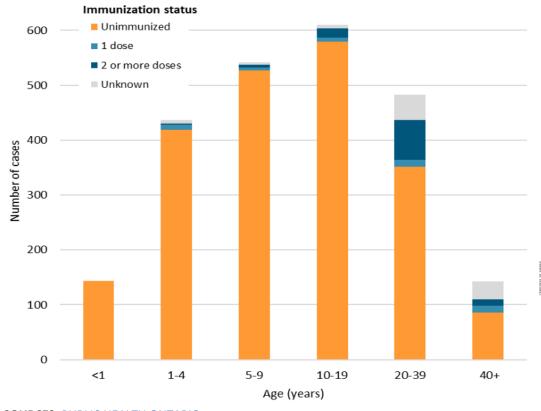
^{*} Count includes 43 cases not associated with the outbreak and the outbreak numbers that began on 21 October 2024

OUTBREAK – ONTARIO

(OCTOBER 18, 2024, TO AUGUST 26, 2025)

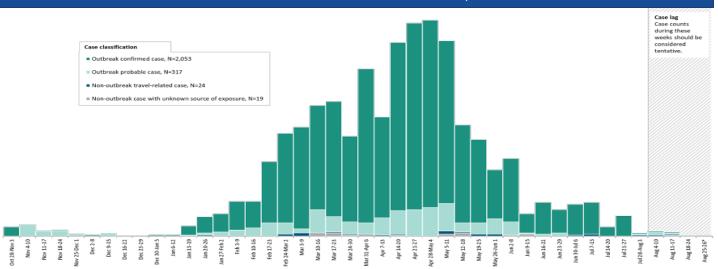
MORBIDITY AND MORTALITY				
PROVINCE	CASES	HOSPITALIZATIONS	DEATHS	
ONTARIO*	2,370 (2,053 confirmed, 317 probable)	165 (12 ICU)	1	

IMMUNIZATION STATUS OF MEASLES OUTBREAK CASES BY AGE GROUP: OCTOBER 28, 2024 – AUGUST 26, 2025



- As of August 26, Ontario has reported a total of 2,370 measles cases (2,053 confirmed, 317 probable) associated
 with the multi-jurisdictional outbreak occurring in 26 public health units. This represents an increase of seven new
 cases.
- Among all outbreak cases, the majority (73.1%, n=1,732) were infants, children, and adolescents (19 years old or younger), while 26.4% (n=625) were adults, and 0.5% (n=13) had unknown age.
- Almost all infant, child, and adolescent outbreak cases (96.4%, n=1,669) were unimmunized, while 69.9% (n=437) of adults were unimmunized.
- A total of 2.2% (n=51) of outbreak cases were pregnant at the time of their measles infection.
 - Of these, 82.4% (n=42) were unimmunized, 2.0% (n=1) received one dose of measles-containing vaccine, 9.8% (n=5) received two or more doses, and 5.9% (n=3) had unknown immunization status.
 - O There have been nine cases of congenital measles (i.e., measles diagnosed in the first 10 days of life).
- Overall, 7.0% (n=165) of outbreak cases were hospitalized, and 0.5% (n=12) were admitted to the intensive care unit (ICU).
 - Overall, 7.0% (n=165) of outbreak cases were hospitalized, and 0.5% (n=12) were admitted to the intensive care unit (ICU).
 - The median length of stay among discharged hospitalized cases was 3 days (range: 1–54 days), and the median length of stay among ICU admissions was 3.5 days (range: 1–54 days).
- One death occurred in a congenital case of measles, who was born pre-term and had other underlying medical conditions.

NUMBER OF MEASLES CASES BY WEEK OF RASH ONSET, 10/28/2024 - 08/26/2025



SOURCES: PUBLIC HEALTH ONTARIO

OUTBREAK – ALBERTA

MORBIDITY AND MORTALITY					
PROVINCE CASES HOSPITALIZATIONS DEATHS					
Alberta	1,819	152 (15 ICU) (4 Currently Hospitalized)	0		

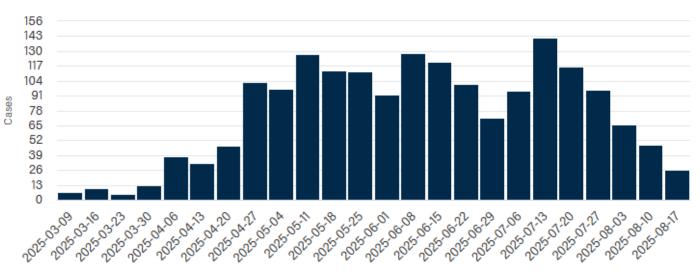
IMMUNIZATION STATUS	COUNT
Unimmunized	1,612
1 dose	52
2 or more doses	77
Unknown	78

AGE RANGE	NUMBERS
<5 years	515 (+2)
5 to 17 years	798 (+13)
18 to 54 years	497 (+3)
55 years and older	9

Multi-Jurisdictional Outbreak

- Measles transmission is currently occurring in Alberta, affecting individuals of all ages including infants, children, and adults. Most reported cases have been in children under 5 years old and those aged 5 to 17 who are not immunized.
- Cases have been reported in all zones of the province, with the highest numbers in the north, south, and central zones. Due to the number of people in these areas who may not be immune to measles, some cases are likely going undetected or unreported.
- Alberta Health Services shares known public <u>exposure locations</u> for the Edmonton, Calgary, Central, and parts of the North Zone. A standing exposure advisory has been issued for the <u>South Zone</u> and areas of the <u>North Zone</u>. Sitespecific exposure advisories will no longer be issued in these locations.

NUMBER OF MEASLES CASES BY WEEK OF RASH ONSET, 1/1/2025 – 08/17/2025



CANADA OUTLOOK

Canada is experiencing its largest measles outbreak since the disease was eliminated in 1998, with the risk of losing its elimination status if transmission continues beyond October 2025. The outbreak reflects gaps in population immunity, driven by under-vaccination in specific communities, pandemic-related disruptions, and mistrust fueled by misinformation.

KEY RISKS INCLUDE:

- Endemic transmission within under-vaccinated groups
- Future outbreaks sparked by continued importations and global vaccine declines
- Severe outcomes for vulnerable groups, including illness, complications, and death

PUBLIC HEALTH RESPONSE REQUIRES A TWO-PRONGED APPROACH:

- Promote vaccination for those willing to receive it
- For those who remain unvaccinated, encourage alternative protective measures such as staying home when sick and seeking prompt care.

Looking ahead, **international collaboration** and strong, evidence-based communication will be crucial. Building **trust with communities**, particularly through local leaders, is crucial to counter misinformation and enhance resilience against measles and other vaccine-preventable diseases.

Likelihood and impact estimates of prolonged transmission of measles in Canada (mid-April to mid-October 2025)

QUESTIONS	ESTIMATE [UNCERTAINTY]
What is the likelihood of prolonged transmission in the next 6 months as a result of the large outbreak in communities with low immunity to measles?	Moderate-high [moderate]
What is the likelihood of prolonged transmission in the next 6 months as a result of small outbreaks in the general population?	Very low [low]
Overall likelihood of prolonged transmission in the next 6 months	Moderate-high [moderate]
What is the most likely spread scenario?	Continued transmission within currently affected communities. Introductions into new communities with low immunity to measles, resulting in prolonged transmission across multiple provinces and territories. Periodic introductions from outbreak-affected communities into the general population resulting in limited transmission.
What is the individual-level impact	Vaccinated individuals: Minor [low] Unvaccinated individuals (>5 years): Moderate [low] Unvaccinated children (1 to 5 years): Moderate [low] Vulnerable individuals: Moderate-major [low]
What is the population-level impact for Canada?	Moderate [moderate]
What is the overall risk?	Moderate

SOURCES: UPDATED PUBLIC HEALTH RISK ASSESSMENT: MEASLES IN CANADA - 26 JULY 2025

MEXICO

BACKGROUND

- The origin of the outbreak is traced to a large Mennonite community near Cuauhtémoc, where vaccination rates are estimated at only 50–70%. It was introduced into the community when an unvaccinated 8-year-old who became infected during a visit to relatives in Texas returned to Mexico, where the virus rapidly spread through schools, churches, and neighboring communities.
- The outbreak has since expanded into Indigenous and working-class populations, including individuals with underlying health conditions that increase the risk of severe illness and death. 20 states and 82 municipalities have confirmed measles cases.

CURRENT SITUATION

- There are 4,322 confirmed cases with the majority in Chihuahua.
- To date, Mexico has reported 17 measles-related deaths—16 in Chihuahua and 1 in Sonora—all among unvaccinated individuals. Indigenous communities have been hardest hit, with a case-fatality rate 20 times higher than in the general population.
- Approximately 70% of deaths have been among the Rarámuri, an indigenous people. The
 combination of low vaccine coverage, geographic barriers, and pre-existing health
 vulnerabilities (like malnutrition) has amplified the impact.
- Chihuahua remains the epicenter, accounting for 93.56% of all confirmed measles cases in Mexico and 94.12% of all deaths.
- In terms of incidence rate, the 0–4 years age group reported the highest incidence (9.88 cases per 100,000 inhabitants under 4 years), followed by the 25–29 years and 30–34 years groups with incidence rates of 5.39 and 4.46, respectively.

GENOTYPES IDENTIFIED:

- D8 (Ontario.CAN/47.24) dominant strain, linked to outbreaks in Texas and Canada.
- B3 (NSW.AUS/10.24) limited to Oaxaca, contained importation.

KEY DRIVERS OF THE OUTBREAK:

- **Systemic Weaknesses:** Post-2018 budget cuts (69% reduction in vaccination funds) and procurement delays.
- Coverage Gaps: Vaccine uptake as low as 30–50% in Mennonite and some Indigenous communities.
- Misinformation & Distrust: Resistance to vaccination in rural and religious groups.
- Access Inequalities: Farmworkers and Indigenous groups face barriers to healthcare.

PUBLIC HEALTH RESPONSE

- "Juarez Shield Strategy" Mass vaccination campaign; 42,000 vaccinated in Chihuahua.
- Rapid Response Plan Enhanced surveillance, lab confirmation, case isolation.
- **Door-to-Door Vaccination** Community engagement with local and religious leaders.
- Vitamin A Supplementation For children under 5 with suspected or confirmed measles.

SOURCES:

Daily Report - Mexico

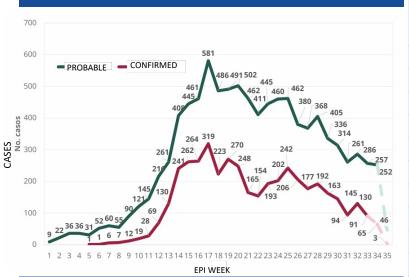
<u>Epidemiological Situation of Vaccine-Preventable Diseases in Mexico – Report 33</u> <u>MediChihuahua – 30 August</u>

Think Global Health - Measles Takes Root In Mexico

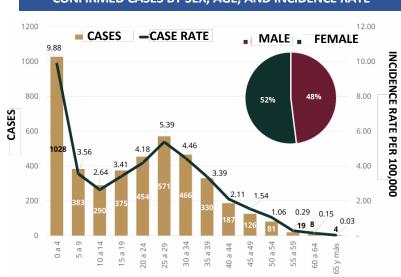
A Population-based Measles Serosurvey In Mexico: Implications For Re-emergence

MEXICO

PROBABLE AND CONFIRMED MEASLES CASES BY EPIDEMIOLOGICAL WEEK AND DATE OF RASH ONSET

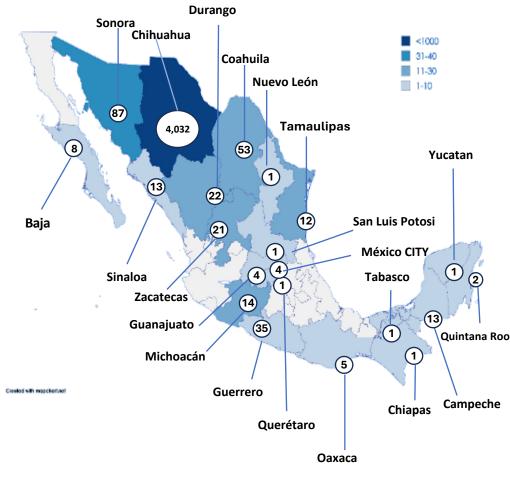


CONFIRMED CASES BY SEX, AGE, AND INCIDENCE RATE



CONFIRMED MEASLES CASES				
STATE	CASES			
SIAIE	CONFIRMED	PROBABLE		
BAJA	8	57		
САМРЕСНЕ	13	68		
CHIAPAS	1	30		
СНІНИАНИА	4,032 (+100)	5,553		
MÉXICO CITY	4 (+1)	383		
COAHUILA	53	239		
DURANGO	22	200		
GUANAJUATO	4	441		
GUERRERO	35 (+4)	101		
MICHOACÁN	14	146		
NUEVO LEÓN	1	222		
OAXACA	5	63		
QUERÉTARO	1	99		
QUINTANA ROO	2	58		
SAN LUIS POTOSI	1	115		
SINALOA	13	96		
SONORA	87	244		
TABASCO	1	61		
TAMAULIPAS	12	108		
YUCATAN	1	45		
ZACATECAS	21	133		
TOTAL	4331 (+106) 8,462			

Data as of 8/30/2025



4,331 CONFIRMED CASES 17 DEATHS

Source: DAILY REPORT

MEXICO – GENTOTYPES

MOLECULAR SURVEILLANCE: The InDRE (National Institute of Epidemiological Diagnosis and Reference) confirmed sequencing results emphasize the importance of tracking viral lineages to distinguish between imported and endemic-like chains.

GENOTYPE D8 (Lineage: MVs/Ontario.CAN/47.24)

- The dominant strain in Mexico during 2025, particularly in Chihuahua and most northern states.
- 91.7% of affected states are reporting Genotype D8, linked to Chihuahua and cross-border spread into Texas/Canada.
- First identified in Ontario, Canada (week 47, 2024), this lineage has since spread widely.
- Genetic sequencing confirmed the same Seq ID (9171) in both Mexico and Texas
 (2025 cases). This provides strong evidence of cross-border transmission, reflecting
 travel and population mobility between Chihuahua and Texas.
- All 17 measles-related deaths in Mexico (16 in Chihuahua, 1 in Sonora) were associated with D8 circulation.
- **Globally**, D8 is a long-persistent genotype, circulating for **over a decade** in multiple regions.

EPIDEMIOLOGICAL SIGNIFICANCE:

- Indicates Mexico's outbreak is part of a larger North American transmission chain.
- Highlights a continued high risk of regional spread across the U.S.–Mexico border.

GENOTYPE B3 (Lineage: MVs/New South Wales.AUS/10.24)

- Reported in **8.3% of affected states** limited to **Oaxaca**.
- Circulation appears **sporadic and likely imported**, with **no evidence of sustained community transmission**.
- No deaths in Mexico have been associated with this genotype.
- Origin traced to Australia (week 10, 2024).
- Globally, B3 has been linked to outbreaks in Africa, Europe, and parts of Asia, but remains uncommon in the Americas.

KEY TAKEAWAYS

Dominance of D8:

- 91–92% of Mexican states with cases are reporting D8 (Seq ID 9171), showing it is the established outbreak strain.
- Public Health Implication:
 - D8's presence across many states suggests sustained local transmission, not just importation.
 - Because it is the same Seq ID as cases in **Texas**, the U.S. and Mexico outbreaks are **epidemiologically linked**.

B3's Role:

- Represents only ~8% of Mexico's states (Oaxaca only).
- No evidence of onward spread—indicating successful containment of this importation.

IN SUMMARY:

- **D8 (Ontario.CAN/47.24)** is the **driver of Mexico's outbreak**, with clear cross-border connections to Canada and the U.S.
- B3 (Australia/NSW/10.24) appears as a small, contained importation in Oaxaca, not contributing significantly to outbreak spread.

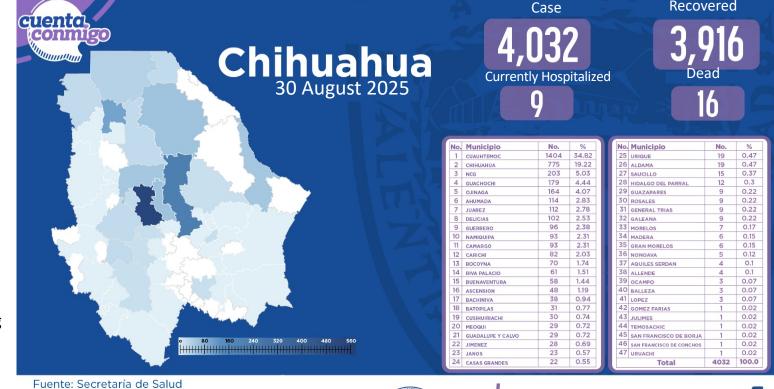
MEXICO – DEATHS FROM MEASLES 2025

1	Adult male, Mennonite community	31years old	Ascensión, Chihuahua	No	4/3/2025	Diabetes	<u>DW</u>
2	Boy, Mennonite community	7 years old	Ojinaga, Chihuahua	No	5/2/2025	Underlying health problem (leukemia)	Chihuahua Secretaría de Salud; TV Azteca
3	Boy, Mennonite community	11 months old	Namiquipa, Chihuahua	No	5/6/2025	mother unvaccinated, no passive immunity, underlying renal condition)	Chihuahua Secretaría de Salud; TV Azteca
4	Girl, agricultural laborers	1 year old	(Originally from Chihuahua) Died in Sonaro	No	5/8/2025	Severe malnutrition	<u>Informador.mx</u> La Secretaría de Salud de Sonora
5	Girl, Rarámuri community	2 years, 11 months	Ojinaga, Chihuahua	No	5/17/2025	Dehydration, diarrhea, pneumonia	Chihuahua Secretaría de Salud
6	Adult male, Rarámuri	45 years old	Carichí, Chihuahua	No	5/29/2025		N+ Noticias
7	Girl, Rarámuri community	4 years old	Guachochi, Chihuahua	No	6/5/2025	Moderate malnutrition, pneumonia	N+ Noticias
8	Boy, Mixtec community	5 years old	(Originally from Sinaloa) Died in Chihuahua.	No	6/15/2025	Severe malnutrition, anemia, respiratory issues, pneumonia	N+ Noticias
9	Woman, Rarámuri	27 years old	Meoqui, Chihuahua	No	6/16/2025	Pneumonia, no comorbidities	N+ Noticias
10	Boy, agricultural laborer family	2 years 11 months	Campo Nueva Holanda, Ojinaga, Chihuahua	No	6/27/2025	Dehydration and diarrhea	Chihuahua Secretaría de Salud
11	Woman, Rarámur community	48 years old	San José Baqueachi, Carichí, Chihuahua	No	7/7/2025	Complications from pneumonia, no comorbidities	Chihuahua Secretaría de Salud
12	Man, Rarámur community	46 years old	Cuauhtémoc, Chihuahua	No	7/21/2025	Respiratory failure and pneumonia	Chihuahua Secretaría de Salud
13	Girl, Rarámur community	6 years old	Carichí, Chihuahua	No	7/21/2025	Respiratory failure and pneumonia	N+ Noticias Secretaría de Salud del Estado de Chihuahua
14	Man, Rarámur community	54 years old	Bocoyna, Chihuahua	No	7/30/2025	Respiratory failure and pneumonia	N+ Noticias Secretaría de Salud del Estado de Chihuahua
15	Girl, Rarámuri community	15 years old	From Guadalupe y Calvo, died in Camargo	No	8/13/2025	Pneumonia, no comorbidities	El Diario de Chihuahua Secretaría de Salud del Estado de Chihuahua
16	Woman, Rarámuri, farm labored	19 years old	From Guadalupe y Calvo, working in Camargo, died in Chihuahua City	No	8/25/2025	No info at this time	Secretaría de Salud del Estado de Chihuahua
17	Rarámuri child	1 year old	From Guadalupe y Calvo, working in Camargo, died in Chihuahua City	No	8/27/2025	Pneumonia	Secretaría de Salud del Estado de Chihuahua

OUTBREAK – CHIHUAHUA, MEXICO

As of August 30, Chihuahua has recorded approximately 4,032 confirmed cases and 5,553 probable cases of measles. It remains the epicenter of Mexico's outbreak, accounting for about 93% of national cases and 16 of the country's 17 reported fatalities from the disease.

- **Current Trend:** While the outbreak is no longer growing at an exponential rate, sustained transmission persists, creating an ongoing risk. Densely populated areas and communities with low vaccination coverage remain vulnerable to new clusters.
- Herd Immunity Challenge: Reaching and maintaining 95% vaccination coverage is essential to halt measles transmission. Until coverage is uniformly achieved, including among vaccine-hesitant and hard-to-reach groups, measles will continue to be a threat.
- Border & Regional Spillover: Chihuahua's geographic proximity and cultural ties to U.S. border states heighten the risk of cross-border spread, especially given recent travel-related introductions (e.g., the initial case linked to Texas). Without containment, additional regional seeding is possible.



Recovered

MediChihuahua 🗫

The situation in Chihuahua is **stabilizing but remains unresolved**. Effective control will depend on:

DEL ESTADO

- Rapidly scaling vaccination coverage,
- Strengthening surveillance and rapid response capacity, and
- Sustaining public trust in immunization efforts.

The implementation of Mexico's response plans is encouraging, but long-term vigilance and outreach are critical to preventing the outbreak from undermining measles elimination in the region.

MEXICO – OUTLOOK

The epidemic continues to expand with **no clear signs of decline**, and systemic weaknesses in health financing and infrastructure leave communities highly vulnerable.

DEEP IMMUNITY GAPS ACROSS AGE GROUPS

Serosurveys reveal **low protection levels**, especially among adults aged 20–49, who show the lowest rates of immunity. In 2023, only about **76% of children** had received the measles vaccine—a sharp decline from previous years and well below the **95% threshold** required for herd immunity.

PUBLIC HEALTH CAMPAIGNS AND FUNDING

Ambitious campaigns—including the *Juarez Shield Strategy* in Chihuahua and the Ministry of Health's Rapid Response Plan—emphasize surveillance, laboratory confirmation, and case isolation. Door-to-door vaccination drives are underway with the support of local and religious leaders to counter misinformation. However, progress has been uneven due to mistrust, limited resources, and chronic underfunding.

VULNERABLE POPULATIONS AND REGIONAL SPILLOVER

Indigenous groups, migrant farmworkers, and vaccine-hesitant communities remain at the highest risk. With continued transmission and low coverage, the threat of regional spillover into neighboring countries grows, complicating control across the Americas.

OUTLOOK

Mexico is at a critical tipping point. Bold strategies must be paired with reliable funding and logistics, targeted outreach to hesitant communities, broader immunity-building in underserved areas, and strong cross-border coordination. Without decisive action, measles risks re-establishing itself as endemic in Mexico and across North America.

FACTOR	OUTLOOK	
Epidemic Trajectory	The rapid spread continues; there are no signs of tapering off yet. Will likely persist through winter 2026.	
Systemic Resilience	Undermined by funding cuts, low vaccine uptake, and healthcare access issues.	
Public Health Campaigns	Ambitious in design; limited by community resistance and uneven execution. Unless vaccination accelerates dramatically, measles will persist through winter 2026.	
Vulnerable Populations	Indigenous communities, rural workers, and vaccine-hesitant groups remain highly vulnerable.	
Cross-Border Risk	High. Mexico's outbreak is deeply tied to trends in North and Central America, making regional coordination vital.	
Long-Term Risk	Without sustained investment, surveillance, and trust- building, measles risks re-emerging as endemic.	

SOURCES:

<u>Daily Report – Mexico</u>

<u>Epidemiological Situation of Vaccine-Preventable Diseases in Mexico – Report 33</u> MediChihuahua – 30 August

Think Global Health - Measles Takes Root In Mexico

A Population-based Measles Serosurvey In Mexico: Implications For Re-emergence

BOLIVIA

BOLIVIA – MEASLES OUTBREAK UPDATE (AS OF AUGUST 25, 2025)

- Cumulative Cases: 269 measles cases reported nationwide.
- Most Affected: Santa Cruz accounts for 229 cases (85% of the national total).
- Emergency Declaration: National Health Emergency declared on 23 June 2025.

EPIDEMIOLOGICAL BACKGROUND:

- First case of 2025: Infant in Santa Cruz (April).
- Second case linked to large evangelical church gatherings in Santa Cruz, each with >30,000 attendees from Bolivia and abroad.

GEOGRAPHIC SPREAD: Cases reported in **8 of 9 departments** and **45 municipalities**.

COMMUNITIES AT RISK: ~50% of cases concentrated in Mennonite communities.

TARGETED INTERVENTION – SANTA CRUZ MENNONITE COLONIES: Vaccination, surveillance, and control campaign led by the Ministry of Health and SEDES Santa Cruz.

ACTIVITIES IMPLEMENTED

- · Contact tracing, household censuses, and active case finding.
- · Vaccination blockades in affected areas
- Preventive campaigns in unaffected communities.
- Engagement with Mennonite leaders to secure cooperation and build trust.

COORDINATION: Municipal governments, the education sector, and community authorities mobilized to ensure access to vaccination and health teams.

CONFIRMED MEASLES		
STATE	CASES	
SANTA CRUZ	229	
LA PAZ	14	
COCHABAMBA	7	
POTOSÍ	6	
BENI	4	
ORURO	4	
CHUQUISACA	4	
PANDO	1	
TOTAL	269	

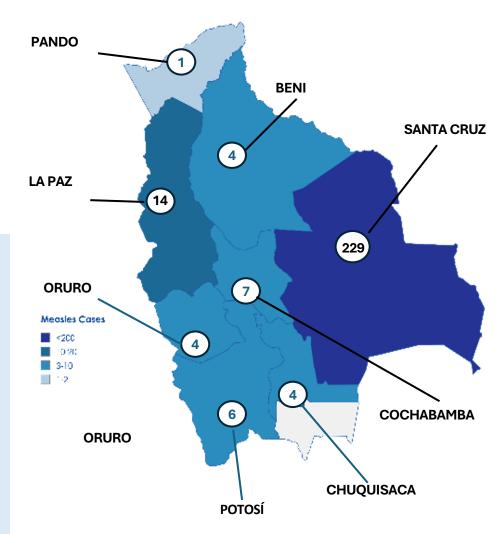
VACCINES:

Since June, the Government of Bolivia has received international donations of 1,050,000 doses of vaccines:

- 50,000 MR Chile
- 100,000 MMR from Venezuela
- 600,000 from Brazil (300,000 MMR + 300,000 MR)
- 300,000 from India (MR)

1,274,385 vaccinations have been administered so far (659,000 MMR, 615,000 MR) to children aged 1–14

The vaccination campaign will soon expand coverage up to age 19.



268 CASES 0 DEATHS

SOURCES: BOLIVIA MINISTRY OF HEALTH

PARAGUAY

BACKGROUND: Paraguay declared a **public health emergency** in August 2025 following the confirmation of its **first measles outbreak with local transmission** since 1998. On August 4, 2025, health authorities confirmed a case of measles in a five-year-old child in San Pedro, who had no vaccination history and apparently had contact with people from abroad.

TOTAL CONFIRMED CASES: 24 (+18)

- 1 imported case
- 21 associated with importation
- 2 under epidemiological investigation

VACCINATION STATUS:

- 88% of confirmed cases had **no prior measles** vaccination.
- Vaccination coverage against measles in the department of San Pedro increased by 6%, rising from 72.2% to 78.1%.
- Vaccination campaigns will continue in the coming days.
 The goal is to achieve optimal vaccination coverage above 95%.

CURRENT INVESTIGATIONS: 11 suspected cases from outbreak zones and nearby districts

HOSPITALIZATIONS: 4

DEATHS: None

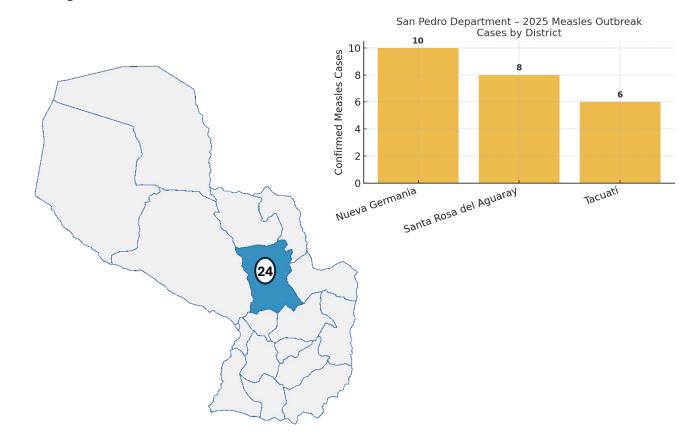
GEOGRAPHIC DISTRIBUTION IN SAN PEDRO'S DISTRICTS:

- Nueva Germania 10 cases
- Santa Rosa del Aguaray 8 cases
- Tacuati 6 cases

AGE RANGE: 1–54 years, includes both children and adults

ACTIVITIES IMPLEMENTED

The National Rapid Response Team is supporting local teams, working together in affected areas of San Pedro and surrounding districts, where various actions and control measures are being carried out: active searches for suspected measles cases, contact tracing, home visits, and vaccinations.



CONTRIBUTORS

The Virtual Medical Operations Center Briefs (VMOC) were created as a service-learning project by the Yale School of Public Health faculty and graduate students in response to the 2010 Haiti Earthquake. Each year, students enrolled in Environmental Health Science Course 581—Public Health Emergencies: Disaster Planning and Response produce the VMOC Briefs. These briefs compile diverse information sources—including status reports, maps, curated news articles, and web content— into a single, easily digestible document that can be widely shared and used interactively.

Key features of this report include:

- Comprehensive Overview: Provides situation updates, maps, relevant news, and web resources.
- Accessibility: Designed for easy reading, wide distribution, and interactive use.
- Collaboration: The "unlocked" format enables seamless sharing, copying, and adaptation by other responders.

The students learn by doing, quickly discovering how and where to find critical information and presenting it in an easily understood manner.

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