

# **Lyme disease diagnoses increased 357% in rural areas over past 15 years**

August 2 2022

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## LYME DISEASE

### A Continuing Concern

#### Private insurance claim lines with a Lyme disease diagnosis in the United States

**From 2016 to 2021:**

In rural areas, increased **60%**

In urban areas, increased **19%**




**From 2007 to 2021:**

In rural areas, increased **357%**

In urban areas, increased **65%**

In June and July, claim lines with Lyme disease diagnoses were more common in rural than urban areas. But from November to April, claim lines with Lyme disease diagnoses occurred more often in urban than rural areas.

Claim Lines with Lyme Disease Diagnoses: Rural/Urban Percentage by Month, 2016-2021



\*Percent of claim lines" is the percent of all claim lines associated with a given diagnosis (e.g., Lyme disease) in a given time period (e.g., 2016-2021).

A claim line is an individual service or procedure listed on an insurance claim.

Top Lyme Disease States\* in 2017



Top Lyme Disease States\* in 2021



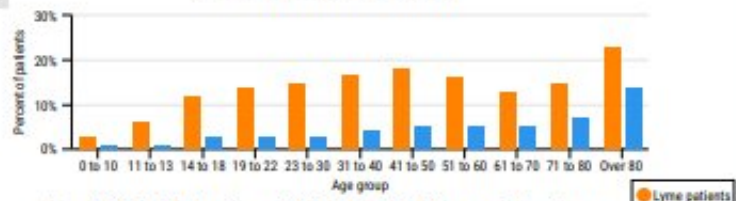
\* States in which diagnoses of Lyme disease as a percentage of all diagnoses in the state were higher than in all other states. As numbered, states are in order from highest to lowest.

#### Lyme Disease and Later Diagnoses

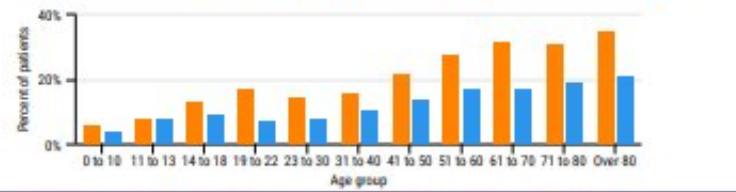
In a longitudinal study of private insurance claims from a statistically significant cohort of individuals from 2017 to 2021, patients with Lyme disease ("Lyme patients") were compared to the overall cohort ("All patients").



Percent of Patients by Age Group with Malaise and Fatigue in Lyme Disease Population Compared to Total Population, 2017-2021



Percent of Patients by Age Group with Soft-Tissue-Related Diagnoses in Lyme Disease Population Compared to Total Population, 2017-2021



Source: FAIR Health's FH MIPS® database of more than 36 billion privately billed healthcare claim records from more than 70 contributors nationwide. Copyright 2022, FAIR Health, Inc. All rights reserved.

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Private insurance claim lines with a Lyme disease diagnosis in the United States.

Credit: fairhealth.org

Lyme disease has experienced notable growth in the United States over the past 15 years and, as a result, has become an illness of increasing national concern. From 2007 to 2021, private insurance claim lines with Lyme disease diagnoses rose 357% in rural areas and 65% in urban areas. These and other findings on this tick-borne, bacterial illness were captured in an infographic just released by FAIR Health. The national, independent organization used its database of over 36 billion privately billed health care claims to conduct its 15-year analysis of Lyme disease; this analysis builds upon a [previous FAIR Health infographic](#) that studied 10 years of Lyme disease data.

## **Rural and urban differences**

The infographic reveals key differences in prevalence of Lyme disease when comparing rural and [urban areas](#). From 2016 to 2021, claim lines with Lyme disease diagnoses increased 60% in rural areas and 19% in urban areas, with diagnoses peaking nationally in June and July of each year. During these [summer months](#), rural areas, on average, had a greater share of claim lines associated with Lyme disease diagnoses than urban areas. From November to April, however, claim lines with Lyme disease diagnoses occurred more often in urban than [rural areas](#).

## **Geographic distribution**

In 2017, the states with the greatest proportion of claim lines with Lyme disease diagnoses as a percentage of all diagnoses in the state, from highest to lowest, were New Jersey, Connecticut, North Carolina, Rhode Island and Vermont. Given that Lyme disease has been historically

associated with the Northeast and upper Midwest, the status of North Carolina as the state with the third highest percentage of Lyme disease claim lines in 2017 suggested marked expansion to a new region. By 2021, however, North Carolina had dropped from the list.

The top states in 2021, from highest to lowest, were New Jersey, Vermont, Maine, Rhode Island and Connecticut. Maine, which was not previously on the list of top five states for Lyme disease claim lines, assumed third place in 2021, suggesting a growing presence of the tick-borne illness in the state. Connecticut and Vermont switched places, with Vermont emerging as number two and Connecticut dropping to number five.

## **Later diagnoses**

Although Lyme disease is treatable with antibiotics, some Lyme patients later develop conditions with long-term symptoms, such as fatigue, muscle and joint pain and cognitive issues. Such conditions have been linked to post-treatment Lyme disease syndrome, sometimes called chronic Lyme disease.

To identify later diagnoses associated with Lyme disease, FAIR Health examined a statistically significant cohort of individuals in its [private insurance](#) claims database from 2017 to 2021, comparing the prevalence of certain diagnoses among Lyme patients to all patients in the cohort. The analysis found that diagnoses such as malaise and fatigue and soft-tissue-related issues were more common among Lyme patients than among the total patient population. Across all age groups, patients with Lyme disease were generally more likely to have these apparently associated diagnoses than all patients in the cohort.

FAIR Health President Robin Gelburd stated, "Lyme disease remains a growing public health concern. FAIR Health will continue to use its

repository of claims data to provide actionable and relevant insights to health care stakeholders seeking to better understand the ongoing rise of Lyme disease cases."

This is the third study FAIR Health has conducted on Lyme disease, the first appearing in an [infographic](#) released in 2017 and the second in a [white paper](#) published in 2019.

**More information:** For the new infographic, click [here](#).

Provided by FAIR Health

Citation: Lyme disease diagnoses increased 357% in rural areas over past 15 years (2022, August 2) retrieved 12 June 2024 from <https://medicalxpress.com/news/2022-08-lyme-disease-rural-areas-years.html>

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