



NEVADA DIVISION of PUBLIC
and BEHAVIORAL HEALTH



Nevada State Unintentional Drug Overdose Reporting System (SUDORS): A Comparison of Characteristics of Overdose Fatalities Based on Bystander Presence

Division of Public and Behavioral Health
State of Nevada Department of Human Services

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ABOUT THE DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

The Division of Public and Behavioral Health (DPBH) is one of five divisions within the Department of Health and Human Services, which falls within the Executive Branch of the State of Nevada. It is the primary provider of public health services in many rural areas of the state and provides certain public health services statewide, though the majority of public health services in urban areas are provided by local health authorities. The Division also provides a wide range of behavioral health services through civil and forensic inpatient psychiatric hospitals in northern and southern Nevada, rural outpatient clinics and programs, and other critical facilities.

ABOUT THE LARSON INSTITUTE

This publication was prepared by the Larson Institute for Health Impact. The Larson Institute, housed within the University of Nevada, Reno School of Public Health, translates academic research into actionable community practices that improve public health outcomes. Through community engagement and workforce development, we build public health capacity, support state systems and mobilize community partners to advance community health and well-being. Learn more by visiting us at larsoninstitute.org. For questions about this report, please contact the Larson Institute's Data Analytics Manager, Taylor Lensch, at tlensch@unr.edu.

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INTRODUCTION

Overview

The Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) is a program that supports state, territorial, county, and city health departments in obtaining more comprehensive and timelier data on overdose morbidity and mortality. The program is meant to enhance opioid overdose surveillance, reporting, and dissemination efforts to better inform prevention and early intervention strategies.

Purpose

The information contained in this special report highlights overdose mortality within the State of Nevada utilizing the State Unintentional Drug Overdose Reporting System (SUDORS) for the period January 1, 2019 to December 31, 2023. Analyses specifically compare fatalities where a bystander was present and not present to assess differences in overdose characteristics and outcomes. By examining potential differences in overdose patterns, substances involved, and contextual factors between these two groups, this report aims to better understand cross-jurisdictional overdose dynamics and identify implications for prevention, surveillance, and response efforts within Nevada.

Data Characteristics

Data Source: SUDORS uses death certificates and coroner/medical examiner reports (including post-mortem toxicology testing results) to capture detailed information on toxicology, death scene investigations, route of drug administration, and other risk factors that may be associated with a fatal overdose. **Case Definitions:** A death that occurred in Nevada where the decedent's place of residence was Nevada and was assigned any of the following ICD-10 underlying cause-of-death codes on the death certificate: X40–X44 (unintentional drug poisoning) or Y10–Y14 (drug poisoning of undetermined intent); or a death classified as a drug overdose death by the Medical Examiner/Coroner. **Limitations:** Data is delayed due to the time required to abstract data from multiple sources. Data completeness is dependent on information documented at time of death and therefore leads to large amounts of missing data.

Acknowledgements

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Questions or comments? Please contact Nevada OD2A's Epidemiologist, Taylor Lensch, PhD, MPH, at tlensch@unr.edu.

COMPARISON OF CHARACTERISTICS OF OVERDOSE DEATHS, BY BYSTANDER PRESENCE

Summary

There were 4,631 drug overdose deaths of unintentional or undetermined intent from January 2019 to December 2023 in the state of Nevada. Compared with decedents without a bystander present, those with a bystander present were more often in the 18–24 (9.0% vs. 4.3%) and 25–34 (21.5% vs. 18.7%) age groups, while bystander presence was lower for older decedents aged 65+ (11.3% vs. 7.1%). Decedents with a bystander present were also more likely to be female (33.9% vs. 24.7%), more commonly had less than a high school education (18.8% vs. 15.9%), and were more frequently Hispanic (19.2% vs. 15.6%) (Figures 1–4).

Deaths without a bystander present more frequently involved methamphetamine (61.3% vs. 51.0% with a bystander present). Opioid involvement was higher among bystander-present deaths (66.8% vs. 57.5%), and fentanyl contributed to a similar proportion of deaths in both groups (39.6% vs. 38.0%) (Figure 5).

The suspected routes of administration for substances among those with a bystander present were: smoking (21.4% vs. 27.2% without a bystander), snorting/sniffing (12.7% vs. 13.7%), oral ingestion (31.2% vs. 24.2%), and injection (12.3% vs. 14.8%) (Figure 6).

Regarding circumstances, the biggest differences observed between those with and without a bystander were an overdose that occurred in a household (72.5% with a bystander vs. 57.9% without), naloxone being administered (31.8% vs. 12.5%), experiencing homelessness (10.0% with a bystander vs. 21.0% without), and witnessed drug use (29.3% vs. 2.6%) (Figure 7).

Figure 1. Age distribution of overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

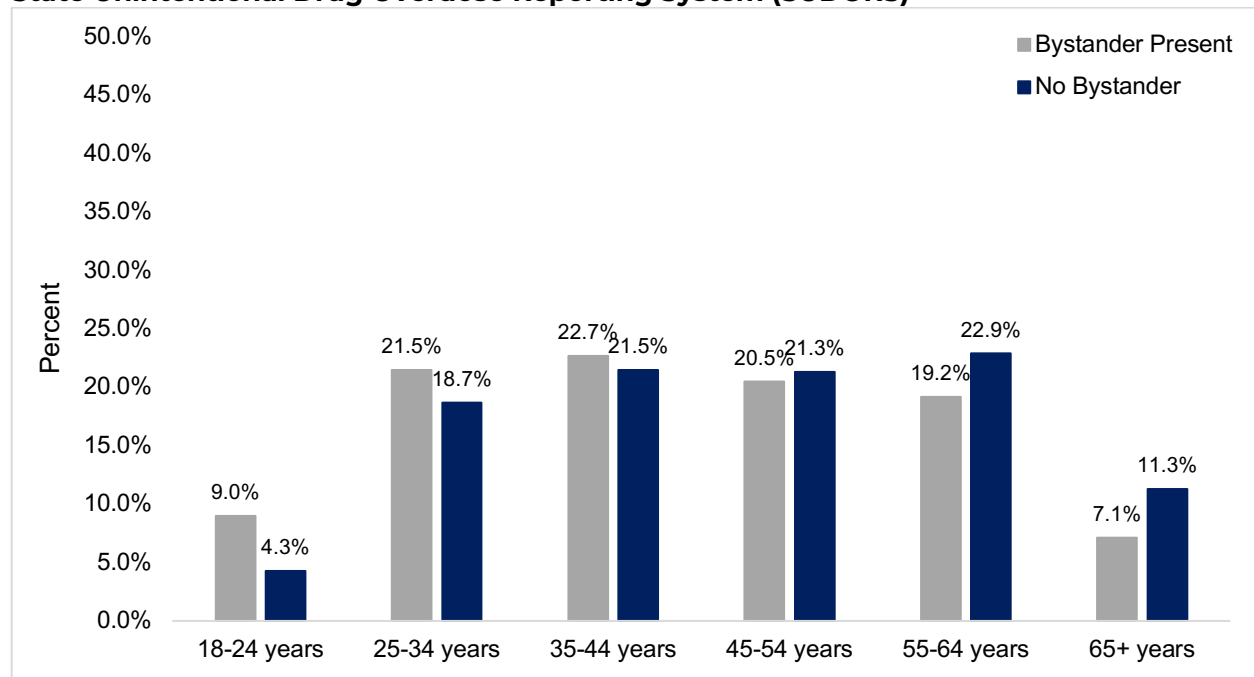


Figure 2. Sex distribution of overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

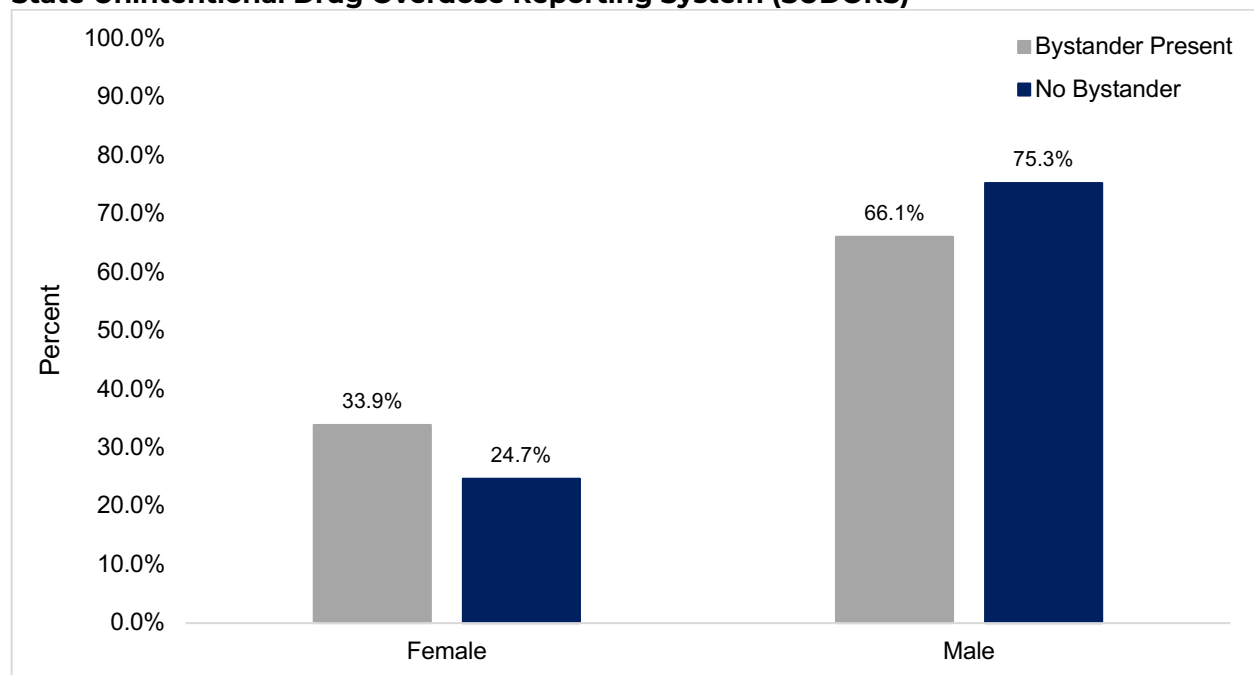


Figure 3. Education distribution of overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

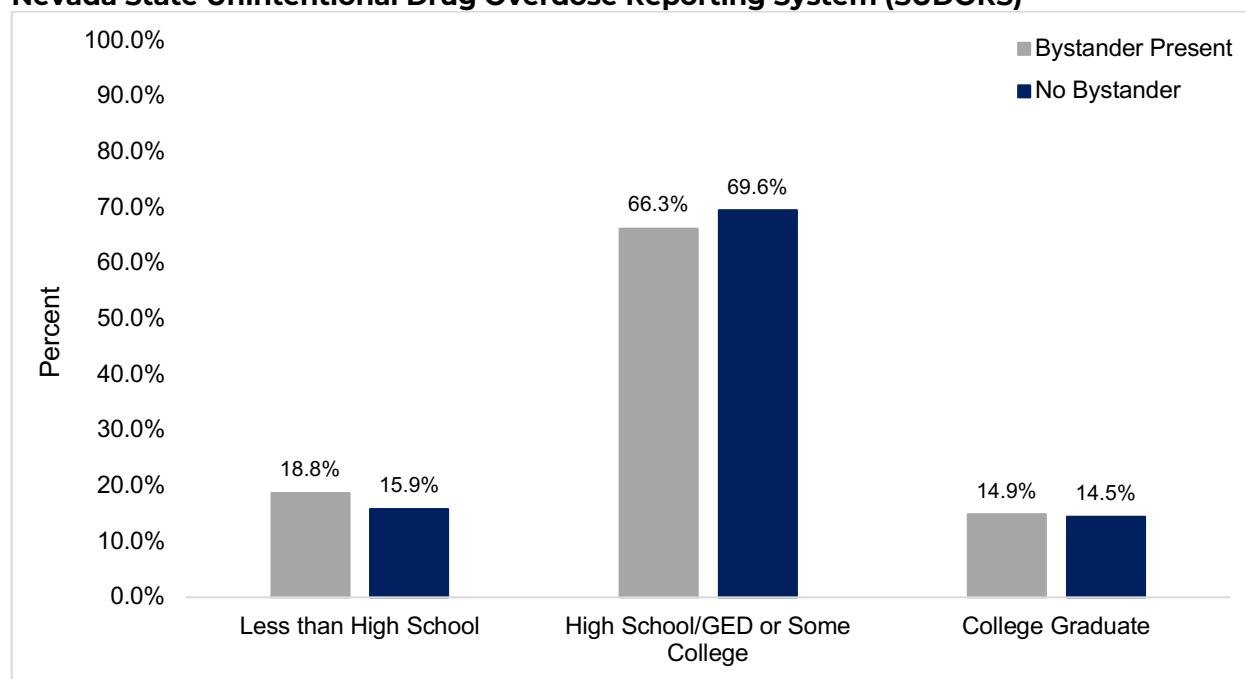


Figure 4. Race/ethnicity distribution of overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

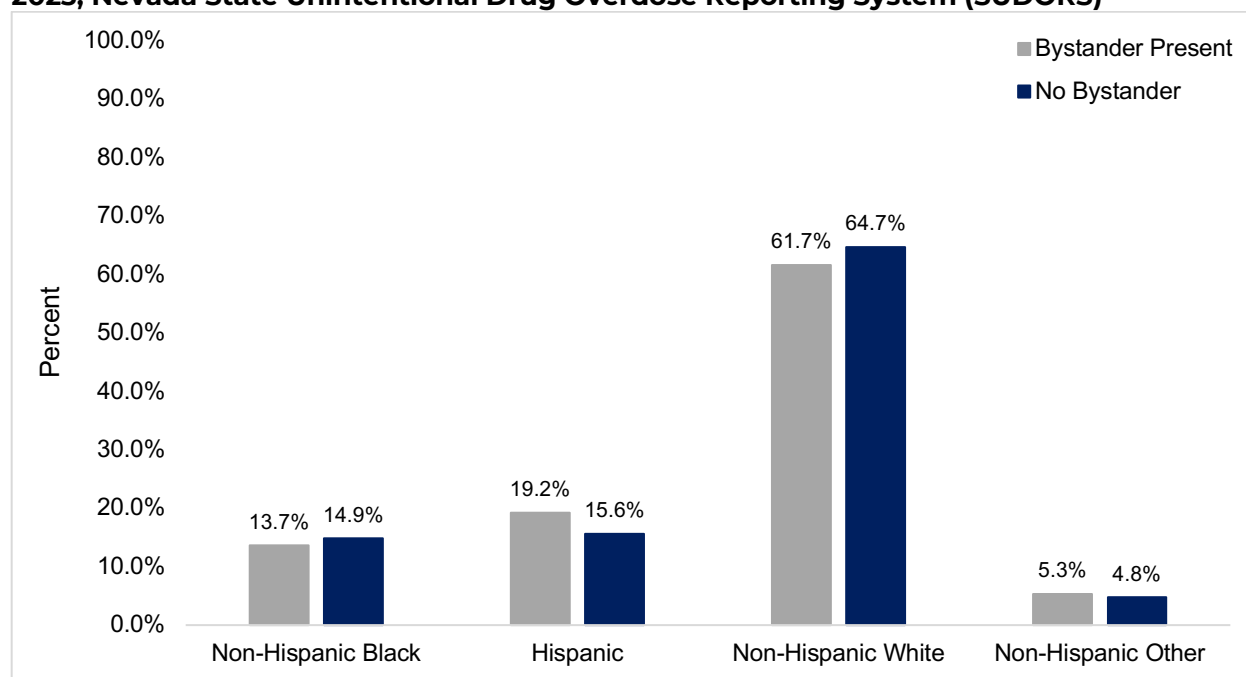
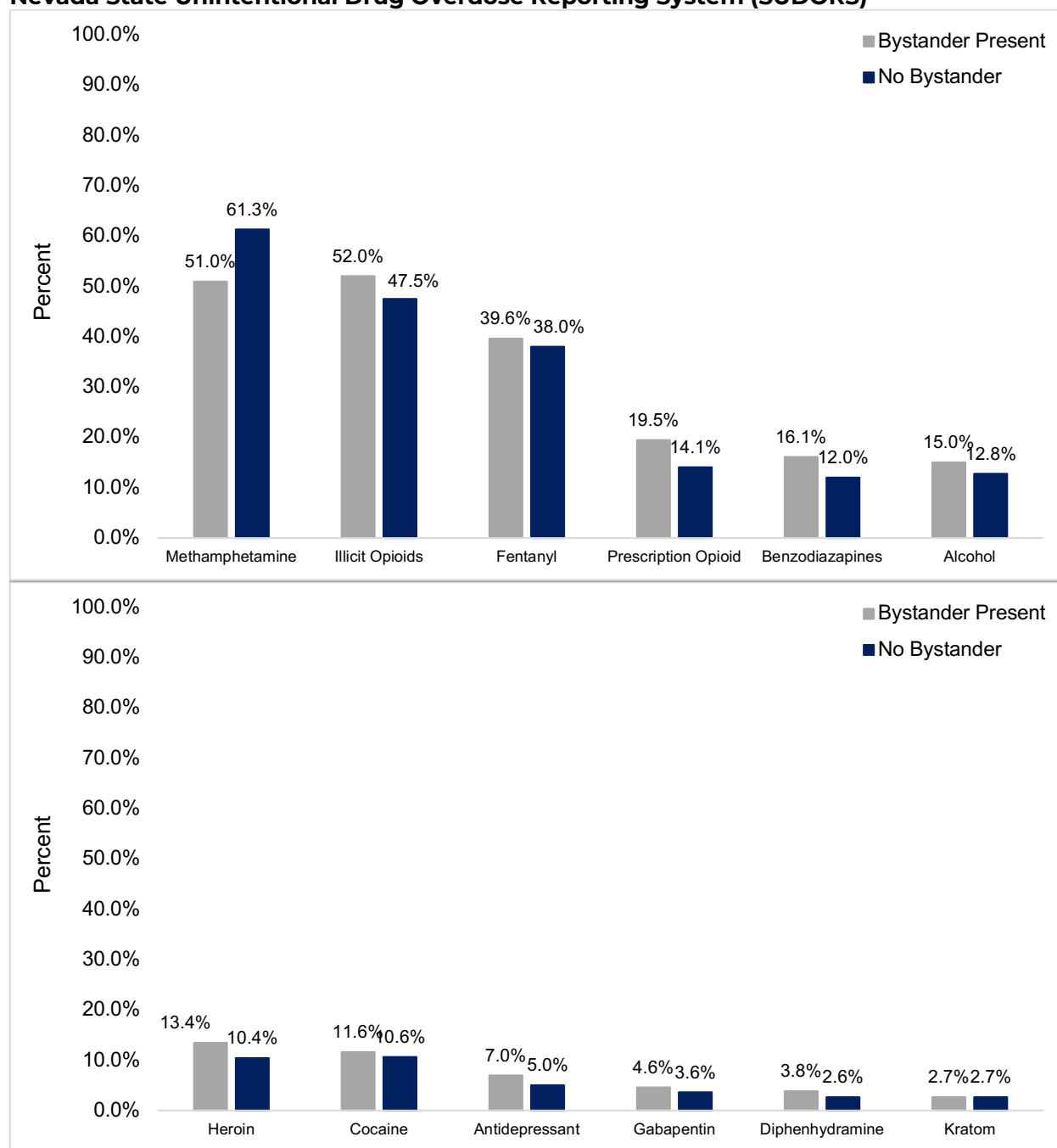
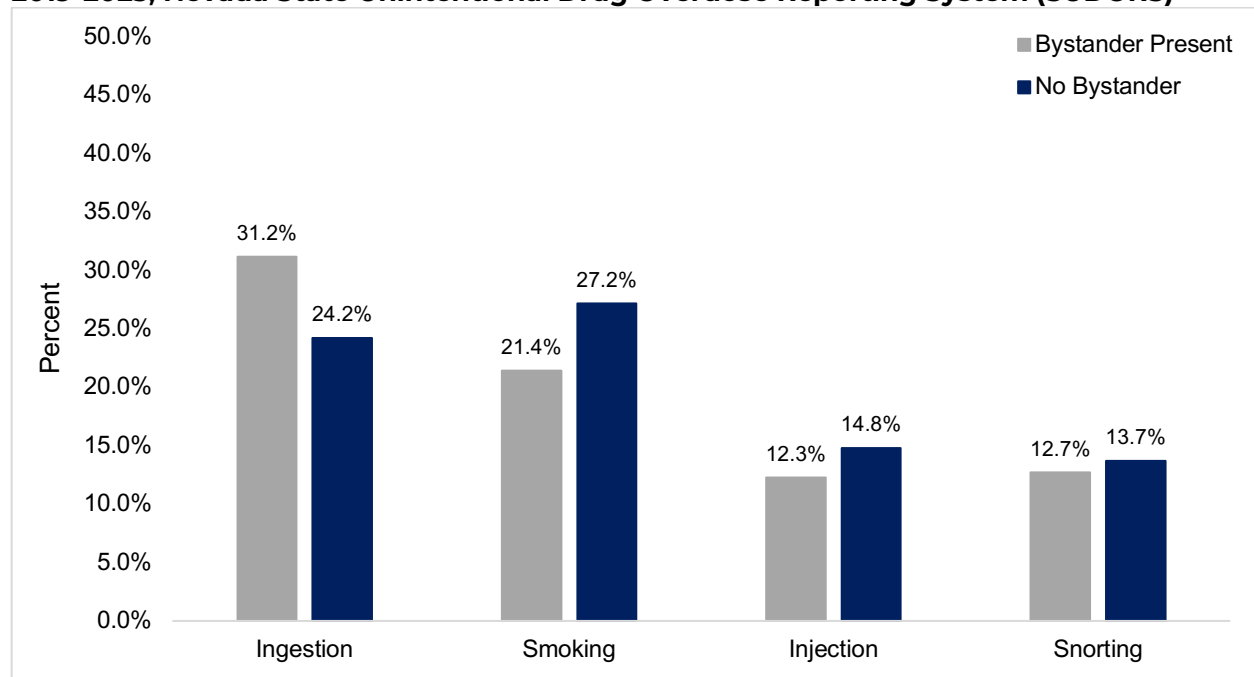


Figure 5. Substances involved in overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)



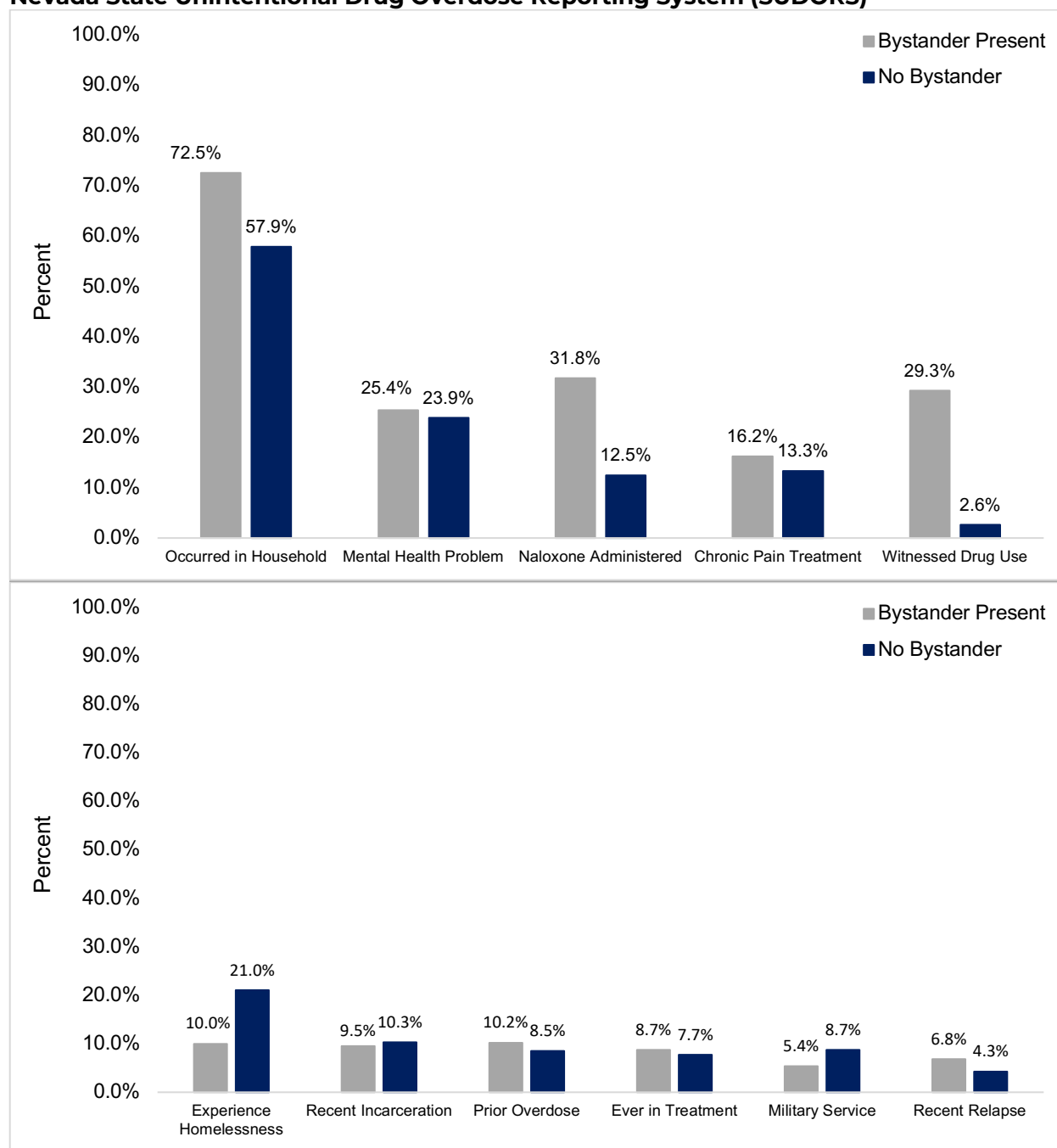
Note: Based on toxicology results for substances ruled by the Coroner/Medical Examiner as causing death. Substances are not mutually exclusive. Illicit opioid is defined as any opioid that is not medically used or prescribed.

Figure 6. Route of substance administration of overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)



Note: Suspected route of administration information is based on information documented during the death scene investigation, and due to limited information on the scene in some investigations, may underestimate the occurrence.

Figure 7. Circumstances involved in overdose deaths in Nevada by bystander presence, 2019-2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)



Note: Based on information documented during the death scene investigation, and due to limited information on scene in some investigations, these results may underestimate their occurrence. Percentages use the denominator of those who had known circumstances.

IMPLICATIONS

Substance use patterns differed between bystander-present and no-bystander deaths. Those without a bystander had higher stimulant involvement, including methamphetamine (61.3% vs. 51.0%). In contrast, opioid involvement was consistently higher among bystander-present deaths, including any opioids (66.8% vs. 57.5%), prescription opioids (19.5% vs. 14.1%), and heroin (13.4% vs. 10.4%). Fentanyl involvement was similar across groups (39.6% vs. 38.0%). Demographically, bystander-present deaths involved higher proportions of younger and female decedents, as well as Hispanic individuals.

The overdose setting and response also differed between groups. Deaths with a bystander present more commonly occurred in a household (72.5% vs. 57.9%), and naloxone was administered at a substantially higher rate (31.8% vs. 12.5%), reflecting the critical role of bystander intervention. Homelessness was more than twice as common among those without a bystander (21.0% vs. 10.0%), and witnessed drug use was far higher in bystander-present deaths (29.3% vs. 2.6%). Mental health problems, chronic pain treatment, prior overdose, and recent relapse were all more common in bystander-present deaths. Together, these patterns suggest that deaths without a bystander disproportionately occur in less stable, more isolated settings.

Overall Implication

When bystander presence is considered, two distinct overdose profiles emerge: deaths with a bystander present more often involve opioids, occur in household settings, and reflect greater structural stability, while deaths without a bystander are associated with higher stimulant involvement, greater housing instability, and substantially lower rates of naloxone administration. These patterns underscore the critical role of bystander intervention in overdose response and highlight the need to expand naloxone access and bystander education, particularly in settings where overdoses are less likely to be witnessed.

APPENDIX 1: DATA TABLES

Table 1. Demographic characteristics by bystander presence, 2019–2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

Characteristic	Bystander Present N	Bystander Present %	No Bystander N	No Bystander %
Age				
18-24 Years	190	9.0%	106	4.3%
25-34 Years	455	21.5%	462	18.7%
35-44 Years	481	22.7%	533	21.5%
45-54 Years	435	20.5%	527	21.3%
55-64 Years	406	19.2%	568	22.9%
65+ Years	151	7.1%	279	11.3%
Sex				
Female	729	33.9%	613	24.7%
Male	1420	66.1%	1869	75.3%
Education				
College Graduate	301	14.9%	323	18.7%
HS/GED or Some College	1338	66.3%	1550	66.1%
Less than HS	380	18.8%	353	15.2%
Race				
Black_NH	295	13.7%	371	14.9%
Hispanic	413	19.2%	388	15.6%
Other*_NH	114	5.3%	118	4.8%
White_NH	1327	61.7%	1605	64.7%

Note: Missing data excluded from percentage calculations.

* Other race includes Asian, Pacific Islander, Native American, Alaskan Native, those identifying as other race, or unknown race. NH=Non-Hispanic

Table 2. Substances involved and suspected routes of administration among overdose decedents by bystander presence, 2019–2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

Characteristic	Bystander Present N	Bystander Present %	No Bystander N	No Bystander %
Opioids Involved (Cause of Death)				
Any opioids	1435	66.8%	1426	57.5%
Fentanyl	852	39.6%	942	38.0%
Rx opioids	420	19.5%	351	14.1%
Heroin	289	13.4%	257	10.4%
Illicit opioids	1117	52.0%	1179	47.5%
Stimulants Involved (Cause of Death)				
Methamphetamine	1097	51.0%	1521	61.3%
Cocaine	249	11.6%	263	10.6%
Other Substances Involved (Cause of Death)				
Benzodiazepines	346	16.1%	297	12.0%
Alcohol	322	15.0%	318	12.8%
Antidepressants	151	7.0%	125	5.0%
Diphenhydramine	82	3.8%	64	2.6%
Gabapentin	99	4.6%	89	3.6%
Kratom	58	2.7%	66	2.7%
Suspected Routes of Administration				
Smoking	459	21.4%	674	27.2%
Ingestion	670	31.2%	600	24.2%
Injection	265	12.3%	367	14.8%
Snorting	272	12.7%	341	13.7%

Note: Substances are not mutually exclusive, and decedents may have had multiple substances listed as the cause of death, so individual counts may have exceeded the total and percentages may exceed 100%. Route of administration based on death investigation reports.

Table 3. Circumstances documented among overdose decedents by bystander presence, 2019–2023, Nevada State Unintentional Drug Overdose Reporting System (SUDORS)

Characteristic	Bystander Present N	Bystander Present %	No Bystander N	No Bystander %
Circumstances				
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Occurred in Household	1552	72.5%	1422	57.9%
Mental Health Problem	546	25.4%	592	23.9%
Naloxone Administered	684	31.8%	311	12.5%
Chronic Pain Treatment	349	16.2%	330	13.3%
Prior Overdose	219	10.2%	212	8.5%
Experiencing Homelessness	199	10.0%	464	21.0%
Witnessed Drug Use	383	29.3%	37	2.6%
Recent Incarceration	203	9.5%	253	10.3%
Ever in Treatment	186	8.7%	190	7.7%
Military Service	112	5.4%	201	8.7%
Recent Relapse	145	6.8%	106	4.3%

Note: Circumstances prior to death were not available for all cases and missing data were excluded. These findings likely underestimate the true proportion of case characteristics.