

Emergency Department Non-Fatal Polysubstance Overdose Trends in Texas

Texas Department of State Health
Services, Center for Health
Statistics, Agency Analytics Unit



TEXAS
Health and Human
Services

December 2021

Table of Contents

Table of Contents	1
1. Introduction	2
2. Emergency Department Non-Fatal Polysubstance Overdose Trends ..	3
Polysubstance Opioid Non-Fatal Overdose Emergency Department Visits	3
Multi-Drug Combination Non-Fatal Overdose Visits	6
3. Conclusion	9
List of Acronyms	10
References	11

1. Introduction

History of a drug overdose is a risk factor for many negative health outcomes. Among people who have experienced a non-fatal overdose, there is an increased risk of future overdose and a higher likelihood of fatal overdose compared to those who have not overdosed (Caudarella et al., 2016). From 2016–2019, Texas emergency departments (EDs) reported treating 35,940 opioid-related non-fatal overdoses. Almost 20 percent of these visits were for polysubstance overdoses, or overdoses that involve multiple substances.

Polysubstance use, which is the consumption of more than one drug at once, can be intentional or unintentional. Using opioids in combination with other drugs increases the risk of overdoses (Shah et al., 2007). The overlap of opioids with other substances can result in unpredictable consequences and render current treatment and intervention strategies ineffective, which makes understanding the characteristics of both polysubstance use and non-fatal overdose in Texas crucial to reduce morbidity and mortality related to polysubstance use.

This report discusses physician-diagnosed non-fatal polysubstance overdose ED visits in Texas involving at least one opioid in combination with either one or more other opioid or drug. Data from 2016 to 2019 include patients who were seen in a hospital-based ED and those who were seen either at a hospital (inpatient) or by another medical provider (outpatient). The data do not include free-standing emergency centers licensed under the Texas Health and Safety Code, Chapter 254.

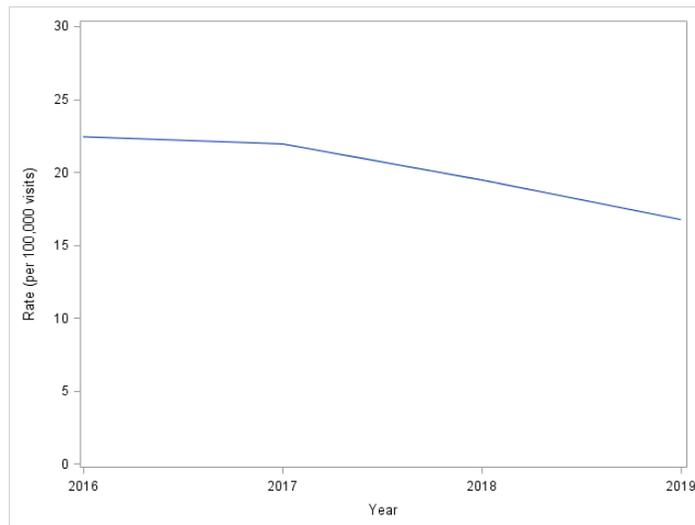
While the total number and rates of visits to EDs for non-fatal polysubstance overdoses slightly decreased since 2016 in Texas, visits and rates for some types of non-fatal polysubstance overdoses increased. For example, the rate of visits for co-involvement of heroin with cocaine or psychostimulants steadily increased since 2016.

2. Emergency Department Non-Fatal Polysubstance Overdose Trends

Polysubstance Opioid Non-Fatal Overdose Emergency Department Visits

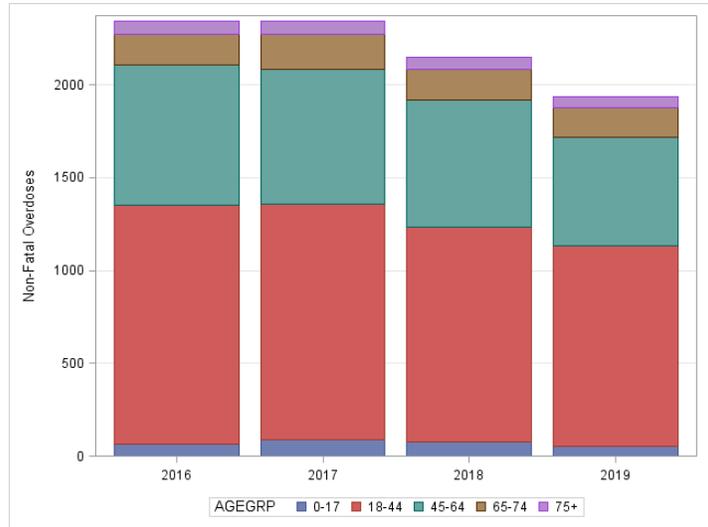
Overall, the number of non-fatal polysubstance opioid overdose visits remained elevated and stable throughout 2016 and 2017, with a slight decrease in 2018 and 2019. Non-fatal polysubstance opioid overdose visits were most common among people aged 18 to 44, followed by those aged 45 to 64, and those aged 65 to 74.

Figure 1. Non-Fatal Opioid Polysubstance Overdose Rates, 2016–2019



All data were derived from the Texas Health Care Information Collection program (THCIC).

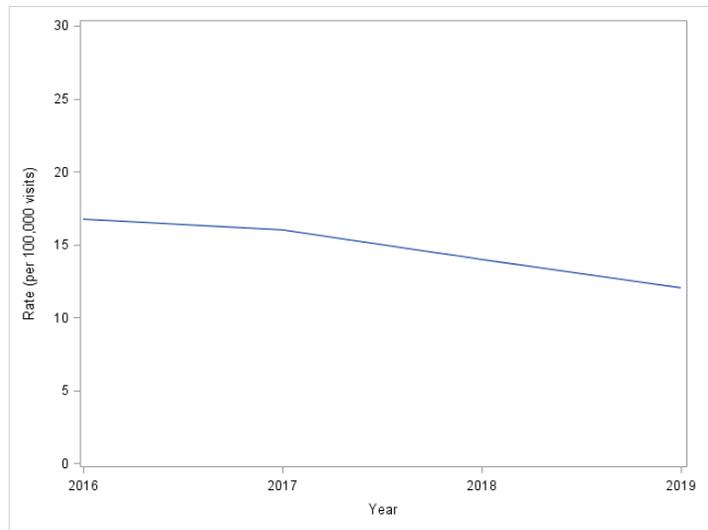
Figure 2. Non-Fatal Opioid Polysubstance Overdoses by Age Group, 2016–2019



All data were derived from THCIC.

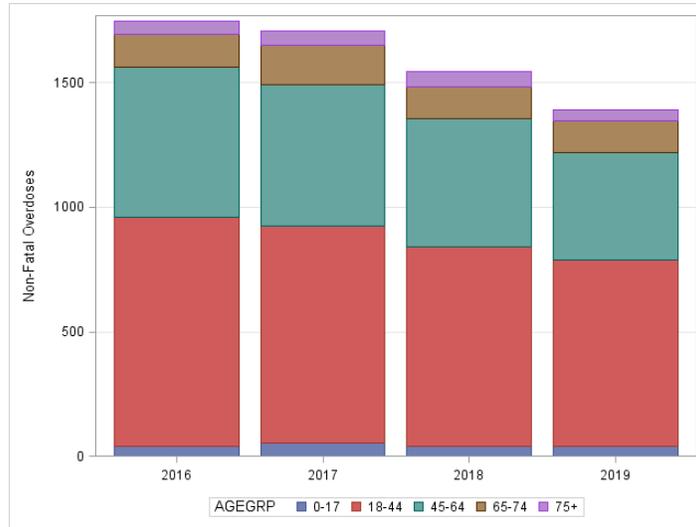
Non-fatal overdose visits involving a combination of at least one opioid and one non-opioid substance, such as cocaine, amphetamines, and benzodiazepines, slightly decreased from 2016 to 2019. These overdose visits were most common among people older than age 18 — with the greatest numbers seen among those aged 18 to 44, followed by those aged 45 to 64, and those aged 65 to 74.

Figure 3. Non-Fatal Overdoses: Opioids in Combination with Non-Opioid Substances, 2016–2019



All data were derived from THCIC.

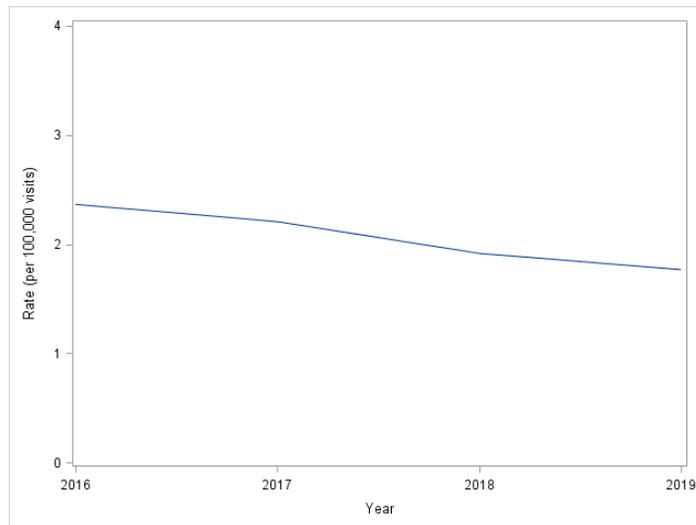
Figure 4. Non-Fatal Overdoses: Opioids in Combination with Non-Opioid Substances by Age Group, 2016-2019



All data were derived from THCIC.

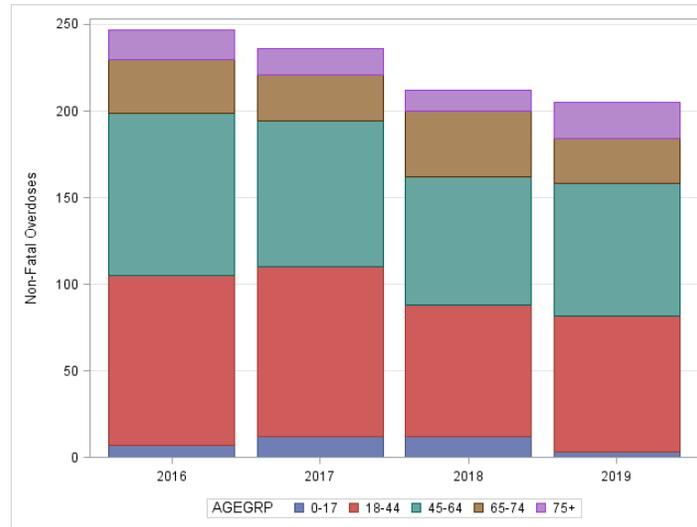
Instances of overdose visits involving multiple opioids also decreased from 2016 to 2019, with a rate of approximately 2 individuals per 100,000 in 2019. Compared to overdose visits involving opioids and non-opioid substances, there were fewer visits for non-fatal multi-opioid overdoses. Most of these overdoses occurred among those aged 18 to 44 and those aged 45 to 64.

Figure 5. Multi-Opioid Non-Fatal Overdose Rates, 2016–2019



All data were derived from THCIC.

Figure 6. Multi-Opioid Non-Fatal Overdoses by Age Group, 2016–2019

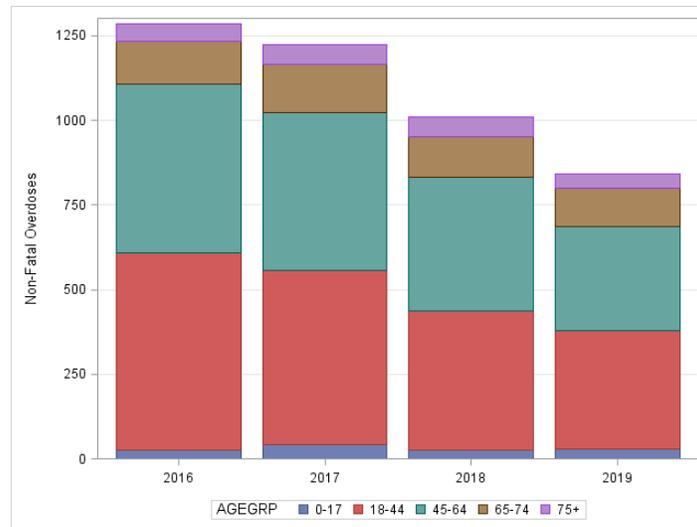


All data were derived from THCIC.

Multi-Drug Combination Non-Fatal Overdose Visits

Non-fatal overdose visits involving a combination of opioids and benzodiazepines were the most common drug combination seen in hospital-based EDs, but this type of overdose visit has decreased since 2016. Like overall trends, these overdoses were most common among people between 18 and 64 years of age.

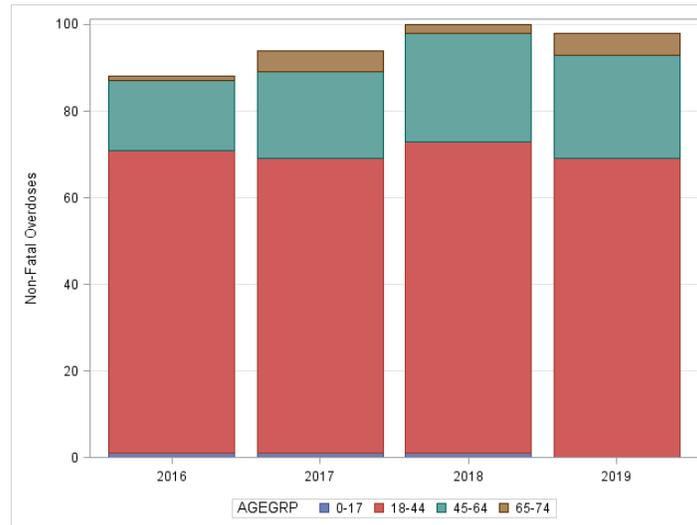
Figure 7. Non-Fatal Overdoses: Opioids in Combination with Benzodiazepines by Age Group, 2016–2019



All data were derived from THCIC.

Overdose visits and rates for heroin in combination with cocaine remained relatively stable, with the highest number of visits and rate recorded in 2018.

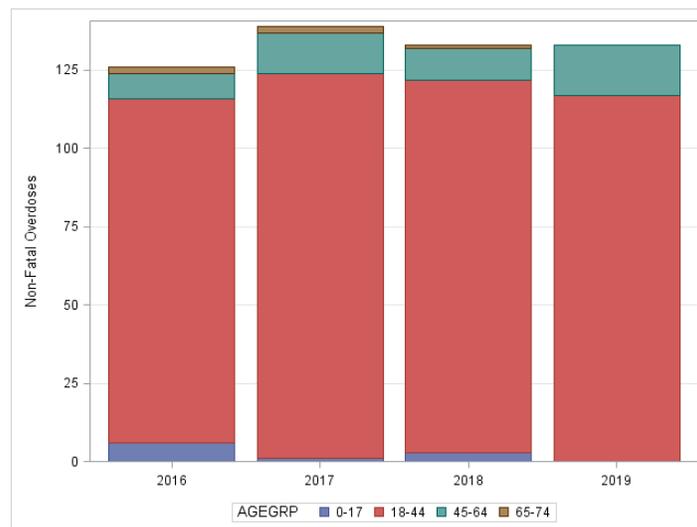
Figure 8. Non-Fatal Overdoses: Heroin in Combination with Cocaine by Age Group, 2016–2019



All data were derived from THCIC.

Overdose visits for heroin in combination with benzodiazepines remained relatively stable since 2016, with the highest number of visits recorded in 2017. The vast majority of this type of overdose visit occurred among those aged 18 to 44 years of age.

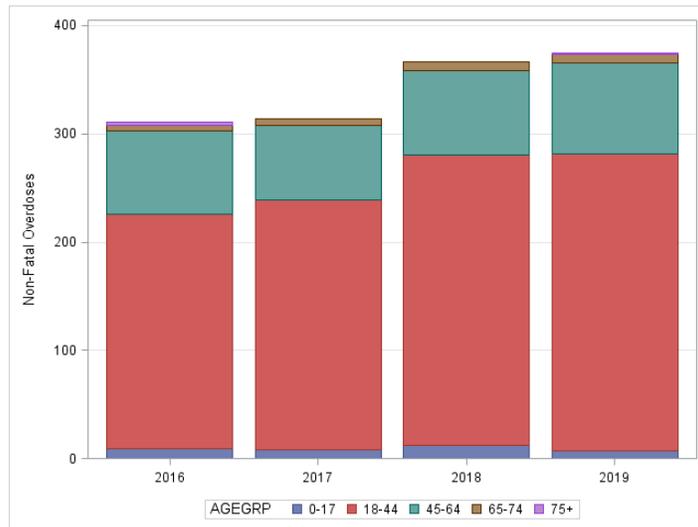
Figure 9. Non-Fatal Overdoses: Heroin in Combination with Benzodiazepines by Age Group, 2016–2019



All data were derived from THCIC.

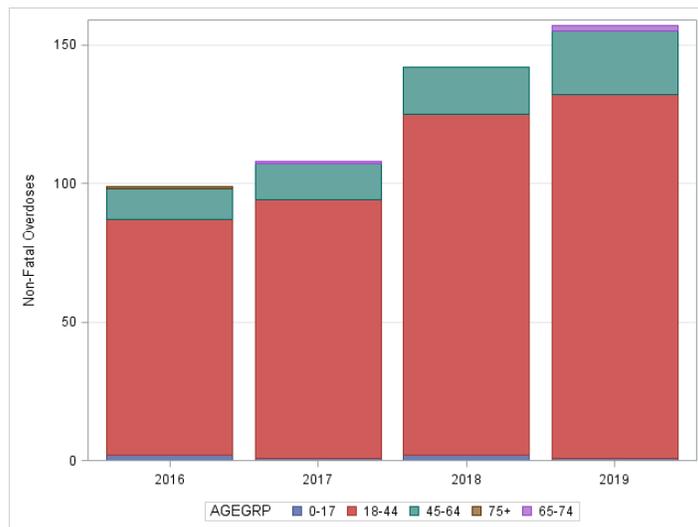
Unlike the trends exhibited by other polysubstance combinations, non-fatal overdose visit rates involving a combination of opioids and psychostimulants slightly increased from 2.98 per 100,000 in 2016 to 3.25 per 100,000 in 2019. Most of these overdoses occurred among individuals aged 18 to 44. Similarly, the rate of overdose visits involving heroin in combination with psychostimulants also slightly increased during this period from 0.95 per 100,000 in 2016 to 1.37 per 100,000 in 2019.

Figure 10. Non-Fatal Overdoses: Opioids in Combination with Psychostimulants by Age Group, 2016–2019



All data were derived from THCIC.

Figure 11. Non-Fatal Overdoses: Heroin in Combination with Psychostimulants by Age Group, 2016–2019



All data were derived from THCIC.

3. Conclusion

From 2016 to 2019, non-fatal overdoses involving opioids in combination with cocaine, amphetamines, and psychostimulants treated in Texas EDs increased, while those involving opioids in combination with benzodiazepines decreased.

While the decreased number of opioid-related visits that also involved benzodiazepines may reflect safe-prescribing practices motivated by recent legislation and intervention campaigns, it remains crucial that these practices continue to be enforced.

The rise in ED visits related to opioid polysubstance use in combination with stimulant-type drugs is of particular concern. Fatal overdoses involving opioids and these substances are also on the rise in Texas over the last several years, so further surveillance of this kind of substance use is essential for understanding and managing the trajectory of opioid-related overdose in Texas.

The surveillance of suspected non-fatal overdoses involving opioid polysubstance use is an important component in the overall fight against the opioid epidemic. Understanding the role of opioid co-involvement with other opioids and other substances in driving non-fatal overdoses can help generate collaborative efforts among medical providers, law enforcement, social workers, and substance use specialists that can reduce the risk of subsequent overdoses and death.

List of Acronyms

Acronym	Full Name
ED	Emergency Department
THCIC	Texas Health Care Information Collection

References

- Caudarella, A., Dong, H., Milloy, M. J., Kerr, T., Wood, E., & Hayashi, K. (2016). Non-fatal overdose as a risk factor for subsequent fatal overdose among people who inject drugs. *Drug and Alcohol Dependence, 162*, 51–55.
<https://doi.org/10.1016/j.drugalcdep.2016.02.024>
- Shah, N. G., Lathrop, S. L., Reichard, R. R., & Landen, M. G. (2008). Unintentional drug overdose death trends in New Mexico, USA, 1990–2005: Combinations of heroin, cocaine, prescription opioids and alcohol. *Addiction, 103*(1), 126–136.
<https://doi.org/10.1111/j.1360-0443.2007.02054.x>