

# **Retrospective Analysis of Drug Overdose Deaths in Allen County, Indiana from 2008-2023**

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## **Introduction:**

Deaths caused by drug overdose have been rising at the national, state, and local level. Research on drug overdose deaths at the local level is insufficient and not as well understood. The aim of this study is to analyze and assess the drug overdose deaths in Allen County, Indiana from 2008-2023.

## **Methods:**

Data was collected from Allen County Coroner's Reports and Allen County Department of Health death certificates on 1,435 decedents. Data included decedent demographic information, employment, education level, and toxicology report results. Data was entered into a spreadsheet for analysis. Chi-squared analyses were completed to assess significance and descriptive statistics were completed.

## **Results:**

1435 drug overdose deaths were identified (1,298 accidental, 110 intentional, 27 undetermined) with a median age of death of 39. 66.4% of deaths were males. Multiple substances were found in nearly 67% of decedents. Race and ethnicity data reflected anticipated results for Allen County based on census data. Deaths in the study period tended to be accidental (83.6%) and most decedents had a high school education or less (71.1%) and were currently employed individuals (75.7%). Naloxone was found in twice as many toxicology reports after policy change occurred in 2015. There was a significant relationship between the age and manner of death in males and females with ages 64+ being more likely to die from an intentional overdose than those under 64,  $X^2 = 49.7$ ,  $p < 0.00001$ .

## **Conclusion:**

Governments can have an impact on drug overdose outcomes through policy change if demographic and locational information is better understood and resources are allocated to at-risk populations. Education efforts should be focused on those with a high school education or less, additional attention should be made for those ages 64+, and Naloxone distribution should be major points of emphasis going forward.