North Carolina Tickborne Disease Annual Report 2024

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NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Tickborne Diseases Reported in North Carolina, 2024

There are several tick species found in North Carolina that can transmit diseases to humans. Effective prevention of tickborne diseases requires the implementation of personal protective measures such as conducting regular tick checks after spending time outdoors and using EPA-registered insect repellents and permethrin-treated clothing. Health care providers should also be aware of the symptoms of and appropriate tests for tickborne diseases as well as the risk of transmission of tickborne diseases in their region. This annual surveillance report summarizes the five reportable tick-borne diseases in North Carolina, all of which were reported in the state during 2024. Detailed statistics and surveillance data for each of these diseases are presented on subsequent pages.

2024 Surveillance Highlights

- Ehrlichiosis was the most frequently reported tickborne disease in NC in 2024, with 278 confirmed and probable cases reported among NC residents. This is likely due to a change in the surveillance case definition and enhanced active surveillance efforts.
- Lyme disease remains common in NC, especially in the northwestern region of the state.
- Rates of spotted fever rickettsiosis have remained stable since 2020, although it remains the third most commonly reported tickborne disease in NC.
- Most cases of tickborne diseases were reported in the summer, likely due to high levels of tick activity and increased time spent outdoors among NC residents.
- Although anaplasmosis and babesiosis were reported infrequently, hospitalization was common among reported cases, demonstrating the potential for severe disease.
- No deaths due to tickborne disease were reported in 2024.

Important Tick Vectors of North Carolina

Photo*	Scientific name	Common name	Diseases commonly vectored	Active season
	*Ixodes scapularis*	Blacklegged tick, Deer tick	Lyme disease, Anaplasmosis, Babesiosis	Spring - Fall
	*Amblyomma americanum*	Lone star tick	Ehrlichiosis	Spring - Summer
	*Dermacentor variabilis*	American dog tick	Rocky Mountain spotted fever	Spring - Summer

Tickborne Diseases Reported in North Carolina, 2024

Number of Cases of Tickborne Diseases Reported in North Carolina, 2019-2024								
Disease	*2019*	*2020*	*2021*	*2022*	*2023*	*Previous five-year average*	*2024*	*Significant Change*
Lyme disease	346	275	347	284	233	*297*	247	--
Ehrlichiosis	156	107	135	90	115	*121*	278	⇧
Spotted Fever Rickettsiosis	682	186	188	202	229	*297*	195	--
Anaplasmosis	11	7	12	9	8	*9*	13	--
Babesiosis	0	0	0	0	3	*1*	1	--

⇧ =significant increase *(≥ 2 standard deviations above average)* ⇩ *=significant decrease (≥ 2 standard deviations below average)* *-- = no significant change*

Report Specifications. Notable information about this report includes:

- Cases include those classified as confirmed or probable, per the surveillance case definitions, and are only among North Carolina residents.
- Geographic distribution of cases is reported at the county level and is determined by county of residence, which may or may not represent the location where infection occurred.
- Cases are counted using the earliest date of illness identification, which is most frequently the symptom onset date. Therefore, case counts in this report may differ slightly from those published in national summaries or state dashboards which can be based on other dates such as date of initial report or the date when cases were closed and reported to the Centers for Disease Control and Prevention (CDC).
- Case counts from previous years may also differ slightly from previously published North Carolina surveillance reports due to disease reports received after annual case counts were finalized.
- Ages are based on the date the case was entered in the North Carolina Electronic Disease Surveillance System (NC EDSS).
- Incidence rates are based on data obtained from the U.S. census population estimates project. Note that estimates of rates based on a small number of cases are unstable and can fluctuate widely. Therefore, these estimates should be interpreted with caution.
- Only tickborne diseases are included in this report. Data for locally transmitted and travel-associated mosquito-borne diseases in North Carolina are summarized in separate reports.
- Please note that case classification criteria are subject to change and counts may fluctuate based on these changes.

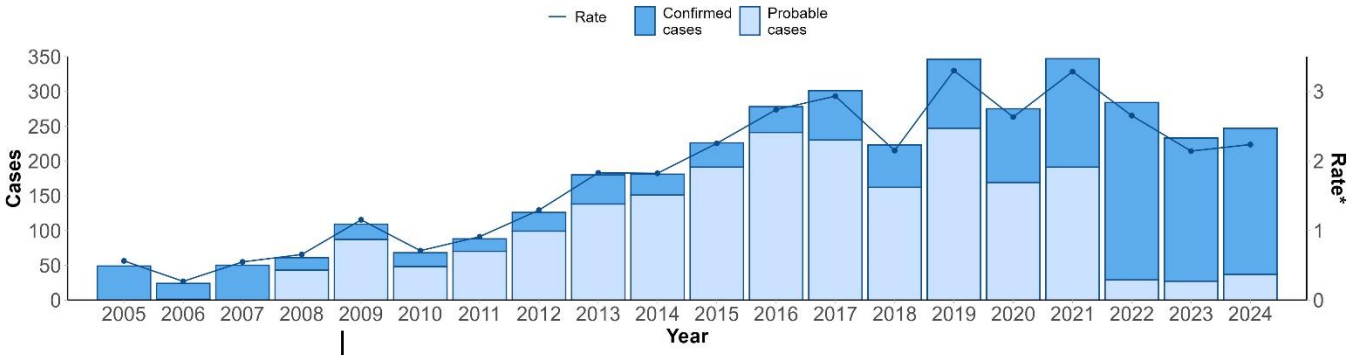
Lyme Disease

2024 Key Points

- Lyme disease remains a commonly reported tickborne disease in NC, with 247 cases reported throughout the state in 2024.
- Most cases were reported from June-July, and county-level incidence was highest among northwestern NC counties.

Lyme disease is caused by the bacteria *Borrelia burgdorferi*. These bacteria are transmitted to people through the bite of an infected blacklegged tick (*Ixodes scapularis*). Historically, the Northeastern and Midwestern U.S. have been hotspots for Lyme disease transmission, but the geographic range of this disease has expanded along with the range expansion of the tick vector. In recent years, the incidence of Lyme disease has increased in western NC.[1] Early symptoms of Lyme disease often include nonspecific, flu-like symptoms such as fever, headache, chills, and muscle and joint pain, as well as a "bull's-eye" rash (erythema migrans) at the site of the tick bite. However, if left untreated, more severe disease, including heart complications, can develop.

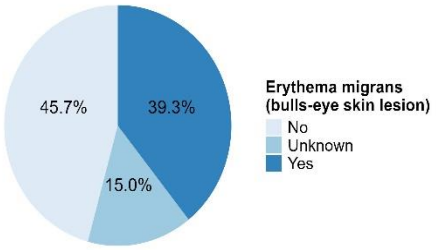
Confirmed and probable cases of Lyme disease and rates of Lyme disease per 100,000 residents, NC, 2005-2024



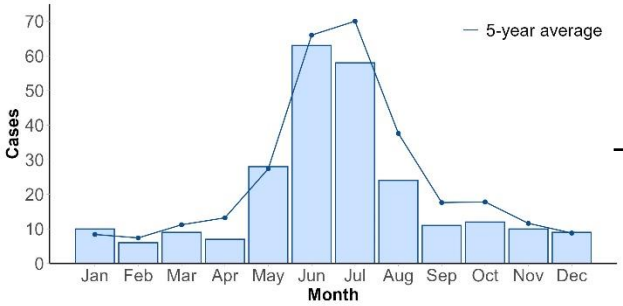
Lyme disease cases and rates have increased substantially in NC over the last 20 years. While a downward trend in reported Lyme disease cases was observed from 2021-2024, this is most likely the result of a change in the surveillance case definition implemented in 2022. However, with increased adoption of modified Two-Tier Testing (mTTT), most reported cases of Lyme disease have been confirmed, rather than probable, since 2022.

2024 NC Lyme disease cases by reporting of erythema migrans rash (N = 247).

The erythema migrans (EM) rash, a common early symptom of Lyme disease (typically occurring in 70-80% of all cases), was reported in less than 40% of NC Lyme disease cases in 2024. This may represent true absence of the rash or lack of recognition of the rash in the majority of cases.



2024 NC Lyme disease cases by month of illness onset, compared to previous 5-year average monthly case count.



Lyme disease cases were reported throughout all months of the year in 2024, but case counts peaked in late spring through mid-summer. The highest number of cases was observed in June, while during the previous five years cases peaked, on average, in July.

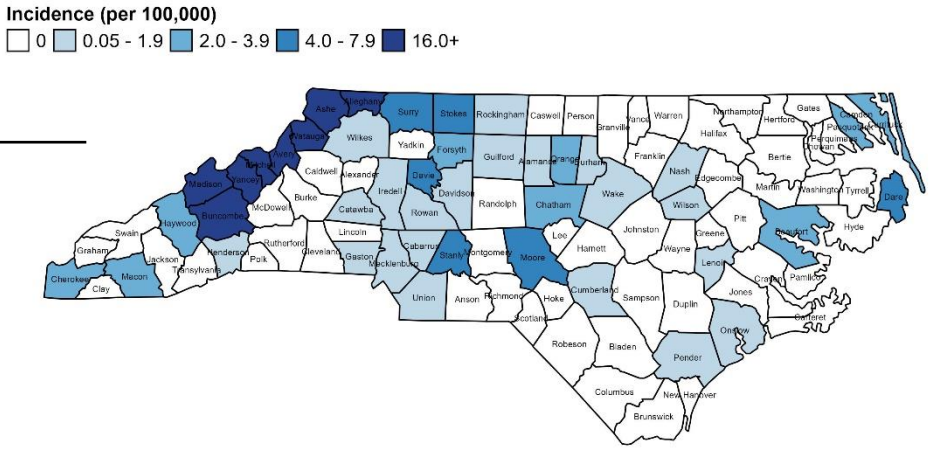
[1]Mokashi NV, Marusiak AB, Giandomenico D, et al. Spatiotemporal patterns of Lyme disease in North Carolina: 2010–2020. *Lancet Reg Health Am.* 2024; 35. https://doi.org/10.1016/j.lana.2024.100792

*Rate calculated per 100,000 residents

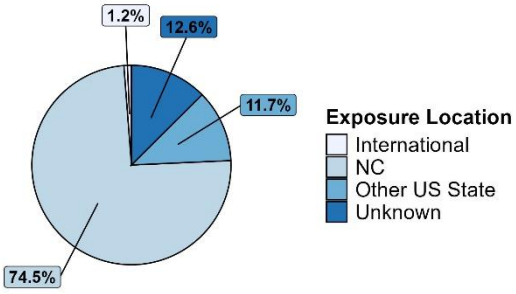
Lyme Disease

While Lyme disease was detected in NC residents throughout the state, the incidence of Lyme disease remains highest in western NC, particularly in counties in the northwestern region of the state bordering VA and TN. Counties with the highest incidence included Yancey, Mitchell, Madison, Alleghany and Ashe counties, all of which exceeded 30 cases per 100,000 residents.

Lyme disease incidence by county, NC, 2024



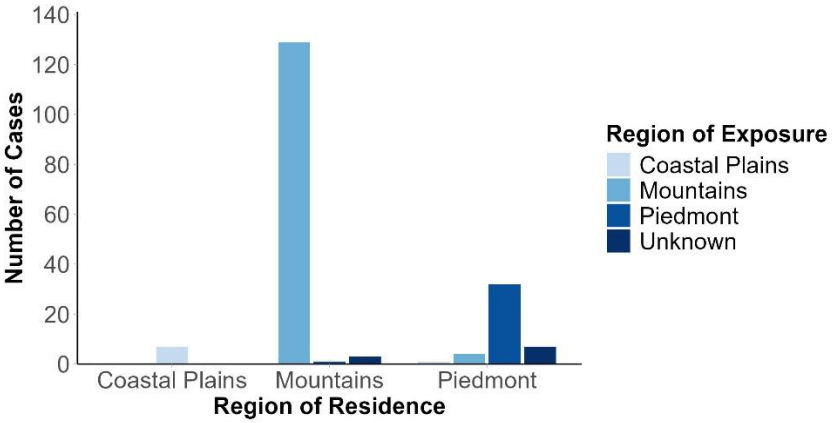
Reported location of exposure among Lyme disease cases, NC, 2024 (N = 247)



Approximately 75% of reported Lyme disease cases in 2024 were most likely acquired in NC, based upon information provided by the infected individuals regarding their travel history and exposure to ticks. About 12% of cases were likely infected in a different state, while very few cases were thought to have been acquired internationally.

Among the 184 cases with a reported exposure in NC, the vast majority both resided in and reported likely exposure in the Mountains region of NC. However, among residents of the Coastal Plains and Piedmont regions, the majority of cases reported likely exposure within their region of residence. Therefore, while the risk of acquiring Lyme disease is highest in the Mountains, likely due to high densities of blacklegged ticks and high infection rates of *B. burgdorferi* among ticks in this region,[2] locally acquired cases occur in other regions of the state as well.

Region of residence and region of reported exposure among Lyme disease cases acquired in-state, NC, 2024 (N = 184)



[2]Garshong RA, Adams DR, Seagle SW, et al. Expanding range of *Ixodes scapularis* Say (Acari: Ixodidae) and Borrelia burgdorferi infection in North Carolina counties, 2018–2023. *PLOS One.* 2025; 20(8): e0329511.

Lyme Disease

Annual Summary					
	2020	2021	2022	2023	2024
Cases	275	347	284	233	247
Rate*	2.6	3.3	2.7	2.1	2.2
Case Statistics, 2024					
Sex	**Category**			**Cases**	**%**
	Male			136	55.1%
	Female			111	44.9%
	Unknown			0	0.0%
Age Group	**Category**			**Cases**	**%**
	<5			5	2.0%
	5-17 yrs			35	14.2%
	18-24 yrs			21	8.5%
	25-34 yrs			7.3	8.2%
	35-44 yrs			31	12.6%
	45-64 yrs			76	30.8%
	65-84 yrs			60	24.3%
	85+ yrs			1	0.4%
	Unknown			0	0.0%
Race	**Category**			**Cases**	**%**
	White			188	76.1%
	Black or African American			6	2.4%
	American Indian/Alaskan Native			0	0.0%
	Asian or Pacific Islander			1	0.4%
	Multiple Races			0	0.0%
	Other or Unknown			52	21.1%
Hispanic Ethnicity	**Category**			**Cases**	**%**
	Yes			11	4.5%
	No			95	38.5%
	Unknown			141	57.1%
Hospitalization	**Category**			**Cases**	**%**
	Yes			28	11.3%
	No			213	86.2%
	Unknown			6	2.4%
Death	**Category**			**Cases**	**%**
	Yes			0	0.0%
	No			235	95.1%
	Unknown			12	4.9%

Annual Summary Key Points

- The 2024 Lyme disease rate in NC (2.2 per 100,000 residents) increased slightly from 2023 (2.1 cases per 100,000 residents), representing a decrease from the peak rate (3.3 cases per 100,000 residents) observed in 2021.
- Cases were reported more commonly in males than females.
- Lyme disease primarily affected adults between the ages of 45-84; individuals in these age groups comprised over 55% of all cases. However, cases were reported in all age groups, including both young children and elderly adults.
- The majority of cases (76.1%) were reported among white North Carolina residents. While cases were more common among non-Hispanic (38.5%) than Hispanic (4.5%) residents, Hispanic ethnicity was unknown or not reported in over 57% of cases.
- While no deaths were reported among Lyme disease cases in 2024, illness requiring hospitalization was reported in 11.3% of cases. Early diagnosis and treatment of Lyme disease is crucial to prevent the development of severe illness.

*Rate calculated per 100,000 residents

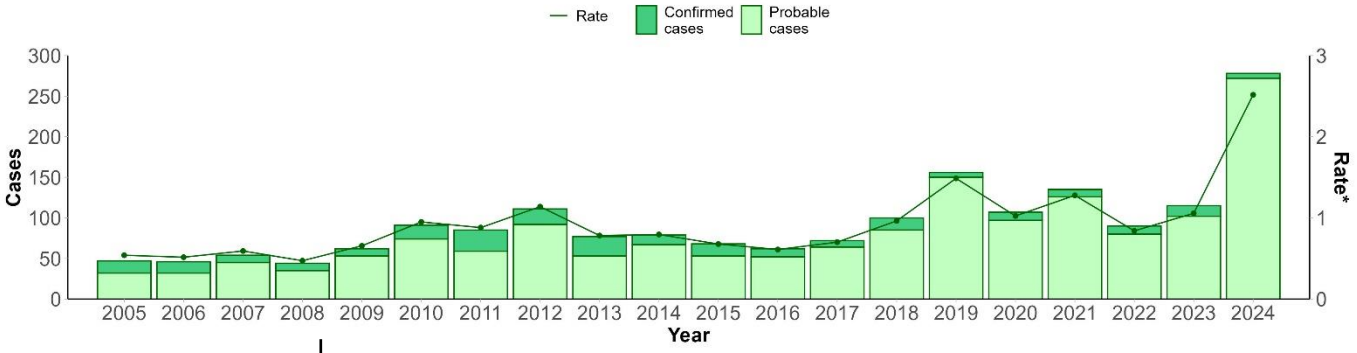
Ehrlichiosis

2024 Key Points

- Reported cases of ehrlichiosis increased in 2024 compared to previous years.
- Most reported cases occurred in Western and Central NC.
- Severe illness requiring hospitalization was common (~25% of cases).

Ehrlichiosis is caused by a group of related *Ehrlichia* bacteria, including (but not limited to) *E. chaffeensis* and *E. ewingii*. These bacteria are transmitted through the bite of infected Lone Star ticks (*Amblyomma americanum*), which are commonly found throughout NC. Early symptoms of ehrlichiosis may be mild and nonspecific such as fever, chills, muscle aches, and a rash. However, without antibiotic treatment, severe illness, including damage to the nervous system and organ failure, may occur.

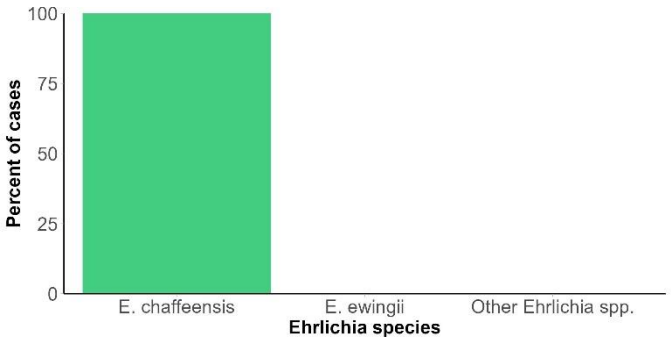
Confirmed and probable cases of ehrlichiosis and rates of ehrlichiosis per 100,000 residents, NC, 2005-2024



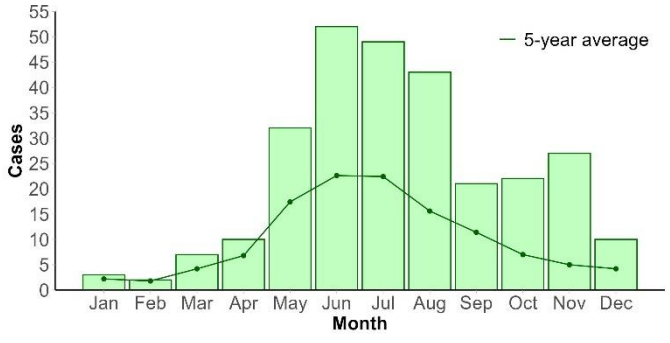
Cases of ehrlichiosis increased significantly in 2024 compared to previous years. This increase is likely due to a change to a less stringent surveillance case definition. Increased recognition of and testing for ehrlichiosis, including an active surveillance project conducted through the UNC Health System, may also be a contributing factor.[3] Because most cases are diagnosed based on evidence of elevated antibody in only a single serum specimen, the vast majority of cases are classified as probable rather than confirmed.

2024 NC ehrlichiosis cases by causative agent (N = 278)

Several different species of *Ehrlichia* bacteria can cause ehrlichiosis, but in 2024, all reported cases in NC were caused by *E. chaffeensis*.



2024 NC ehrlichiosis cases by month of illness onset, compared to previous 5-year average monthly case count



Ehrlichiosis cases occurred throughout the year but were most common during the summer months from June to August. Monthly case counts in 2024 were higher than the previous five-year average from March to December.

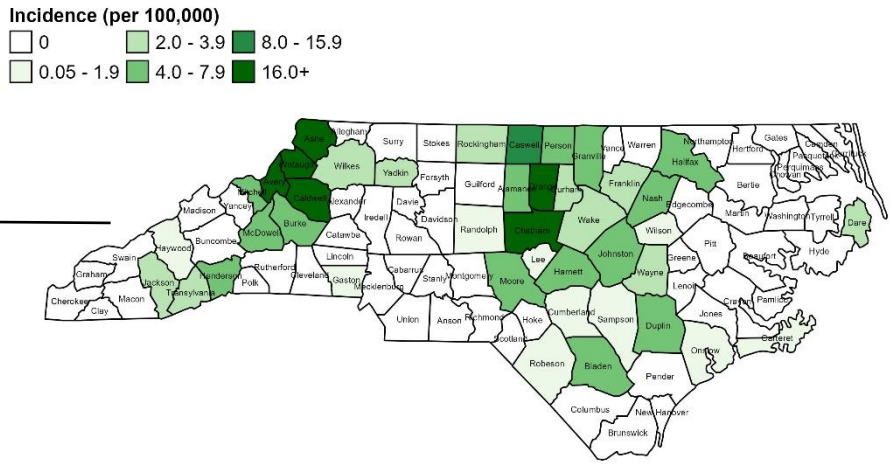
[3]Ursery L, Mansour O, Abernathy H, et al. Enhanced surveillance for tick-borne rickettsiosis and ehrlichiosis in North Carolina: Protocol and preliminary results. *PLoS One.* 2025; 20(5). https://doi.org/10.1371/journal.pone.0320361

***Rate calculated per 100,000 residents**

Ehrlichiosis

Ehrlichiosis cases were concentrated in the Western and Central regions of NC. While this may be indicative of increased transmission in these regions compared to other parts of the state, this distribution may also be due to improved recognition and diagnosis of ehrlichiosis by health care providers in these regions of the state. This is likely attributable, at least in part, to active surveillance conducted through the UNC Health System.

Ehrlichiosis incidence by county, NC, 2024



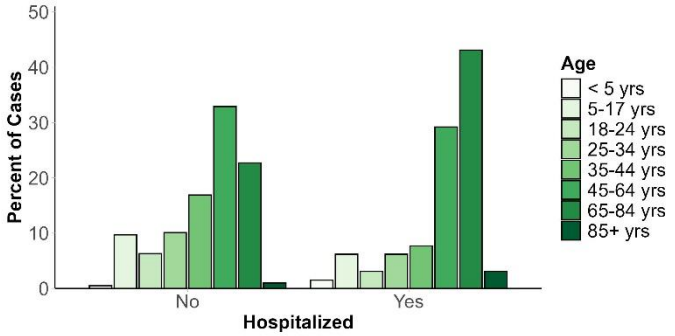
Annual Summary					
	2020	2021	2022	2023	2024
Cases	107	135	90	115	278
Rate*	1.0	1.3	0.8	1.1	2.5

Case Statistics, 2024			
Sex	**Category**	**Cases**	**%**
	Male	149	53.6%
	Female	128	46.0%
	Unknown	1	0.0%
Age Group	**Category**	**Cases**	**%**
	<5	2	0.7%
	5-17 yrs	24	8.6%
	18-24 yrs	18	6.5%
	25-34 yrs	25	9.0%
	35-44 yrs	42	15.1%
	45-64 yrs	87	31.3%
	65-84 yrs	76	27.3%
	85+ yrs	4	1.4%
	Unknown	0	0.0%
Race	**Category**	**Cases**	**%**
	White	241	86.7%
	Black or African American	14	5.0%
	American Indian/Alaskan Native	1	0.4%
	Asian or Pacific Islander	5	1.8%
	Multiple Races	1	0.4%
	Other or Unknown	16	5.8%
Hispanic Ethnicity	**Category**	**Cases**	**%**
	Yes	15	5.4%
	No	242	87.1%
	Unknown	21	7.6%
Hospitalization	**Category**	**Cases**	**%**
	Yes	65	23.4%
	No	207	74.5%
	Unknown	6	2.2%
Death	**Category**	**Cases**	**%**
	Yes	4	1.4%
	No	266	95.7%
	Unknown	8	2.9%

*Rate calculated per 100,000 residents

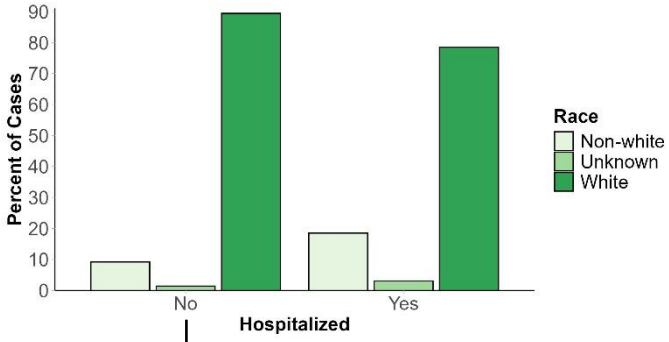
Ehrlichiosis

Ehrlichiosis hospitalizations by age, NC, 2024 (N = 272)



Among the 272 reported ehrlichiosis cases for which hospitalization status was known, those who were hospitalized tended to be older (mean: 56 years) than those who were not hospitalized (mean: 47 years). In 2024, this was primarily driven by increased hospitalizations among individuals between the ages of 65-84, who are at increased risk of severe disease.

Ehrlichiosis hospitalizations by race, NC, 2024 (N = 272)

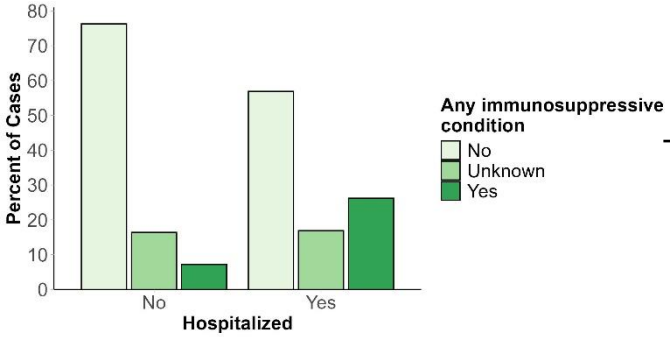


Among the 272 ehrlichiosis cases with known hospitalization status, the overwhelming majority of both hospitalized and non-hospitalized cases were white. However, the proportion of white patients was lower among hospitalized cases than among non-hospitalized cases. In contrast, the proportion of non-white patients was higher among hospitalized cases than among non-hospitalized cases. This may indicate that members of non-white racial groups are at higher risk of severe ehrlichiosis and/or that underdiagnosis or delayed diagnosis are more common among non-white racial groups compared to white persons.

Annual Summary Key Points

- The incidence of ehrlichiosis in 2024 was more than twice that of each of the previous four years. This is likely primarily due to a change in the case definition, as well as improved recognition and diagnosis of ehrlichiosis in 2024, rather than a drastic increase in ehrlichiosis transmission.
- Ehrlichiosis cases were more common among males than females.
- Adults ages 35-84 comprised the majority of cases.
- Most cases (86.7%) occurred among white NC residents, while 5% of cases were Black or African American. Most cases (87.1%) were not Hispanic.
- Nearly a quarter of all cases were hospitalized for their illness, and four cases (1.4%) died. Hospitalization was more common among those with advanced age, those who belong to a non-white racial group, and those who have an immunosuppressive condition.

Ehrlichiosis hospitalizations by immune status, NC, 2024 (N = 272)



Among the 272 ehrlichiosis cases for which hospitalization status was known, having an immunosuppressive condition was more common among hospitalized individuals than non-hospitalized individuals. Immunosuppressive conditions may predispose infected people to more severe disease requiring hospitalization.

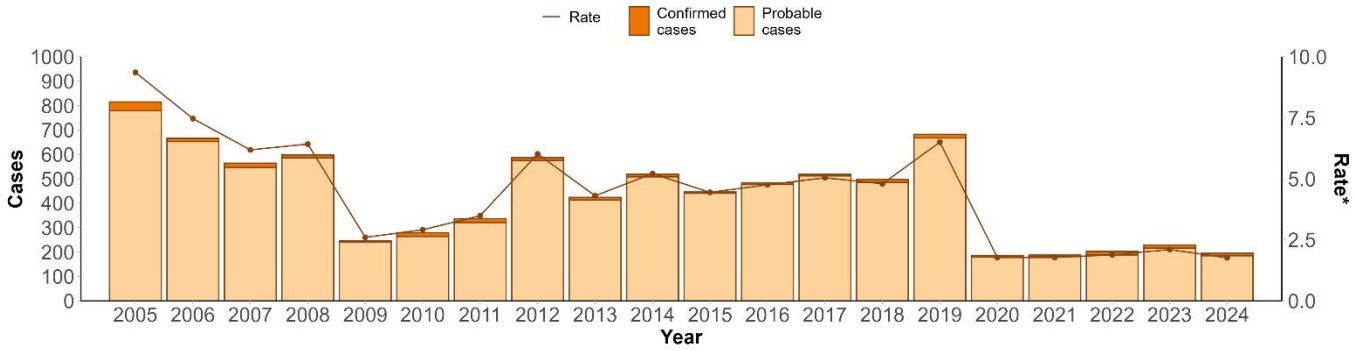
Spotted Fever Rickettsiosis (SFR)

2024 Key Points

- Reported cases of SFR remained consistent with the previous four years.
- Reported SFR cases were distributed throughout the state.
- Over 16% of reported SFR cases in 2024 resulted in hospitalization.

Spotted fever rickettsioses are a group of diseases caused by a closely related group of bacteria in the genus *Rickettsia*. Rocky Mountain Spotted Fever (RMSF), caused by *Rickettsia rickettsii*, is the most severe disease in this group, while infection with other bacteria, such as *R. parkeri*, typically results in less severe symptoms. In NC, the most common tick vector of *R. rickettsii* is likely the American dog tick (*Dermacentor variabilis*), while the primary vector of *R. parkeri* is the Gulf Coast tick (*Amblyomma maculatum*). Early symptoms of RMSF are often nonspecific and may include fever, headache, and muscle pain. A rash often develops later in the course of the illness. If left untreated, RMSF may result in severe complications, including organ failure, so early recognition and antibiotic treatment are crucial. *R. parkeri* rickettsiosis is often characterized by the formation of a dark scab at the site of the tick bite, which may be followed by other symptoms, such as fever, headache, rash, and muscle aches.

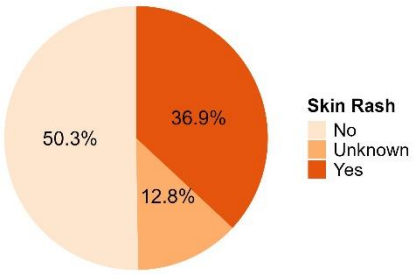
Confirmed and probable cases of SFR and rates of SFR per 100,000 residents, NC, 2005-2024



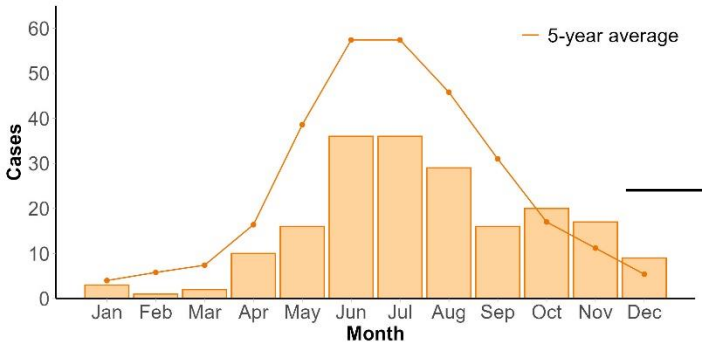
Reported cases of SFR have remained consistently low since 2020 compared to previous years. The decrease in reported cases in 2020 is attributable to the change to a more stringent case definition. In 2024, as in previous years, the vast majority of reported SFR cases are classified as probable, not confirmed, since only a single elevated antibody titer is usually obtained.

While a splotchy or pinpoint rash is a common symptom of RMSF and other spotted fevers, the presence of a rash was reported in less than half of all reported SFR cases in 2024. This may be due to lack of recognition of the rash by health care providers, diagnosis prior to rash development, and/or incomplete reporting.

2024 NC SFR cases by reporting of skin rash



2024 NC SFR cases by month of illness onset, compared to previous 5-year average monthly case count



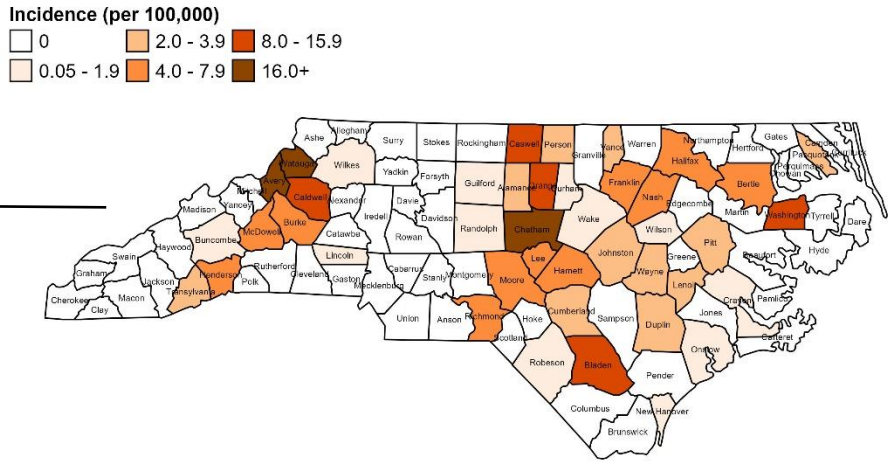
Consistent with the previous five years, the highest reported case counts of SFR were observed in June and July of 2024, although cases did occur year-round. During most months, case counts were lower than the five-year average. This is likely due to the higher case counts observed in 2019 prior to the change in case definition.

*Rate calculated per 100,000 residents

Spotted Fever Rickettsiosis (SFR)

The highest county-level incidence of SFR was observed in Chatham, Watauga and Avery counties in 2024. However, there are counties with a moderately high incidence of SFR in the Mountains, Piedmont and Coastal Plains regions. Therefore, there is likely a risk of SFR transmission throughout the state.

NC 2024 SFR incidence by county, NC, 2024



Annual Summary					
	2020	2021	2022	2023	2024
Cases	186	188	202	229	195
Rate*	1.8	1.8	1.9	2.1	1.8
Case Statistics, 2024					
Sex	**Category**			**Cases**	**%**
	Male			124	63.6%
	Female			70	35.9%
	Unknown			1	0.5%
Age Group	**Category**			**Cases**	**%**
	<5			1	0.5%
	5-17 yrs			7	3.6%
	18-24 yrs			14	7.2%
	25-34 yrs			17	8.7%
	35-44 yrs			35	17.9%
	45-64 yrs			77	39.5%
	65-84 yrs			40	20.5%
	85+ yrs			3	1.5%
	Unknown			1	0.5%
Race	**Category**			**Cases**	**%**
	White			162	83.1%
	Black or African American			8	4.1%
	American Indian/Alaskan Native			1	0.5%
	Asian or Pacific Islander			4	2.1%
	Multiple Races			1	0.5%
	Other or Unknown			19	9.7%
Hispanic Ethnicity	**Category**			**Cases**	**%**
	Yes			12	6.2%
	No			159	81.5%
	Unknown			24	12.3%
Hospitalization	**Category**			**Cases**	**%**
	Yes			33	16.9%
	No			161	82.6%
	Unknown			1	0.5%
Death	**Category**			**Cases**	**%**
	Yes			0	0.0%
	No			188	96.4%
	Unknown			7	3.6%

Annual Summary Key Points

- The rate of SFR among NC residents decreased slightly from 2.1 cases per 100,000 residents in 2023 to 1.8 cases per 100,000 residents in 2024. Still, rates of SFR in NC have remained quite consistent since 2020.
- SFR cases were more common among males than females.
- Adults ages 45-64 comprised the majority of cases, but cases were observed among all age groups.
- Most cases (83.1%) occurred among white NC residents, while 4.1% of cases were Black or African American. Most cases (81.5%) were not Hispanic.
- Illness requiring hospitalization was relatively common, occurring in over 16% of reported cases. This represented a return to the rate of hospitalization typically observed over the last decade, after two years of increased hospitalizations in 2022 (23.8%) and 2023 (25.3%). No deaths due to SFR were reported in 2024.

*Rate calculated per 100,000 residents

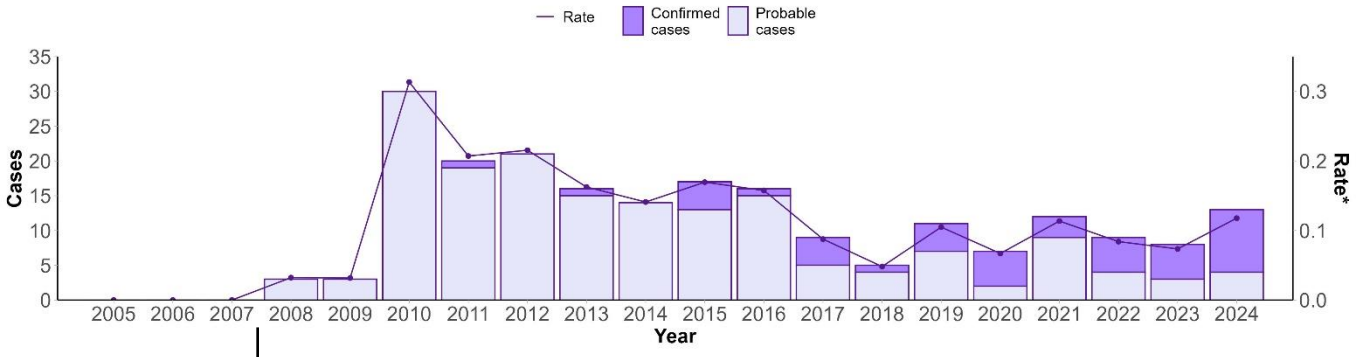
Anaplasmosis

2024 Key Points

- Anaplasmosis remains an uncommonly reported tickborne disease in NC.
- Thirteen cases of anaplasmosis were reported in 2024 – the highest number of cases reported since 2016.
- Most cases were reported among adults over the age of 65, who are at risk for severe illness.

Anaplasmosis is a disease caused by the bacteria *Anaplasma phagocytophilum*, which in NC is primarily vectored by the blacklegged tick (*Ixodes scapularis*). Anaplasmosis may first present as a mild, nonspecific illness, with symptoms such as fever and muscle aches, but if left untreated, more severe symptoms may occur.

Confirmed and probable cases of anaplasmosis and rates of anaplasmosis per 100,000 residents, NC, 2005-2024

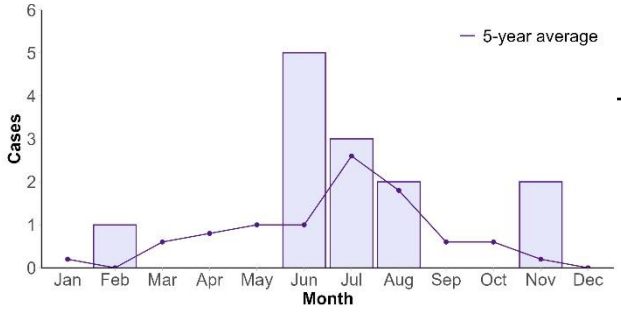


Anaplasmosis is an uncommonly reported tickborne disease in NC with 30 cases or fewer identified per year since the disease became reportable in 2008. Since 2010, there has been a downward trend in annual reported cases of anaplasmosis with fewer than 15 cases reported per year since 2017. However, in 2024, there were 13 reported cases – the highest case count observed since 2016.

Only 31% of reported anaplasmosis cases in 2024 were likely exposed to *A. phagocytophilum* in NC. The most commonly reported region of exposure was the Northeastern U.S.

Location of most likely exposure among 2024 NC anaplasmosis cases

2024 NC anaplasmosis cases by month of illness onset, compared to previous five-year average monthly case count



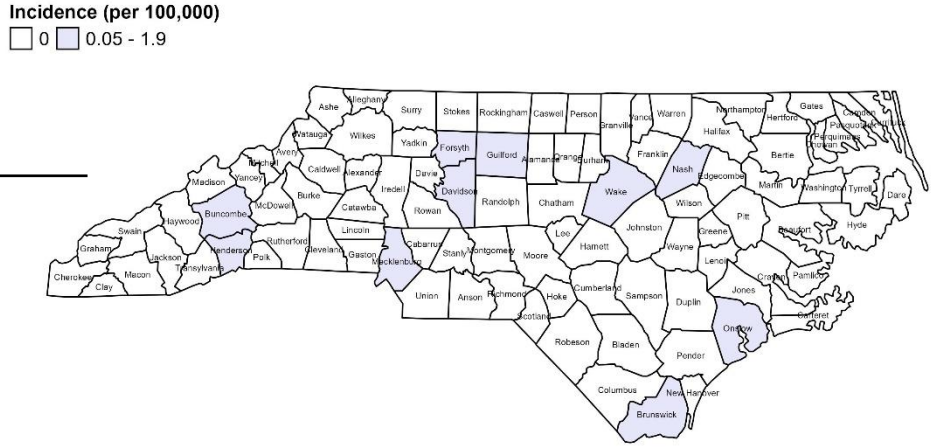
In 2024, the highest number of reported anaplasmosis cases was observed in June. During the previous five years, cases peaked, on average, in July.

*Rate calculated per 100,000 residents

Anaplasmosis

Anaplasmosis cases were reported in the Mountains, Piedmont and Coastal Plains regions. The county-level incidence of anaplasmosis was low (0.05-1.9 cases per 100,000 residents) among all counties with reported cases.

Anaplasmosis incidence by county, NC, 2024



Annual Summary					
	2020	2021	2022	2023	2024
Cases	7	12	9	8	13
Rate*	0.1	0.1	0.1	0.1	0.1
Case Statistics, 2024					
Sex	**Category**		**Cases**	**%**	
	Male		11	84.6%	
	Female		2	15.4%	
	Unknown		0	0.0%	
Age Group	**Category**		**Cases**	**%**	
	<5		0	0.0%	
	5-17 yrs		0	0.0%	
	18-24 yrs		0	0.0%	
	25-34 yrs		0	0.0%	
	35-44 yrs		1	7.7%	
	45-64 yrs		4	30.8%	
	65-84 yrs		8	61.5%	
	85+ yrs		0	0.0%	
	Unknown		0	0.0%	
Race	**Category**		**Cases**	**%**	
	White		8	61.5%	
	Black or African American		1	7.7%	
	American Indian/Alaskan Native		0	0.0%	
	Asian or Pacific Islander		0	0.0%	
	Multiple Races		0	0.0%	
	Other or Unknown		4	30.8%	
Hispanic Ethnicity	**Category**		**Cases**	**%**	
	Yes		0	0.0%	
	No		8	61.5%	
	Unknown		5	38.5%	
Hospitalization	**Category**		**Cases**	**%**	
	Yes		9	69.2%	
	No		4	30.8%	
	Unknown		0	0.0%	
Death	**Category**		**Cases**	**%**	
	Yes		0	0.0%	
	No		13	100.0%	
	Unknown		0	0.0%	

Annual Summary Key Points

- The incidence of anaplasmosis in NC has remained consistently low since 2020 (0.1 cases per 100,000 residents).
- Over 84% of reported cases were male.
- Over 60% of reported anaplasmosis cases in 2024 occurred in adults ages 65-84. This age group has a higher risk of experiencing severe illness compared to younger people.
- Over 60% of reported cases occurred among white NC residents, although race was unknown in over 30% of cases. The majority of reported cases were not Hispanic.
- Most reported cases (69.2%) of anaplasmosis were hospitalized for their illness, but no deaths were reported.

*Rate calculated per 100,000 residents

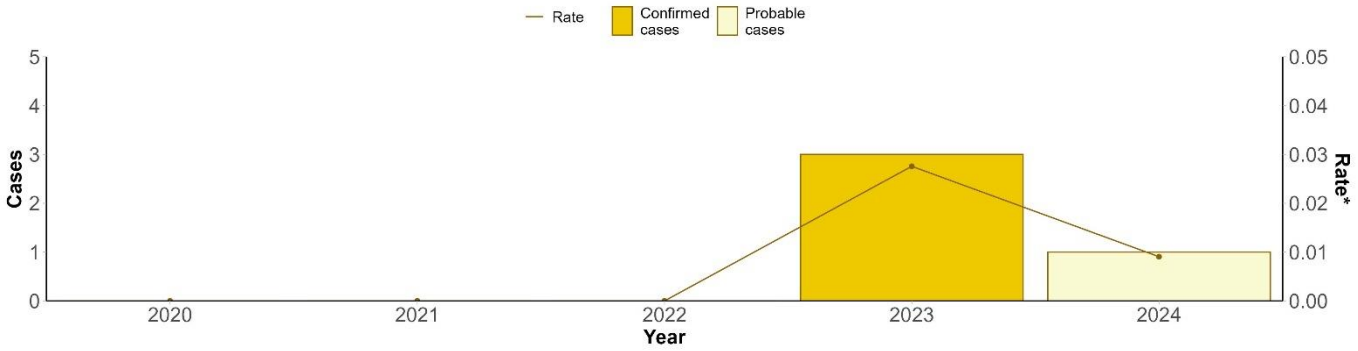
Babesiosis

2024 Key Points

- Babesiosis is uncommon in NC with only a single case reported in 2024.
- Only four cases of babesiosis have ever been reported in NC.

Babesiosis is a disease caused by *Babesia* parasites. In the U.S., the most common *Babesia* species that infects people is *B. microti*. The most common vector of *Babesia spp.* is the blacklegged tick (*Ixodes scapularis*). The parasite damages red blood cells causing anemia. While many people do not experience any symptoms of babesiosis, some may experience a mild flu-like illness with symptoms such as fever, chills, and body aches. However, more severe illness may occur, especially in those with weakened immune systems. Most cases of babesiosis in the U.S. occur in the Northeast and Midwest.

Confirmed and probable cases of babesiosis and rates of babesiosis per 100,000 residents, NC, 2020-2024



Babesiosis is uncommon in NC, with only four total cases identified since it became reportable in 2020. In 2024, only one case was reported, representing a decrease from the three cases reported in 2023.

Annual Summary Key Points

- A single case of babesiosis was reported in November 2024 in Mecklenburg County.
- The incidence of babesiosis in NC remains very low at less than 0.1 cases per 100,000 residents.

*Rate calculated per 100,000 residents