

Analysis of Drug Overdose Incidents in the U.S

Group 2:

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Motivation

- Increase in drug Public Service Announcements
- How has the drug crisis impacted California?
- How has the drug crisis impacted the U.S?
- What drugs have contributed to the drug crisis in the past few years?
- Who is being affected the most?



Data Overview

Drug poisoning deaths by:

intent, age, sex, drug type, 1999-2021

Data in csv file and read into a pandas dataframe.

Adjusted labels, no spaces, Camel Casing

Filter by grouping labels.

Sources: Centers for Disease Control and Prevention (CDC),
National Center for Health Statistics (NCHS).



Drug poisoning deaths by intent, age, sex, and drug type, 1999-2021

Year	Gender	Intent	Drug type	< 1 year	1-4 y
2021	Both sexes	All (preventable, intentional, unde	All drugs	75	12
2021	Both sexes	All (preventable, intentional, unde	Any Opioid	43	10
2021	Both sexes	All (preventable, intentional, unde	Benzodiazepines	0	0
2021	Both sexes	All (preventable, intentional, unde	Cannabis	0	0
2021	Both sexes	All (preventable, intentional, unde	Cocaine	0	1
2021	Both sexes	All (preventable, intentional, unde	Opioid subgroup - heroin	0	0
2021	Both sexes	All (preventable, intentional, unde	Opioid subgroup - methadone	0	0
2021	Both sexes	All (preventable, intentional, unde	Opioid subgroup – including fentanyl	40	9
2021	Both sexes	All (preventable, intentional, unde	Opioid subgroup – including oxycodone and hydro	0	0
2021	Both sexes	All (preventable, intentional, unde	Psychostimulants – incl. methamphetamine	29	0
2021	Both sexes	Preventable/accidental	All drugs	26	3
2021	Both sexes	Preventable/accidental	Any Opioid	12	2
2021	Both sexes	Preventable/accidental	Benzodiazepines	0	0
2021	Both sexes	Preventable/accidental	Cannabis	0	0
2021	Both sexes	Preventable/accidental	Cocaine	0	0

Data Overview

VSRR Provisional Drug Overdose Death Counts

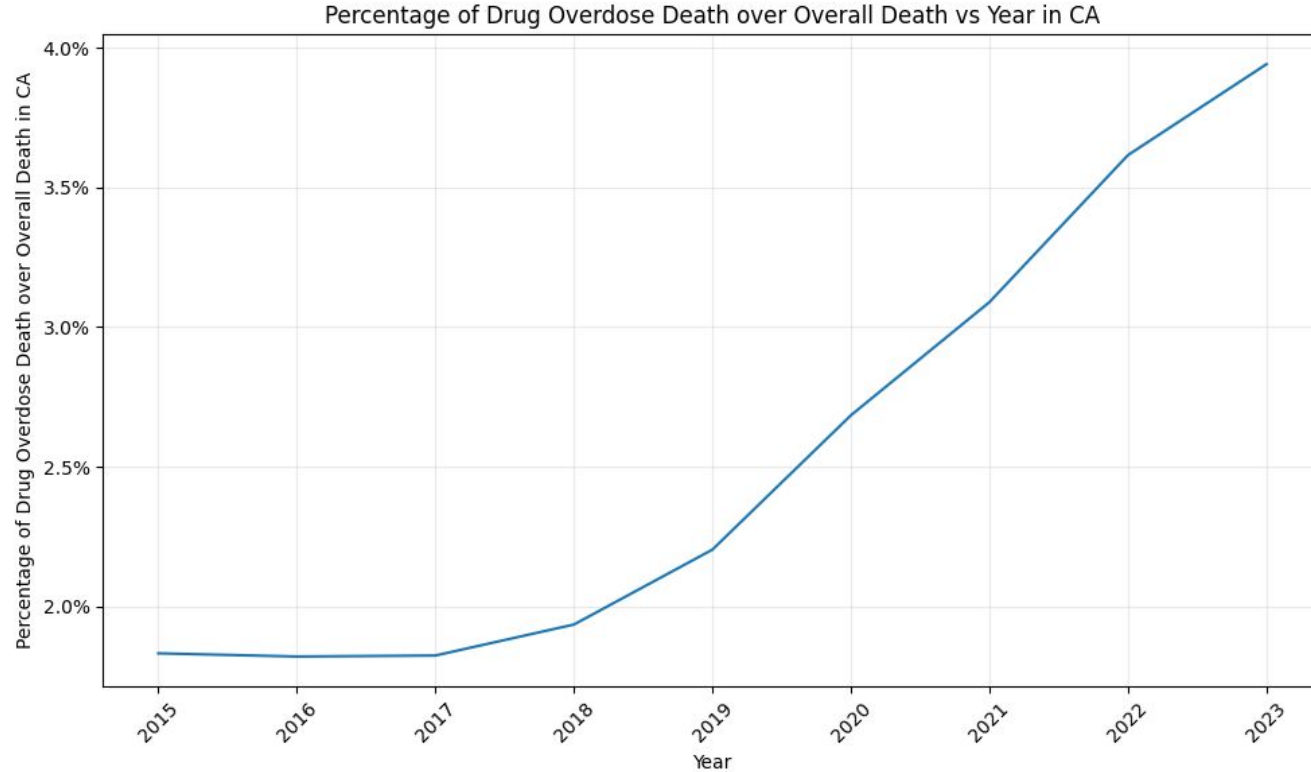
- Comprehensive
- Number of Drug Overdose Death
- Number of Deaths(Overall)
- Number of Deaths for each drugs
- etc

https://data.cdc.gov/NCHS/VSRR-Provisional-Drug-Overdose-Death-Counts/xkb8-kh2a/about_data

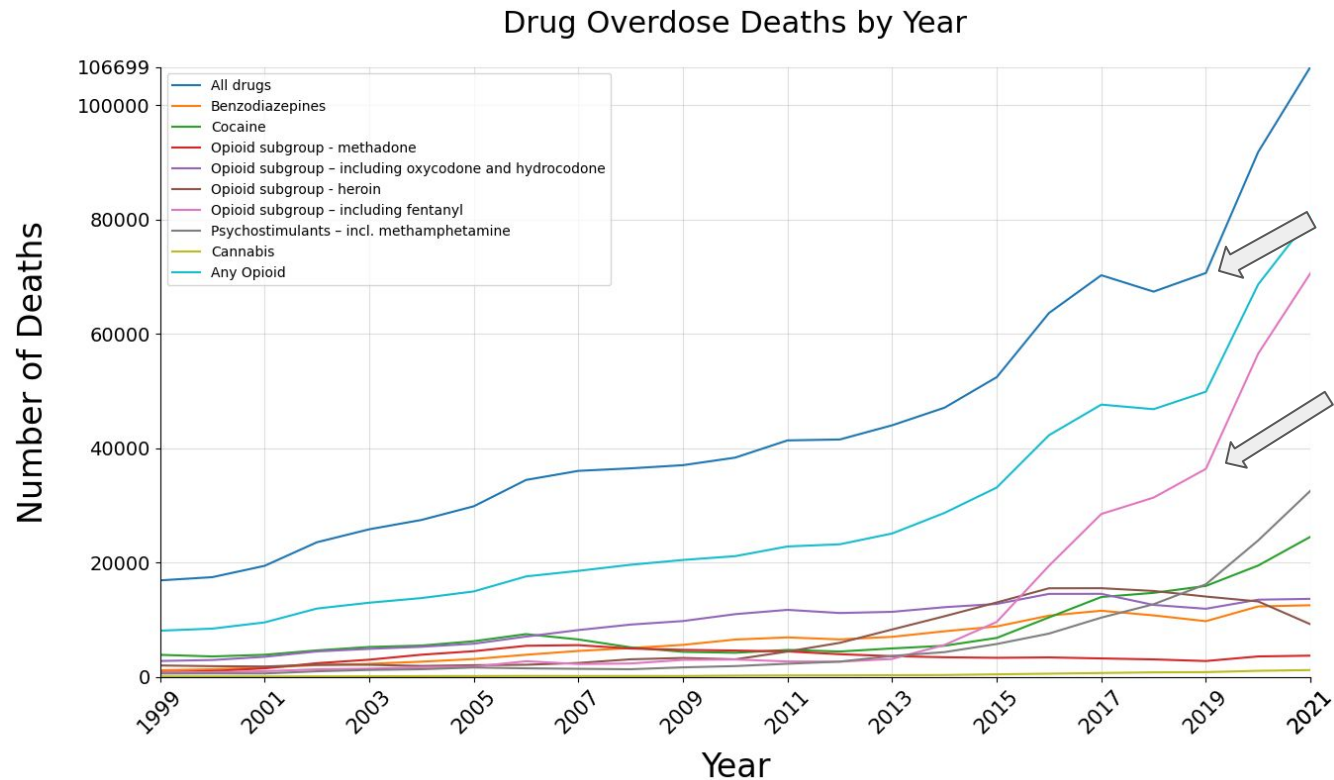
5083 CA	2015 March	12 month-ending	Number of Deaths	251,540	100	0.224616
5084 CA	2015 March	12 month-ending	Psychostimulants with abuse potential (T43.6)		100	0.224616
5085 CA	2015 March	12 month-ending	Percent with drugs specified	78.25520833	100	0.224616
5086 CA	2015 March	12 month-ending	Natural, semi-synthetic, & synthetic opioids, incl. methadone (T40.2-T40.4)		100	0.224616
5087 CA	2015 March	12 month-ending	Methadone (T40.3)		100	0.224616
5088 CA	2015 March	12 month-ending	Opioids (T40.0-T40.4,T40.6)		100	0.224616
5089 CA	2015 March	12 month-ending	Heroin (T40.1)		100	0.224616
5090 CA	2015 May	12 month-ending	Cocaine (T40.5)		100	0.217444
5091 CA	2015 May	12 month-ending	Number of Drug Overdose Deaths	4,607	100	0.217444
5092 CA	2015 May	12 month-ending	Psychostimulants with abuse potential (T43.6)		100	0.217444
5093 CA	2015 May	12 month-ending	Number of Deaths	253,858	100	0.217444
5094 CA	2015 May	12 month-ending	Methadone (T40.3)		100	0.217444
5095 CA	2015 May	12 month-ending	Natural, semi-synthetic, & synthetic opioids, incl. methadone (T40.2-T40.4)		100	0.217444
5096 CA	2015 May	12 month-ending	Percent with drugs specified	78.48925548	100	0.217444
5097 CA	2015 May	12 month-ending	Synthetic opioids, excl. methadone (T40.4)		100	0.217444
5098 CA	2015 May	12 month-ending	Natural & semi-synthetic opioids, incl. methadone (T40.2, T40.3)		100	0.217444
5099 CA	2015 May	12 month-ending	Heroin (T40.1)		100	0.217444
5100 CA	2015 May	12 month-ending	Natural & semi-synthetic opioids (T40.2)		100	0.217444
5101 CA	2015 May	12 month-ending	Opioids (T40.0-T40.4,T40.6)		100	0.217444
5102 CA	2015 November	12 month-ending	Percent with drugs specified	79.35538235	100	0.308337

Sources: Centers for Disease Control and Prevention (CDC)

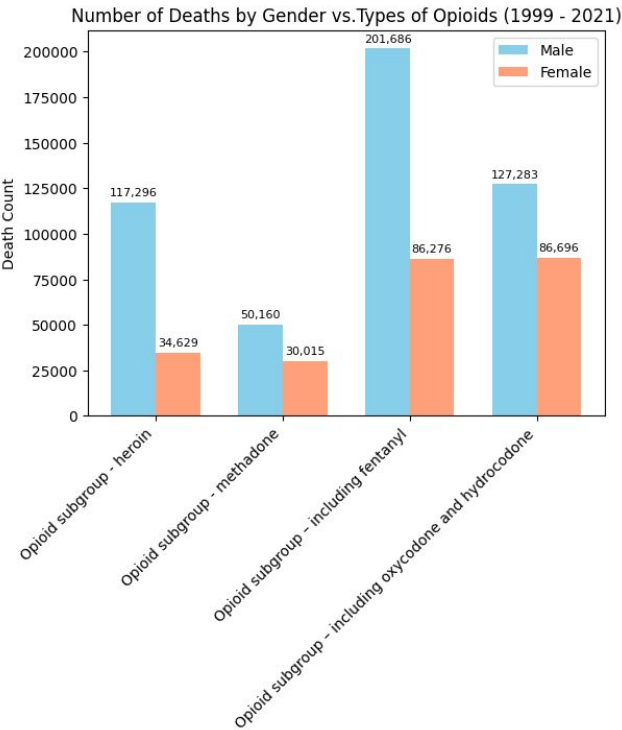
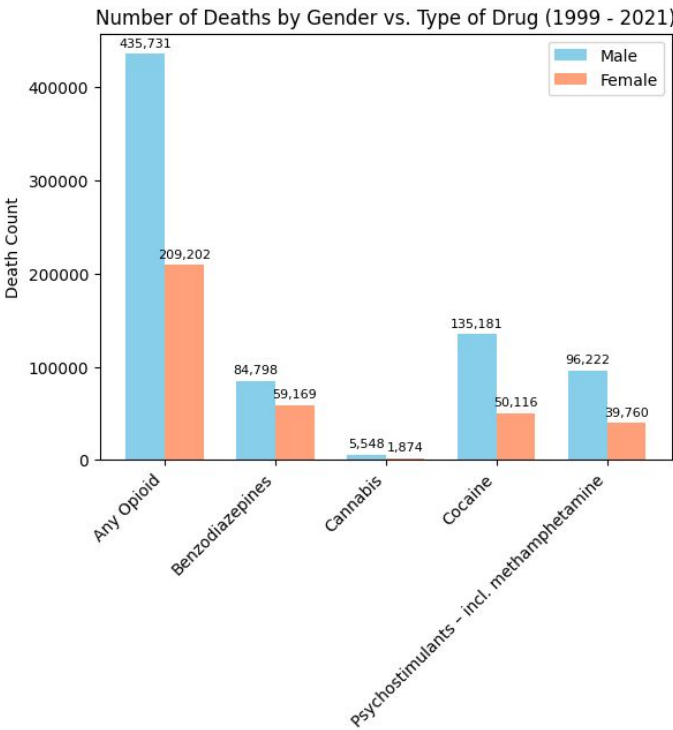
How has the drug crisis impacted California?



How has the drug crisis impacted the U.S?



How much has Fentanyl contributed to the drug crisis over the past years?



Who is being affected the most?

Age Group Distribution in Drug Poison Deaths



Age Group	
< 1 year	0.073
1-4 years	0.096
5-14 years	0.829
15-24 years	9.863
25-34 years	21.632
35-44 years	24.449
45-54 years	23.14
55-64 years	14.767
65-74 years	3.615
75-84 years	1.036
85+ years	0.501

Summary & Reflection

- An **exponential increase** in drug overdose deaths
- **Male** sex tends to be affected more from drug poisoning
- Major proportions of drug-related deaths occur in the **24-54 years age groups**
- **Targeted interventions and policies** are urgently needed to address this pressing public health issue



Questions?