



Vaccine-Preventable Diseases Surveillance Summary, 2024

Wisconsin Immunization Program

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Introduction

Wisconsin's Immunization Program is responsible for collecting surveillance data on vaccine-preventable diseases (VPDs) for the purposes of determining disease impact, assessing trends in disease occurrence, characterizing affected populations, prioritizing control efforts, and evaluating prevention strategies in Wisconsin.

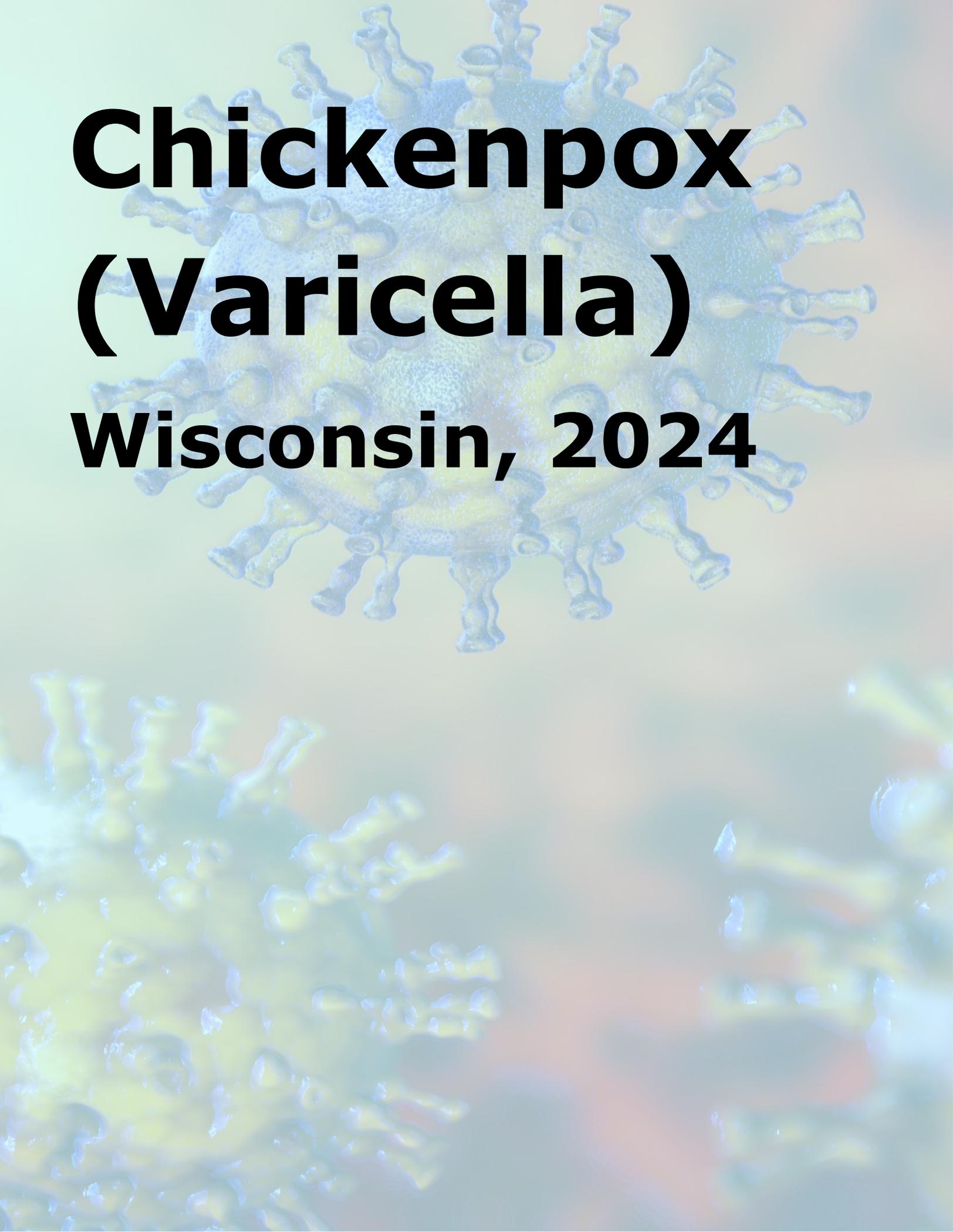
[Wisconsin state statute § 252.05](#) and [Wisconsin Administration Code chapter DHS 145](#) requires healthcare providers and laboratories to report specified [communicable diseases](#) and conditions to the local health officer electronically or by mail or fax within 24 to 72 hours after identification of a known or suspected case among Wisconsin residents.

This report summarizes information on select VPDs among Wisconsin residents reported to the Wisconsin Department of Health Services (DHS) through the Wisconsin Electronic Disease Surveillance System (WEDSS).

Vaccines are one of the best ways to protect the health of our community. Before vaccines, many people died from diseases we now can prevent. However, routine vaccination rates have declined in recent years due to a variety of factors, including the COVID-19 pandemic. During the pandemic, many children and adolescents fell behind schedule for routine vaccines, leaving our communities vulnerable to VPDs.



The viruses and bacteria that cause these VPDs still exist and can still cause serious illnesses or even death. It is critically important for everyone to get the vaccines they need on time to stay healthy and keep our communities safe from VPDs.



Chickenpox (Varicella)

Wisconsin, 2024

Summary

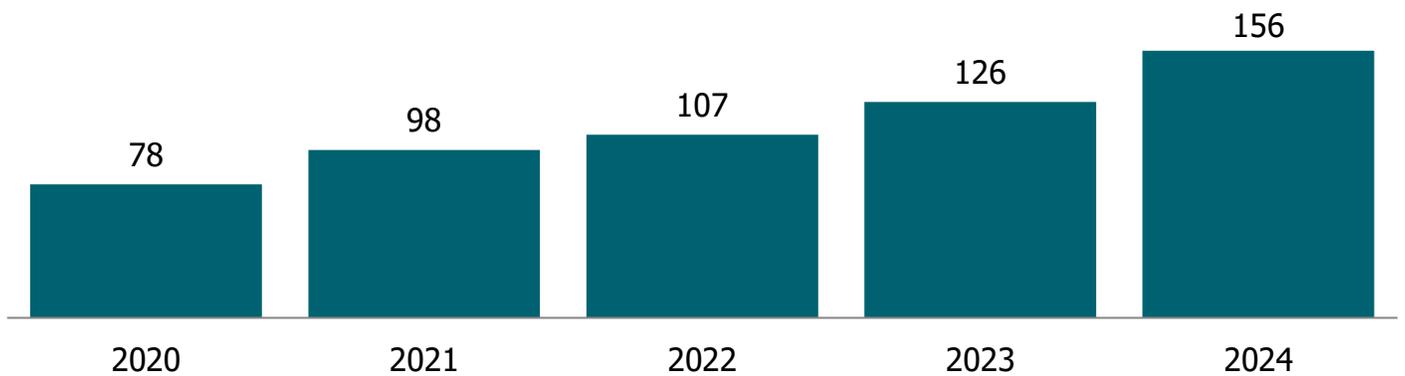
Chickenpox, or varicella, affects people of all ages in Wisconsin and the United States. Chickenpox can result in serious complications, especially for infants, adolescents, adults, pregnant people, and immunocompromised people. The varicella vaccine prevents most cases and complications.

2024 Data

Confirmed cases were reported from 39 of Wisconsin’s 72 counties. Ages ranged from less than 1 month to 61 years (median: 10 years). Among those aged 1–3 years, 27% were up to date for age and had received one dose of varicella vaccine. Among those aged 4–18 years, 17.5% were up to date for age and had received two doses of varicella vaccine, 2% had received one dose of varicella vaccine, and 70% had not been vaccinated with varicella vaccine and 10.5% had an unknown varicella vaccination status. Four individuals were hospitalized, including one infant. Of these four individuals, one had received no varicella vaccine, two received two doses, and one had an unknown varicella vaccination status.

Figure 1. During 2024, 156 confirmed chickenpox cases were reported among Wisconsin residents.

Number of reported confirmed chickenpox cases, by year, Wisconsin, 2020–2024.

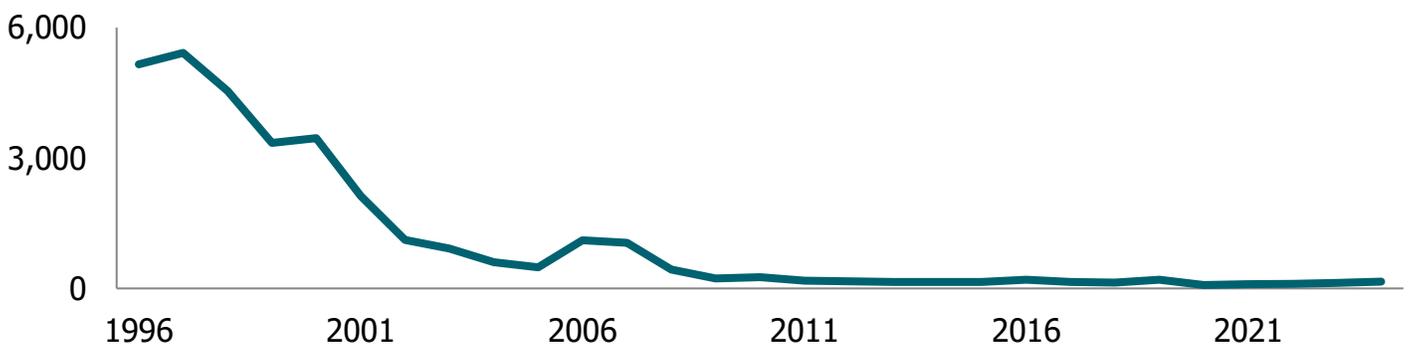


Trends

In response to outbreaks among vaccinated children, in 2006 a second dose of varicella vaccine was routinely recommended. Cases and outbreaks continue to occur. Surveillance for chickenpox is challenging because most cases are not laboratory confirmed and the clinical presentation can be confused with other rash illnesses.

Figure 2. After varicella vaccine was introduced in 1995, the number of cases decreased greatly in Wisconsin and in the United States.

Number of reported confirmed chickenpox cases, by year, Wisconsin, 1996–2024.



Diphtheria

Wisconsin, 2024



Summary

Diphtheria is a serious and contagious infection that can be spread from person to person through airborne droplets. Less commonly, diphtheria can spread through surfaces that have the bacteria on it. The bacteria make a toxin, or poison, that kills healthy tissues in the respiratory system. Within two to three days, the dead tissue forms a thick, gray coating that can build up in the throat or nose. This gray coating can cover tissues in the nose, tonsils, voice box, and throat, making it hard to breathe and swallow. If the toxin gets into your blood stream, it can damage the heart, nerves, and kidneys.

Infection is rare in the United States but continues to occur in many developing countries in Asia, the Middle East, Eastern Europe, Haiti, and the Dominican Republic. Travelers to these areas are at risk of diphtheria infection. It is important to prevent diphtheria because diphtheria can cause [serious complications](#), including death. Vaccination with diphtheria vaccine is the most effective method for preventing diphtheria.

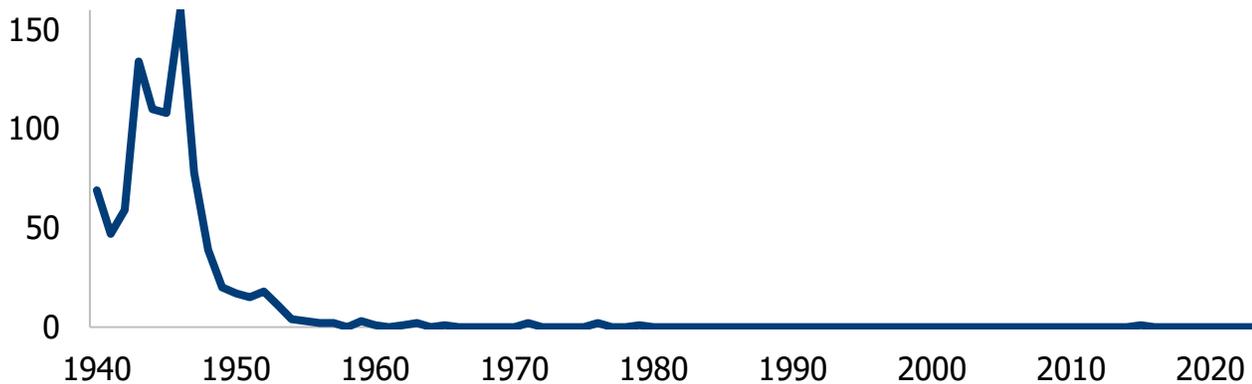
2024 Data

During 2024, no diphtheria cases were reported among Wisconsin residents. The last case of diphtheria among Wisconsinites was in 2015.

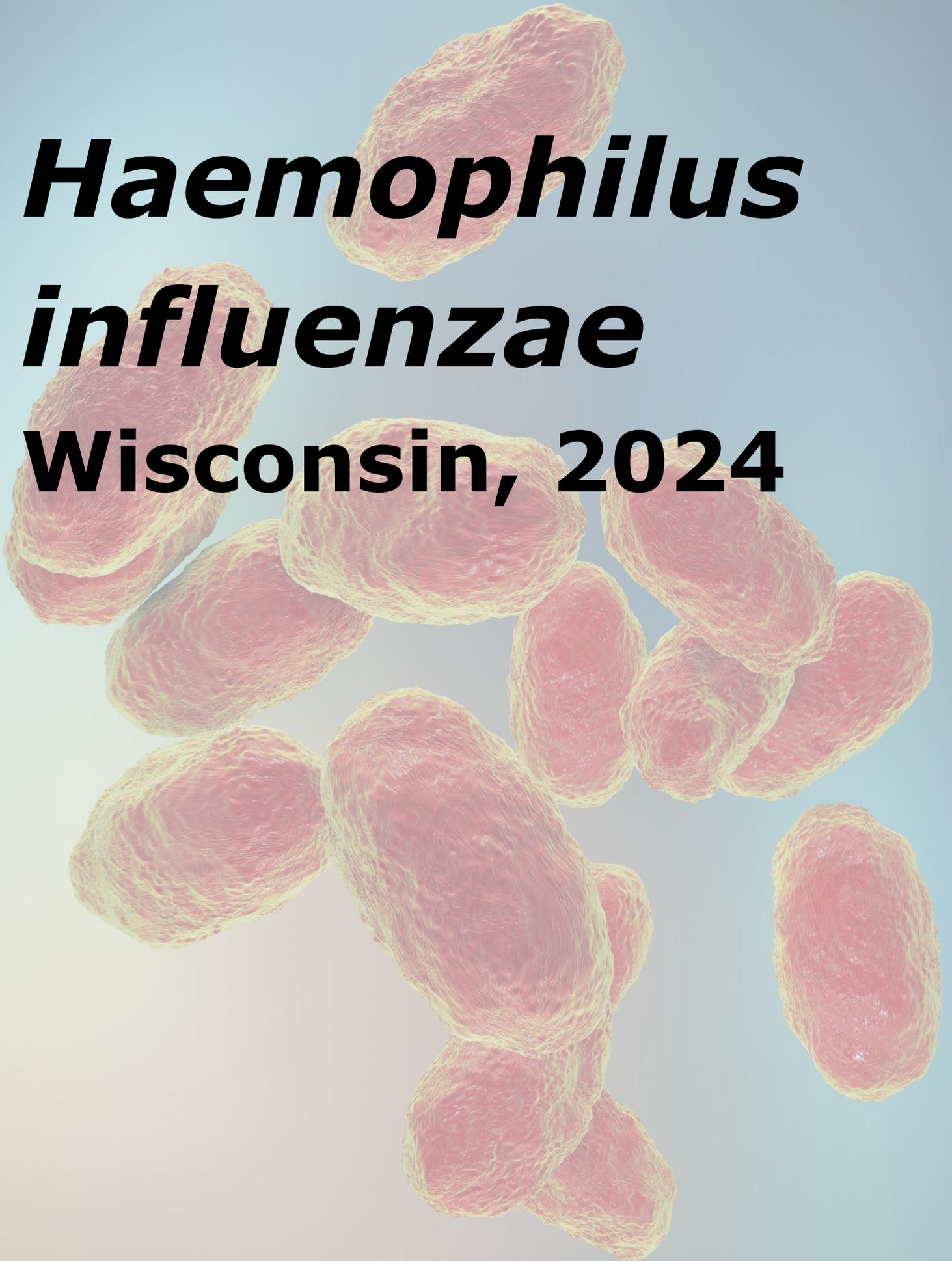
Trends

Figure 3. After use of diphtheria vaccine became routine and widespread during the late 1940s, the number of diphtheria cases decreased substantially in Wisconsin and in the United States.

Number of reported confirmed diphtheria cases, by year, Wisconsin, 1943–2024.



***Haemophilus
influenzae***
Wisconsin, 2024



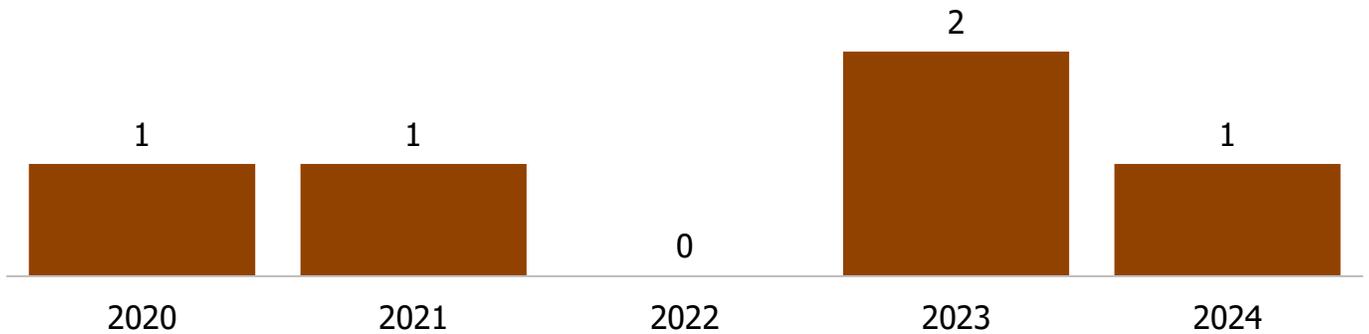
Summary

Haemophilus influenzae disease is any type of infection caused by *Haemophilus influenzae* bacteria. One strain is type b, commonly called Hib, and is the only type that is vaccine preventable. Before the Hib vaccine, Hib was the most common cause of life-threatening infections in young children. Hib disease can occur at any age, but those at increased risk of disease are children younger than five years of age.

2024 Data

Figure 4. During 2024, there was one Hib case reported in a Wisconsin resident younger than five years old.

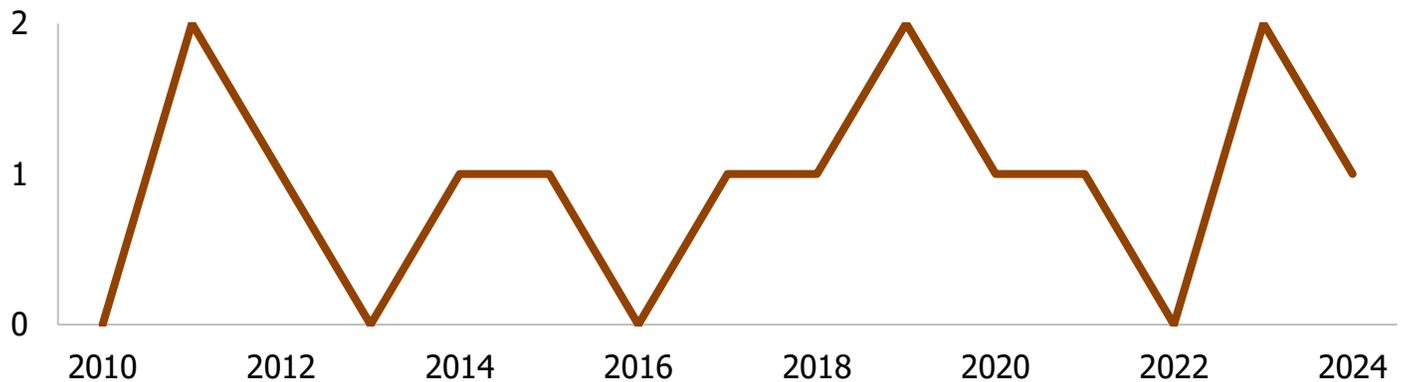
Number of reported confirmed Hib cases among children younger than five years, by year, in Wisconsin, 2014–2024.

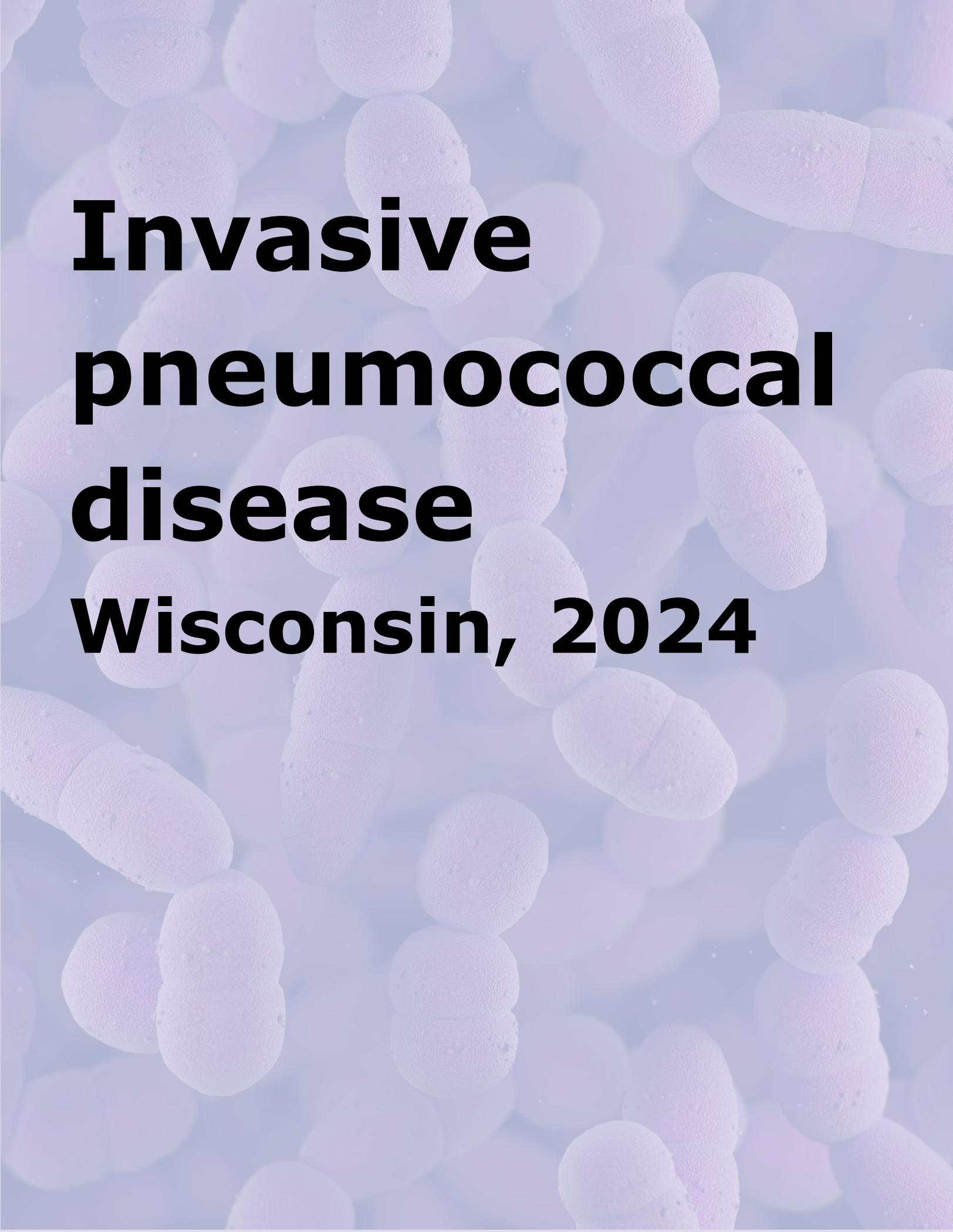


Trends

Figure 5. During 2024, there was one case of Hib among Wisconsin children.

Number of reported confirmed Hib cases among children younger than five years, by year, Wisconsin, 1943–2024.



A microscopic view of numerous pneumococcal bacteria, which are spherical and often appear in pairs or chains. The bacteria are light purple and have a textured surface. They are scattered across the entire frame against a light blue background.

**Invasive
pneumococcal
disease
Wisconsin, 2024**

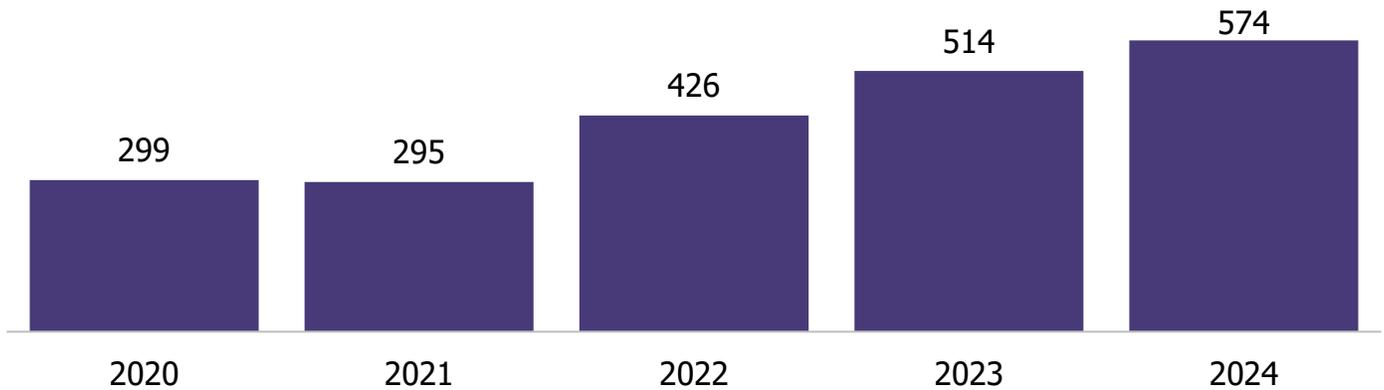
Summary

Invasive pneumococcal disease is an infection caused by the bacteria *Streptococcus pneumoniae*. The bacteria usually cause mild illness, such as ear and sinus infections but can cause more serious conditions, like pneumonia, sepsis, and meningitis. Vaccines are available for many common types of pneumococcal bacteria. These vaccines are recommended for infants, young children, and older adults.

2024 Data

Figure 6. During 2024, there were 574 invasive pneumococcal disease cases reported among Wisconsin residents.

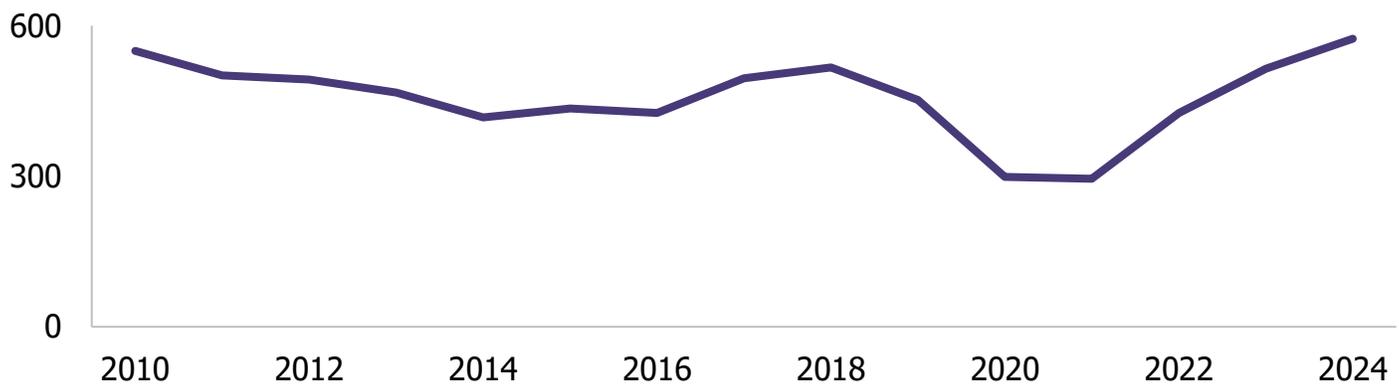
Number of reported confirmed invasive pneumococcal disease cases, by year, in Wisconsin, 2014–2024.

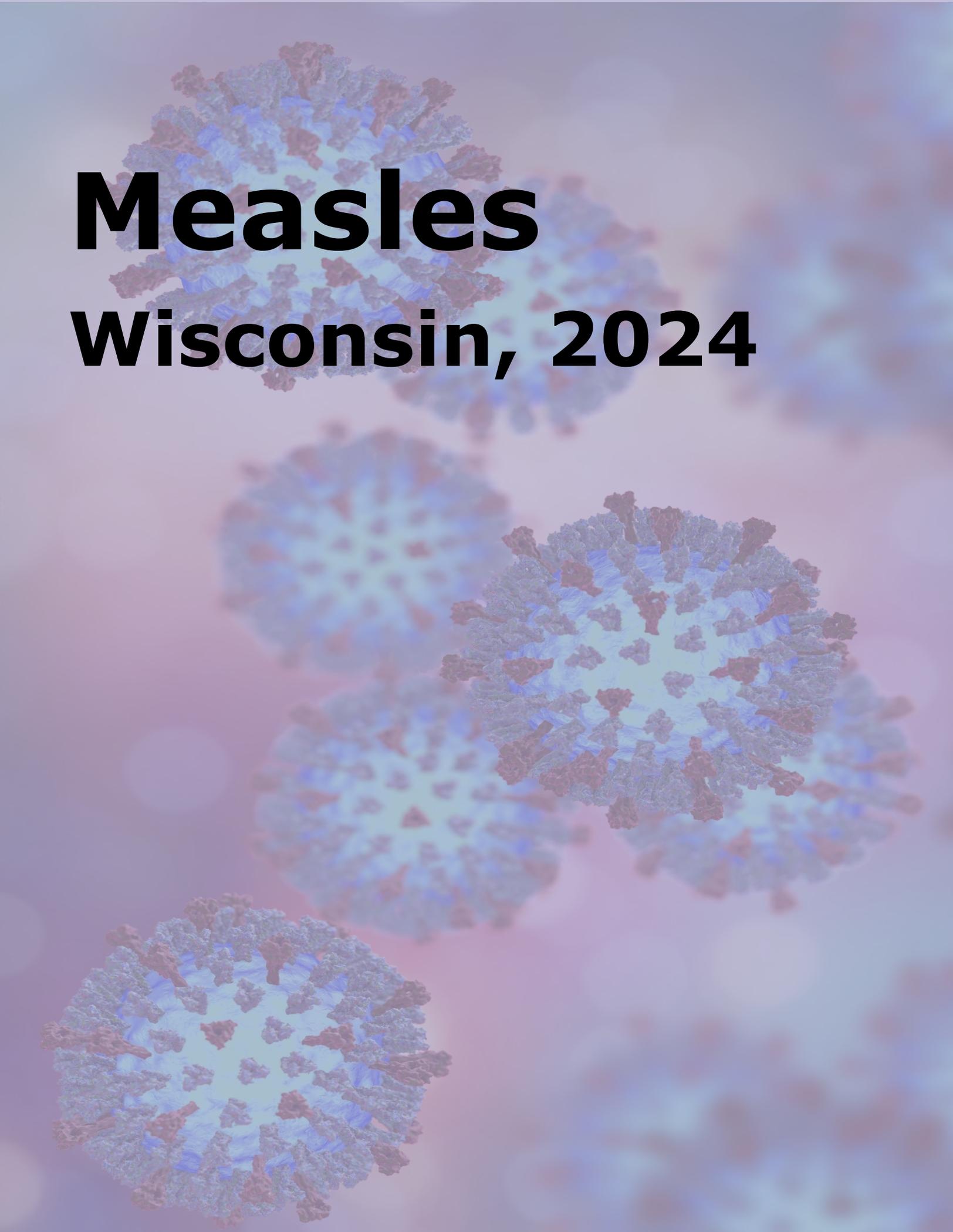


Trends

Figure 7. During 2024, there were 574 invasive pneumococcal disease cases reported among Wisconsin residents.

Number of reported confirmed invasive pneumococcal disease cases, by year, Wisconsin, 2010–2024.



The background of the slide features several 3D models of measles virus particles. These particles are spherical and covered in a dense layer of red, spike-like surface proteins. The models are rendered in a semi-transparent, light blue color, allowing the underlying structure to be visible. They are scattered across the slide, with some appearing larger and more detailed than others, creating a sense of depth and movement.

Measles

Wisconsin, 2024

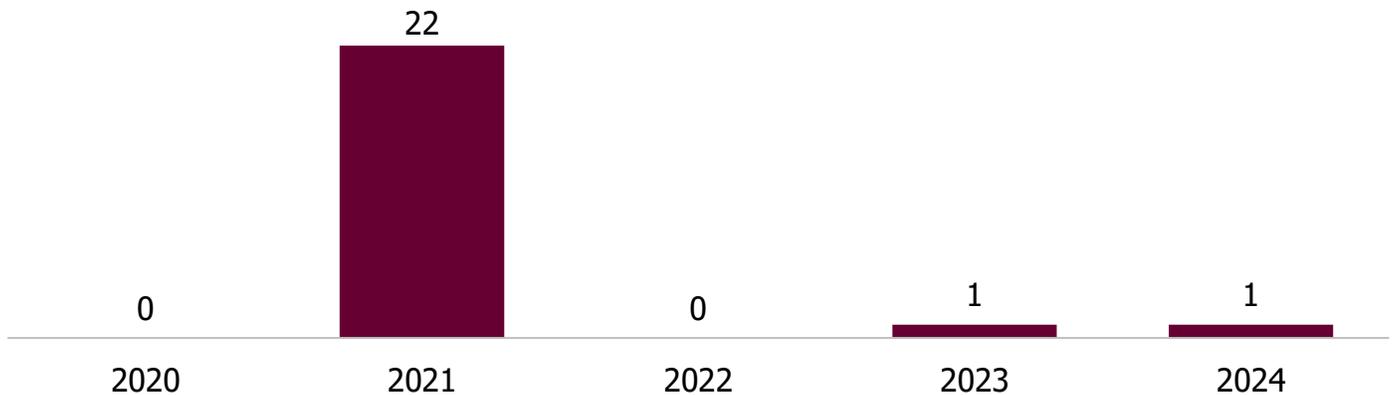
Summary

Although measles is now relatively rare in Wisconsin, it is still common in many parts of the world and is becoming more prevalent in the United States. In 2024, [285 measles cases were reported](#) in the United States by 33 state or city health departments and 69% of those cases were outbreak-associated. Additionally, 89% were unvaccinated or had an unknown vaccination status, 7% had received one measles, mumps, and rubella (MMR) dose, and 4% had received two MMR doses. It is important to prevent measles because it spreads quickly among unvaccinated people and can cause [serious illness and complications](#), especially for children. For example, of the 114 U.S. cases hospitalized in 2024, 54% (62 of 114) were under the age of 5 years. The MMR vaccine is the most effective method for preventing measles.

2024 Data

Figure 8. During 2024, there was one measles case [reported](#) in a Wisconsin resident.

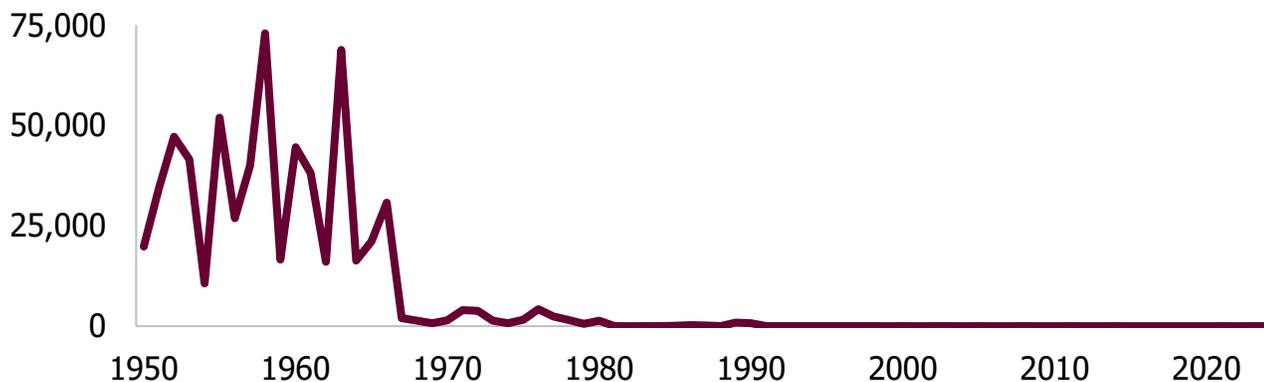
Number of reported confirmed measles cases, by year, in Wisconsin, 2020–2024.*



Trends

Figure 9. Measles cases in Wisconsin have decreased substantially since the measles vaccine was introduced in 1963.

Number of reported confirmed measles cases, by year, in Wisconsin, 1950–2024.



*[Wisconsin DHS Health Alert #34: Measles Outbreak Associated with Operation Allies Welcome at Fort McCoy](#)

The background of the slide is a light blue color with a dense field of translucent, spherical meningococcal bacteria. The bacteria are shown in various stages of division and are arranged in a way that creates a sense of depth and movement. The text is overlaid on this background in a bold, black, sans-serif font.

**Meningococcal
disease
Wisconsin, 2024**

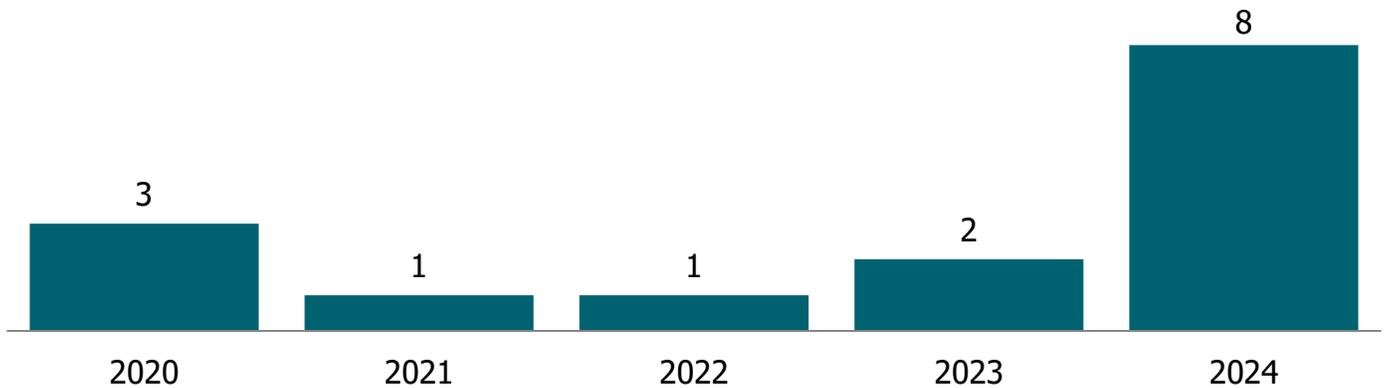
Summary

Meningococcal disease is a rare but serious infection caused by *Neisseria meningitidis* bacteria that often leads to severe illness or death. Those at highest risk are infants, preteens, teens, and young adults. Teens and young adults are particularly susceptible, as they are more likely to engage in activities in which there is direct contact with oral secretions. Meningococcal disease occurs worldwide, with cases circulating widely in Sub-Saharan Africa. Unvaccinated travelers to this region are at increased risk of meningococcal disease. Vaccination with meningococcal vaccine prevents meningococcal disease, its [serious complications](#), and reduces transmission to other countries.

2024 Data

Figure 10. In 2024, seven case of meningococcal disease were reported among Wisconsin residents.

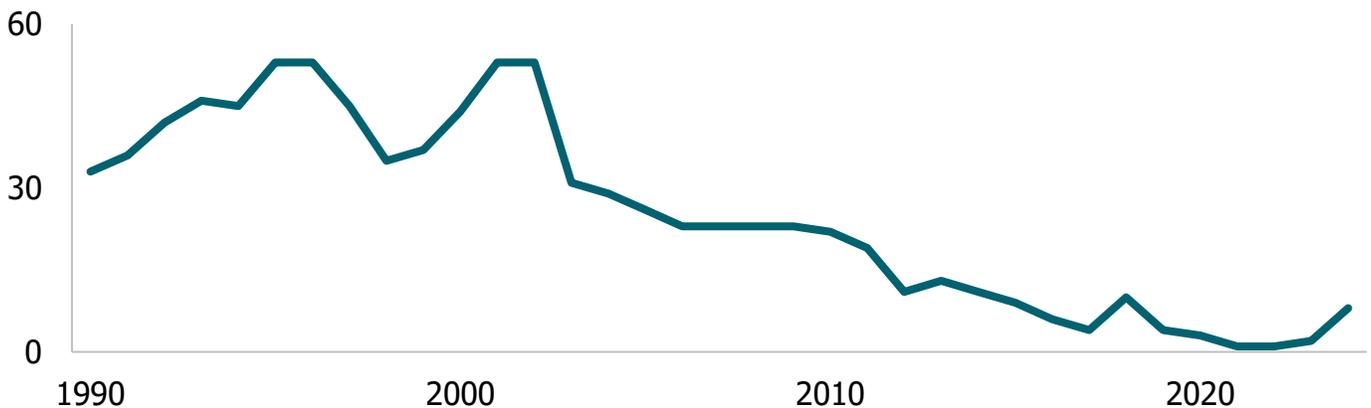
Number of reported confirmed meningococcal disease (all serogroups) cases, by year, Wisconsin, 2020–2024.



Trends

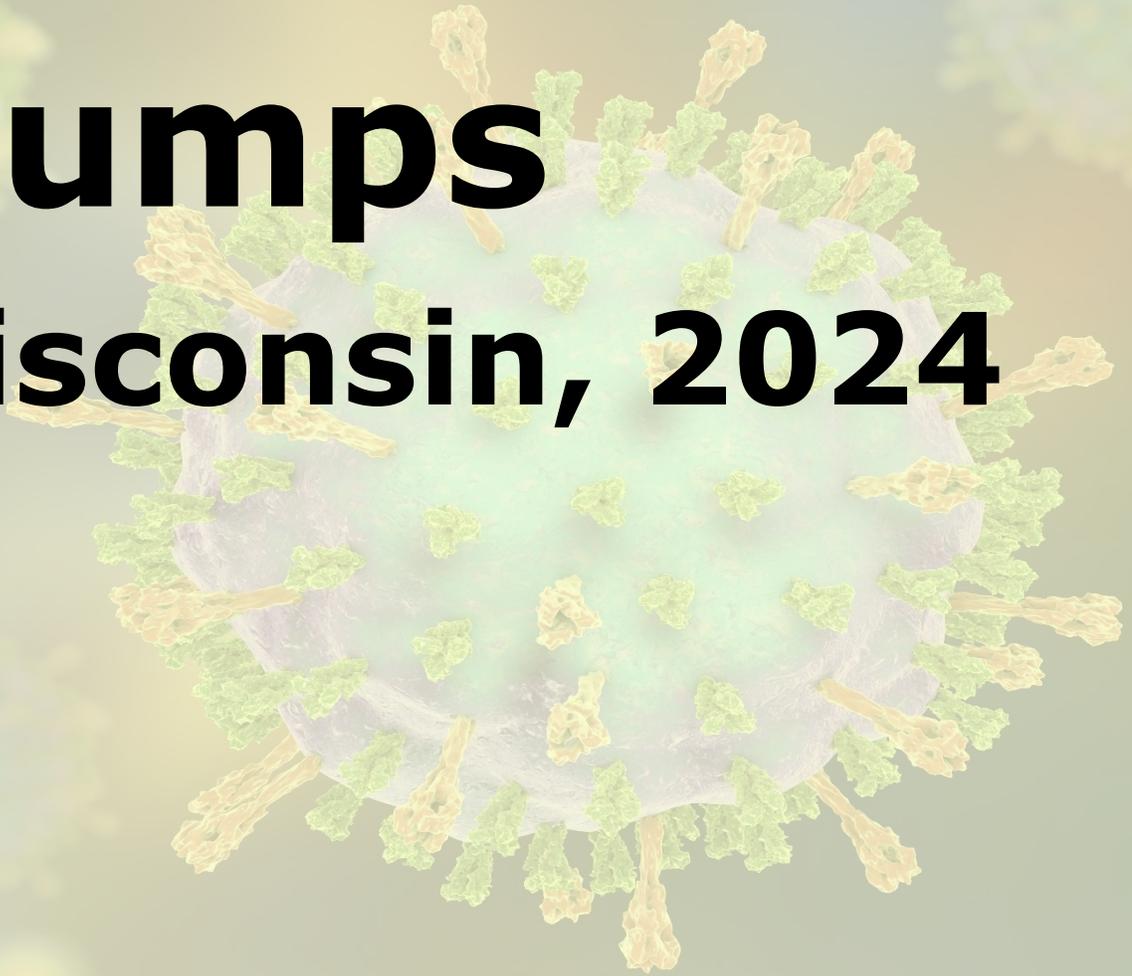
Figure 11. After the meningococcal conjugate (serogroups ACWY) and serogroup B meningococcal vaccines were introduced in 2005 and 2014, respectively, the number of meningococcal cases has decreased steadily in Wisconsin and in the United States. In 2010, a second dose of meningococcal conjugate vaccine was routinely recommended, and cases have declined even further.

Number of reported confirmed meningococcal disease (all serogroups) cases, by year, Wisconsin, 1990–2024.



Mumps

Wisconsin, 2024



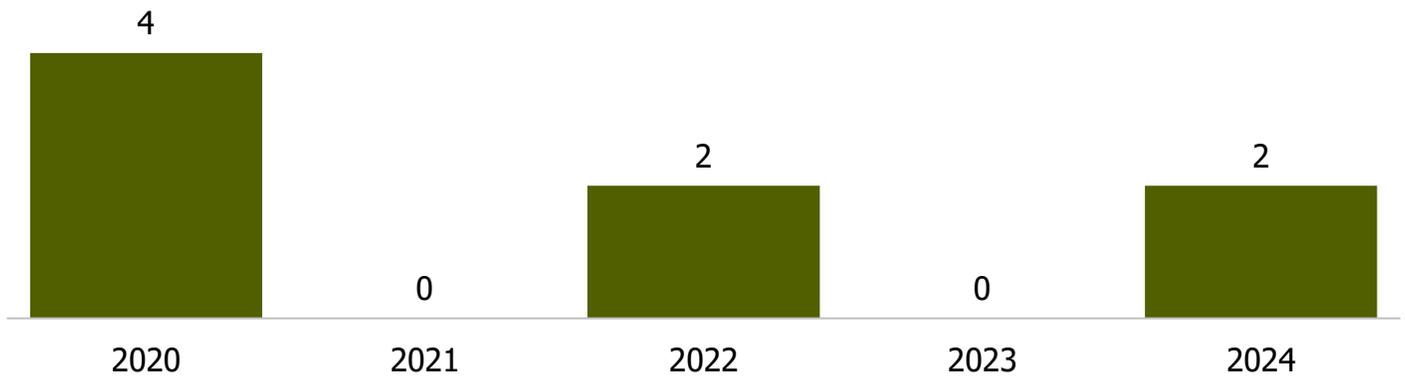
Summary

Cases and outbreaks of mumps continue to occur in Wisconsin and the United States, often among young adults in close-contact settings. It is important to prevent mumps because it can cause [serious complications](#), especially among adults. The MMR vaccine prevents most mumps cases and complications.

2024 Data

Figure 12. During 2024, there were two mumps cases reported among Wisconsin residents.

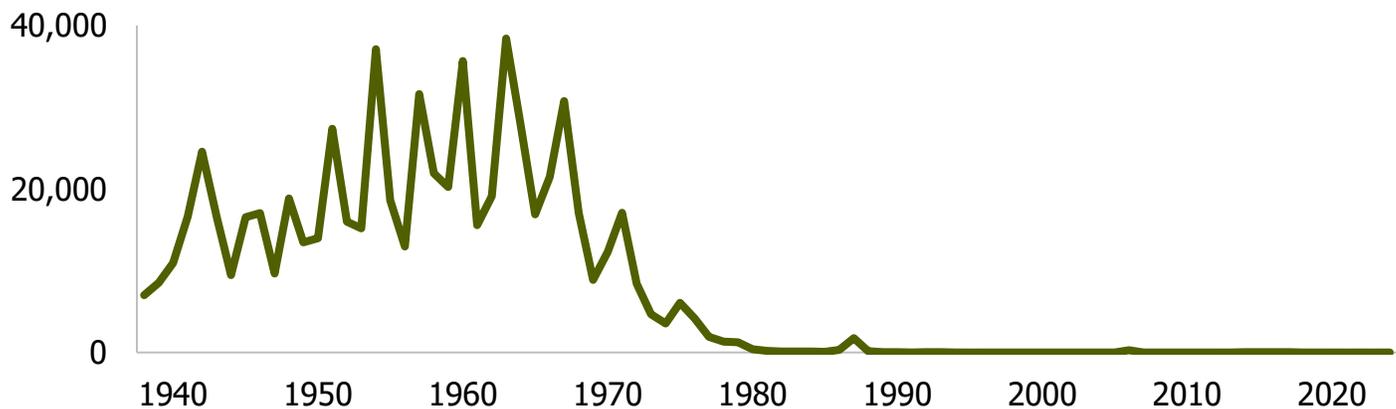
Number of reported confirmed mumps cases, by year, in Wisconsin, 2020–2024.

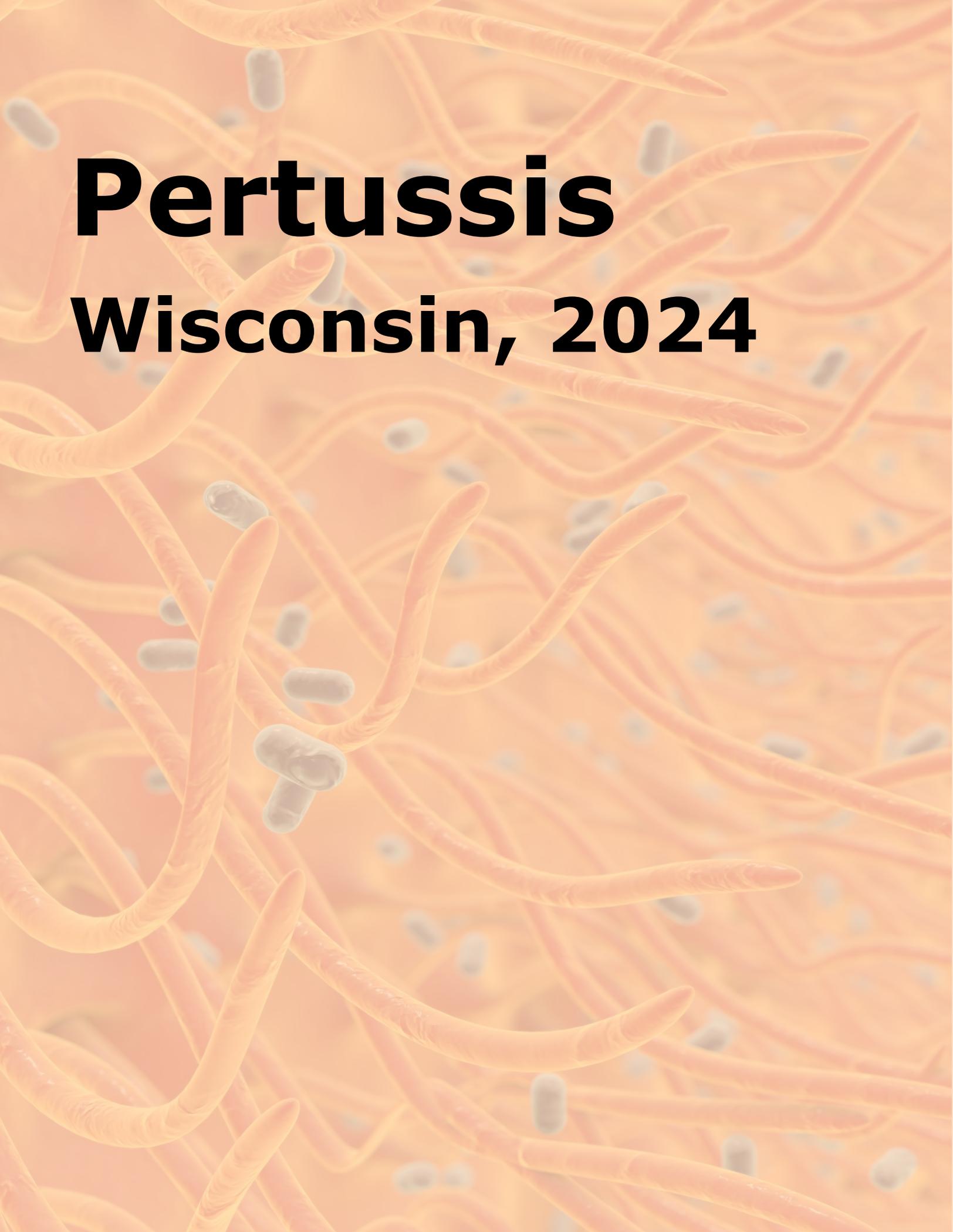


Trends

Figure 13. After the live attenuated mumps vaccine was introduced in 1967, cases decreased greatly in Wisconsin and in the United States; however, cases and outbreaks still occur.

Number of reported confirmed mumps cases, by year, in Wisconsin, 1940–2024.



The background of the image is a dense field of microscopic structures. It features numerous long, thin, orange-colored cilia or flagella that are curved and oriented in various directions. Interspersed among these are several grey, rod-shaped bacteria, some of which appear to have flagella. The overall color palette is warm, dominated by shades of orange and yellow, with the grey bacteria providing a contrasting element.

Pertussis

Wisconsin, 2024

Summary

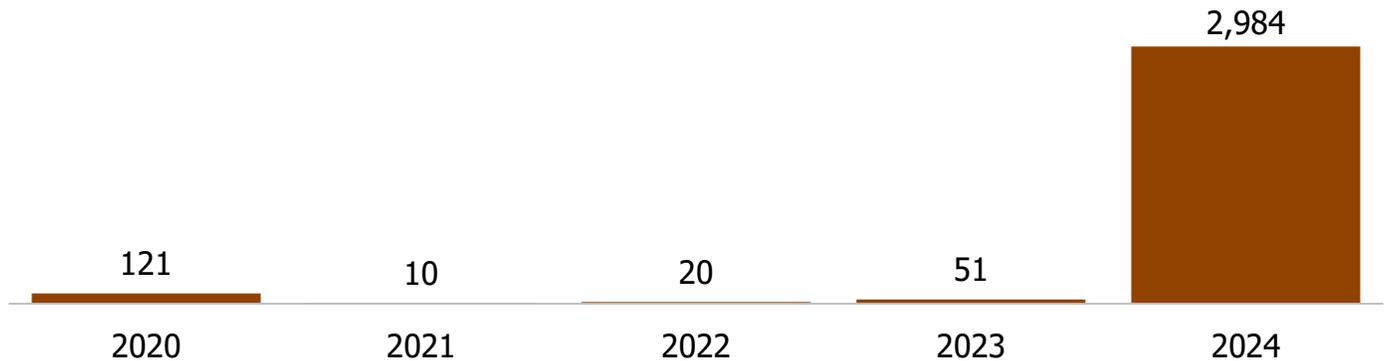
Pertussis continues to affect people of all ages in Wisconsin and the United States. Large and small outbreaks continue to occur. Infants too young to be fully vaccinated are at highest risk of pertussis and its [serious complications](#), including death. Routine vaccination with pertussis vaccine is the most effective method for preventing pertussis. Newborn infants are best protected from pertussis when their birthing parent is vaccinated with Tdap vaccine during the third trimester of pregnancy. These infants are born with passive protection from pertussis.

2024 Data

People with pertussis ranged in age from less than 1 year to 92 years (median: 14 years). 119 (4.0%) cases occurred among infants less than one year of age. Thirty-eight (1.4%) cases were hospitalized. Among individuals hospitalized, 16 (42.1%) were among infants less than one year of age. There were no deaths due to pertussis in 2024.

Figure 14. During 2024, 2,701 confirmed and 283 probable pertussis cases were reported among Wisconsin residents in 72 counties.

Number of reported confirmed and probable pertussis cases, by year, Wisconsin, 2020–2024.

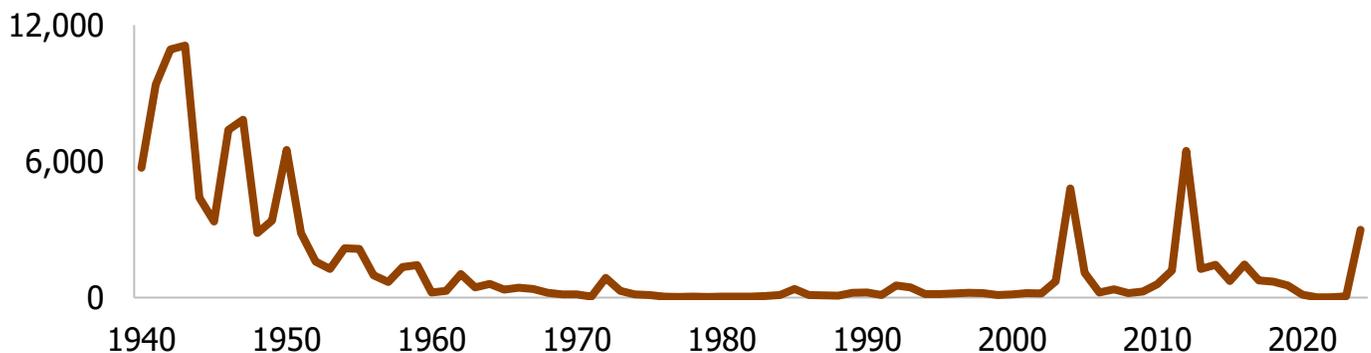


Trends

During the 1990s, a new diagnostic test (PCR) was introduced that allowed more pertussis cases to be detected and reported. Also, during the 1990s, whole cell vaccine was replaced by acellular pertussis vaccine (DTaP). Recent studies indicate DTaP provides a shorter duration of protection from pertussis than whole cell vaccine. A booster acellular pertussis vaccine, Tdap, was introduced in 2006.

Figure 15. After whole cell pertussis vaccine was introduced during the 1940s, the number of cases decreased in Wisconsin and in the United States.

Number of reported confirmed and probable pertussis cases, by year, Wisconsin, 1938–2024.



Polio

Wisconsin, 2024



Summary

Polio is a life-threatening disease caused by poliovirus. The virus is very contagious and spreads easily from person to person through the fecal oral route. This means the virus is swallowed and then multiplies in the intestine. Someone who is infectious with polio can spread the disease to others before they develop symptoms and up to two weeks after symptoms appear. Polio affects the nervous system and causes muscle weakness. About 25% of people infected with polio will have flu-like symptoms. In some cases, polio can cause paralysis or death.

Health officials from around the globe have been working intently to eradicate polio. Only a few countries remain where polio cases continue to occur, but travelers can and have spread polio to other previously polio-free countries. Travelers to affected areas, including some parts of Africa and Asia, are at risk for polio. Vaccination with polio vaccine prevents polio, its serious complications and reduces polio transmission to other countries.

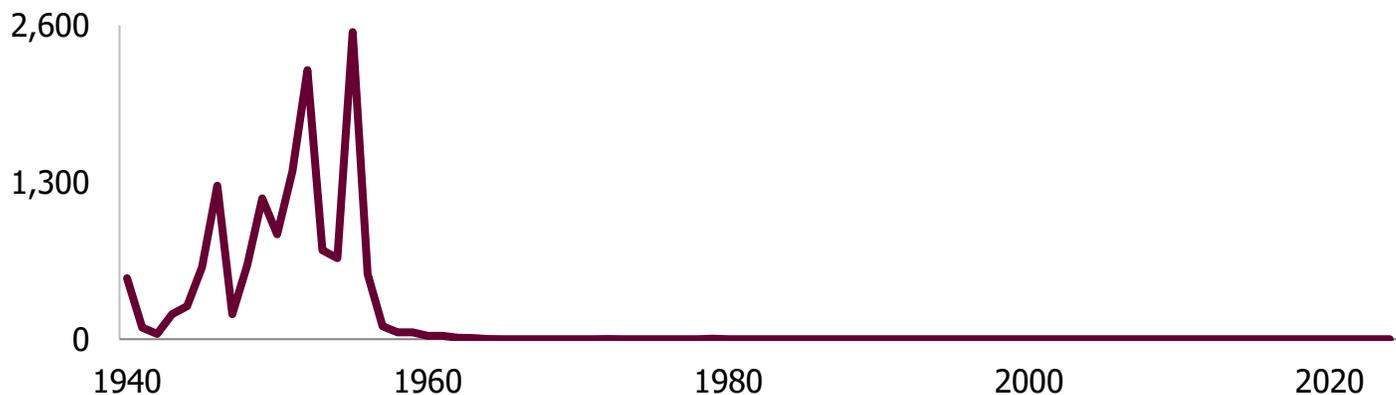
2024 Data

During 2024, no polio cases were reported among Wisconsin residents. The last case of polio among Wisconsinites was in 1979.

Trends

Figure 16. After the first polio vaccine was introduced in 1955, the number of polio cases decreased greatly in Wisconsin and in the United States.

Number of reported confirmed polio cases, by year, Wisconsin, 1940–2024.



Rubella

Wisconsin, 2024



Summary

Rubella is no longer constantly present in the United States. However, because rubella is still common in many parts of the world, including Southeast Asia, Africa, and the Eastern Mediterranean region, travelers to affected areas can bring rubella to the United States and Wisconsin. For example, in 2012 a Wisconsin resident developed rubella after having contact with family members who recently arrived from an affected country. Rubella can cause [serious complications](#) and people who are infected with rubella during pregnancy are at risk for miscarriage, stillbirth, and of having a baby with severe birth defects, a condition known as [congenital rubella syndrome](#). Vaccination with rubella vaccine is the most effective method for preventing rubella. To prevent congenital rubella syndrome, people should be vaccinated with MMR vaccine before they become pregnant.

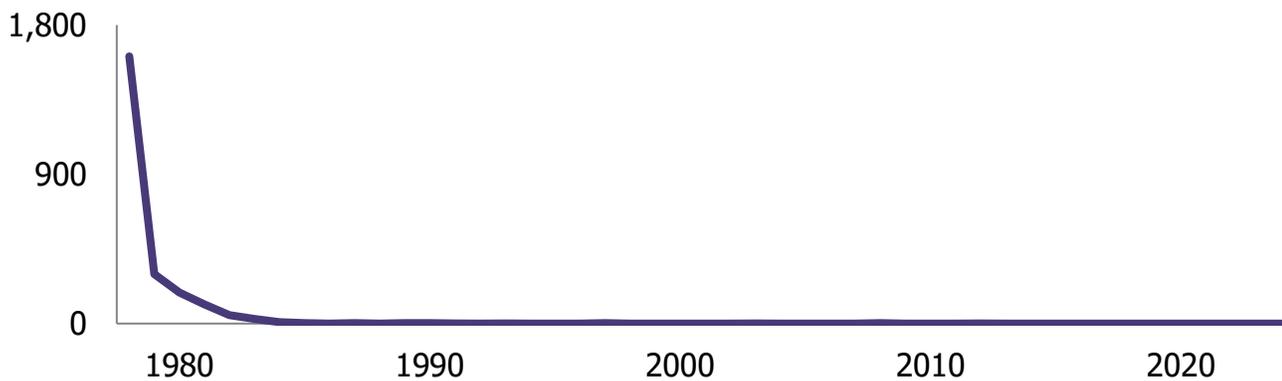
2024 Data

During 2024, no rubella cases were reported among Wisconsin residents. The last rubella case among a Wisconsin resident was in 2012.

Trends

Figure 17. After rubella vaccine was introduced in 1969, the number of cases decreased in Wisconsin and in the United States.

Number of reported confirmed rubella cases, by year, Wisconsin, 1978–2024.



Tetanus

Wisconsin, 2024



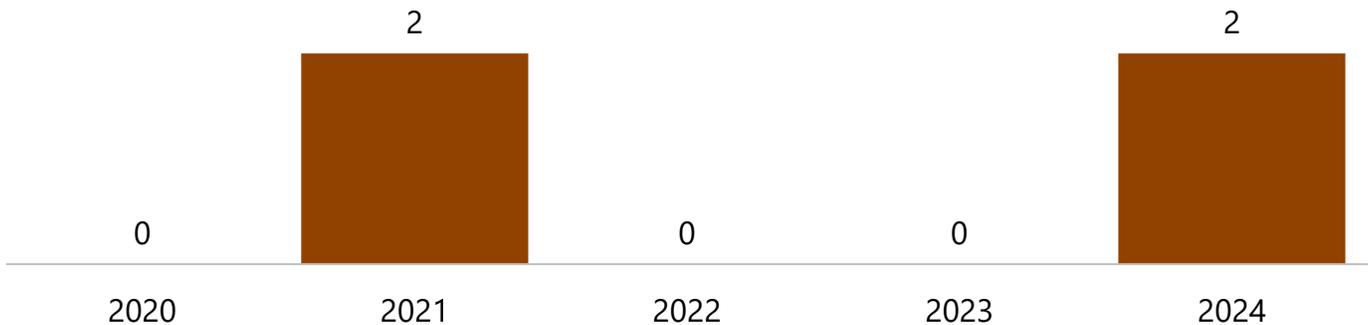
Summary

Because the bacteria that cause tetanus live in soil, unvaccinated people and people overdue for a tetanus booster shot are at risk for tetanus when they have a contaminated wound or [other breaks in the skin](#). Tetanus cases continue to occur among Wisconsin residents. For example, in 2015 an unvaccinated Wisconsin child was diagnosed with tetanus requiring hospitalization for 33 days (including 15 days in intensive care). Preventing tetanus is important because tetanus can cause severe [symptoms and complications](#), including breathing difficulty that can lead to death. Vaccination with tetanus vaccine is the most effective method for preventing tetanus.

2024 Data

Figure 18. During 2024, there were two tetanus cases reported among Wisconsin residents.

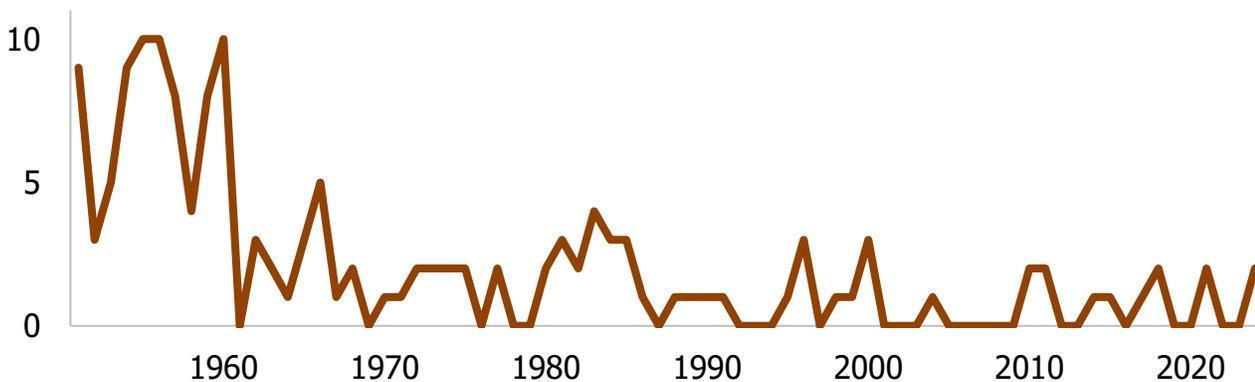
Number of reported probable cases, by year, Wisconsin, 2020–2024.



Trends

Figure 19. After tetanus vaccine was introduced for routine childhood vaccination during the late 1940s, the number of cases decreased steadily in Wisconsin and in the United States.

Number of reported probable tetanus cases, by year, Wisconsin, 1951–2024.



Other VPDs

For additional information, resources, and data on VPDs not covered in this report, visit Wisconsin's [Immunization Program webpage](#).

- [COVID-19](#)
- [Hepatitis A](#)
- [Hepatitis B](#)
- [Hepatitis D](#)
- [Human papillomavirus \(HPV\)](#)
- [Influenza](#)
- [Mpox](#)
- [RSV](#)
- [Rotavirus](#)
- [Shingles](#)

Notes

Additional Resources

Vaccination rates for Wisconsin: <https://www.dhs.wisconsin.gov/immunization/data/index.htm>

VPDs in Wisconsin by year: <https://www.dhs.wisconsin.gov/publications/p02259.pdf>

Recommended vaccination schedules:

Children: <https://www.cdc.gov/vaccines/hcp/imz-schedules/child-adolescent-age.html>

Adults: <https://www.cdc.gov/vaccines/hcp/imz-schedules/adult-age.html>

References

Epidemiology and Prevention of Vaccine-Preventable Diseases: The Pink Book:

<https://www.cdc.gov/pinkbook/index.html>

Data Source

The diseases included in this report have significant public health impact and are required by law to be reported to the local health officer when suspected in a Wisconsin resident. This information is collected and reported to DHS through the WEDSS:

<https://www.dhs.wisconsin.gov/wiphin/wedss.htm>

More information on disease reporting: <https://www.dhs.wisconsin.gov/disease/reporting.htm>

For more information about this data, please contact DHSImmProgram@dhs.wisconsin.gov

Limitations

Monitoring trends in disease occurrence depends on complete and consistent reporting of diseases to DHS through the WEDSS. This report only includes information on the cases that were reported to DHS. Therefore, to the extent that diseases are underreported or misreported to DHS, the results depicted in this report might differ from the true burden of these diseases in Wisconsin.

Abbreviations

CDC: Centers for Disease Control and Prevention

DHS: Department of Health Services

DTaP: diphtheria, tetanus, acellular pertussis vaccine

MMR: measles, mumps, and rubella vaccine

Tdap: tetanus, diphtheria, acellular pertussis vaccine

VPD: Vaccine-preventable disease

WEDSS: Wisconsin Electronic Disease Surveillance System

Wisconsin Immunization Program, Division of Public Health
Wisconsin Department of Health Services
P-02321 (09/2025)

