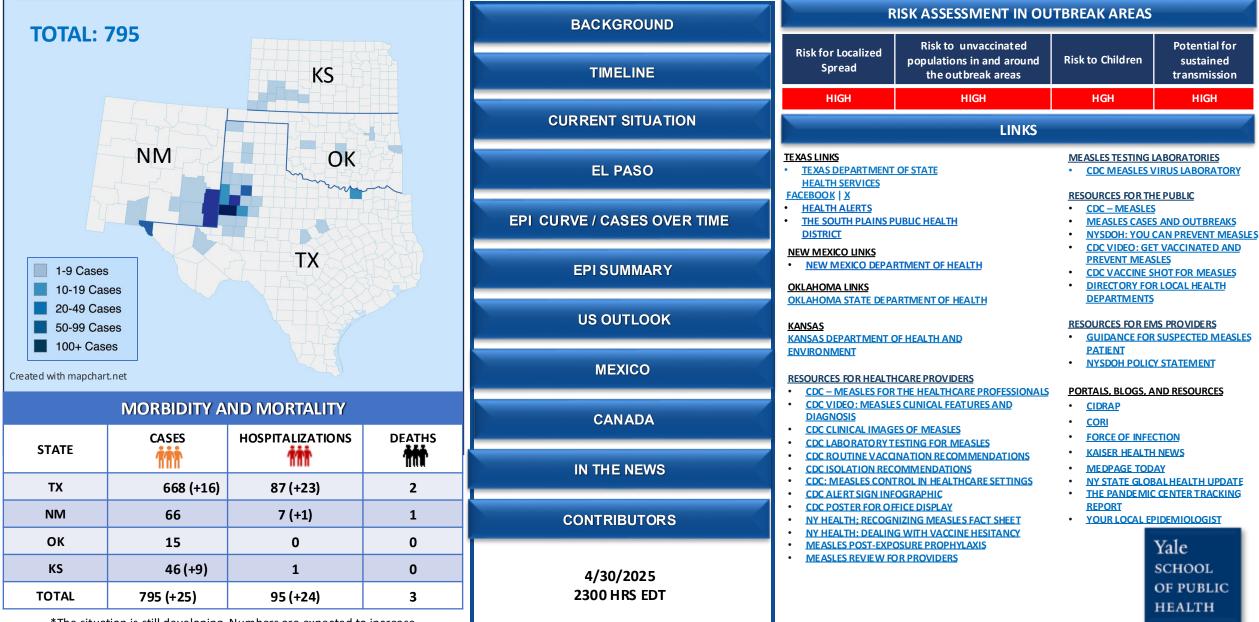
YALE SCHOOL OF PUBLIC HEALTH - ESF-8 VIRTUAL MEDICAL OPERATION CENTER SPECIAL REPORT

MEASLES OUTBREAK - SOUTHWEST U.S. - 2025



*The situation is still developing. Numbers are expected to increase.

BACKGROUND

TYPE OF PUBLIC HEALTH EMERGENCY: LARGE REGIONAL MEASLES OUTBREAK

MEASLES CASES IN 2025 - CDC

OVERVIEW:

A measles outbreak originating in **West Texas** has spread in the US to **New Mexico**, **Oklahoma**, and **Kansas**, resulting in **95 hospitalizations** and **3 confirmed deaths** — including **two previously healthy children** in Texas and **one adult** in New Mexico. These are the **first U.S. measles deaths since 2015**, and the **first pediatric deaths since 2003**. Genetic and epidemiological evidence suggests this outbreak has also seeded the current outbreak in Chihuahua, Mexico, indicating clear cross-border transmission.

THE VIRUS:

<u>Measles</u> 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 distinctive **red, blotchy rash**. The virus can remain **airborne or infectious on surfaces for up to two hours**, contributing to its rapid spread.

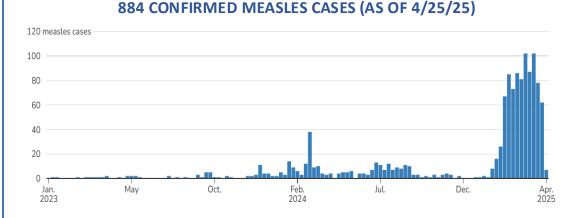
Despite being preventable through the <u>MMR</u> (measles, mumps, and rubella) vaccine, outbreaks continue to occur in under-vaccinated communities, leading to severe health outcomes and increased transmission risk (<u>CDC</u>).

FACTORS DRIVING THIS OUTBREAK:

- Low vaccination rates
- High levels of vaccine hesitancy and misinformation
- Community mistrust in public health authorities, heightened by post-pandemic attitudes

PUBLIC HEALTH RESPONSE:

- Emergency vaccination campaigns and targeted outreach.
- Focused messaging to combat misinformation and rebuild community trust.
- Multi-sector coordination involving schools, healthcare providers, and local organizations.



As of April 24, 2025, 30 jurisdictions reported **884 confirmed** measles cases: Alaska, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Montana, New Jersey, New Mexico, New York City, New York State, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia, and Washington.

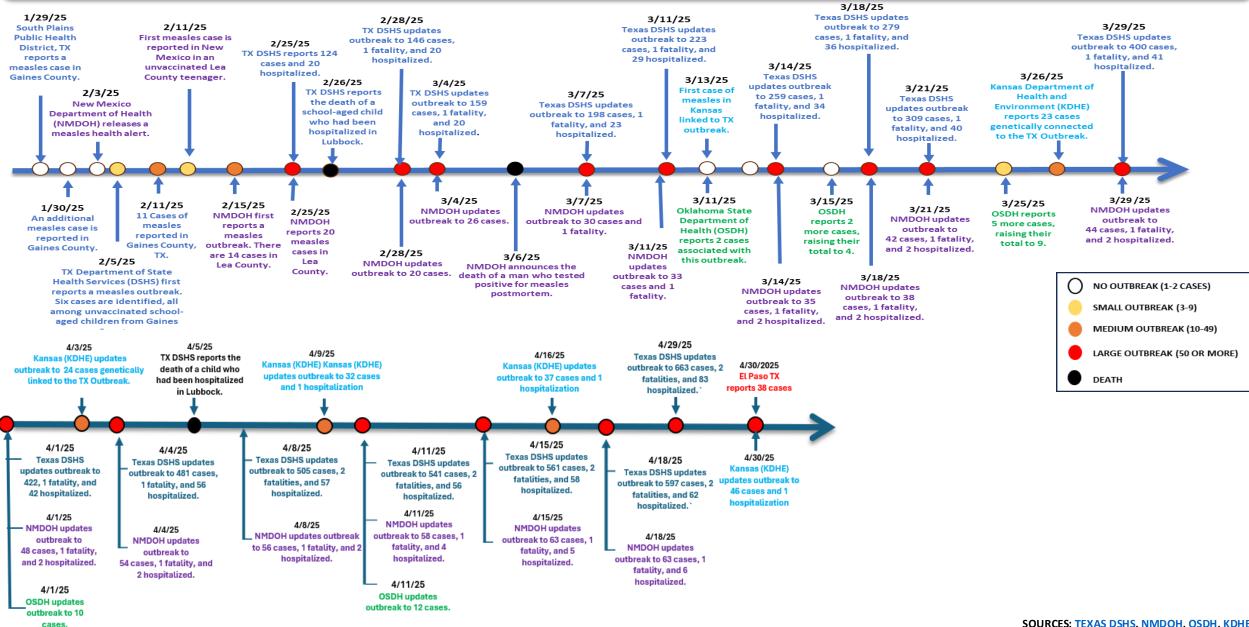
Age Under 5 years: 266 (30%) 5-19 years: 338 (38%) 20+ years: 261 (30%) Age unknown: 19 (2%)

Percent Hospitalized, by Age Group Under 5 years: 20% (53 of 266) 5-19 years: 7% (22 of 338) 20+ years: 7% (17 of 261) Age unknown: 11% (2 of 19) Vaccination Status Unvaccinated or Unknown: 97% One MMR dose: 1% Two MMR doses: 2%

Deaths: 3

There have been <u>2 confirmed</u> <u>deaths</u> from measles, and <u>1 death</u> <u>under investigation</u>

TIMELINE (JANUARY – APRIL 2025)



CURRENT SITUATION

As of 4/30/25, the Southwestern outbreak has 795 cases, including confirmed and pending cases across Texas, New Mexico, Oklahoma, and Kansas. Experts warn this is likely a severe undercount. The situation remains fluid, with case numbers expected to rise. Experts project the outbreak could last up to a year.

CURRENT CASE COUNT: 795 (As of 04/30/2025)

- **Texas: 668(+16)**(62% of these cases are in Gaines County).
- New Mexico: 66)(92.4% of the cases are from Eddy County)
- Oklahoma: 15
- Kansas: 46 (+9)(32% of the cases are from Gray County)

HOSPITALIZATIONS: 95(+24)

- **Texas: 87 (+23)** This is 13.02% of all TX cases. (The increase is due to delays reporting)
- New Mexico: 7 (+1) This is 10.6% of all NM cases.
- Kansas: 1 This is 2.7% of all KS cases.

DEATHS: 3

- Texas: 2 This is 0.31% of all cases
- New Mexico: 1 This is 1.54% of all cases

US NATIONAL CASE COUNT: 957 (Confirmed and suspected):

INTERNATIONAL SPREAD (As of 4/26/2025)

- Mexico 807 (+183)
 - Chihuahua, Mexico: 786 (+181) cases, 4 hospitalizations, 1 fatality
- Canada: 1261 (This reflects Ontario's Outbreak, which began 11/24)
 Ontario, Canada 1020 (+109) cases, 69 hospitalizations.

Measles has been confirmed in 6 countries in the WHO Region of the Americas, an 11-fold increase compared to the same period in 2024. The majority of cases have occurred among people between 1 to 29 years, who are either unvaccinated or have an unknown vaccination status. (WHO)

TEXAS:

- The outbreak continues, though it appears to be slowing in some areas. As of 4/29/2025, DSHA estimates that fewer than 10 confirmed cases—approximately 1.0%—remain actively infectious, based on rash onset dates within the past week. However, this figure may underestimate the true number due to reporting delays.
- Gaines County remains the epi center of the outbreak with 396 cases, which accounts for 60% of the outbreak.
- The outbreak has been exacerbated by declining vaccination rates, particularly in communities with high nonmedical exemption rates. Gaines County, for instance, has one of the highest exemption rates in the state, with nearly 1 in 5 incoming kindergartners in the 2023–2024 class not having received the MMR vaccine.
- DSHS has identified "designated outbreak counties" with ongoing measles transmission: Cochran, Dallam, Dawson, Gaines, Garza, Lynn, Lamar, Lubbock, Terry, and Yoakum.
- El Paso County is experiencing a significant uptick in measles. Since 4/4/2025, the county has reported 38 confirmed cases with 3 hospitalizations. The majority of these involve unvaccinated individuals or those with unknown vaccination histories.

NEW MEXICO: Cases appear to be stabile.

OKLAHOMA: Cases appear to be stabile.

KANSAS:

- As of 4/30/2025, Kansas is experiencing a growing measles outbreak, with 46 confirmed cases reported by the Kansas Department of Health and Environment (KDHE)—a 24% increase from the 37 cases reported two weeks earlier. It is highly likely that the number of cases is being under reported.
- The outbreak remains localized to eight counties in the southwestern part of the state: Finney, Ford, Grant, Gray, Haskell, Kiowa, Morton, and Stevens.
- Most cases (38) involve individuals under the age of 18, including 28 children under 10. Of the 46 confirmed cases, 39 were unvaccinated, three were fully vaccinated, one had an incomplete vaccination series, and vaccination status is unknown for the remaining three.
- The first case was reported on 3/14/2025 in Stevens County. Genetic sequencing links the outbreak to the larger Texas cluster, particularly in Gaines County, though the precise exposure source remains unclear.

SOURCES: TEXAS DSHS, NMDOH, OSDH, KDHE, MEDICHIHUAHUA WHO - MEASLES - REGION OF THE AMERICAS 4/28/2025

CURRENT SITUATION

AGES OF CASES:

| WEST TEXAS OUTBR | EAK | | | |
|----------------------|----------------------------|----------------------|--------------|------------------|
| 0-4 Years | 5-17 Years | 18+ Years | Pending | Total |
| 200 (6) (30%) | 246 (3) (37%) | 198 (8) (29%) | 24 (-1) (4%) | 668 (+16) |
| NEW MEXICO OUTB | REAK | | | |
| 0-4 Years | 5-17 Years | 18+ Years | Pending | Total |
| 18 (+1) (28%) | 19 (29%) | 28 (+1) (43%) | 0 | 65 (+2) |
| KANSAS OUTBREAK | | | | |
| 0-4 Years | 5-17 Years | 18+ Years | Pending | Total |
| 14 (+3) (30%) | 24 (+5) (51%) | 8 (+1) (19%) | 0 | 46 (+9) |
| OKLAHOMA OUTBREAK | | | | |
| 0-4 Years | 5-17 Years | 18+ Years | Pending | Total |
| 12 Cases C | confirmed, 3 Probable – no | ages provided | 3 | 15 |

Genotype D8 Lineage: MVs/Ontario.CAN/47.24 — Cross-Border Circulation Summary (2024–2025)

The detection of measles virus lineage MVs/Ontario.CAN/47.24 across Canada, the United States, and Mexico supports the hypothesis of a travel-associated importation event—likely originating in Canada or involving individuals with recent international travel—in late 2024 or early 2025.

Initially identified in Ontario, this lineage has since been documented in multiple provinces on Canada, US states, including Texas, New Mexico, Oklahoma, Kansas, and northern Mexico, particularly Chihuahua and Durango.

Its wide geographic spread and consistent genetic profile highlight the persistence of cross-border transmission, especially in regions with low vaccination coverage. Many of the reported cases

have occurred in communities with high rates of nonmedical exemptions or limited access to immunization, where population immunity is insufficient to prevent sustained outbreaks.

The emergence of MVs/Ontario.CAN/47.24 in both rural and urban settings underscores gaps in regional surveillance systems and the urgent need for improved coordination across borders in outbreak detection, case investigation, and immunization efforts. Its continued spread serves as a critical reminder of measles' high transmissibility and the threat posed by even a single imported case in under immunized populations.

CANADA: Genotype D8, specifically lineage MVs/Ontario.CAN/47.24, was first detected in Ontario in late 2024. By early 2025, the lineage had been identified in 57 confirmed cases, primarily in Ontario, with additional cases reported in Quebec, Manitoba, and British Columbia. Most cases occurred among unvaccinated individuals. (Source: PAHO)

UNITED STATES: Although specific lineages are not always reported, genotype D8 has been the predominant strain in recent outbreaks across Texas, New Mexico, Oklahoma, and Kansas. Genetic sequencing has linked the virus circulating in the U.S. to the same D8 lineage found in Canada and Mexico, suggesting cross-border transmission. However, the precise source of initial introduction remains undetermined. (Source: WHO)

MEXICO: In February 2025, a case of measles in **Chihuahua** was confirmed to be of **genotype D8**, **lineage MVs/Ontario.CAN/47.24**. Contact tracing and enhanced surveillance efforts identified **17 additional related cases**, confirming **local transmission** of this lineage. (Source: <u>El Diario de Chihuahua</u>, <u>PAHO</u>)

CURRENT SITUATION: EL PASO

| CONFIRMED CASES BY AGE | | | |
|------------------------|-------|------------------|--------|
| AGE | CASES | HOSPITALIZATIONS | DEATHS |
| 0-4 | 11 | 1 | 0 |
| 5-17 | 2 | 0 | 0 |
| 18+ | 25 | 3 | 0 |
| TOTAL | 38 | 4 | 0 |

HOSPIT

HOSPITALIZATION STA

| - | | | STATUS | NUMBER |
|--------|------|--------|--------------|--------|
| 3 | | 0 | UNVACCIANTED | 16 |
| 4 | | 0 | UNKNOWN | 13 |
| ALIZAT | IONS | | 1 DOSE | 6 |
| TUS | 1 | NUMBER | 2 DOSES | 3 |
| | | 1 | TOTAL | 38 |
| | | 2 | | |
| | | | | |

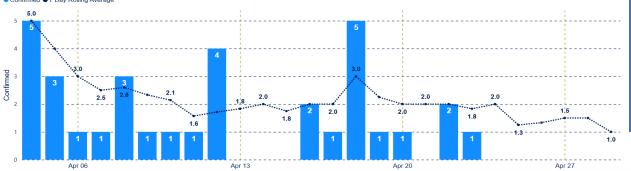
VACCINATION STATUS

Confirmed • 7 Day Rolling Average

PREVIOUSLY

CURRENT

TOTAL



- With a population of 679,000, El Paso's first 5 confirmed cases were reported on 4/4/2025. As of 4/30/2025, El Paso has reported 38 confirmed measles cases. According to the City of El Paso Department of Public Health, there are 38 confirmed measles cases in the region, with 25 of those cases involving people 18 years old and older.
- As of April 2025, the vaccination rate in El Paso County stands at 96%. However, there is reason for concern about unvaccinated pockets within the community. Based on population, this would put 27,000 individuals at risk.
- In El Paso, cross-border dynamics with Juárez, Mexico, add unique challenges. High levels of daily binational travel have contributed to the spread of measles. Through contact tracing and sequencing data, a large outbreak in the Mexican state of Chihuahua has been directly linked to the ongoing outbreak in Gaines, Texas. The genotype D8 is now confirmed on both sides of the U.S.-Mexico border.
- Public health outreach faces obstacles such as language barriers, pervasive misinformation, and concerns among undocumented populations who may avoid seeking care for fear of deportation.
- Earlier cases in El Paso involved exposures at high-traffic locations such as malls, retail stores, and restaurants, underscoring the risk of transmission in urban public spaces.
- Measles cases have been reported in three Ysleta Independent School District (YISD) high schools (Eastwood, Bel Air, and Hanks), triggering schoolwide alerts and reinforcing the need for improved vaccination record reviews and contact tracing in school settings.

THE BOTTOM LINE:

Due to their unique community vulnerabilities, the rates of measles transmission have been steadily increasing in urban areas such as Lubbock, TX, and El Paso, TX. Cases linked to public venues like schools, retail settings, and other public spaces, or congregate settings such as the county jail, reveal how urban density accelerates the risk of measles exposure. Trusted community messengers who can spread awareness about the safety and necessity of the MMR vaccine are critical at this time.

CURRENT SITUATION: VACCINATION STATUS

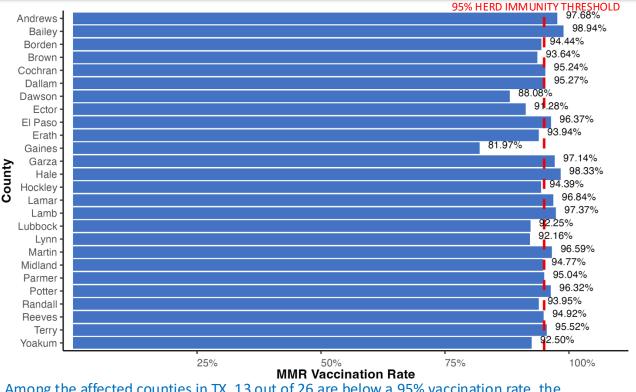
| STATE | VACCINATED | VACCINATED | UNVACCINATED/ | TOTAL |
|-------|------------|--------------|---------------|-------|
| | WITH 1DOSE | WITH 2 DOSES | UNKNOWN | CASES |
| тх | 12 | 17 | 639* | 668 |

NOTE: The TX unvaccinated/unknown category includes people with no documented doses of measles vaccine more than 14 days before symptom onset.

| STATE | VACCINATED WITH AT LEAST ONE DOSE | NOT VACCINATED | UNKNOWN | TOTAL CASES |
|-------|--------------------------------------|-------------------|---------|-------------|
| NM | 7 | 47 | 12 | 66 |

| STATE | VACCINATED WITH | VACCINATED WITH | UNVACCINATED / | TOTAL |
|-------|-----------------|-----------------|----------------|-------|
| | ONE DOSE | TWO DOSES | UNKNOWN | CASES |
| ОК | 0 | 1 | 14 | 15 |

| STATE | AGE APPROPRIATELY VACCINATED | NOT AGE APPROPRIATELY VACCINED | NOT VACCINATED | Pending Verification/ Unable to Verify | TOTAL CASES |
|-------|------------------------------------|--------------------------------------|-------------------|---|----------------|
| KS | 3 | 1 | 39 | 3 | 46 |



Among the affected counties in TX, 13 out of 26 are below a 95% vaccination rate, the recommended rate for herd immunity (SOURCE: <u>Annual Report on Immunization Status</u> and <u>CORI</u>).

BECAUSE MEASLES IS HIGHLY CONTAGIOUS, 95% OF THE POPULATION MUST BE VACCINATED TO ACHIEVE HERD IMMUNITY AND PREVENT ONGOING TRANSMISSION OF THE VIRUS.

- **TX:** Vaccination rates are low in most affected areas. In Gaines County, TX, vaccination rates are significantly below the threshold required for herd immunity, contributing to the virus's rapid spread.
- NM: NM reports that <u>94%</u> of individuals aged 18 and under in Lea County have received at least one dose of the MMR vaccine. This is slightly below the state's overall rate of 95% for the same age group.
- **OK:** For the 2023–24 school year, CDC reported Oklahoma kindergartners' vaccine exemption rate rose to 5.7%. <u>88.3%</u> of kindergarteners received the MMR vaccine.
- **KS**: Vaccination rates are low in the most affected counties in KS. The statewide vaccination rate is <u>90%</u>. In the counties reporting cases, vaccination rates are far below herd immunity, except for Finney and Grant Counties (98% and 99%, respectively).

EPI CURVE AND CASES OVER TIME

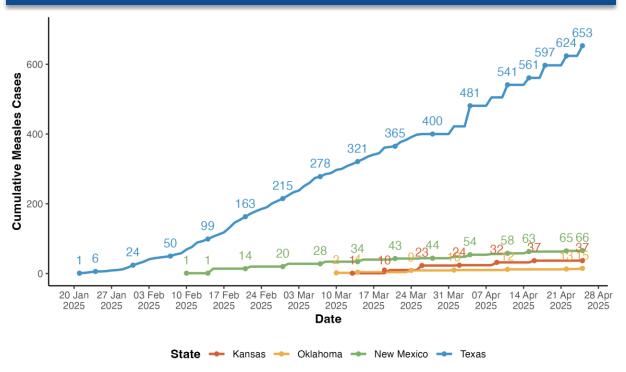
SOUTHWEST MEASLES OUTBREAK - EPI CURVE (AS OF 4/26/2025)

75 Reported Cases 25 20 Jan 27 Jan 03 Feb 10 Feb 17 Feb 24 Feb 03 Mar 10 Mar 17 Mar 24 Mar 31 Mar 07 Apr 14 Apr 21 Apr 28 Apr 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 2025 Week State Oklahoma New Mexico Kansas Texas

The number of new cases per week remains high.

- **TX:** Reported first case the week of 1/25/25. 16 new cases this week.
- NM: Reported first cases the week of 2/10/25. No new cases.
- **OK:** Reported first cases the week of 3/10/25. No new cases.
- **KS**: Reported first case on 3/13/25. 9 new cases on 4/30/2025.

SOUTHWEST MEASLES OUTBREAK – CUMULATIVE CASES OVER TIME (AS OF 4/26/2025)

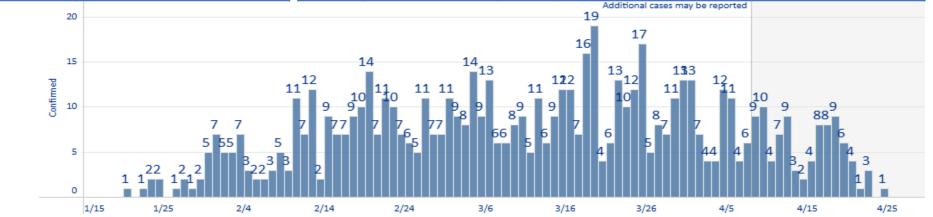


Cases are rising, but at a slower pace in some areas.

- **TX:** The number of cases has increased consistently over time, to a total of 668 cases across 26 counties.
- **NM:** A total of 66 cases have been reported in 4 counties.
- **OK:** A total of 15 cases have been reported by the OSDH.
- KS: A total of 46 cases across 8 counties have been reported by the KDHE.

EPI SUMMARY - TEXAS (n=653) AS OF 4/26

| COUNTY | MEASLES CASES (NUMBER OF NEW CASES) | % of TOTAL CASES | % KINDERGARTENERS VACCINATED (2023-2024) | # OF SCHOOL DISTRICTS IN EACH COUNTY WITH MMR BELOW 95% | 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% |
|---------|---|------------------------|--|---|---------|---|------------------------|--|---|
| Andrews | 3 | 0.32 % | 97.70% | 0 | Lamar | 17 (+3) | 1.8% | 96.84% | 0 |
| Bailey | 2 | 0.32 % | 98.94% | 0 | Lamb | 1 | 0.2% | 97.37% | 1 |
| Borden | 1 | 0.2% | 94.44% | 1 | | | | | |
| Brown | 1 | 0.2% | 93.64% | 5 | Lubbock | 48 (+1) | 7.5% | 92.25% | 8 |
| Cochran | 14 | 1.9% | 95.20% | 1 | Lynn | 2 | 0.3% | 92.16% | 2 |
| Dallam | 7 | 1.1% | 95.30% | 2 | Martin | 3 | 0.5% | 96.59% | 1 |
| Dawson | 25 | 3.7% | 88.10% | 4 | Midland | 3 | 0.5% | 94.77% | 4 |
| Ector | 10 | 1.6% | 91.30% | 5 | Parmer | 4 | 0.6% | 95.04% | 1 |
| El Paso | 38 (+9) | 3.2% | 96.37% | 8 | Potter | 1 | 0.2% | 96.32% | 3 |
| Erath | 1 | 0.2% | 93.94% | 5 | Randall | 1 | 0.2% | | 1 |
| Gaines | 396 (+3) | 61.9% | 82.00% | 3 | Kartaan | | | 93.95% | |
| Garza | 2 | 0.3% | 97.10% | 0 | Reeves | 1 | 0.2% | 94.92% | 1 |
| Hale | 5 | 0.8% | 98.30% | 2 | Terry | 59 | 8.7% | 95.52% | 2 |
| Hockley | 5 | 0.8% | 94.40% | 3 | Yoakum | 19 | 3.0% | 92.50% | 1 |



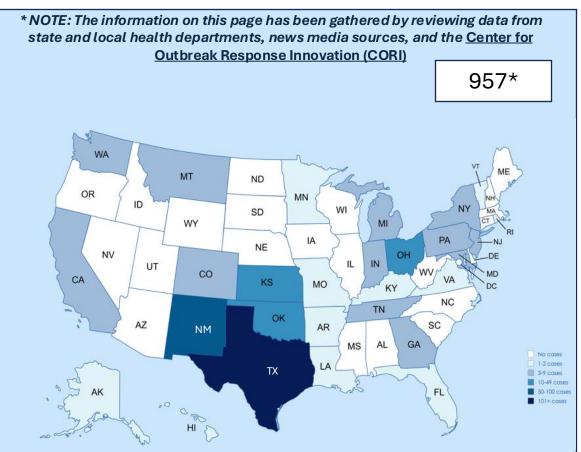
OUTBREAK CASES BY DATE OF RASH ONSET

EPI SUMMARY (KS, NM, OK)

| COUNTY | MEASLES CASES (NUMBER OF NEW CASES) | % of TOTAL CASES | % KINDERGARTENERS VACCINATED (2023-2024) | | |
|-----------------------------------|---|------------------|--|--|--|
| KANSAS (n=37) AS OF 4/23/2025 | | | | | |
| <u>Finney</u> | Between 1-5 | | 98% | | |
| Ford | Between 1-5 | | 87% | | |
| Grant | Between 1-5 | | 99% | | |
| Gray | 15 | 32.61% | 66% | | |
| <u>Haskell</u> | 8 | 21.6% | 58% | | |
| <u>Kiowa</u> | 6 | 16.2% | 92% | | |
| Morton | Between 1-5 | | 82% | | |
| <u>Stevens</u> | 7 | 18.9% | 83% | | |
| NEW MEXICO (n=66) AS OF 4/22/2025 | | | | | |
| Chaves | 1 | 1.5% | 98% | | |
| Doña Ana | 1 | 1.5% | | | |
| Eddy | 3 (+1) | 3.% | 93% | | |
| Lea | 61 | 94% | 94% | | |
| | Note: Those 18 years or younger have a 95% vaccination rate. 63% of adults have received one shot of MMR, and only 55% have received both shots, according to local health officials, though they noted that there may be vaccinated adults whose records have not been added to the system. Adults make up more than half of reported cases in New Mexico. | | | | |

| OKLAHOMA (n=13) AS OF 4/22/2025 | | | |
|---------------------------------|----|--------------------------|-------|
| Tulsa and Cherokee Nation | 15 | Insufficient Information | 89.5% |

US OUTLOOK



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 ** | 699 |
| NEW MEXICO | 66 |
| <u>KANSAS</u> | 46 |
| <u>OHIO</u> | 38 |
| <u>OKLAHOMA</u> | 15 |
| <u>PENNSYLVANIA</u> | 13 |
| CALIFORNIA | 10 |
| <u>MICHIGAN</u> | 9 |
| <u>INDIANA</u> | 8 |
| <u>TENNESSEE</u> | 6 |
| <u>COLORADO</u> | 5 |
| <u>MONTANA</u> | 5 |
| <u>WASHINGTON</u> | 5 |
| <u>ARKANSAS</u> | 4 |
| <u>NEW YORK</u> | 4 |
| <u>GEORGIA</u> | 3 |
| MARYLAND | 3 |
| NEW JERSEY | 3 |
| <u>ALASKA</u> | 2 |
| <u>FLORIDA</u> | 2 |
| HAWAII | 2 |
| LOUISIANA | 2 |
| <u>MINNESOTA</u> | 2 |
| <u>ILLINOIS</u> | 1 |
| KENTUCKY | 1 |
| MISSOURI | 1 |
| RHODE ISLAND | 1 |
| VERMONT | 1 |
| VIRGINIA | 1 |
| TOTAL | 957 |

OUTBREAKS

SMALL OUTBREAK (3-9)

MEDIUM OUTBREAK (10 - 49)

LARGE OUTBREAK (50 OR MORE)

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

As of 4/30/2025, 2300 hrs. EDT, there are approximately 957 measles cases (including confirmed and suspected cases) across 21 states.

Currently, there are **eight measles outbreaks**:

- West Texas, involving <u>26 counties</u> in **Texas**, <u>4 counties</u> in **New** 1. Mexico, <u>2 counties</u> in Oklahoma, and the <u>Cherokee Nation</u> in Oklahoma
 - 8 counties in Kansas

2.

3.

- Ashtabula and Knox Counties, Ohio
- 4. Erie County, Pennsylvania
- 5. Allen County, Indiana
- 6. Bergen County, New Jersey 7.
 - metro Atlanta, **Georgia**
- 8. Gallatin County, Montana
- Montcalm County, Michigan (linked to Ontario Outbreak) 9.
- Upper Cumberland region Tennessee 10.

** TEXAS CASES NOT ASSOCIATED WITH OUTBREAK: 31

- 1 case Atascosa County
- 1 case Brazoria County
- 1 case Collin County
 - 1 case Adult, Fort Bend (travel-related)
 - 4 cases Harris County
- 2 cases Adults, Rockwall County (travel-related)
- 1 case Shackelford
- 2 case Travis County
- 18 cases Upshur County

TEXAS CASES ASSOCIATED WITH THE OUTBREAK: 668

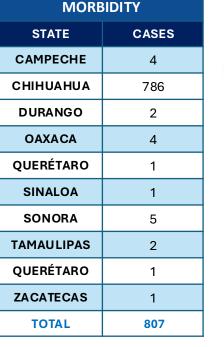
MEXICO OUTLOOK

THE MEASLES OUTBREAK IN MEXICO: OVERVIEW

- Measles Outbreak in Mexico: 807 Cases First Death Reported: Mexico is grappling with a measles outbreak. The state of Chihuahua has been hit hardest, reporting 786 cases and the country's first measles-related death — a 31-year-old unvaccinated man with diabetes and kidney complications.
- Low Immunization & Cross-Border Spread: The outbreak traces back to Texas, where
 rising anti-vaccine sentiment has contributed to increased infections. In Mexico, declining
 childhood vaccination rates particularly in Chihuahua, where coverage in some age
 groups is as low as 21.2% have heightened vulnerability. In terms of vaccination
 history, 92.4% had no vaccination history, while 3.8% had received one dose of the MMR
 vaccine, and another 3.8% had received two doses.
- The Most Affected Age Group: 25 to 44-year-olds are the most affected age group, with 34.4% of cases, followed by 5 to 9-year-olds, with 13.5% of cases.
- On 4/25/2025, the Mexican Health Ministry issued a medium-level travel alert for the United States and Canada due to a significant increase in measles cases in both countries.

| VACCINES ADMINISTERED (JAN-MAR 2025) | | |
|--------------------------------------|-----------------------|--|
| TYPE OF VACCINES | VACCINATIONS GIVEN | |
| Measles, Mumps and Rubella (MMR) | 669,209 | |
| Measles and Rubella | 46,068 | |
| Total | 715,277 | |

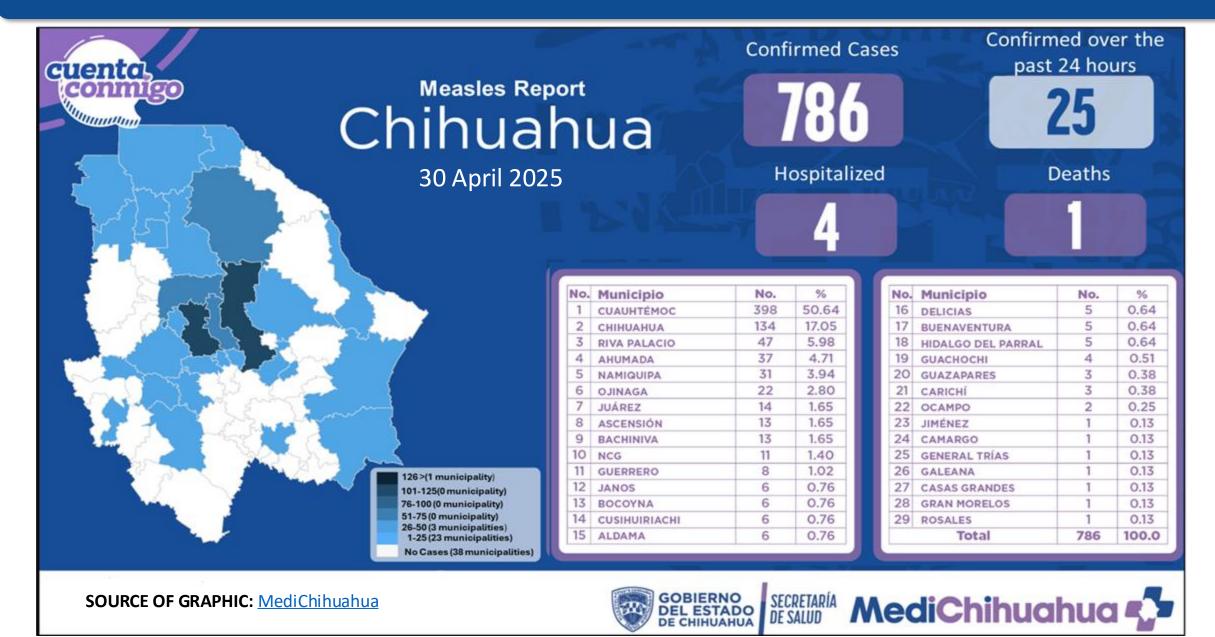
Vaccination Campaign Underway: Between January and March, over 715,000 people were vaccinated as part of the national response. Authorities have implemented "vaccine cordons," targeting healthcare workers and close contacts of confirmed cases to curb the spread. On April 15, the Secretary of Health urged the need for measles vaccination, and the triple viral vaccine against measles, mumps, and rubella will be administered during the First National Vaccination Week of 2025 from April 26th 2025 to May 3rd 2025.



*Data as of Tuesday, April 30 April 2025



MEXICO OUTLOOK: CHIHUAHUA



THE AMERICAS: CANADA



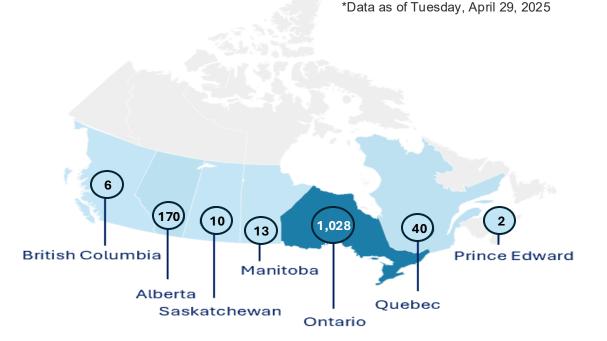


| MORBIDITY IN 2025 | | |
|----------------------|--------|--|
| PROVINCE | CASES | |
| ONTARIO | 1,020* | |
| ALBERTA | 170 | |
| ΜΑΝΙΤΟΒΑ | 13 | |
| BRITISH COLUMBIA | 6 | |
| SASKATCHEWAN | 10 | |
| QUEBEC | 40 | |
| PRINCE EDWARD ISLAND | 2 | |
| TOTAL | 1261 | |

* From October 18, 2024 to April 23, 2025, Ontario has reported a total of 1,020 measles cases (884 confirmed, 136 probable) associated with this outbreak occurring in 15 public health units

CANADA OUTBREAK:

- An ongoing outbreak of measles in Ontario has been traced back to a large gathering in New Brunswick last fall that was attended by guests from Mennonite communities. On October 18, 2024, exposure to a travel-related case in New Brunswick led to measles cases in Ontario. The Ontario outbreak continues to escalate.
- Alberta has seen a large number of cases since Easter.
- Manitoba has also reported measles cases related to this outbreak.
- New Brunswick declared their outbreak over on 1/7/2025.
- Quebec declared its outbreak on 4/22/2025 after no new cases in 32 days.



SOURCES: MANITOBA HEALTH, ALBERTA DASHBOARD, CBC, OUEBEC, PUBLIC HEALTH ONTARIO, CBC NEWS, THE GLOBE AND MAIL, SASKATCHEWAN, CBC CA MEASLES AND RUBELLA WEEKLY MONITORING REPORT

ONTARIO, CANADA OUTBREAK

| MORBIDITY AND MORTALITY | | | |
|-------------------------|-------------|------------------|--------|
| PROVINCE | CASES | HOSPITALIZATIONS | DEATHS |
| ONTARIO | 1,020 (+97) | 76 (+7) | 0 |

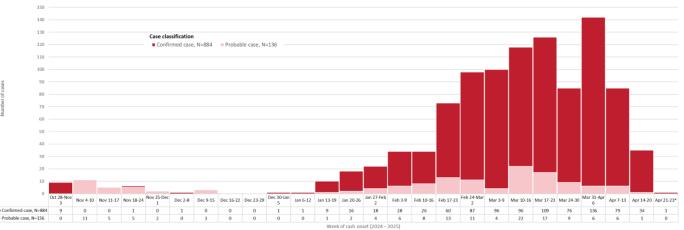
ONTARIO:

- Among all outbreak cases 74.6% (n=761) were in infants, children and adolescents, while 24.9% (n=254) were in adults, and 0.5% (n=5) had unknown age.
- 2.2% (n=22) of outbreak cases were pregnant.
- 98.4% (n=1,004) of outbreak cases were born in or after 1970.
- Among infants, children and adolescents, 95.3% (n=725) were unimmunized, while among adults, 61.0% (n=155) were unimmunized.
- 76 outbreak cases have required hospitalization. Among all hospitalizations, 72 were unimmunized, including 57 children.

IMMUNIZATION STATUS OF MEASLES OUTBREAK CASES BY AGE GROUP: OCTOBER 28, 2024 - APRIL 23, 2025 100% 90% 80% 70% 60% of cases 50% 28 40% 30% 20% 10% 0% <1 1-4 5-9 10-19 20-39 40+ Unknown 0.0% 5.1% 1.9% 2.8% 14.7% 31.7% 2 or more doses 0.0% 0.0% 0.8% 2.4% 20.4% 9.5% 1 dose 0.0% 1.5% 0.8% 0.4% 2.1% 3.2% Unimmunized 100.0% 93.4% 96.6% 94.4% 62.8% 55.6%

Age (years)

NUMBER OF MEASLES CASES BY WEEK OF RASH ONSET, 10/28/2024 - 04/23/25



partial week up to April 23, 2025

SOURCES: PUBLIC HEALTH ONTARIO

IN THE NEWS

AS MEASLES CASES SURGE, MEXICO ISSUES A US TRAVEL ALERT – WIRED: As the US struggles to contain its worst measles outbreak in years, cases have spilled into Mexico. In an <u>April 25</u> report, Mexico's Ministry of Health reported 583 confirmed cases in the country this year, with 560 recorded in the border state of Chihuahua. On April 27, the Chihuahua Health Secretariat pushed the state's number of confirmed cases even higher, to 713. (Carbajal, 4/29/2025)

HOW A SMALL DROP IN VACCINATION COULD SEE MEASLES BECOME ENDEMIC AGAIN -

MEDICAL XPRESS: A new <u>modeling study</u> published in *JAMA* sounded the alarm: recent drops in childhood vaccination rates could reignite diseases that were nearly extinguished. The researchers used a simulation to predict the effect of falling vaccination coverage for measles, rubella, polio and diphtheria. Even at current coverage, measles alone could soon infect more than 850,000 people in the US every year, leading to over 2,500 deaths annually. The study also warned how quickly the situation could get worse. A further 10% drop in vaccination rates could lead to more than 11 million cases annually. (Theodosiou, Ho, Jones, 4/29/2025)

CHIHUAHUA BECOMES EPICENTER OF MEASLES OUTBREAK IN MEXICO – BORDER REPORT:

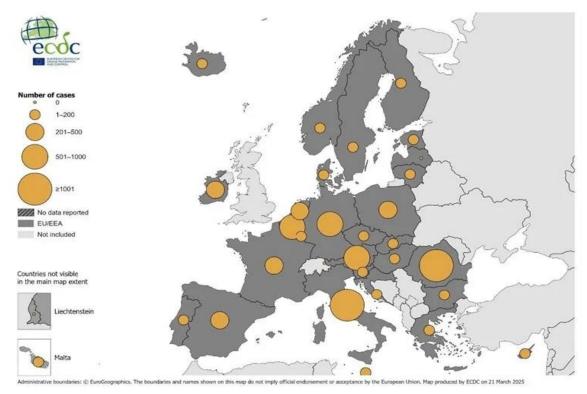
Mexico is experiencing a measles outbreak, and the northern border state of Chihuahua is at the epicenter. Earlier, state authorities <u>said</u> most patients came from Cuauhtemoc's regional agricultural center and surrounding Mennonite camps. He linked the outbreak to poor vaccination rates. So far, 542 of the confirmed cases (93%) involve unvaccinated individuals, with an almost equal number of men and women affected, and with the largest group of patients (35.7%) being between the ages of 24 and 35. Children ages 1 to 4 make up the next highest cluster, at 13.9% of the total. (Resendiz)

THE BRAINWASHING CAMPAIGN THAT IS MEASLES MISINFORMATION - SCIENTIFIC

AMERICAN: A long-running nationwide brainwashing campaign, conducted in plain sight, now comes to its deadly culmination. The predictable consequence—reviving a preventable childhood disease in the U.S.—is at hand. With two children dead in Texas, an adult dead in New Mexico and nearly 900 confirmed cases of measles across 25 states, we are now at risk of a preventable, <u>dangerous disease</u> becoming endemic <u>once more</u> within a generation. A terrifically infectious disease, measles requires <u>roughly 95 percent of people being vaccinated</u> to stop its spread, and the U.S. has <u>been below that since 2022</u>. (Vergano, 4/40/2025)

MEASLES MAKES A DEADLY COMEBACK IN EUROPE AS VACCINE GAPS WIDEN - NEWS

MEDICAL: A dramatic spike in measles cases across Europe in 2024, driven by low vaccination rates and widening immunity gaps, has reignited urgent calls for catch-up immunization and strengthened disease surveillance. In 2024, measles cases surged across Europe, reaching the highest levels seen in decades. A recent report by the *European Centre for Disease Prevention and Control (ECDC)* discussed this alarming rise in measles cases, the factors contributing to outbreaks, and the urgent strategies needed to prevent future epidemics. (Sidharthan, 4/29/2025)



Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

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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