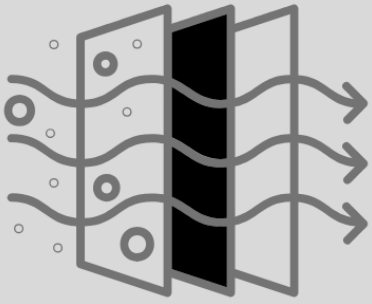
Marion County
Air Quality-Related Illnesses
Surveillance Report 2025

OREGON
Health & Human Services



Purpose of this report

The purpose of this report is to evaluate the association between Non-Infectious Respiratory Illness (formally known as Air Quality-Related Respiratory Illness), Asthma, Fire and Smoke Inhalation, Pollen-Related Allergy emergency department and urgent care clinic visits (emergency visits) and hospitalizations in relation to the air quality index readings in Marion County. This report explores data by population characteristics (age, sex, zip code, and race), and characteristics related to air quality. This report is meant to inform resilience and preparedness to environmental health hazards, threats, and natural disasters that impact the public's health and wellbeing.

Background

Located in the heart of the Mid-Willamette Valley, Marion County has a landscape that stretches from the Willamette River to the Cascade Mountains and encompasses nearly 1,200 square miles of rural, urban, forested, and agricultural landscapes. Marion County is home to a diverse population of 345,920 people and 20 cities, including Oregon's capital, Salem. According to the 2020 US Census, the five largest cities in the county - Salem, Keizer, Woodburn, Silverton, and Stayton - are home to 66% of the total population. The remaining 34% live in one of the smaller 15 cities or on unincorporated land. Demographically, Marion County is home to people of various ages, occupations, faiths, physical and mental capabilities, languages, and many more unique characteristics.

Methods

This report presents information on air quality index readings, emergency department and urgent care visits (emergency visits) and hospitalizations (in-patient) due to Non-Infectious Respiratory Illness (formally known as Air Quality-Related Respiratory Illness), Asthma, Fire and Smoke Inhalation, Pollen-Related Allergy in Marion County year-round. The data was collected from the Oregon Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) database, US Census, and the Environmental Protection Agency. Counts and numerical data are shown in the Appendix. All counts and rates are based on the patient's place of residence and not the location where they received care.

Definitions

Emergency visits: Emergency department or urgent care clinic visits among people residing in Marion County.

ESSENCE: The State of Oregon has a public health syndromic surveillance system known as ESSENCE, which stands for Electronic Surveillance System for the Early Notification of Community-Based Epidemics. It provides real-time data for public health and hospitals to monitor what is happening in emergency departments across the state before, during, and after a public health emergency.[4]

Fire & Smoke Inhalation (ESSENCE): To identify emergency department and ambulatory care visits associated with fire and smoke inhalation. The primary purpose of the query is for wildfire surveillance, although the query may return visits not limited to wildfires. Using this query in combination with air quality trends may further assist with surveillance efforts. It was developed by the National Syndromic Surveillance Program (NSSP) Community of Practice in collaboration with the Council of State and Territorial Epidemiologists and the National Center for Environmental Health.[4]

Good air quality: Air quality index (AQI) values at or below 100 are generally thought of as satisfactory. This includes the Good (green) and Moderate (yellow) AQI levels.[2]

Hospitalizations: An in-patient designation linked to an emergency department or urgent care clinic visit in Oregon ESSENCE. In-patient visits show that the severity of the emergency visit required more intensive care.[5]

Non-Infectious Respiratory Illness (NIRI): Emergency department and ambulatory care visits for respiratory illnesses associated with poor air quality. Definition includes chief complaint terms and diagnosis codes for acute bronchitis, emphysema, chronic obstructive airway disease, chronic obstructive lung disease, chronic obstructive pulmonary disease, asthma, bronchial asthma, reactive airway disease, acute respiratory distress syndrome, difficulty breathing, chest tightness, dyspnea, shortness of breath and wheezing. Using this query in combination with air quality trends may further assist with surveillance efforts. (NSSPCP, 2019) **This query used to be called "Air quality-related respiratory illness" and was retitled "Non-Infectious Respiratory Illness" by Oregon ESSENCE on 5/28/25.*[4]

Pollen-related allergies: Emergency department and ambulatory care visits for allergies to pollen. The immune system mistakenly identifies a typically harmless substance as an intruder. This substance is called an allergen. The immune system responds to the allergen by releasing histamine and chemical mediators that typically cause symptoms in the nose, throat, eyes, ears, skin and roof of the mouth.[2]

Poor air quality: Air quality index (AQI) values above 100 are unhealthy: first for certain sensitive groups of people, then for everyone as AQI values get higher. This includes the following levels of concern: Unhealthy for Sensitive Groups (orange), Unhealthy (red), Very Unhealthy (purple), and Hazardous (maroon).[2]

US Air Quality Index: The Environmental Protection Agency's (EPA) tool for communicating daily air quality. It uses color-coded categories and provides statements for each category that tell you about air quality in your area, which groups of people may be affected, and steps you can take to reduce your exposure to air pollution. It's also used as the basis for air quality forecasts and current air quality reporting. Air quality data is found at www.airnow.gov.[2]

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Summary of Findings

This report shows various air quality-related illness data between 2019 and 2024, including non-infectious respiratory illness (previously known as air-quality related respiratory illness), asthma, fire and smoke inhalation, and pollen-related allergies. It also includes Air Quality Index (AQI) data between 2019 and 2024.

Between 2019 and 2024, Marion County has experienced spikes in poor air quality index (AQI) readings. Other air quality-related environmental factors such as pollen count, wildfire smoke, and air temperature have been known to affect respiratory health. Non-infectious respiratory illness and asthma showed an increase in emergency visits as AQI classification increased. Fire and smoke inhalation peaked during the hazardous air quality in 2020, which was caused by wildfire smoke from the Beachie Creek and Lionshead fires in the Santiam Canyon. No pollen monitor currently exists in Marion County, despite the county being a regional agricultural hub. As a result, pollen-related allergy emergency visits do not have a data link to an environmental hazard.

The air quality-related illnesses reviewed in this report do not affect all people and communities the same. Between 2019 and 2024, the data shows the following health outcomes amongst various demographic groups:

- Non-Infectious Respiratory Illness (NIRI):
    - Emergency visits have steadily increased over time, peaking at 20,118 in 2024.
    - In-patient hospitalizations peaked at 3,909 in 2024.
    - Females had higher rates of emergency visits and hospitalizations than males.
    - Emergency visits and hospitalizations increased with age, peaking at 65 years old or older.
    - Residents who identified as African American/Black and Hawaiian/Pacific Islander had the highest rates of emergency visits, while African American/Black and White racial groups had the highest hospitalization rates.
    - Residents who did not identify as Hispanic or Latino had higher rates of emergency visits and significantly higher rates of hospitalizations.
    - Northeast Salem, central Salem, Detroit, and Idanha had the highest emergency department visit rates geographically.
    - 1.4% of all residents' emergency visits were identified as homeless.

- Asthma:
    - Emergency visits have steadily increased over time, peaking at 5,064 in 2024.
    - Marion County surpassed the state of Oregon between 2022 – 2024 per 100,000 population.
    - In 2024, Asthma made up 25.2% of all NIRI visits, up from the 2019-2023 average of 22.1%.
    - Fewer monthly emergency visits and hospitalizations occurred during the Oregon COVID-19 State of Emergency between March 2020 – March 2022.
    - Females had higher rates of emergency visits and hospitalizations than males.
    - Emergency visits were highest among adults aged 18-44, while hospitalizations occurred most often among adults 65 years old or older and infants and toddlers 0-4 years old.
    - Residents who identified as African American/Black and Hawaiian/Pacific Islander had the highest rates of emergency visits and hospitalizations.
    - Residents who did not identify as Hispanic or Latino had higher rates of emergency visits and hospitalizations.
    - Northeast Salem, central Salem, and Aumsville had the highest emergency department visits geographically.
    - 0.9% of all resident emergency visits were identified as homeless.

- Fire and Smoke Inhalation:
    - Emergency visits and hospitalizations peaked in September 2020.
    - Over the past six years, Marion County had lower rates of emergency visits than the state of Oregon.
    - Males had higher rates of emergency visits than females, and females had higher rates of hospitalizations than males.
    - Emergency visits were highest among adults aged 25-44.
    - Residents who identified as Hawaiian/Pacific Islander and African American/Black had the highest rates of emergency visits.
    - Residents who did not identify as Hispanic or Latino had higher rates of emergency visits and hospitalizations.
    - Residents who lived in rural geographical areas had higher rates of hospitalizations.
    - 3.8% of all resident emergency visits were identified as homeless.

- Pollen-related Allergies:
    - Over the past six years, emergency visits spiked in June and peaked to record highs in 2024.
    - In-patient hospitalizations were suppressed due to low numbers between 2019-2024.
    - Over the past six years, Marion County had higher rates of emergency visits than the state of Oregon.
    - Fewer monthly emergency visits occurred during the Oregon COVID-19 State of Emergency between March 2020 – March 2022.
    - Females had higher rates of emergency visits than males.
    - Emergency visits were highest among adults aged 18-44.
    - Residents who identified as Hawaiian/Pacific Islander had the highest rates of emergency visits.
    - Residents who identify as Hispanic or Latino had higher rates of emergency visits.
    - Residents who lived in urban geographical areas had higher rates of emergency visits, but this trend flipped for hospitalizations.
    - Residents identified as homeless were suppressed due to low numbers between 2019-2024.

This report and its associated indicators provide timely information that can detect trends and groups disproportionately affected by air quality-related illnesses for targeted interventions. Like any source, ESSENCE has key limitations, including the requirement that a person must be seen at an urgent care or emergency department to be detected in the ESSENCE surveillance system. Patients seen in other settings, such as a clinic, would be missed. Duplications in patient visits may also exist, where one person could be counted more than once due to multiple visits. Other limitations include errors in medical coding, or incomplete notes, which may influence results.

ESSENCE remains one of the timeliest surveillance systems for tracking resident patient visits for air quality related-illness in our community. Like any system, it is most effective when used in combination with other systems and indicators that describe air quality-related illness and its contributing risk factors.

Air Quality Index (AQI)

What am I reading?

The following figures show the identified Moderate or worse air quality index days for Marion County with each figure observing different air quality categories. The data was collected from Oregon Department of Environmental Quality stations across Marion County, Oregon.[3]

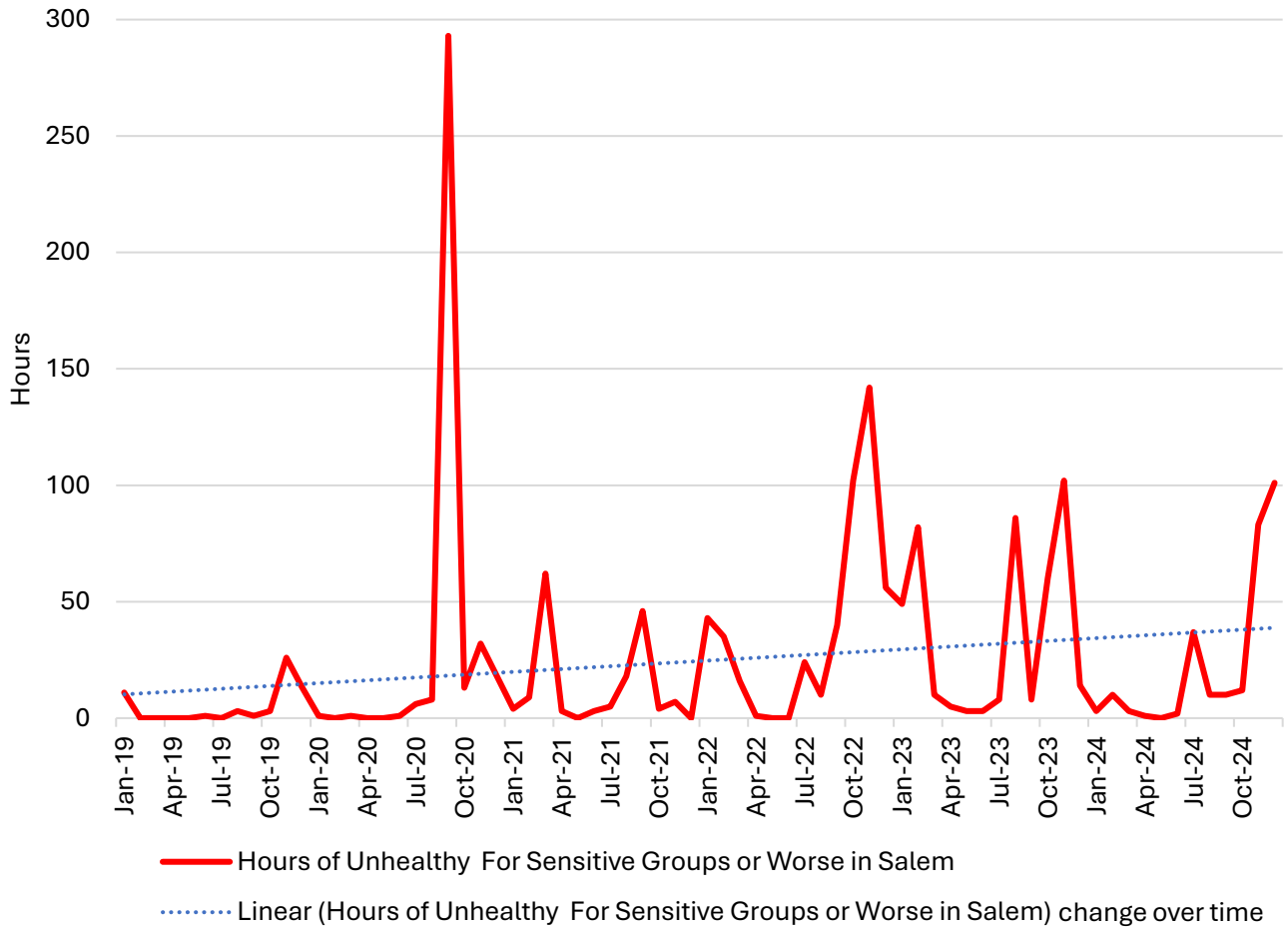
Table 1: AQI Basics for Ozone & Particle Pollution

The table shows the classification for each range of the Air Quality Index (AQI) according to the Environmental Protection Agency. Each AQI range has an explanation of its risk.[2]

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Figure 1: Monthly Count of Unhealthy for Sensitive Groups or worse Air Quality Index in Salem, OR, 2019-2024

The figure shows the total number of hours per month that Unhealthy for Sensitive Groups (orange) or worse was recorded at the air quality station at the Oregon State Hospital according to the Oregon Department of Environmental Quality (DEQ). Spikes in moderate or worse air quality have occurred consistently in the late fall and early winter each year between 2019 and 2024. The linear best fit trend line shows that Unhealthy for Sensitive Groups or worse Air Quality Index days increased over time.



Air Quality Index Readings in Salem, Oregon

What am I reading?

The following figures show the identified air quality index readings in Salem, Oregon by year. Each figure observes different Air Quality Index Levels of Concern, which include Good (0-50), Moderate (51-100), Unhealthy for Sensitive Groups (101-150), Unhealthy (151-200), Very Unhealthy (201-300), Hazardous (301 or more). The data was collected from the Oregon Department of Environmental Quality air quality monitoring station at the Oregon State Hospital in Salem, Oregon. While other air quality stations currently exist in Marion County, the Oregon State Hospital air quality station is the only one with data spanning 2019-2024.[2,3]

Figure 2a: Percent of Good Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced good air quality through hourly Oregon DEQ readings. The percentage of good air quality has fluctuated over the past several years.

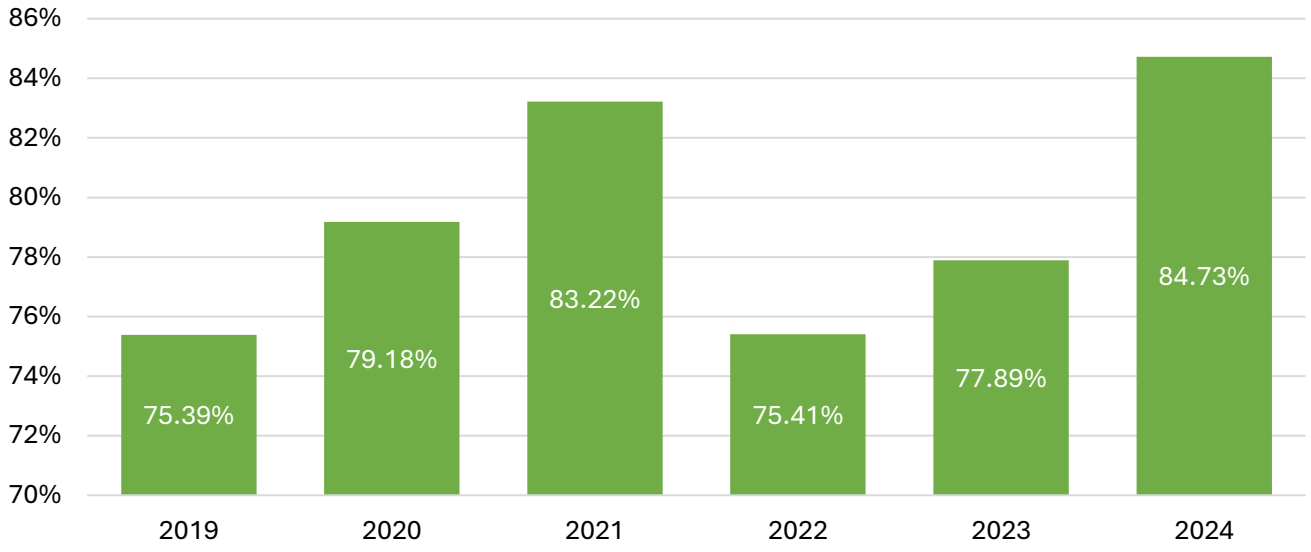


Figure 2b: Percent of Good Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced moderate air quality through hourly Oregon DEQ readings. The percentage of moderate air quality has fluctuated over the past several years.

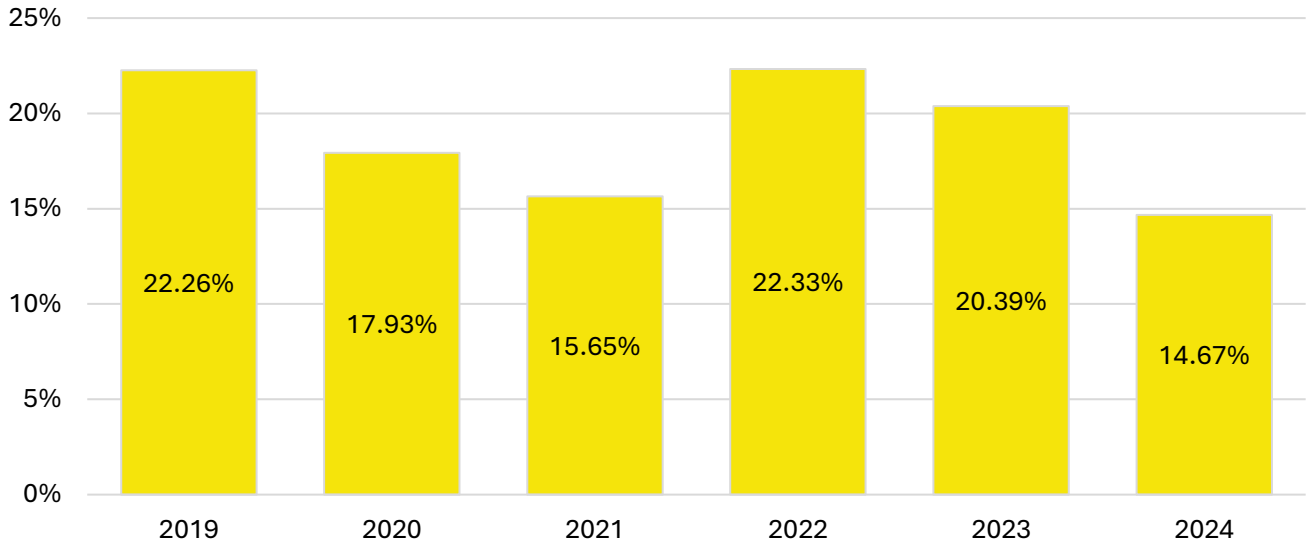


Figure 2c: Percent of Unhealthy for Sensitive Groups or Worse Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced Unhealthy for Sensitive Groups air quality through hourly Oregon DEQ readings. Air Quality that is Unhealthy for Sensitive Groups or worse peaked in 2020 due to the Beachie Creek and Lionshead Fires.

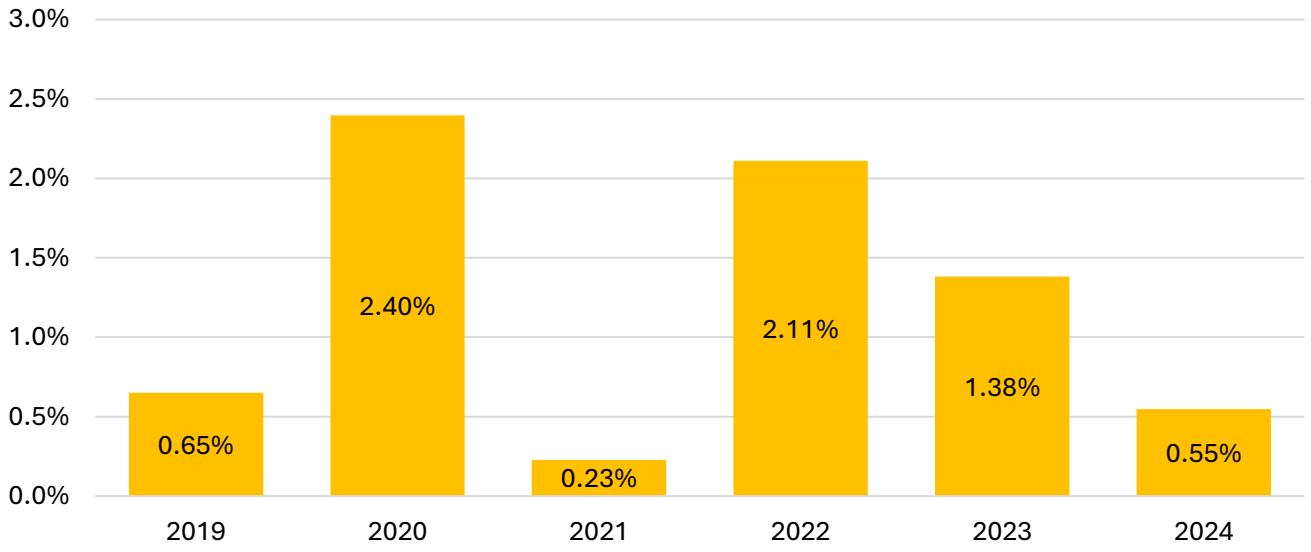


Figure 2d: Percent of Unhealthy or Worse Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced Unhealthy or worse air quality through hourly Oregon DEQ readings at the Oregon State Hospital. Unhealthy or worse Air Quality peaked in 2020 due to the Beachie Creek and Lionshead Fires.

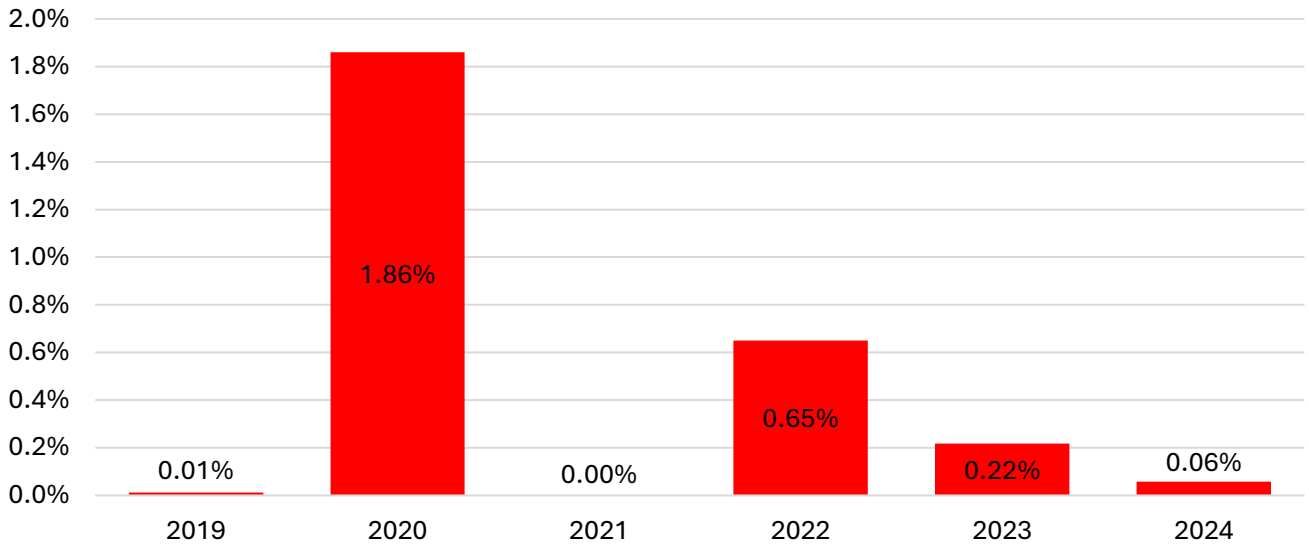


Figure 2e: Percent of Very Unhealthy or Worse Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced Very Unhealthy or worse air quality through hourly Oregon DEQ readings at the Oregon State Hospital. Very Unhealthy or worse Air Quality peaked in 2020 due to the Beachie Creek and Lionshead Fires.

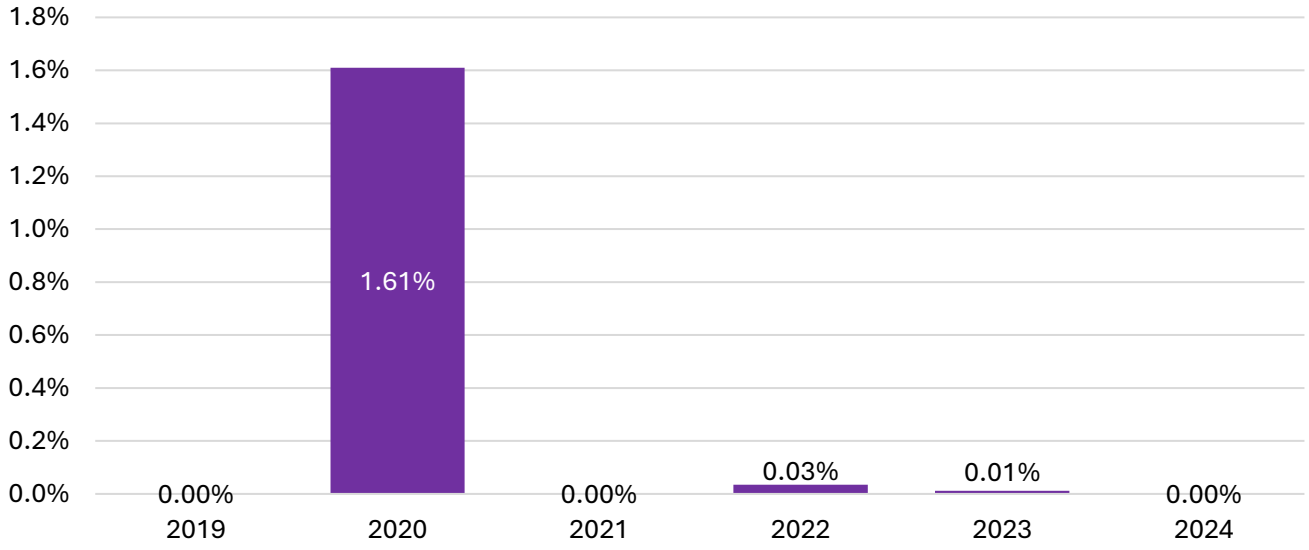


Figure 2f: Percent of Hazardous or Worse Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of time Salem, Oregon experienced Hazardous air quality through hourly Oregon DEQ readings at the Oregon State Hospital. Over the past six years, the only year Salem experienced Hazardous air quality was in 2020, due to the Beachie Creek and Lionshead Fires.

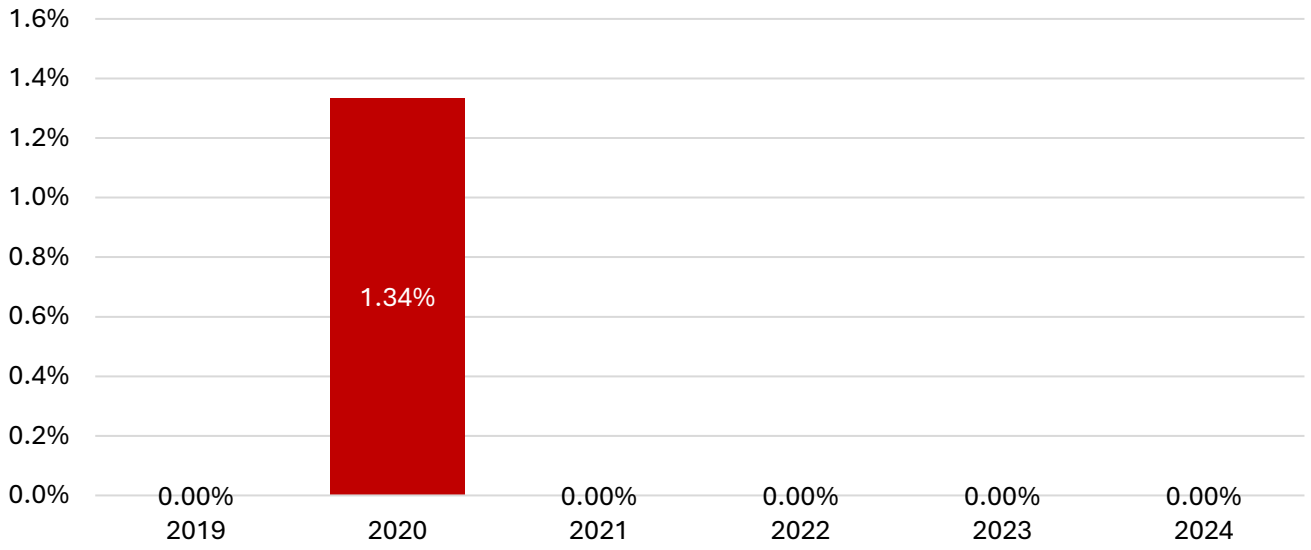
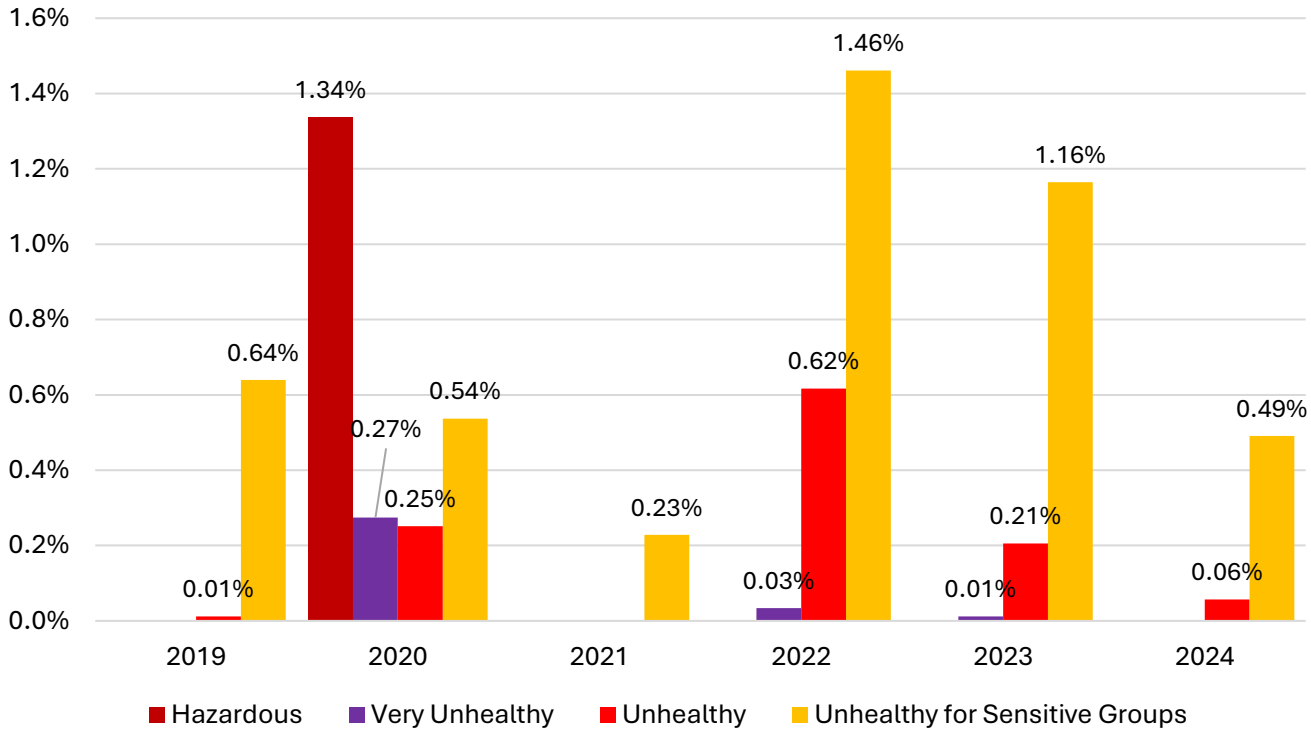


Figure 2g: Percent of Unhealthy or Worse Air Quality Hours, 2019-2024, Salem, OR

The figure shows the percentage of the year Salem, Oregon experienced air quality index categories starting at Unhealthy for Sensitive Groups through hourly Oregon DEQ readings at the Oregon State Hospital. Over the past six years, the only year Salem experienced Hazardous air quality was in 2020, due to the Beachie Creek and Lionshead Fires.



Non-Infectious Respiratory Illness

What am I reading?

Emergency Department & Urgent Care Visits (referred to as "Emergency Visits" in this report) are the number of visits to a hospital and/or hospital-associated urgent care clinic within Marion County, Oregon. These visits are gathered from the Oregon ESSENCE database, which provides real-time data for public health and hospitals to monitor what is happening in emergency departments across the state before, during, and after a public health emergency.[2,4,7]

Figure 3a: Non-Infectious Respiratory Illness Emergency Visit Counts, 2019-2024, Marion County
The figure shows the number of non-infectious respiratory illness emergency visits from 2019 to 2024 in Marion County. Emergency visits have increased over time and peaked in 2024.

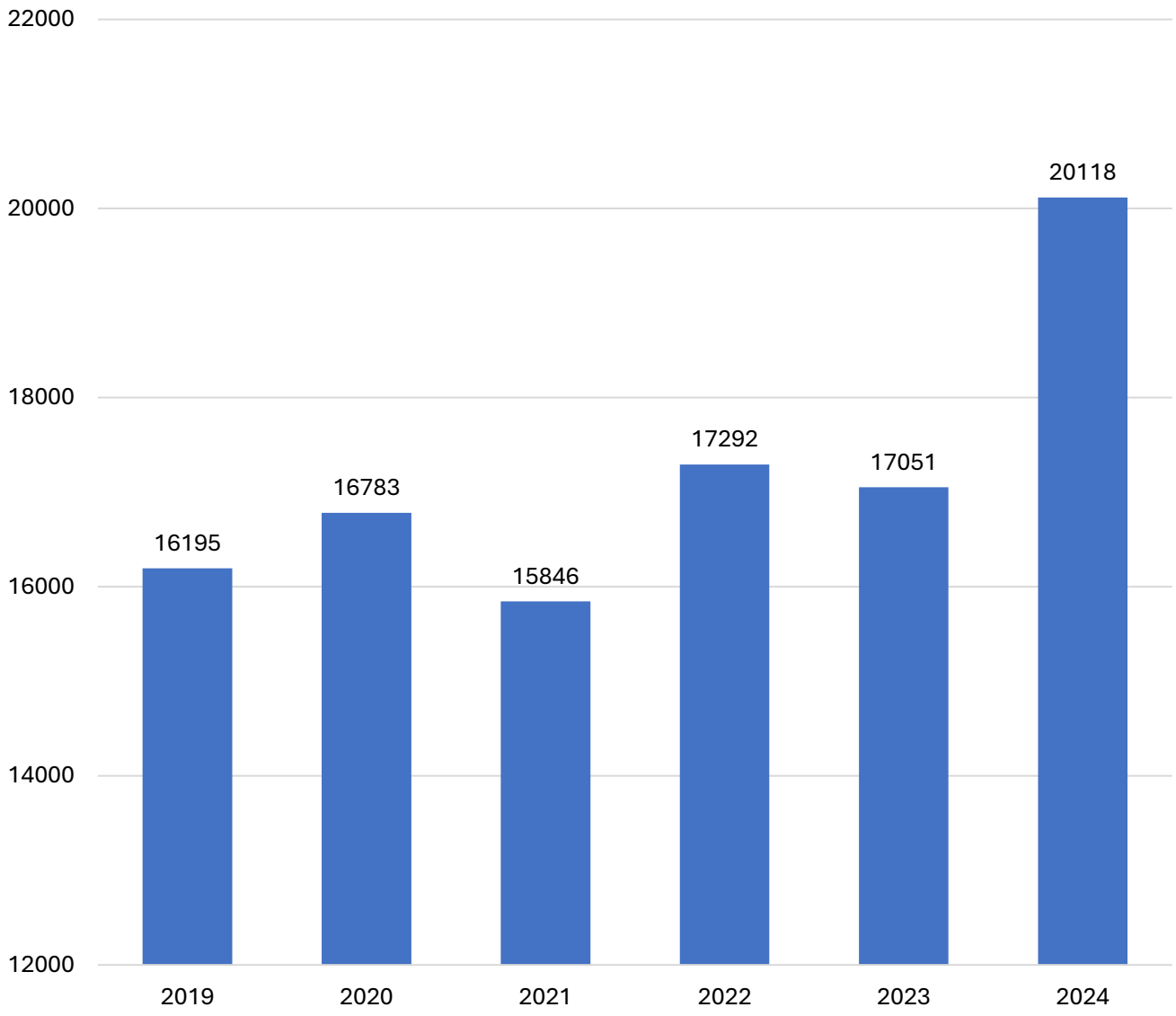


Figure 3b: Monthly Non-Infectious Respiratory Illness Emergency Visit Counts and Moderate or Worse Air Quality Index Days, 2019-2024, Marion County

The figure shows the number of monthly non-infectious respiratory illness visits in Marion County and the hourly air quality readings by month from January 2019 to December 202 in Salem, Oregon.Moderate or worse AQI shows some correlation between AQI and emergency visits.

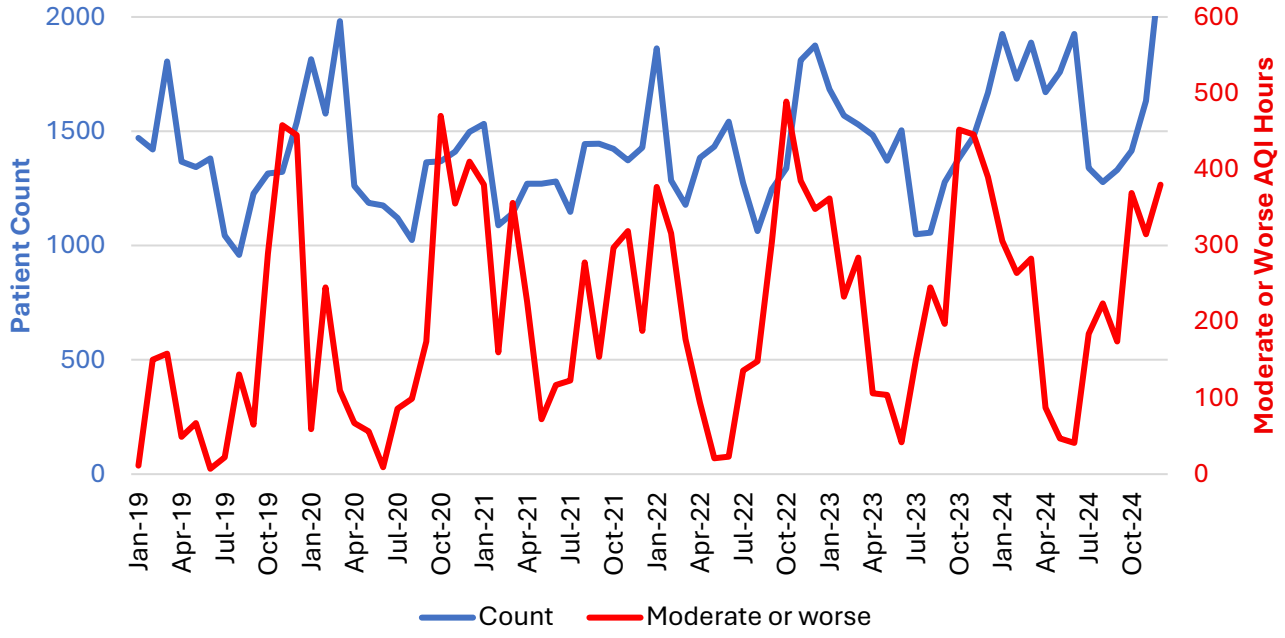


Figure 3c: Non-Infectious Respiratory Illness Emergency Visit Rates per 100,000 population, 2019-2024, Marion County and Oregon

The figure shows the rate of non-infectious respiratory illness emergency visits per 100,000 population from 2019 – 2024 in Marion County and Oregon. The data shows a consistent upward trend over the study period for both Marion County and Oregon.

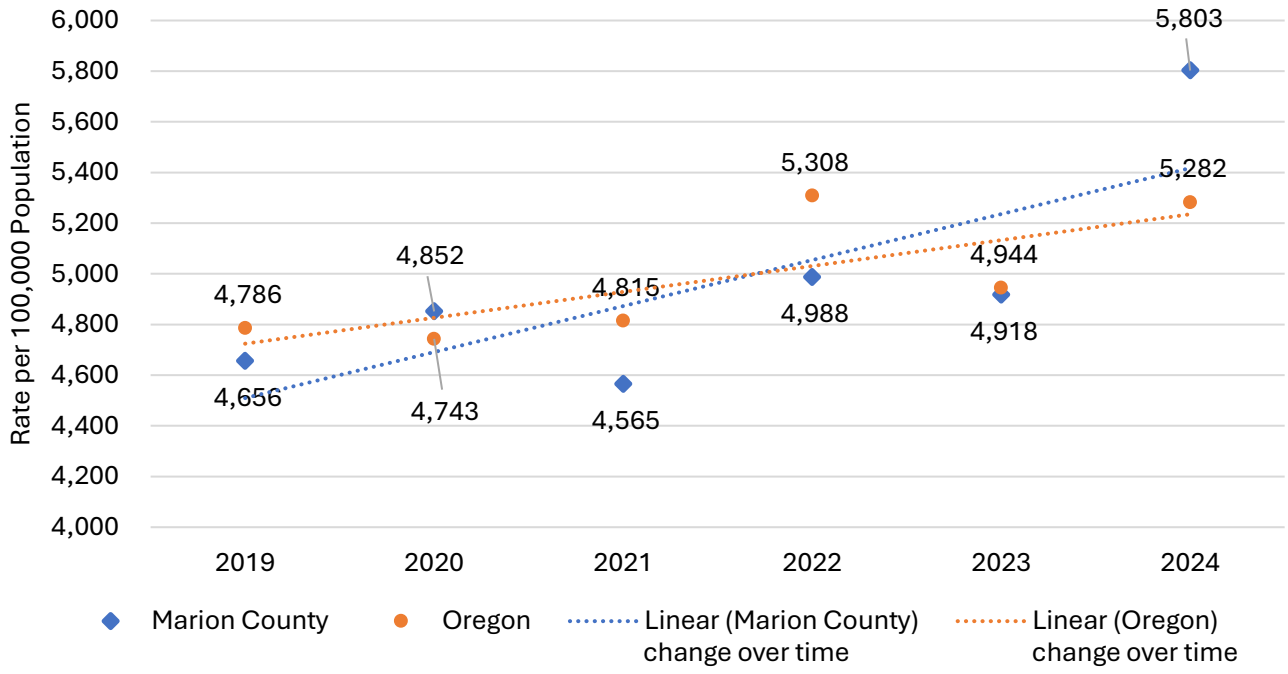
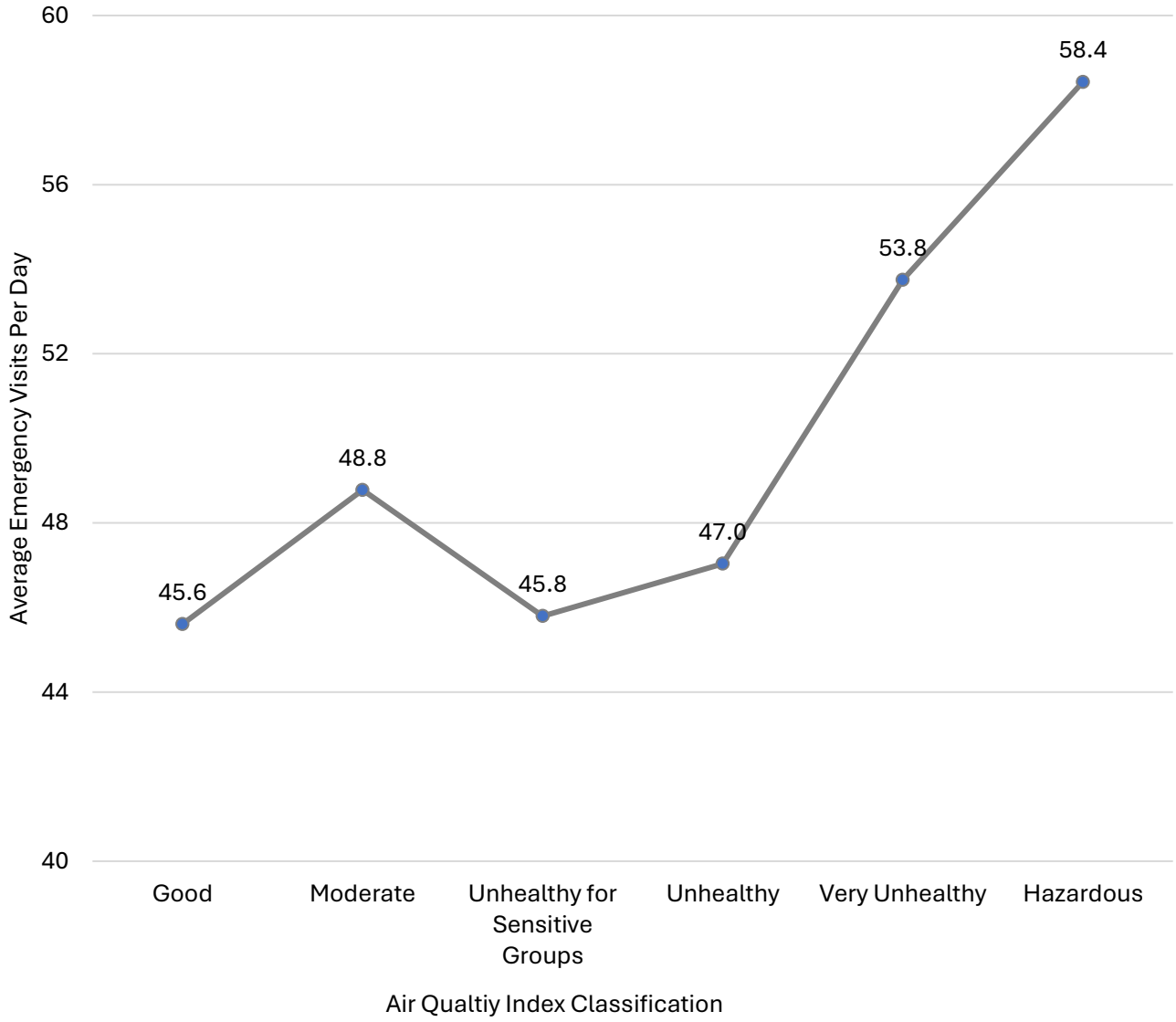


Figure 3d: Non-Infectious Respiratory Illness Emergency Visits per Day by Air Quality Index Classification, 2019-2024, Marion County

The figure shows the average number of non-infectious respiratory illness emergency visits within each Air Quality Index Classification. The number of non-infectious respiratory illness emergency visits increase as the AQI gets worse.



Hospitalizations (In-patient)

What are you reading?

Hospitalizations are the number of emergency visits that result in an in-patient visit caused by non-infectious respiratory illness in Marion County. The previous 2019-2023 report used 24 hours or longer to define hospitalizations. However, due to the hospitals recording 24 hours or longer differently, this report shows the in-patient designation. Between the two reports, readers may notice a reduction in hospitalization numbers in this report. The in-patient designation is more accurate at showing the severity of the emergency visits and are recorded in Oregon ESSENCE. [4,5,7]

Figure 4a: Non-Infectious Respiratory Illness Hospitalization (In-patient) Counts, 2019-2024, Marion County

The figure shows the number of yearly non-infectious respiratory illness hospitalizations (in-patient) from 2019 – 2024 in Marion County. Hospitalizations have increased over time and peaked in 2024.

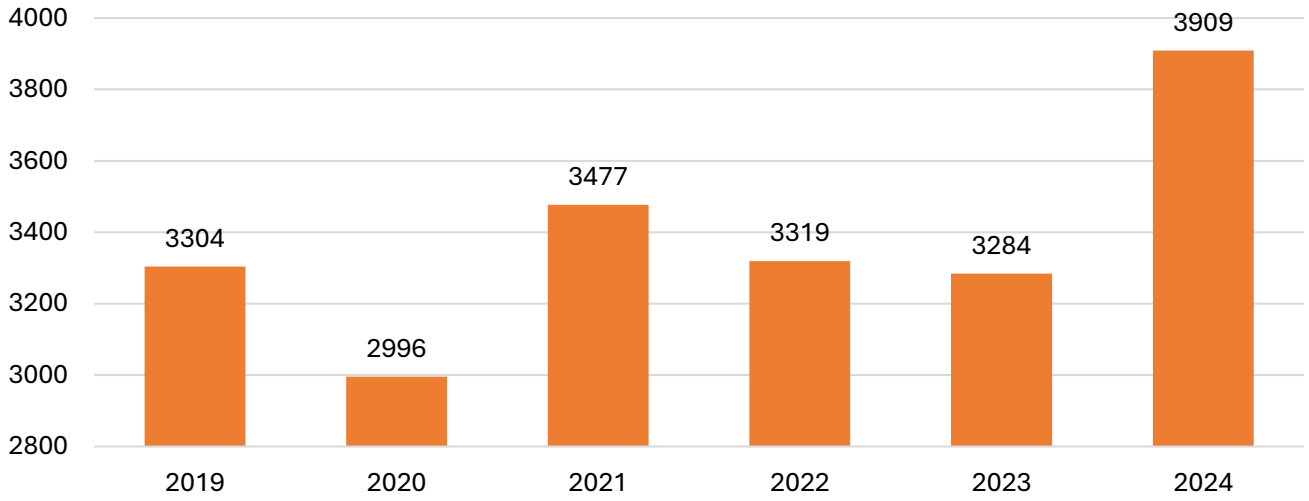
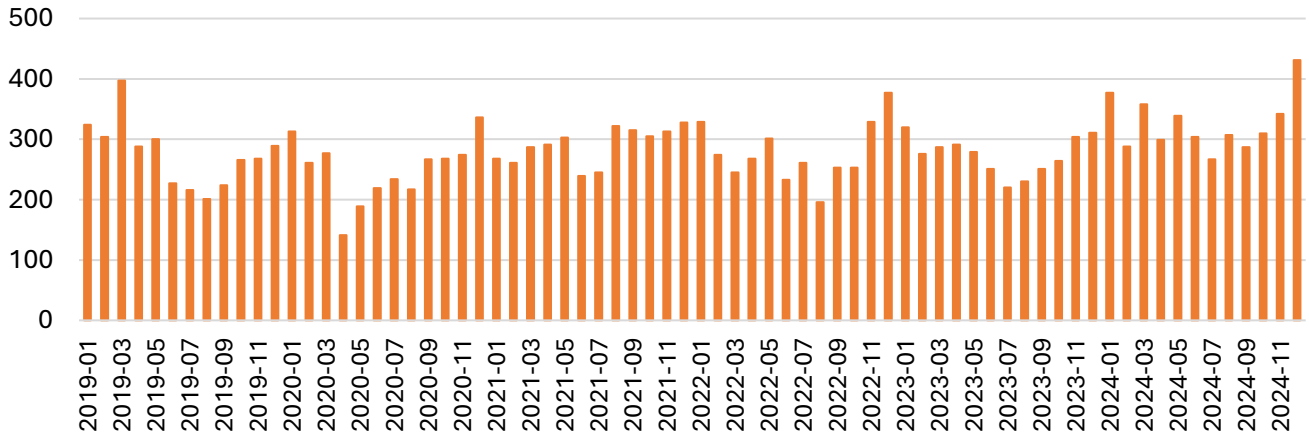


Figure 4b: Monthly Non-Infectious Respiratory Illness Hospitalizations (In-patient) Counts, 2019-2024, Marion County

The figure shows the number of monthly non-infectious respiratory illness hospitalizations (in-patient) from 2019 – 2024 in Marion County. The month with the highest number of hospitalizations occurred in March 2019. The months with the most hospitalizations were January (10,290) and December (10,233).



Demographics

What are you reading?

The following sections are different populations of interest in Marion County. Each section explains the association between the characteristics (sex, age, race, ethnicity, geographic designation, and zip code, and identified housing status) related to emergency visits and hospitalizations (in-patient) between 2019 and 2024. [4,7]

By Sex

Figure 5a: Non-Infectious Respiratory Illness Emergency Visit Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness emergency visits per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had an emergency visit rate 1.3 times higher than males.

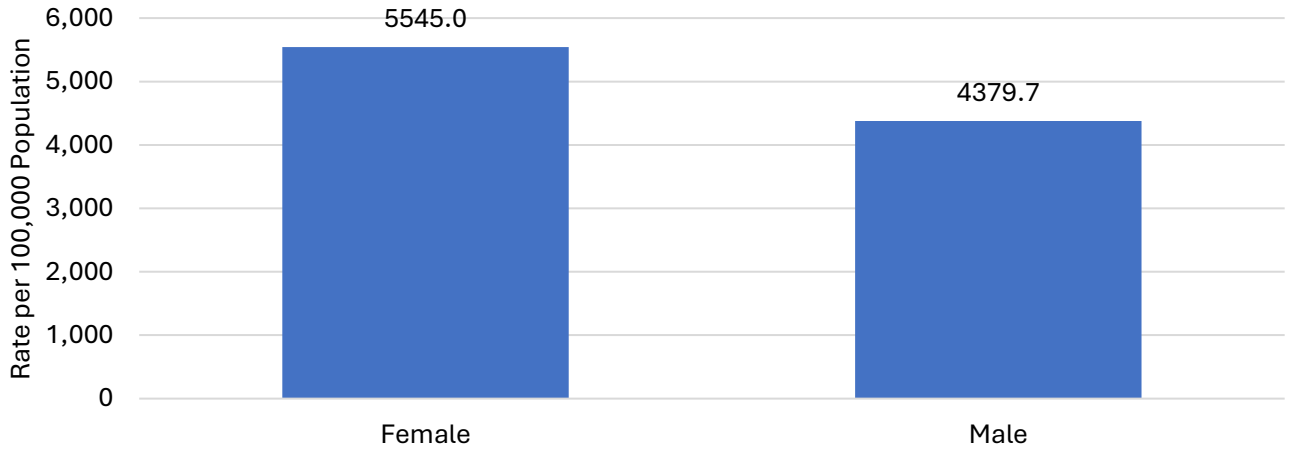
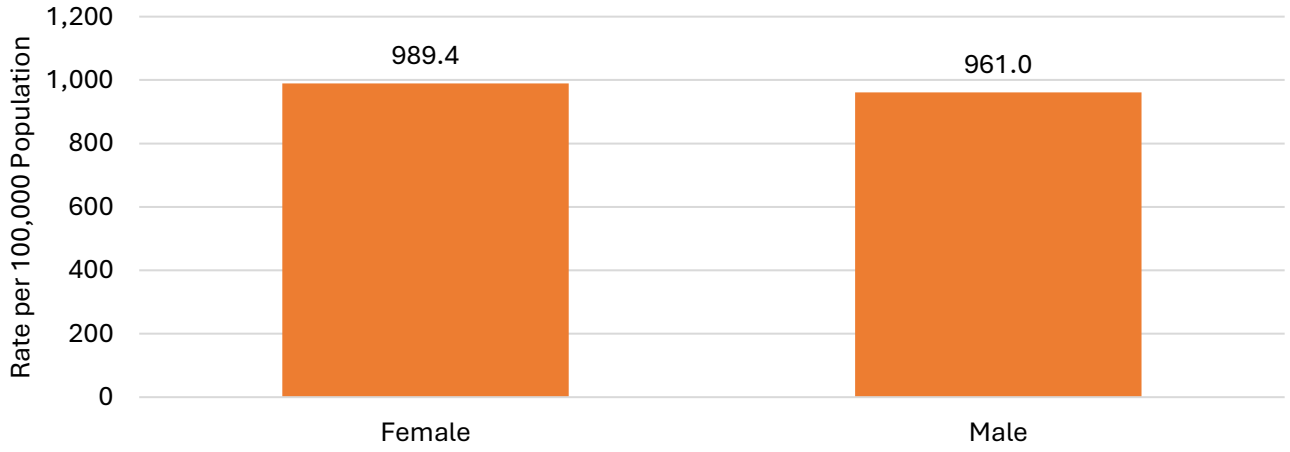


Figure 5b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness hospitalizations per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had a higher hospitalization rate than males.



By Age

Figure 6a: Non-Infectious Respiratory Illness Emergency Visit Rates by Age Groups per 100,000 population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness emergency visits per 100,000 population by age groups from 2019 – 2024 in Marion County. Non-infectious respiratory illness emergency visit rates increase with age. The 65+ age group had the highest rate of emergency visits compared to other age groups. Infants and toddlers 0-4 years old had the highest rate of emergency visits among children.

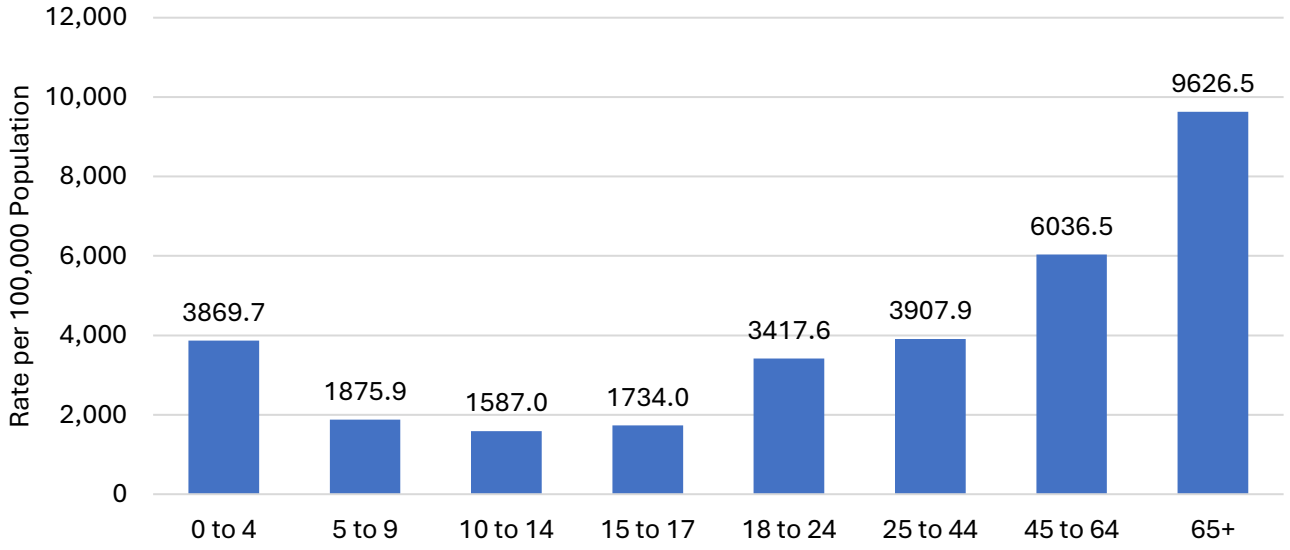
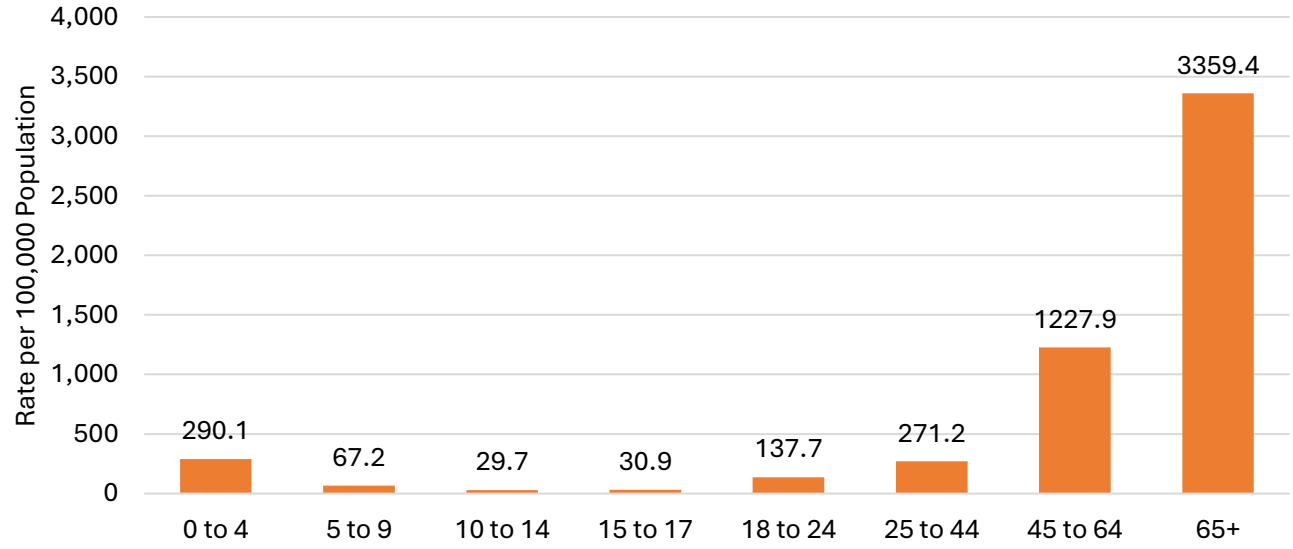


Figure 6b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rates by Age Groups per 100,000 population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness hospitalizations per 100,000 population by age groups from 2019 – 2024 in Marion County. Non-infectious respiratory illness hospitalization rates increase with age. The 65+ age group have the highest rate of emergency visits compared to other age groups. Infants and toddlers 0-4 years old had the highest rate of emergency visits among children.



By Race

Figure 7a: Non-Infectious Respiratory Illness Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness emergency visit rate per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as African American/Black and Hawaiian/Pacific Islander had the highest emergency visit rate among all racial groups.

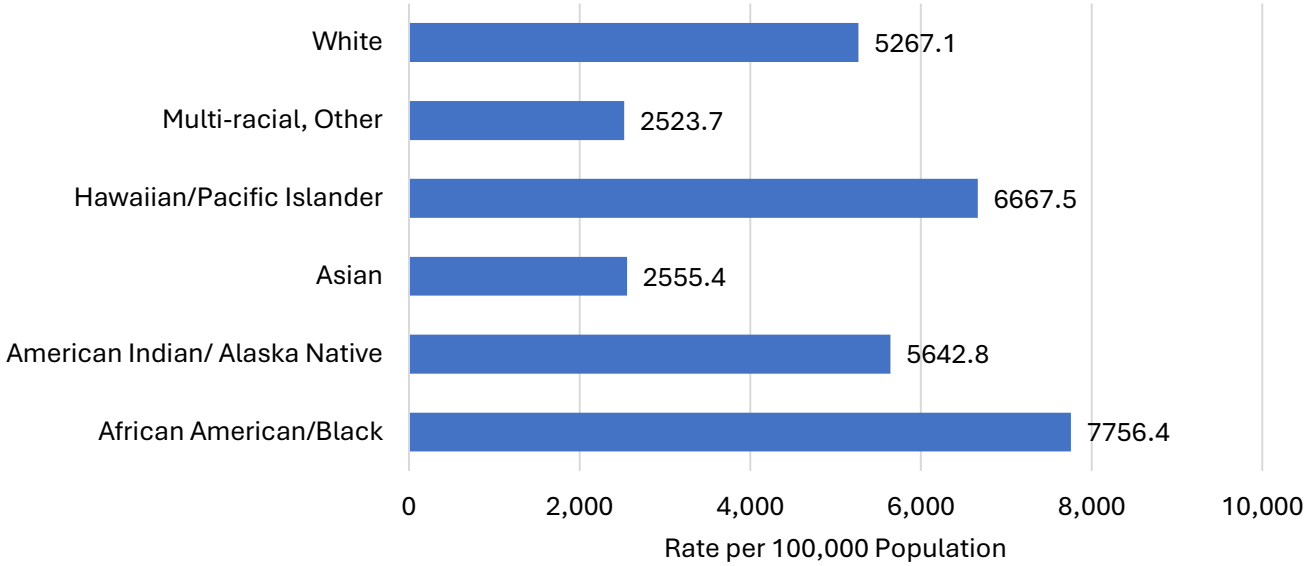
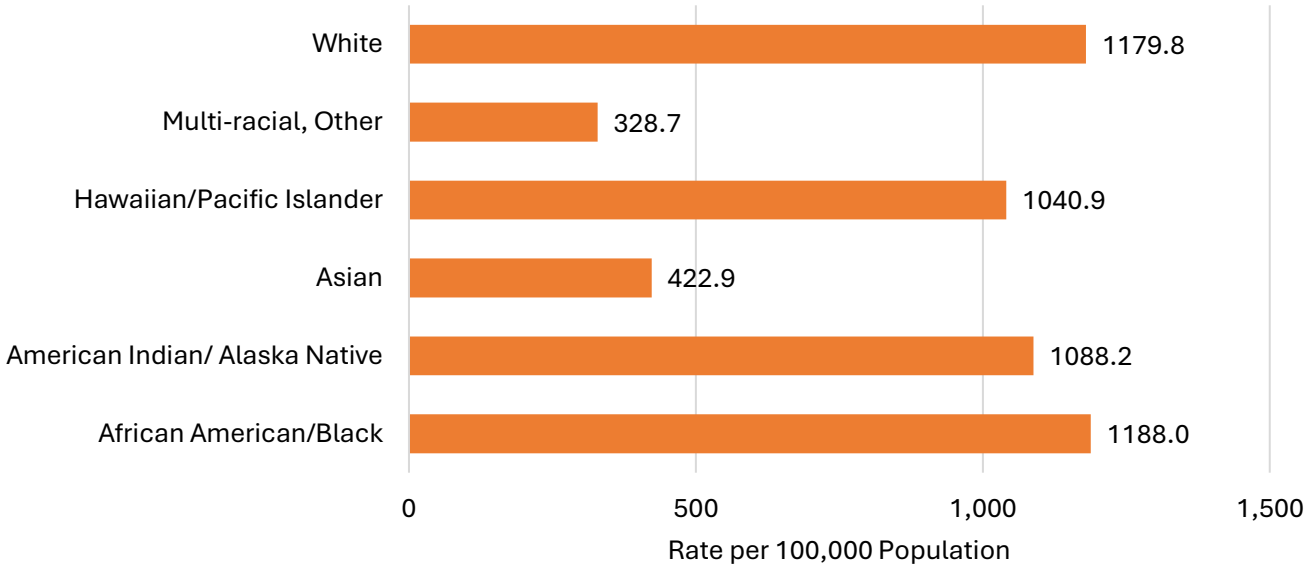


Figure 7b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rates by Race per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness hospitalization rates per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as African American/Black and White had the highest hospitalization rate among all racial groups.



By Ethnicity

Figure 8a: Non-Infectious Respiratory Illness Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness emergency visit rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. People who identified as "Not Hispanic or Latino" had an emergency visit rate 1.9 times higher than people who identified as "Hispanic or Latino."

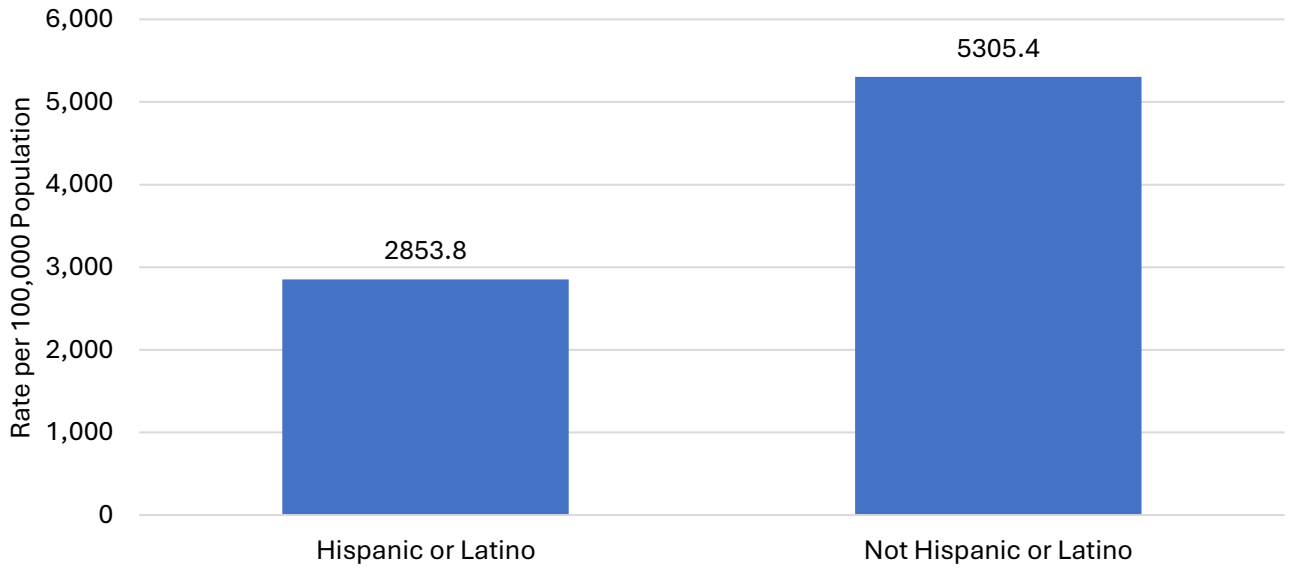
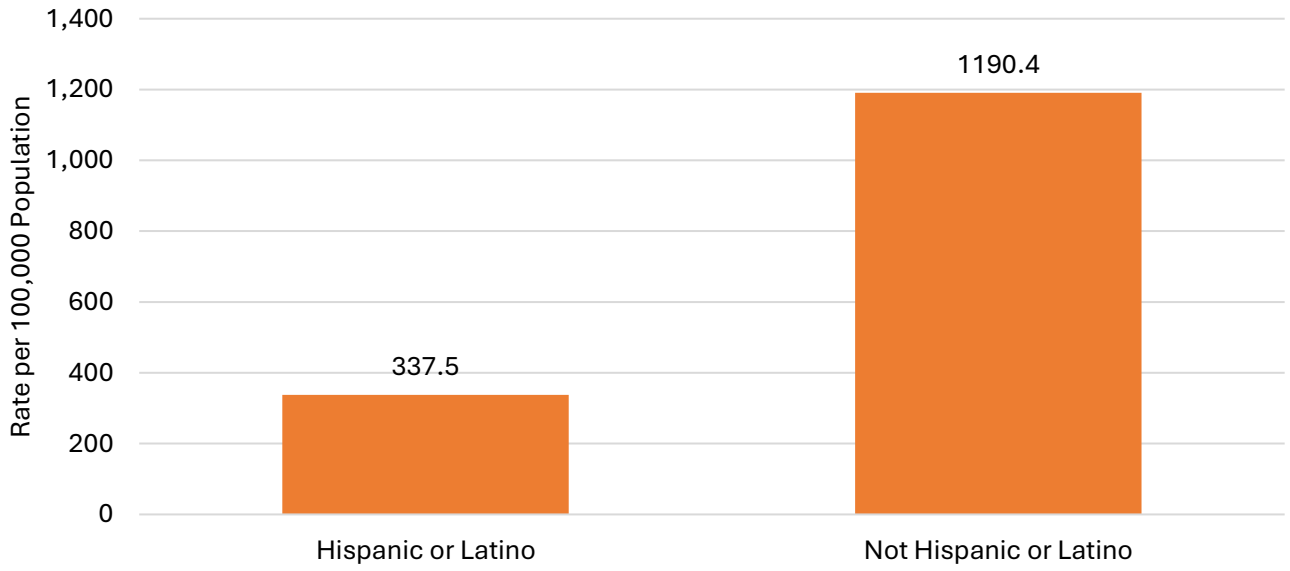


Figure 8b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness hospitalization rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. Residents who identified as "Not Hispanic or Latino" had a hospitalization rate 3.5 times higher than residents who identified as "Hispanic or Latino."



By Geographic Designation – Rural & Urban Communities

The designations for rural areas are defined as locations situated ten or more miles from the center point (centroid) of a population center with at least 40,000 residents.

Figure 9a: Non-Infectious Respiratory Illness Emergency Visit Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness emergency visit rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had an emergency visit rate 1.4 times higher than residents in rural areas.

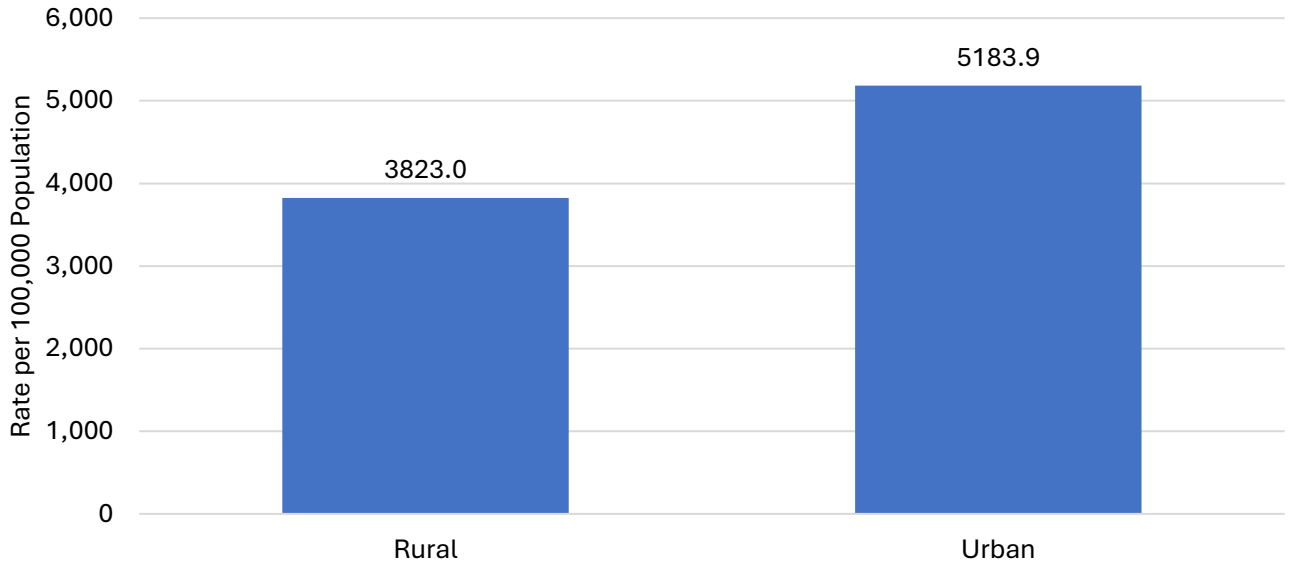
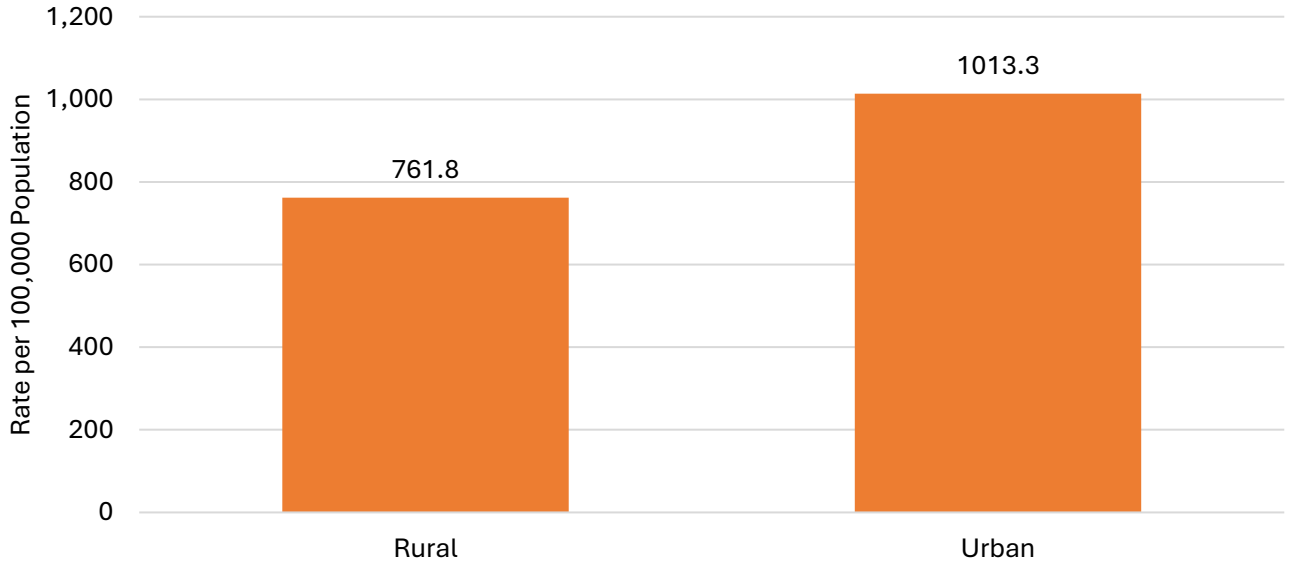


Figure 9b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the non-infectious respiratory illness hospitalization rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had a hospitalization rate 1.3 times higher than residents in rural areas.

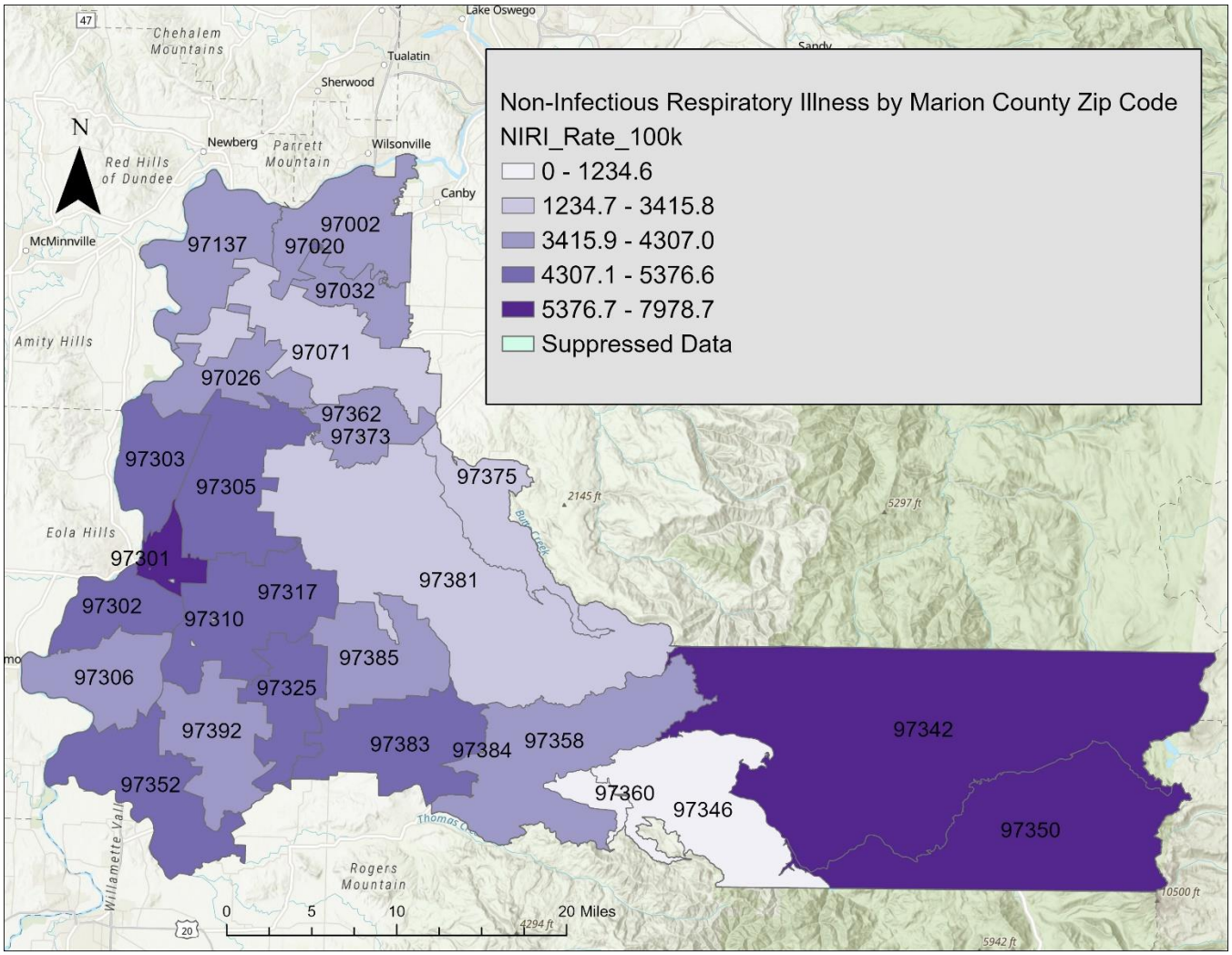


Zip Code - Spatial Analysis

What are you reading?

The map below shows the non-infectious respiratory illness emergency visit rate per 100,000 population by zip code from 2019-2024 in Marion County. These are expressed with different colors to represent different values. The zip codes with the highest rates include 97301,97342, and 97350.[4,7]

Figure 10: Non-Infectious Respiratory Illness Emergency Visit Rate per 100,000 Population by Zip Code, 2019 – 2024, Marion County



Identified Homeless & Unsheltered Persons

What am I reading?

The following sections describe the associations of emergency visits due to non-infectious respiratory illness and people identified as homeless from 2019-2024 in Marion County. An individual is identified as homeless if they were described as homeless, houseless, unhoused, or unsheltered in Oregon ESSENCE.[4,7]

Figure 11a: Number of Non-Infectious Respiratory Illness Emergency Visits among People Identified as Homeless, 2019-2024, Marion County

The figure shows the yearly number of non-infectious respiratory illness emergency visits among groups identified as homeless during from 2019 – 2024 in Marion County. Over the past six years, emergency visits among people identified as homeless peaked in 2022, with a slight downward trend in cases.

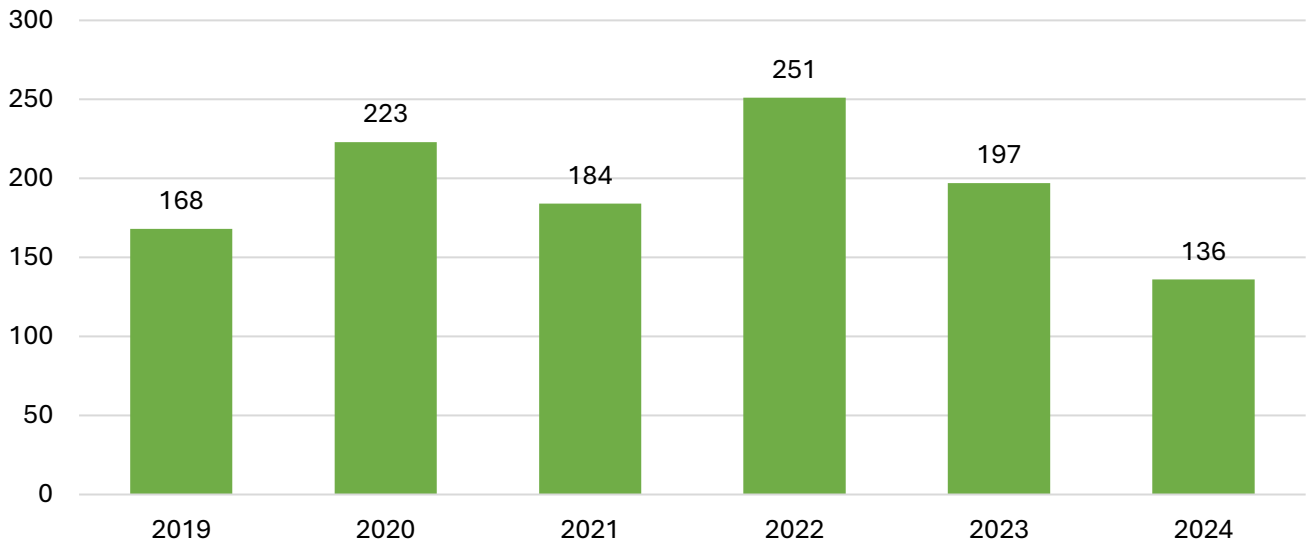


Figure 11b: Percentage of Non-Infectious Respiratory Illness Emergency Visit by Identified Housing Status, 2019-2024, Marion County

The figure shows the percentage of non-infectious respiratory illness emergency visits by identified housing status from 2019-2024 in Marion County. According to the Oregon Housing and Community Services, an estimated 1,428 Marion County residents (0.4% of the population) were identified homeless.[7] This shows that the proportion of emergency visits among people identified as homeless was high.

In total, 1159 non-infectious respiratory illness emergency visits occurred among people identified as homeless 2019 – 2024.

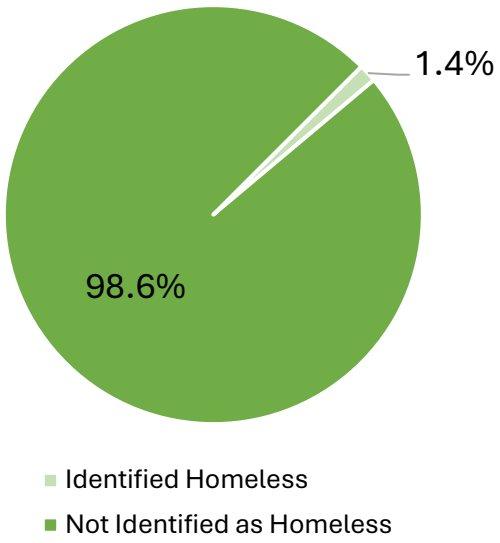


Figure 11c: Non-Infectious Respiratory Illness Hospitalization (In-patient) Count among People Identified as Homeless, 2019-2024, Marion County

The figure shows the yearly number of non-infectious respiratory illness hospitalizations (in-patient) among people identified as homeless from 2019 – 2024 in Marion County. Over the past six years, hospitalizations among people identified as homeless peaked in 2022, with a slight upward trend in hospitalizations.

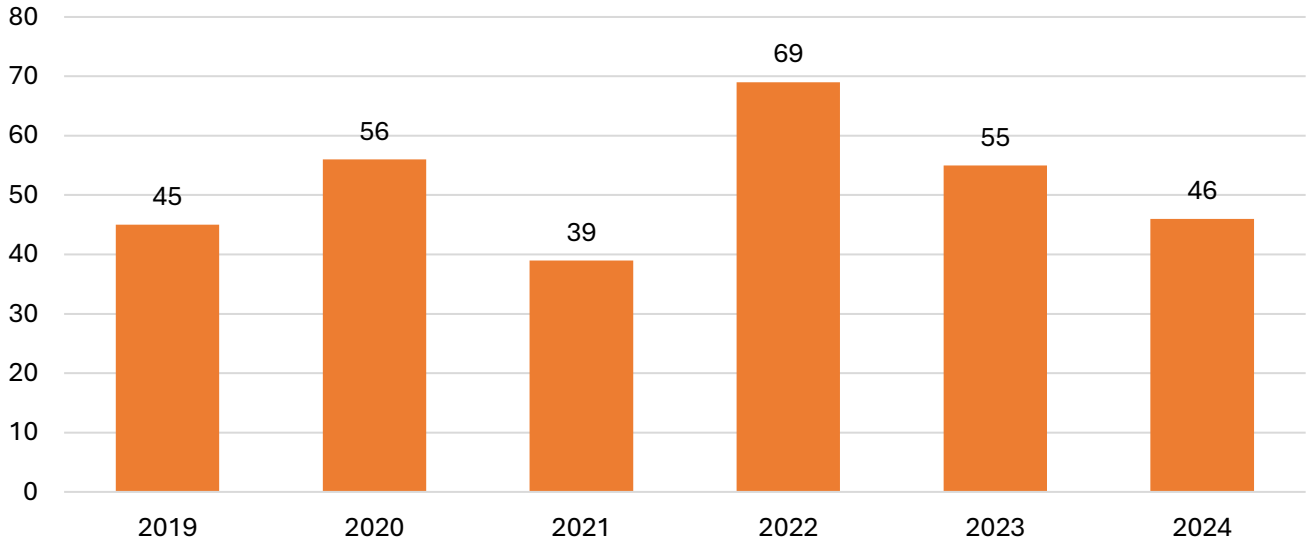
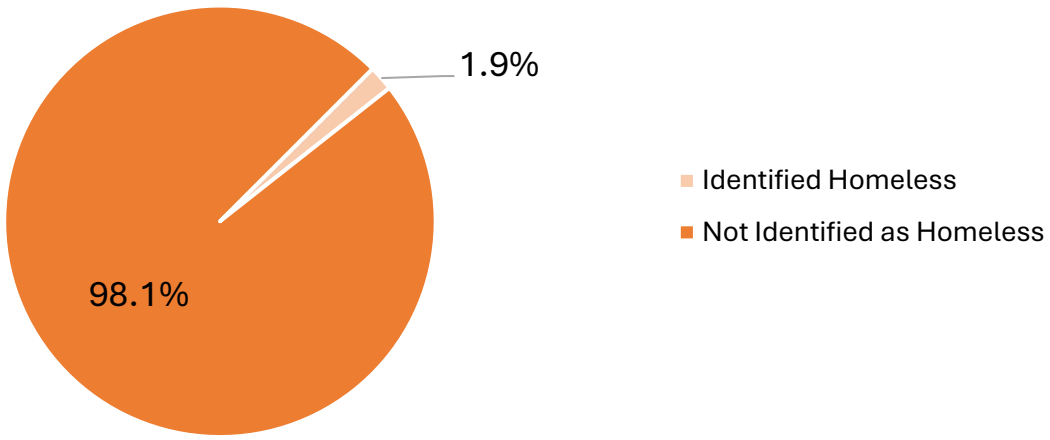


Figure 11d: Percentage of Non-Infectious Respiratory Illness Hospitalizations (In-Patient) by Identified Housing Status, 2019-2024, Marion County

The figure shows the percentage of non-infectious respiratory illness hospitalizations by identified housing status from 2019-2024 in Marion County.

In total, 534 non-infectious respiratory illness hospitalizations occurred among people identified as homeless from 2019 – 2024. 26.7% of all homeless emergency visits were hospitalized.



By Housing Status and Sex

Figure 12a: Non-Infectious Respiratory Illness Emergency Visit Rate by Sex (Male or Female) who were Identified as Homeless per 100,000 population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness emergency visits per 100,000 population for male and female residents identified as homeless from 2019-2024 in Marion County. Male residents identified as homeless had a non-infectious respiratory illness rate 2.1 times higher than females identified as homeless, which is a reversed trend compared to all male and female residents.

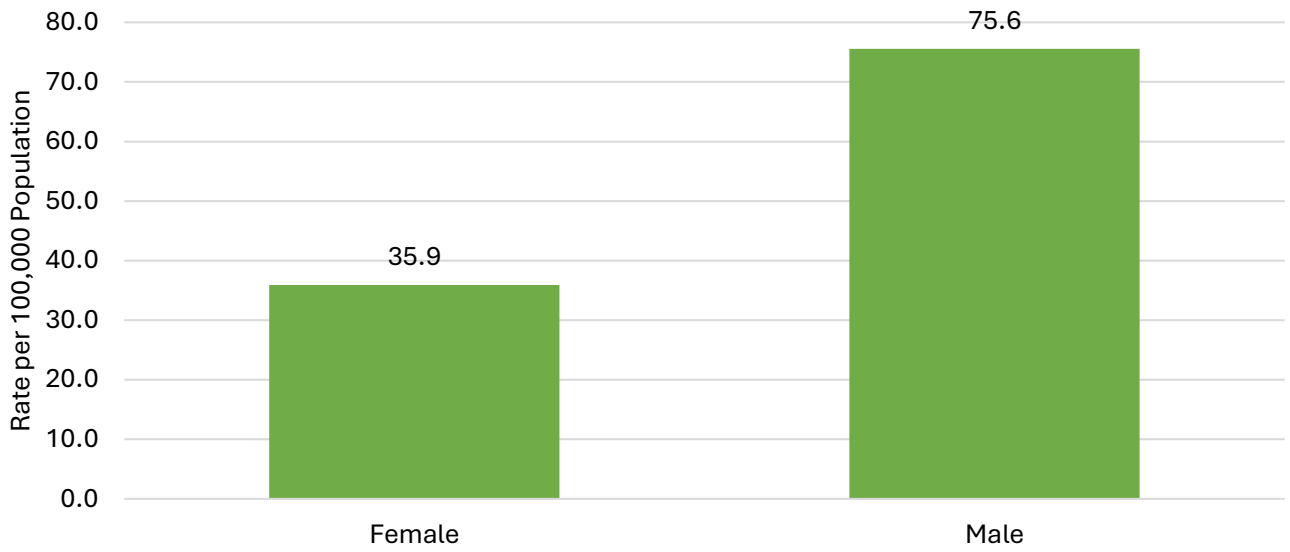
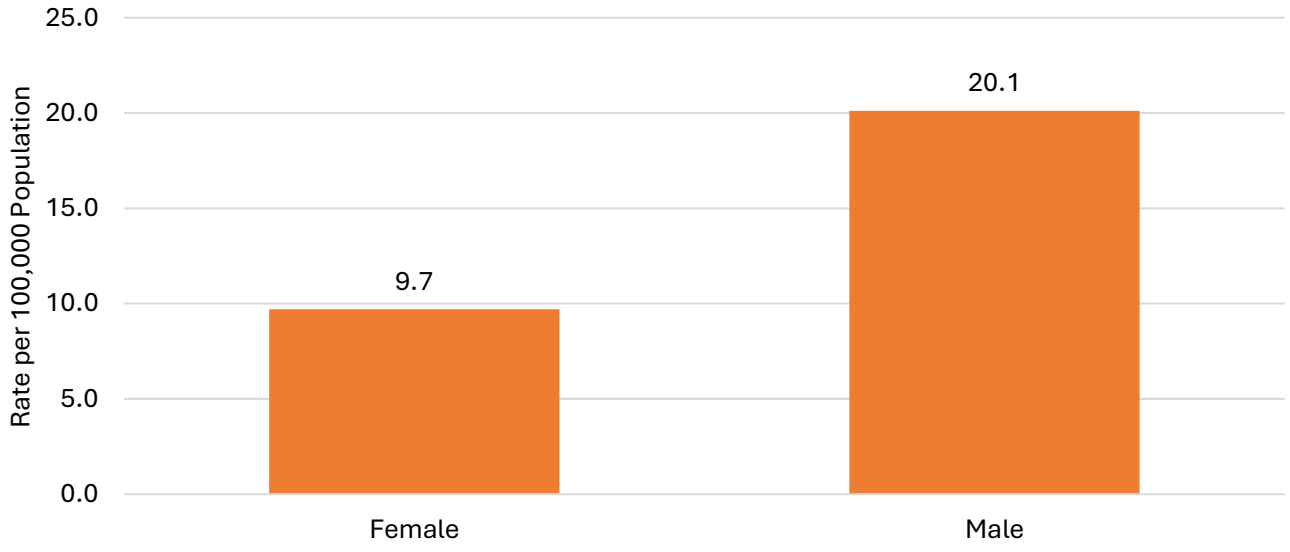


Figure 12b: Non-Infectious Respiratory Illness Hospitalization (In-patient) Rate by Sex (Male or Female) who were Identified as Homeless per 100,000 population, 2019-2024, Marion County

The figure shows the rate of non-infectious respiratory illness hospitalizations per 100,000 population for male and female residents identified as homeless from 2019-2024 in Marion County. Male residents identified as homeless had a non-infectious respiratory illness rate 2.1 times higher than females identified as homeless, which is a reversed trend compared to all male and female residents.



Asthma

What am I reading?

Emergency Department & Urgent Care Visits (referred to as "Emergency Visits" in this report) are the number of visits to a hospital and/or hospital associated urgent care clinic within Marion County, Oregon. These visits are gathered from the Oregon ESSENCE database, which provides real-time data for public health and hospitals to monitor what is happening in emergency departments across the state before, during, and after a public health emergency. [2,4,7]

Figure 13a: Asthma Emergency Visit Counts, 2019-2024, Marion County

The figure shows the number of asthma illness emergency visits from 2019 to 2024 in Marion County. Asthma visits have increased in recent years and have peaked in 2024.

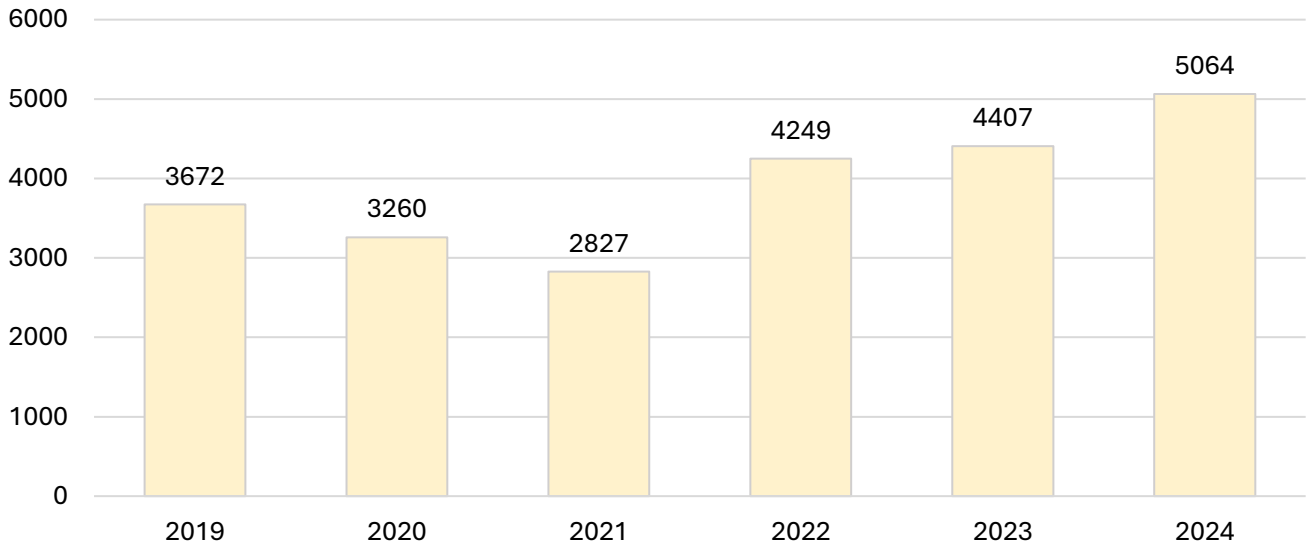


Figure 13b: Monthly Asthma Emergency Visit Counts and Moderate or Worse Air Quality Index Days, 2019-2024, Marion County

The figure shows the number of monthly asthma emergency visits in Marion County and the hourly moderate or worse air quality readings by month from January 2019 to December 2024 in Salem, Oregon.

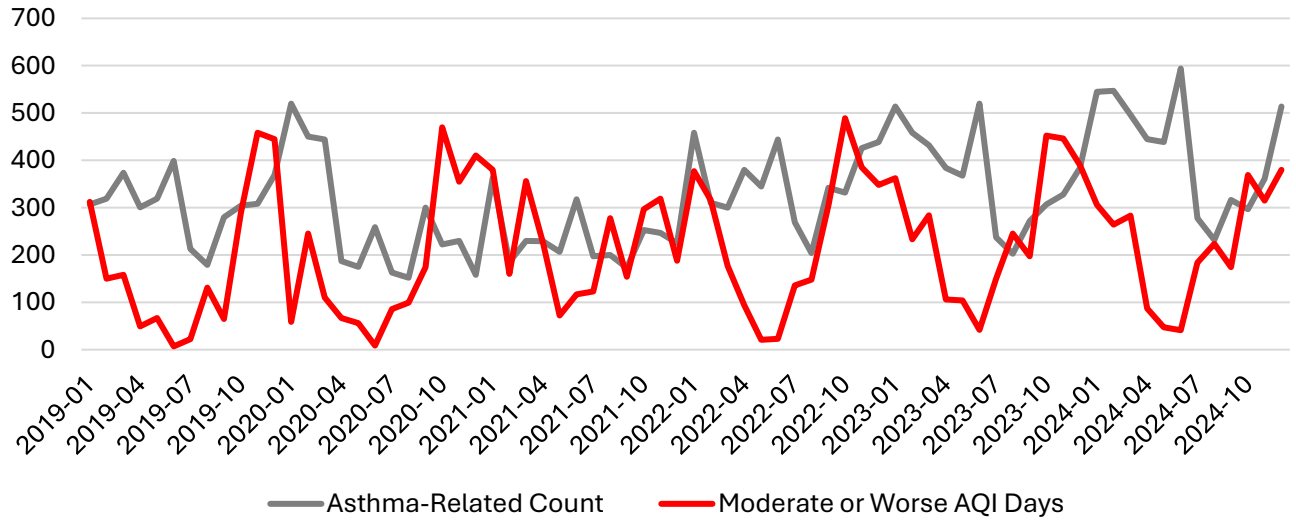


Figure 13c: Asthma Emergency Visit Rates per 100,000 population, 2019-2024, Marion County and Oregon

The figure shows the rate of asthma emergency visits per 100,000 population from 2019 – 2024 in Marion County and Oregon. The data shows a consistent upward trend over the study period for both Marion County and Oregon, with a more drastic increase in rates in Marion County compared to Oregon.

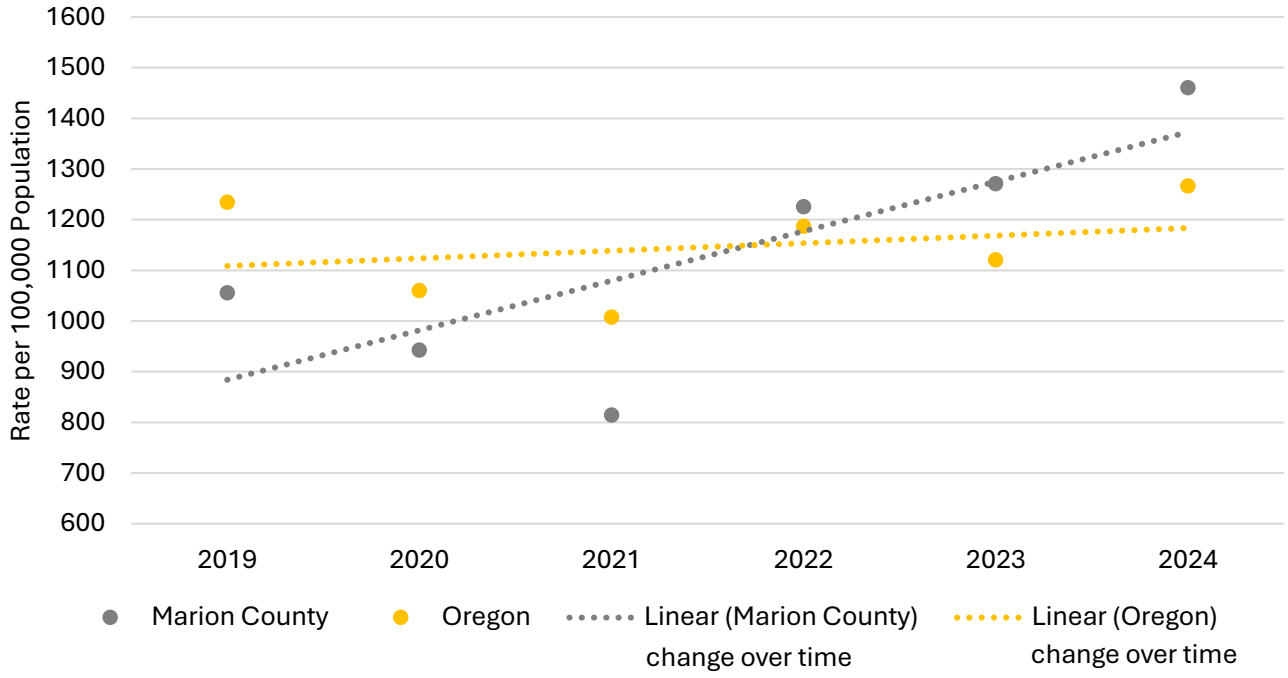
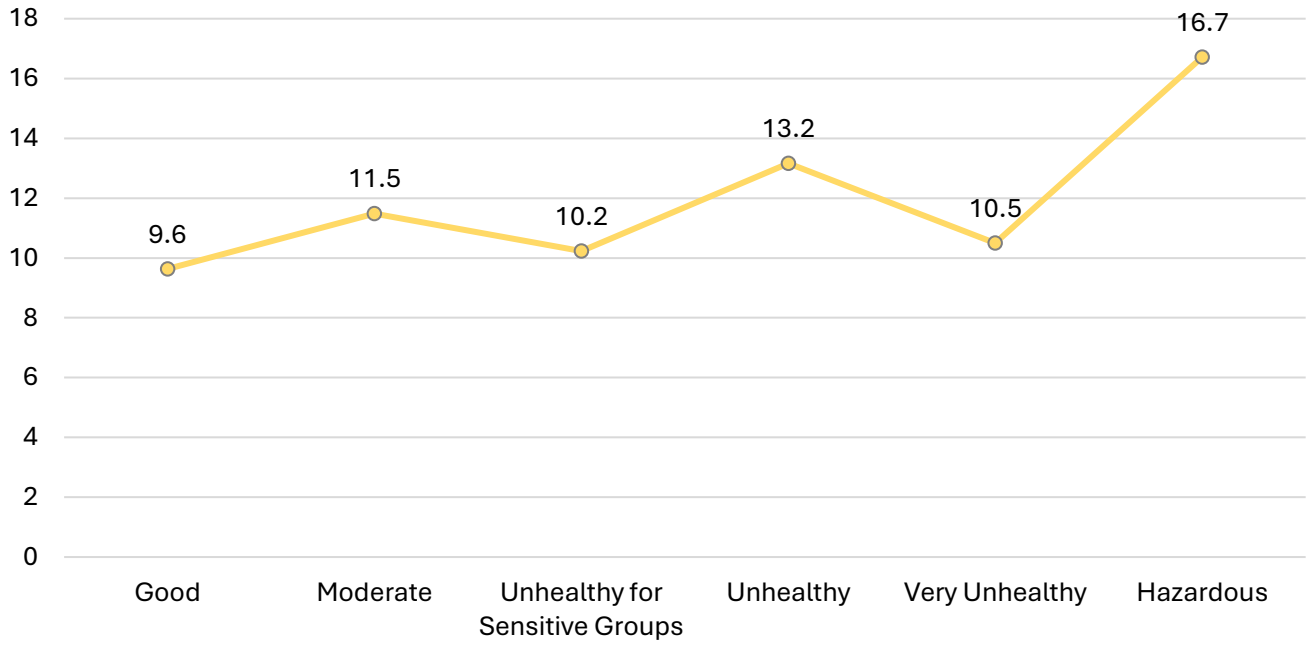


Figure 13d: Asthma Emergency Visits by Air Quality Index Classification per day, 2019-2024, Marion County

The figure shows the average number of asthma emergency visits within each Air Quality Index Classification. The number of asthma emergency visits shows a gradual increase as the AQI gets worse.



Hospitalizations (In-patient)

What are you reading?

Hospitalizations are the number of emergency visits that result in an in-patient visit caused by asthma in Marion County. The previous 2019-2023 report used 24 hours or longer to define hospitalizations. However, due to the hospitals recording 24 hours or longer differently, this report shows the in-patient designation. Between the two reports, readers may notice a reduction in hospitalization numbers in this report. The in-patient designation is more accurate at showing the severity of the emergency visits and are recorded in Oregon ESSENCE. [4,5,7]

Figure 14a: Asthma Hospitalization (In-patient) Counts, 2019-2024, Marion County

The figure shows the number of yearly asthma hospitalizations (in-patient) from 2019 – 2024 in Marion County. Hospitalizations have increased over time and peaked in 2024.

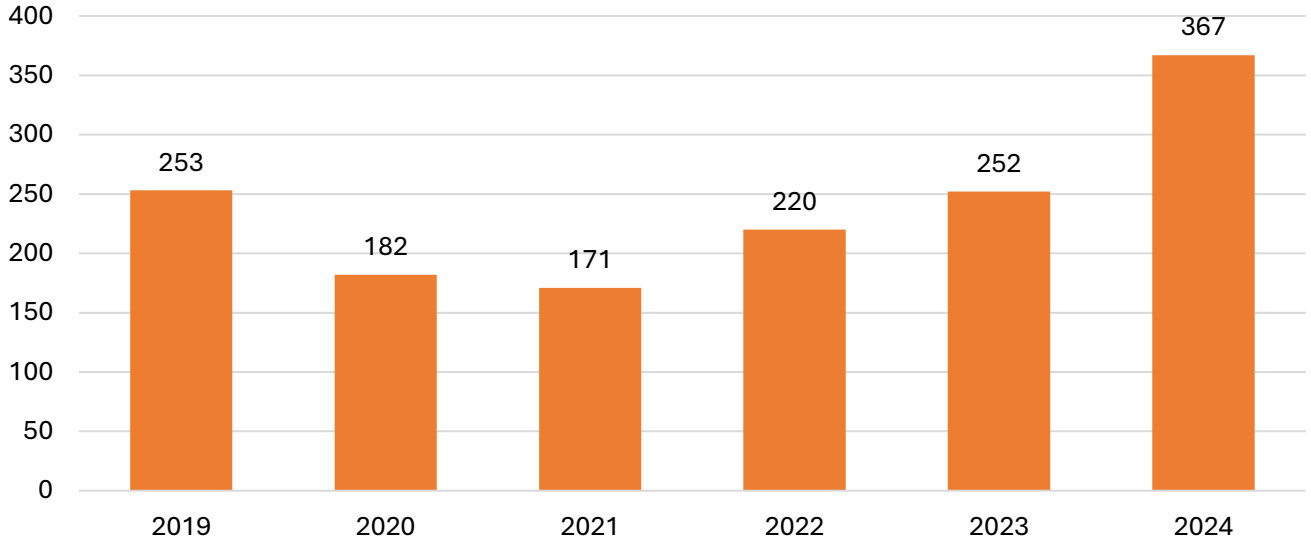
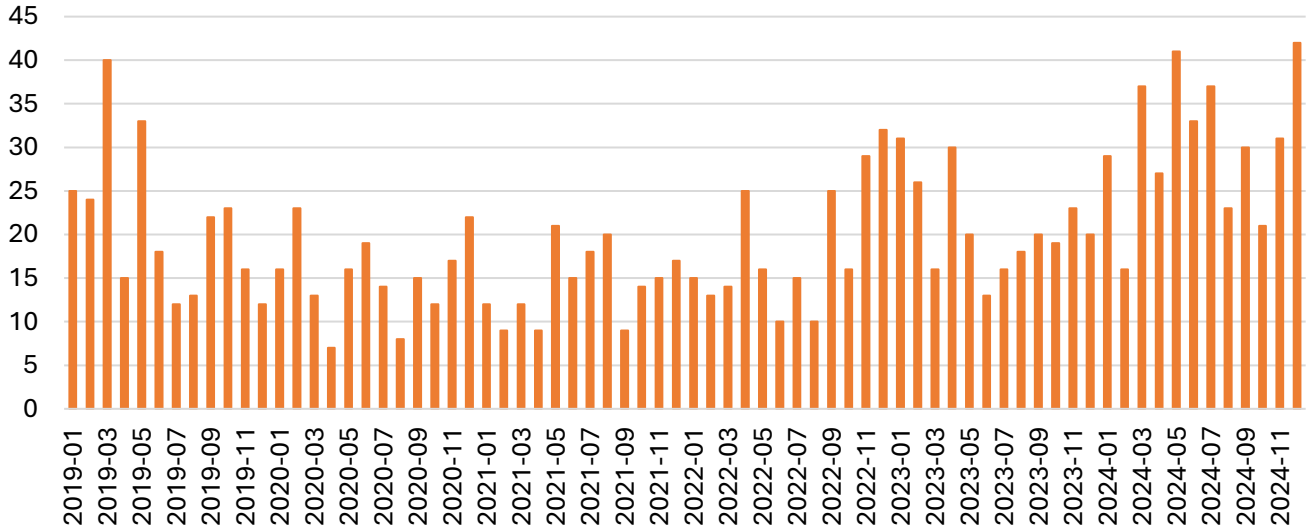


Figure 14b: Monthly Asthma Hospitalization (In-patient) Counts, 2019-2024, Marion County

The figure shows the number of monthly asthma hospitalizations (in-patient) from 2019 – 2024 in Marion County. The month with the highest number of hospitalizations occurred in December 2024.



Demographics

What are you reading?

The following sections are different populations of interest in Marion County. Each section explains the association between the characteristics (sex, age, race, ethnicity, geographic designation, and zip code, and identified housing status) related to emergency visits and hospitalizations (In-patient) between the 2019 – 2024.[4,7]

By Sex

Figure 15a: Asthma Emergency Visit Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

The figure shows the rate of asthma emergency visits per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had an emergency visit rate 1.6 times higher than males.

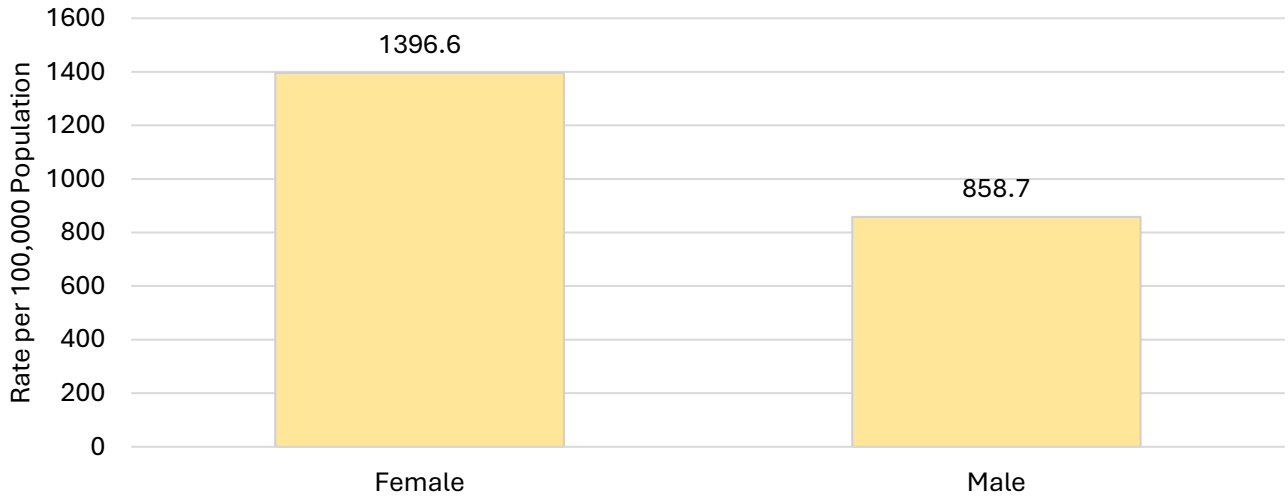
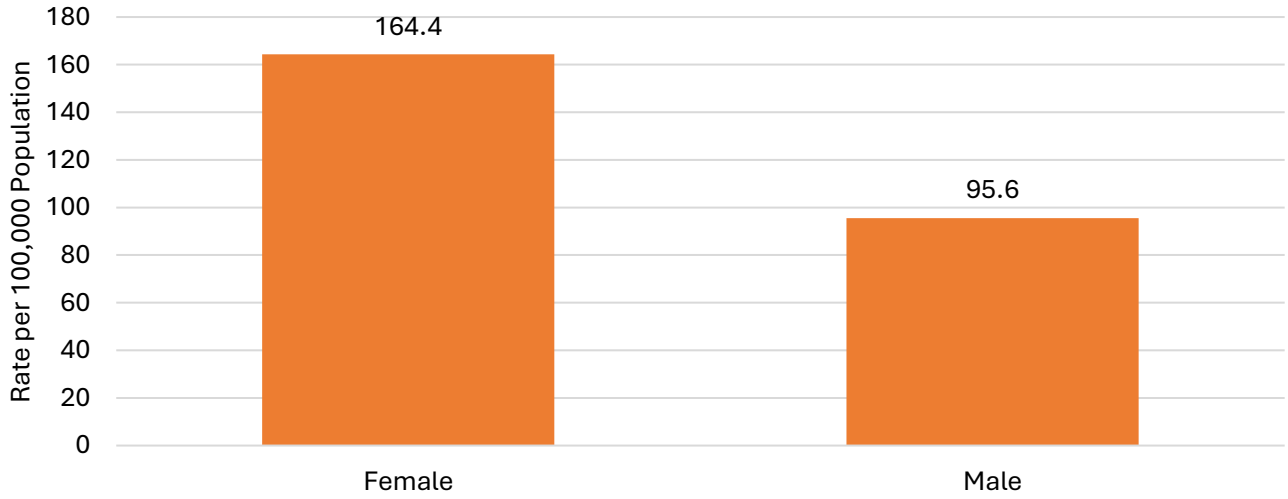


Figure 15b: Asthma Hospitalization (In-patient) Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

The figure shows the rate of asthma hospitalizations per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had an hospitalization rate 1.7 times higher than males.



By Age

Figure 16a: Asthma Emergency Visit Rates by Age Groups per 100,000 population, 2019-2024, Marion County

The figure shows the rate of asthma emergency visits per 100,000 population by age groups from 2019 – 2024 in Marion County. Asthma emergency visit rates increase with age. The 25 to 44 age group had the highest rate of emergency visits compared to other age groups. Young children 5 to 9 years old had the highest rate of emergency visits among children.

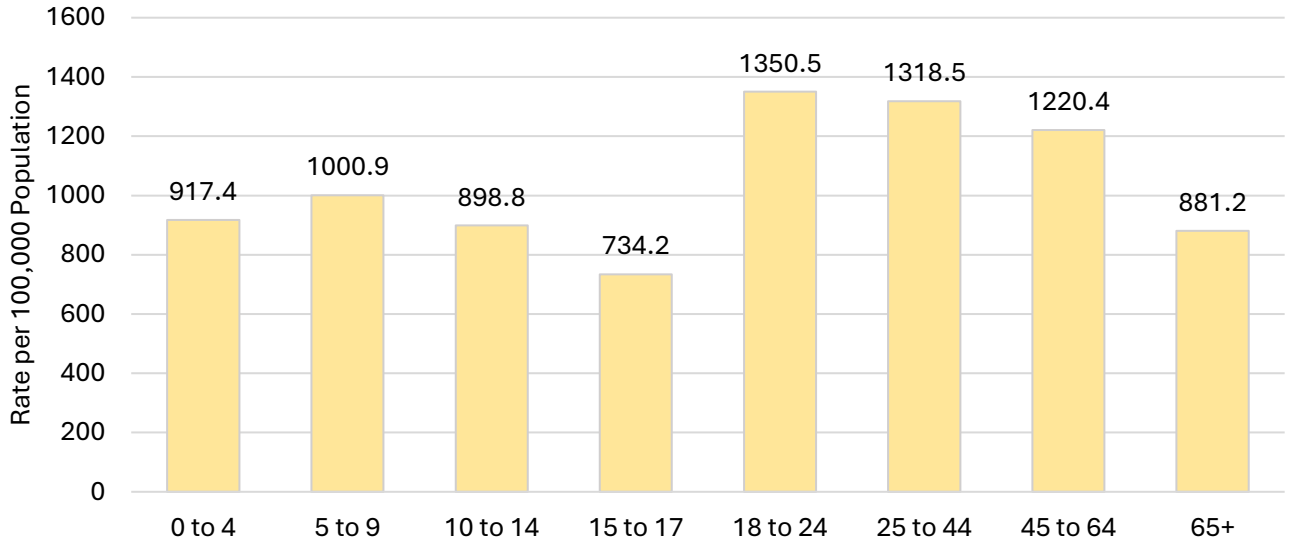
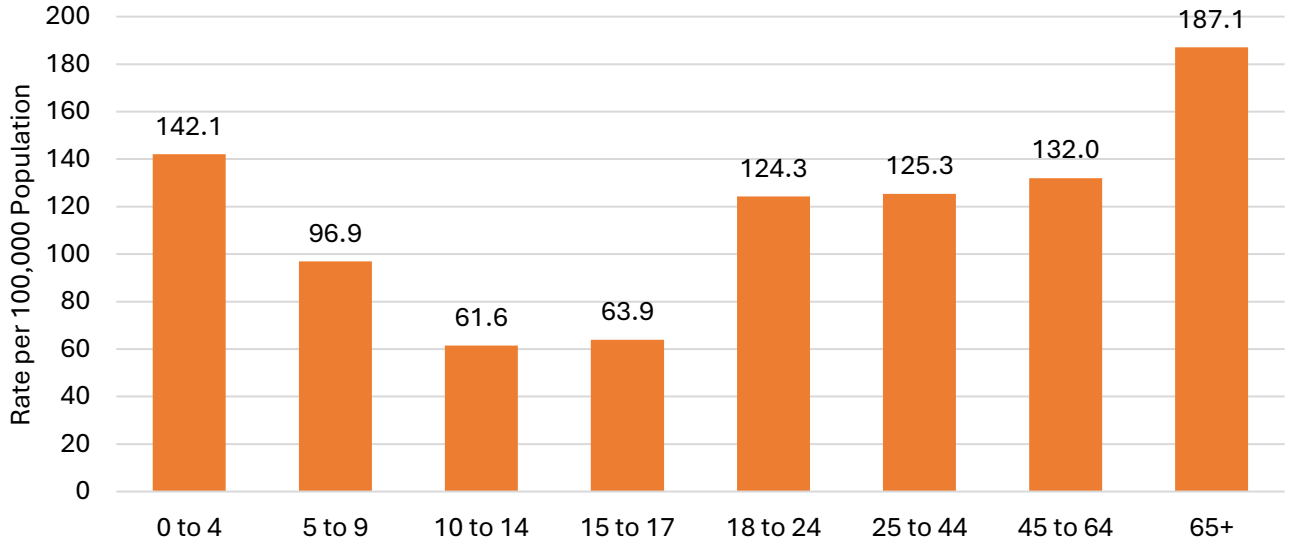


Figure 16b: Asthma Hospitalization (In-patient) Rates by Age Groups per 100,000 population, 2019-2024, Marion County

The figure shows the rate of asthma hospitalizations per 100,000 population by age groups from 2019 – 2024 in Marion County. Asthma hospitalization rates increase with age. The 65+ age group have the highest rate of emergency visits compared to other age groups. Infants and toddlers 0-4 years old had the highest rate of emergency visits among children.



By Race

Figure 17a: Asthma Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County

The figure shows the asthma emergency visit rate per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as African American/Black and Hawaiian/Pacific Islander had the highest emergency visit rate among all racial groups.

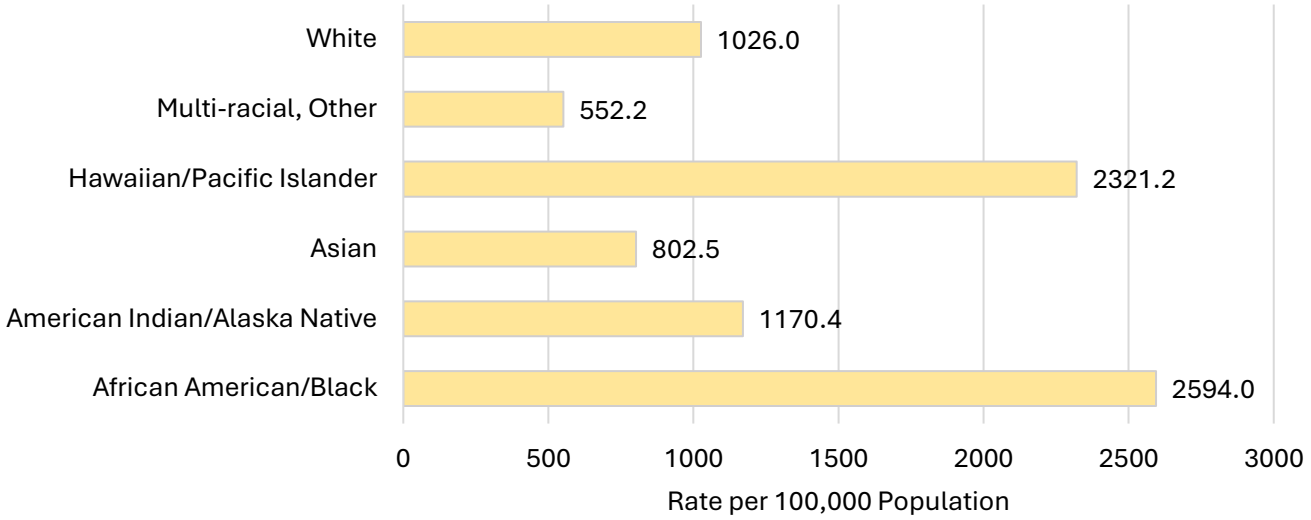
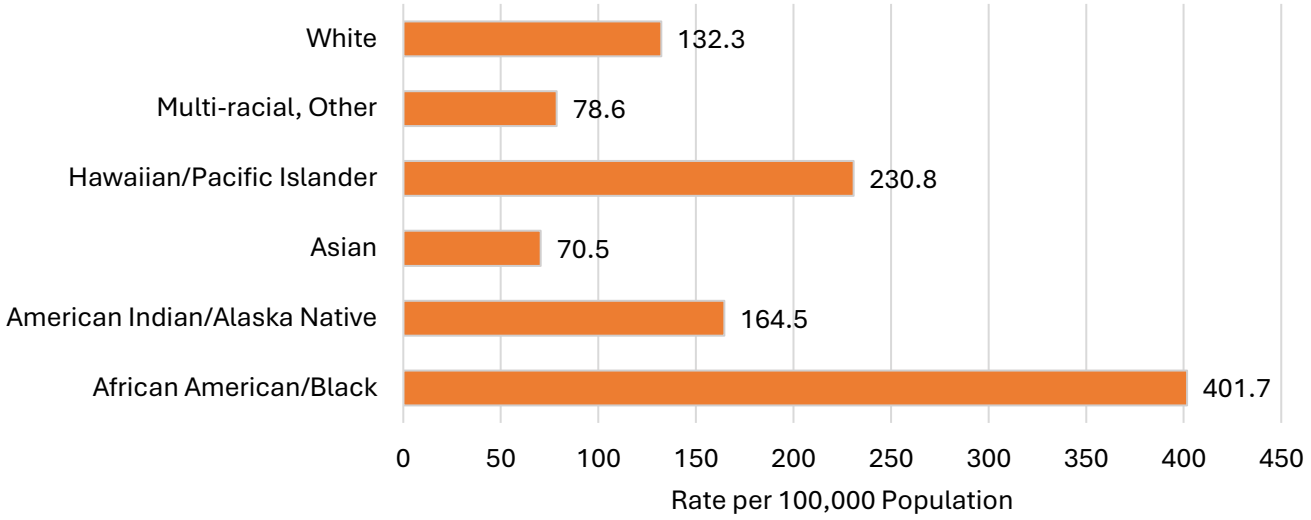


Figure 17b: Asthma Hospitalization (In-patient) Rates by Race per 100,000 population, 2019-2024, Marion County

The figure shows the asthma hospitalization rates per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as African American/Black, Hawaiian/Pacific Islander, and American Indian/Alaska Native had the highest hospitalization rate among all racial groups.



By Ethnicity

Figure 18a: Asthma Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the asthma emergency visit rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. People who identified as "Not Hispanic or Latino" had an emergency visit rate 1.4 times higher than people who identified as "Hispanic or Latino."

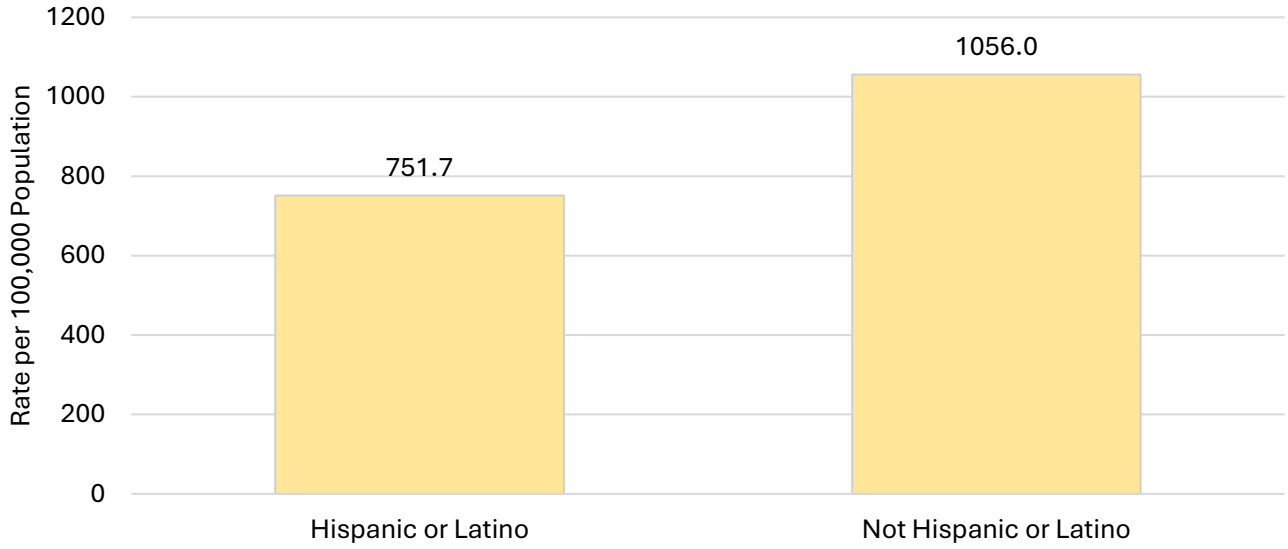
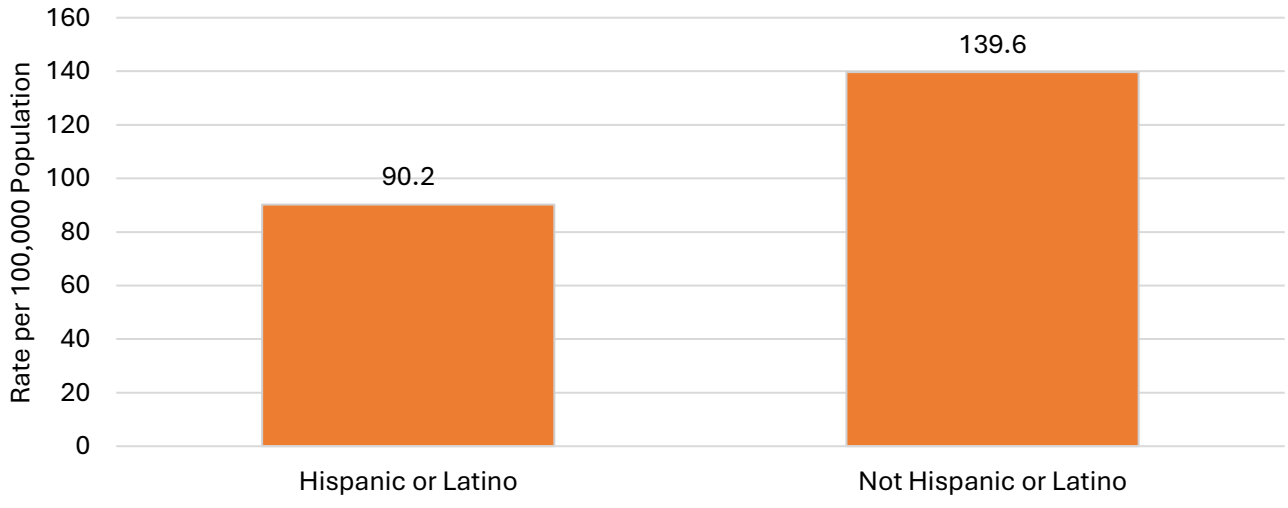


Figure 18b: Asthma Hospitalization (In-patient) Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the asthma hospitalization rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. Residents who identified as "Not Hispanic or Latino" had a hospitalization rate 1.5 times higher than residents who identified as "Hispanic or Latino."



By Geographic Designation – Rural & Urban Communities

The designations for rural areas are defined as locations situated ten or more miles from the center point (centroid) of a population center with at least 40,000 residents.

Figure 19a: Asthma Emergency Visit Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the asthma emergency visit rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had an emergency visit rate 1.5 times higher than residents in rural areas.

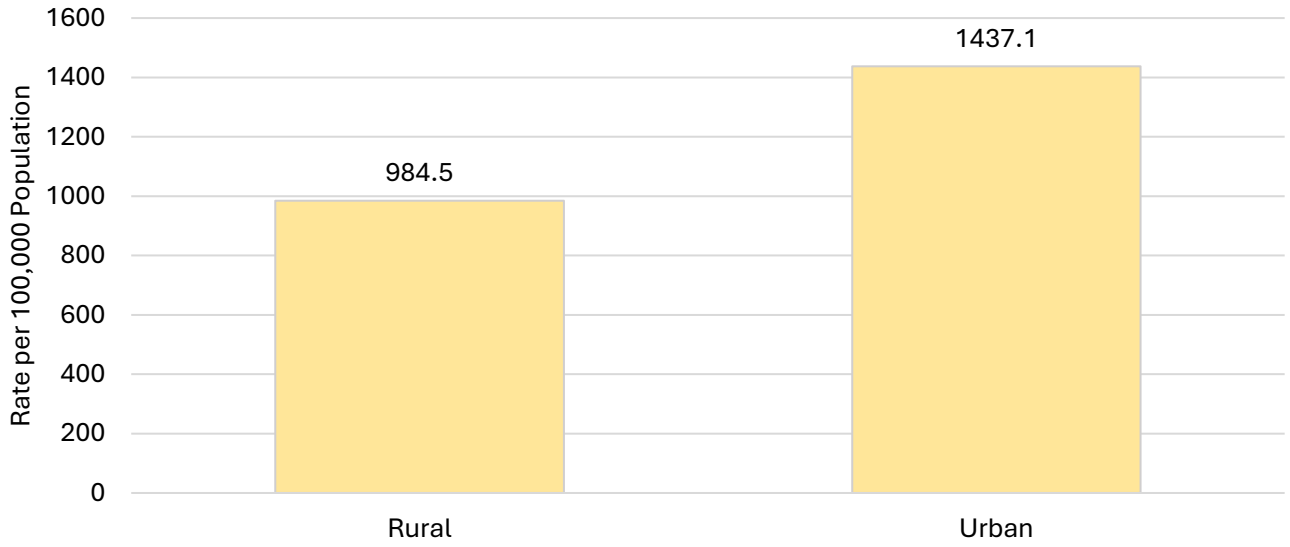
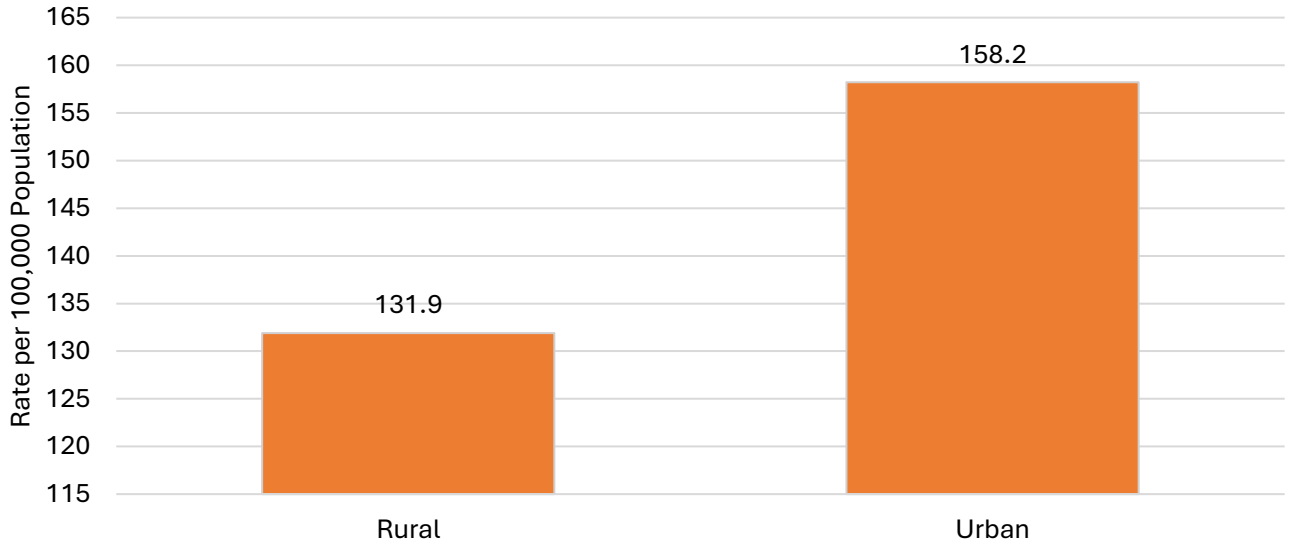


Figure 19b: Asthma Hospitalization (In-patient) Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the asthma hospitalization rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had a hospitalization rate 1.2 times higher than residents in rural areas.

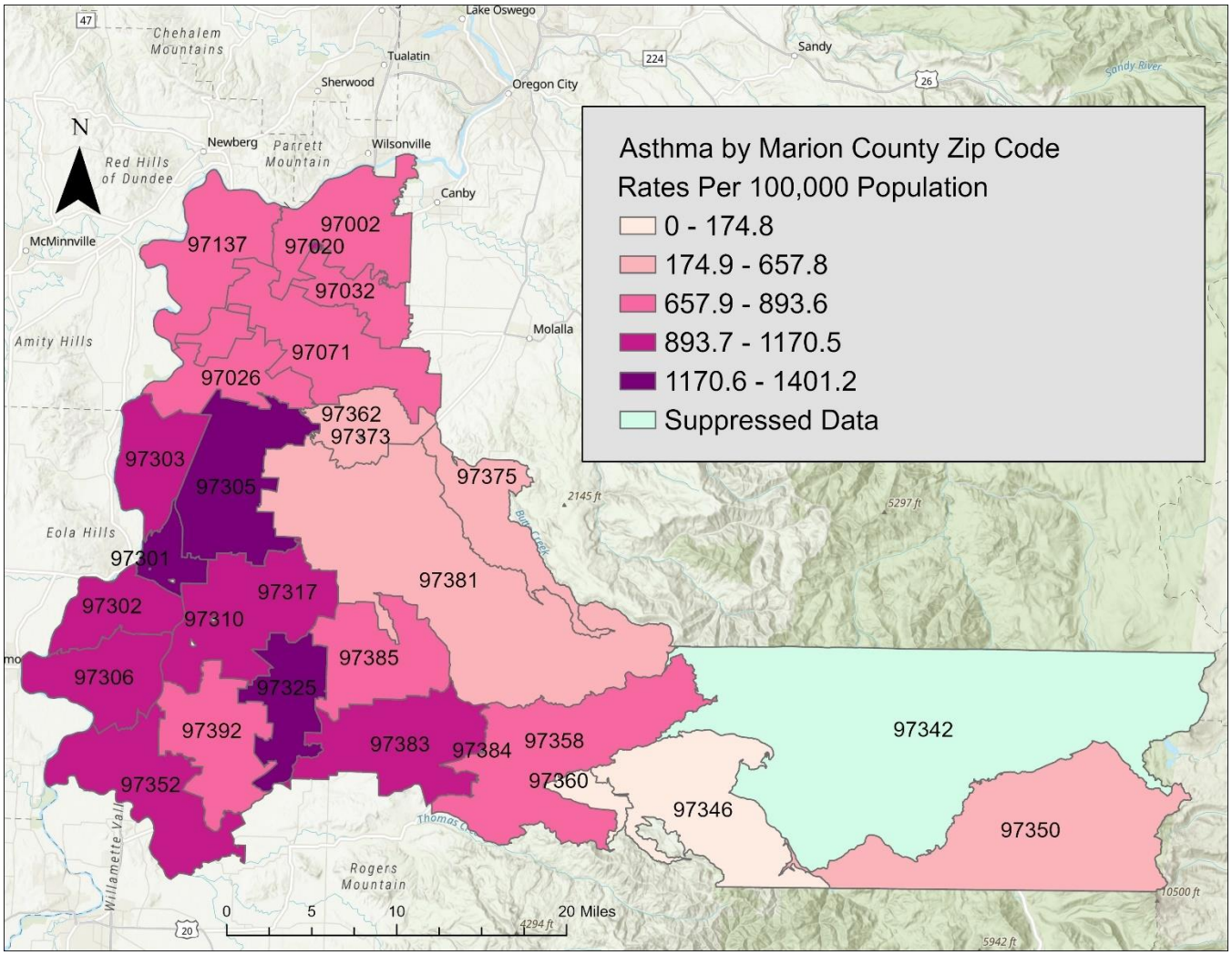


Zip Code - Spatial Analysis

What are you reading?

The map below shows the asthma emergency visit rate per 100,000 population by zip code from 2019-2024 in Marion County. These are expressed with different colors to represent different values. The zip codes with the highest rates include 97301,97305, and 97325. [4,7]

Figure 20: Asthma Emergency Visit Rate per 100,000 Population by Zip Code, 2019 – 2024, Marion County



Identified Homeless & Unsheltered Persons

What am I reading?

The following sections describe the associations of emergency visits due to asthma and people identified as homeless from 2019-2024 in Marion County. An individual is identified as homeless if they were described as homeless, houseless, unhoused, or unsheltered in Oregon ESSENCE. [4,6,7]

Figure 21a: Number of Asthma Emergency Visits among People Identified as Homeless, 2019-2024, Marion County

The figure shows the yearly number of asthma emergency visits among groups identified as homeless during from 2019 – 2024 in Marion County. The number of asthma emergency visits among people identified as homeless peaked in 2023.

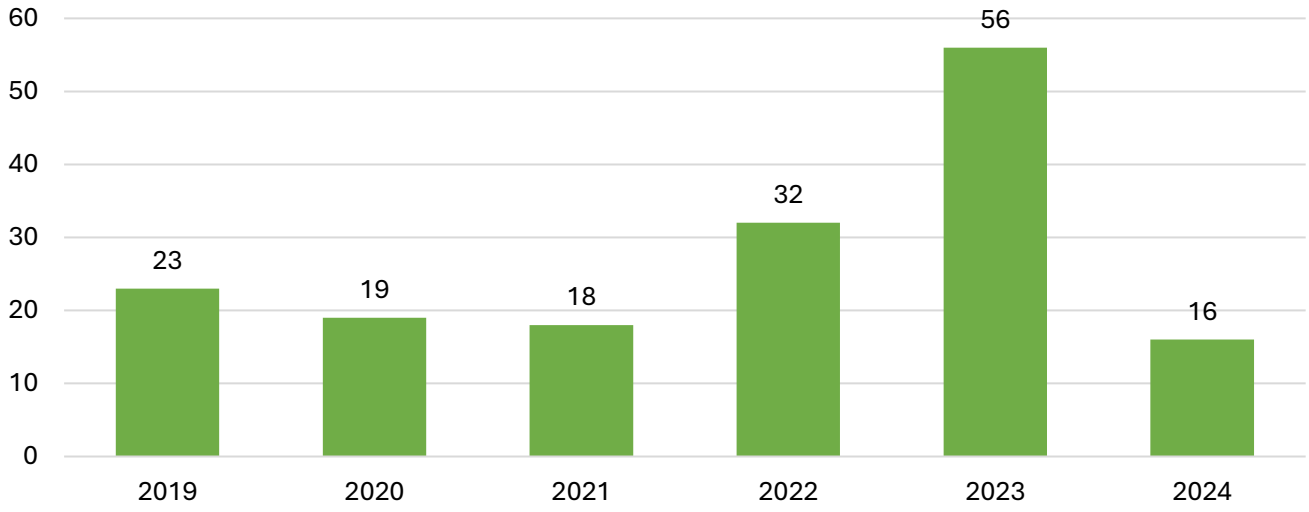
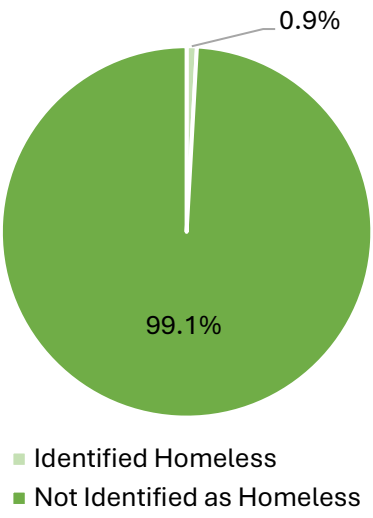


Figure 21b: Percentage of Asthma Emergency Visit by Identified Housing Status, 2019-2024, Marion County

The figure shows the percentage of asthma emergency visits by identified housing status from 2019-2024 in Marion County. According to the Oregon Housing and Community Services, an estimated 1,428 Marion County residents (0.4% of the population) were identified homeless.[7] This shows that the proportion of emergency visits among people identified as homeless was high.

In total, 164 asthma emergency visits occurred among people identified as homeless 2019 – 2024.



Fire & Smoke Inhalation

What am I reading?

Emergency Department & Urgent Care Visits (referred to as "Emergency Visits" in this report) are the number of visits to a hospital and/or hospital-associated urgent care clinic within Marion County, Oregon. These visits are gathered from the Oregon ESSENCE database, which provides real-time data for public health and hospitals to monitor what is happening in emergency departments across the state before, during, and after a public health emergency. [4,7]

Figure 22a: Fire and Smoke Inhalation Emergency Visit Counts, 2019-2024, Marion County

The figure shows the number of fire and smoke inhalation emergency visits from 2019 to 2024 in Marion County. Fire and smoke inhalation peaked in 2020 due to the Beachie Creek and Lionshead wildfires.

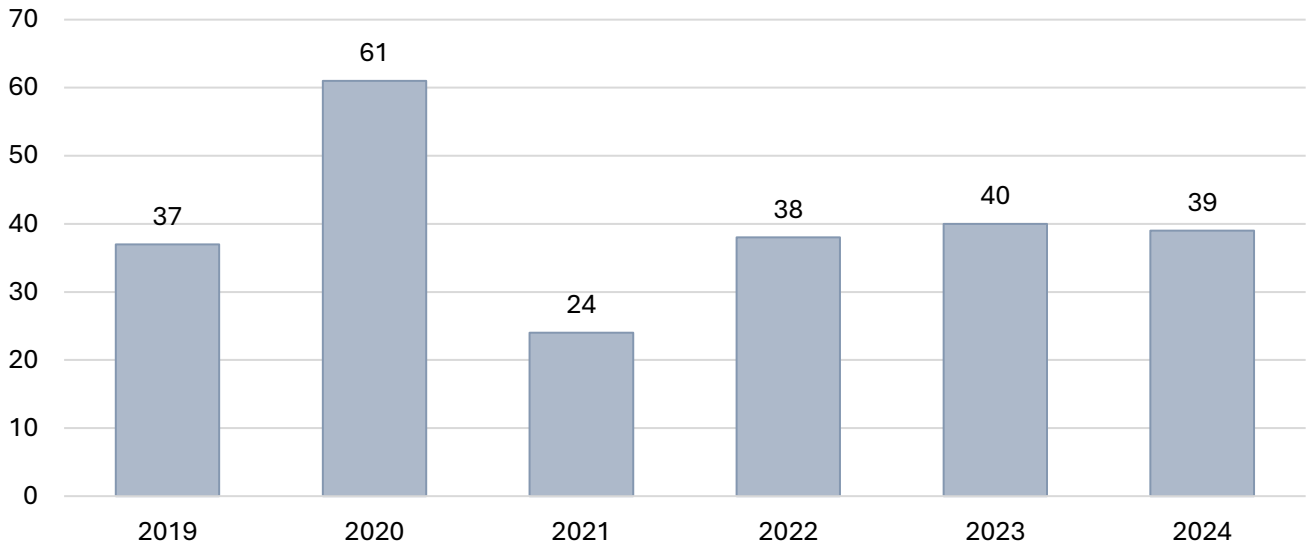
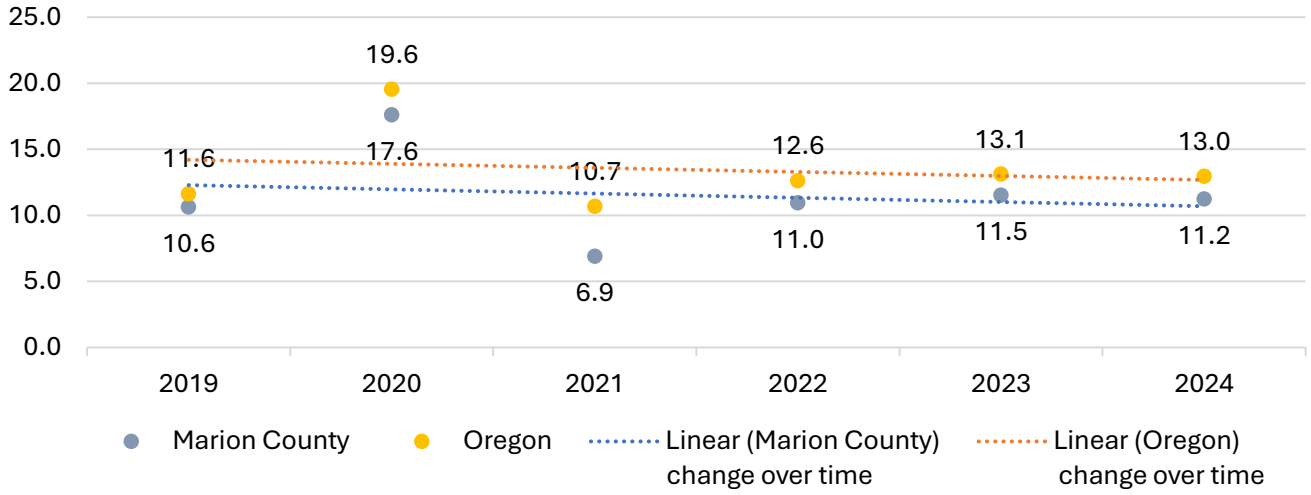


Figure 22b: Fire and Smoke Inhalation Emergency Visit Rates per 100,000 population, 2019-2024, Marion County and Oregon

The figure shows the rate of fire and smoke inhalation emergency visits per 100,000 population from 2019 – 2024 in Marion County and Oregon. The trend line is the rate of emergency visits per 100,000 population and shows a negative linear relationship (change over time) in Marion County and Oregon.

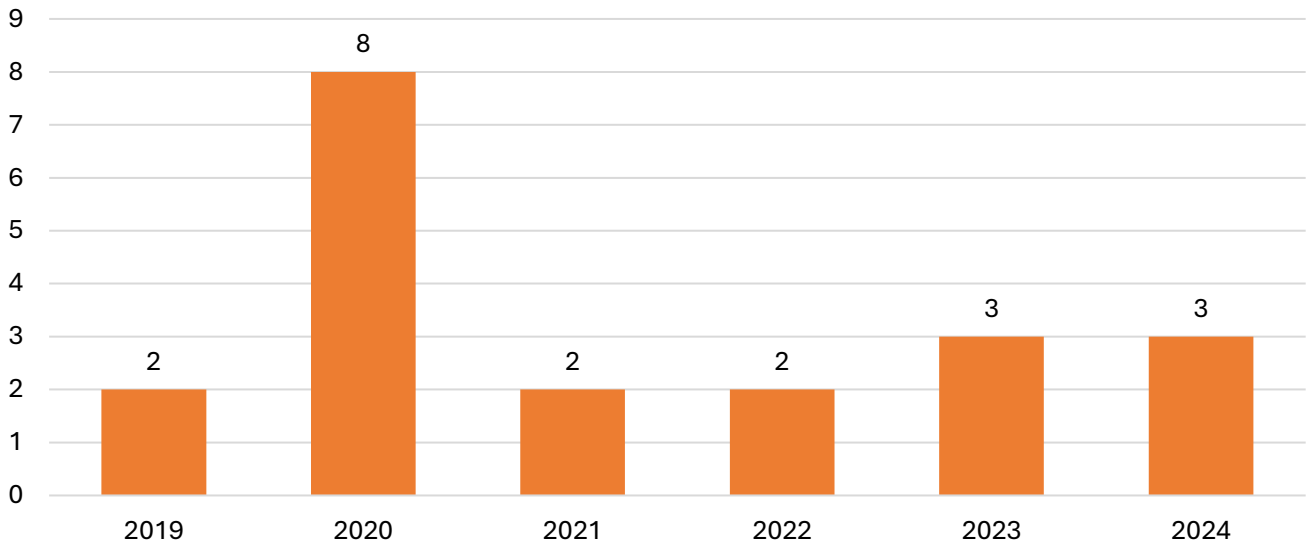


Hospitalizations (In-patient)

What are you reading?

Hospitalizations are the number of emergency visits that result in an in-patient visit caused by fire and smoke inhalation in Marion County. The previous 2019-2023 report used 24 hours or longer to define hospitalizations. However, due to the hospitals recording 24 hours or longer differently, this report shows the in-patient designation. Between the two reports, readers may notice a reduction in hospitalization numbers in this report. The in-patient designation is more accurate at showing the severity of the emergency visits and are recorded in Oregon ESSENCE. [4,5,7]

Figure 23: Fire and Smoke Inhalation Hospitalization (In-patient) Counts, 2019-2024, Marion County
The figure shows the number of yearly fire and smoke inhalation hospitalizations (in-patient) from 2019 – 2024 in Marion County. The year with the highest number of hospitalizations occurred in 2020.



Demographics

What are you reading?

The following sections are different populations of interest in Marion County. Each section explains the association between the characteristics (sex, age, race, ethnicity, geographic designation, and zip code, and identified housing status) related to emergency visits and hospitalizations (In-patient) between the 2019 – 2024.[4,7]

By Sex

Figure 24a: Fire and Smoke Inhalation Emergency Visit Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

The figure shows the rate of fire and smoke inhalation emergency visits per 100,000 population for males and females from 2019-2024 in Marion County. Male residents had an emergency visit rate 1.3 times higher than females.

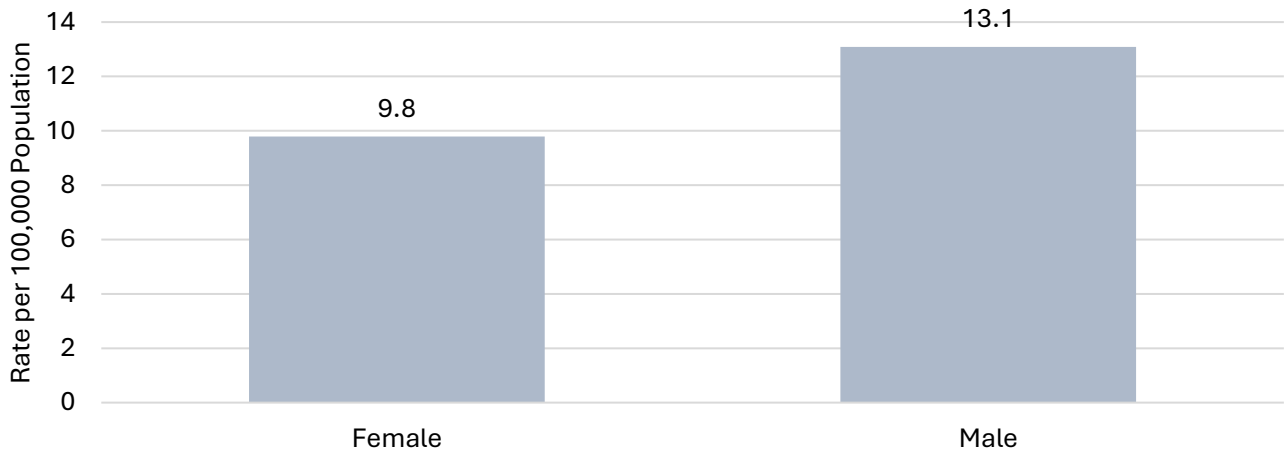
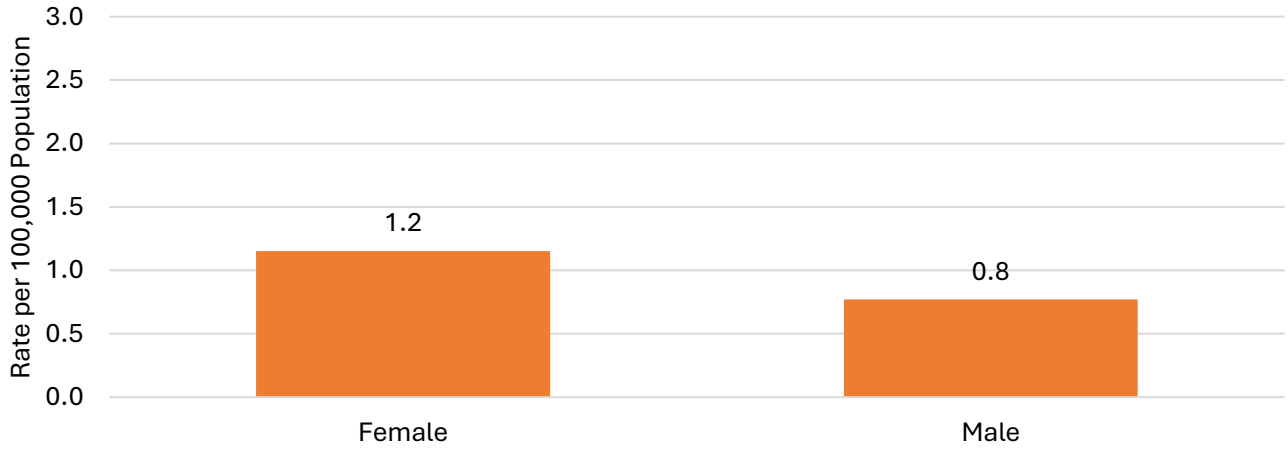


Figure 24b: Fire and Smoke Inhalation Hospitalization (In-patient) Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

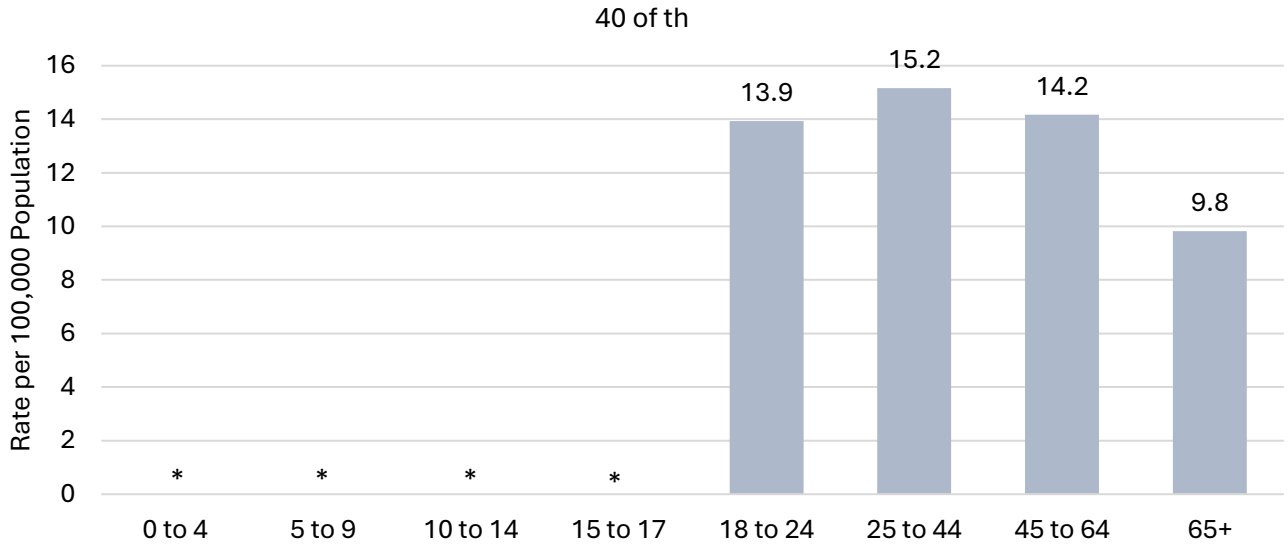
The figure shows the rate of fire and smoke inhalation hospitalizations per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had a slightly higher hospitalization rate than males.



By Age

Figure 25: Fire and Smoke Inhalation Emergency Visit Rates by Age Groups per 100,000 population, 2019-2024, Marion County

The figure shows the rate of fire and smoke inhalation emergency visits per 100,000 population by age groups from 2019 – 2024 in Marion County. Fire and smoke inhalation emergency visit rates increase with age. The 25 to 44 age group had the highest rate of emergency visits compared to other age groups.

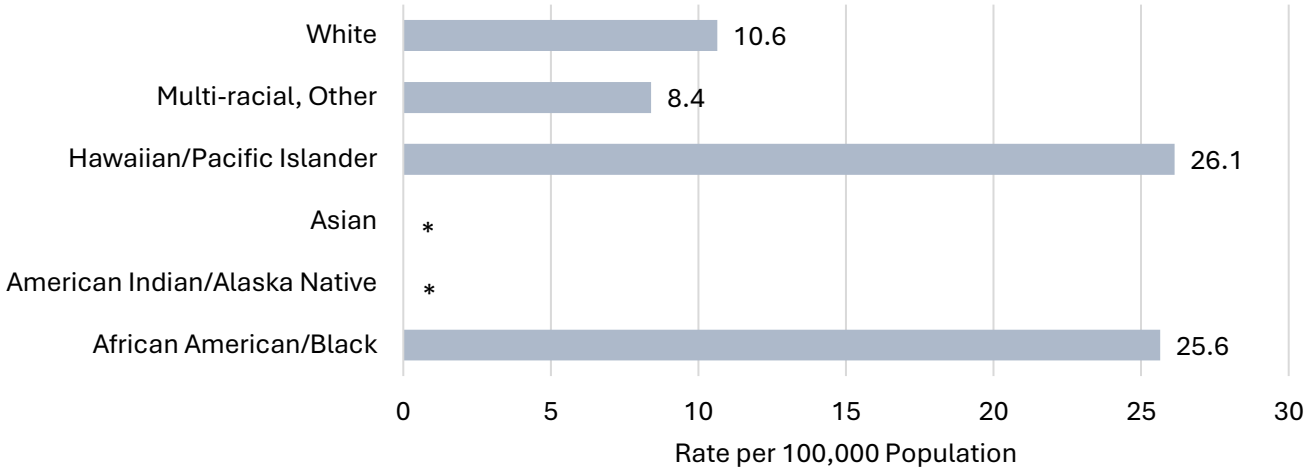


** - Suppressed due to low counts (less than 6)*

By Race

Figure 26: Fire and Smoke Inhalation Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County

The figure shows the fire and smoke inhalation emergency visit rate per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as Hawaiian/Pacific Islander and African American/Black had the highest emergency visit rate among all racial groups.



** - Suppressed due to low counts (less than 6)*

By Ethnicity

Figure 27a: Fire and Smoke Inhalation Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the fire and smoke inhalation emergency visit rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. People who identified as "Not Hispanic or Latino" had an emergency visit rate 1.3 times higher than people who identified as "Hispanic or Latino."

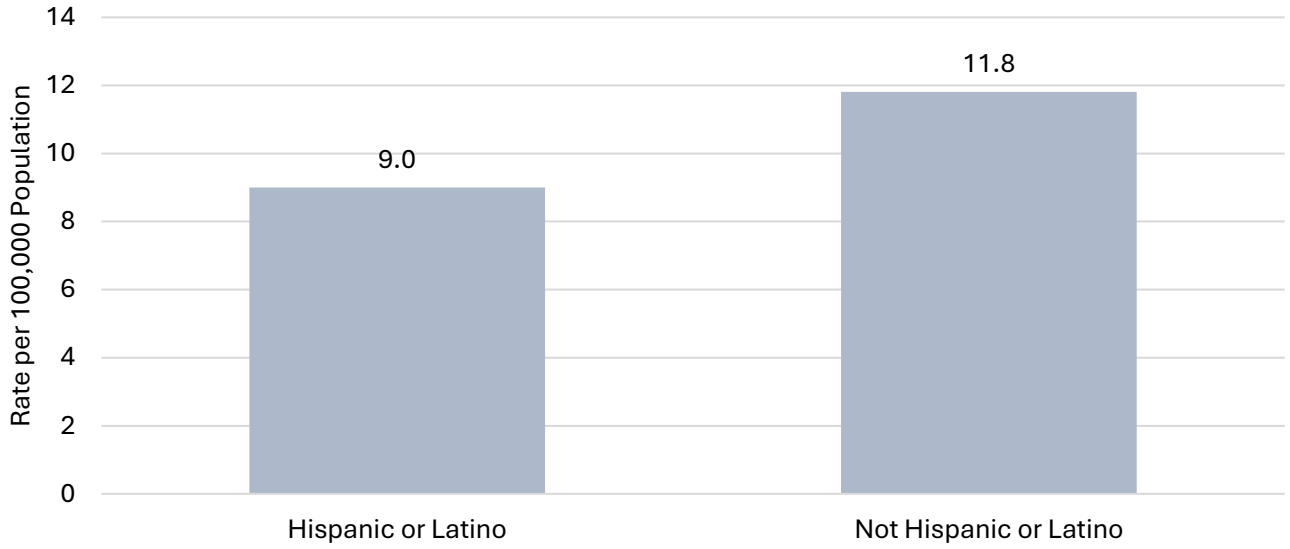
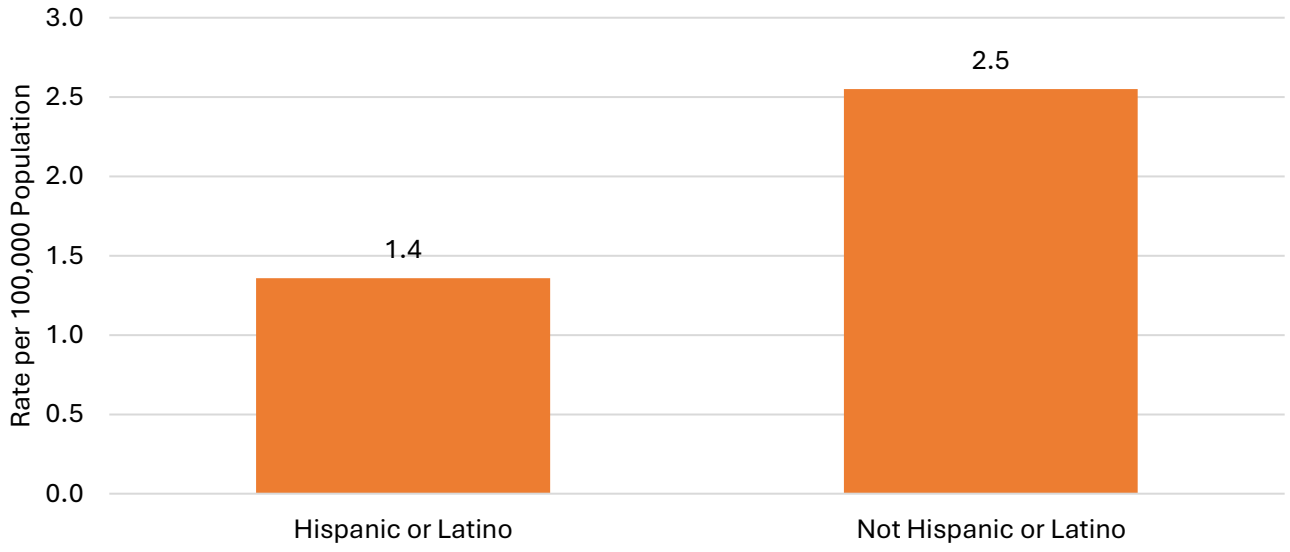


Figure 27b: Fire and Smoke Inhalation Hospitalization (In-patient) Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the fire and smoke inhalation hospitalization rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. Residents who identified as "Not Hispanic or Latino" had a hospitalization rate 1.5 times higher than residents who identified as "Hispanic or Latino."



By Geographic Designation – Rural & Urban Communities

The designations for rural areas are defined as locations situated ten or more miles from the center point (centroid) of a population center with at least 40,000 residents.

Figure 28a: Fire and Smoke Inhalation Emergency Visit Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the fire and smoke inhalation emergency visit rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had a slightly higher emergency visit rate than residents in rural areas.

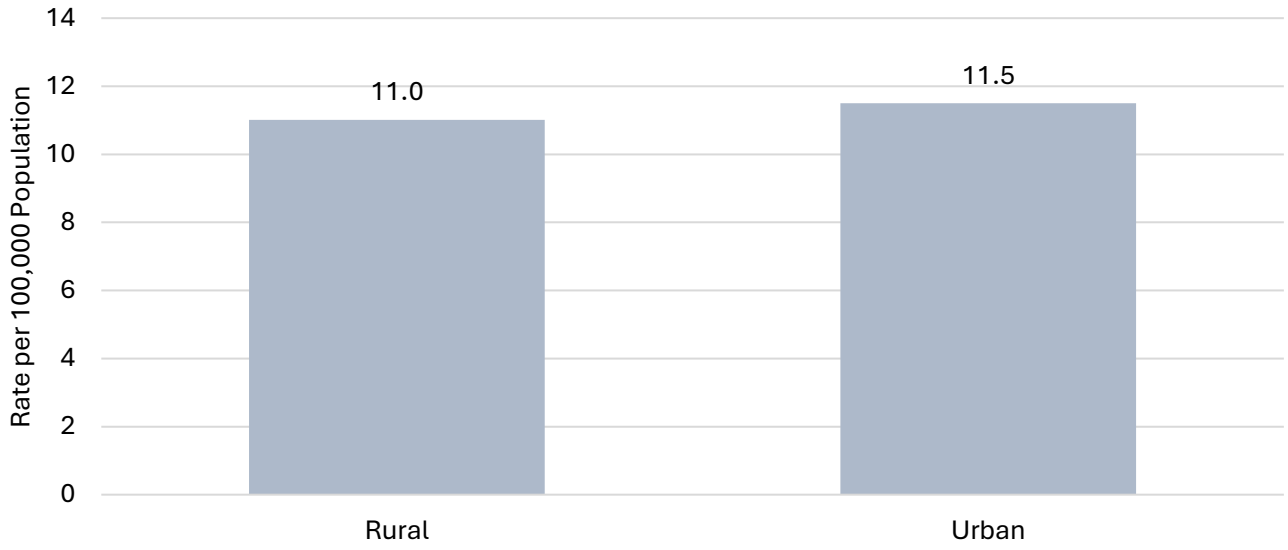
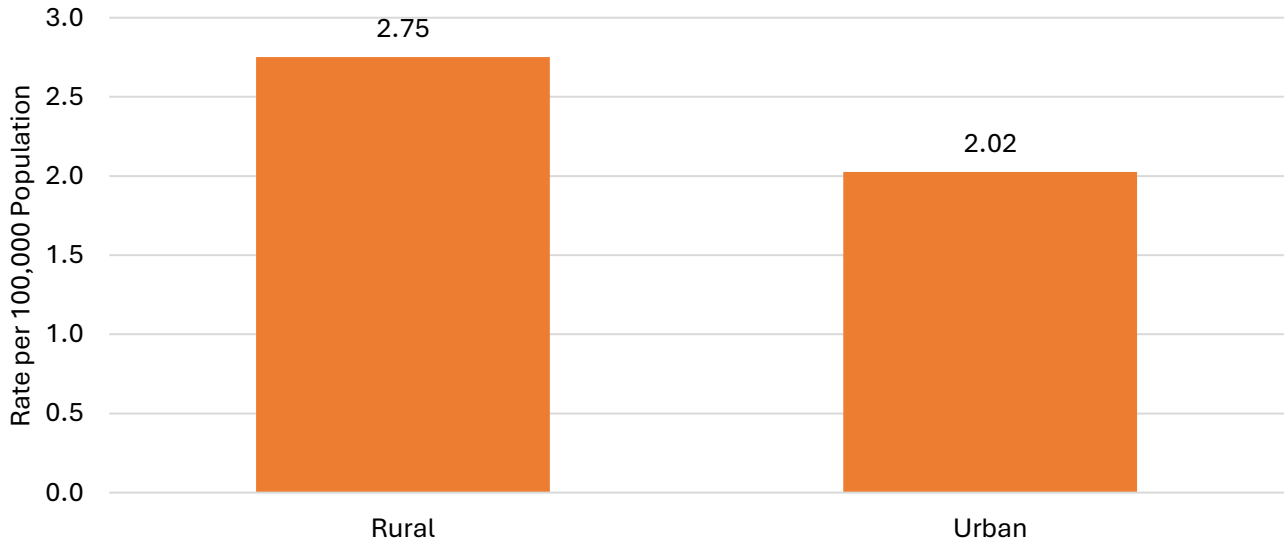


Figure 28b: Fire and Smoke Inhalation Hospitalization (In-patient) Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows the fire and smoke inhalation hospitalization rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in rural designated areas had a hospitalization rate 1.3 times higher than residents in rural areas.



Zip Code - Spatial Analysis

The zip code map has been excluded due to low numbers for most zip codes in Marion County.

Identified Homeless & Unsheltered Persons

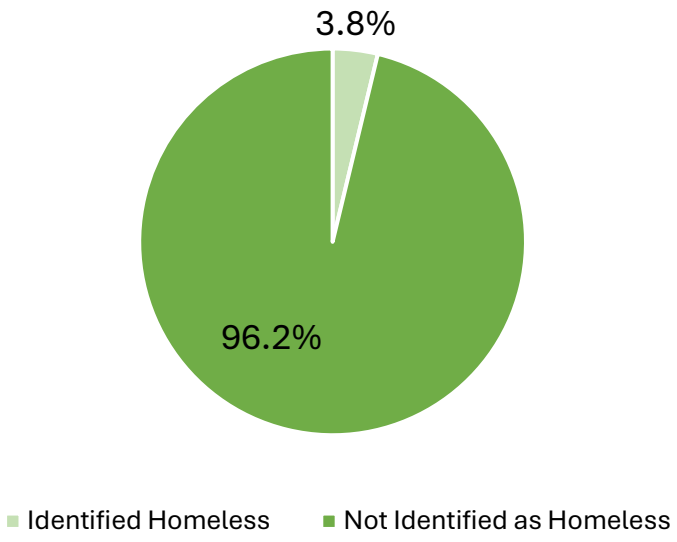
What am I reading?

The following sections describe the associations of emergency visits due to fire and smoke inhalation and people identified as homeless from 2019-2024 in Marion County. An individual is identified as homeless if they were described as homeless, houseless, unhoused, or unsheltered in Oregon ESSENCE. [4,6,7]

Figure 29: Percentage of Fire and Smoke Inhalation Emergency Visit by Identified Housing Status, 2019-2024, Marion County

The figure shows the percentage of fire and smoke inhalation emergency visits by identified housing status from 2019-2024 in Marion County. According to the Oregon Housing and Community Services, an estimated 1,428 Marion County residents (0.4% of the population) were identified homeless. This shows that the proportion of emergency visits among people identified as homeless was high.

In total, 9 fire and smoke inhalation emergency visits occurred among people identified as homeless 2019 – 2024.



Pollen-related Allergies

What am I reading?

Emergency Department & Urgent Care Visits (referred to as "Emergency Visits" in this report) are the number of visits to a hospital and/or hospital associated urgent care clinic within Marion County, Oregon. These visits are gathered from the Oregon ESSENCE database, which provides real-time data for public health and hospitals to monitor what is happening in emergency departments across the state before, during, and after a public health emergency. [4,7]

Figure 30a: Pollen-Related Allergy Emergency Visit Counts, 2019-2024, Marion County

The figure shows the number of pollen-related allergy emergency visits from 2019 to 2024 in Marion County. Pollen-related allergy visits have increased in recent years and peaked in 2024.

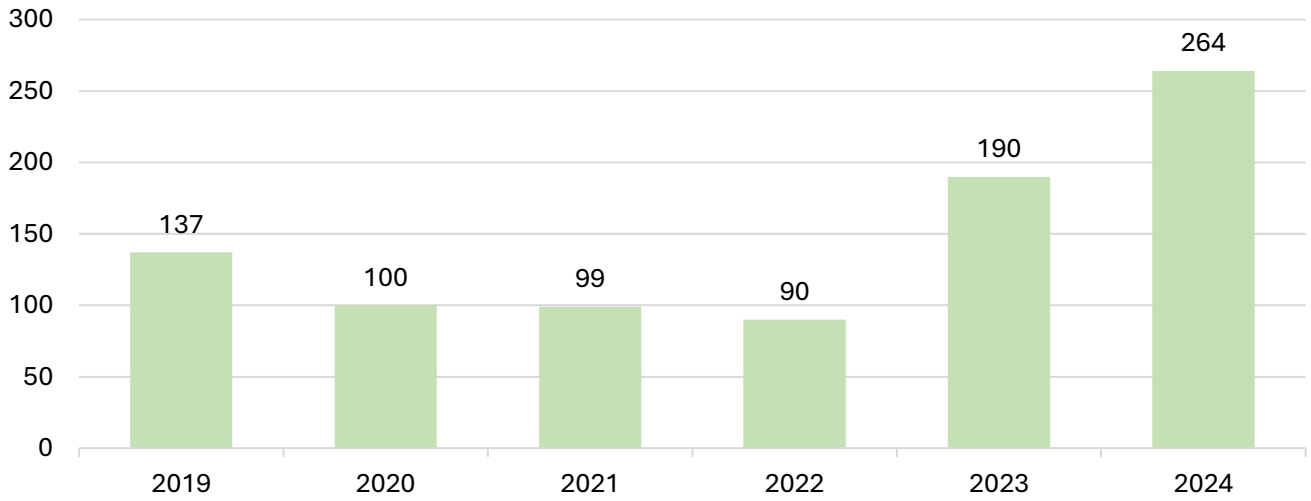
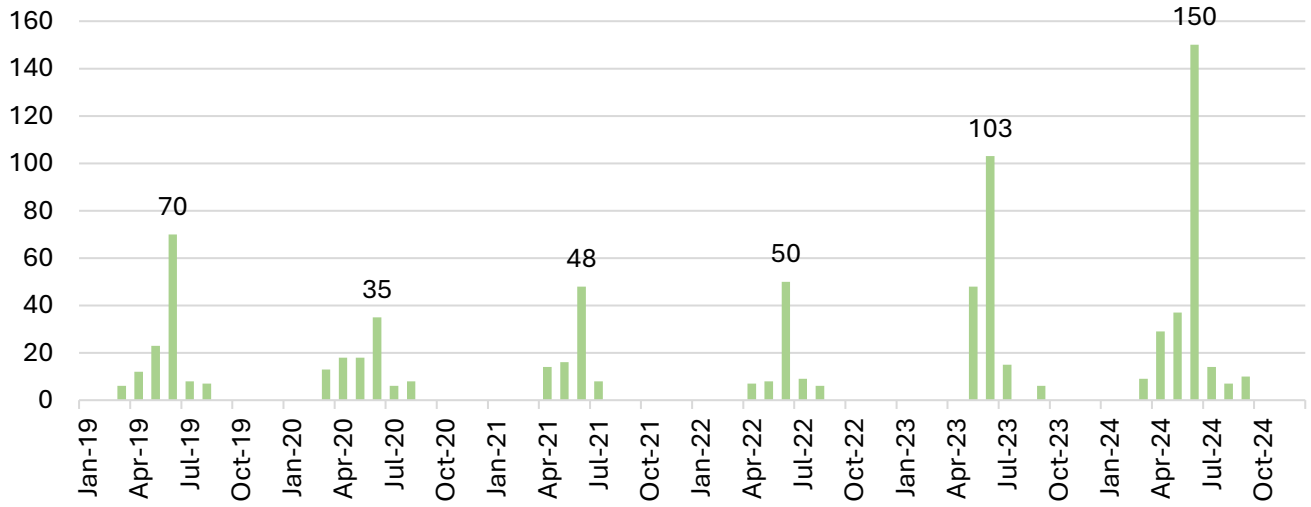


Figure 30b: Monthly Pollen-Related Allergy Emergency Visit Counts and High Temperature Monthly Averages, 2019-2024, Marion County

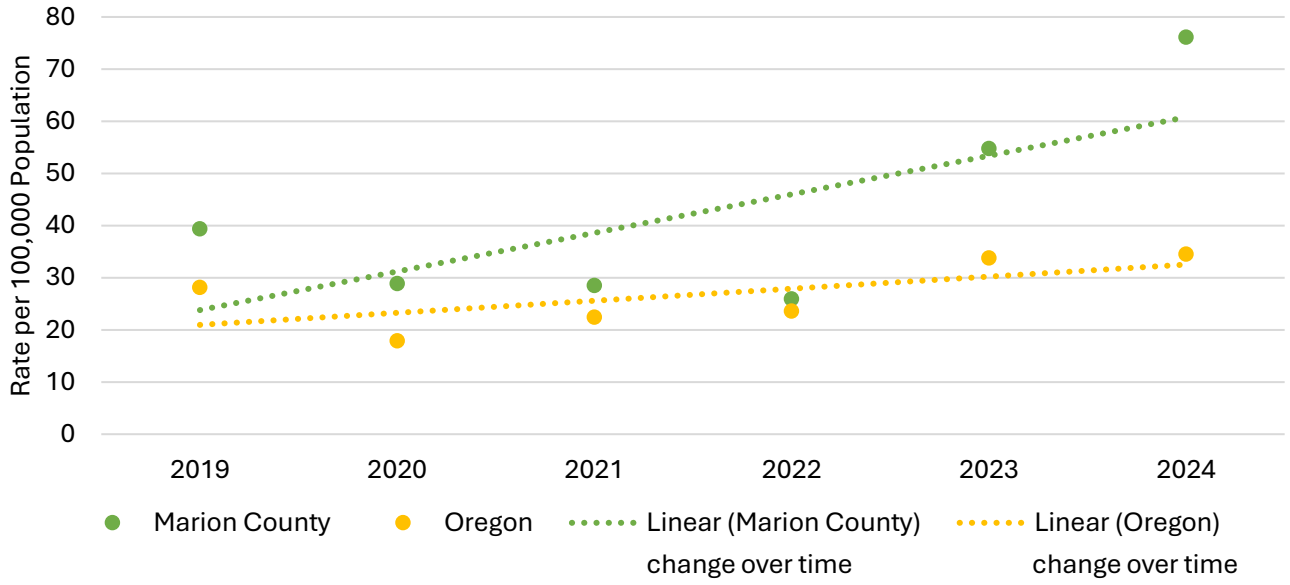
The figure shows the number of monthly pollen-related allergy emergency visits in Marion County and values for spikes in June of each year from January 2019 to December 2024 in Salem, Oregon. Emergency visits spike in June of each year and were highest in June 2024.



Months with values below six have been suppressed and will not show in the figure.

Figure 30c: Pollen-Related Allergy Emergency Visit Rates per 100,000 population, 2019-2024, Marion County and Oregon

The figure shows the rate of pollen-related allergy emergency visits per 100,000 population from 2019 – 2024 in Marion County and Oregon. The trend line is the rate of emergency visits per 100,000 population and shows a positive linear relationship (change over time) in Marion County and Oregon.



Hospitalizations (In-patient)

Pollen-related allergy hospitalization data between 2019-2024 for Marion County residents is suppressed due to low numbers.

Demographics

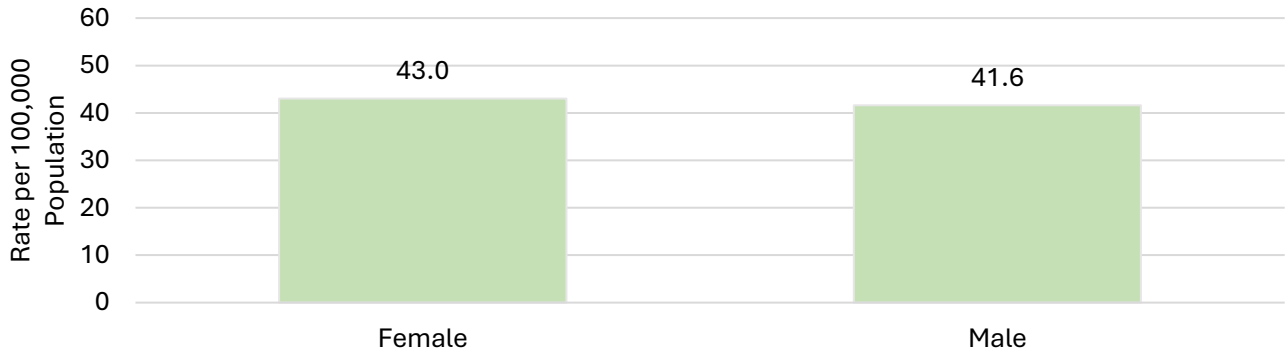
What are you reading?

The following sections are different populations of interest in Marion County. Each section explains the association between the characteristics (sex, age, race, ethnicity, geographic designation, and zip code, and identified housing status) related to emergency visits and hospitalizations (In-patient) between the 2019 – 2024.[4,7]

By Sex

Figure 31: Pollen-Related Allergy Emergency Visit Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County

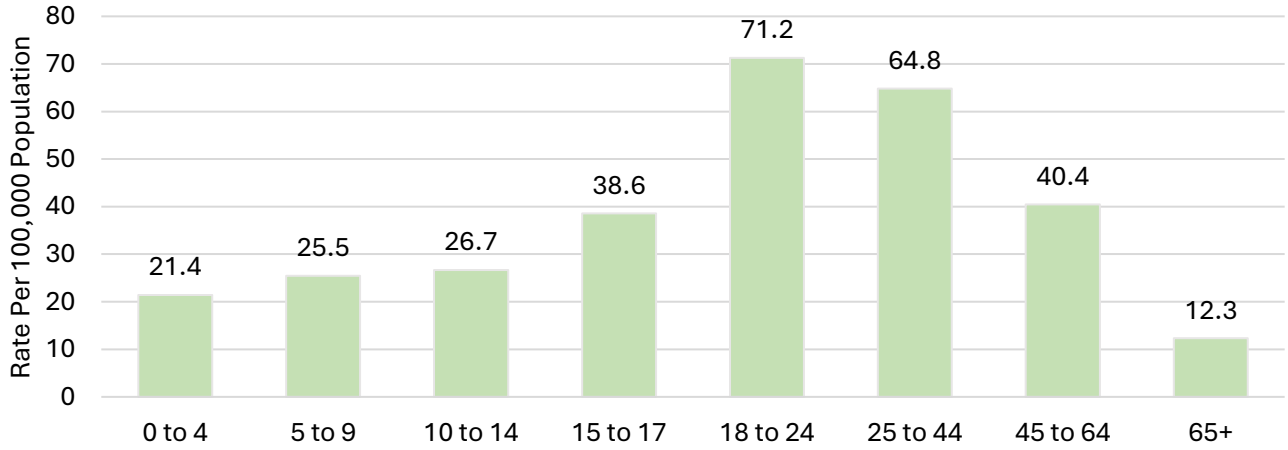
The figure shows the rate of pollen-related allergy emergency visits per 100,000 population for males and females from 2019-2024 in Marion County. Female residents had a slightly higher emergency visit rate than males.



By Age

Figure 32: Pollen-Related Allergy Emergency Visit Rates by Age Groups per 100,000 population, 2019-2024, Marion County

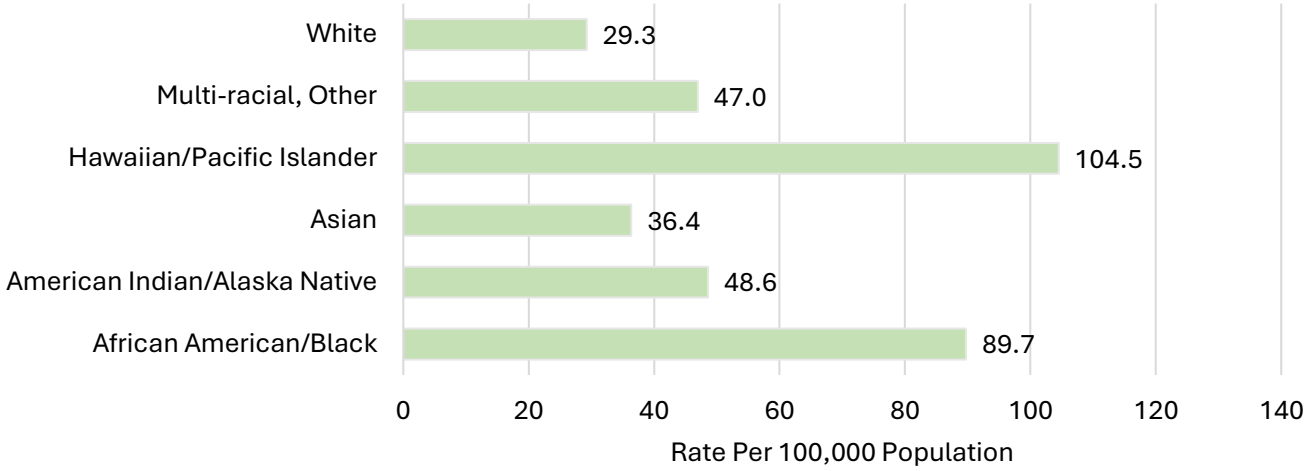
The figure shows the rate of pollen-related allergy emergency visits per 100,000 population by age groups from 2019 – 2024 in Marion County. The 18 to 24 and 25 to 44 age group had the highest rate of emergency visits compared to other age groups. Teenagers 15 to 17 years old had the highest rate of emergency visits among children.



By Race

Figure 33: Pollen-Related Allergy Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County

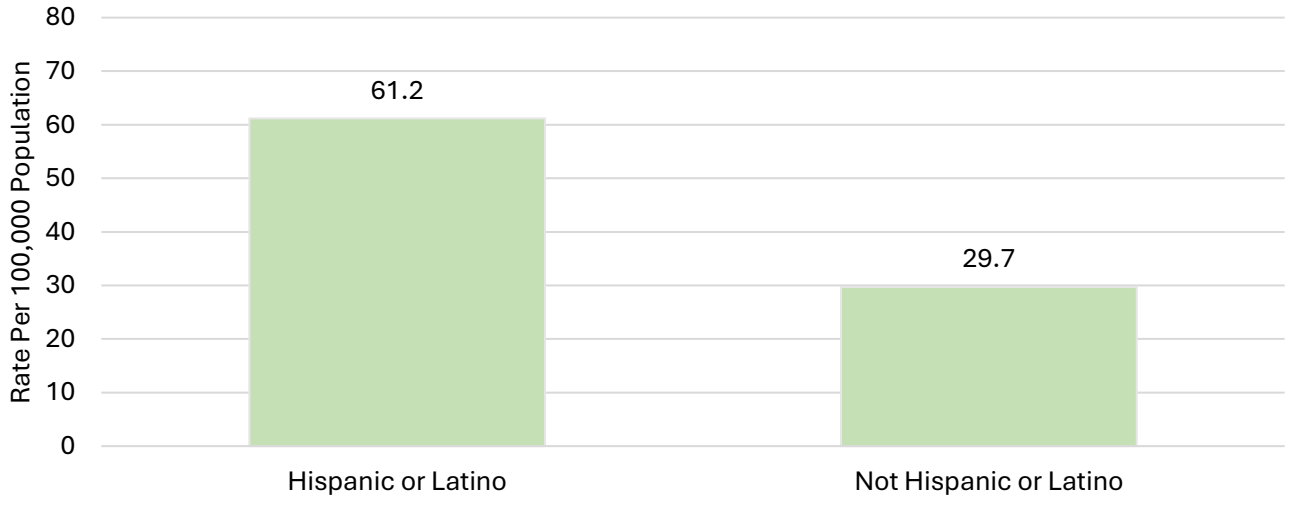
The figure shows the pollen-related allergy emergency visit rate per 100,000 population by racial group from 2019 – 2024 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as Hawaiian/Pacific Islander and African American/Black had the highest emergency visit rate among all racial groups.



By Ethnicity

Figure 34: Pollen-Related Allergy Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County

The figure shows the pollen-related allergy emergency visit rate per 100,000 population by ethnicity from 2019 – 2024 in Marion County. Ethnicity groups in this report match those used in the Oregon ESSENCE system. People who identified as "Hispanic or Latino" had an emergency visit rate 2.1 times higher than people who identified as "Not Hispanic or Latino."

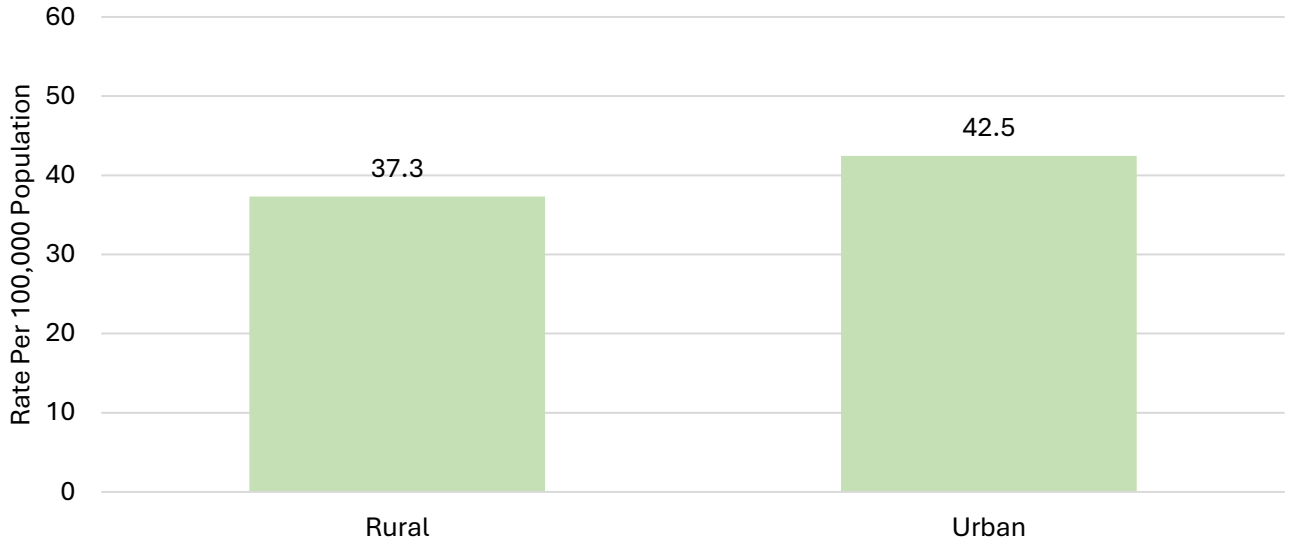


By Geographic Designation – Rural & Urban Communities

The designations for rural areas are defined as locations situated ten or more miles from the center point (centroid) of a population center with at least 40,000 residents.

Figure 35: Pollen-Related Allergy Emergency Visit Rates by Geographic Designation per 100,000 population, 2019-2024, Marion County

The figure shows pollen-related allergy emergency visit rate per 100,000 population by the type of geographic residence (rural or urban) from 2019 – 2024 in Marion County. Residents in urban designated areas had an emergency visit rate 1.2 times higher than residents in rural areas.



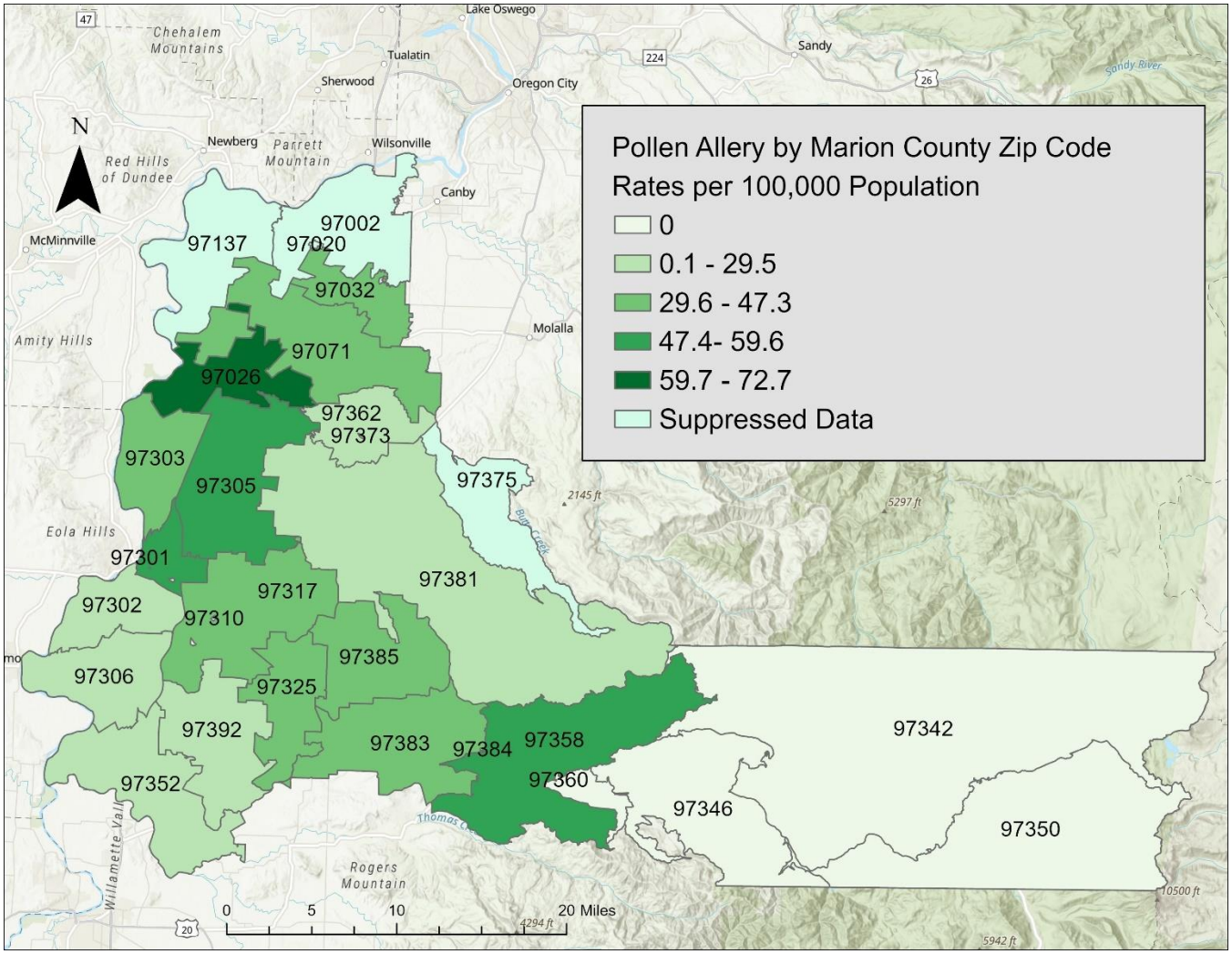
Zip Code - Spatial Analysis

What are you reading?

The map below shows the pollen-related allergy emergency visit rate per 100,000 population by zip code from 2019-2024 in Marion County. These are expressed with different colors to represent different values. The zip codes with the highest rates include 97301,97305, and 97325.[4,7]

Due to a mismatch in zip codes between the US Census and US Postal Service, some zip codes are not included in the map. This includes zip codes 97020, 97310, 97360, 97384. The map follows the zip coded areas identified from the U.S. Census Bureau.

Figure 36: Pollen-Related Allergy Emergency Visit Rate per 100,000 Population for by Zip Code, 2019 – 2024, Marion County



Identified Homeless & Unsheltered Persons

Pollen-related allergy emergency visit and hospitalization data between 2019-2024 for patients identified as homeless or unsheltered is suppressed due to low numbers.

Appendix A. Data Tables – Counts

Hours of Unhealthy for Sensitive Groups in Salem, OR, 2019 – 2024 (Figures 1)												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2019	11	0	0	0	0	1	0	3	1	3	26	13
2020	1	0	1	0	0	1	6	8	293	13	32	18
2021	4	9	62	3	0	3	5	18	46	4	7	0
2022	43	35	16	1	0	0	24	10	40	102	142	56
2023	49	82	10	5	3	3	8	86	8	60	102	14
2024	3	10	3	1	0	2	37	10	10	12	83	101

Percentage of Air Quality Index Category readings by year in Salem, OR (Figure 2a - 2f)						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
Good	75.39%	79.18%	83.22%	75.41%	77.89%	84.73%
Moderate	22.26%	17.93%	15.65%	22.33%	20.39%	14.67%
Unhealthy for Sensitive Groups	0.64%	0.54%	0.23%	1.46%	1.16%	0.49%
Unhealthy	0.01%	0.25%	0.00%	0.62%	0.21%	0.06%
Very Unhealthy	0.00%	0.27%	0.00%	0.03%	0.01%	0.00%
Hazardous	0.00%	1.34%	0.00%	0.00%	0.00%	0.00%

Non-Infectious Respiratory Illness Emergency Visit Counts, 2019-2024, Marion County (Figure 3a and 3c)	
Year	**Count**
2019	16195
2020	16783
2021	15846
2022	17292
2023	17051
2024	20118

Non-Infectious Respiratory Illness Emergency Visits per Day by Air Quality Index Classification, 2019-2024, Marion County, Oregon (Figure 3d)			
Air Quality Index Classifications	**Cases of Non-Infectious Respiratory Illness Emergency Visits**	**Total Air Quality Index Days**	**Emergency Visits per Day by Air Quality Index Classification**
Good	48664	1067	45.6
Moderate	47755	979	48.8
Unhealthy for Sensitive Groups	4488	98	45.8
Unhealthy	1411	30	47.0
Very Unhealthy	215	4	53.8
Hazardous	409	7	58.4

Monthly Non-Infectious Respiratory Illness Emergency Visit Counts, 2019-2024, Marion County (Figure 3b)					
Month – 2019 Year	**Counts**	**Month- 2020 Year**	**Counts**	**Month – 2021 Year**	**Counts**
Jan-19	1471	Feb-20	1815	Jan-21	1532
Feb-19	1421	Mar-20	1577	Feb-21	1089
Mar-19	1805	Apr-20	1981	Mar-21	1142
Apr-19	1367	May-20	1261	Apr-21	1270
May-19	1343	Jun-20	1186	May-21	1271
Jun-19	1381	Jul-20	1176	Jun-21	1281
Jul-19	1044	Aug-20	1121	Jul-21	1147
Aug-19	959	Sep-20	1024	Aug-21	1444
Sep-19	1227	Oct-20	1364	Sep-21	1445
Oct-19	1316	Nov-20	1369	Oct-21	1423
Nov-19	1322	Dec-20	1411	Nov-21	1373
Dec-19	1539	Feb-20	1498	Dec-21	1429
Month – 2022 Year	**Counts**	**Month – 2023 Year**	**Counts**	**Month- 2024 Year**	**Counts**
Jan-22	1863	Jan-23	1683	Jan-24	1926
Feb-22	1284	Feb-23	1569	Feb-24	1729
Mar-22	1178	Mar-23	1530	Mar-24	1888
Apr-22	1384	Apr-23	1483	Apr-24	1671
May-22	1433	May-23	1371	May-24	1759
Jun-22	1542	Jun-23	1505	Jun-24	1926
Jul-22	1273	Jul-23	1050	Jul-24	1339
Aug-22	1064	Aug-23	1056	Aug-24	1277
Sep-22	1247	Sep-23	1278	Sep-24	1331
Oct-22	1338	Oct-23	1382	Oct-24	1415
Nov-22	1811	Nov-23	1476	Nov-24	1633
Dec-22	1875	Dec-23	1668	Dec-24	2224

Non-Infectious Respiratory Illness Hospitalizations (In-patient) Counts, 2019-2024, Marion County (Figure 4a)	
Year	**Count**
2019	3304
2020	2996
2021	3477
2022	3319
2023	3284
2024	3909

Monthly Non-Infectious Respiratory Illness Hospitalization (in-patient) Counts, 2019-2024, Marion County (Figure 4b)					
Month – 2019 Year	**Counts**	**Month- 2020 Year**	**Counts**	**Month – 2021 Year**	**Counts**
Jan-19	324	Feb-20	313	Jan-21	268
Feb-19	304	Mar-20	261	Feb-21	261
Mar-19	397	Apr-20	277	Mar-21	287
Apr-19	288	May-20	141	Apr-21	291
May-19	300	Jun-20	189	May-21	303
Jun-19	227	Jul-20	219	Jun-21	239
Jul-19	216	Aug-20	234	Jul-21	245
Aug-19	201	Sep-20	217	Aug-21	322
Sep-19	224	Oct-20	267	Sep-21	315
Oct-19	266	Nov-20	268	Oct-21	305
Nov-19	268	Dec-20	274	Nov-21	313
Dec-19	289	Feb-20	336	Dec-21	328
Month – 2022 Year	**Counts**	**Month – 2023 Year**	**Counts**	**Month- 2024 Year**	**Counts**
Jan-22	329	Jan-23	320	Jan-24	377
Feb-22	274	Feb-23	276	Feb-24	288
Mar-22	245	Mar-23	287	Mar-24	358
Apr-22	268	Apr-23	291	Apr-24	299
May-22	301	May-23	279	May-24	339
Jun-22	233	Jun-23	251	Jun-24	304
Jul-22	261	Jul-23	220	Jul-24	267
Aug-22	196	Aug-23	230	Aug-24	307
Sep-22	253	Sep-23	251	Sep-24	287
Oct-22	253	Oct-23	264	Oct-24	310
Nov-22	329	Nov-23	304	Nov-24	342
Dec-22	377	Dec-23	311	Dec-24	431

Non-Infectious Respiratory Illness Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County (Figures 5a and 5b)		
Sex	**Counts of Emergency Visit**	**Counts of Hospitalizations (In-patient)**
Female	57752	10305
Male	45502	9984

Non-Infectious Respiratory Illness Rates by Age Groups per 100,000 population, 2019-2024, Marion County (Figures 6a and 6b)		
Age Groups	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
0 to 4	4522	339
5 to 9	2652	95
10 to 14	2140	40
15 to 17	1573	28
18 to 24	6380	257
25 to 44	22422	1556
45 to 64	28955	5890

65+	34324	11978

Non-Infectious Respiratory Illness Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County (Figures 7a and 7b)		
Race	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
African American/Black	1815	278
American Indian/Alaska Native	1509	291
Asian	1124	182
Hawaiian/Pacific Islander	1531	237
Multi-racial, Other	13221	1628
Unknown	8332	
White	75753	16960

Non-Infectious Respiratory Illness Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County (Figures 8a and 8b)		
Ethnicity	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
Hispanic or Latino	16803	1987
Not Hispanic or Latino	79071	17742

Non-Infectious Respiratory Illness by Geographic Designation per 100,000 population, 2019-2024, Marion County (Figures 9a and 9b and Figure 10)		
Zip code	**Counts of Emergency Visits**	**Rate per 100,000 population of Emergency Visits**
97002	1,581	4,073.9
97020	372	4,991.9
97026	943	4,032.0
97032	1,243	4,307.0
97071	6,443	3,371.9
97137	265	3,922.4
97301	21,303	6,309.3
97302	11,630	4,733.0
97303	12,998	5,297.6
97305	14,531	5,376.6
97306	8,552	4,172.5
97310	188	2,738.9
97317	7,506	4,781.2
97325	2,020	4,706.0
97342	53	6,134.3
97346	0	0
97350	90	7,978.7
97352	1,892	4,752.6
97358	634	3,942.8
97362	1,008	4,251.0

97373	10	1,234.6
97375	243	3,363.8
97381	3,157	3,415.8
97383	2,662	4,691.8
97385	978	4,205.4
97392	1,730	4,119.6

Yearly Non-Infectious Respiratory Illness Emergency Visits by Identified Housing Status, Marion County, 2019 – 2024 (Figure 11a)

Year	Emergency Visit Counts of People Identified as Homeless	Emergency Visit Counts of People Not Identified as Homeless
2019	168	16027
2020	223	16560
2021	184	15662
2022	251	17041
2023	197	16854
2024	136	19982

Yearly Non-Infectious Respiratory Illness Hospitalizations (in-patient) by Identified Housing Status, Marion County, 2019 – 2024 (Figure 11c)

October – April Cold Weather Season Year	Hospitalization Counts of People Identified as Homeless	Hospitalization Counts of People Not Identified as Homeless
2019	45	3259
2020	56	2940
2021	39	3438
2022	69	3250
2023	55	3229
2024	46	3863

Non-Infectious Respiratory Illness Counts by Identified Housing Status, 2019-2024, Marion County (Figure 11b and 11d)

Status of Homelessness & Unsheltered	Emergency Visit Counts	Hospitalization (in-patient) Counts
Identified Homeless	1159	310
Not Identified as Homeless	82008	16,070

Non-Infectious Respiratory Illness Counts by Identified Housing Status and Sex, Marion County, Oregon, 2019 – 2024 (Figure 12a and 12b)

Sex	Emergency Visit Counts of People Identified as Homeless	Hospitalization (in-patient) Counts of Identified as Homeless	Emergency Visit Counts of People Not Identified as Homeless	Hospitalization (in-patient) Counts of People Not Identified as Homeless
Female	374	101	57378	10204
Male	785	209	44717	9775

Asthma Emergency Visit Counts, 2019-2024, Marion County (Figure 13a and 13c)	
Year	**Count**
2019	3672
2020	3260
2021	2827
2022	4249
2023	4407
2024	5064

Asthma Emergency Visits per Day by Air Quality Index Classification, 2019-2024, Marion County, Oregon (Figure 13d)			
Air Quality Index Classifications	**Emergency Visits**	**Total Air Quality Index Days**	**Emergency Visits per Day by Air Quality Index Classification**
Good	11066	1067	10.4
Moderate	10804	979	11.0
Unhealthy for Sensitive Groups	997	98	10.2
Unhealthy	381	30	12.7
Very Unhealthy	42	4	10.5
Hazardous	117	7	16.7

Monthly Asthma Emergency Visit Counts, 2019-2024, Marion County (Figure 13b)					
Month – 2019 Year	**Counts**	**Month- 2020 Year**	**Counts**	**Month – 2021 Year**	**Counts**
Jan-19	307	Feb-20	520	Jan-21	363
Feb-19	319	Mar-20	450	Feb-21	185
Mar-19	374	Apr-20	444	Mar-21	230
Apr-19	301	May-20	187	Apr-21	229
May-19	319	Jun-20	175	May-21	207
Jun-19	399	Jul-20	259	Jun-21	318
Jul-19	213	Aug-20	163	Jul-21	197
Aug-19	179	Sep-20	152	Aug-21	200
Sep-19	280	Oct-20	300	Sep-21	173
Oct-19	304	Nov-20	222	Oct-21	253
Nov-19	308	Dec-20	230	Nov-21	247
Dec-19	369	Feb-20	158	Dec-21	225
Month – 2022 Year	**Counts**	**Month – 2023 Year**	**Counts**	**Month- 2024 Year**	**Counts**
Jan-22	458	Jan-23	514	Jan-24	545
Feb-22	310	Feb-23	458	Feb-24	547
Mar-22	300	Mar-23	432	Mar-24	496
Apr-22	380	Apr-23	384	Apr-24	445
May-22	345	May-23	368	May-24	439
Jun-22	444	Jun-23	520	Jun-24	594
Jul-22	269	Jul-23	237	Jul-24	278
Aug-22	204	Aug-23	203	Aug-24	232
Sep-22	342	Sep-23	272	Sep-24	316

Oct-22	332	Oct-23	307	Oct-24	297
Nov-22	426	Nov-23	328	Nov-24	361
Dec-22	439	Dec-23	384	Dec-24	514

Asthma Hospitalizations (In-patient) Counts, 2019-2024, Marion County (Figure 14a)	
Year	**Count**
2019	253
2020	182
2021	171
2022	220
2023	252
2024	367

Monthly Asthma Hospitalization (in-patient) Counts, 2019-2024, Marion County (Figure 14b)					
Month – 2019 Year	**Counts**	**Month- 2020 Year**	**Counts**	**Month – 2021 Year**	**Counts**
Jan-19	25	Jan-20	16	Jan-21	12
Feb-19	24	Feb-20	23	Feb-21	9
Mar-19	40	Mar-20	13	Mar-21	12
Apr-19	15	Apr-20	7	Apr-21	9
May-19	33	May-20	16	May-21	21
Jun-19	18	Jun-20	19	Jun-21	15
Jul-19	12	Jul-20	14	Jul-21	18
Aug-19	13	Aug-20	8	Aug-21	20
Sep-19	22	Sep-20	15	Sep-21	9
Oct-19	23	Oct-20	12	Oct-21	14
Nov-19	16	Nov-20	17	Nov-21	15
Dec-19	12	Dec-20	22	Dec-21	17
Month – 2022 Year	**Counts**	**Month – 2023 Year**	**Counts**	**Month- 2024 Year**	**Counts**
Jan-22	15	Jan-23	31	Jan-24	29
Feb-22	13	Feb-23	26	Feb-24	16
Mar-22	14	Mar-23	16	Mar-24	37
Apr-22	25	Apr-23	30	Apr-24	27
May-22	16	May-23	20	May-24	41
Jun-22	10	Jun-23	13	Jun-24	33
Jul-22	15	Jul-23	16	Jul-24	37
Aug-22	10	Aug-23	18	Aug-24	23
Sep-22	25	Sep-23	20	Sep-24	30
Oct-22	16	Oct-23	19	Oct-24	21
Nov-22	29	Nov-23	23	Nov-24	31
Dec-22	32	Dec-23	20	Dec-24	42

Asthma Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County (Figures 15a and 15b)		
Sex	**Counts of Emergency Visit**	**Counts of Hospitalizations (In-patient)**
Female	14546	1712

Male	8921	993

Non-Infectious Respiratory Illness Rates by Age Groups per 100,000 population, 2019-2024, Marion County (Figures 16a and 16b)		
Age Groups	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
0 to 4	1072	166
5 to 9	1415	137
10 to 14	1212	83
15 to 17	666	58
18 to 24	2521	232
25 to 44	7565	719
45 to 64	5854	633
65+	3142	667

Asthma Emergency Visit Rates by Race per 100,000 population, 2019-2024, Marion County (Figures 17a and 17b)		
Race	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
African American/Black	607	94
American Indian/Alaska Native	313	44
Asian	353	31
Hawaiian/Pacific Islander	533	53
Multi-racial, Other	2893	412
Unknown	4024	
White	14756	1903

Asthma Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County (Figures 18a and 18b)		
Ethnicity	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
Hispanic or Latino	4426	531
Not Hispanic or Latino	15739	2081

Asthma by Geographic Designation per 100,000 population, 2019-2024, Marion County (Figures 19a and 19b and Figure 20)		
Zip code	**Counts of Emergency Visits**	**Rate per 100,000 population of Emergency Visits**
97002	302	778.2
97020	77	1033.3
97026	209	893.6
97032	244	845.5
97071	1427	746.8
97137	55	814.1
97301	4731	1401.2
97302	2486	1011.7

97303	2872	1170.5
97305	3620	1339.4
97306	2214	1080.2
97310	12	174.8
97317	1818	1158.0
97325	564	1314.0
97342	*	*
97346	0	0
97350	6	531.9
97352	430	1080.1
97358	118	733.8
97362	140	590.4
97373	0	0.0
97375	37	512.2
97381	608	657.8
97383	654	1133.5
97384	*	*
97385	202	868.6
97392	375	893.0

** = Suppressed due to low counts (less than 6)*

Yearly Asthma Emergency Visits by Identified Housing Status, Marion County, 2019 – 2024 (Figure 21a)		
Year	**Emergency Visit Counts of People Identified as Homeless**	**Emergency Visit Counts of People Not Identified as Homeless**
2019	23	3649
2020	19	3241
2021	18	2809
2022	32	4217
2023	56	4351
2024	16	5048

Hospitalization (in-patient) data is not shown due to low numbers

Yearly Asthma Hospitalizations (in-patient) by Identified Housing Status, Marion County, 2019 – 2024 (Figure 11c)		
October – April Cold Weather Season Year	**Hospitalization Counts of People Identified as Homeless**	**Hospitalization Counts of People Not Identified as Homeless**
2019	45	3259
2020	56	2940
2021	39	3438
2022	69	3250
2023	55	3229
2024	46	3863

Asthma Counts by Identified Housing Status, 2019-2024, Marion County (Figure 21b and 21b)

Status of Homelessness & Unsheltered	Emergency Visit Counts	Hospitalization (in-patient) Counts
Identified Homeless	164	20
Not Identified as Homeless	18251	1425

Fire and Smoke Inhalation Emergency Visit Counts, 2019-2024, Marion County (Figure 22a and 22b)	
Year	**Count**
2019	37
2020	61
2021	24
2022	38
2023	40
2024	39

Fire and Smoke Inhalation Hospitalizations (In-patient) Counts, 2019-2024, Marion County (Figure 23)	
Year	**Count**
2019	2
2020	8
2021	2
2022	2
2023	3
2024	3

Fire and Smoke Inhalation Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County (Figures 24a and 24b)		
Sex	**Counts of Emergency Visit**	**Counts of Hospitalizations (in-patient)**
Female	102	12
Male	136	8

Fire and Smoke Inhalation Rates by Age Groups per 100,000 population, 2019-2024, Marion County (Figure 25)	
Age Groups	**Counts of Emergency Visits**
0 to 4	*
5 to 9	*
10 to 14	*
15 to 17	*
18 to 24	26
25 to 44	87
45 to 64	68
65+	35

** = Suppressed due to low counts (less than 6)*

Hospitalization (in-patient) data is not shown due to low numbers

Fire and Smoke Inhalation Rates by Race per 100,000 population, 2019-2024, Marion County (Figure 26)	
Race	**Counts of Emergency Visits**
African American/Black	6
American Indian/Alaska Native	*
Asian	*
Hawaiian/Pacific Islander	6
Multi-racial, Other	44
Unknown	25
White	153

** = Suppressed due to low counts (less than 6)*

Hospitalization (in-patient) data is not shown due to low numbers

Fire and Smoke Inhalation Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County (Figures 27a and 27b)		
Ethnicity	**Counts of Emergency Visits**	**Counts of Hospitalizations (in-patient)**
Hispanic or Latino	53	8
Not Hispanic or Latino	176	38

Fire and Smoke Inhalation by Geographic Designation per 100,000 population, 2019-2024, Marion County (Figures 28a and 28b)		
Zip code	**Counts of Emergency Visits**	**Rate per 100,000 population of Emergency Visits**
97002	*	*
97020	*	*
97026	*	*
97032	*	*
97071	23	12.0
97137	0	0
97301	53	15.7
97302	28	11.4
97303	16	6.5
97305	31	11.5
97306	23	11.2
97310	0	0
97317	15	9.6
97325	9	21.0
97342	*	*
97346	0	0
97350	*	*
97352	7	17.6
97358	*	*
97362	*	*
97373	0	0

97375	*	*
97381	*	*
97383	*	*
97384	0	0
97385	*	*
97392	*	*

** = Suppressed due to low counts (less than 6)*

Pollen-related Allergy Emergency Visit Counts, 2019-2024, Marion County (Figure 30a and 30c)	
Year	**Count**
2019	137
2020	100
2021	99
2022	90
2023	190
2024	264

Hospitalization (in-patient) data is not shown due to low numbers

Pollen-related Allergy Rates by Sex (Female and Male) per 100,000 Population, 2019-2024, Marion County (Figure 31)	
Sex	**Counts of Emergency Visit**
Female	448
Male	432

Hospitalization (in-patient) data is not shown due to low numbers

Pollen-related Allergy Rates by Age Groups per 100,000 population, 2019-2024, Marion County (Figure 32)	
Age Groups	**Counts of Emergency Visits**
0 to 4	25
5 to 9	36
10 to 14	36
15 to 17	35
18 to 24	133
25 to 44	372
45 to 64	194
65+	44

Hospitalization (in-patient) data is not shown due to low numbers

Pollen-related Allergy Rates by Race per 100,000 population, 2019-2024, Marion County (Figure 33)	
Race	**Counts of Emergency Visits**
African American/Black	21
American Indian/Alaska Native	13
Asian	16

Hawaiian/Pacific Islander	24
Multi-racial, Other	246
Unknown	139
White	421

Hospitalization (in-patient) data is not shown due to low numbers

Pollen-related Allergy Emergency Visit Rates by Ethnicity per 100,000 population, 2019-2024, Marion County (Figure 34)	
Ethnicity	**Counts of Emergency Visits**
Hispanic or Latino	347
Not Hispanic or Latino	445

Hospitalization (in-patient) data is not shown due to low numbers

Pollen-related Allergy by Geographic Designation per 100,000 population, 2019-2024, Marion County (Figures 28a and 28b)		
Zip code	**Counts of Emergency Visits**	**Rate per 100,000 population of Emergency Visits**
97002	*	
97020	*	
97026	17	72.7
97032	12	41.6
97071	79	41.3
97137	*	
97301	180	53.3
97302	70	28.5
97303	107	43.6
97305	161	59.6
97306	58	28.3
97310	0	0
97317	61	38.9
97325	20	46.6
97342	0	0
97346	0	0
97350	0	0
97352	10	25.1
97358	8	49.8
97362	7	29.5
97373	0	0
97375	*	
97381	22	23.8
97383	26	45.1
97384	0	0
97385	11	47.3
97392	11	26.2

** = Suppressed due to low counts (less than 6)*

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