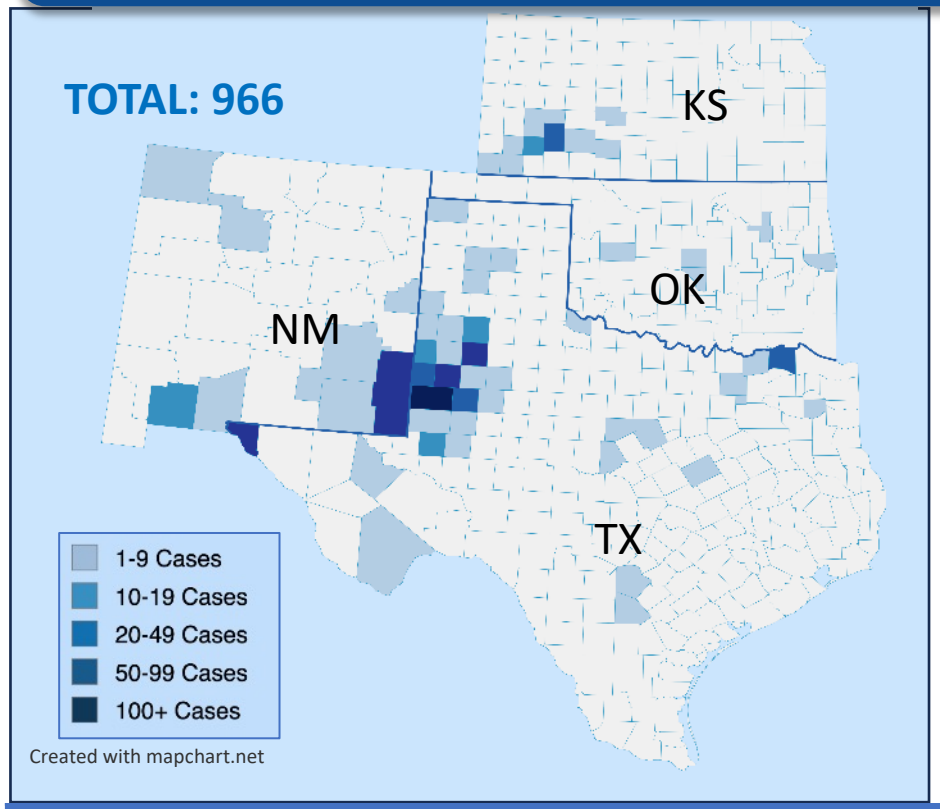
YALE SCHOOL OF PUBLIC HEALTH - ESF-8 VIRTUAL MEDICAL OPERATION CENTER SPECIAL REPORT

MEASLES OUTBREAK - SOUTHWEST U.S. - 2025



MORBIDITY AND MORTALITY

STATE	CASES	HOSPITALIZATIONS	DEATHS
TX	764	99	2
NM	95	7	1
OK	20	0	0
KS	87	8	0
TOTAL	966	114	3

Yale SCHOOL OF PUBLIC HEALTH

8/3/2025
2300 HRS EDT

RISK ASSESSMENT IN OUTBREAK AREAS

Risk for Localized Spread	Risk to unvaccinated populations in and around the outbreak areas	Risk to Children	Potential for sustained transmission
HIGH	HIGH	HGH	HIGH

LINKS

TEXAS LINKS
- TEXAS DEPARTMENT OF STATE HEALTH SERVICES

FACEBOOK | X
- HEALTH ALERTS
- THE SOUTH PLAINS PUBLIC HEALTH DISTRICT

NEW MEXICO LINKS
- NEW MEXICO DEPARTMENT OF HEALTH

OKLAHOMA LINKS
OKLAHOMA STATE DEPARTMENT OF HEALTH

KANSAS
KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

RESOURCES FOR HEALTHCARE PROVIDERS
- CDC – MEASLES FOR THE HEALTHCARE PROFESSIONALS
- CDC VIDEO: MEASLES CLINICAL FEATURES AND DIAGNOSIS
- CDC CLINICAL IMAGES OF MEASLES
- CDC LABORATORY TESTING FOR MEASLES
- CDC ROUTINE VACCINATION RECOMMENDATIONS
- CDC ISOLATION RECOMMENDATIONS
- CDC: MEASLES CONTROL IN HEALTHCARE SETTINGS
- CDC ALERT SIGN INFOGRAPHIC
- CDC POSTER FOR OFFICE DISPLAY
- NY HEALTH; RECOGNIZING MEASLES FACT SHEET
- NY HEALTH: DEALING WITH VACCINE HESITANCY
- MEASLES POST-EXPOSURE PROPHYLAXIS
- MEASLES REVIEW FOR PROVIDERS

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
- CIDRAP
- 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 REGIONAL MEASLES OUTBREAK

OVERVIEW: A measles outbreak originating in West Texas has spread to New Mexico, Oklahoma, and Kansas, resulting in **114 hospitalizations and three confirmed deaths**—including two previously healthy children in Texas and one adult in New Mexico. These mark the first U.S. measles-related deaths since 2015 and the first pediatric fatalities since 2003. Genetic and epidemiological evidence links this outbreak to the current measles surge in Chihuahua, Mexico, underscoring clear cross-border transmission.

THE VIRUS: Measles is a highly contagious viral disease transmitted primarily through respiratory droplets from coughing or sneezing. **Symptoms include high fever, cough, runny nose, conjunctivitis, and a characteristic red, blotchy rash.** The virus can remain airborne or infectious on surfaces for up to two hours, contributing to its rapid spread.

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, national MMR vaccination rates among children have declined—a trend that coincided with the COVID-19 pandemic. This drop reflects a convergence of complex factors, including socioeconomic inequities, limited access to healthcare, under-resourced public health systems, and localized vaccine hesitancy (JAMA).

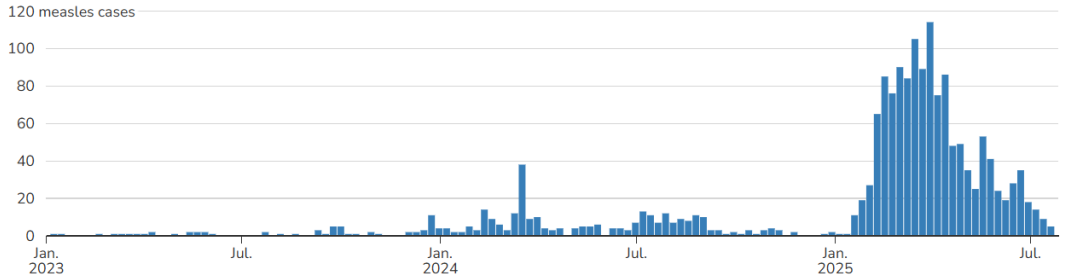
IN THE US: **As of 8/3/2025, the United States has reported 1,346 measles cases in 2025—the highest total in 33 years.** This resurgence poses a serious threat to the nation's measles elimination status, achieved 25 years ago through sustained high vaccination coverage. If outbreaks persist without interruption for more than 12 months, the U.S. risks losing its official designation as an eliminated country.

GLOBAL TRENDS: Over the past 20 years, vaccination rates have declined globally, leading to a worldwide increase in measles cases. The Americas have experienced a 29-fold increase in cases compared to this time last year (PAHO). According to the WHO's latest report, there were 188,355 suspected cases and 88,853 confirmed cases (WHO). This week, we examine the WHO's African Region, where measles remains endemic across much of the region, with routine immunization gaps and the lingering effects of the COVID-19 pandemic driving increased susceptibility and periodic outbreaks.

SOURCES: CENTER FOR OUTBREAK RESPONSE (CORI), CDC, TX MEASLES OUTBREAK, NM MEASLES OUTBREAK, OSDH, KDHE, TRENDS IN COUNTY-LEVEL MMR VACCINATION COVERAGE IN CHILDREN IN THE UNITED STATES, EPIDEMIOLOGICAL UPDATE - MEASLES IN THE AMERICAS REGION, MEASLES AND RUBELLA GLOBAL UPDATE JUNE 2025

MEASLES CASES IN 2025 - CDC

1,333 (+14) CONFIRMED MEASLES CASES (AS OF 7/29/2025)



As of July 29, 2025, a total of 1,333 confirmed* measles cases were reported by 40 jurisdictions: Alaska, Arkansas, Arizona, California, Colorado, Florida, Georgia, Hawaii, 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, and Wyoming.

Age
Under 5 years: 382 (29%)
5-19 years: 491 (37%)
20+ years: 453 (34%)
Age unknown: 7 (1%)

Vaccination Status
Unvaccinated or Unknown: 92%
One MMR dose: 4%
Two MMR doses: 4%

Percent Hospitalized: 13%
Under 5 years: 21% (81 of 382)
5-19 years: 8% (40 of 491)
20+ years: 11% (48 of 453)
Age unknown: 0% (0 of 7)

Deaths: 3

There have been 3 confirmed deaths from measles.

TIMELINE (JANUARY – JULY 2025)

JANUARY 2025
INDEX CASES IDENTIFIED

1/29
South Plains Public Health District, TX reports a measles case in Gaines County.

FEBRUARY 2025
OUTBREAK DECLARED & SPREADS

2/5/25
The Texas Department of State Health Services (DSHS) declares an outbreak. 6 cases are identified, all among unvaccinated school-aged children from Gaines County.

2/15
The New Mexico Department of Health (NMDOH) confirms an **outbreak** with 14 cases in Lea County.

2/26/25 (TX):
DSHS reports the death of a school-aged child who had been hospitalized in Lubbock.

2/28
DSHS reports 146 cases, 1 fatality, and 20 hospitalizations.

NMDOH reports 20 cases.

MARCH 2025
RAPID REGIONAL EXPANSION

3/1–3/15
DSHS reports 259 cases, 1 fatality, and 34 hospitalizations.

3/6 - NMDOH reports the death of a male adult.

3/11- Oklahoma (OSDH) reports **two linked cases** to the Texas outbreak.

3/13 - First Kansas case genetically linked to TX.

3/16 - 5/31
DSHS reports 400 cases, 1 fatality, and 41 hospitalizations.

NMDOH reports 44 cases, 1 fatality, and 2 hospitalizations.

OSDH reports 9 cases.

KDHE reports 23 cases.

APRIL 2025
PEAK OF TRANSMISSION

4/1 - 4/15
4/5 - DSHA reports the death of a second child.

DSHS reports 561 cases, 2 fatalities, and 58 hospitalizations.

NMDOH reports 63 cases, 1 fatality, and 5 hospitalizations.

OSDH reports 12 cases.

KDHE reports 38 cases and 1 hospitalization.

4/16 - 4/31
DSHS updates the outbreak to 663 cases, 2 fatalities, and 83 hospitalizations.

NMDOH reports 6 cases, 1 fatality, and 2 hospitalizations.

OSDH reports 16 cases.

KDHE reports 46 cases and 1 hospitalization.

MAY – AUG 2025
SLOWING BUT PERSISTENT

5/1- 5/15
DSHS reports 718 cases, 2 fatalities, and 92 hospitalizations.

NMDOH reports 71 cases, 1 fatality, and 7 hospitalizations.

OSDH reports 17 cases.

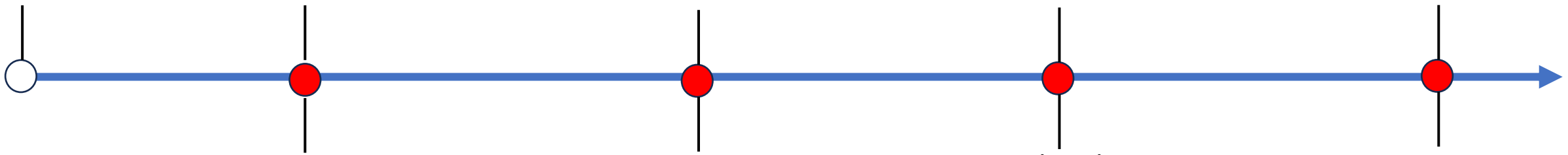
KDHE reports 54 cases and 2 hospitalizations.

5/16 – 8/3
DSHS reports 762 cases, 2 fatalities, and 99 hospitalizations.

NMDOH reports 95 cases, 1 fatality, and 7 hospitalizations.

OSDH reports 20 cases.

KDHE reports 87 cases and 8 hospitalizations.



SOURCES: TEXAS DSHS, NMDOH, OSDH, KDHE

CURRENT SITUATION

As of August 3, 2025, the Southwestern outbreak has **966 cases,** including confirmed and pending cases across **Texas, New Mexico, Oklahoma**, and **Kansas**. The situation remains fluid, but **this is the second week with no reported cases associated with the outbreak.**

CURRENT CASE COUNT: 966

- **Texas: 764** (55% of cases are from Gaines County)
- **New Mexico: 95** (70% of cases are from Lea County)
- **Oklahoma: 20**
- **Kansas**: **87** (33% of the cases are from Gray County)

HOSPITALIZATIONS: 114

- **Texas: 99 –** This accounts for 13% of all cases in Texas.
- **New Mexico: –** This accounts for 7.4% of all cases in New Mexico.
- **Kansas 8 –** This accounts for 9.2% of all cases in the state of Kansas.

DEATHS: 3

- **Texas: 2** – This is 0.26% of all cases in Texas.
- **New Mexico: 1 –** This represents 1.05% of all cases in New Mexico.

US NATIONAL CASE COUNT: 1,145 (AS OF 8/3/2025)

INTERNATIONAL SPREAD

- **Mexico: 3,830 (+186), 14 (+2) fatalities**
  - **Chihuahua Outbreak, Mexico: 3580 (+175)** cases, **13** fatalities, **13** currently hospitalized
  - **Sonora Outbreak**, Mexico: **84 (+1)** cases, **1** fatality
- **Canada: 4,489 (+187), 1 fatality**
  - **Ontario Outbreak, Canada: 2,352 (+56)** cases, **166 (+5)** hospitalizations, **1** fatality
  - **Alberta Outbreak, Canada: 1,644 (+106)** cases**, 132 (+4)** hospitalized, 1 currently in the hospital.

AGES OF CASES:

WEST TEXAS OUTBREAK				
0-4 Years	**5-17 Years**	**18+ Years**	**Pending**	**Total**
225 (29%)	286 (37%)	247 (32%)	6 (0.8%)	764
NEW MEXICO OUTBREAK				
0-4 Years	**5-17 Years**	**18+ Years**	**Pending**	**Total**
24 (25%)	21 (21%)	50 (54%)	0	95
KANSAS OUTBREAK				
0-4 Years	**5-17 Years**	**18+ Years**	**Pending**	**Total**
37 (42.5%)	33 (38%)	17 (19.5%)	0	87
OKLAHOMA OUTBREAK				
0-4 Years	**5-17 Years**	**18+ Years**	**Pending**	**Total**
17 Cases Confirmed, 3 Probable – no ages provided			3	20

VACCINATION STATUS

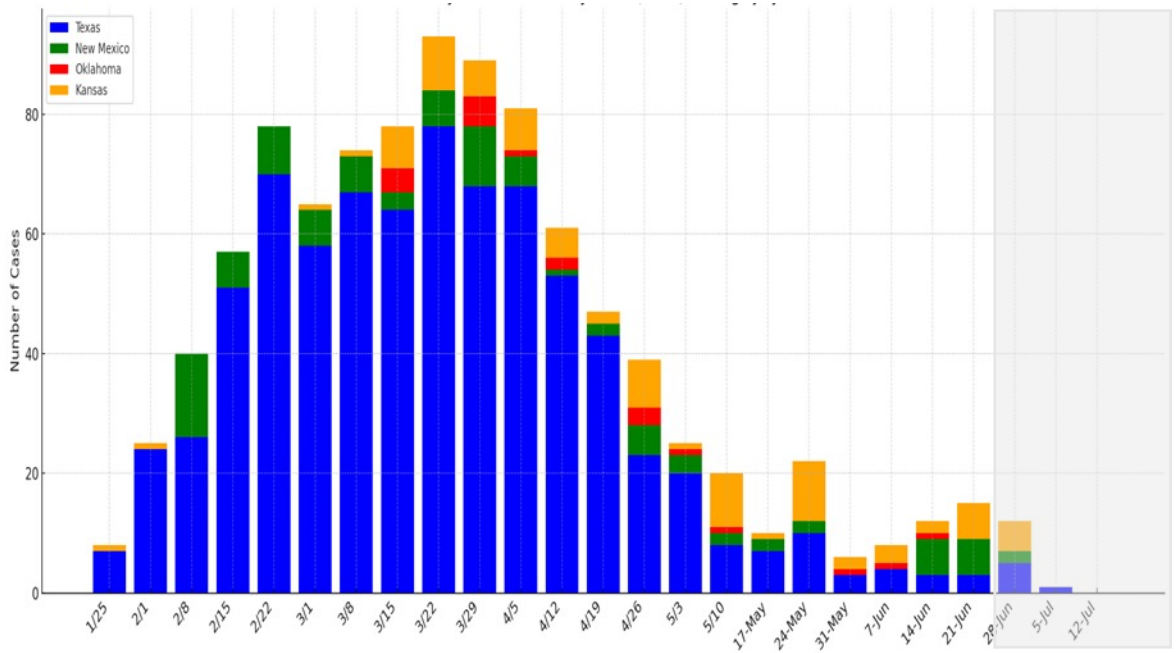
STATE	VACCINATED WITH 1 DOSE	VACCINATED WITH 2 DOSES	UNVACCINATED/ UNKNOWN	TOTAL CASES
TX	22	21	721*	764
NM	15	53	28	96
OK	0	1	19	20

STATE	AGE APPROPRIATELY VACCINATED	NOT AGE APPROPRIATELY VACCINED	NOT VACCINATED	PENDING VERIFICATION/ UNABLE TO VERIFY	TOTAL CASES
KS	7	1	72	7	87

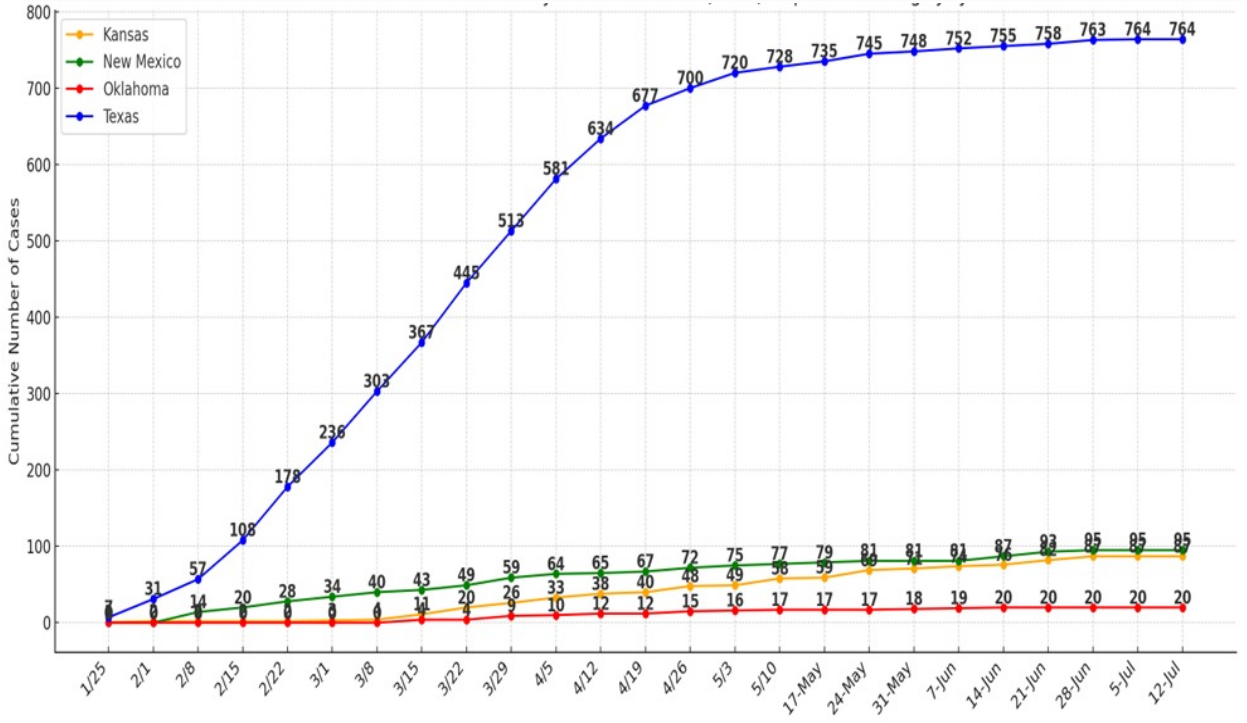
SOURCES: TEXAS DSHS, NMDOH, OSDH, KDHE

EPI CURVE AND CASES OVER TIME

SOUTHWEST MEASLES OUTBREAK – EPI CURVE (WEEK ENDING 07/26/2025)



CUMULATIVE CASES OVER TIME (WEEK ENDING 07/26/2025)



The number of new cases per week is declining in Texas and Oklahoma, while cases in New Mexico remain sporadic, and Kansas is experiencing a rise.

- **TX:** Reported first case the week of 1/25/25.
- **NM:** Reported first cases the week of 2/8/25.
- **OK:** Reported first cases the week of 3/15/25.
- **KS:** Reported first cases the week of 3/15/25.

Cases are stable or slowly rising.

- **TX:** A total of 764 cases across 37 counties.
- **NM:** A total of 96 cases across 8 counties.
- **OK:** A total of 20 cases (17 confirmed, 3 probable) have been reported.
- **KS**: A total of 87 cases across 9 counties.

SOURCES: TX DSHS, NMDOH, OSDH, KDHE

EPI SUMMARY – TEXAS

(n= 764) AS OF 7/29/2025

COUNTY	MEASLES CASES (NUMBER OF NEW CASES)	% of TOTAL CASES	% KINDERGARTENERS VACCINATED (2023-2024)	# OF SCHOOL DISTRICTS IN EACH COUNTY WITH MMR BELOW 95%
Andrews	3	0.40%	97.70%	0
Atascosa	1	0.13%	98.51%	0
Bailey	2	0.26%	98.94%	0
Bexar	1	0.13%	94.44%	1
Borden	1	0.13%	94.44%	1
Brewster	1	0.13%	94.74%	1
Brown	1	0.13%	93.64%	5
Carson	1	0.13%	91.67%	3
Cochran	14	1.85%	95.20%	1
Collins	1	0.13%	93.31%	16
Dallam	7	0.93%	95.30%	2
Dawson	26	3.44%	88.10%	4
Eastland	**2**	0.26%	95.63%	2
Ector	12	1.59%	91.30%	5
El Paso	61*	8.08%	96.37%	8
Erath	1	0.13%	93.94%	5
Fannin	4 (NEW)	0.55%	94.15%	6
Gaines	414	54.83%	82.00%	3
Garza	2	0.26%	97.10%	0

COUNTY	MEASLES CASES (NUMBER OF NEW CASES)	% of TOTAL CASES	% KINDERGARTENERS VACCINATED (2023-2024)	# OF SCHOOL DISTRICTS IN EACH COUNTY WITH MMR RATES BELOW 95%
Hale	5	0.66%	98.30%	2
Harderman	1	0.13%	94.40%	3
Hockley	**6**	0.79%	94.40%	3
Lamar	28 (+5)	3.05%	96.84%	0
Lamb	1	0.13%	97.37%	1
Lubbock	53	7.02%	92.25%	8
Lynn	2	0.26%	92.16%	2
Martin	3	0.40%	96.59%	1
McLennan	9	1.19%	96.53%	6
Midland	6	0.79%	94.77%	4
Parmer	5	0.66%	95.04%	1
Potter	1	0.13%	96.32%	3
Randall	1	0.13%	93.95%	1
Reeves	2	0.26%	94.92%	1
Rockwell	1	0.13%	91.47%	2
Terry	60	7.95%	95.52%	2
Upshur	**5**	0.66%	93.30%	2
Yoakum	20	2.65%	92.50%	1

*Cases reported by El Paso

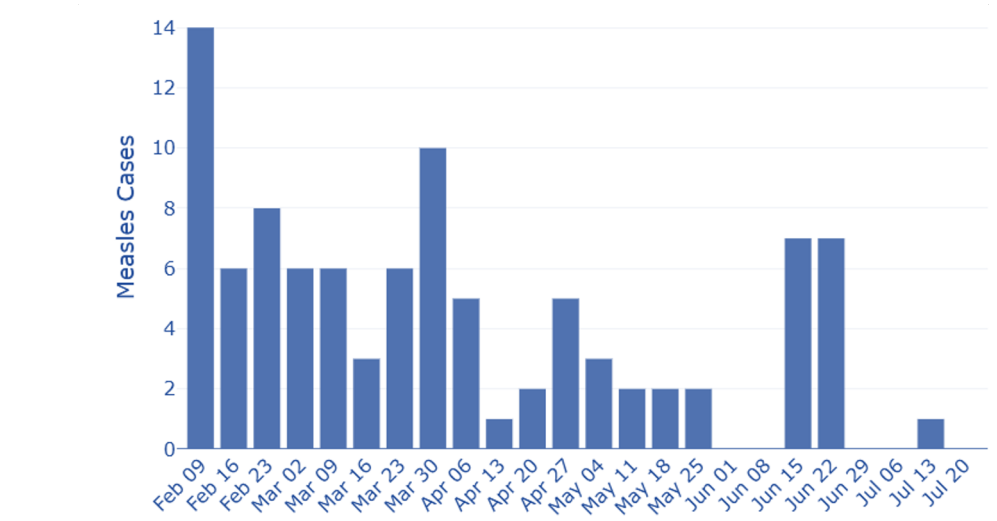
SOURCES:

- MEASLES OUTBREAK – 29 JULY 2025 | TEXAS DSHS
- MEASLES OUTBREAK EL PASO 3 AUG 2025
- 2023-2024 SCHOOL VACCINATION COVERAGE LEVELS BY DISTRICT/PRIVATE SCHOOL AND COUNTY - KINDERGARTEN (XLS)

EPI SUMMARY – NEW MEXICO

COUNTY	MEASLES CASES (NUMBER OF NEW CASES)	% of TOTAL CASES	% KINDERGARTENERS VACCINATED (2023-2024)
New Mexico (n=96) AS OF 7/31/2025			
Chaves	1	1.04%	98%
Curry	1	1.04%	95%
Doña Ana	2	2.08%	95%
Eddy	3	3.12%	93%
Lea	67	68.79%	94%
Luna	14	14.58%	
San Juan	1	1.05%	
Sandoval	6	6.25%	94%
Santa Fe	1 (New – International travel related)	1.04%	

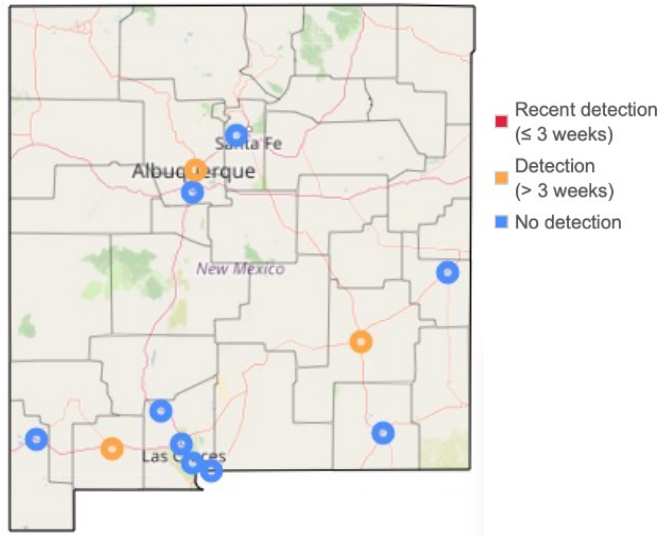
Measles by Case Week



Measles Virus Detected in Wastewater by Treatment Plant Site

Treatment Plant	# Detections	Most Recent Detection
City of Deming WWTP	3	07/10/2025
City of Rio Rancho WWTP #2	1	05/01/2025
City of Roswell WWTP	1	06/05/2025
Total	**5**	**---**

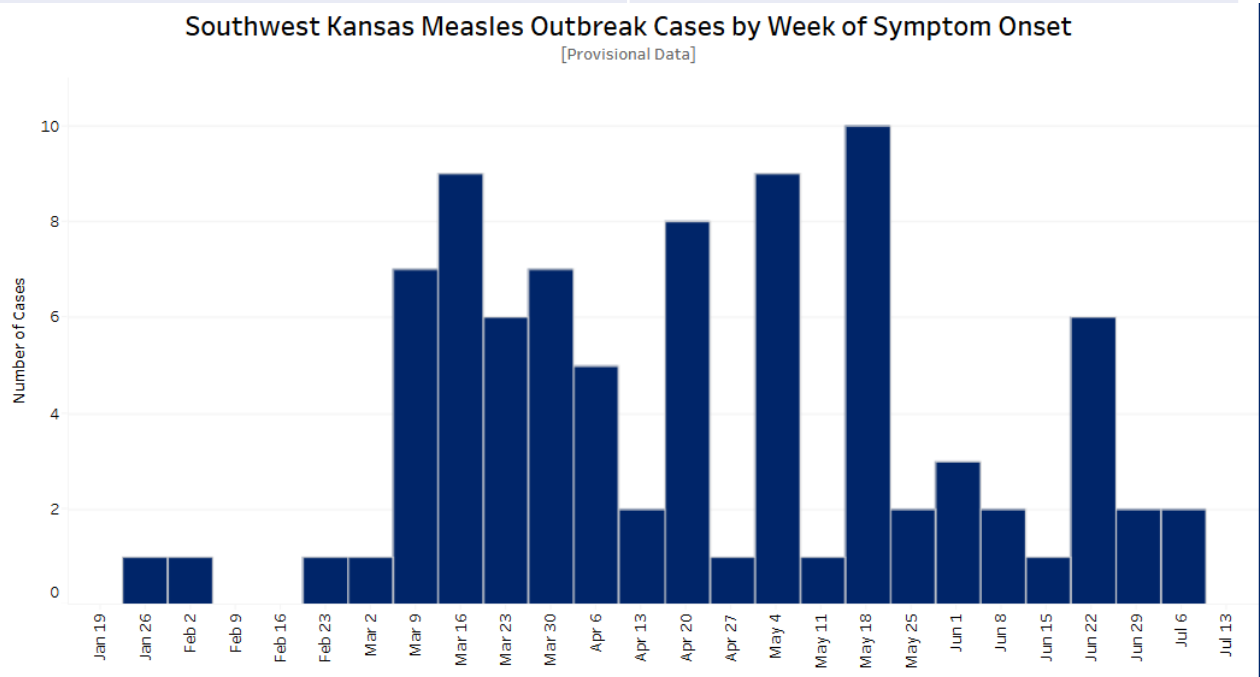
Measles Virus Detected in Wastewater by Treatment Plant Site (as of 7/31/25)



Source: NEW MEXICO DEPARTMENT OF HEALTH

EPI SUMMARY – KANSAS

COUNTY	MEASLES CASES (NUMBER OF NEW CASES)	% of TOTAL CASES	% KINDERGARTENERS VACCINATED (2023-2024)
KANSAS (n=87) AS OF 7/30/2025			
Finney	Between 1- 5		98%
Ford	Between 1- 5		87%
Grant	Between 1- 5		99%
Gray	29	33.33%	66%
Haskell	19	21.43%	58%
Kiowa	6	7.14%	92%
Morton	Between 1- 5		82%
Pawnee	7	8.33%	90%
Stevens	10	8.33%	83%

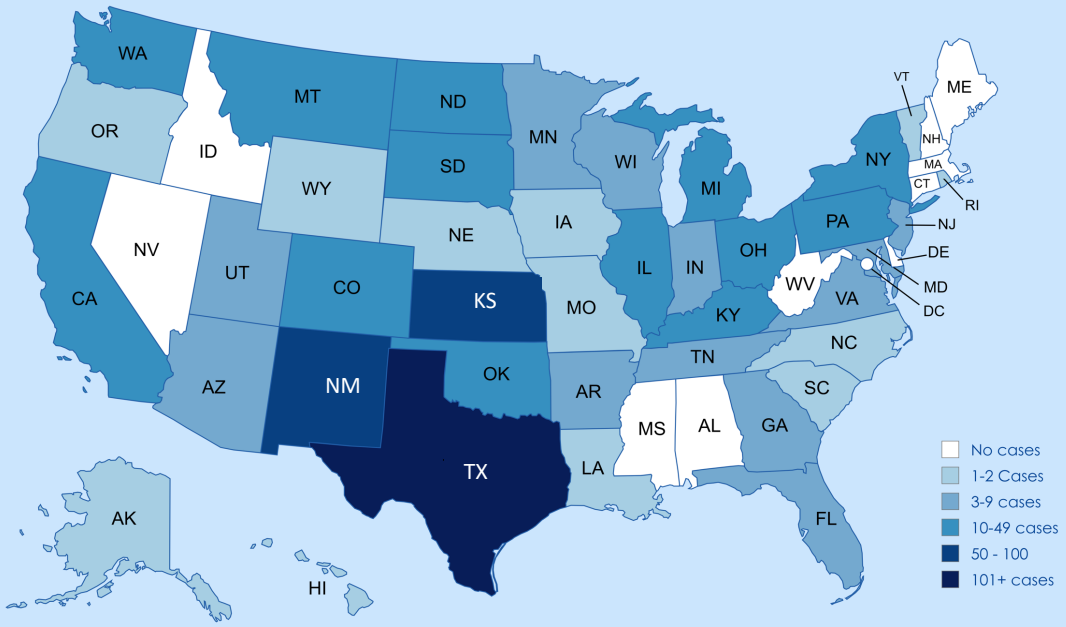


Source: Kansas Division of Public Health

US OUTLOOK

** 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 Outbreak Response Innovation (CORI)*

1,346*



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 **	798
NEW MEXICO	96
KANSAS	90
NORTH DAKOTA	36
OHIO	35
MONTANA	30
MICHIGAN	27
OKLAHOMA	20
CALIFORNIA	19
COLORADO	16
PENNSYLVANIA	15
NEW YORK	14
KENTUCKY	14
SOUTH DAKOTA	12
UTAH	11
ILLINOIS	10
WASHINGTON	10
INDIANA	9
WISCONSIN	9
ARKANSAS	8
IOWA	8
MISSOURI	7
GEORGIA	6
NEW JERSEY	6
TENNESSEE	6
MINNESOTA	5
ARIZONA	4
FLORIDA	4
MARYLAND	3
VIRGINIA	3
WYOMING	3
ALASKA	2
HAWAII	2
LOUISIANA	2
NEBRASKA	1
NORTH CAROLINA	1
OREGON	1
RHODE ISLAND	1
SOUTH CAROLINA	1
VERMONT	1
TOTAL	1,346

OUTBREAKS

- SMALL OUTBREAK (3-9)
- MEDIUM OUTBREAK (10 - 49)
- LARGE OUTBREAK (50 OR MORE)

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 3 August 2025, EDT, there are approximately 1,346 measles cases (including confirmed and suspected cases) across 41 states.

This year, there have been at least ***29 measles outbreaks. Here are some listed below****:*

- ***Texas****, involving 37 counties*
- ***New Mexico****, 6 counties*
- ***Oklahoma****, and the Cherokee Nation in Oklahoma*
- *9 counties in* ***Kansas***
- *Ashtabula and Knox* ***Counties, Ohio***
- *Erie County,* **Pennsylvania**
- *Allen County,* ***Indiana***
- *Bergen County,* ***New Jersey***
- *Metro Atlanta,* ***Georgia***
- *Gallatin County,* ***Montana***
- *Montcalm County,* ***Michigan*** *(linked to Ontario Outbreak) and a 2nd outbreak in Grand Traverse County*
- *Upper Cumberland region,* ***Tennessee***
- *Williams County, Grand Rapids,* ***North Dakota***
- *Faulkner County,* ***Arkansas***
- *Utah County,* ***Utah***
- *Navajo County,* ***Arizona***

**** TEXAS CASES NOT ASSOCIATED WITH OUTBREAK: 34**

- 1 case – Bell County
- 1 case – Brazoria County
- 3 cases– Collin County
- 1 case – Dallas County
- 2 case – Denton County
- 2 cases – El Paso County
- 1 Case – Fannin County
- 1 Case – Adult, Fort Bend (travel-related)
- 3 cases – Harris County
- 1 case – Harrison County.
- 1 case – Hays County
- 3 cases – Lamar County
- 2 case – Randall County
- 1 case – Adults, Rockwall County (travel-related)
- 1 Case – Scurry County
- 1 case – Shackelford
- 4 cases – Tarrant
- 2 case – Travis County
- 6 cases - Williamson

TEXAS CASES ASSOCIATED WITH THE OUTBREAK: 764

OUTLOOK: THINGS TO KEEP AN EYE ON

UNITED STATES

VACCINATION COVERAGE AND EXEMPTIONS AMONG KINDERGARTNERS: During the 2024-2025 school year, vaccination coverage among kindergartners in the U.S. decreased for all reported vaccines from the year before, ranging from 92.1% for diphtheria, tetanus, and acellular pertussis vaccine (DTaP) to 92.5% for measles, mumps, and rubella vaccine (MMR) and polio vaccine. Exemptions from one or more vaccines among kindergartners in the U.S. increased to 3.6% from 3.3% the year before.

MICHIGAN: A new measles outbreak has been confirmed in Central Michigan. The latest outbreak is in Osceola County, after the Central Michigan District Health Department confirmed on Thursday that there are additional cases traced to residents who were infected while traveling out of state in June.

NEW JERSEY: NJDOH currently has two confirmed measles cases under investigation. These cases are not related. Additional cases would be expected to occur no later than Aug 24 (See the exposure table and recent press releases). NJ has a total of six cases reported in 2025.

WISCONSIN: The Wisconsin Department of Health Services (DHS) has confirmed nine cases of measles in Oconto County, Wisconsin. One case was confirmed through testing at the Wisconsin State Laboratory of Hygiene, with eight additional cases confirmed based on exposure and symptoms. All of the cases were exposed to a common source during out-of-state travel.

MEXICO

MEXICO'S MEASLES OUTBREAK HAS ESCALATED INTO A CRISIS. CONFIRMED CASES HAVE RISEN TO MORE THAN 3,800, AND THE DEATH TOLL HAS NOW REACHED 14.

CHIHUAHUA is the epicenter of the outbreak, primarily affecting Indigenous and Mennonite communities with low vaccination coverage. Since February, three deaths have occurred among Mennonites and ten among Rarámuri Indigenous people, none of whom were vaccinated. Children aged 0–4 remain the most affected, with an incidence of 8.44 cases per 100,000, while adults aged 25–29 also account for a significant share, with 4.92 cases per 100,000.

In response to the crisis, the government of Chihuahua launched the "**Juarez Shield Strategy**," a large-scale, free vaccination campaign targeting residents aged six months to 49 years. Over the past week, state health authorities vaccinated approximately 42,146 people against measles.

Mexico's Ministry of Health has also activated its "**Rapid Response Plan for the Interruption of the Measles Outbreak**," which focuses on strengthening epidemiological surveillance, accelerating laboratory diagnosis, and implementing control measures both in clinics and in the community. The plan emphasizes breaking chains of transmission, including isolating probable and confirmed cases in healthcare settings.

CANADA

CANADA'S MEASLES OUTBREAKS CONTINUE TO GROW, MEANING CANADA COULD LOSE ITS DESIGNATION OF MEASLES ELIMINATION BY OCTOBER.

Canada has had three times as many measles cases as the U.S. this year, according to the Canadian government and Centers for Disease Control and Prevention (CDC) data.

While case counts have slowed in Ontario, activity is increasing in Alberta, which has lower vaccination rates than other provinces, and more residents who eschew vaccines.

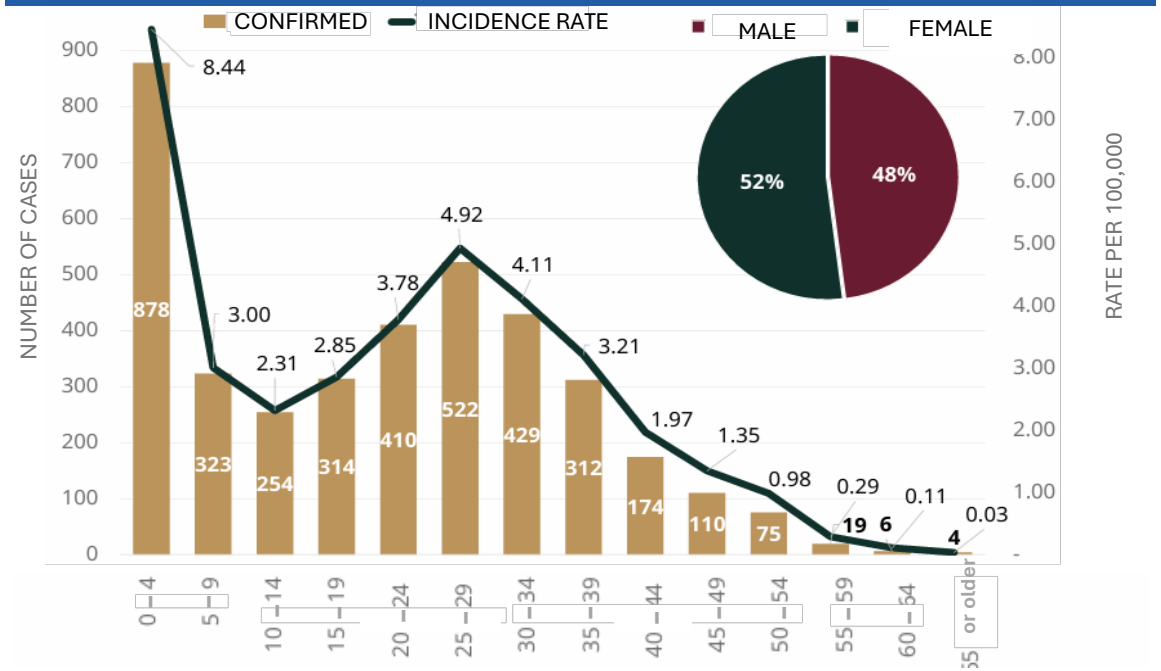
ALBERTA currently has the second highest number of cases with 1,656 as of Friday afternoon, sitting behind Ontario, which is reporting 2,353 cases as of July 29.

Between March 16 and July 26, more than 92,000 measles vaccinations were administered in the province—a 57% increase compared with the same period last year. Vaccination rates rose particularly sharply in the south and north zones, increasing by 122% and 95%, respectively. However, only 70% of children are fully vaccinated with two doses of the measles-containing vaccine in the province, and schools in Alberta do not have mandatory immunization requirements for school enrollment.

MEXICO OUTLOOK

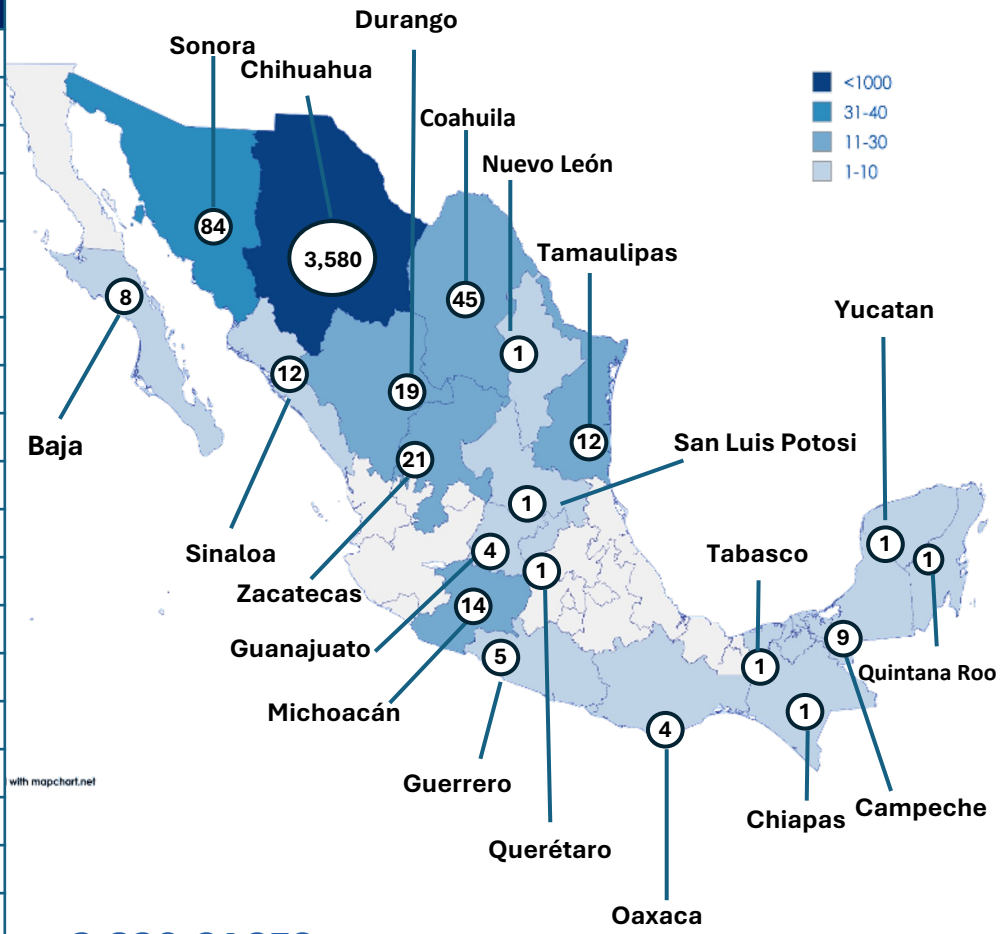
- The origin of the outbreak is traced to a large Mennonite community near Cuauhtémoc, where vaccination rates are estimated at only 50–70%. It was introduced into the community when an unvaccinated 8-year-old who became infected during a visit to relatives in Texas and returned to Mexico, where the 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.**
- **To date, Mexico has reported 14** measles-related deaths—**13 in Chihuahua** and 1 in Sonora—all among unvaccinated individuals. These fatalities underscore the consequences of low vaccination coverage, particularly in isolated and vaccine-hesitant communities.
- Chihuahua remains the epicenter, accounting for 93.29% of all confirmed measles cases in Mexico and 93% of all deaths. The state's incidence rate stands at 83.1 cases per 100,000 inhabitants, compared to just 2.5 per 100,000 in the rest of the country.

CONFIRMED MEASLES CASES BY SEX, AGE GROUP, AND INCIDENCE RATE



CONFIRMED MEASLES	
STATE	CASES
BAJA CALIFORNIA SUR	8
CAMPECHE	12 (+4)
CHIAPAS	1
CHIHUAHUA	3580 (+175)
COAHUILA	45 (+6)
DURANGO	21
GUANAJUATO	4
GUERRERO	5
MICHOACÁN	14
NUEVO LEÓN	1
OAXACA	4
QUERÉTARO	1
QUINTANA ROO	2
SAN LUIS POTOSI	1
SINALOA	12 (+3)
SONORA	84 (+1)
TABASCO	1
TAMAULIPAS	12
YUCATAN	1
ZACATECAS	21
TOTAL	3,830

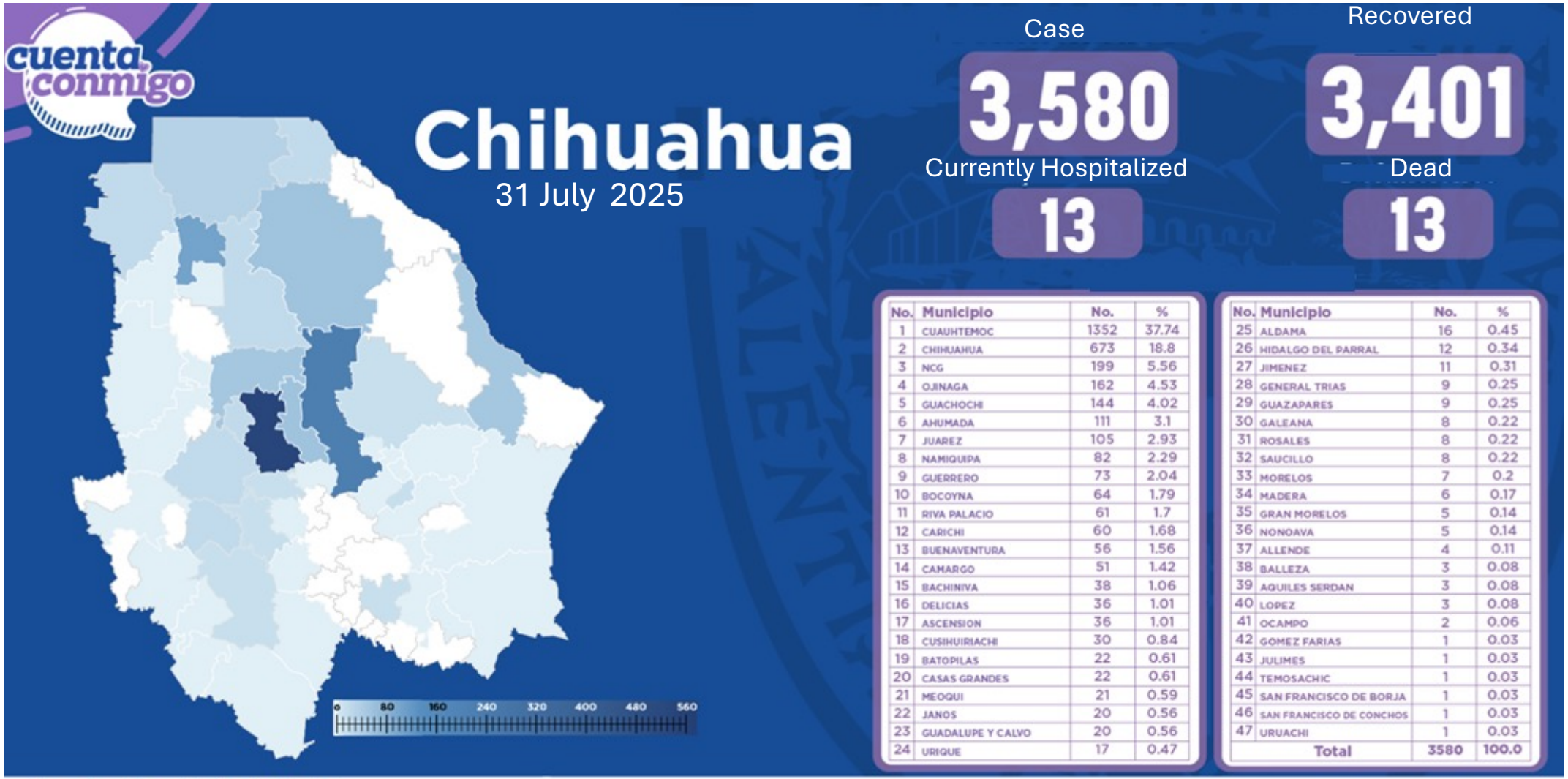
Data as of 8/3/2025



3,830 CASES
14 DEATHS

Source: DAILY REPORT

MEXICO: CHIHUAHUA'S OUTBREAK



No.	Municipio	No.	%
1	CUAUHTEMOC	1352	37.74
2	CHIHUAHUA	673	18.8
3	NCG	199	5.56
4	OJINAGA	162	4.53
5	GUACHOCHI	144	4.02
6	AHUMADA	111	3.1
7	JUAREZ	105	2.93
8	NAMIQUIPA	82	2.29
9	GUERRERO	73	2.04
10	BOCOYNA	64	1.79
11	RIVA PALACIO	61	1.7
12	CARICHI	60	1.68
13	BUENAVENTURA	56	1.56
14	CAMARGO	51	1.42
15	BACHINIVA	38	1.06
16	DELICIAS	36	1.01
17	ASCENSION	36	1.01
18	CUSIHUIRIACHI	30	0.84
19	BATOPILAS	22	0.61
20	CASAS GRANDES	22	0.61
21	MEOQUI	21	0.59
22	JANOS	20	0.56
23	GUADALUPE Y CALVO	20	0.56
24	URIQUE	17	0.47

No.	Municipio	No.	%
25	ALDAMA	16	0.45
26	HIDALGO DEL PARRAL	12	0.34
27	JIMENEZ	11	0.31
28	GENERAL TRIAS	9	0.25
29	GUAZAPARES	9	0.25
30	GALEANA	8	0.22
31	ROSALES	8	0.22
32	SAUCILLO	8	0.22
33	MORELOS	7	0.2
34	MADERA	6	0.17
35	GRAN MORELOS	5	0.14
36	NONOAVA	5	0.14
37	ALLENDE	4	0.11
38	BALLEZA	3	0.08
39	AQUILES SERDAN	3	0.08
40	LOPEZ	3	0.08
41	OCAMPO	2	0.06
42	GOMEZ FARIAS	1	0.03
43	JULIMES	1	0.03
44	TEMOSACHIC	1	0.03
45	SAN FRANCISCO DE BORJA	1	0.03
46	SAN FRANCISCO DE CONCHOS	1	0.03
47	URUACHI	1	0.03
	Total	3580	100.0

Fuente: Secretaría de Salud

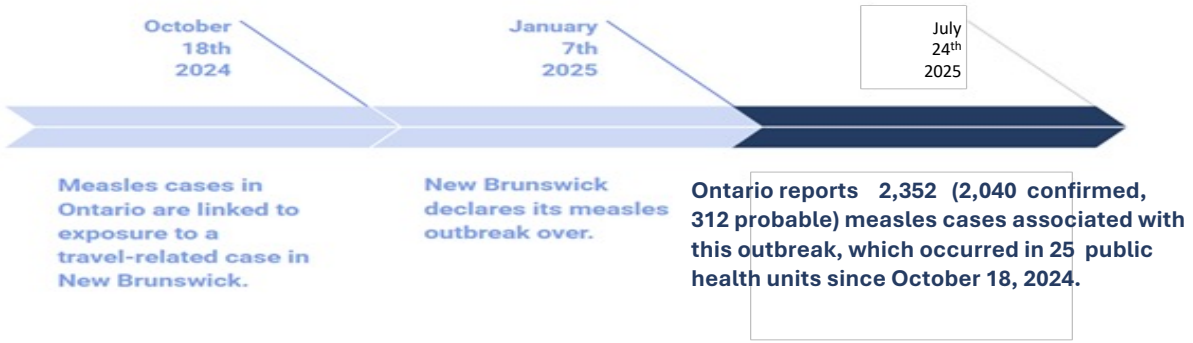
GOBIERNO DEL ESTADO DE CHIHUAHUA | SECRETARÍA DE SALUD

MediChihuahua

SOURCE OF GRAPHIC: MediChihuahua

CANADA OUTLOOK

Brief Timeline of Outbreak

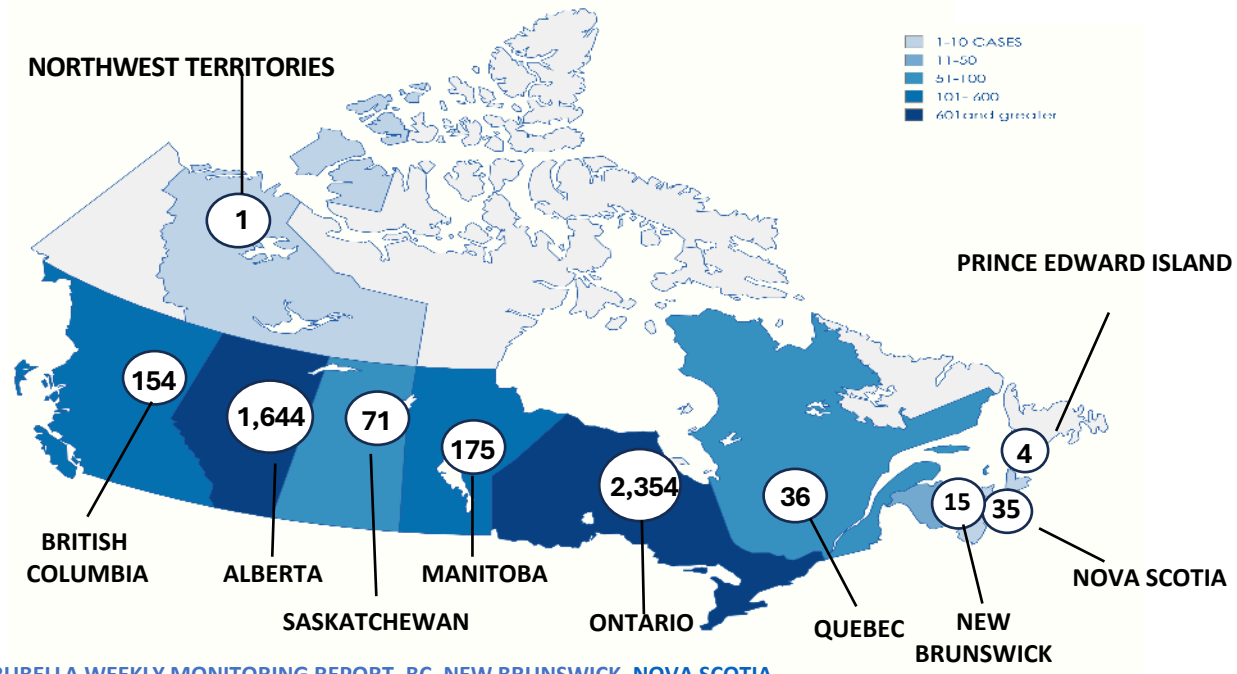


CANADA OUTBREAK:

- An ongoing outbreak of measles in Ontario has been traced back to a large gathering in New Brunswick last fall that guests from Mennonite communities attended. On October 18, 2024, exposure to a travel-related case in New Brunswick led to measles cases in Ontario.
- Of all the cases reported in 2025 in Ontario, all but 39 cases are linked to the ongoing multi-jurisdictional outbreak.
- Currently, **seven** provinces are experiencing active outbreaks: **Ontario, Alberta, Manitoba, Saskatchewan, British Columbia, New Brunswick, and Nova Scotia.**
- **An infant infected with measles has died** in southwestern Ontario, Canada, the province's chief medical officer of health said in a statement on Thursday**, 6/5/2025.**
- Alberta has surpassed Ontario in new case growth, becoming the country's primary hotspot.
- **The measles strain circulating in this outbreak is wild-type (genotype D8).**

MEASLES 2025	
PROVINCE	**CASES**
ONTARIO	2,354 (+53) (2,068 confirmed, 286 probable)
ALBERTA	1,644 (+106) confirmed
MANITOBA	175 (+8) (165 confirmed, 10 probable)
BRITISH COLUMBIA	154 (+8) (136 confirmed, 18 probable)
SASKATCHEWAN	71 (+7) confirmed
QUEBEC	36 confirmed
PRINCE EDWARD ISLAND	4 confirmed
NOVA SCOTIA	35 (+5) (Since 7 JUL) confirmed
NORTHWEST TERRITORIES	1 confirmed
NEW BRUNSWICK	15 (Since 9 JUL) confirmed
TOTAL	4,489 (4,175 confirmed and 314 probable)

As of 7/26/2025

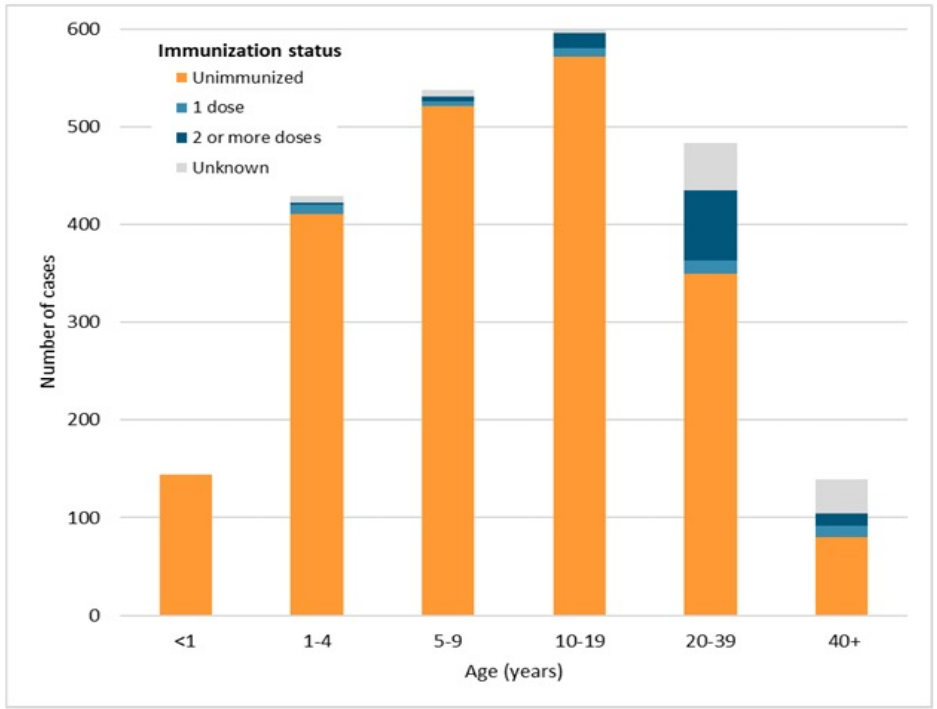


SOURCES: MANITOBA HEALTH, ALBERTA DASHBOARD, QUEBEC, PUBLIC HEALTH ONTARIO, SASKATCHEWAN, CA MEASLES AND RUBELLA WEEKLY MONITORING REPORT, BC, NEW BRUNSWICK, NOVA SCOTIA

CANADA OUTLOOK: ONTARIO'S OUTBREAK
(OCTOBER 18, 2024 TO JULY 29, 2025)

MORBIDITY AND MORTALITY			
PROVINCE	CASES	HOSPITALIZATIONS	DEATHS
ONTARIO*	2,352 (+54)	163 (+2)	1

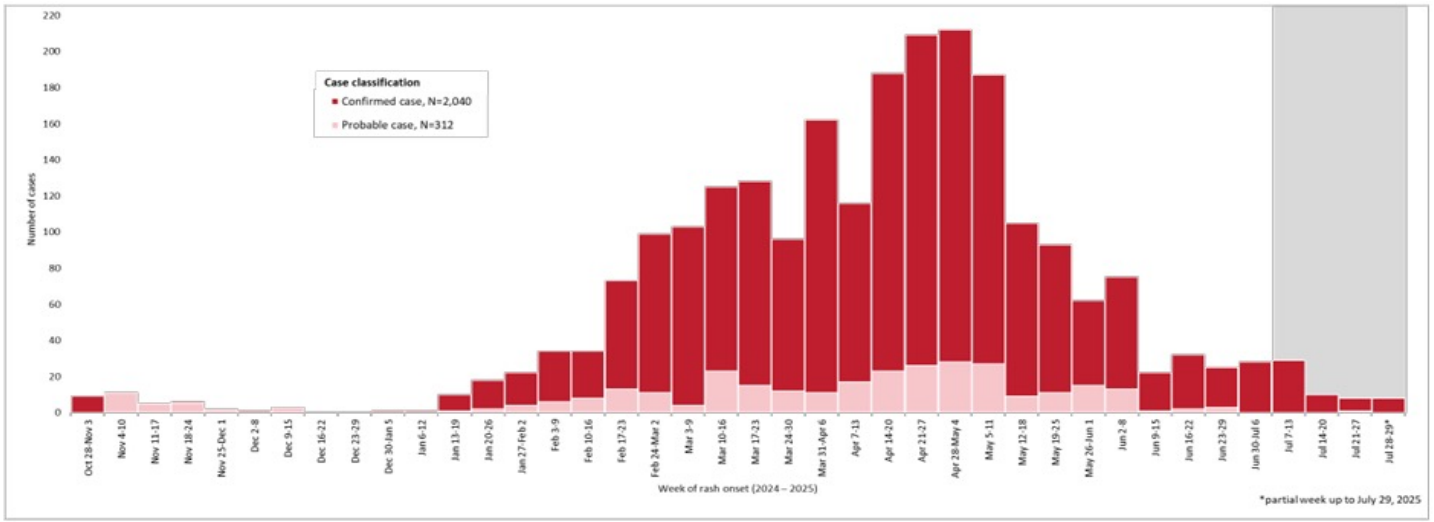
IMMUNIZATION STATUS OF MEASLES OUTBREAK CASES BY AGE GROUP: OCTOBER 28, 2024 – JULY 29 2025



Age group	<1	1-4	5-9	10-19	20-39	40+
Unimmunized	100.0%	95.8%	96.8%	94.4%	72.5%	57.6%
1 dose	0.0%	2.1%	0.9%	1.3%	2.7%	8.6%
2 or more doses	0.0%	0.5%	0.9%	2.6%	14.9%	8.6%
Unknown	0.0%	1.6%	1.3%	1.7%	9.9%	25.2%

- As of July 29, 2025, Ontario has reported a total of 2,352 measles cases (2,040 confirmed, 312 probable) associated with this outbreak in 26 (+1) public health units. The increase in outbreak cases includes newly reported cases as well as previously reported cases with an unknown source of exposure that are now linked to the outbreak based on genomic sequencing results.
- Among all outbreak cases, the majority (73.0%, n=1,717) were infants, children, and adolescents (19 years old or younger), while 26.4% (n=622) were adults, and 0.6% (n=13) had unknown age.
- Almost all infant, child, and adolescent outbreak cases (96.0%, n=1,648) were unimmunized, while 69.1% (n=430) of adults were unimmunized 98.2% (n=2,256) of outbreak cases were born in or after 1970.
- A total of 2.1% (n=49) of outbreak cases were pregnant at the time of their measles infection.
- There was one death that occurred in a congenital case of measles, who was born pre-term and had other underlying medical conditions.
- A total of 2.2% (n=51) of outbreak cases were pregnant at the time of their measles infection:
  - Of these, 80.4% (n=41) were unimmunized, 2.0% (n=1) received one dose of measles-containing vaccine, 9.8% (n=5) received two or more doses, and 7.8% (n=4) had unknown immunization status.
  - There have been nine cases of congenital measles.
- Overall, 6.9% (n=163) of outbreak cases were hospitalized and 0.5% (n=12) were admitted to the intensive care unit (ICU). 94.5% (n=154) of hospitalized cases were unimmunized, of whom 120 were infants, children, and adolescents.
- There was one death that occurred in a congenital case of measles, who was born pre-term.

NUMBER OF MEASLES CASES BY WEEK OF RASH ONSET, 10/28/2024 – 07/29//2025



SOURCES: PUBLIC HEALTH ONTARIO

CANADA OUTLOOK: ALBERTA'S OUTBREAK

MORBIDITY AND MORTALITY			
PROVINCE	CASES	HOSPITALIZATIONS	DEATHS
Alberta	1,644 (+106)	132 (+4) (15 ICU)	0

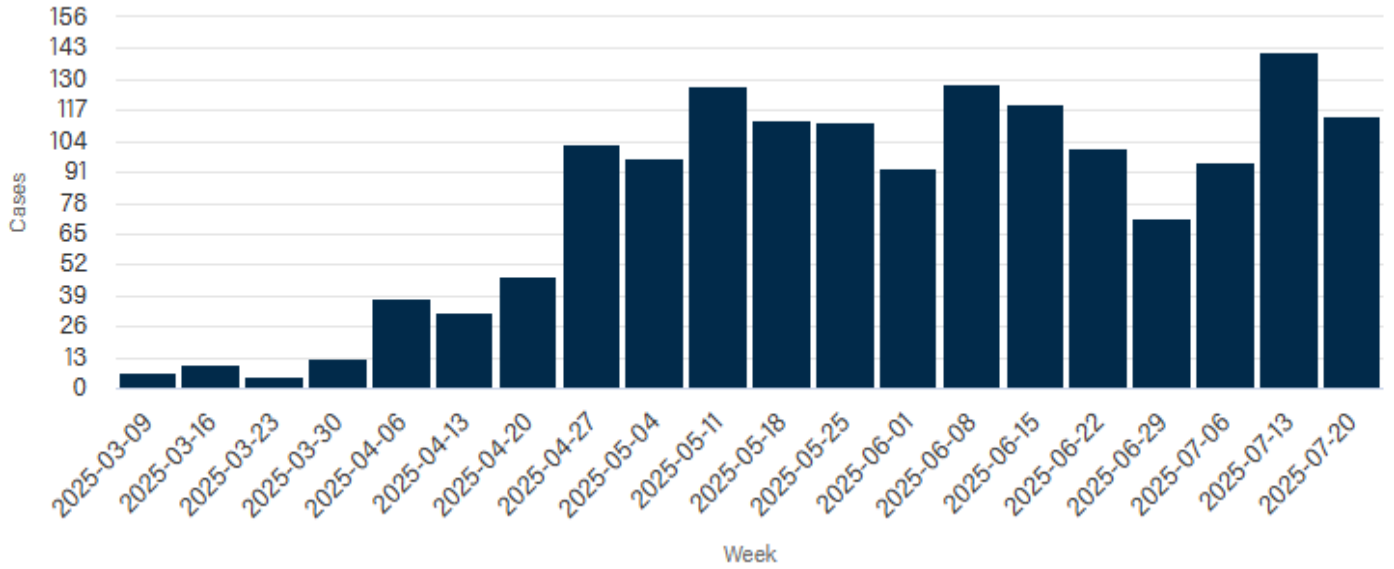
IMMUNIZATION STATUS	COUNT
Unimmunized	1,396
1 dose	50
2 or more doses	70
Unknown	128
Total	**1,644**

HOSPITALIZATIONS	
Hospitalizations	132
ICU Admissions (ICU admissions are included in the total count of hospitalizations)	15
Currently Hospitalized	1

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 exposure locations for the Edmonton, Calgary, Central, and parts of the North Zone. A standing exposure advisory has been issued for the South Zone and areas of the North Zone. Site-specific exposure advisories will no longer be issued in these locations.

NUMBER OF MEASLES CASES BY WEEK OF RASH ONSET, 1/1/2025 – 07/26//2025



SOURCES: ALBERTA DASHBOARD, CA MEASLES AND RUBELLA WEEKLY

WHO AFRICAN REGION OUTLOOK

MEASLES CASES (JAN 2025 – MAY 2025)

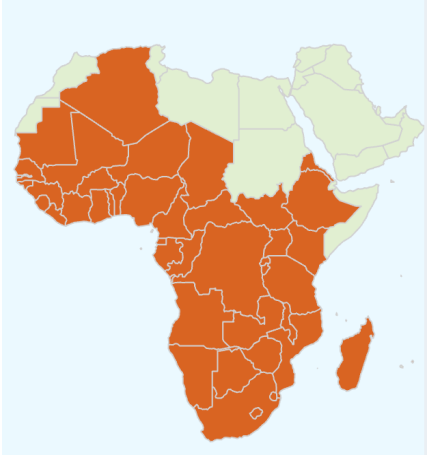
COUNTRY	CONFIRMED CASES	VACCINATION RATE*
ALGERIA	255	90%
ANGOLA	246	31%
BENIN	596	44% **
BOTSWANA	4	77%
BURKINA FASO	1425	65%
BURUNDI	334	80%
CABO VERDE		86%
CAMEROON	1422	49%
CENTRAL AFRICAN REPUBLIC	372	41% **
CHAD	280	46%
COMOROS	5	70%
CONGO	404	47%
CÔTE D'IVOIRE	652	48%

COUNTRY	CONFIRMED CASES	VACCINATION RATE*
DEMOCRATIC REPUBLIC OF THE CONGO (DRC)	~45,327	51%
EQUITORIAL GUINEA	0	31%
ERITREA		85%
ESWATINI	0	86%
ETHIOPIA	~5,370	59%
GABON	10	57% **
GAMBIA	7	83%
GHANA	187	79%
GUINEA	497	45%
GUINEA-BISSAU	0	45%
KENYA	319	76%

COUNTRY	CONFIRMED CASES	VACCINATION RATE*
LESOTHO	1	74%
LIBERIA	76	60%
MADAGASCAR	87	46%
MALAWI	840	69%
MALI	169	60%
MAURITANIA	39	59%
MAURITIUS		96%
MOZAMBIQUE	159	44%
NAMIBIA	48	66%
NIGER	1827	77%
NIGERIA	~3,395	35%

COUNTRY	CONFIRMED CASES	VACCINATION RATE*
RWANDA	86	93%
SAO TOME AND PRINCIPE		87%
SENEGAL	99	79%
SEYCHELLES		88%
SIERRA LEONE	11	73%
SOUTH AFRICA	431	82%
SOUTH SUDAN	91	72% **
TOGO	439	74%
UGANDA	650	69%
TANZANIA	44	50%
ZAMBIA	240	77%
ZIMBABWE	3	78%

- Measles is endemic throughout much of Africa.
  - In sub-Saharan Africa, measles seasonality peaks during the dry season.
- Routine measles immunization coverage in the African Region averaged just 69% for the first routine dose (MCV1) and 45% for the second dose (MCV2) in 2022 (latest consolidated data).
- As of 2023, the Region's two-dose measles vaccination coverage was estimated at only ~49%, the lowest of all WHO Regions.
- Unvaccinated children under 5 years account for the majority of cases and nearly all deaths.
- B3 is the most commonly circulating genotype in Africa.

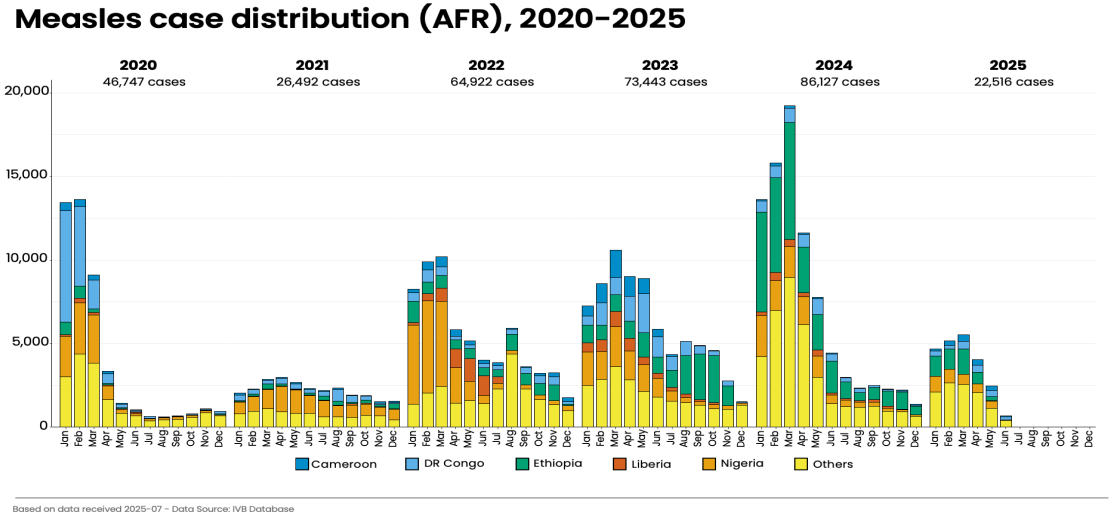


** Vaccination rate taken from WHO/ UNICEF estimates of national immunization coverage for second dose of measles-containing vaccine, 2024. Case data from WHO July measles report.*

*** Vaccination rate only available for first dose of measles-containing vaccine because a second dose is not included in the routine immunization schedule.*

SOURCES: WHO, WHO2, WHO3, UNICEF, WPRO., VACCINES, CDC, CIDRAP, PATH

WHO AFRICAN REGION OUTLOOK



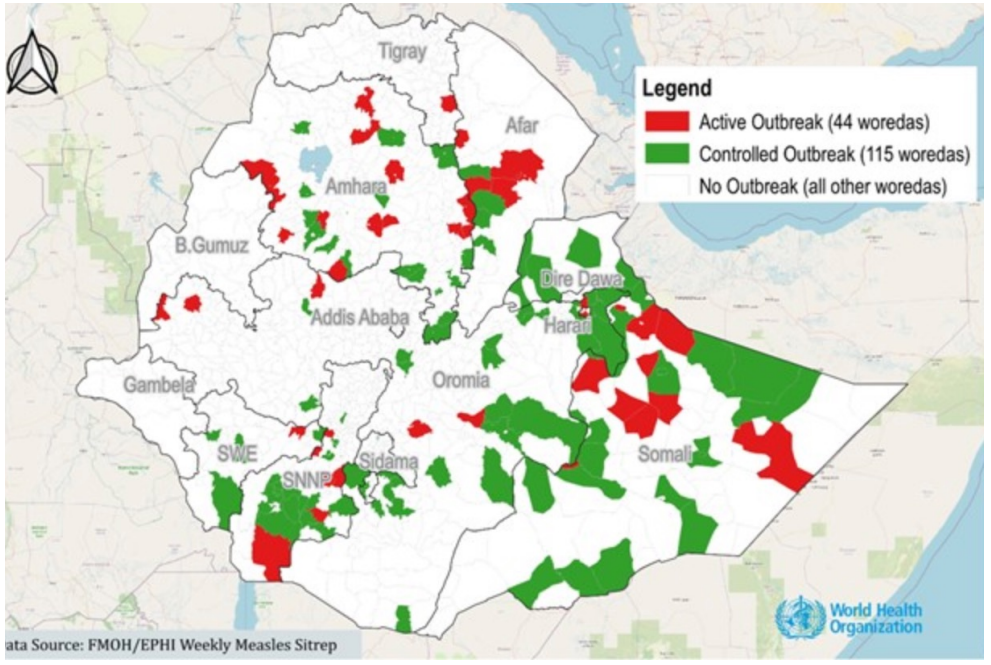
Measles remains endemic across much of sub-Saharan Africa, with routine immunization gaps and the lingering effects of the COVID-19 pandemic driving increased susceptibility and periodic outbreaks.

As of 2025, surveillance indicates a worsening trend, fueled by insufficient vaccine uptake and uneven access to immunization services. Measles continues to circulate extensively in many countries, particularly in high-risk settings where routine coverage remains low.

WHO and UNICEF stress the urgent need for catch-up campaigns, mass vaccination drives, and expanded outreach to curb transmission. Without intensified immunization efforts and stronger surveillance, the continent faces the continued risk of large-scale outbreaks in 2025 and beyond.

SOURCES: WHO, WHO2, WHO3, UNICEF, WPRO, UNICEF, NIGERIA CDC, GAVI, CONGO MINISTRY OF HEALTH

ETHIOPIA: Ethiopia is one of the most affected countries in Africa, with 5,370 cases reported this year. The vast majority of cases have occurred among children under five, particularly in rural, conflict-affected, and drought-prone areas where routine immunization coverage is severely limited. As of 2023, only about 36% of measles cases nationally had received at least one vaccine dose, highlighting persistent immunity gaps. Contributing factors include COVID-19 service disruptions, ongoing internal conflict, population displacement, malnutrition, and drought, all of which have undermined the effectiveness of routine immunization programs. Measles remains endemic in Ethiopia, and recent years have seen large outbreaks as well. Between August 2021 and May 2023, they reported 16,814 lab-confirmed cases and 182 deaths, with a case fatality ratio (CFR) of 1.1%. To address the crisis, Ethiopia launched targeted response efforts: from January to March 2025, WHO-supported campaigns in 38 high-risk woredas reached 99% of their target, immunizing over 441,000 children. An earlier reactive campaign in 2024 reached 1.7 million children.



Measles Outbreaks in Ethiopia

WHO AFRICAN REGION OUTLOOK CONT.

DEMOCRATIC REPUBLIC OF THE CONGO: Although the devastating 2019–2020 outbreak has ended, measles continues to surge in DRC, with persistent flare-ups reported in 2025—particularly during the rainy season and in conflict-affected provinces. As of mid-2025, over 45,000 suspected cases and more than 1,000 deaths have been reported, with the eastern provinces of South Kivu, North Kivu, and parts of Ituri among the hardest hit. Children under five, especially those in remote, displaced, and under-immunized communities, remain most at risk. Many cases occur in areas where health services are limited and routine immunization coverage remains critically low, with MCV1 coverage below 50% in several provinces. In some outbreaks, over 70% of affected children were unvaccinated. Ongoing challenges such as insecurity, displacement, malnutrition, and limited access to healthcare continue to undermine vaccination efforts. While targeted campaigns are being conducted with support from WHO and partners, gaps in coverage and surveillance allow the virus to circulate in vulnerable areas.

NIGERIA: As of July 27, 2025, Nigeria has reported an estimated 3,395 confirmed measles cases to WHO between December 2024 and June 2025, with many outbreaks concentrated in regions with low vaccination coverage and political instability, particularly in northern and central states. According to the Nigerian Ministry of Health's latest update on May 31, 2025, there were 6,596 suspected cases and 1,772 confirmed cases, with measles outbreaks recorded in 174 Local Government Areas (LGAs) across 25 states. The states with the highest number of affected LGAs include Katsina, Adamawa, Sokoto, and Bauchi. Routine vaccine coverage remains low: MCV1 at ~60% and MCV2 at ~38%, far below the 95% herd immunity threshold. In response, Nigeria launched a catch-up campaign in October 2024, expanding to 24 states and targeting 24 million children (ages 9–59 months). A broader 2025–2026 national immunization effort aims to reach up to 100 million children under age 15 and close persistent immunity gaps.

ALGERIA: As of August 2025, Algeria has not reported a major measles outbreak, though its proximity to Morocco, where over 13,700 cases and 184 deaths have been recorded since late 2023, raises concerns about cross-border transmission. Morocco's outbreak has been most intense in regions such as Tanger–Tétouan–Al Hoceïma, Fès–Meknès, and Souss-Massa, all of which border or are near northern Algeria. According to the WHO, Algeria has reported 488 confirmed measles cases so far in 2025. While this does not indicate widespread national transmission, it highlights the need for continued vigilance. Algeria's measles vaccination coverage is relatively high, with MCV1 at 88% and MCV2 at 92% based on recent WHO/UNICEF estimates. However, these rates remain just below the 95% threshold required for herd immunity, leaving certain areas, particularly border regions and under-immunized communities, vulnerable to outbreaks. Ongoing surveillance and targeted immunization efforts are essential to prevent further spread.

SUDAN: As of July 2025, Sudan is facing a severe measles outbreak amid the collapse of its health system due to ongoing civil conflict. Since June 2024, nearly 10,000 suspected measles cases have been treated by Médecins Sans Frontières (MSF) across conflict-affected areas of Darfur, including Rokero, Forbrenga, East Jebel Marra, and Sortony. Most cases involve children under five, with high hospitalization rates and at least 35 confirmed measles-related deaths. In some regions, over 70% of affected children were unvaccinated, highlighting the breakdown of routine immunization. Sudan's vaccination coverage has plummeted during the war, with MCV1 dropping from ~75% in 2022 to just 57% in 2023, and MCV2 coverage even lower. Health access remains critically limited, with more than 80% of health facilities in conflict zones non-functional and 156 verified attacks on health infrastructure since the war began in April 2023.

The outbreak is driven by a combination of conflict-related displacement, malnutrition, vaccine gaps, and the near-total collapse of health services in many areas. In high-risk localities such as Dongola, data show that even among reported measles cases, 75% were unvaccinated. Despite efforts from WHO and MSF, including emergency vaccination campaigns reaching thousands of children in Darfur, operational challenges like insecurity, vaccine shortages, and road access continue to hinder the response. With an estimated 700,000 zero-dose children and over 30 million people in need of humanitarian assistance, Sudan's measles outbreak reflects the fragility of its public health infrastructure and the urgency of expanded international support.

SOURCES: WHO, WHO2, WHO3, UNICEF, WPRO, UNICEF, NIGERIA CDC, GAVI, Hespress Morocco News, MMWR Morbidity and Mortality Weekly Report, MSF, ReliefWeb, UNICEF Situation Report

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.

Yale MPH Student Contributors: Our semester has come to a close. Congratulations to all our graduates who worked tirelessly on this report throughout the semester. Over the summer months, volunteers will step in to continue the reports.

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Shoa Moosavi (Editor)

Bryn Redal (Contributor)