

# Trends in United States Adolescent and Young Adult Overdose Fatalities, 1999-2023

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## Introduction/Objectives

Long-term trends in US overdose fatalities among adolescents and young adults (AYAs) aged 10-24, especially 10-14-year-olds, are poorly described in the literature.

We aimed to:

1) Develop an interactive data visualization application to enhance researcher and community member ability to interact with youth overdose data, creating demonstrative figures

2) Describe and compare rates of change over time for fentanyl-related overdoses among youth aged 10-24 by age and racial/ethnic groups

## Methods

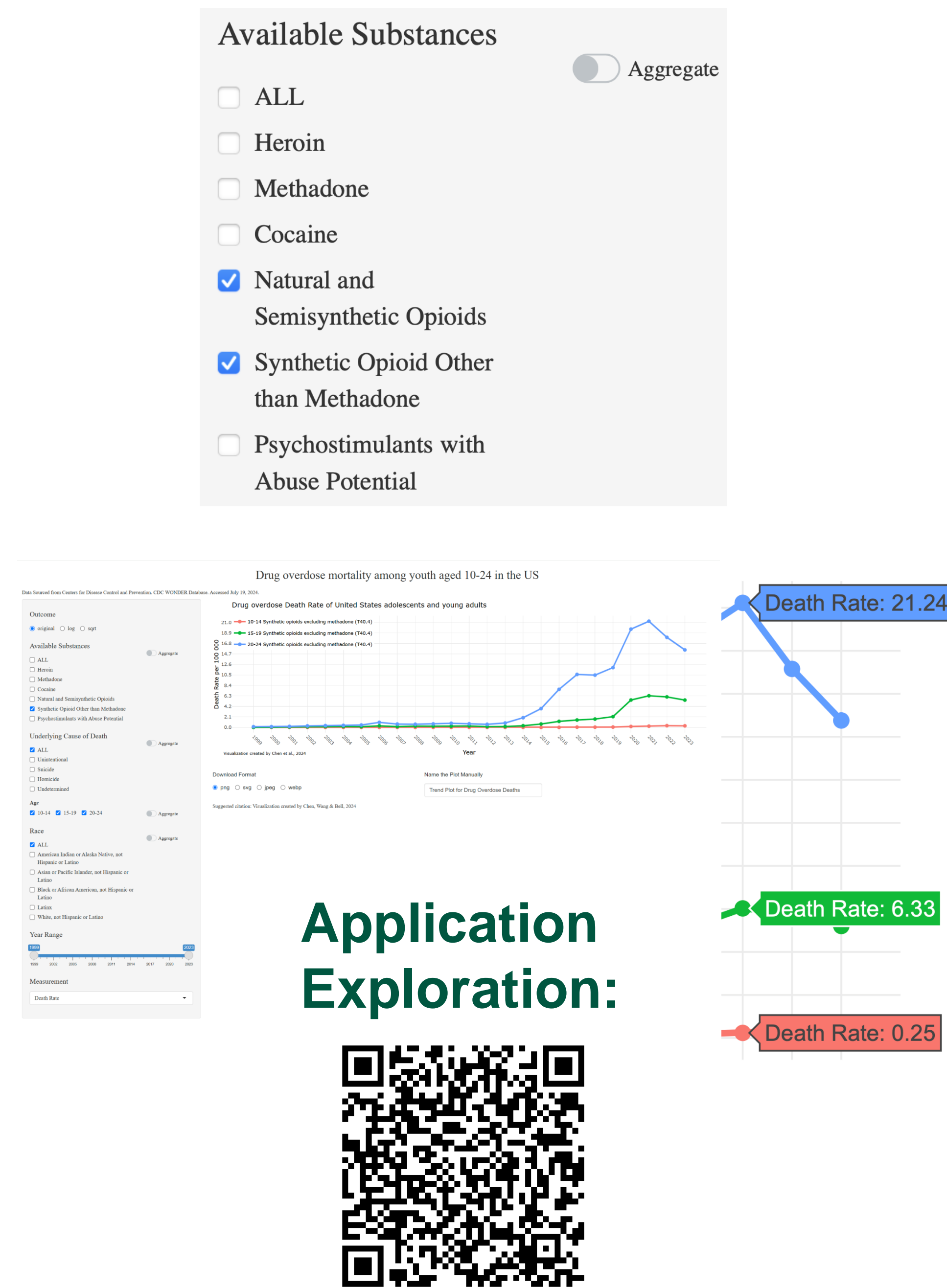
- Data source: CDC WONDER
- Application development: R shiny
- Analysis: R 4.3.2; linear regression to establish rates of change, Z-tests and non-parametric bootstrapping to compare rates of change

## Acknowledgments

**Chen:** UTHSC Biostatistics, Epidemiology, and Research Design Unit's Biomedical Data Science Summer Internship  
**Seiters:** UTHSC Medical Student Research Fellowship

## Results

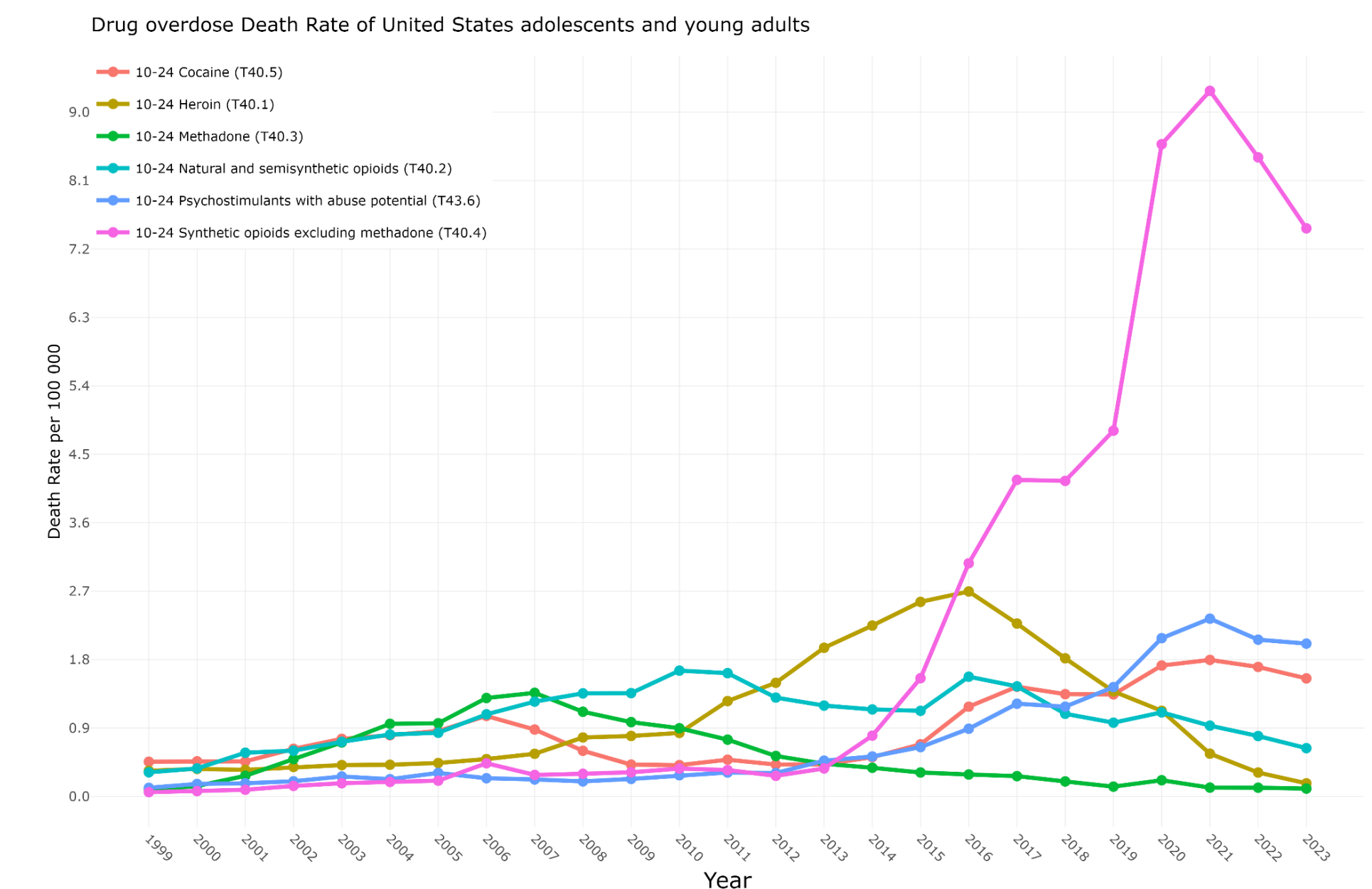
Shiny app interface overview:



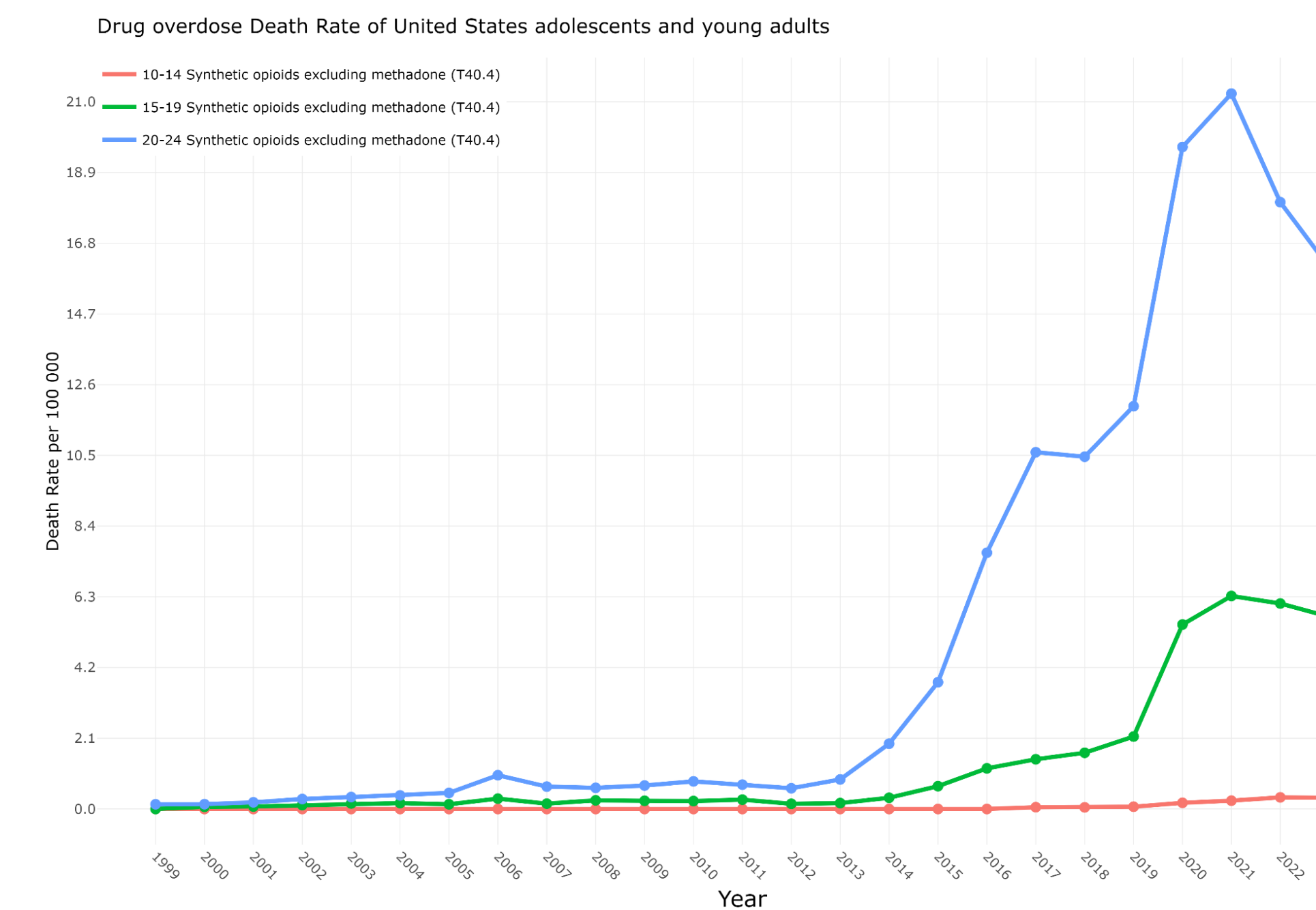
## Application Exploration:



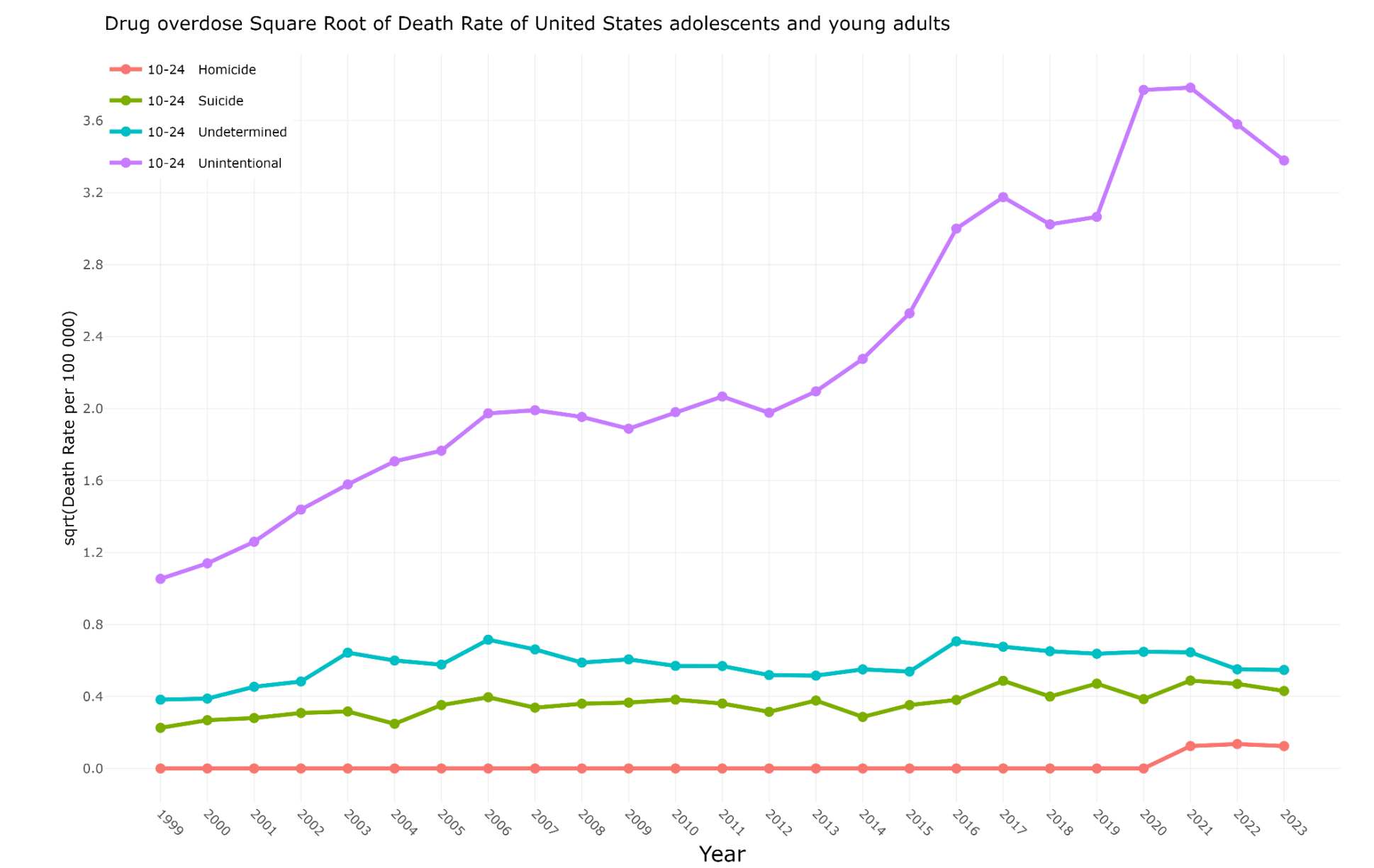
For youth aged 10-24, synthetic opioids (mainly illicitly manufactured fentanyl, IMFs) have been the main cause of drug overdose death since 2016.



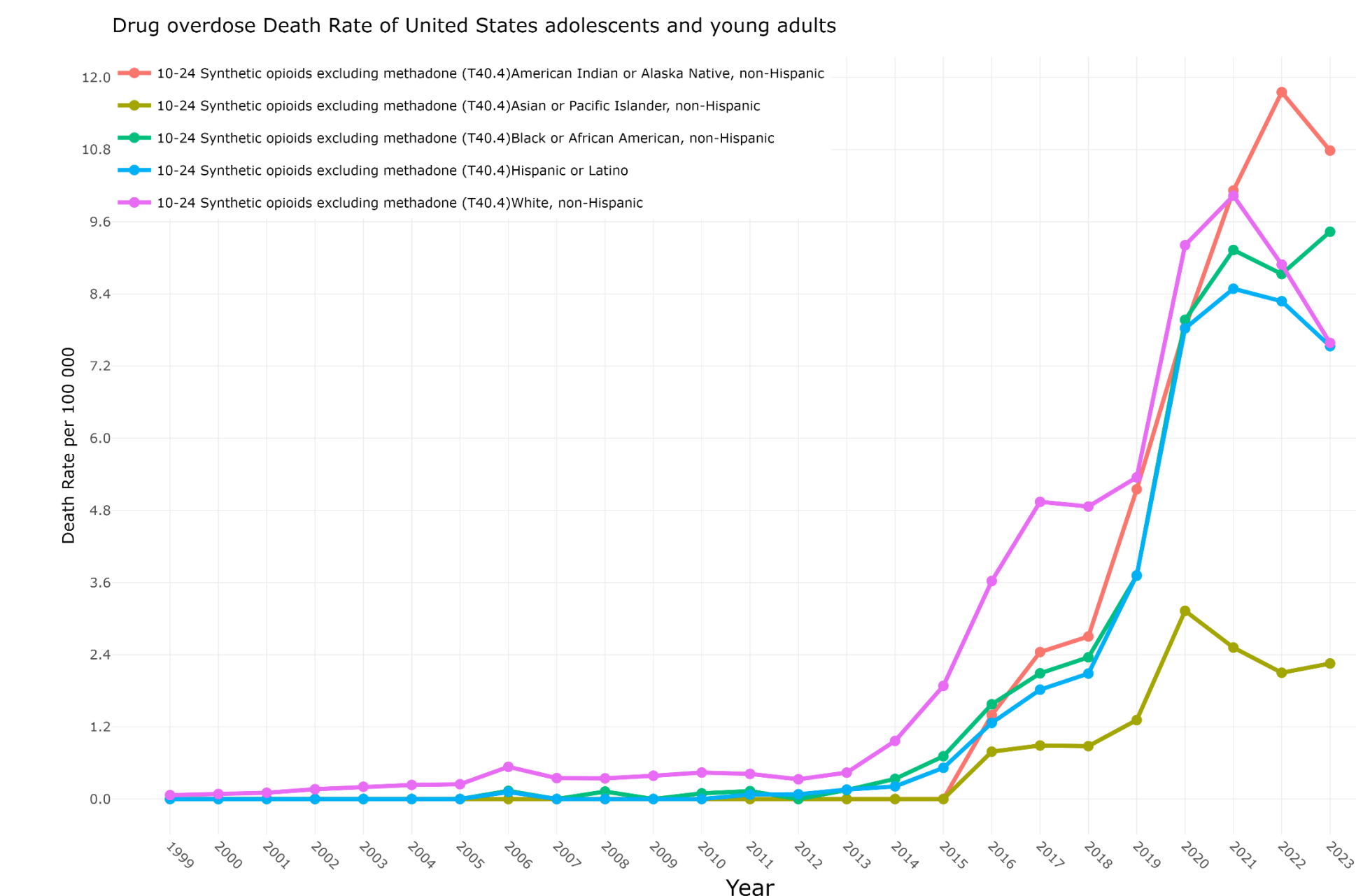
IMF-related death rates in youth aged 20-24 years increased faster than younger AYA age groups and remain higher despite recent decreases.



Of 74,599 overdose deaths among 10-24-year-olds, 91.14% were diagnosed as unintentional, 2.87% were suicides, and 0.3% were homicides.



Decreases in overdose death rates among White, non-Hispanic youth since 2021 haven't been equally shared by other racial/ethnic groups.



## Conclusions

Youth aged 10-14, 15-19, and 20-24 all experienced increases in overdose fatalities in the past decade, mostly unintentional and involving IMFs. American Indian and Alaska Native AYA continue to experience the highest rates of IMF-related fatal overdose, and rates among Black AYA are increasing. IMF-related overdose rates of Black and Latinx 10-14-year-olds overtook their White, non-Hispanic counterparts in 2019, suggesting higher disparity at younger ages vs. differences in reporting. **Overdose prevention and response programming should be tailored and implemented to meet varying needs of youth of differing ages and groups.**

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## Tables/Poster PDF:

