NDEWS Special Report

National Trends in EMS Encounters for Suspected Nonfatal Overdoses Involving Ketamine by Age Group January 1, 2023 - September 30, 2026

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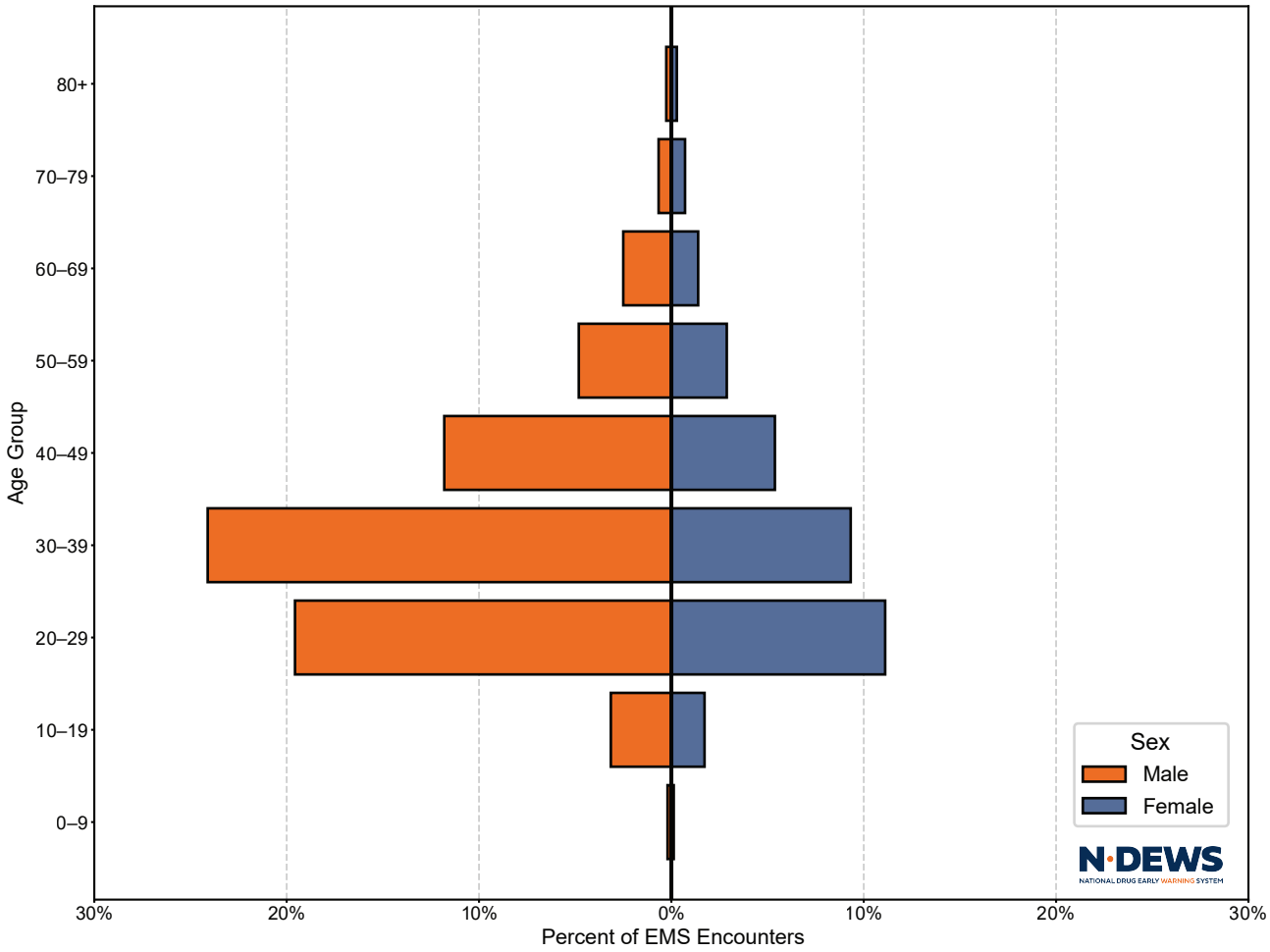
Nationally, 10,791 EMS encounters for suspected nonfatal overdoses involving ketamine were recorded from January 1, 2023, through September 30, 2026. The population pyramid below shows the distribution of encounters by age and sex. National trends in encounters among individuals aged 18–25 years and those aged 26 years and older were examined by quarter using Joinpoint regression to identify changes in temporal trends.

Population pyramid of EMS encounters for suspected nonfatal overdoses involving ketamine January 1, 2023 - September 30, 2026 (n=10,791)



Nationally, among EMS encounters for suspected nonfatal overdoses involving ketamine, the highest proportion of male encounters occurred among individuals aged 30–39 years, while the highest proportion of female encounters occurred among individuals aged 20–29 years.

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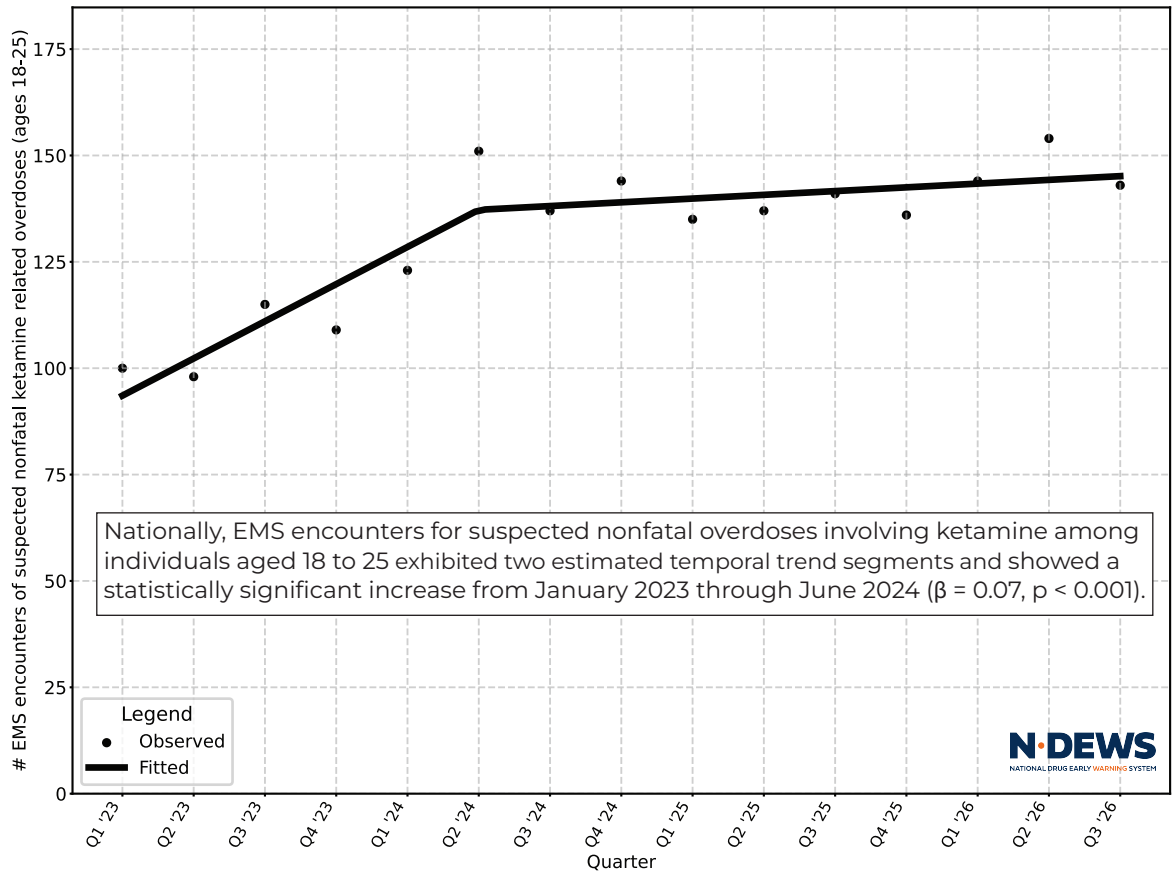
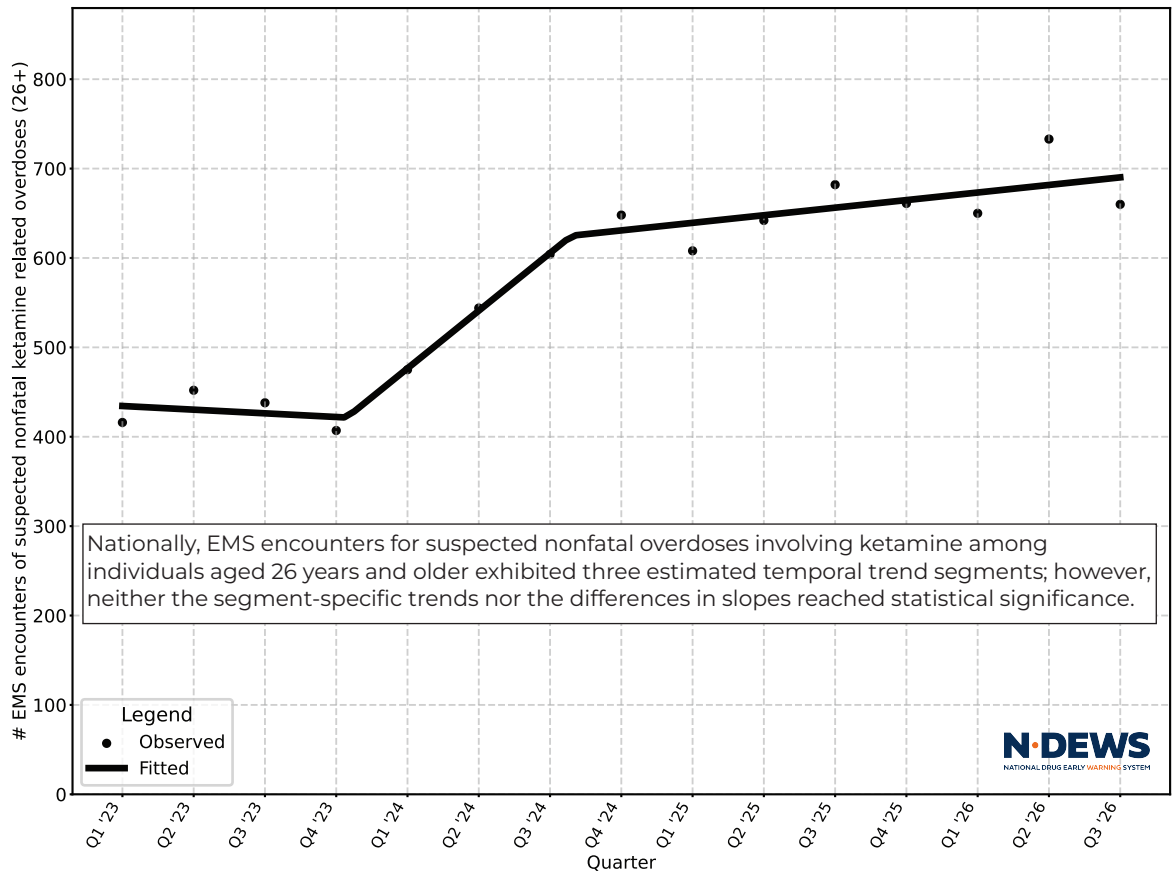
National trend of EMS encounters for suspected nonfatal overdoses involving ketamine ages 18-25
January 1, 2023 - September 30, 2026 (n=1,967)



National trend of EMS encounters for suspected nonfatal overdoses involving ketamine ages 26+
January 1, 2023 - September 30, 2026 (n=8,620)



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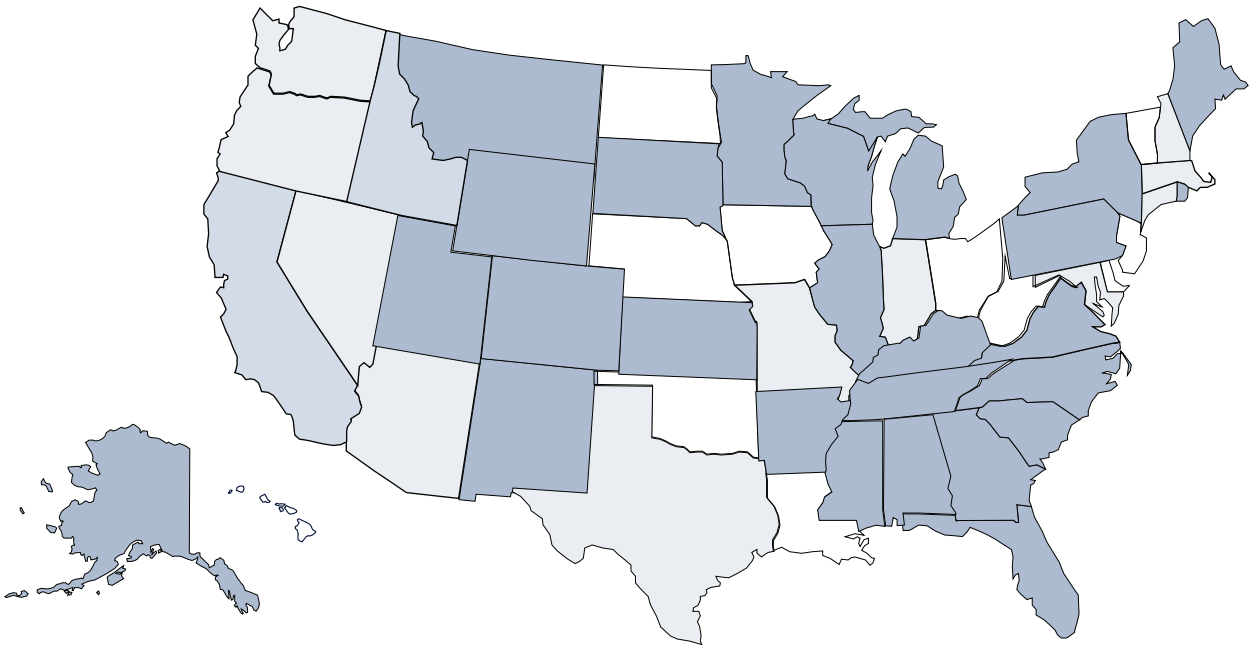
Map of National Underlying Event Coverage



Underlying Event Coverage Legend ☐ No Coverage ☐ 1%-33% ☐ 34%-66% ☐ 67%-99%

Methodology: The distribution of EMS encounters by age and sex is displayed using a population pyramid. Percentages were calculated relative to the total number of encounters included in the demographic analysis. Quarterly trends in EMS encounters were examined using Joinpoint regression. This method fits weighted least-squares regression models to log-transformed encounter counts to identify changes in temporal trends. The optimal number of joinpoints was determined using the Weighted Bayesian Information Criterion (WBIC). Joinpoints represent estimated changes in the slope of a temporal trend. Poisson variance was specified to account for non-constant variance in EMS encounter counts.

EMS encounters for suspected nonfatal overdoses involving ketamine from January 1, 2023, through September 30, 2026, were analyzed by age and sex. Encounters were identified using the Florida ESOOS Overdose syndrome definition and included documented mentions of ketamine in the patient complaint or narrative, including common misspellings. Only encounters involving emergency response services in which patient contact was made were included. Encounters in which ketamine was administered by EMS were excluded. Dispatch classifications follow National Emergency Medical Services Information System (NEMSIS) guidelines.

Limitations: biospatial.io data reflect pre-hospital EMS encounters and do not include hospital outcomes or toxicological confirmation. Much of the classification relies on clinical impressions, self-report, or bystander accounts. Additionally, EMS encounters involving suspected overdoses may be underreported, overreported, or misclassified. Underlying event coverage varies by state, with incomplete reporting in some states. States with less than 67% coverage are AZ, CA, CT, DE, IA, ID, IN, LA, MA, ND, NE, NH, NJ, NV, OH, OK, OR, TX, VT, WA, and WV.