Maryland 2024/2025 Cold-Related Illness Surveillance Summary Report

Reporting Period October 27, 2024 to March 29, 2025
Report Date: May 15, 2025

Executive Summary

The Maryland 2024/2025 cold season occurred from October 27, 2024 to March 29, 2025. Overall, in Maryland, the 2024/2025 cold season was consistent with previous seasons and had an average low temperature of 32.0°F. MMWR Week 4, 2025 (1/19/25 – 1/25/25) had a below average temperature at 13.3°F. There was a corresponding increase in cold-related emergency department (ED) and urgent care (UC) visits with 221 visits in that week.

There were a total of 2,300 cold-related ED/UC visits this cold season, with an average of 104.6 visits per week. These counts represent an increase from the 2023/2024 cold season in which there were a total of 1,712 visits and an average of 77.8 visits per week. This season, there were also a total of 175 ED/UC visits related to carbon monoxide (CO) exposure, with an average of 8.0 visits per week. These counts represent a decrease from the 2023/2024 cold season in which there were a total of 205 visits and an average of 9.3 visits per week due to CO exposure. For the 2024/2025 cold season, most of the cold-related illness visits were in the 18-44 age group (699 visits) which is different from last season for which the 65+ age group (510 visits) had the most cold-related illness visits.

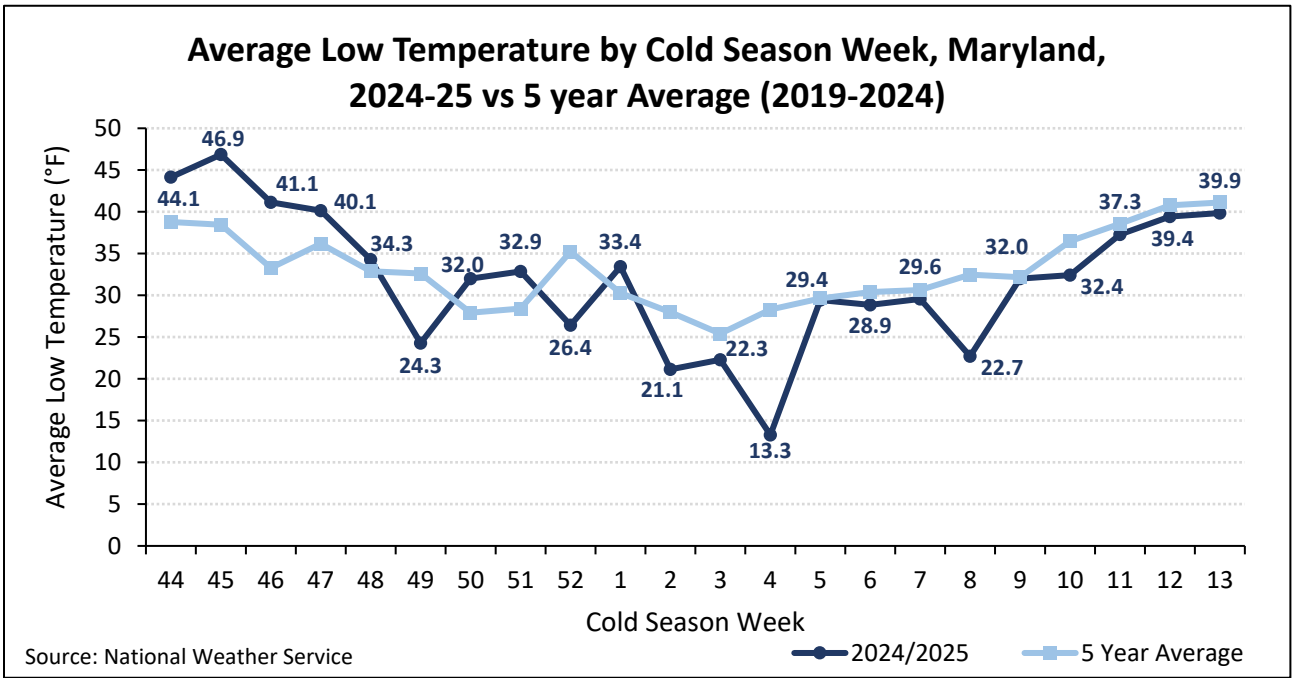
During the 2024/2025 cold season, 69 cold-related deaths were reported. This count is the same compared to last season. Deaths most frequently occurred among the 45-64 (31 deaths) and 65+ (28 deaths) age groups. There was a total of 50 male deaths compared to 19 female deaths. 13 of the 2024/2025 cold season's deaths were among individuals indicated to be experiencing homelessness by the Office of the Chief Medical Examiner in Maryland.

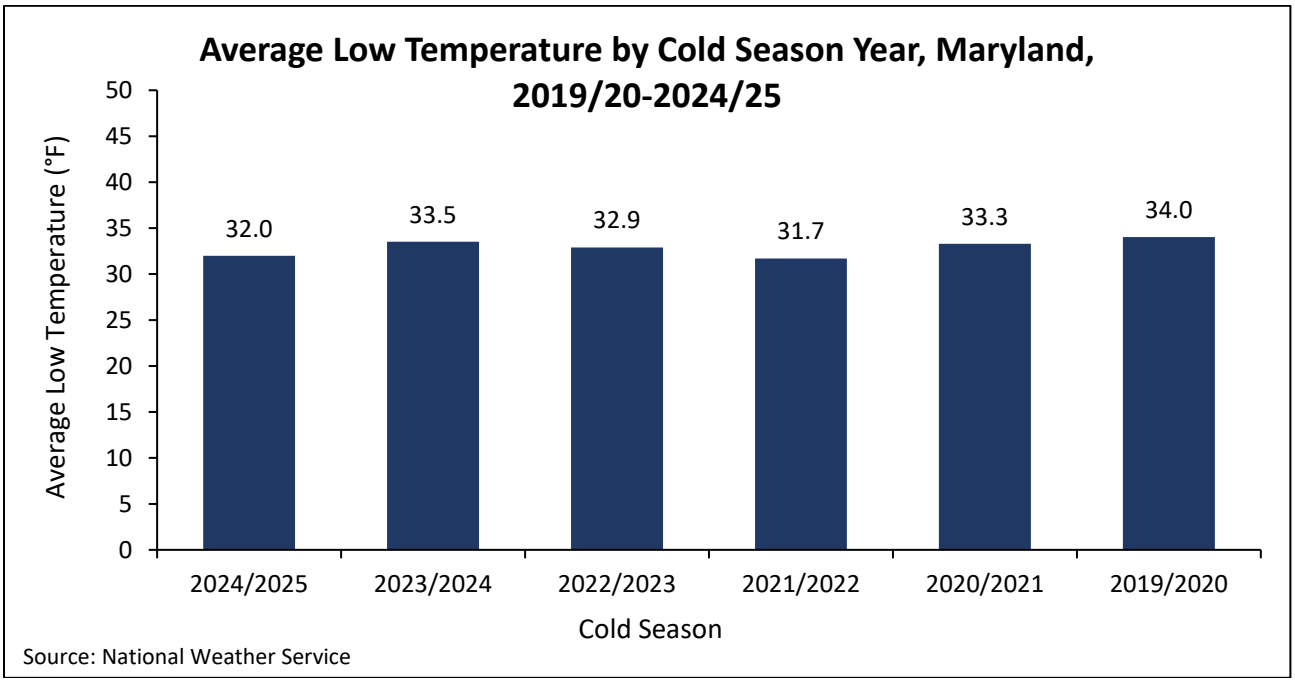
Background

The weekly Cold-Related Illness Surveillance Report is disseminated from November to March. The report focuses on extreme cold conditions including temperature, cold-related illness, carbon monoxide exposure, and cold-related deaths in Maryland.

Weather

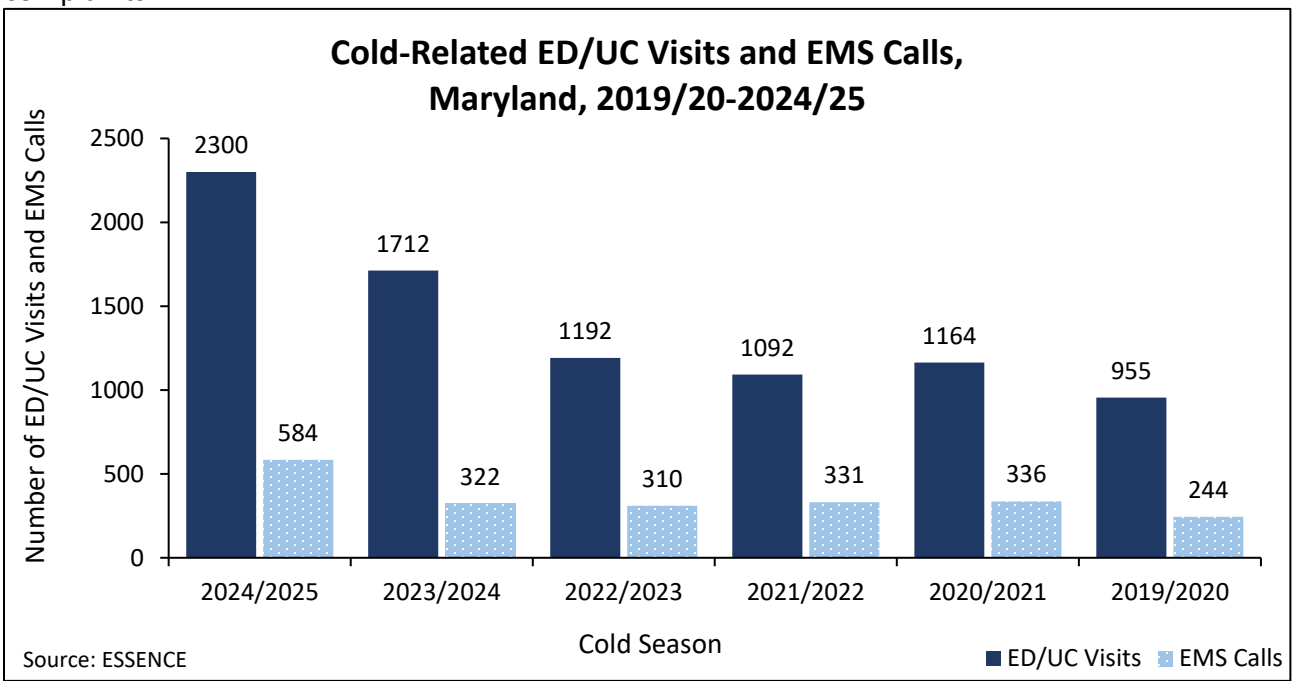
Overall, the 2024/2025 cold season average low temperature was comparable with the average of the last 5 seasons (2019/2020 - 2023/2024). In MMWR week 4, 2025 (1/19/25 - 1/25/25), we did see a drop in temperature with the average low temperature for that week falling to 13.3°F which corresponded to an increase in cold-related ED/UC visits (221 visits).



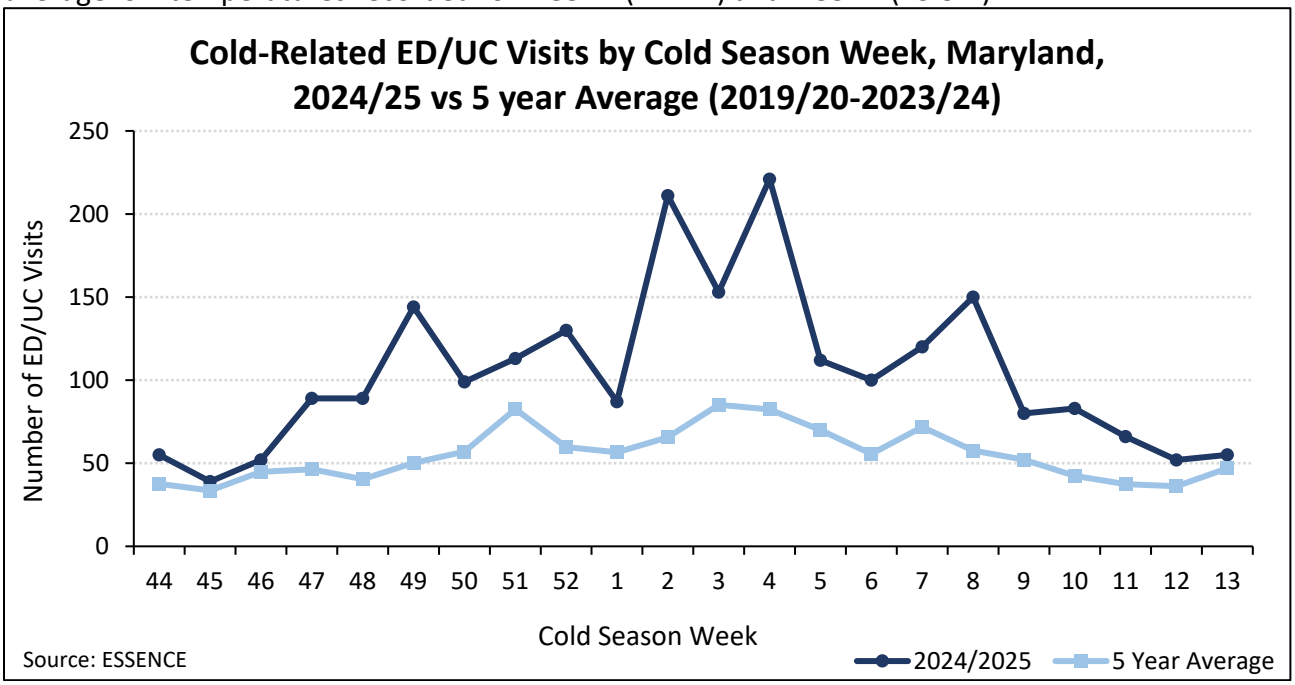


Cold-Related Illness

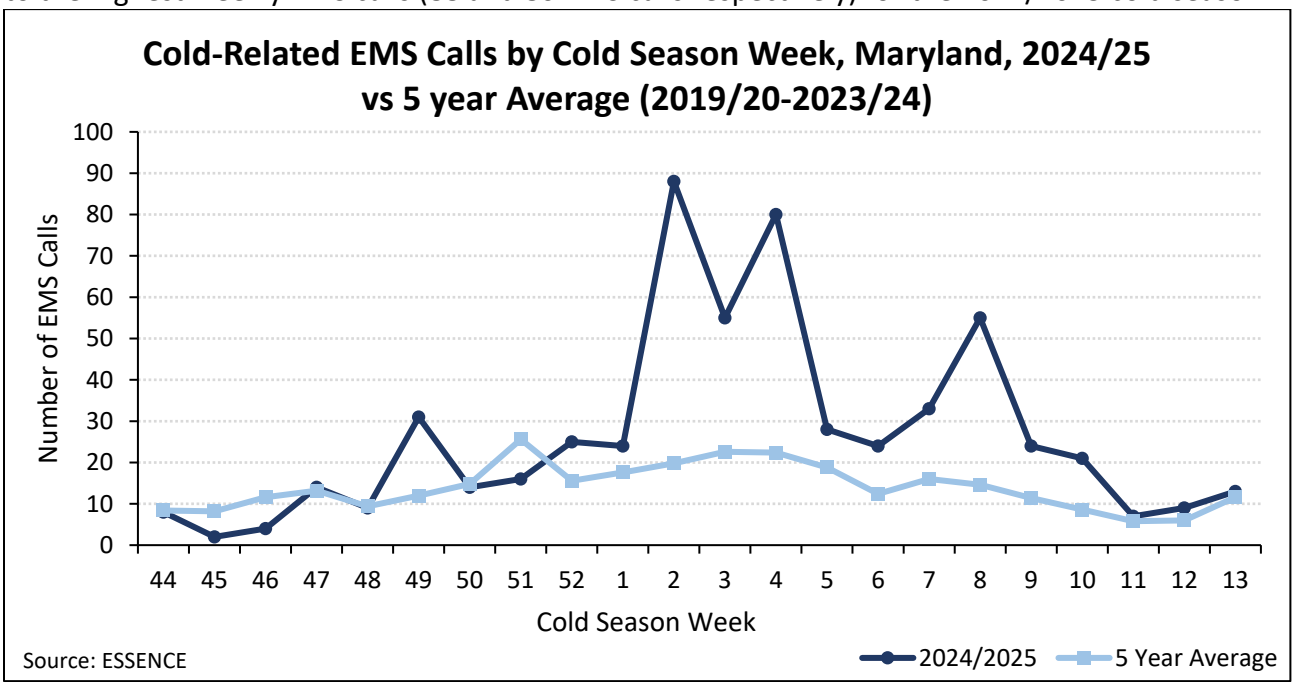
The number of cold-related ED/UC visits and EMS Calls for the 2024/2025 cold season trended slightly higher than the previous five years. For the 2024/2025 cold season, there were 2,300 ED/UC visits with cold-related chief complaints and 584 EMS calls for cold-related chief complaints.



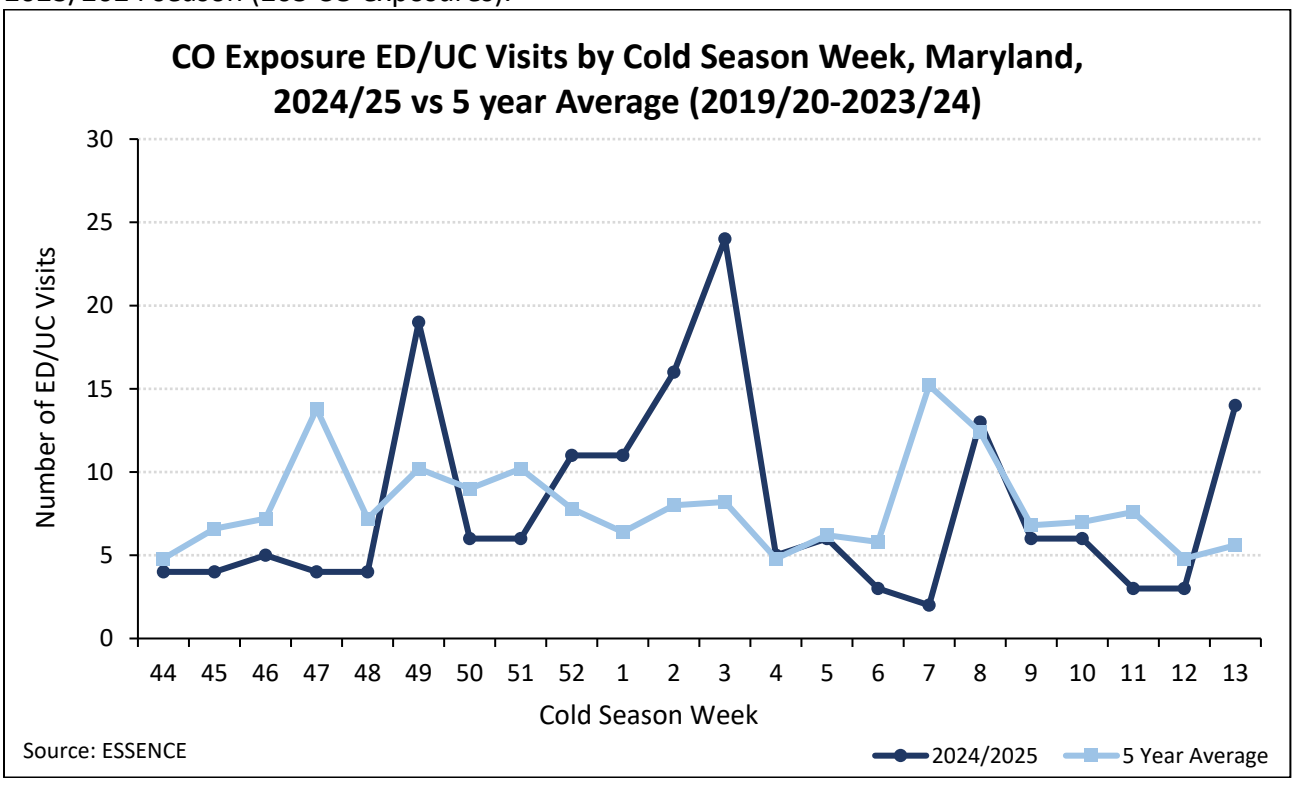
The number of cold-related ED/UC visits for the 2024/2025 season trended slightly higher than the average for the past five seasons and peaked in MMWR weeks 2 and 4, 2025, where there were spikes (211 and 221 cold-related visits respectively) corresponding to the decrease in the weekly average low temperatures recorded for week 2 (21.1°F) and week 4 (13.3°F).



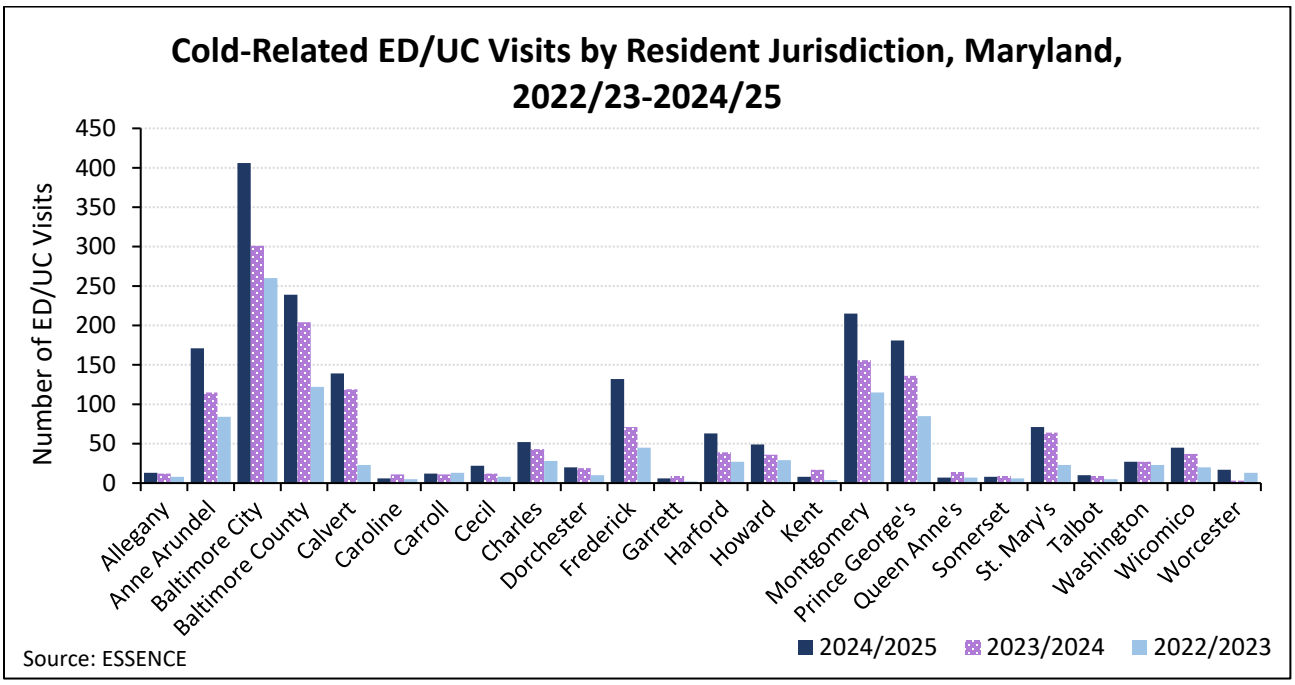
A similar spike in cold-related EMS calls was noted in MMWR weeks 2 and 4, 2025, corresponding to the highest weekly EMS calls (88 and 80 EMS calls respectively) for the 2024/2025 cold season.



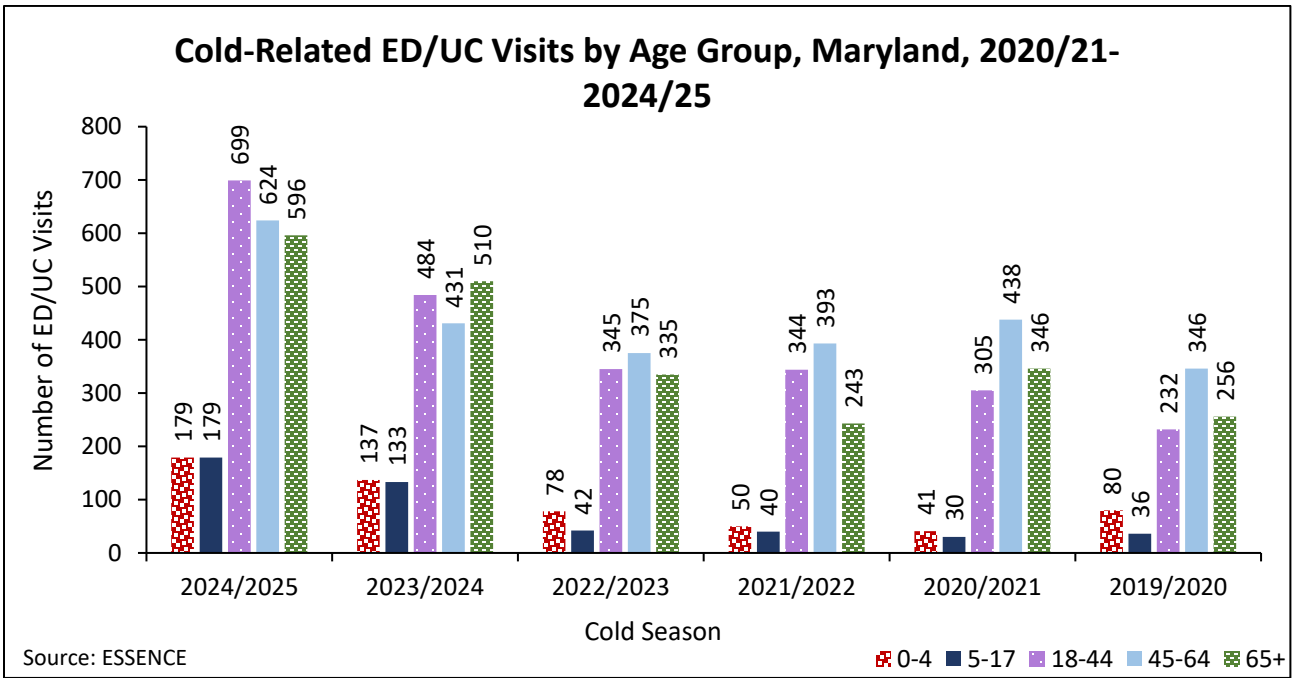
As for CO exposure-related visits, there were spikes during the 2024/2025 season, which corresponded to the period of increased in ED/UC cold-related visits and EMS calls. Overall, the trend remained consistent with the five-year average from the previous five seasons. The total CO exposure-related visits for the 2024/2025 season was lower (175 CO exposures) compared to the 2023/2024 season (205 CO exposures).



Geographically, cold-related ED/UC visits were highest in residents of Baltimore City (406 visits), followed by Baltimore County (239 visits), Montgomery (215 visits), Prince George's (181 visits), Anne Arundel (171 visits), Calvert (139 visits) and Frederick counties (132 visits).

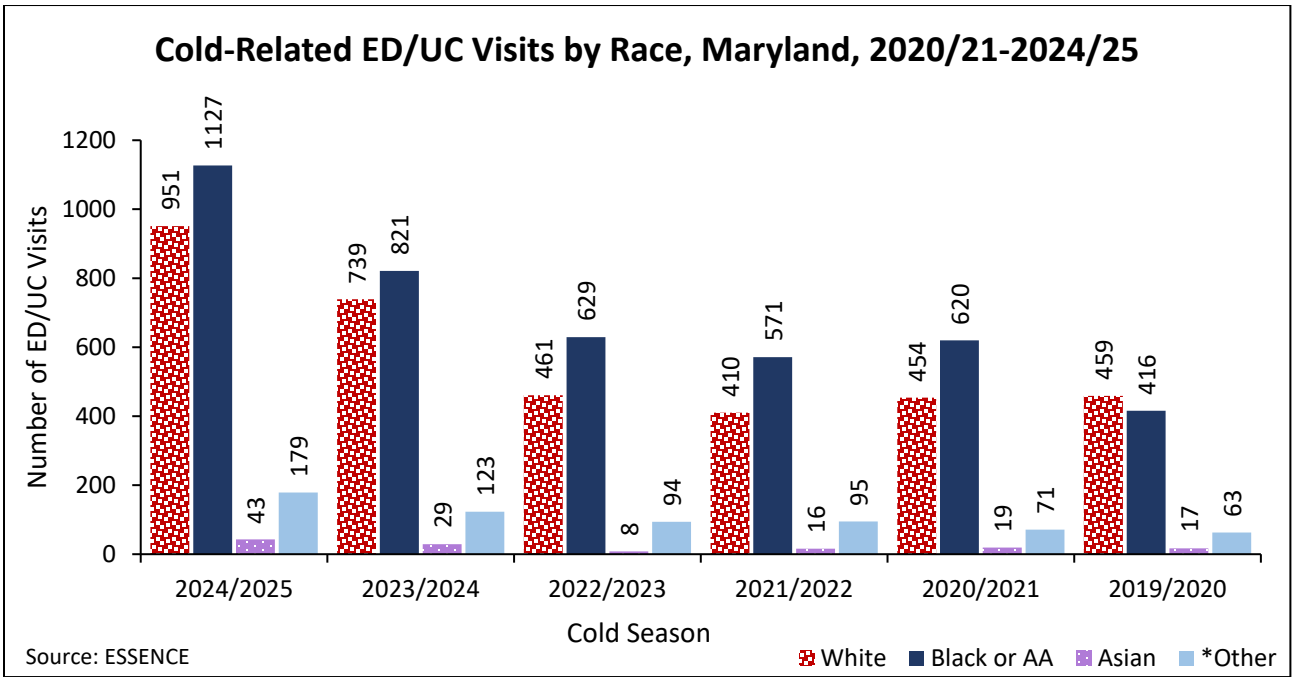


In addition, cold-related ED/UC visits were highest in the 18-44 age group (699 visits) followed by the 45–64-year age group (624 visits). This trend is different from the previous five seasons in which the 45-65, 65+, and 18-44-year age groups consistently had the highest number of cold-related ED/UC visits.



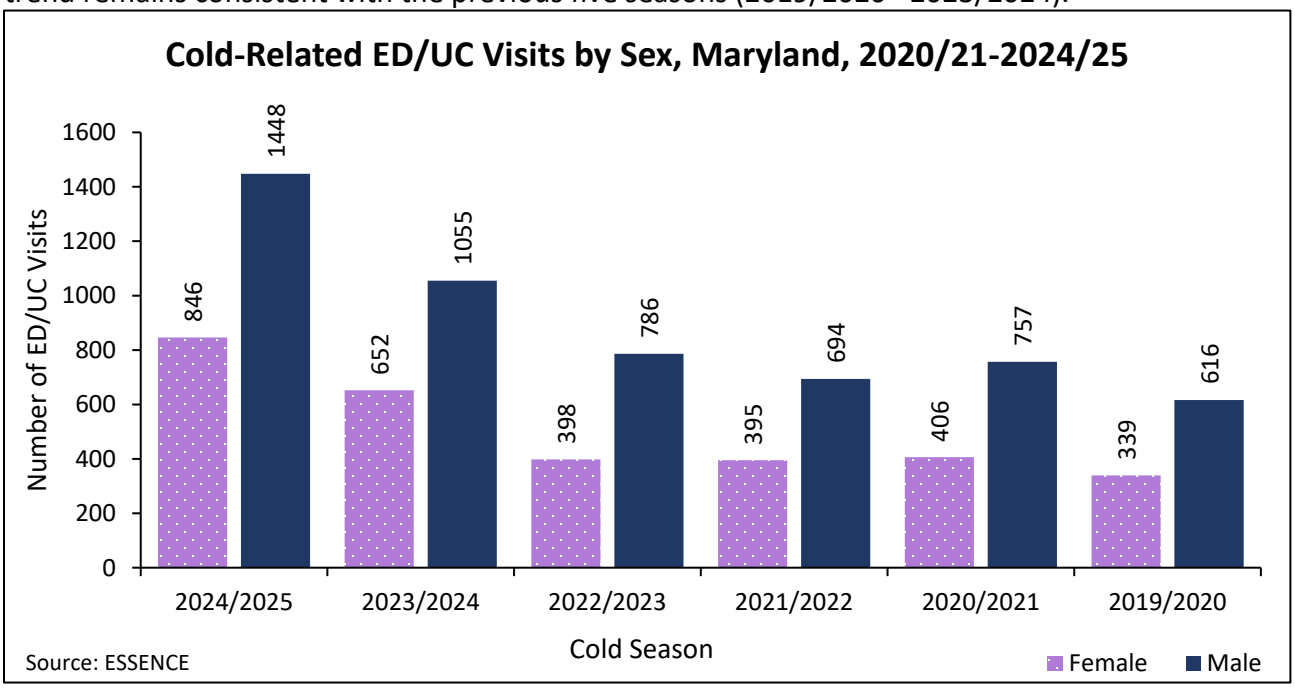
**Note: The numbers for ED/UC chief complaint visits and CO exposure published in the weekly reports may not match the summary numbers which are collected at the end of the season as ESSENCE data updates daily.*

Cold-related ED/UC visits were highest among Black/African American individuals (1,127 visits) followed by White individuals (951 visits). This trend is consistent with the previous five seasons (2019/2020 –2023/2024), during which Black/African American and White individuals consistently had the highest number of cold-related ED/UC visits.



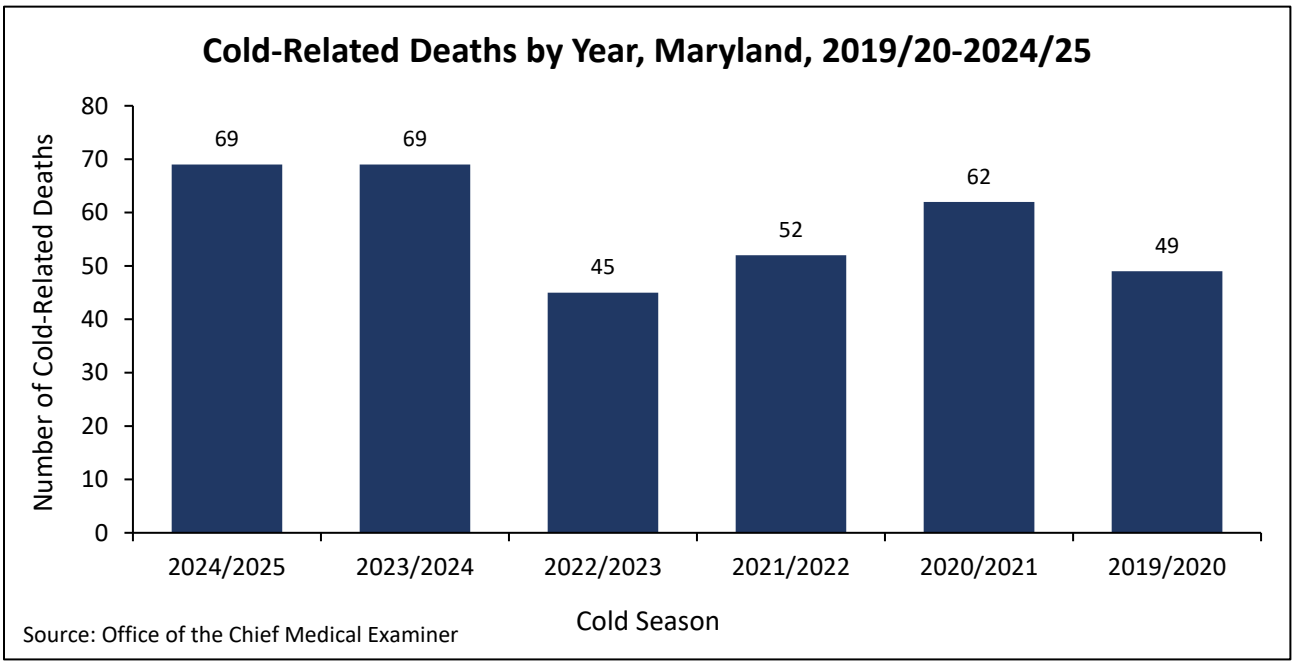
*Note: **Other** includes American Indian/Alaskan Native, Native Hawaiian/Other Pacific Islander, Other, and Not Reported

Cold-related visits were highest among males (1,448 visits), followed by females (846 visits). This trend remains consistent with the previous five seasons (2019/2020 –2023/2024).

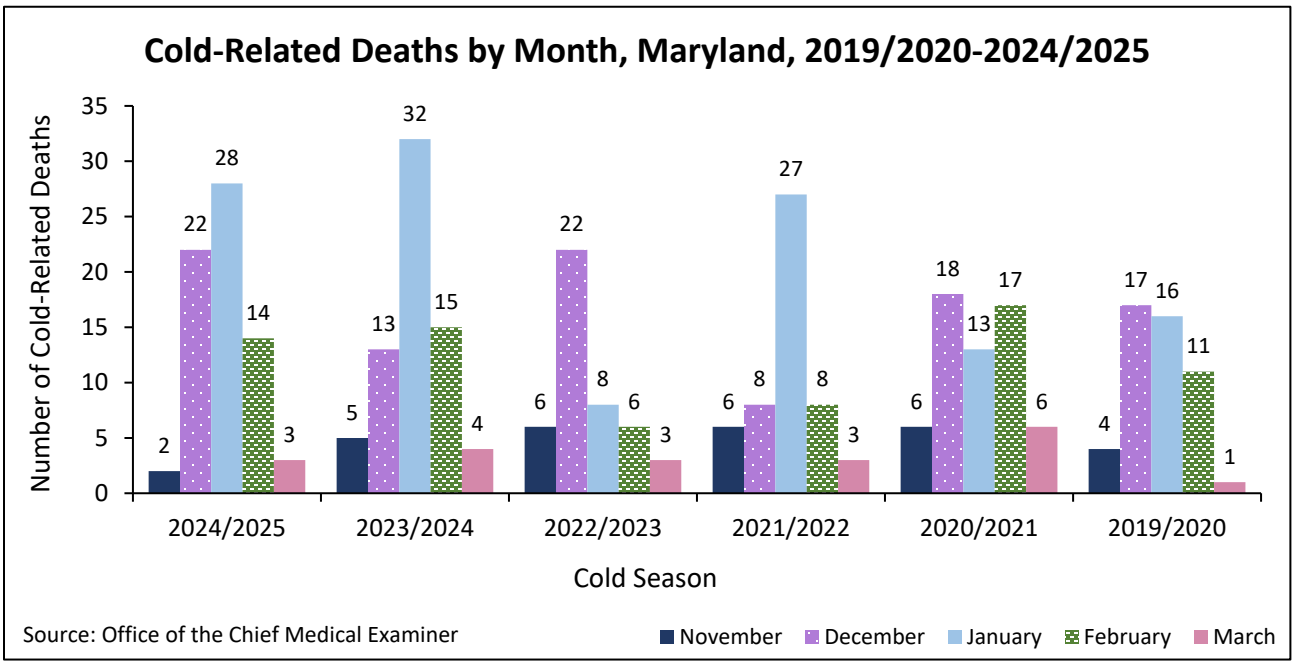


Cold-Related Deaths

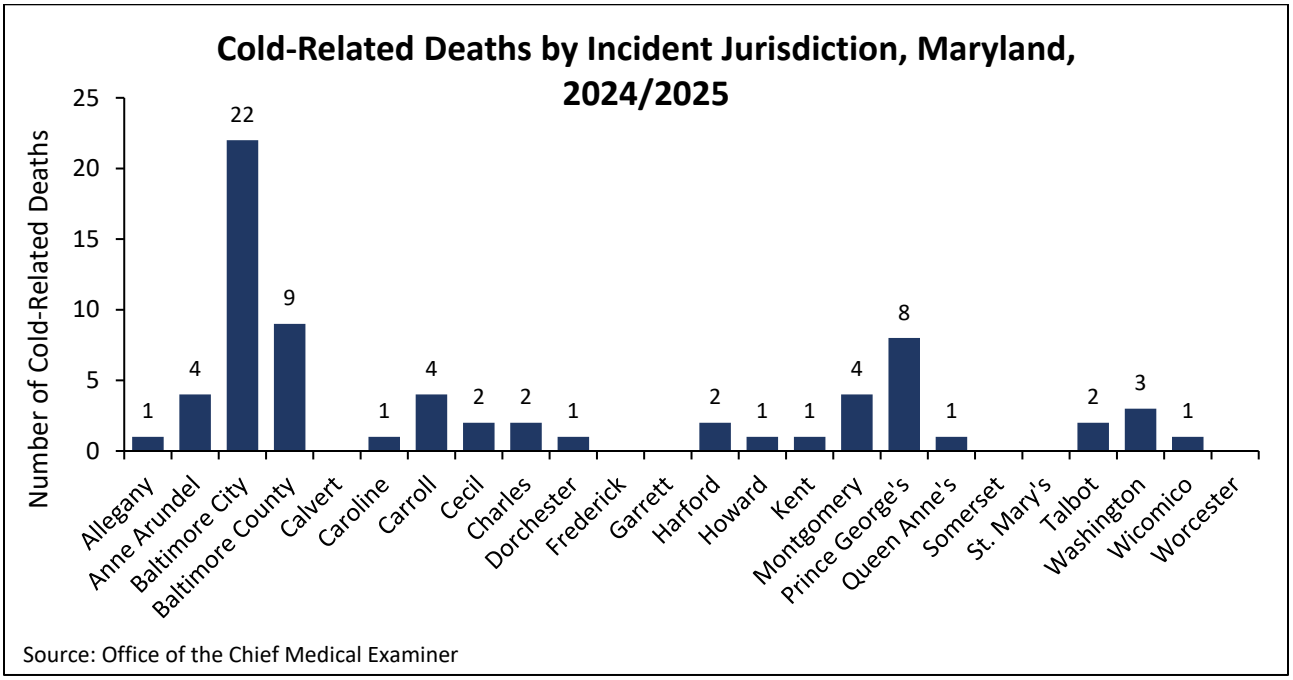
There were 69 cold-related deaths reported by the Office of the Chief Medical Examiner in Maryland during the 2024/2025 cold season. This count is the same as the 2023/2024 season but higher compared to other seasons (2019/2020 – 2022/2023).



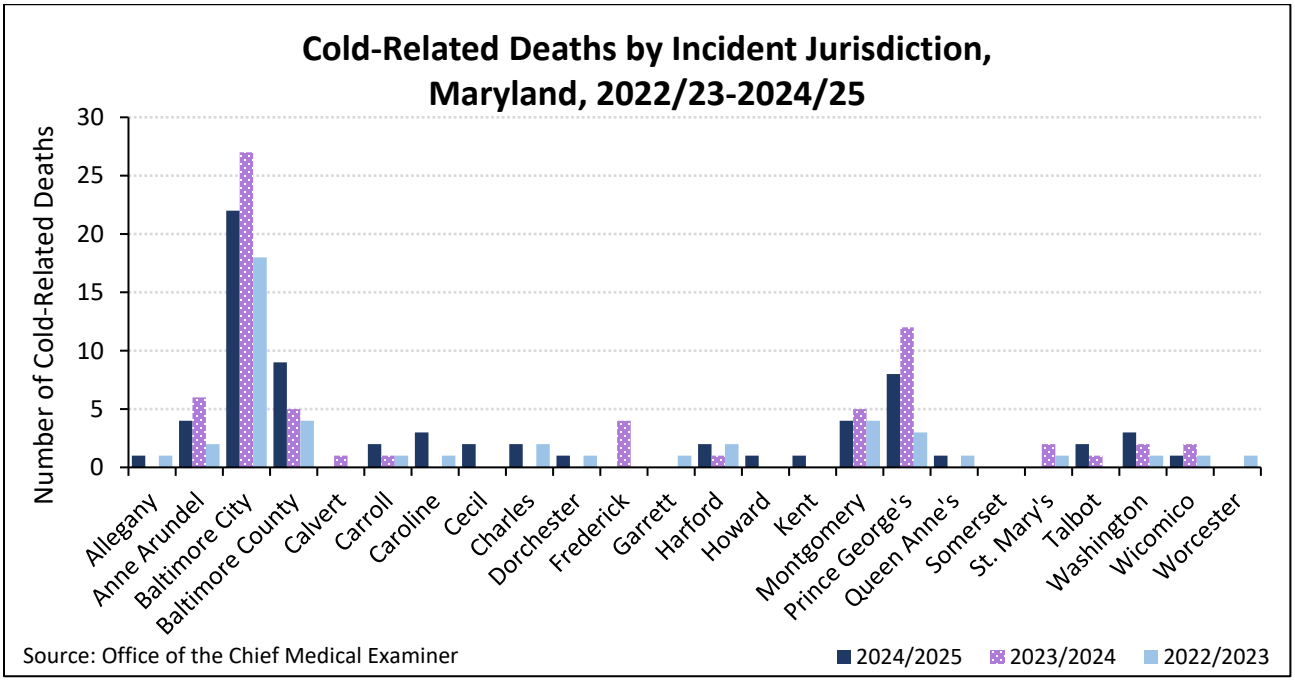
During the 2024/2025 cold season, the largest number of cold-related deaths occurred in the month of January (28 deaths). This trend is consistent with the 2023/2024 season, during which the largest number of deaths also occurred in January (32 deaths). Historically, the largest number of cold-related deaths occurred from December through February of the reporting season.



Geographically, the highest number of reported deaths occurred in Baltimore City, followed by Baltimore County, Prince George's, Montgomery, Anne Arundel and Carroll counties. In the previous two cold seasons (2022/2023 –2024/2025), the highest number of deaths were reported in Baltimore City, Prince George's, Montgomery, Baltimore County and Anne Arundel counties.

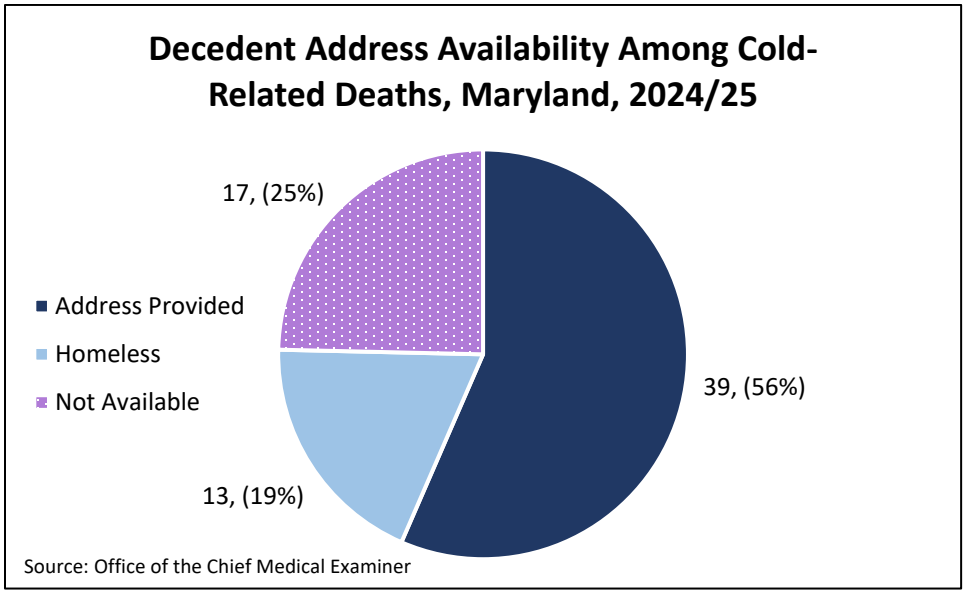


Source: Office of the Chief Medical Examiner

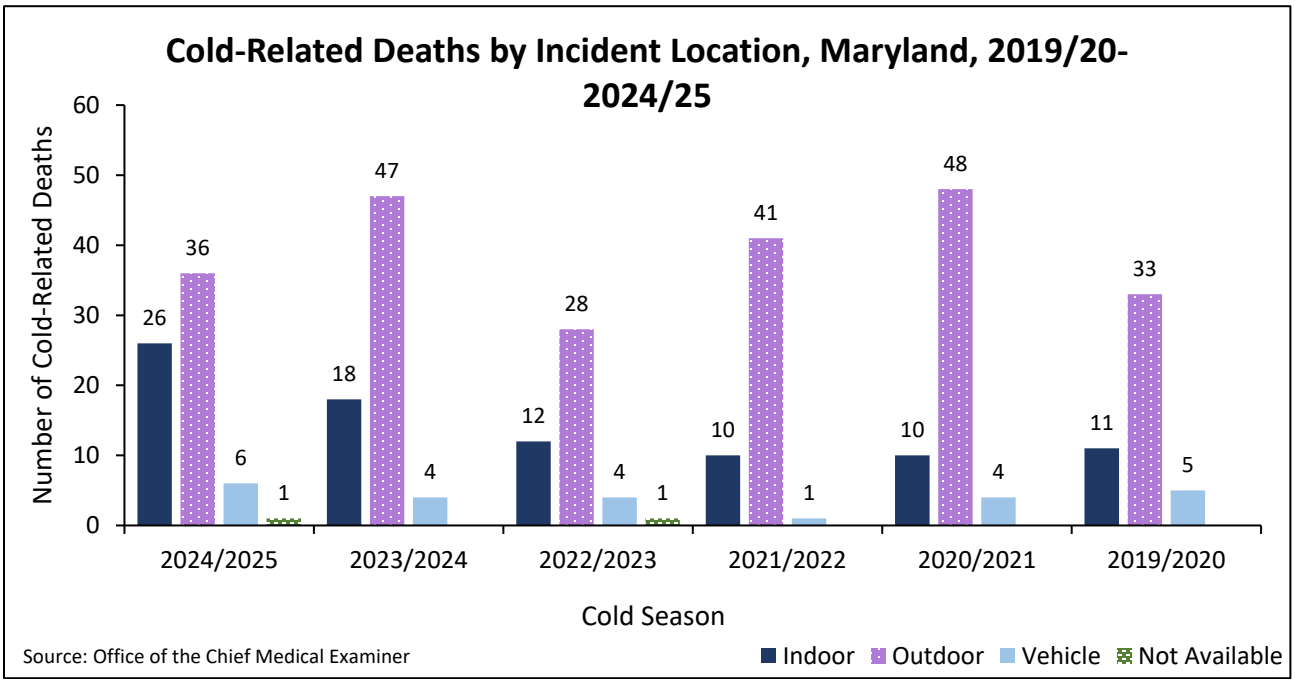


Source: Office of the Chief Medical Examiner

Of the 69 cold-related deaths for the 2024/2025 season, a residential address was available for 39 decedents (56%). 13 decedents (19%) were indicated to be experiencing homelessness. For 17 decedents (25%), a residential address was not available, and it could not be determined whether the decedent was experiencing homelessness or not.

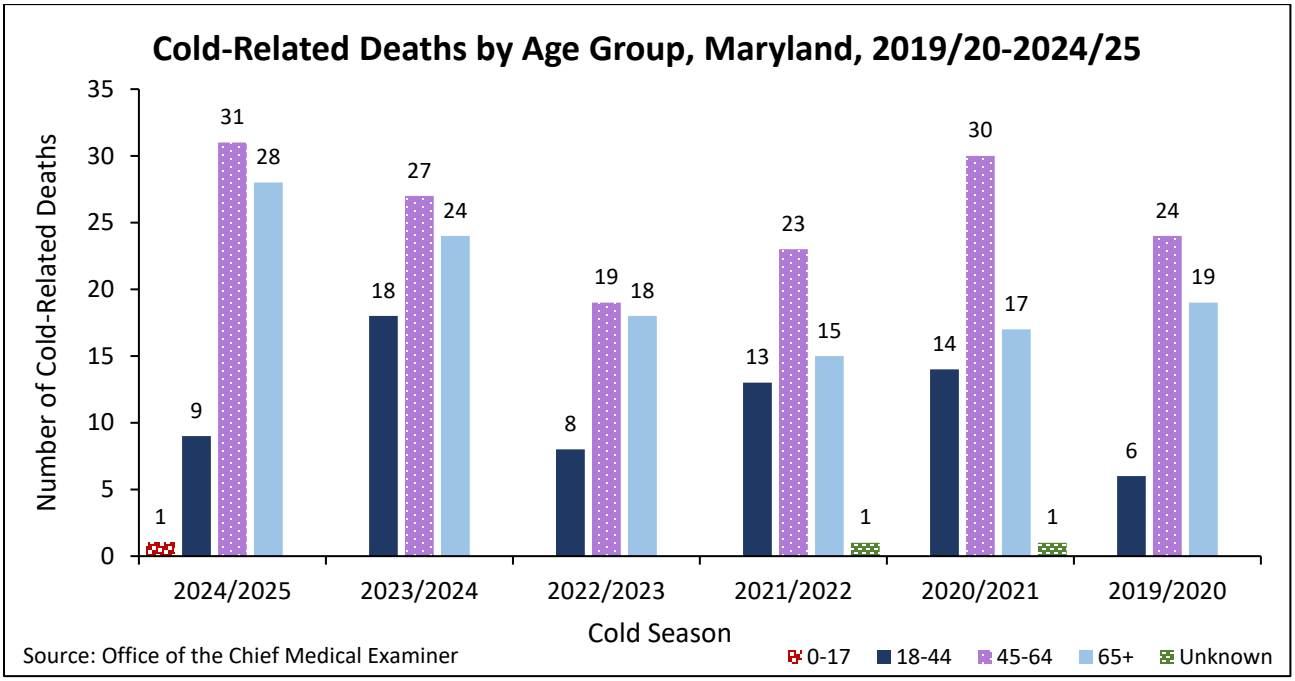


During the 2024/2025 cold-season, 36 deaths occurred outdoors, while 26 deaths occurred indoors. This trend is consistent with previous cold seasons (2019/2020-2023/2024), during which most deaths occurred outdoors.

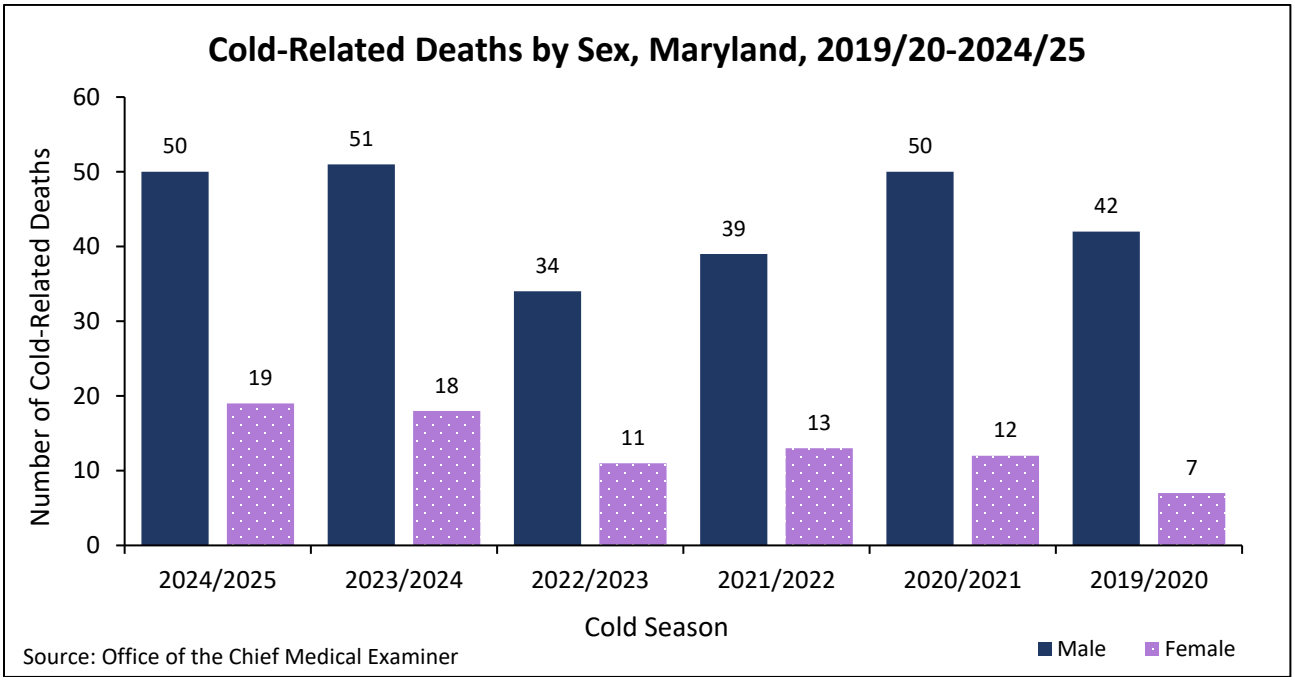


Note: **Indoor locations are areas protected from exposure to weather. **Outdoor** locations are exposed to weather. **Not Available** indicates that no incident location information was provided.*

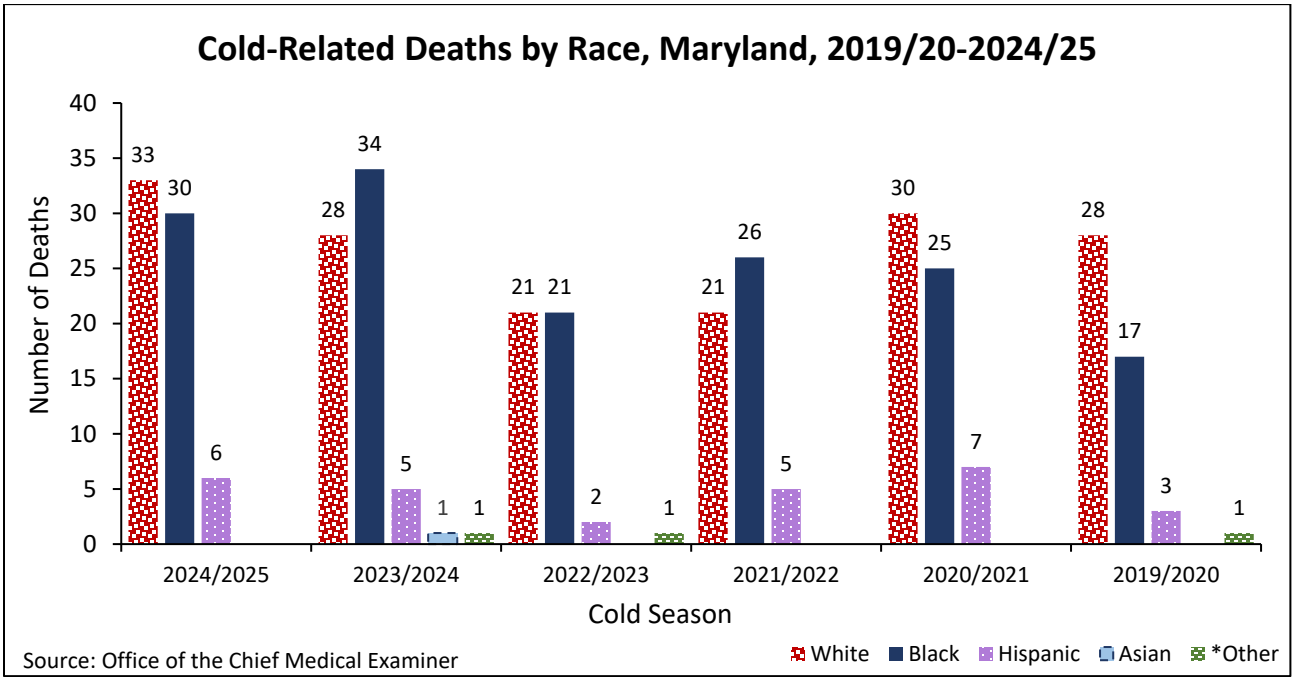
For the 2024/2025 cold season, the most deaths were recorded among individuals in the 45-64 (31 deaths) and the 65+ (28 deaths) age groups. This trend is consistent with previous cold seasons.



Most of the deaths reported in the 2024/2025 cold season were among males (50 deaths), compared to females (19 deaths). This trend is also consistent with previous cold seasons.

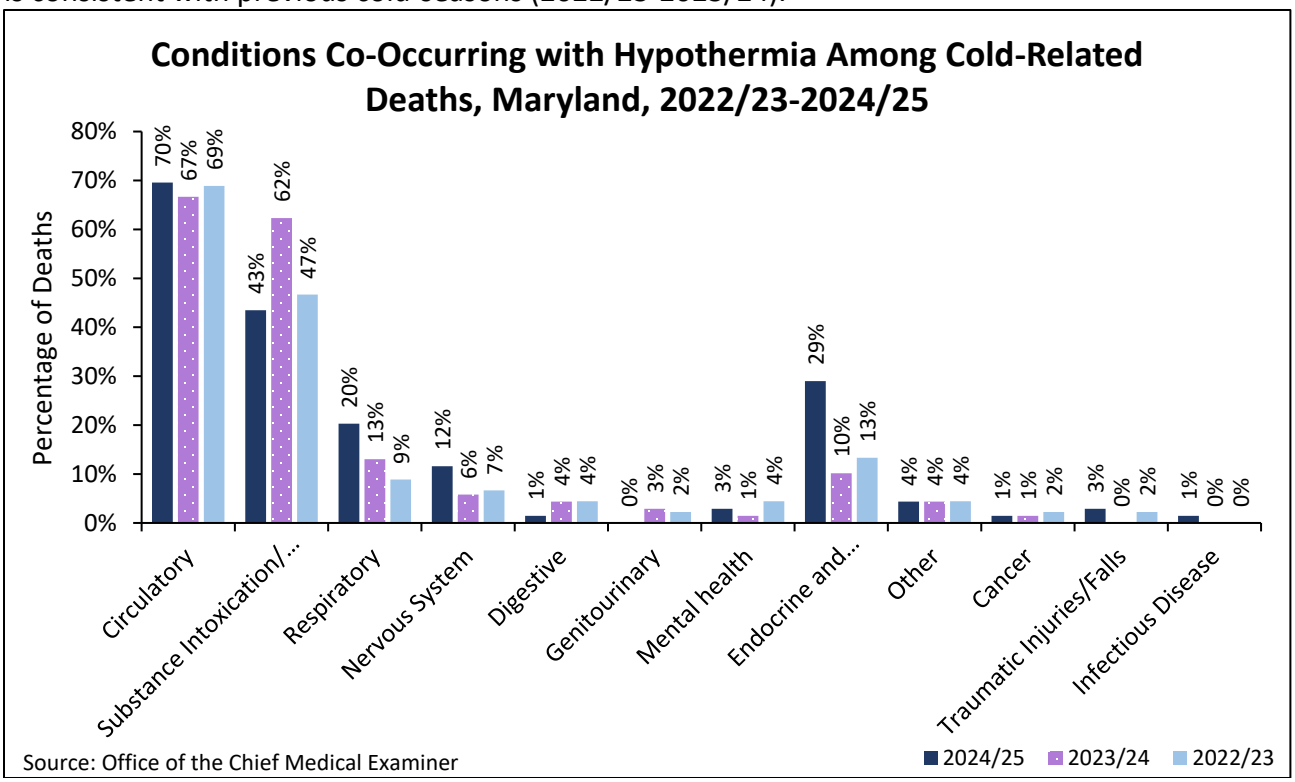


For the 2024/2025 cold season, the most deaths were recorded among White individuals (33 deaths) and Black individuals (30 deaths). This trend is consistent with previous cold seasons.



Note: **Other represents individuals whose race was recorded as "Other", "Not Available" or "Unknown".*

This season, 70% of decedents were reported to have circulatory conditions (e.g., cardiovascular disease, cardiomegaly, and atrial fibrillation), and 43% of decedents were reported to have substance intoxication/abuse/use, co-occurring with hypothermia at the time of death. This trend is consistent with previous cold-seasons (2022/23-2023/24).



References

ESSENCE

The Maryland Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) program is an electronic biosurveillance system that uses non-traditional data sources to quickly identify disease outbreaks and other patterns of illness.

Data Sources

MDH analyzes chief complaints and discharge diagnoses of ED and UC visits to identify and monitor issues of public health concern across Maryland. The chief complaint is a free-text field capturing the patient's primary reason for seeking medical care as interpreted by the ED registration staff. The discharge diagnosis is a coded field that uses standardized values outlined by the International Classification of Diseases (ICD) 10th Revision and SNOMED Clinical Terms (CT) code sets.

Case Definitions

ED and UC visits for cold-related illness were identified based on the Cold-Related Illness Syndrome Query definition published by the Council of State and Territorial Epidemiologists (CSTE) using Chief Complaint and Discharge Diagnosis.

Social Media and Contact Information

For more information about extreme cold and emergency preparedness, follow the Office of Preparedness and Response on Twitter and Facebook.

For media inquiries, please contact the Office of Communications: 410-767-6490

Prepared by:

Office of Preparedness and Response
Maryland Department of Health
7462 Candlewood Rd
Hanover, MD 21076

https://preparedness.health.maryland.gov

Peter Fotang, MD, MPH
Biosurveillance Epidemiologist, Biosurveillance Program
Email: peter.fotang@maryland.gov

Yvonne Romero, MPH
Biosurveillance Epidemiologist, Biosurveillance Program
Email: yvonne.romero1@maryland.gov

Johanna Gergory Belssner
Special Projects Coordinator
Email: johanna.belssner@maryland.gov

Alizay Jalisi, MPH
DOSE Epidemiologist, Biosurveillance Program
Email: alizay.jalisi@maryland.gov

David McCallister
Emergency Communication Coordinator (PIO)
Email: david.mccallister@maryland.gov