Understanding Measles

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Health & Human Services and Education and Unhoused & Shelter Committee
Attachment # 1

Why we are concerned...

- For years, measles was considered a disease of the past. In the year 2000, the United States officially eliminated measles due to widespread vaccination efforts.
- However, in recent years, we've seen a resurgence. New York City has already reported measles cases in 2024 and 2025.
- The last major outbreak in 2019 in NYC led to over 600 cases, primarily in under-vaccinated communities.
- Measles is not just a rash. It can lead to life-threatening complications, even in previously healthy individuals.
- Measles is very contagious and dangerous, but we can stop the spread and prevent future outbreaks!

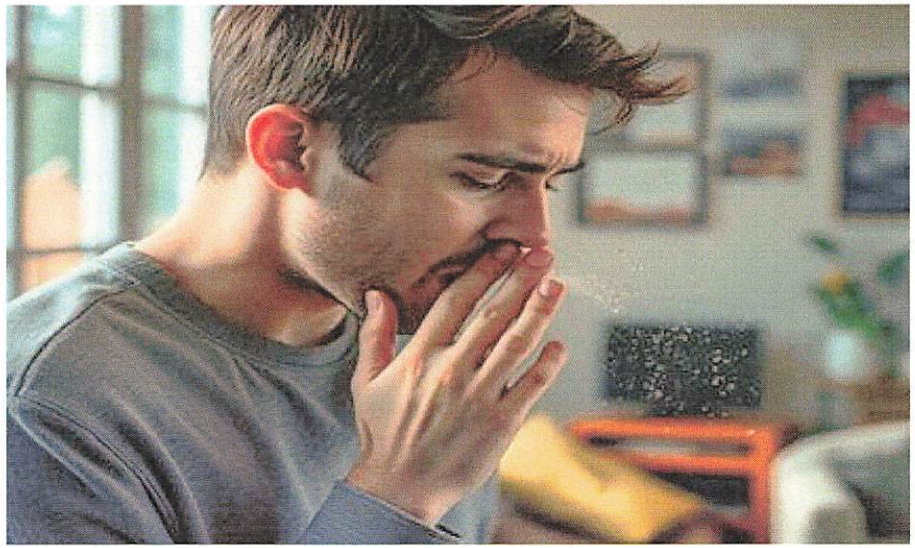
Agenda

- Introduction to Measles
- Symptoms of Measles
- Complications of Measles
- Measles Outbreaks and Vaccine Hesitancy
- Prevention and Vaccination
- Conclusion: Importance of Awareness

What is Measles?

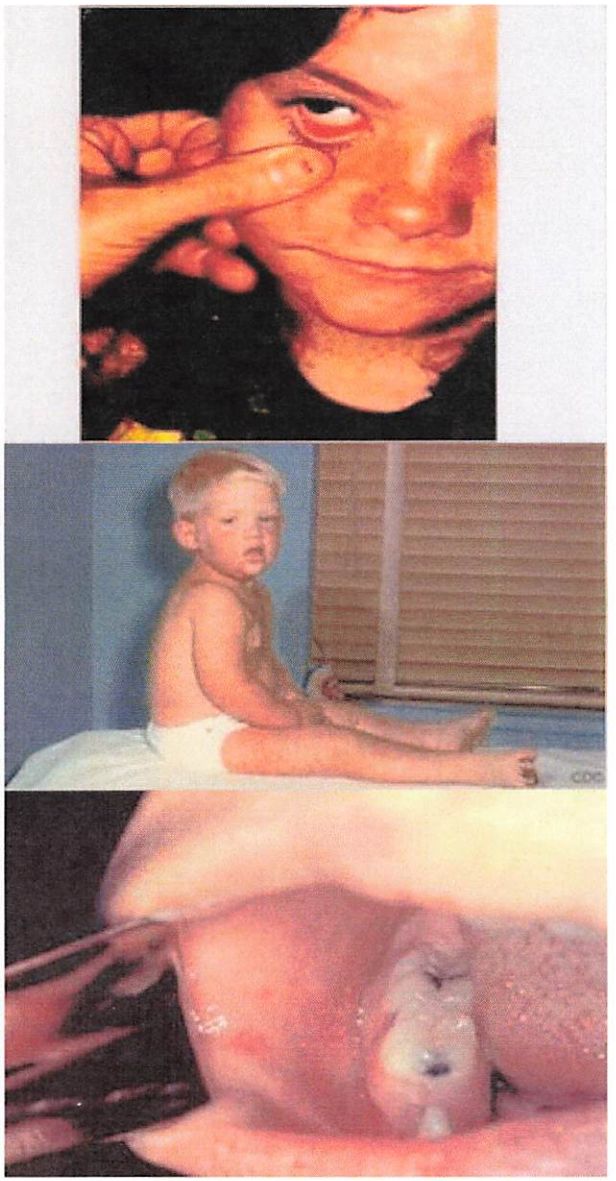
Measles is very contagious

- **Measles is one of the most contagious viruses known - more contagious than Influenza, Covid, and Chicken Pox!**
- It's known for its distinctive red rash and high fever.
- Primarily affects children but can also impact unvaccinated adults.
- It spreads through respiratory droplets when an infected person coughs, sneezes or even breathes.
- Measles can remain in the air and on surfaces up to 2 hours, making it easy to contract in crowded places.
- Measles can be transmitted from 4 days before the rash appears until 4 days after it emerges.



Significance and Awareness

- Despite the availability of vaccines, measles remains prevalent, especially in unvaccinated populations.
- Measles can lead to severe complications, particularly in young children, including pneumonia, encephalitis and death.
- **Raising awareness about measles and vaccination is crucial for public health.**



Symptoms of Measles

- Measles typically begins with high fever, often reaching up to 104°F (40°C).
- Symptoms usually begin 7 to 14 days after infection.
- A cough, runny nose, and red eyes (conjunctivitis) are common early symptoms.
- A distinctive red, blotchy rash usually appears 3-5 days after the first symptoms, starting at the head and spreading downwards.
- Koplik spots, small white spots inside the mouth, can appear 1-2 days before the rash.
- Symptoms generally last about 7-10 days, with the rash fading after a few days.

Complications of Measles

- Most people with measles recover, but some suffer severe complications, especially young children, pregnant women, and those with weakened immune systems.
- Common complications include ear infections (1 out 10 children infected) and diarrhea (1 out 10 children infected).
- People at greatest risk are children younger than age 5, adults older than age 20, pregnant women and people with weakened immune systems.

Severe Complications in Children and Adults

Hospitalization	About 1 in 5 unvaccinated people in the U.S. who get measles is hospitalized.
Pneumonia	Measles can lead to pneumonia, which is a serious lung infection. This is one of the most common complications and can be life-threatening. **Pneumonia occurs in 1 in 20 children with measles and is the most common cause of death from measles in young children.**
Encephalitis	Encephalitis, or brain inflammation, occurs in about 1 in 1,000 cases and can cause seizures and permanent brain damage, **leaving children deaf or disabled.**
Blindness	Measles can cause severe eye infections that may lead to permanent blindness, particularly in malnourished children.
Death	Nearly 1 to 3 of every 1,000 children who become infected with measles will die from respiratory and neurologic complications.
Complications uring pregnancy	If you are pregnant and have not had the MMR vaccine, measles may cause premature delivery or a low-birth-weight infant.
Long-term Risks	Subacute sclerosing panencephalitis (SSPE) is a rare but fatal condition that can develop 7 to 10 years after measles infecti on, affecting brain function.

Measles Outbreaks and Vaccine Hesitancy

Rising Measles Cases

Measles in NYC : In 2019, NYC had its largest measles outbreak in decades, with over 600 cases. The outbreak occurred mostly in Brooklyn and Queens, where vaccine coverage had fallen below the necessary levels. The NYC Health Department spent over $6 million responding to the outbreak. Now, in 2024 and 2025, we are again seeing new cases.

Vaccine Hesitancy Factors

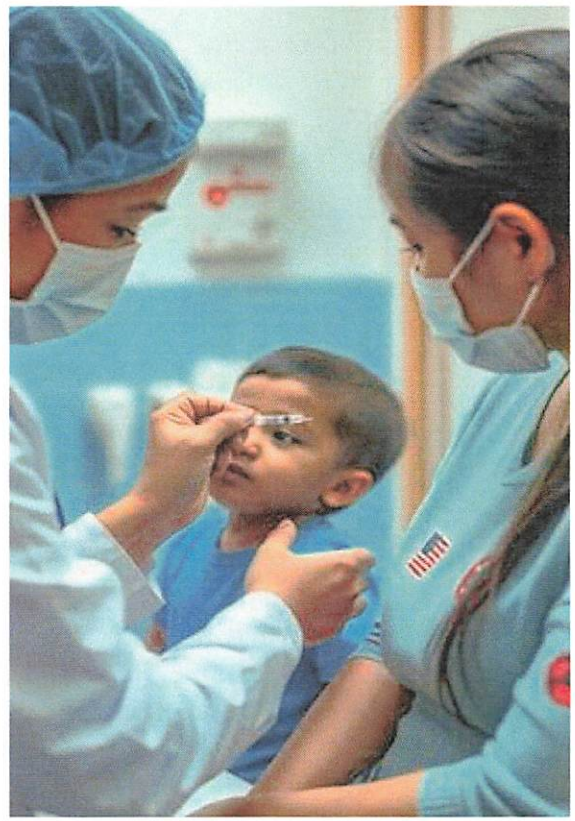
One of the main reasons some parents hesitate to vaccinate is the false belief that the MMR vaccine causes autism. This claim came from a fraudulent 1998 study that was later fully retracted. Since then, over 25 large studies have proven there is no link between MMR and autism. A 2019 study involving 650,000 children found no increased risk of autism after vaccination. The real risk is not getting vaccinated : unvaccinated children are 35 times more likely to get measles.

Misinformation, religious beliefs, and distrust in healthcare systems contribute to vaccine hesitancy among various populations. **The idea that Vitamin A can be used to prevent Measles infection is one such example of misinformation.**

https:/Vitamin A + Measles Myths & What Actually Prevents Measles | AAP/youtu.be/J7ZoXJs-ryk

Strategies to Increase Vaccination

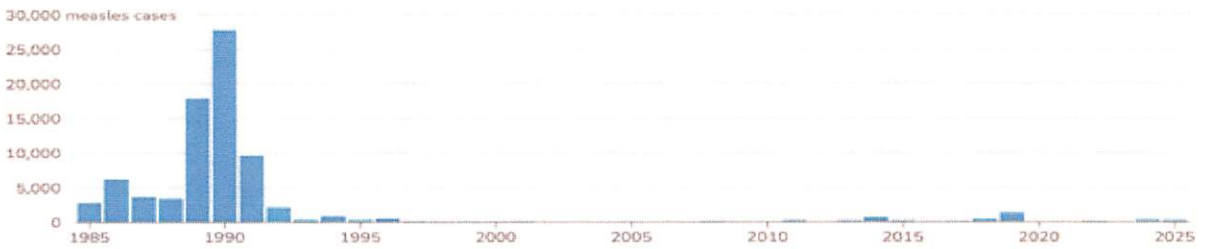
Community education, government policies, and partnerships with local leaders are key to improving vaccination rates.



Yearly measles cases

as of March 6, 2025

2000–Present* 1985–Present*



Data Table +

Download Data (CSV)

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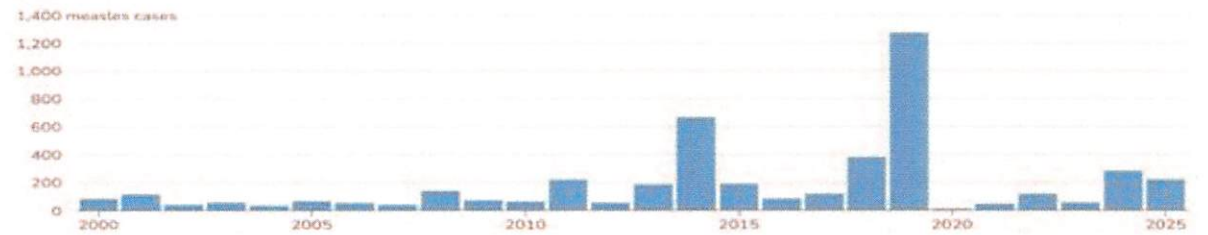

Data Table +

Download Data (CSV)

Measles activity is increasing in parts of the United States and Canada in 2025. In 2024, there were no reported deaths. To date in 2025, there are currently 2 reported deaths - 1 in an unvaccinated child in Texas and the other in an unvaccinated adult in New Mexico.

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Commissioner

NYC Health

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Michelle Morse, MD, MPH
Acting Health Commissioner

DATE: February 26, 2025

TO: Hospitals, Laboratories, Emergency Medicine, Critical Care, Family Medicine, Pediatrics, Adolescent Medicine, Internal Medicine, Infectious Disease, Infection Control Practitioners, Urgent Care, Primary Care Providers, Director of Nursing, Local Health Departments

FROM: New York State Department of Health (NYSDOH), Division of Vaccine Excellence and the New York City Department of Health and Mental Hygiene (NYCDOHMH), Bureau of Immunization

HEALTH ADVISORY:
Measles Activity in the United States and Canada

Summary
Measles activity is increasing in parts of the United States and Canada in 2025.

- The Texas Department of State Health Services is reporting an outbreak of measles in the South Plains Region of Texas, with 124 cases as of February 25, 2025. Only five of the persons were vaccinated, 18 patients have been hospitalized and there has been one death.
- The New Mexico Department of Health is reporting an outbreak of measles in Lea County, near Gaines County, Texas. As of February 25, 2025, 9 cases have been identified.
- The Public Health Agency of Canada has reported 44 cases of measles in 2025, 31 cases in Ontario and 13 in Quebec. Thirty-three (33) persons were unvaccinated or had unknown vaccination status and four patients have been hospitalized.
- The New Jersey Department of Health has reported 3 cases of measles among unvaccinated Bergen County residents as of February 20, 2025.
- The NYCDOHMH has reported two unrelated cases of measles since the beginning of 2025. During this time, there have been no cases identified in New York State outside of New York City.
- "Immune amnesia," or the resetting of the immune system, can occur among persons who are infected with measles. This can cause increased susceptibility to other infectious diseases after a measles infection.
- The measles, mumps and rubella (MMR) vaccine, which includes two doses, is 97% effective at preventing measles. Communities develop herd immunity when at least 95% of residents are vaccinated.
- MMR vaccination rates by NYS county and zip code (excluding NYC) are available here.

PREVENTION

Measles is preventable with the MMR vaccine.
Vaccination is the most effective way to protect children and communities from measles and its serious complications.

- The MMR Vaccine is one of the most effective vaccines in history.
- One dose = 93% protection. Two doses = 97% protection. Most people who receive both doses will have lifelong immunity. CDC recommendations include: First dose at 12-15 months, Second dose at 4-6 years. For unvaccinated adults, it's not too late—the CDC recommends at least one dose for those without immunity.
- Before international travel, you should plan to be fully vaccinated with 2 doses of the MMR vaccine at least 2 weeks before you depart (infants 6 months and older can receive a pre-travel dose and children between the ages of 1 and 4 can receive their 2nd dose early).
- High vaccination rates create herd immunity, protecting vulnerable populations.

Further Preventative Measures

- Encourage good hygiene practices like handwashing.
- Avoid close contact with infected individuals during outbreaks.
- Stay informed about vaccination schedules and updates.

https://www.youtube.com/watch?v=wuXIeWGn7kE

Awareness and prevention are key to eliminating measles!

Understanding the symptoms, complications, and the importance of vaccination can significantly reduce the incidence of measles.

It is crucial for parents and caregivers to stay informed and ensure their children are vaccinated to protect their health and the health of the community.

References and useful resources for parents and the community include:

https://www.cdc.gov/measles/index.html

https://www.health.ny.gov/diseases/communicable/measles/

https://www.healthychildren.org/English/health-issues/vaccine-preventable-diseases/Pages/Measles.aspx

https://www.nfid.org/resource/frequently-asked-questions-about-measles/