# N·DEWS | NATIONAL DRUG EARLY WARNING SYSTEM

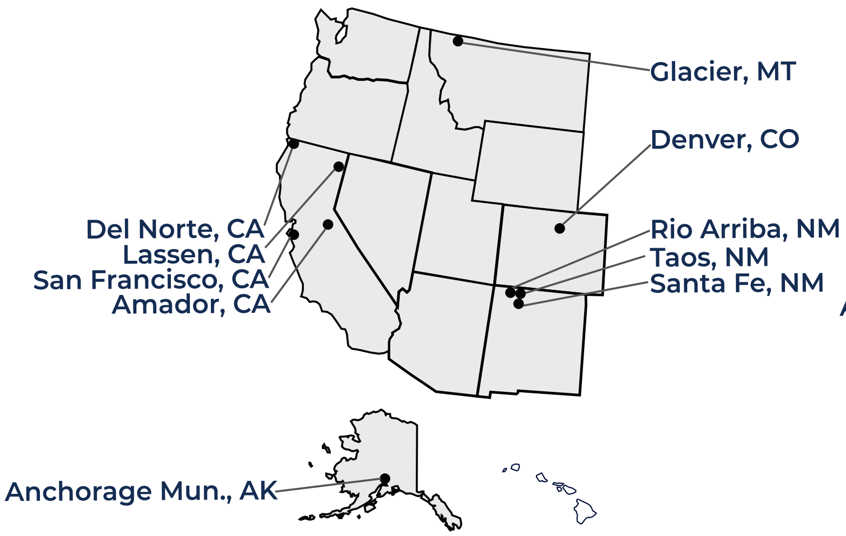


## NDEWS Special Report
## Naloxone utilization in EMS encounters for nonfatal overdoses in the US
## January 1, 2024 - July 31, 2025

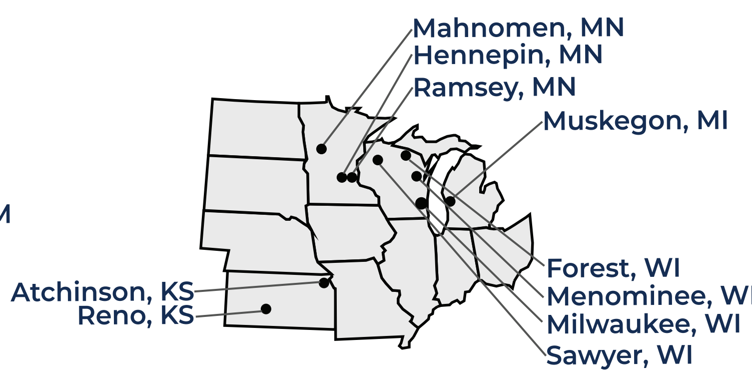
Out of 444,343 instances of naloxone utilization in EMS encounters for nonfatal overdoses from January 1, 2024 to July 31, 2025, 109,840 (24.7%) occurred in Western states, 67,241 (15.1%) in Midwestern states, 188,312 (42.4%) in Southern states and 78,950 (17.8%) in Northeastern states. **The data shows an initial statistically significant decrease in naloxone utilization in EMS encounters for nonfatal overdoses, followed by a statistically significant increase across Western, Midwestern, Northeastern and Southern states, and nationally overall.**

### US counties with the highest rates of naloxone utilization in EMS encounters for nonfatal overdoses per 10,000 population
### January 1, 2024 - July 31, 2025

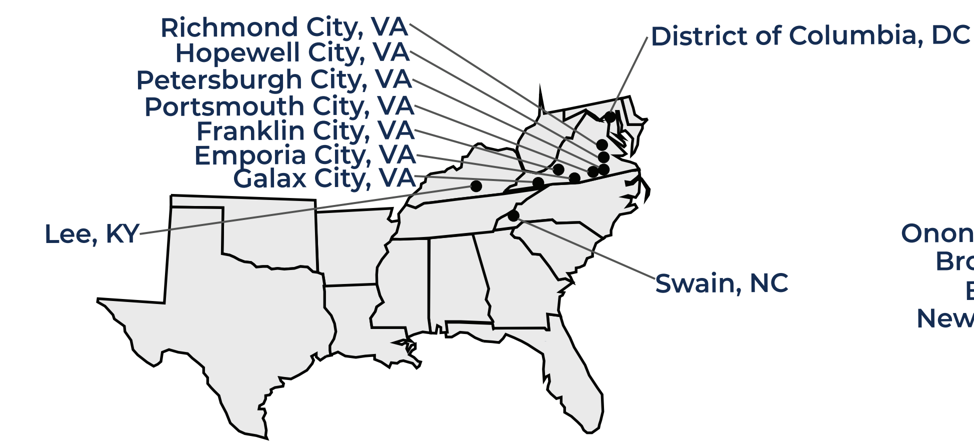
#### Western States
#### n = 109,840



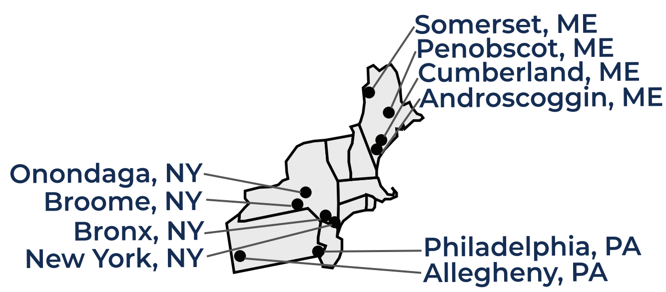

#### Midwestern States
#### n = 67,241




#### Southern States
#### n = 188,312




#### Northeastern States
#### n = 78,950




See page 2 for table detailing naloxone utilization in EMS encounters for nonfatal overdoses and trends

# US counties with the highest rates of naloxone utilization in EMS encounters for nonfatal overdoses per 10,000 population
## January 1, 2024 - July 31, 2025
## n = 444,343

### Western States
### n = 109,840

| County* | EMS encounters per 10,000 population |
|---|---|
| San Francisco, CA | 80.56 |
| Del Norte, CA | 74.01 |
| Denver, CO | 73.25 |
| Lassen, CA | 68.96 |
| Rio Arriba, NM | 67.50 |
| Taos, NM | 55.23 |
| Santa Fe, NM | 53.83 |
| Glacier, MT | 51.49 |
| Amador, CA | 50.40 |
| Anchorage Mun., AK | 48.00 |

### Midwestern States
### n = 67,241

| County* | EMS encounters per 10,000 population |
|---|---|
| Mahnomen, MN | 91.36 |
| Menominee, WI | 70.39 |
| Milwaukee, WI | 38.12 |
| Reno, KS | 37.87 |
| Ramsey, MN | 37.51 |
| Sawyer, WI | 35.93 |
| Muskegon, MI | 35.31 |
| Atchinson, KS | 33.72 |
| Hennepin, MN | 33.57 |
| Forest, WI | 33.48 |

### Southern States
### n = 188,312

| County* | EMS encounters per 10,000 population |
|---|---|
| District of Columbia, DC | 139.12 |
| Galax City, VA | 90.53 |
| Lee, KY | 88.06 |
| Richmond City, VA | 79.19 |
| Swain, NC | 73.35 |
| Petersburg City, VA | 71.93 |
| Portsmouth City, VA | 66.25 |
| Hopewell City, VA | 63.46 |
| Franklin City, VA | 62.56 |
| Emporia City, VA | 58.97 |

### Northeastern States
### n = 78,950

| County* | EMS encounters per 10,000 population |
|---|---|
| Philadelphia, PA | 67.29 |
| Bronx, NY | 54.46 |
| New York, NY | 48.13 |
| Somerset, ME | 38.91 |
| Androscoggin, ME | 38.05 |
| Broome, NY | 37.22 |
| Penobscot, ME | 36.73 |
| Onondaga, NY | 36.34 |
| Cumberland, ME | 35.76 |
| Allegheny, PA | 34.29 |

*Note: Colors reflect EMS encounters grouped by state

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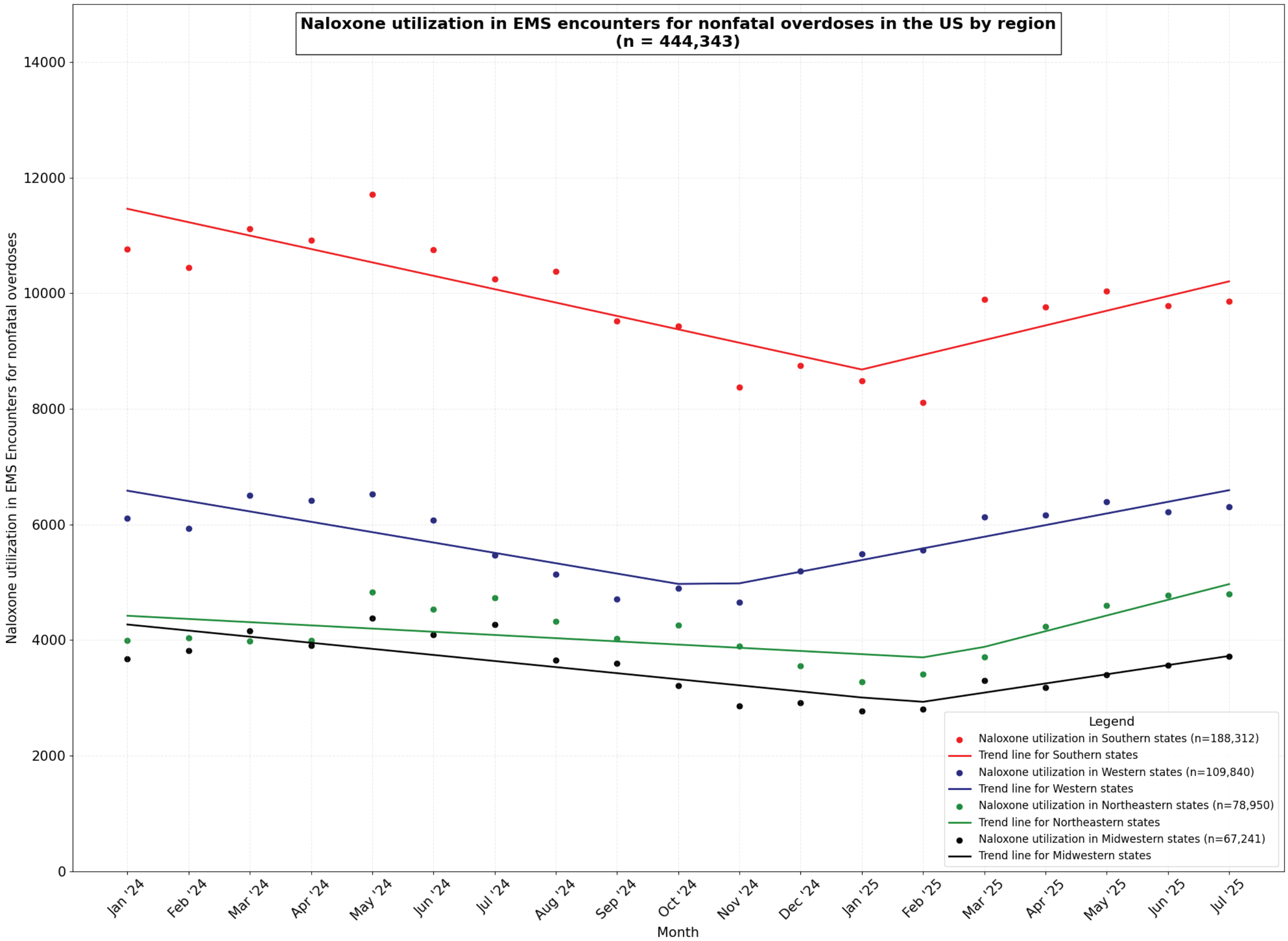
# Trends** in naloxone utilization in EMS encounters for nonfatal overdoses in the US by month
# January 1, 2024 - July 31, 2025
# n = 444,343




Southern states:
The data shows the naloxone utilization in EMS encounters for nonfatal overdoses significantly decreased from January 2024 to January 2025 (β=-0.02, SE=0.005, p=0.0005) and then significantly increased through July 2025 (β=0.05, SE=0.016, p=0.006).

Western states:
The data shows the naloxone utilization in EMS encounters for nonfatal overdoses significantly decreased from January 2024 to October 2024 (β=-0.03, SE=0.008, p=0.0012) and then significantly increased through July 2025 (β=0.07, SE=0.011, p=0.00006).

Northeastern states:
The data shows the naloxone utilization in EMS encounters for nonfatal overdoses significantly decreased from January 2024 to February 2025 (β=-0.01, SE=0.006, p=0.048) and then significantly increased through July 2025 (β=0.08, SE=0.03, p=0.023)

Midwestern states:
The data shows the naloxone utilization in EMS encounters for nonfatal overdoses significantly decreased from January 2024 to February 2025 (β=-0.03, SE=0.006, p=0.0006) and then significantly increased through July 2025 (β=0.08, SE=0.03, p=0.018).

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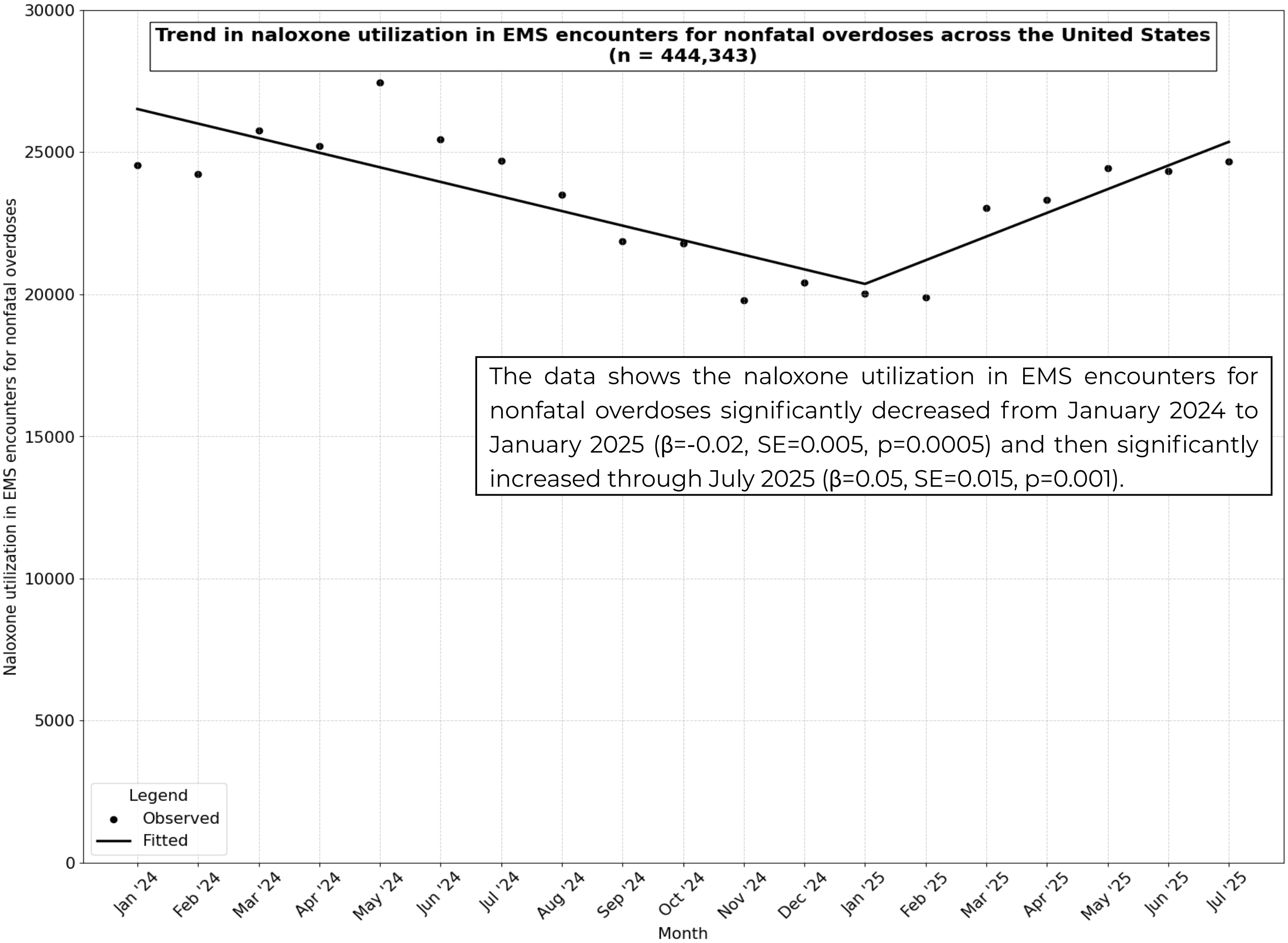


**Methodology:** Trends in naloxone utilization in EMS encounters for nonfatal overdoses were examined using joinpoint regression also known as broken line, piecewise, multiphase or segmented regression. This method fits weighted least-square regression models to EMS encounters on a log transformed scale. It also uses Monte Carlo permutation tests with a Bonferroni correction for multiple testing and identifies models with the best-fit set of joinpoints. These are points ( or knots) in trends that indicate significant shifting points. Poisson models were specified under the assumption of non-constant variance or heterogeneity over time. Separate models were run for each US region and for the national total to detect region-specific trends. All regional and national trends were found to be statistically significant.

**Naloxone utilization in EMS encounters for nonfatal overdoses** were included if the patient complaint/narrative mentioned narcan, naloxone, evzio or klaxxado.

All dispatch types above follow the guidelines set by the National Emergency Medical Services Information System (NEMSIS).

Note: It is consistent with nonfatal overdoses reporting.

**Limitations:** Biospatial.io data reflect pre-hospital EMS encounters and do not include hospital outcomes, toxicology confirmation, medical history, or prescription information. Much of the data relies on clinical impressions, self-report, or bystander accounts. Additionally, naloxone utilization in EMS encounters for nonfatal overdoses may be underreported or misclassified.

75% of the data reported within 24 hours of event. Source: biospatial.io, 2025. NDEWS is funded by the National Institute on Drug Abuse to the University of Florida (MPI: Cottler (contact), Co-Is: Goldberger, Nixon, Striley), NYU Langone Health (MPI: Palamar), and Florida Atlantic University (Co-I: Barenholtz). Recommended citation: National Drug Early Warning System (NDEWS). (2025). Special Report (August 29, 2025). (NDEWS-2025-SR00038.5). Retrieved from https://ndews.org.