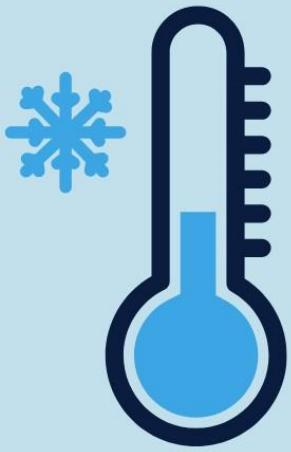
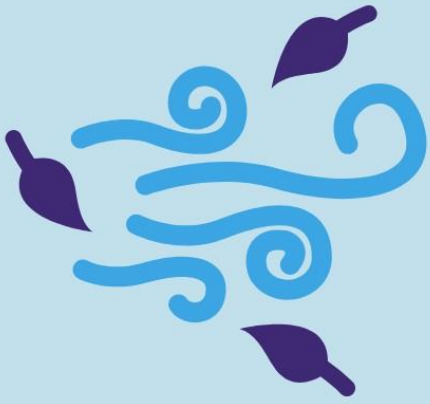
Marion County Cold-Related Illness Surveillance Report 2025

OREGON
Health & Human Services





Purpose of this report

The purpose of this report is to evaluate the association between cold-related illnesses (CRI) emergency department and urgent care visits and hospitalizations due to cold exposure in Marion County. This report explore CRI by population characteristics (age, sex, zip code, and race), and characteristics related to cold exposure. This report is meant to inform of emergency preparedness for 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 are Salem, Keizer, Woodburn, Silverton, and Stayton, home to 66% of the county's 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 cold weather seasonal data during the months of October – April between 2019-2025 for Marion County on high and low temperatures, emergency department and urgent care visits (emergency visits), hospitalizations (in-patient admissions), and deaths due to cold-related illness (CRI). The data was collected from the Oregon Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), the Oregon Health Authority Center for Disease Statistics, United States Census, and the National Oceanic and Atmospheric Administration. Counts and numerical data are shown in the Appendix. All counts and rates are based on the patient's residence and not the location of where they are seen for care.

Definitions

Cold-related illness (CRI): An emergency visit for illnesses associated with cold weather. Definition includes chief complaint terms and diagnosis codes for direct cold exposure causing reduced temperature, hyperthermia, frost bite, and other tissue damage. Secondary harms from cold weather such as carbon monoxide exposure, slips, trips, and falls were not included in this definition. Using this query in combination with cold temperature trends may further assist with surveillance efforts.[2]

Emergency visits: Any emergency department or urgent care clinic visit from a Marion County resident at any Oregon hospital or hospital affiliated clinic.

Hospitalizations: An in-patient designation linked to an emergency visit in Oregon ESSENCE. In-patient visits show that the severity of the emergency visit required more intensive care.[6]

Wind chill temperature: The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it feel much colder. If the temperature is 0°F and the wind is blowing at 15 mph, the wind chill is -19°F. At this wind chill temperature, exposed skin can freeze in 30 minutes.[3]

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Summary of Findings

This report shows the cold weather month season (October through April) statistics between 2019-2025. Cold-related illnesses increase during the winter months.[4]

Between 2019-2024, wind chill temperatures fluctuated in severity. During this time, the number of cold-related illness emergency visits peaked in the 2022-2023 cold weather month season. Hospitalizations (emergency visits that required in-patient care) were highest in the 2022-2023 season and lowest in the 2024-2025 season. Deaths remain low, but have steadily increased between 2019-2023.[1,4,5]

Cold-related illnesses have not affected all people and communities the same. The data shows that some people and communities experience cold-related illness more and are more vulnerable to cold than others. Males had higher rates of emergency visits and hospitalizations than females. Emergency visits and hospitalizations increased with age and were especially severe for residents 65 years old or older. Residents who identified as American Indian/Alaska Native had the highest rates of emergency visits among identified racial groups, while residents who identified as African American/Black had the highest rates of hospitalizations. Residents who did not identify as Hispanic or Latino had significantly higher rates of emergency visits and hospitalizations than residents of Hispanic or Latino identifying residents.[4,8]

Geographically, urban geographies have had significantly higher rates of cold-related illness and hospitalizations than rural geographies. This trend indicates urban areas may have more cold sensitivity (vulnerable people) than rural areas, such as unsheltered or homeless populations, populations with lower incomes who cannot properly heat their home, and more older adults. Zip codes with the highest cold-related illness emergency visit rate include Central Salem (97301), Northeast Salem (97305), and Southeast Salem (97302).[4,8]

Residents who were identified as homeless (also houseless, unsheltered, or unhoused) were disproportionately affected by cold-related illness emergency visits. According to the Oregon Housing and Community Services, an estimated 1,428 Marion County residents (0.4% of the population) were identified homeless. Individuals identified as homeless made up 42.5% of total emergency visits and 20.9% of all hospitalizations. Cold-related illnesses for people identified as homeless increased between 2019-2024, similarly to the overall homelessness rate. For those experiencing homelessness: men, adults 45-64, and urban areas had the highest rates of cold-related illness emergency visits. Overall, the numbers of homelessness were likely undercounted, as a homeless designation for patients may not be standardized for individual emergency department and urgent care clinics.[4,7,8]

This report and its associated indicators provide timely information that can detect trends and groups disproportionately affected by cold related illness 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, inaccurate patient reporting, or incomplete notes, which may influence results.[4]

ESSENCE remains amongst the timeliest surveillance system for tracking resident patient visits for cold related illness in our community. Like any system, it is most effective when used in concert with other systems and indicators that describe cold-related illness and its contributing risk factors.[4]

Average Monthly Temperatures (°F) in Salem, Oregon

What am I reading?

The following figures show the 5-year average monthly temperatures between 1970-2024. A 5-year average is used to show the trend line without massive fluctuations due to seasonal changes.[1]

Figure 1a: 5-Year Average Temperatures (°F), 1970-2024, Salem, Oregon

The following figure shows the 5-year average high and low monthly temperatures in Salem, Oregon between 1970 and 2024. This shows that the overall temperature has increased over time. The data was collected from NOAA weather station at the McNary Field Airport in Salem, Oregon.

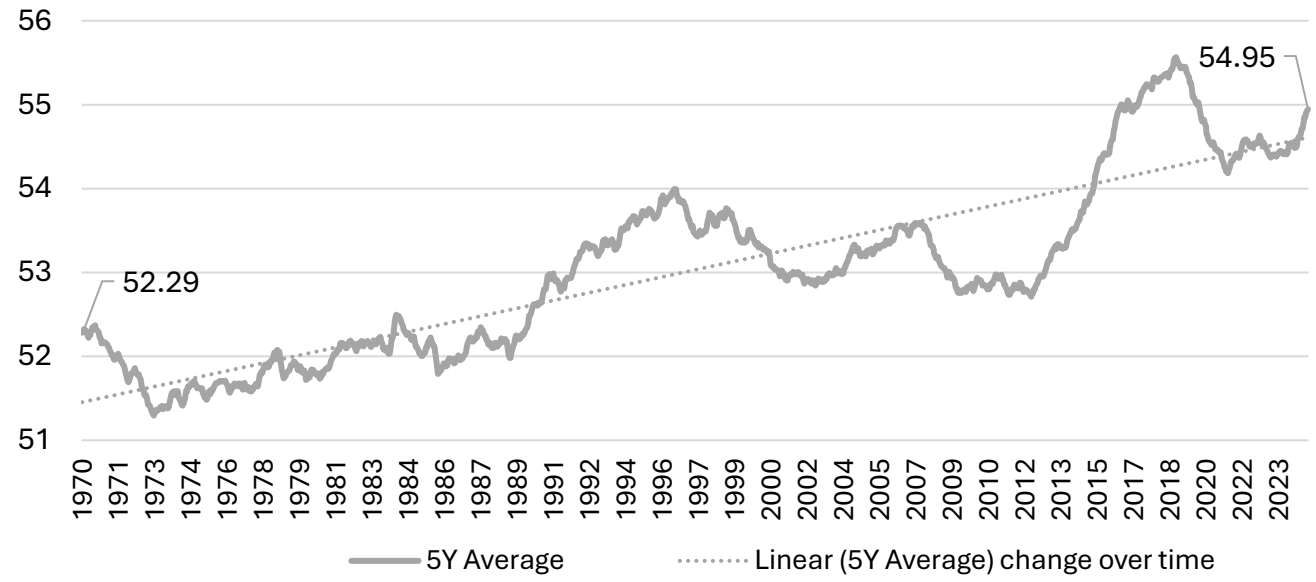
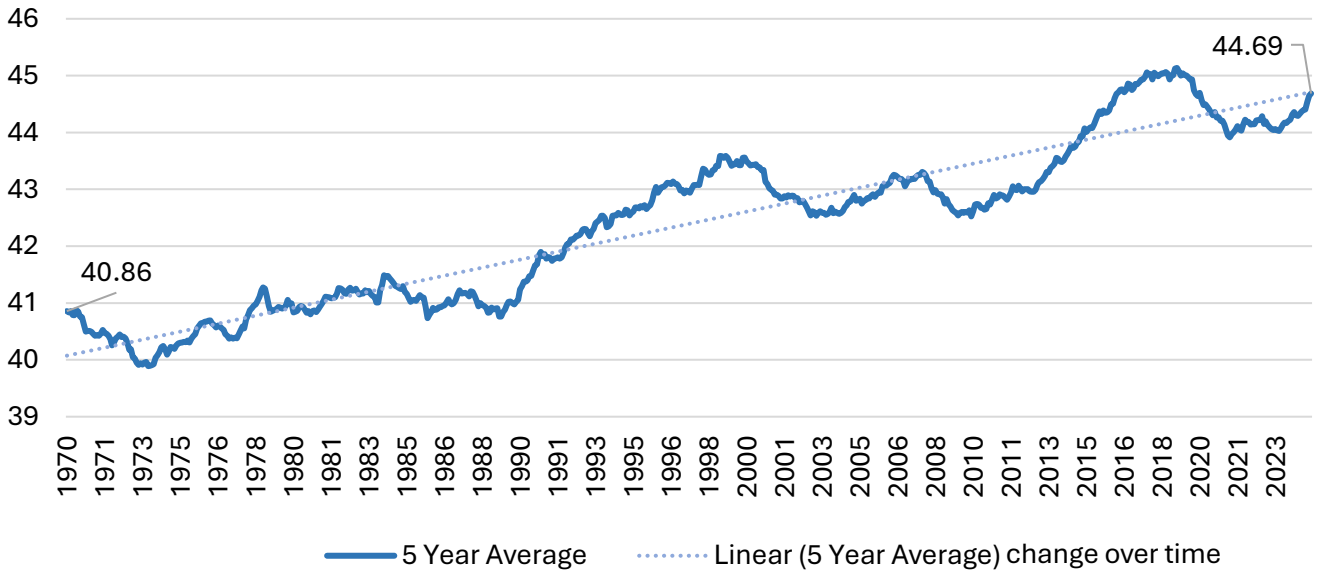


Figure 1b: 5-Year Average Low Temperatures (°F), 1970-2024, Salem, Oregon

The following figure shows the 5-year average monthly low temperatures in Salem, Oregon between 1970-2024. This shows that recorded low temperatures have increased over time. The data was collected from NOAA weather station at the McNary Field Airport in Salem, Oregon.



Wind Chill Days

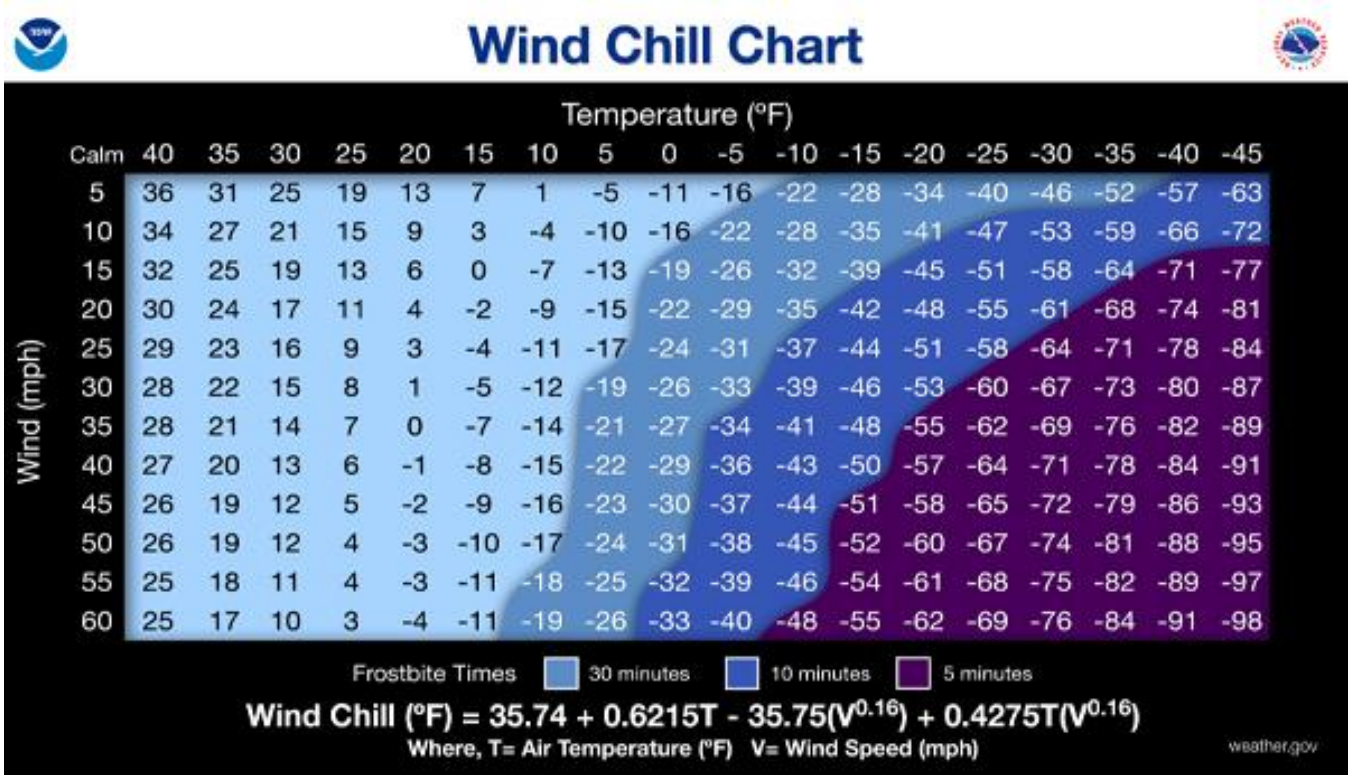
What am I reading?

The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually, the internal body temperature. Therefore, the wind makes it feel much colder. [3]

Wind chill temperature will be used in this report to compare temperature to cold-related illness.

Figure 2: Wind Chill Chart

The figure explains the relationship between the ranges of air temperature and wind. It also shows the time until frostbite can occur when skin is exposed to those temperatures.



Seasonal Temperature Days in Marion County by Temperature Threshold

What am I reading?

The following figures show the identified cold days for Marion County by cold weather seasons (October-April). Each figure observes different wind chill temperatures, which include 40°F, 32°F, 25°F, 20°F, and 10°F or below. The data was collected from NOAA weather station at the McNary Field Airport in Salem, Oregon.[1]

Figure 3a: Wind Chill Temperature Days 40°F or Below, Oct-April, 2019-2025, Salem, OR

The figure shows the number of wind chill temperature days per year during seasonal months (Oct – April) with a wind chill of 40°F or below in Salem, Oregon. In recent years, the number of days with a wind chill of 40°F or below has generally decreased each cold weather season.

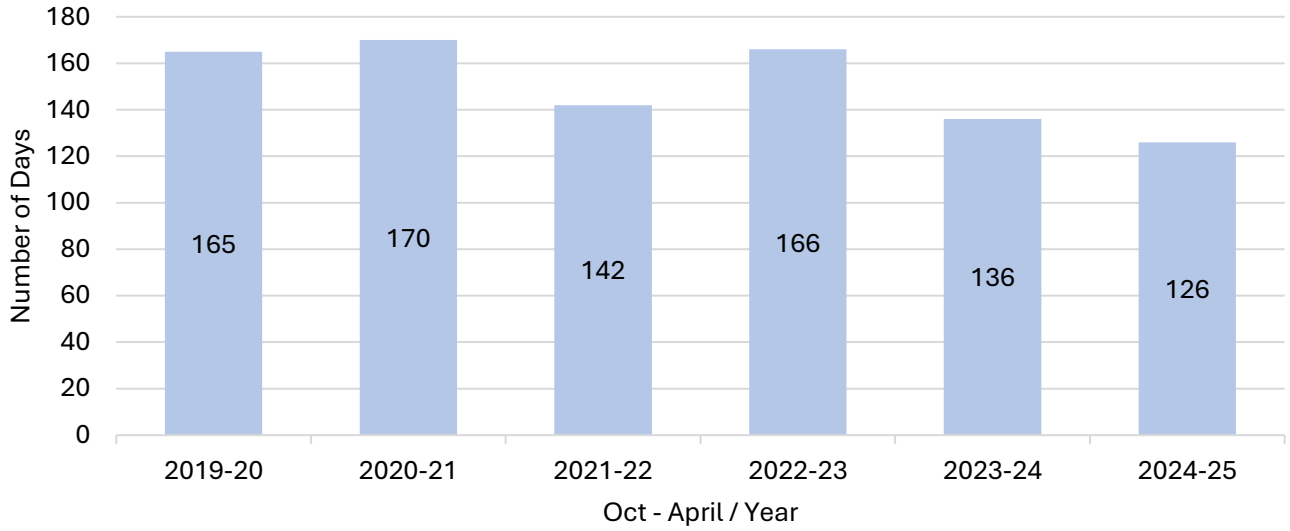


Figure 3b: Wind Chill Temperature Days 32°F or Below, Oct-April, 2019-2025, Salem, OR

The figure shows the number of wind chill temperature days per year during seasonal months (Oct – April) with wind chill of 32°F or below in Salem, Oregon. In recent years, the 2022-2023 season had the most 32°F wind chill days, while 2024-2025 had the least.

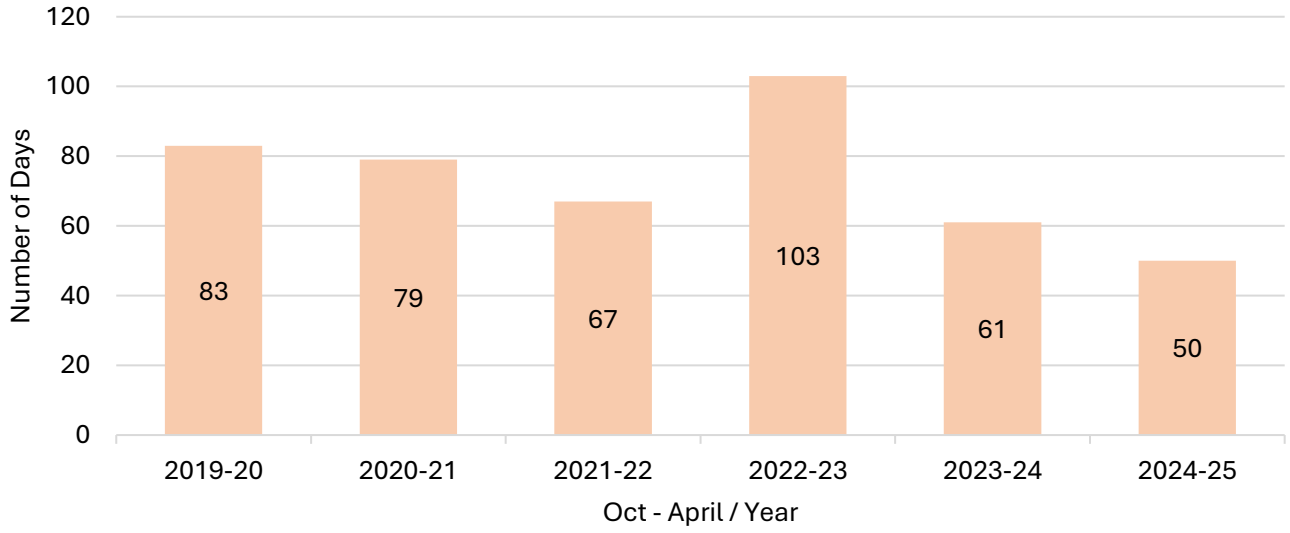


Figure 3c: Wind Chill Temperature Days 25°F or Below, Oct-April, 2019-2025, Salem, OR

The figure shows the number of wind chill temperature days per year during seasonal months (Oct – April) with a wind chill of 25°F or below in Salem, Oregon. In recent years, the 2022-2023 season had the most 25°F wind chill days, while 2023-2024 had the least.

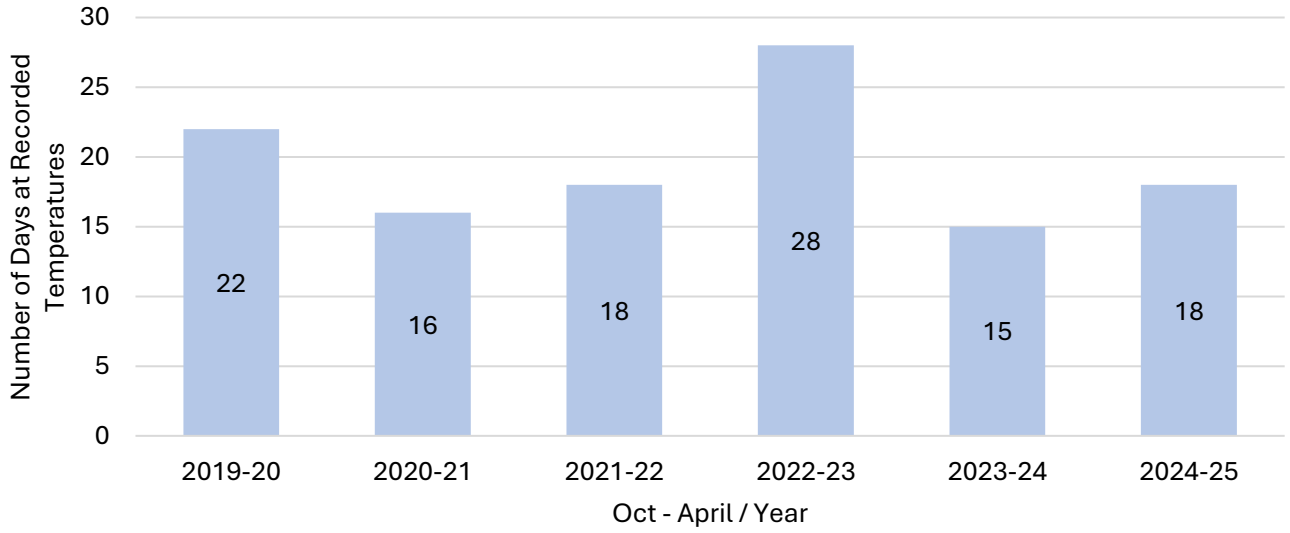


Figure 3d: Wind Chill Temperature Days 20°F or Below, Oct-April, 2019-2025, Salem, Oregon

The figure shows the number of win chill temperature days per year during seasonal months (Oct – April) with wind chill 20°F or below in Salem, Oregon. In recent years, the 2022-2023 season had the most 20°F wind chill days, while 2024-2025 had the least with zero.

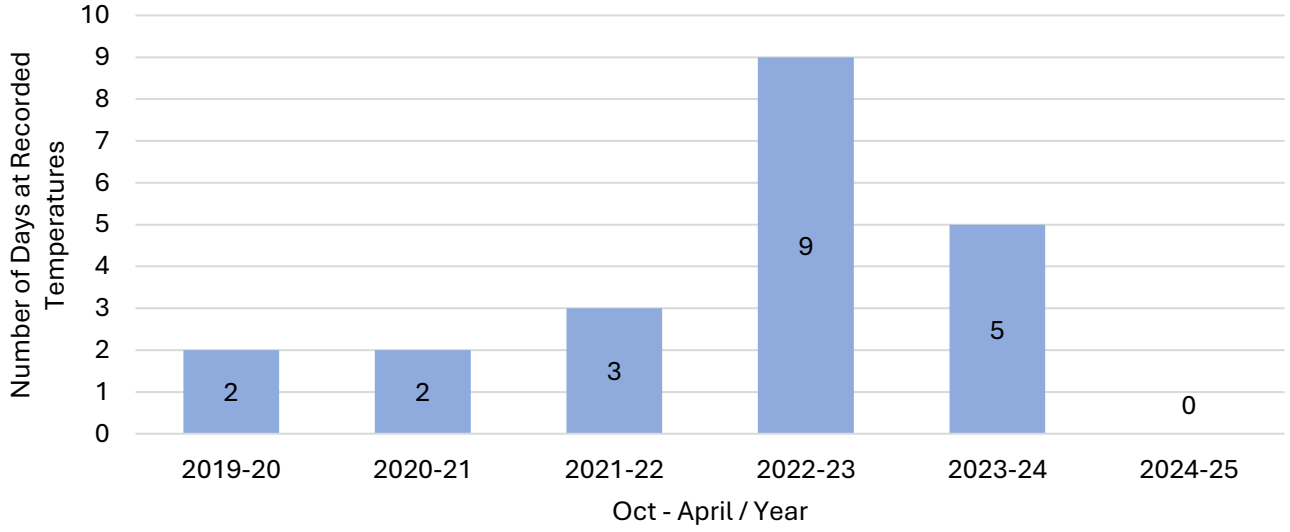


Figure 3e: Wind Chill Temperature Days 10°F or Below, Oct-April, 2019-2025, Salem, Oregon

The figure shows the number of temperature days per year during seasonal months (Oct – April) with wind chill 10°F or below in Salem, Oregon. The only period identified with wind chill temperatures 10°F or below was during October – April 2023 – 2024.

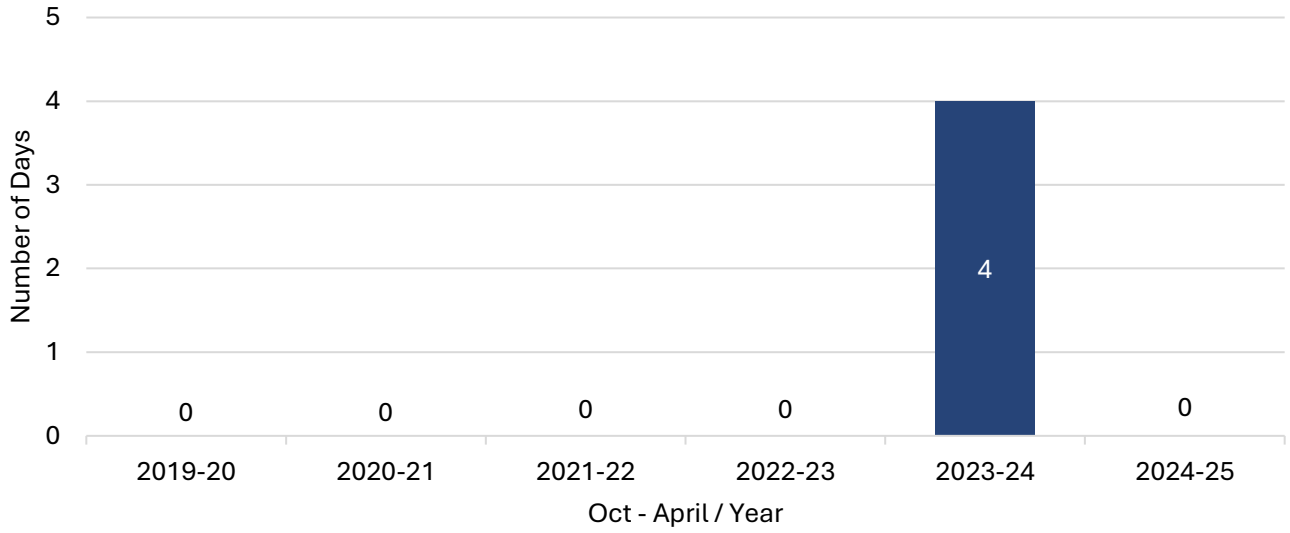
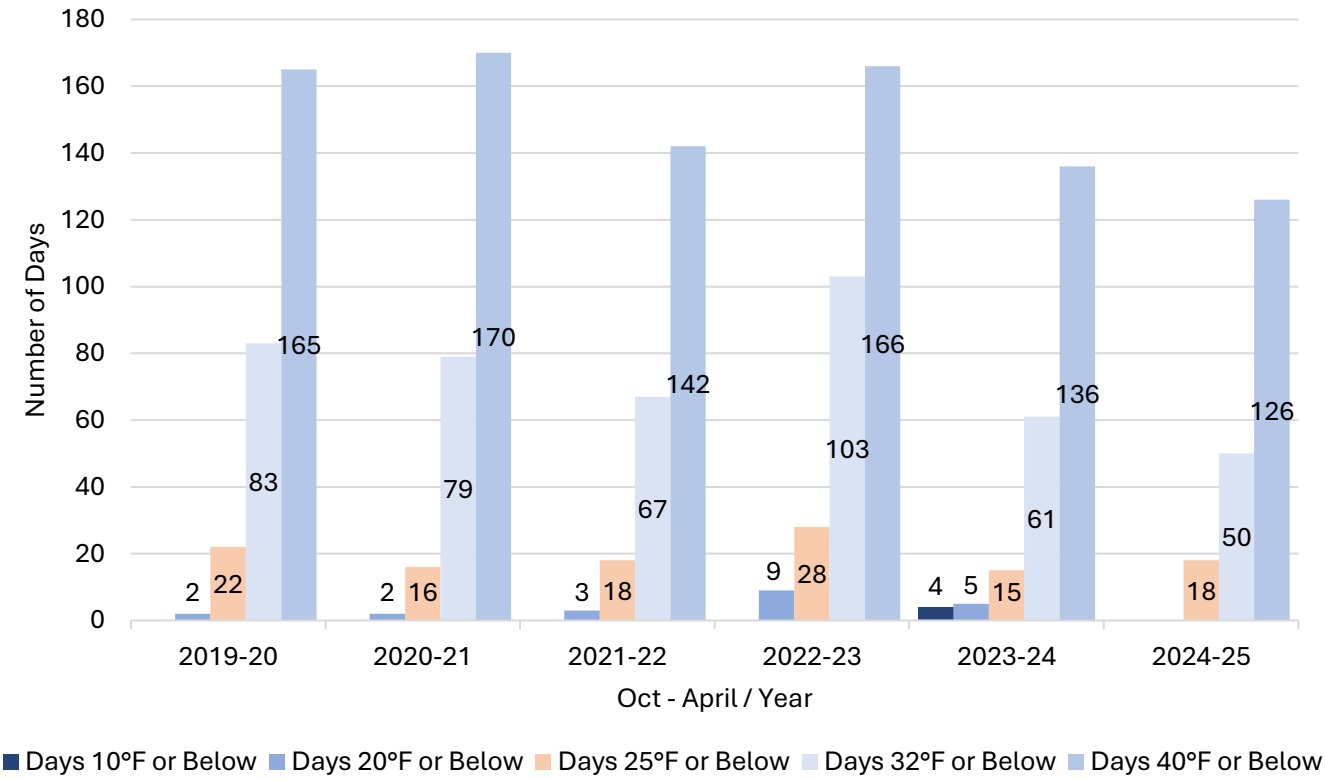


Figure 3f: Wind Chill Temperature Days 40°F, 32°F, 25°F, 20°F, and 10°F or Below, Oct-April, 2019-2025, Salem, Oregon

The figure shows the number of wind chill temperature days per year during seasonal months (Oct – April) with each temperature category measured in Salem, Oregon. Overall, cold temperatures decreased in recent years.



Emergency Department & Urgent Care Visits (Emergency Visits)

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. The figures below demonstrate the surveillance of these trends in Marion County within the seasonal period of October through April.[4,8]

Figure 4a: Cold-Related Illness (CRI) Emergency Visit Counts, Oct-April, 2019-2025, Marion County

The figure shows the number of cold-related illness emergency visits during the cold weather season (October to April) from 2019-2025 in Marion County. In recent years, cold-related illness visits have steadily increased. The 2024-2025 season had a 204% increase from 2019-2020. Overall, the average emergency visits over the past six cold weather seasons was 215.2 per year.

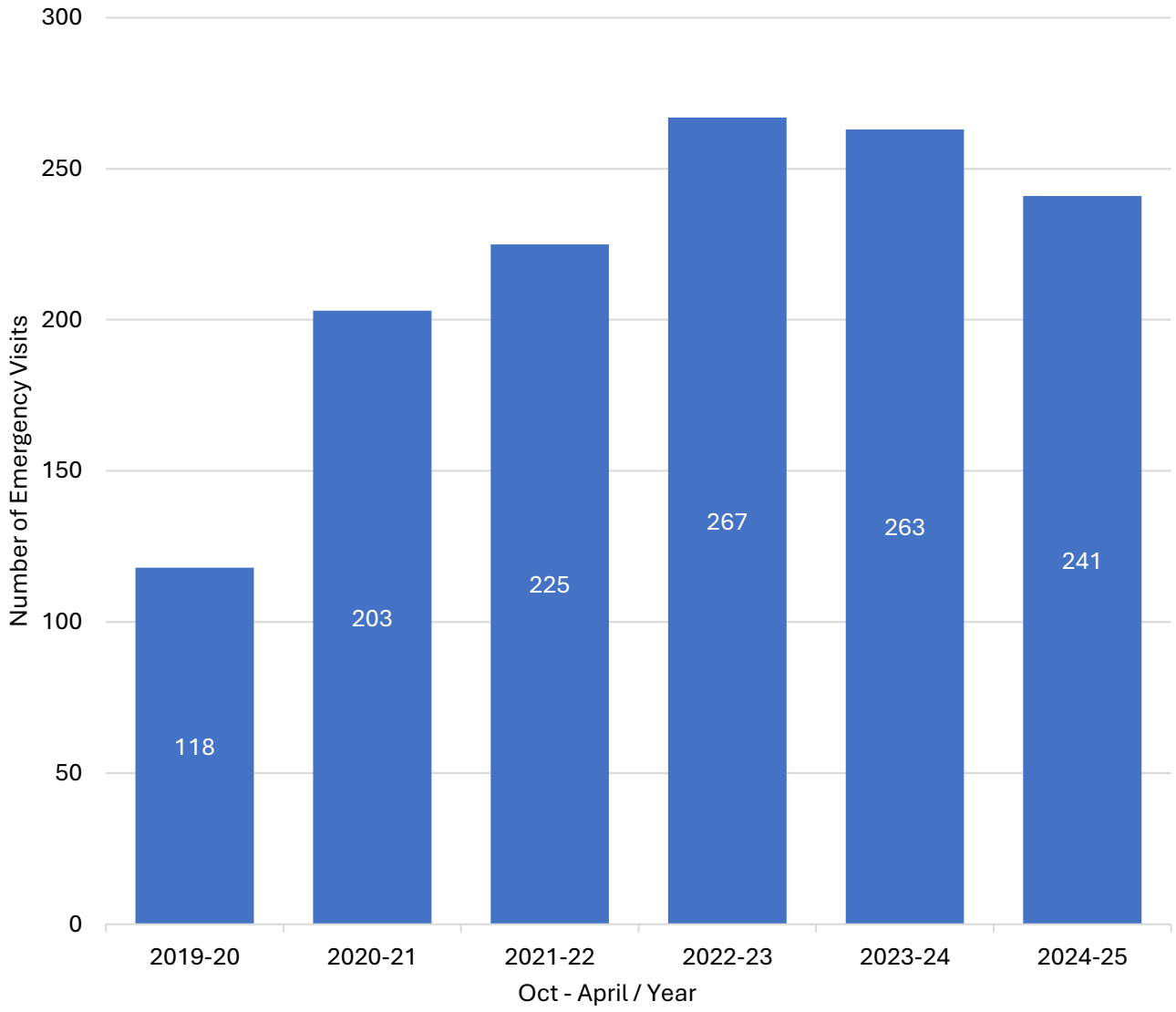


Figure 4b: Cold-Related Illness Emergency Visit Counts and Wind Chill Monthly Average Temperature, Oct-April, 2019-2025, Marion County

The figure shows the monthly emergency visits for cold-related illness and winter storm events during cold weather seasons between October and April 2019 – 2025 in Marion County. While wind chill temperatures do affect cold-related illness, winter storm occurrences had a greater impact on spikes on emergency visits.

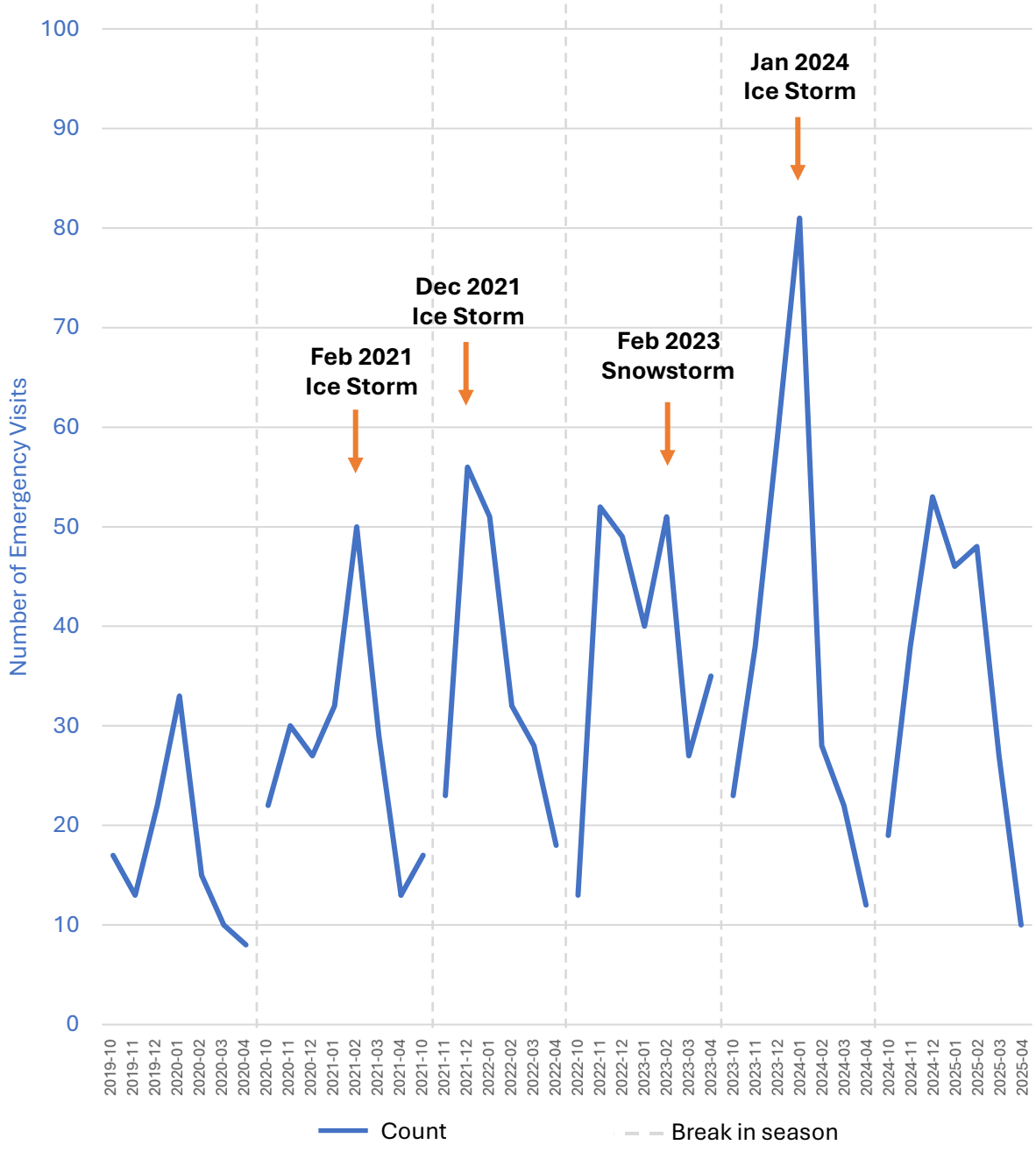
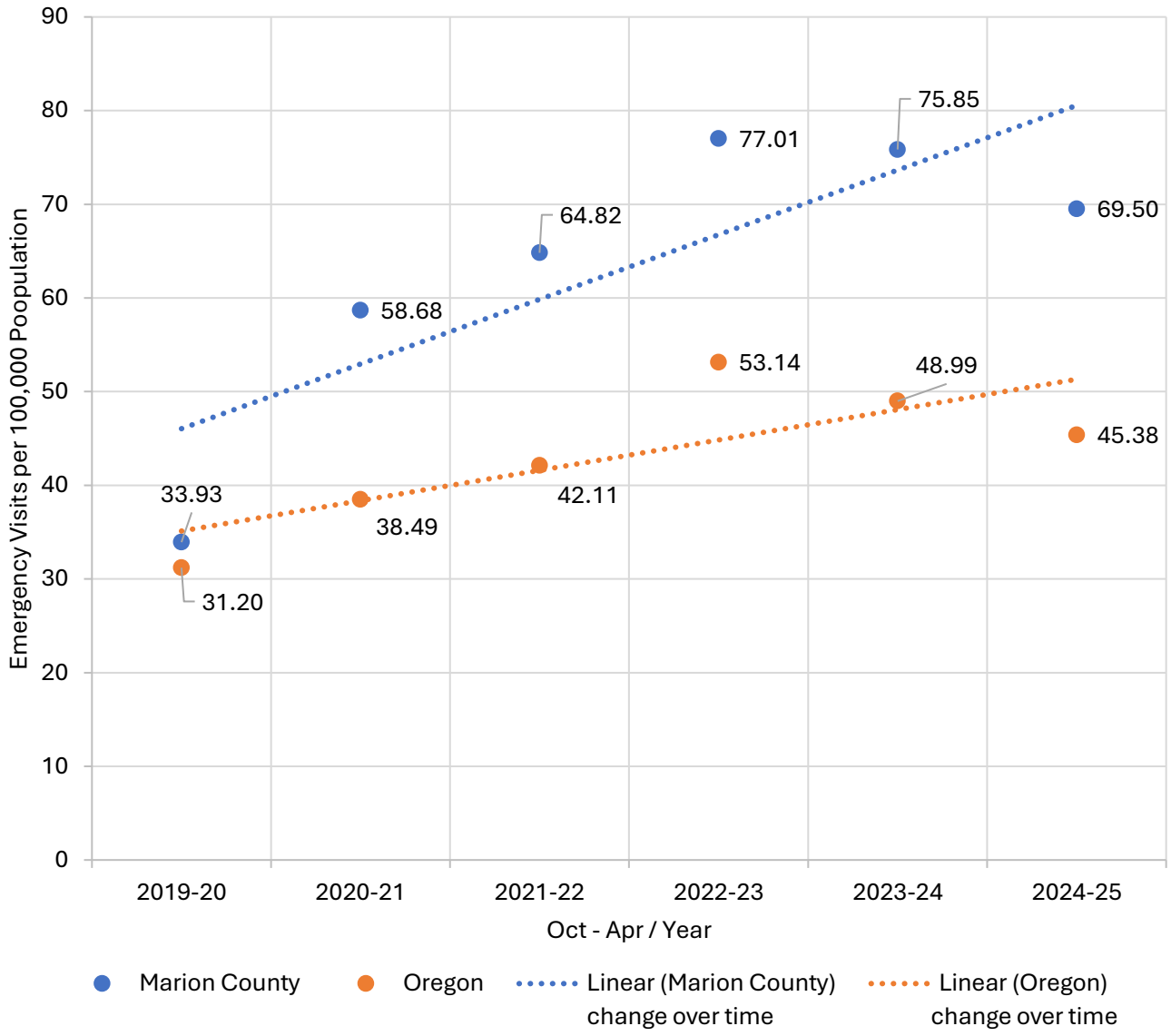


Figure 4c: Cold-Related Illness Emergency Visit Rates per 100,000 Population, Oct-April, 2019-2025, Marion County and Oregon

The figure shows the rate of cold-related illness emergency visits per 100,000 population during cold weather seasons of October and April from 2019- 2025 in Marion County and Oregon. The trend lines show change over time over. Marion County's trend line increased much higher than the state of Oregon.



Hospitalizations (In-patient)

What am I reading?

Hospitalizations are the number of emergency visits that resulted in an in-patient visit caused by Cold-Related Illness in Marion County. The previous 2019 – 2023 report used 24 hours or longer to define hospitalizations. This was changed due to the hospitals recording 24 hours or longer differently. 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. [4,6,8]

Figure 5a: Cold-Related Illness Hospitalization (in-patient) Counts, Oct-April, 2019-2025, Marion County

The figure shows the yearly number of cold-related illness hospitalizations (in-patient) during cold weather seasons of October and April from 2019 – 2025 in Marion County. Between the 2023 – 2024 to 2024 – 2025 season years, there was a decrease of hospitalizations (in-patients) in Marion County.

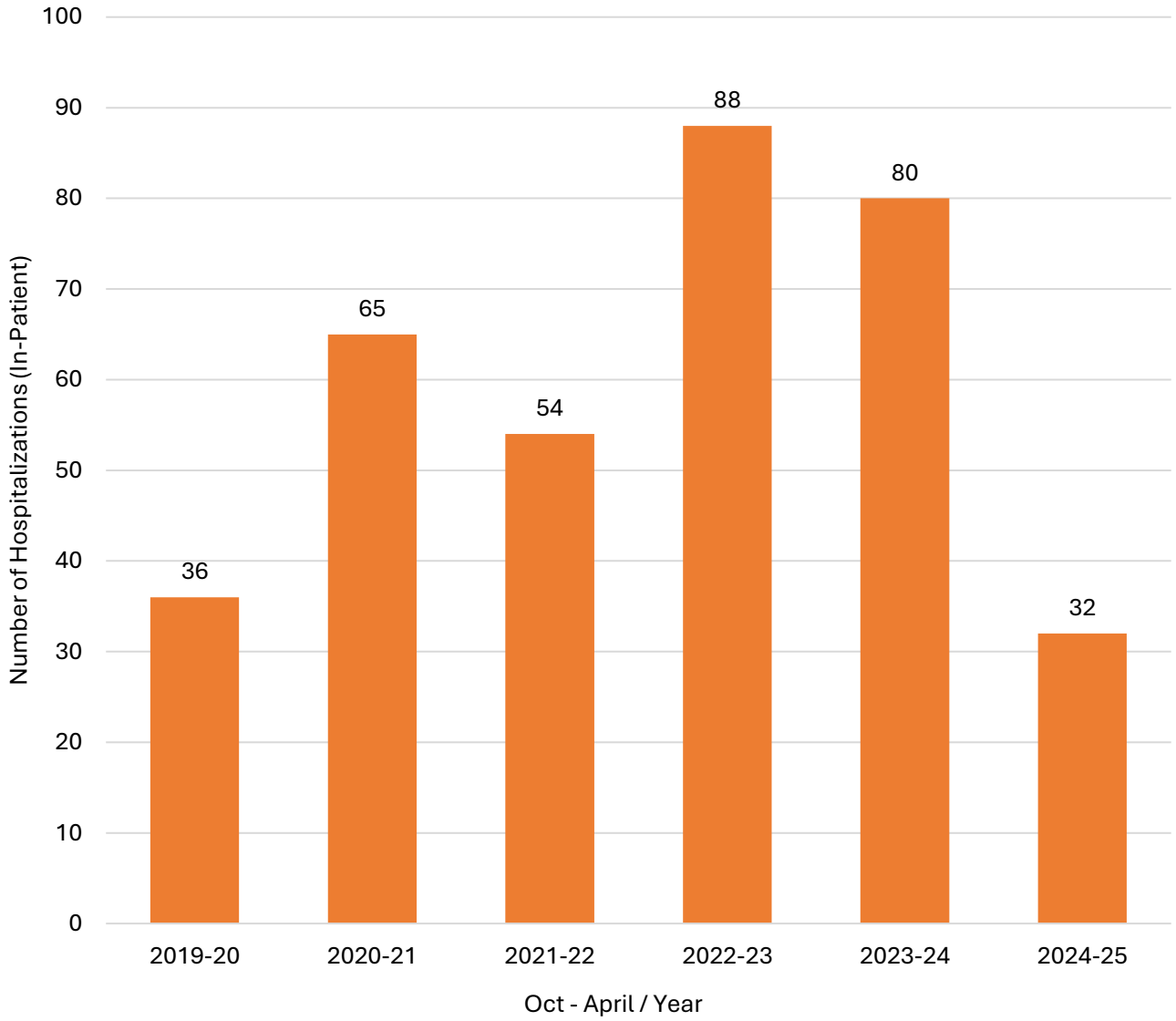
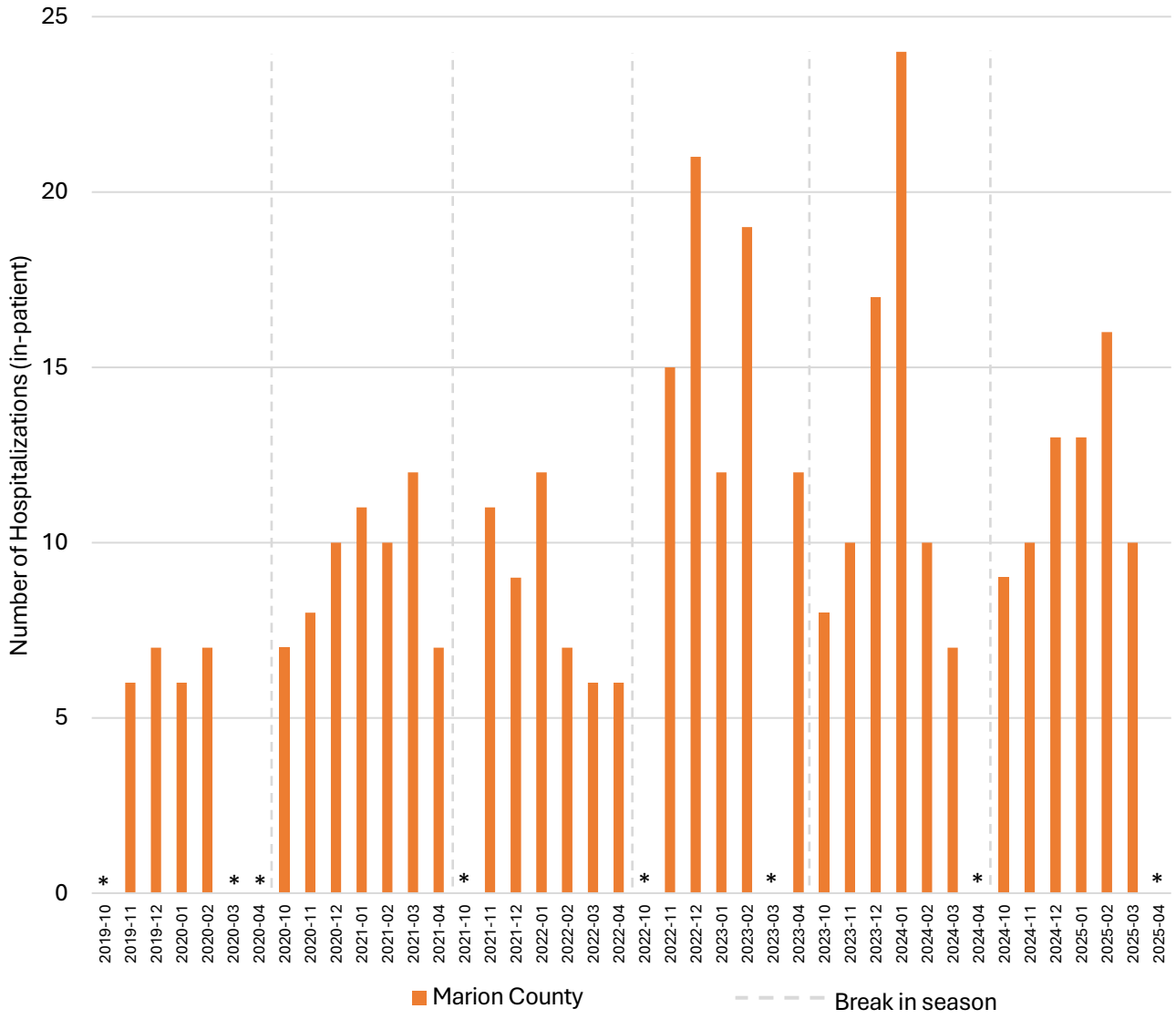


Figure 5b: Monthly Cold-Related Illness Hospitalization (in-patient) Counts, Oct-April, 2019- 2025, Marion County

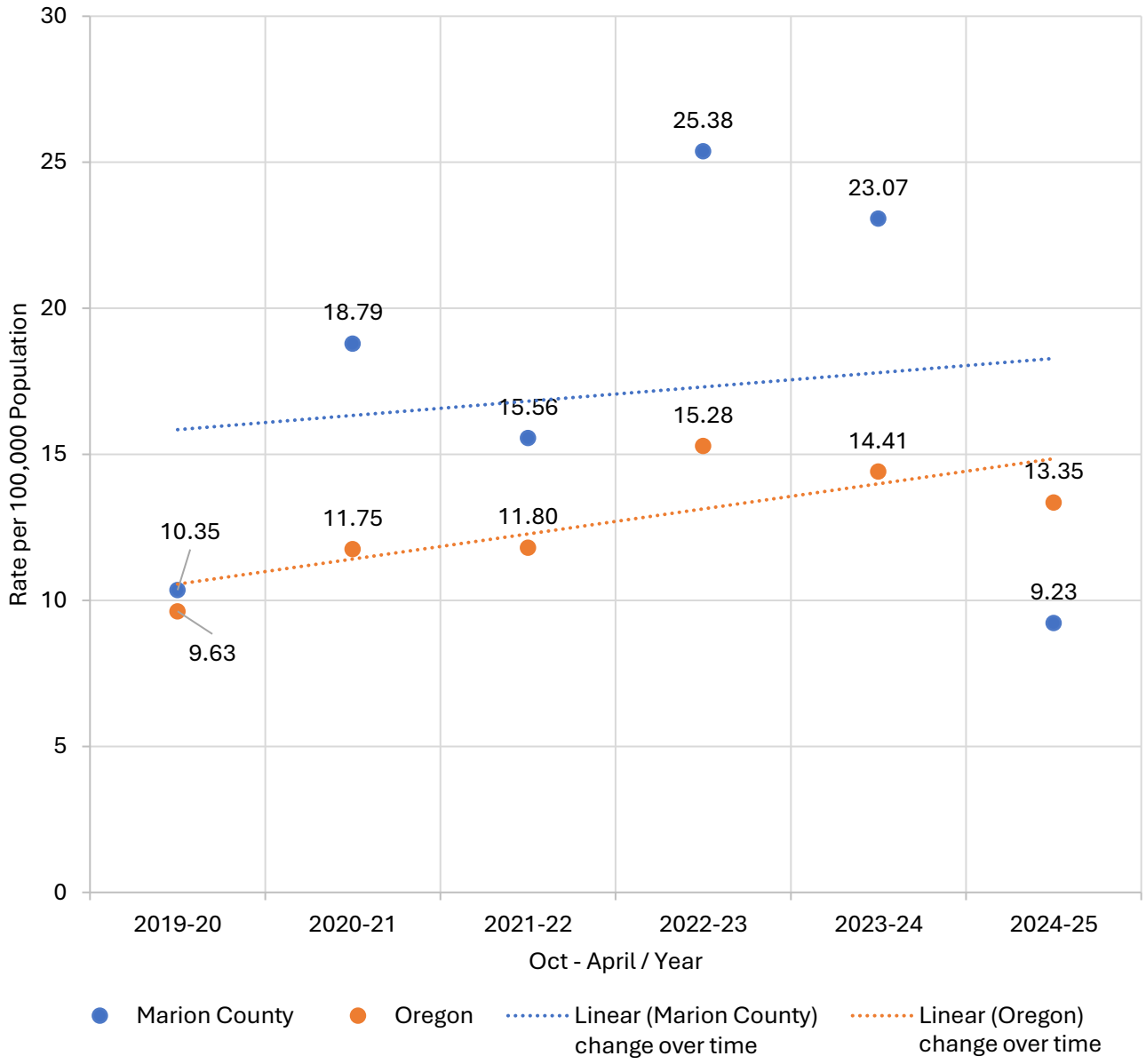
The figure shows the monthly cold-related illness hospitalizations (in-patient) during cold weather seasons of October and April from 2019 – 2025 in Marion County. In the past six years, cold related illnesses peaked during January 2024 with 24 hospitalizations, coinciding with an ice storm and a temperature drop below 10°F wind chill for four straight days.



** = a suppressed value due to a low count of 6 or less*

Figure 5c: Cold-Related Illness Hospitalization (in-patient) Rates per 100,000 Population, Oct-April, 2019- 2025, Marion County and Oregon

The figure shows the cold-related illness hospitalization (in-patient) rate per 100,000 population during cold season months of October to April from 2019 – 2025 in Marion County and Oregon. The best fit trendline shows an increase of hospitalizations from 2019 to 2025 for Marion County and Oregon. Marion County was higher than the state rate each season excluding the 2024-2025 season.



Injury Deaths – Excessive Natural Cold

What am I reading?

The number of recorded deaths due to excessive natural cold exposure that occurred in Marion County and Oregon. These deaths are documented and available to view from the Oregon Health Authority Center for Health Statistics website.[5]

Table 1: Total Deaths and Rates per 100,000 persons from Natural Exposure to Excessive Cold, 2019 – 2023, Marion County and Oregon

From 2019-2023, Marion County had identified12 deaths due to excessive natural cold exposure, with a rate per 100,000 people of 0.69. This shows an increasing trend occurred between 2019-2023. Oregon totaled 119 deaths due to excessive cold exposure, with a rate per 100,000 people of 0.56. Oregon data also showed an increasing trend between 2019-2023. As of the release of this report, data was unavailable for 2024.

	Marion County		Oregon	
Year	**Count**	**Rate per 100,000**	**Count**	**Rate per 100,000**
2019	1	0.29	18	0.43
2020	1	0.29	17	0.40
2021	2	0.58	29	0.68
2022	3	0.87	31	0.73
2023	5	1.44	24	0.57
Total	**12**	**0.69**	**119**	**0.56**

Demographics

What am I reading?

The following sections are different populations of interest in Marion County, Oregon. Each section explains the association between the ESSENCE recorded characteristics (sex, age, race, ethnicity, geographic designation, and zip code, and identified housing status) related to emergency visits and hospitalizations (in-patient) between the cold weather seasons of October to April from 2019 – 2025.[4,8]

By Sex

Figure 6a: Cold-Related Illness Emergency Visit Rates by Sex (Female and Male) per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the rate of cold-related illness emergency visits per 100,000 population for males and females during cold weather seasons of October to April from 2019 – 2025 in Marion County. Males had an emergency visit rate 2.5 times higher than females.

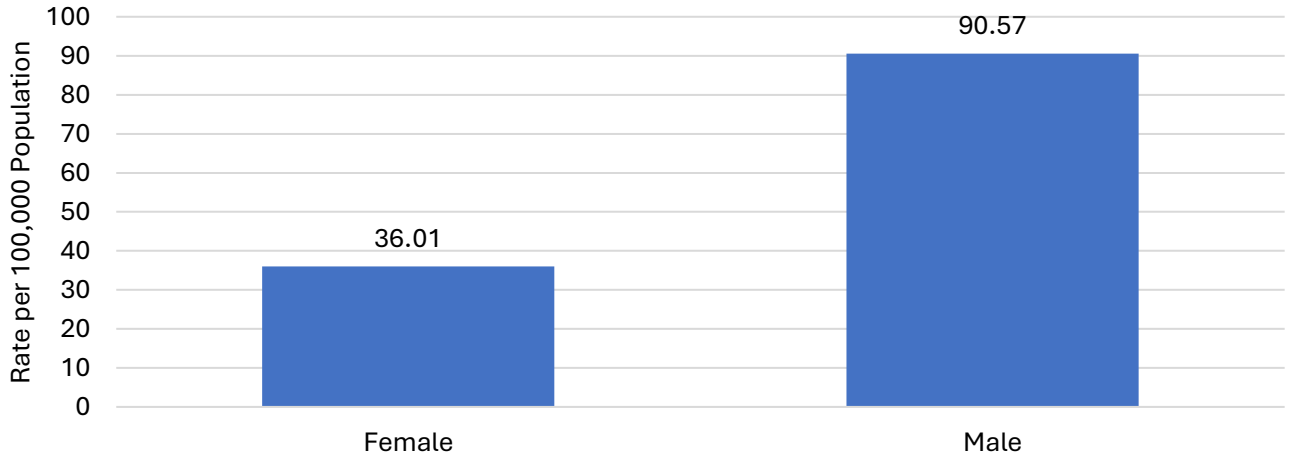
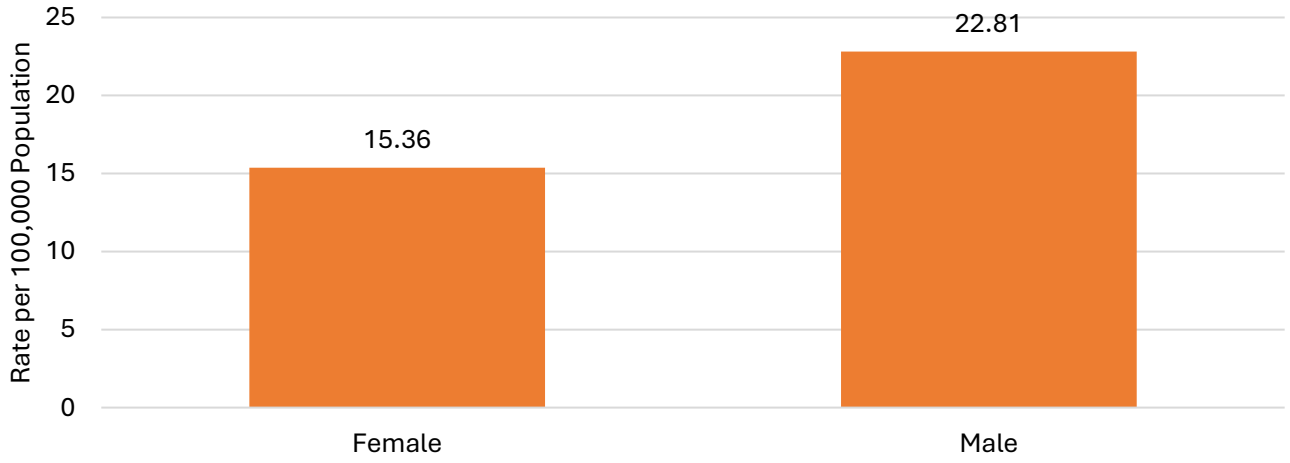


Figure 6b: Cold-Related Illness Hospitalization (In-patient) Rates by Sex (Female and Male) per 100,000 population, Oct-April, 2019-2025, Marion County

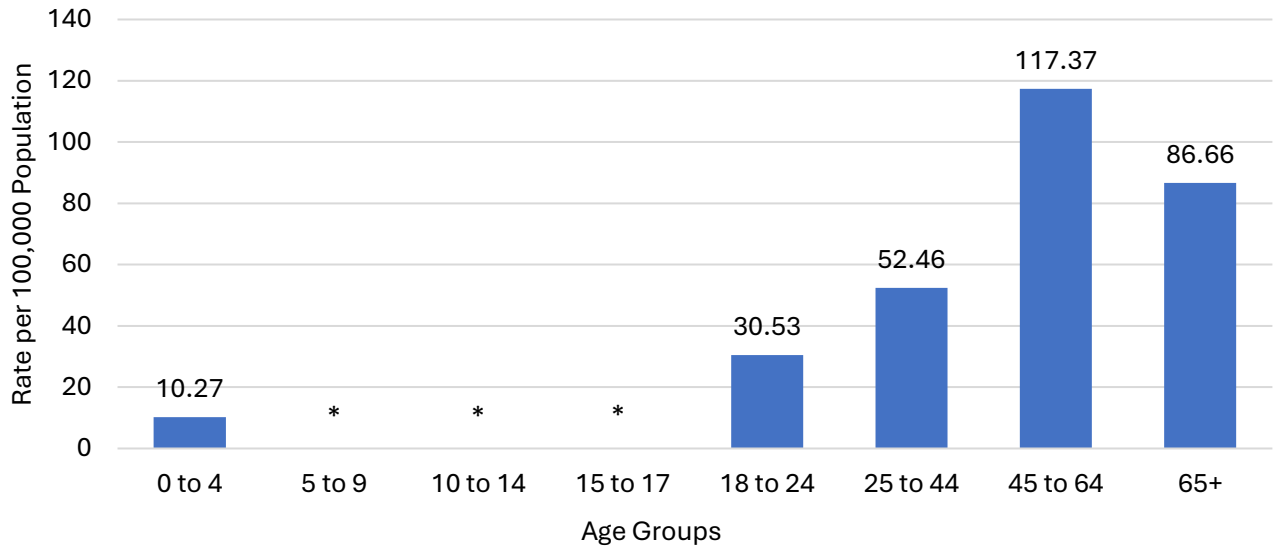
The figure shows the rate of cold-related illness hospitalizations (in-patient) per 100,000 population by sex group (female and male) during cold weather months of October to April from 2019 – 2025 in Marion County. Males had a hospitalization rate 1.5 times higher than females.



By Age

Figure 7a: Cold-Related Illness Emergency Visit Rates by Age Groups per 100,000 population, Oct-April 2019- 2025, Marion County

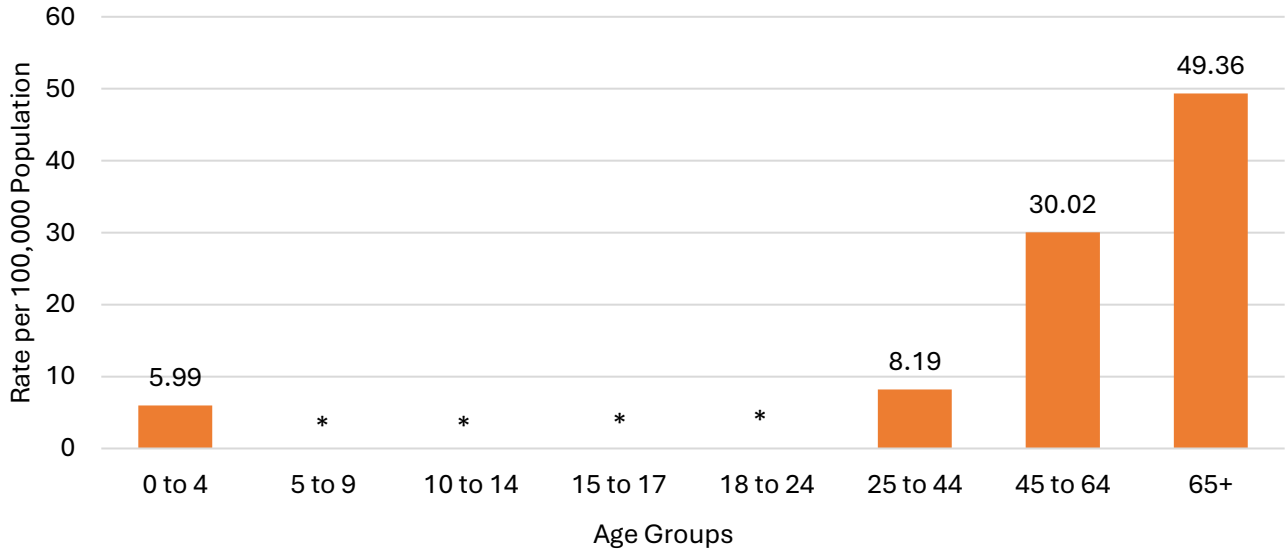
The figure shows the rate of cold-related illness emergency visits per 100,000 population by age groups during cold weather months of October to April from 2019 – 2025 in Marion County. Cold-related illness emergency visits increased with age. The 45 to 65 age group have the highest rate of emergency visits compared to other age groups.



** = a suppressed value due to a low category count of 6 or less*

Figure 7b: Cold-Related Illness Hospitalization (In-patient) Rates per 100,000 population by Age Groups, Oct-April, 2019 - 2025, Marion County

The figure shows the rate of cold-related illness hospitalizations (in-patient) per 100,000 population by age group during cold weather months of October to April from 2019 – 2025 in Marion County. Cold-related illness hospitalizations increased with age. The 65+ age group had the highest rate of hospitalizations compared to other age groups.



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By Race

Figure 8a: Cold-Related Illness Emergency Visit Rates by Race per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness rate per 100,000 population for emergency visits by racial group during cold weather months of October to April from 2019 – 2025 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as American Indian/Alaska Native and African American/Black had the highest emergency visit rate among all racial groups.

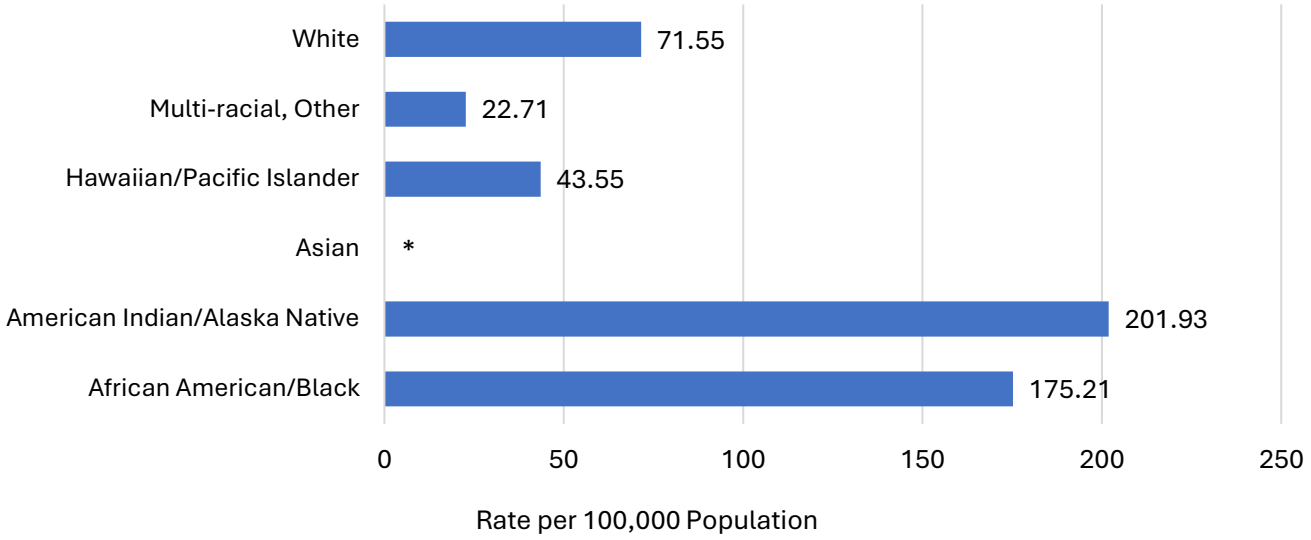

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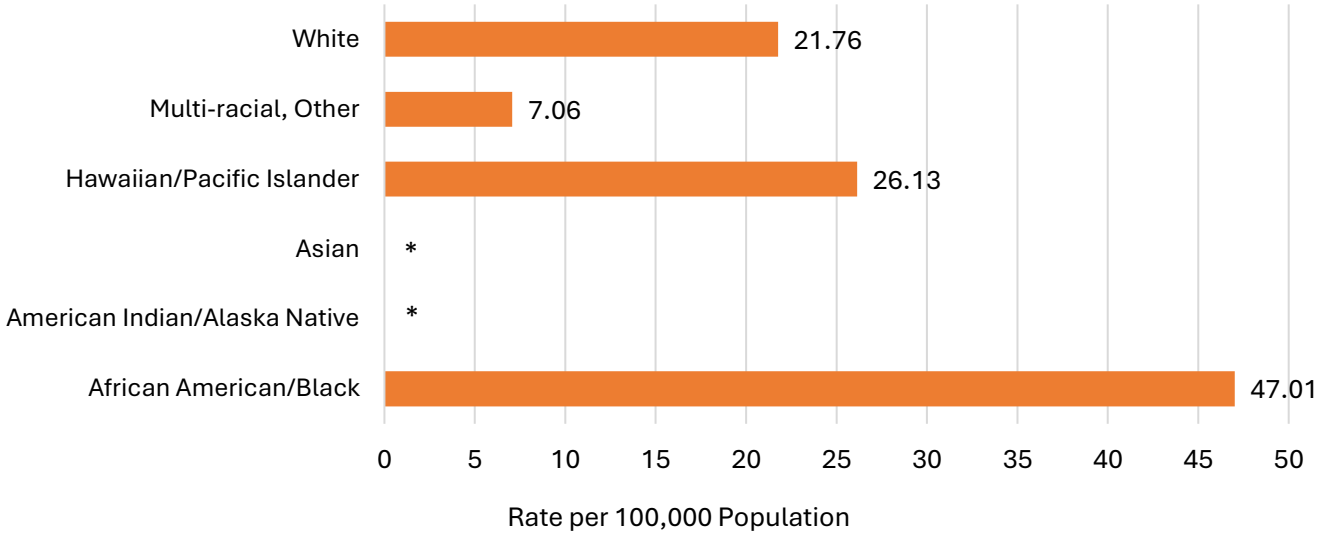
Figure 8b: Cold-Related Illness Hospitalization (In-patient) Rates by Race per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness rate hospitalization (-in-patient) rate per 100,000 population by racial group during cold weather months of October to April from 2019 – 2025 in Marion County. Racial groups in this report match those used in the Oregon ESSENCE system. People who identified as African American/Black had the highest hospitalization rate among all racial groups.



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By Ethnicity

Figure 9a: Cold-Related Illness Emergency Visit Rates by Ethnicity per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness emergency visit rate per 100,000 population by ethnicity during cold weather months of October to April from 2019 – 2025 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 3.2 times higher than people who identified as "Hispanic or Latino."

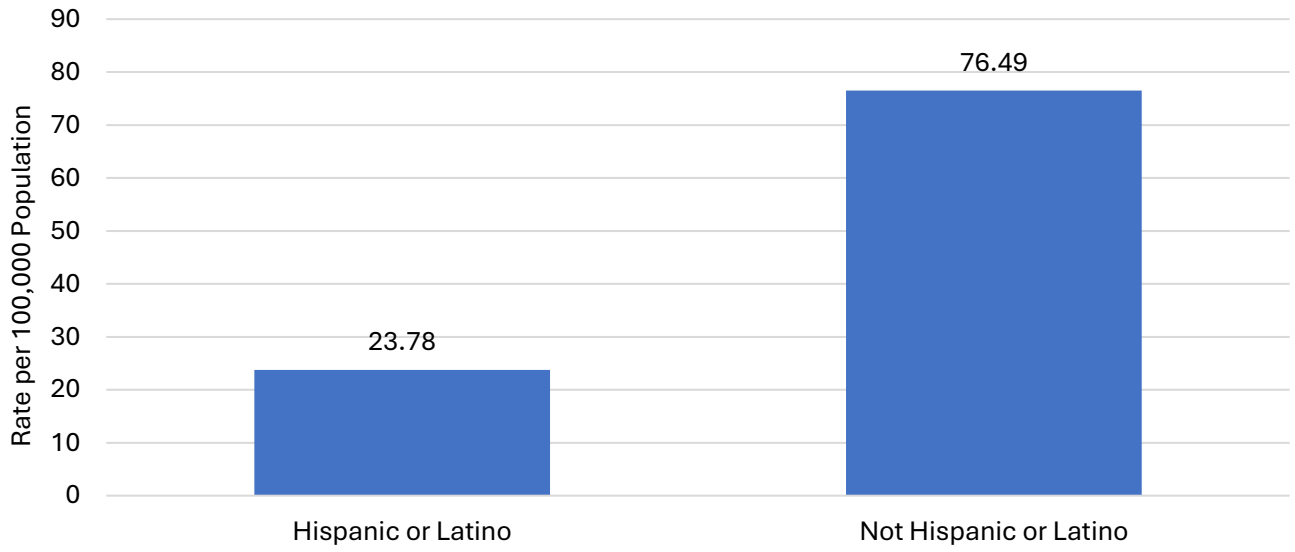
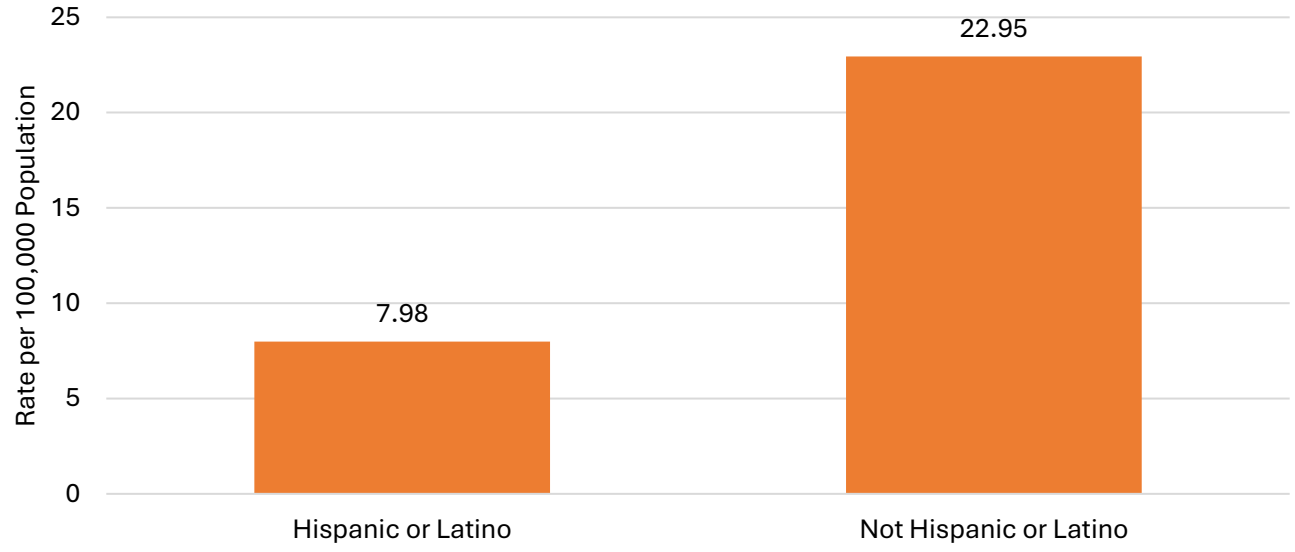


Figure 9b: Cold-Related Illness Hospitalization (In-patient) Rates by Ethnicity per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness hospitalizations (in-patient) rate per 100,000 population by ethnicity during cold weather months of October to April from 2019 – 2025 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 a hospitalizations rate 2.9 times higher than people who identified "Hispanic or Latino."



Geographic Designation – Rural & Urban Communities

Figure 10a: Cold-Related Illness Emergency Visits Rates by Geographic Designation per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness emergency visit rate per 100,000 population by the type of geographic residence (rural or urban) during cold weather months of October to April from 2019 – 2025 in Marion County. 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. Urban designated areas had an emergency visit rate 3.6 times higher than rural designated areas.

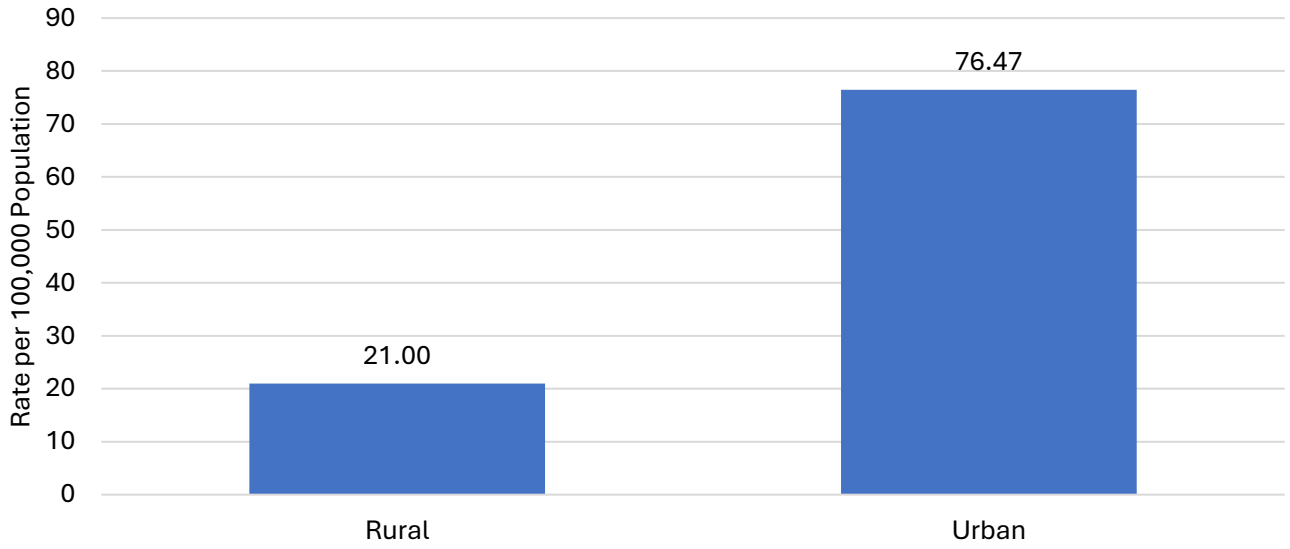
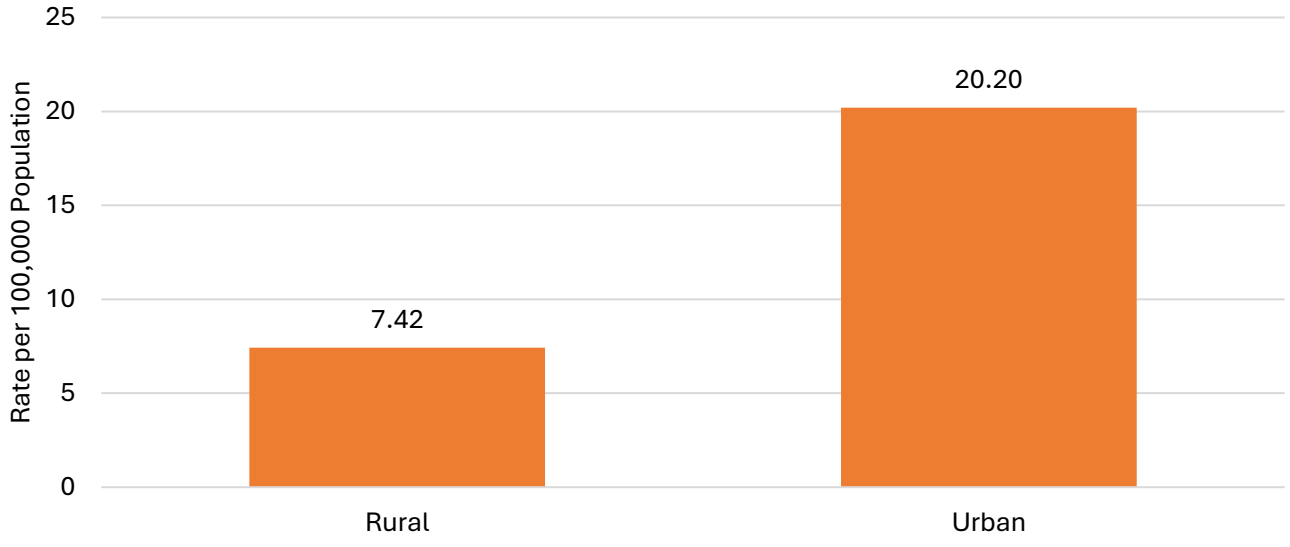


Figure 10b: Cold-Related Illness Hospitalization (In-patient) Rates by Geographic Designation per 100,000 population, Oct-April, 2019-2025, Marion County

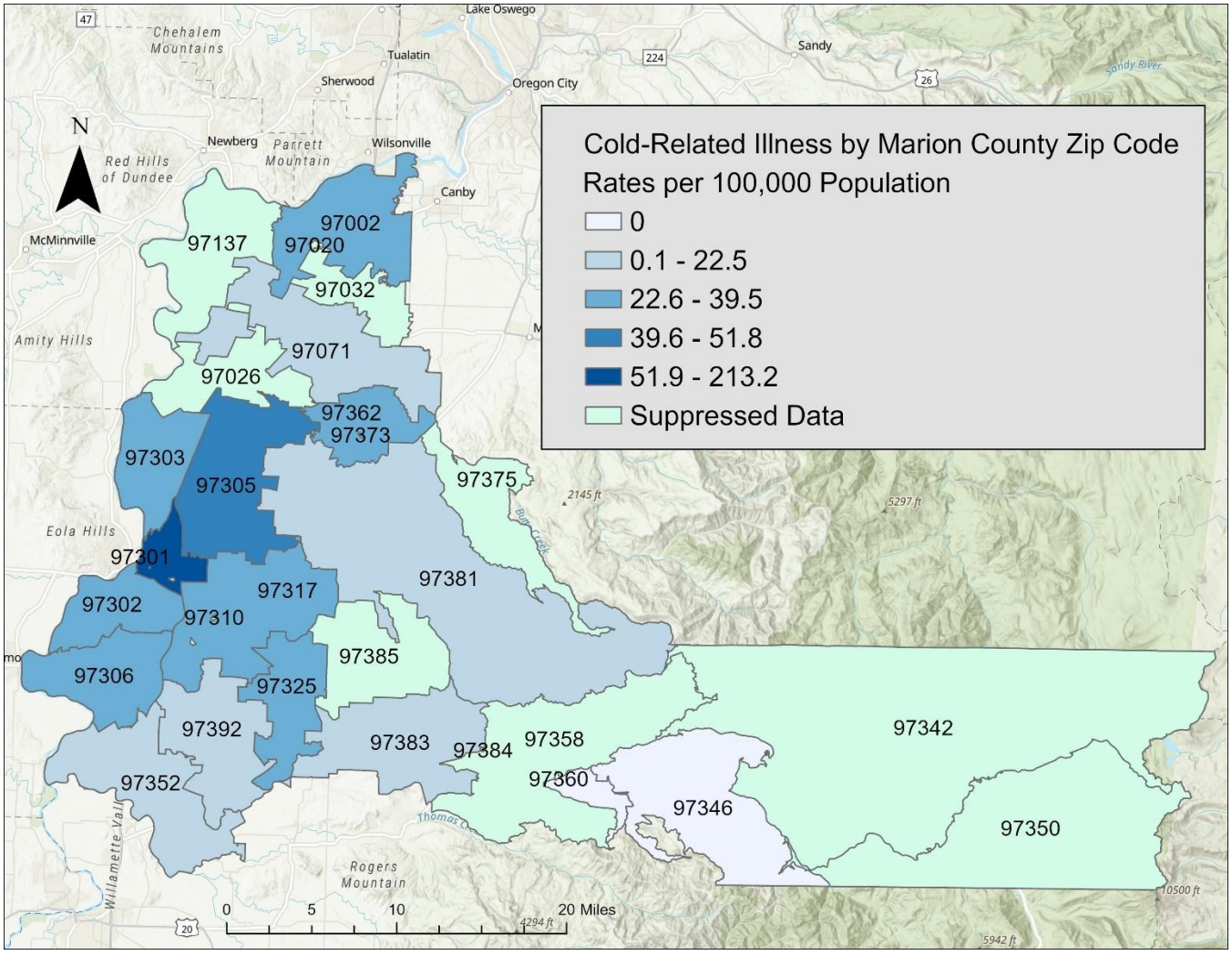
The figure shows the cold-related illness hospitalizations (in-patient) rate per 100,000 population by the type of geographic residence (rural or urban) during cold weather months of October to April from 2019 – 2025 in Marion County. Rural areas are defined as locations situated ten or more miles from the center point (centroid) of a population center with at least 40,000 residents. Urban designated areas had a hospitalization rate 2.7 times higher than rural designated areas.



Zip Code – Spatial Analysis

Figure 11: Cold-Related Illness Emergency Visit Rates by Zip Code per 100,000 population, Oct-April, 2019-2025, Marion County

The map below shows the cold-related illness emergency visit rate per 100,000 population by zip code during cold weather months of October to April from 2019 – 2025 in Marion County. These are expressed with different colors to represent different values. The zip codes with the highest rates include 97301 and 97305.[4,8]



Identified Homeless & Unsheltered Persons – Housing Status

What am I reading?

The following sections describe the associations of emergency visits and hospitalizations (in-patient) due to cold-related illness and people identified as homeless and unsheltered during cold weather months of October to April from 2019 – 2025 in Marion County. An individual is identified as homeless if they were described as homeless, houseless, unhoused, or unsheltered in the triage notes, chief complaints, discharge description, and/or provider description from Oregon ESSENCE.[4,7,8]

Figure 12a: Number of Cold-Related Illness Emergency Visits among People Identified as Homeless during cold weather months, Oct-April, 2019-2025, Marion County

The figure shows the yearly number of cold-related illness emergency visits among groups identified as homeless during seasonal cold months of October to April from 2019 – 2025 in Marion County. The number of cold-related illness visits among people identified as homeless has increased and remained consistent around 100-110 per year in recent seasons, matching a similar trend among all resident numbers.

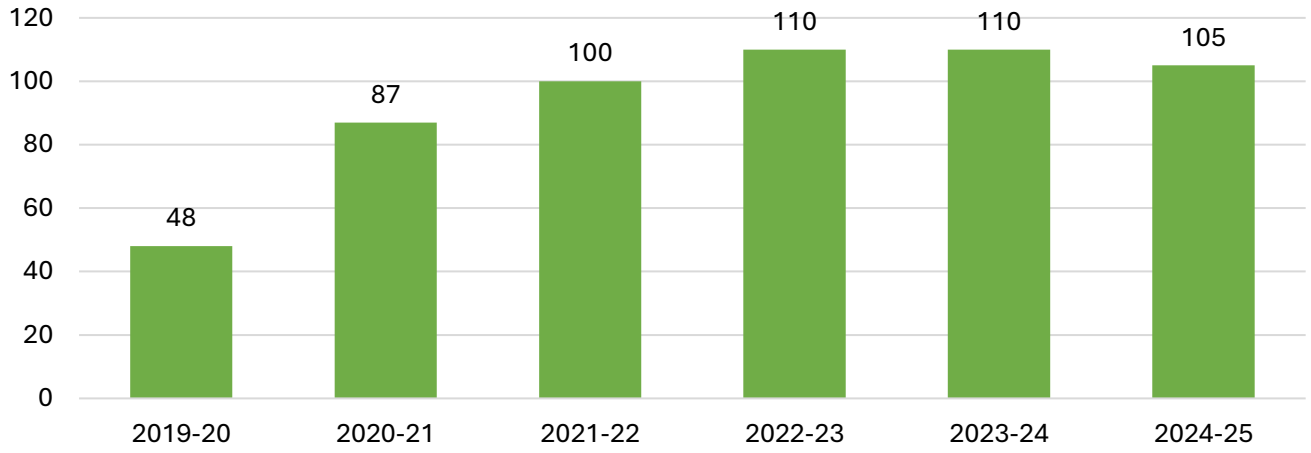


Figure 12b: Percentage of Cold-Related Illness Emergency Visits by Identified Housing Status, Oct-April, 2019-2025, Marion County

The figure shows the percentage of cold-related illness emergency visits by identified housing status during cold weather months of October to April from 2019 – 2025. 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 very high.

In total, 560 cold-related illness emergency visits occurred among people identified as homeless during cold weather months of October to April from 2019 – 2025, compared to 757 people not identified as homeless.

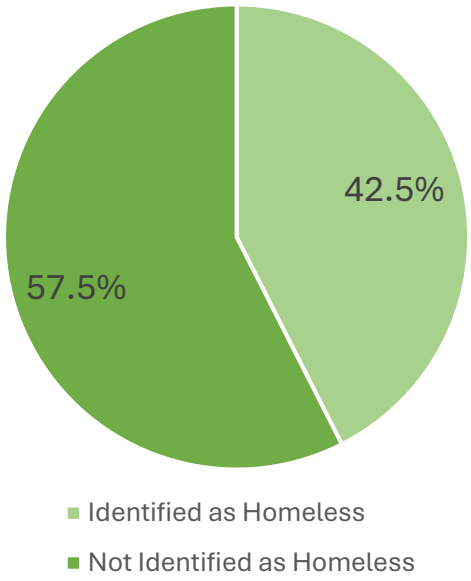
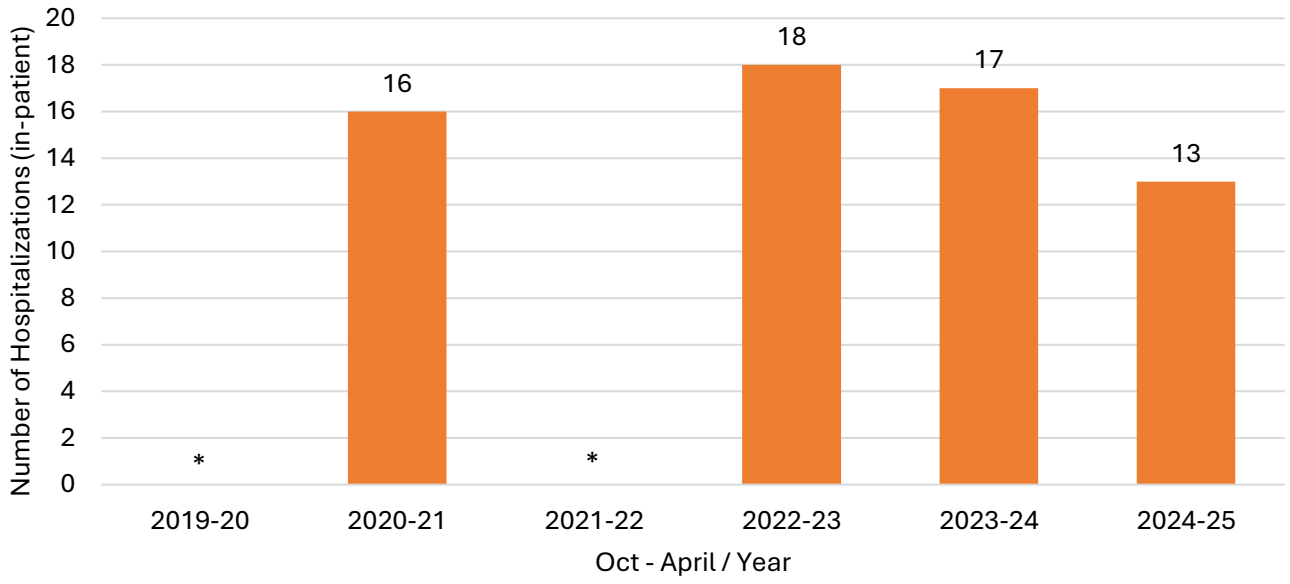


Figure 12c: Cold-Related Illness Hospitalization (In-patient) Counts among People Identified as Homeless, Oct-April, 2019-2025, Marion County

The figure shows the yearly number of cold-related illness hospitalizations (in-patient) among people identified as homeless during cold weather months of October to April from 2019 – 2025 in Marion County. While the trend of hospitalizations increased over the past six seasons for people identified as homeless, hospitalizations have declined since their peak in the 2022-2023 season.

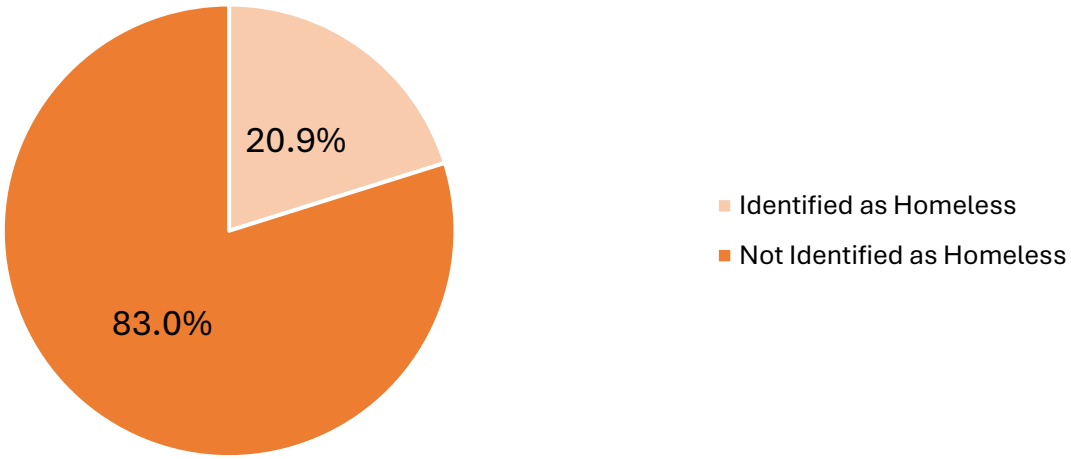


** = a suppressed value due to a low category count of 6 or less, and/or secondary suppression to protect confidentiality*

Figure 12d: Percentage of Cold-Related Illness Hospitalization (In-patient) Rates by Identified Housing Status, Oct-April, 2019-2025, Marion County

The figure shows the seasonal number of cold-related illness hospitalizations (in-patient) by identified housing status during cold weather months of October to April from 2019- 2025 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 is very high.

In total, 80 cold-related illness hospitalizations occurred among people identified as homeless during cold weather months of October to April from 2019 – 2025, compared to 317 people not identified as homeless.



Identified Housing Status - Demographics

What are you reading?

The following sections show demographic information by housing status in Marion County, Oregon. Each section shows the association between the characteristics in the identified housing status with emergency visits and hospitalizations (in-patient) during the cold weather season of October to April from 2019 – 2025. The indicators to identify an individual as homeless and/or unsheltered are recorded from triage notes, chief complaints, discharge description, and/or provider description from Oregon ESSENCE.[4,8]

By Housing Status and Sex

Figure 13a: Cold-Related Illness Emergency Visit Rates by Sex (Female and Male) and Identified Housing Status per 100,000 population, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness emergency visit rate per 100,000 population by the patients' identified housing status and sex during cold season months of October to April from 2019 – 2025 in Marion County. Males had a higher proportion of emergency visits among people identified as homeless compared to females.

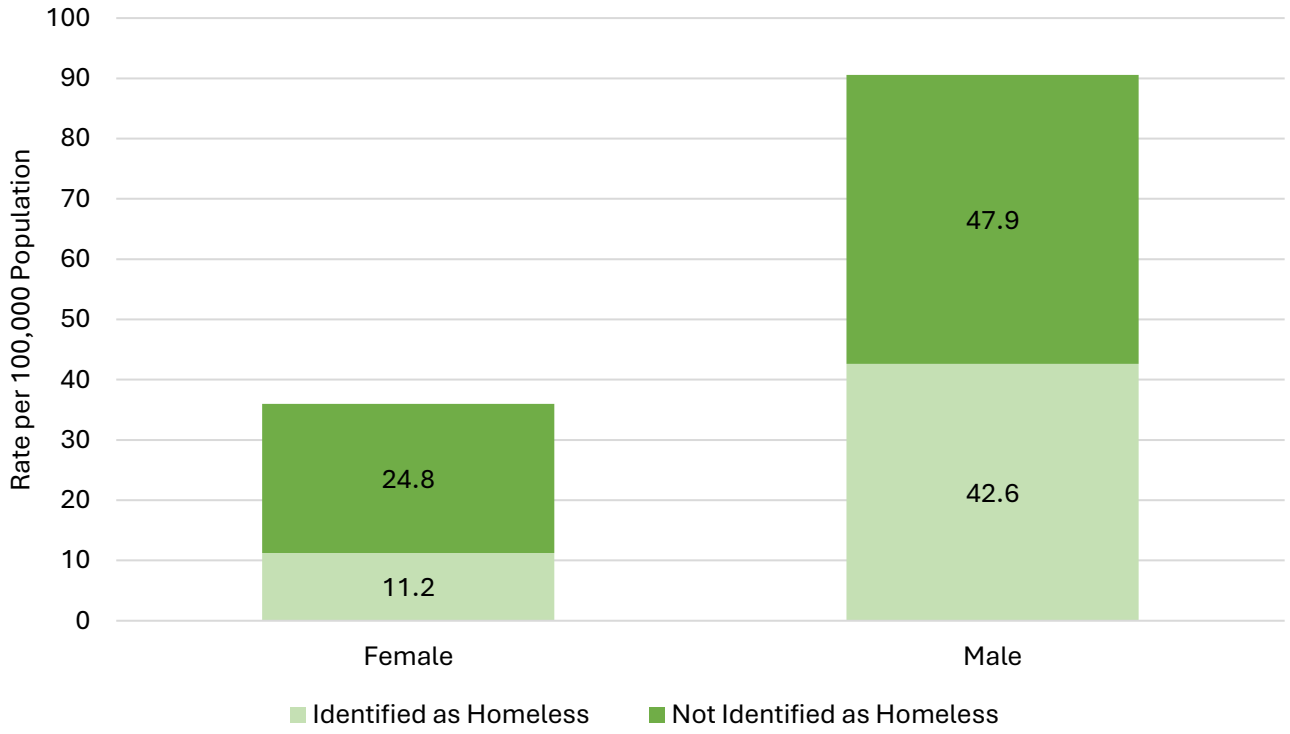
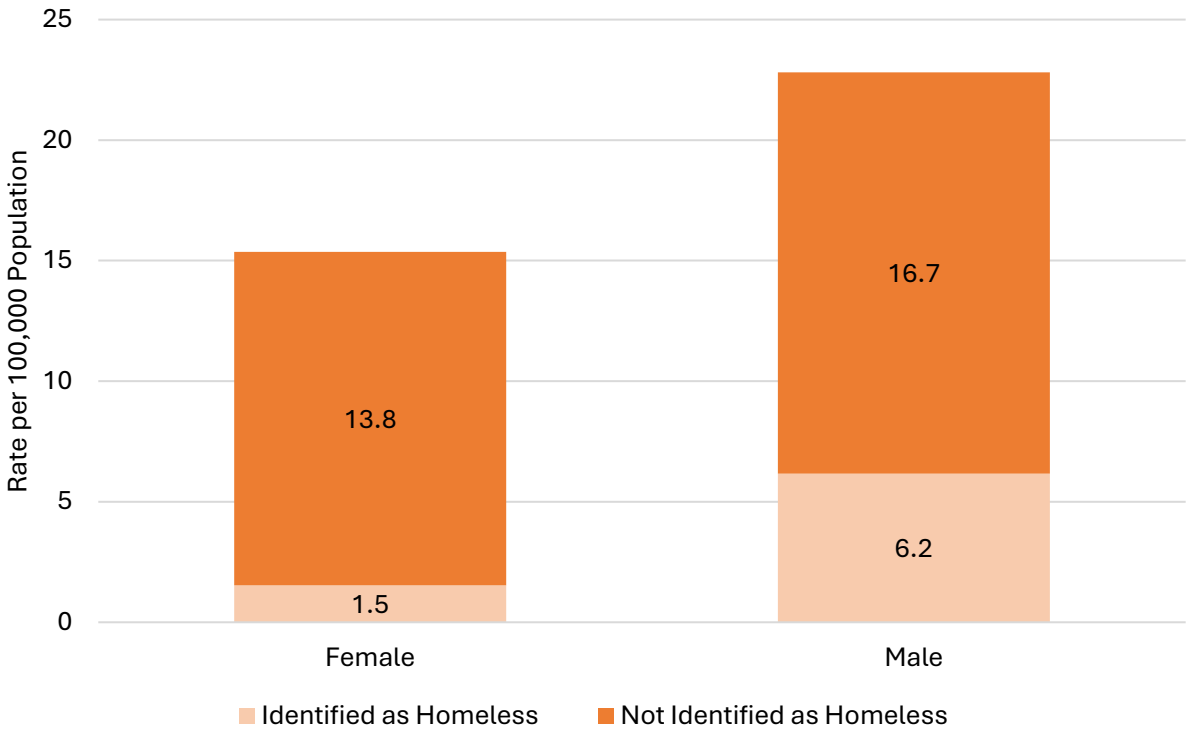


Figure 13b: Cold-Related Illness Hospitalization (In-patient) Rates per 100,000 population by Sex (Female and Male) and Identified Housing Status, Oct-April, 2019-2025, Marion County

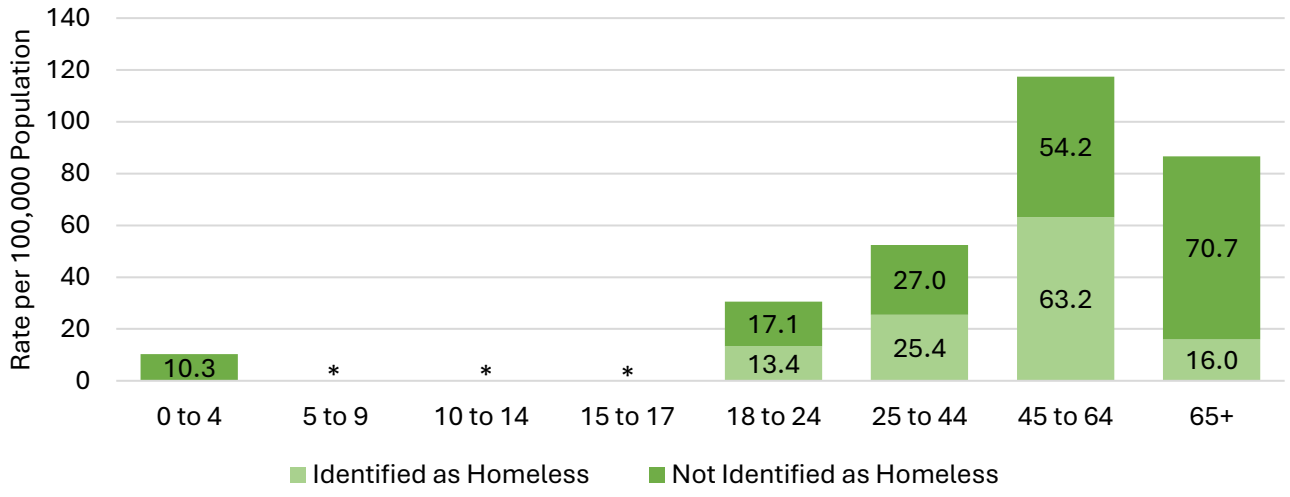
The figure shows the cold-related illness hospitalization (in-patient) rate per 100,000 population by patients' identified housing status and sex during cold season months of October to April from 2019 – 2025 among Marion County residents. Males had a higher proportion of emergency visits among people identified as homeless compared to females. Both males and female patients not identified as homeless and seen for an emergency visit were more likely to be hospitalized by cold-related illness than those identified as homeless.



By Housing Status and Age

Figure 14a: Cold-Related Illness Emergency Visit Rates per 100,000 population by Identified Housing Status and Age group, Oct-April, 2019-2025, Marion County

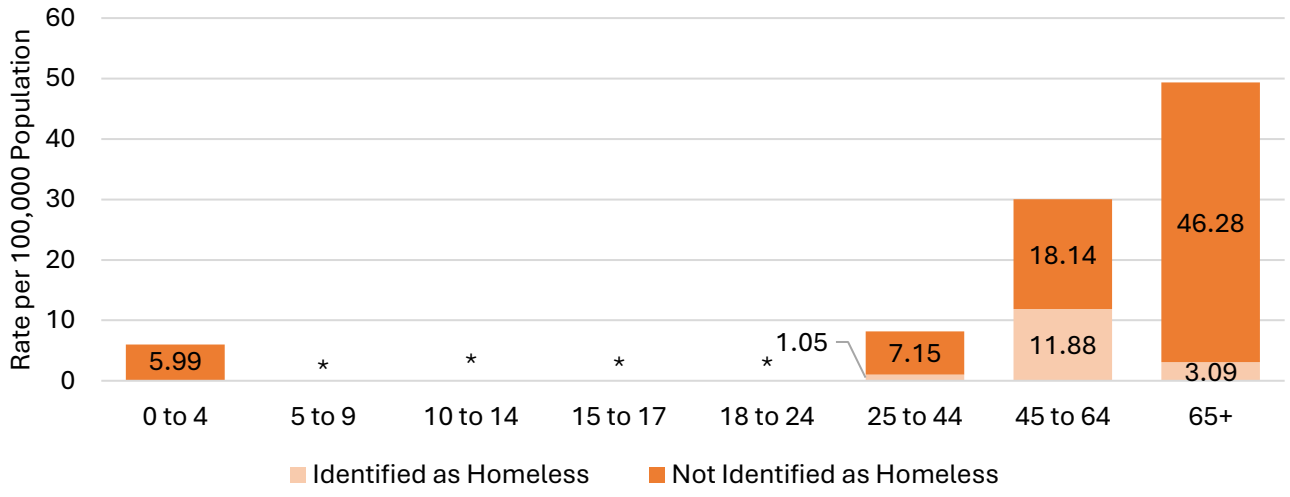
The figure shows the cold-related illness emergency visit rate per 100,000 population by patients' identified housing status and age group during cold season months of October to April from 2019 – 2025 in Marion County. The rate per 100,000 population for the group not identified as homeless and 65+ was the highest among all the observed groups. The rate per 100,000 population for the group identified as homeless and 45 to 64 was the highest among all the groups identified as homeless and age.



** = a suppressed value due to a low category count of 6 or less, and/or secondary suppression to protect confidentiality*

Figure 14b: Cold-Related Illness Hospitalization (In-patient) Rates per 100,000 population by Identified Housing Status and Age group, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness hospitalization (in-patient) rate per 100,000 population by identified housing status and age group during cold season months of October to April from 2019 – 2025 in Marion County. The rate per 100,000 population for the group not identified as homeless and 65+ were the highest among all the observed groups. The rate per 100,000 population for the group identified as homeless and 45 to 64 were the highest among all the groups identified as homeless and different ages.



** = a suppressed value due to a low category count of 6 or less, and/or secondary suppression to protect confidentiality*

By Housing Status and Ethnicity

Figure 15a: Cold-Related Illness Emergency Visit Rates per 100,000 population by Identified Housing Status and Ethnicity, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness emergency visit rate per 100,000 population by identified housing status and ethnicity during the cold season months of October to April from 2019 – 2025 in Marion County. The groups identified as "Not Hispanic or Latino" had the highest among all the observed groups.

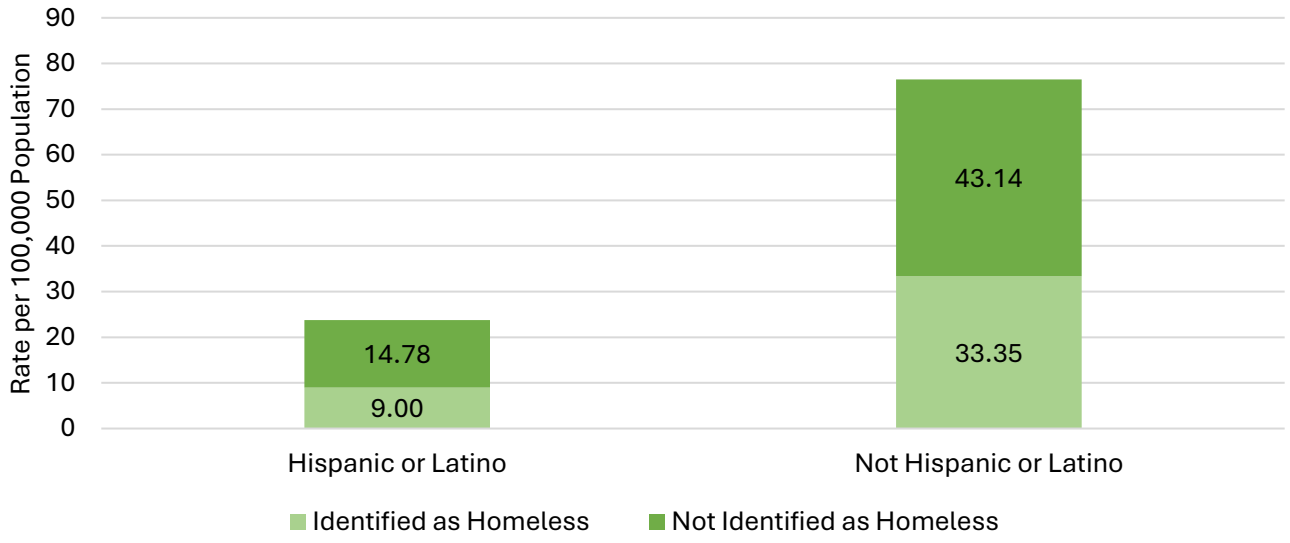
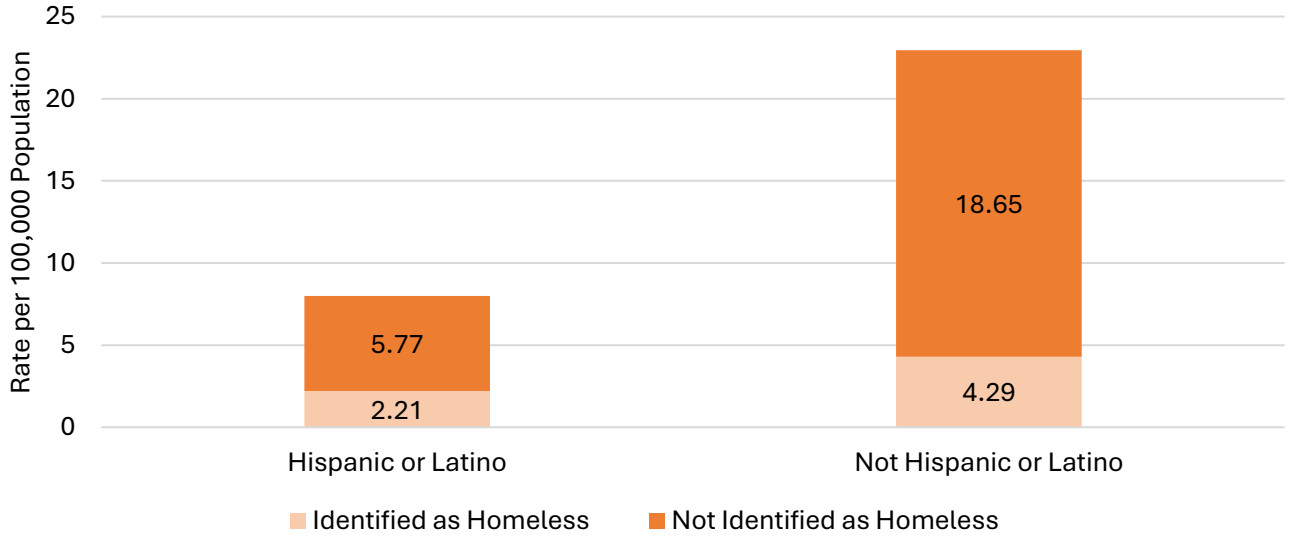


Figure 15b: Cold-Related Illness Hospitalization (In-patient) Rates per 100,000 population by Identified Housing Status and Ethnicity, Oct-April, 2019-2025, Marion County

The figure shows the cold-related illness hospitalization (in-patient) rate per 100,000 population by identified housing status and ethnicity during the cold season months of October to April from 2019 – 2025 in Marion County. The rate per 100,000 population for people not identified as homeless and not Hispanic or Latino was the highest among observed groups.



Appendix A. Data Tables – Counts

Wind Chill Days Marion County, Oregon, October - April, 2019 – 2025 (Figures 3a – 3f)					
Year	**Days Below 40°F**	**Days Below 32°F**	**Days Below 25°F**	**Days Below 20°F**	**Days Below 10°F**
2019-20	165	83	22	2	0
2020-21	170	79	16	2	0
2021-22	142	67	18	3	0
2022-23	166	103	28	9	0
2023-24	136	61	15	5	4
2024-25	126	50	18	0	0

Yearly Cold-Related Illness Emergency Visits Marion County, Oregon, October - April, 2019 – 2025 (Figure 4a)	
Year	**Count**
2019-20	118
2020-21	203
2021-22	225
2022-23	267
2023-24	263
2024-25	241

Monthly Cold-Related Illness Emergency Visits Marion County, Oregon, October - April, 2019 – 2025 (Figures 4b - 4c)					
Month 2019-20 cold season	**Counts**	**Month 2020-21 cold season**	**Counts**	**Month 2021-22 cold season**	**Counts**
Oct-19	17	Oct-20	22	Oct-21	17
Nov-19	13	Nov-20	30	Nov-21	23
Dec-19	22	Dec-20	27	Dec-21	56
Jan-20	33	Jan-21	32	Jan-22	51
Feb-20	15	Feb-21	50	Feb-22	32
Mar-20	10	Mar-21	29	Mar-22	28
April-20	8	April-21	13	April-22	18
Month 2022-23 cold season	**Counts**	**Month 2023-24 cold season**	**Counts**	**Month 2024-25 cold season**	**Counts**
Oct-22	13	Oct-23	23	Oct-24	19
Nov-22	52	Nov-23	38	Nov-24	38
Dec-22	49	Dec-23	59	Dec-24	53
Jan-23	40	Jan-24	81	Jan-25	46
Feb-23	51	Feb-24	28	Feb-25	48
Mar-23	27	Mar-24	22	Mar-25	27
April-23	35	April-24	12	April-25	10

Yearly Cold-Related Illness Hospitalizations (in-patient), Marion County, Oregon, October - April, 2019 – 2025 (Figure 5a)	
Year	**Count**
2019-20	36
2020-21	65
2021-22	54
2022-23	88
2023-24	80
2024-25	32

Monthly Cold-Related Illness Hospitalizations (in-patient), Marion County, October - April, 2019 – 2025 (Figure 5b-5c)					
Month 2019-20 cold season	**Counts**	**Month 2020-21 cold season**	**Counts**	**Month 2021-22 cold season**	**Counts**
Oct-19	*	Oct-20	7	Oct-21	*
Nov-19	6	Nov-20	8	Nov-21	11
Dec-19	7	Dec-20	10	Dec-21	9
Jan-20	6	Jan-21	11	Jan-22	12
Feb-20	7	Feb-21	10	Feb-22	7
Mar-20	*	Mar-21	12	Mar-22	6
April-20	*	April-21	7	April-22	6
Month 2022-23 cold season	**Counts**	**Month 2023-24 cold season**	**Counts**	**Month 2024-25 cold season**	**Counts**
Oct-22	*	Oct-23	8	Oct-24	9
Nov-22	15	Nov-23	10	Nov-24	10
Dec-22	21	Dec-23	17	Dec-24	13
Jan-23	12	Jan-24	24	Jan-25	13
Feb-23	19	Feb-24	10	Feb-25	16
Mar-23	*	Mar-24	7	Mar-25	10
April-23	12	April-24	*	April-25	*

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

Cold-Related Illness Counts by Sex, Marion County, Oregon, October - April, 2019 – 2025 (Figures 6a – 6b)		
Sex	**Emergency Visit Counts**	**Hospitalizations (In-patient) Counts**
Female	375	160
Male	941	237

Cold-Related Illness Counts by Age Group, Marion County, Oregon, October - April, 2019 – 2025 (Figures 7a – 7b)		
Age Groups	**Emergency Visit Counts**	**Hospitalizations (In-patient) Counts**
0 to 4	12	7
5 to 9	*	*
10 to 14	*	*
15 to 17	*	*
18 to 24	57	*

25 to 44	301	47
45 to 64	563	144
65+	309	176

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

Cold-Related Illness Counts by Race Group, Marion County, Oregon, October - April 2019 – 2025 (Figures 8a – 8b)		
Race	**Emergency Visit Counts**	**Hospitalizations (In-patient) Counts**
African American/Black	41	11
American Indian/Alaska Native	54	*
Asian	*	*
Hawaiian/Pacific Islander	10	6
Multi-racial, Other	119	37
Unknown	61	24
White	1029	313

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

Cold-Related Illness Counts by Ethnicity Group, Marion County, Oregon, October - April, 2019 – 2025 (Figures 9a – 9b)		
Ethnicity	**Emergency Visit Counts**	**Hospitalizations (In-patient) Counts**
Hispanic or Latino	140	47
Not Hispanic or Latino	1140	342

Cold-Related Illness Emergency Visits by Zip code Group, Marion County, Oregon, October - April, 2019 – 2025 (Figures 10a – 10b, 11)		
Zip code	**Emergency Visit Counts**	**Emergency Visit Rates per 100,000 Population**
97002	12	30.9
97020	*	*
97026	*	*
97032	*	*
97071	32	16.7
97137	*	*
97301	720	213.2
97302	97	39.5
97303	86	35.1
97305	140	51.8
97306	66	32.2
97310	*	*
97317	56	35.7
97325	13	30.3
97342	*	*
97346	0	0

97350	*	*
97352	7	17.6
97362	7	29.5
97373	0	0
97375	*	*
97381	18	19.5
97383	13	22.5
97384	0	0
97385	*	*
97392	9	21.4

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

Yearly Cold-Related Illness Emergency Visits by Identified Housing Status, Marion County, October - April, 2019 – 2025 (Figure 12a)		
October – April Cold Weather Season Year	**Emergency Visit Counts of People Identified as Homeless**	**Emergency Visit Counts of People Not Identified as Homeless**
2019-20	48	70
2020-21	87	116
2021-22	100	125
2022-23	110	157
2023-24	110	153
2024-25	105	136

Yearly Cold-Related Illness Hospitalizations (in-patient) by Identified Housing Status, Marion County, October - April, 2019 – 2025 (Figure 12c)		
October – April Cold Weather Season Year	**Hospitalization Counts of People Identified as Homeless**	**Hospitalization Counts of People Not Identified as Homeless**
2019-20	*	*
2020-21	16	49
2021-22	*	*
2022-23	18	70
2023-24	17	63
2024-25	13	19

** = Suppressed due to low counts (less than 6) and/or secondary suppression to protect confidentiality*

Cold-Related Illness Counts by Identified Housing Status, Marion County, Oregon, October - April, 2019 – 2025 (Figure 12b and 12d)		
Status of Homelessness & Unsheltered	**Emergency Visit Counts**	**Hospitalizations (In-patient) Counts**
Identified Homeless	560	80
Not Identified as Homeless	757	317

Cold-Related Illness Counts by Identified Housing Status and Sex, Marion County, Oregon, October - April, 2019 – 2025 (Figure 11a and 11b)

Sex	Emergency Visit Counts of People Identified as Homeless	Hospitalization Counts of Identified as Homeless	Emergency Visit Counts of People Not Identified as Homeless	Hospitalization Counts of People Not Identified as Homeless
Female	117	16	258	144
Male	443	64	498	173

Cold-Related Illness Counts by Identified Housing Status and Age Groups, Marion County, Oregon, October - April 2019 – 2025 (Figure 12a and 12b)				
Age Groups	**Emergency Visit Counts of People Identified as Homeless**	**Hospitalization Counts of Identified as Homeless**	**Emergency Visit Counts of People Not Identified as Homeless**	**Hospitalization Counts of People Not Identified as Homeless**
0 to 4	0	0	12	7
5 to 9	*	0	*	0
10 to 14	*	0	*	0
15 to 17	*	*	*	*
18 to 24	25	*	32	*
25 to 44	146	6	155	41
45 to 64	303	57	260	87

** = Suppressed due to low counts (less than 6) and/or secondary suppression to protect confidentiality*

Cold-Related Illness Counts by Identified Housing Status and Ethnicity, Marion County, Oregon, October - April 2019 – 2025 (Figures 13a – 13b)				
Ethnicity	**Emergency Visit Counts of People Identified as Homeless**	**Hospitalization Counts of Identified as Homeless**	**Emergency Visit Counts of People Not Identified as Homeless**	**Hospitalization Counts of People Not Identified as Homeless**
Hispanic or Latino	53	13	87	34
Not Hispanic or Latino	497	64	643	278

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