

Washington Drug Overdose Epidemic

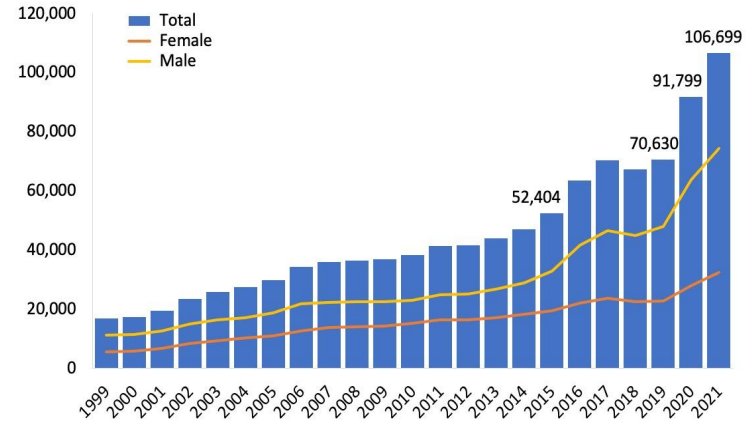
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Intro

- Washington state has recently faced a drug overdose epidemic
- This societal concern has been known to be connected to socioeconomic issues connected to race
- More people are dying every year meaning governmental and societal action needs to be taken to stop this problem
- Our target group is the population of Washington state especially policy makers
- By viewing our work policy, makers and the general public will gain a greater understanding about the issue at hand and cause a greater push for changes to be made

Figure 1. National Drug-Involved Overdose Deaths*, Number Among All Ages, by Gender, 1999-2021



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Our Questions

- How much have drug-related deaths increased in Washington State over the years?
- What is the relationship, if any, between overdose deaths in Washington and Race?
- Do these results change when relating overdosed to population percentages?
- What factors could be causing these race related overdose discrepancies?



Original Data Sets

Washington State Department of Health: Death by Residence of the Decedent's, 2017 - 2022

- 11 Columns, 9680 Observations

Washington State Department of Health: Death by Race, 2018 - 2022

- 5 Columns, 120 Observations

United States Census Bureau: Washington State, Population by Race

- 2 Columns, 73 Observations

We merged the two Washington State DOH datasets by year, and compared our numbers to the United States Census Bureau - Washington State race population data.

Cleaned & Modified Data Sets

Year <chr>	Quarter <dbl>	StatewideTotal <dbl>
2018	1	1086
2018	2	1063
2018	3	1109
2018	4	1125
2019	1	1265
2019	2	1056
2019	3	1294
2019	4	1249
2020	1	1435
2020	2	1995

1-10 of 18 rows

Washington State DOH - Drug Overdoses (Overall)

Shows statewide drug overdose deaths for each quarter from 2018-2022. 18 Rows, 4 Columns

Year <chr>	Quarter <dbl>	AIAN <dbl>	Asian <dbl>	Black <dbl>	Hispanic <dbl>	White <dbl>	Other <dbl>
2018	1	35	47	57	101	1022	42
2018	2	46	61	51	112	1024	46
2018	3	54	59	59	112	1108	50
2018	4	43	47	62	106	1056	43
2019	1	27	49	67	96	1092	78
2019	2	39	49	51	122	1047	77
2019	3	35	55	71	116	1071	98
2019	4	29	48	53	108	1041	69
2020	1	43	47	75	122	1067	50
2020	2	39	50	89	163	1163	85

1-10 of 20 rows

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Washington State DOH - Drug Overdoses (by Race)

Shows statewide drug overdose deaths by population for each quarter from 2018-2022. 20 Rows, 8 Columns

Race <chr>	Count <dbl>
Hispanic	1059213
White	4918820
Black	296170
AIAN	91191
Asian	723062
Other	105711

US Census Bureau - Washington State Population By Race (2020)

Shows statewide populations of Washington State in 2020. 6 Rows, 2 Columns



Final Dataset

We merge the first two datasets, and compare the merged dataset with the third dataset (US Census Bureau - Washington State population by race)

Year <int>	Quarter <dbl>	StatewideTotal <dbl>	AIAN <int>	Asian <int>	Black <int>	Hispanic <int>	White <int>	Other <int>
2018	1	1086	35	47	57	101	1022	42
2018	2	1063	46	61	51	112	1024	46
2018	3	1109	54	59	59	112	1108	50
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2020	1	1435	43	47	75	122	1067	50
2020	2	1995	39	50	89	163	1163	85

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Deriving Meaning from the Final Dataset

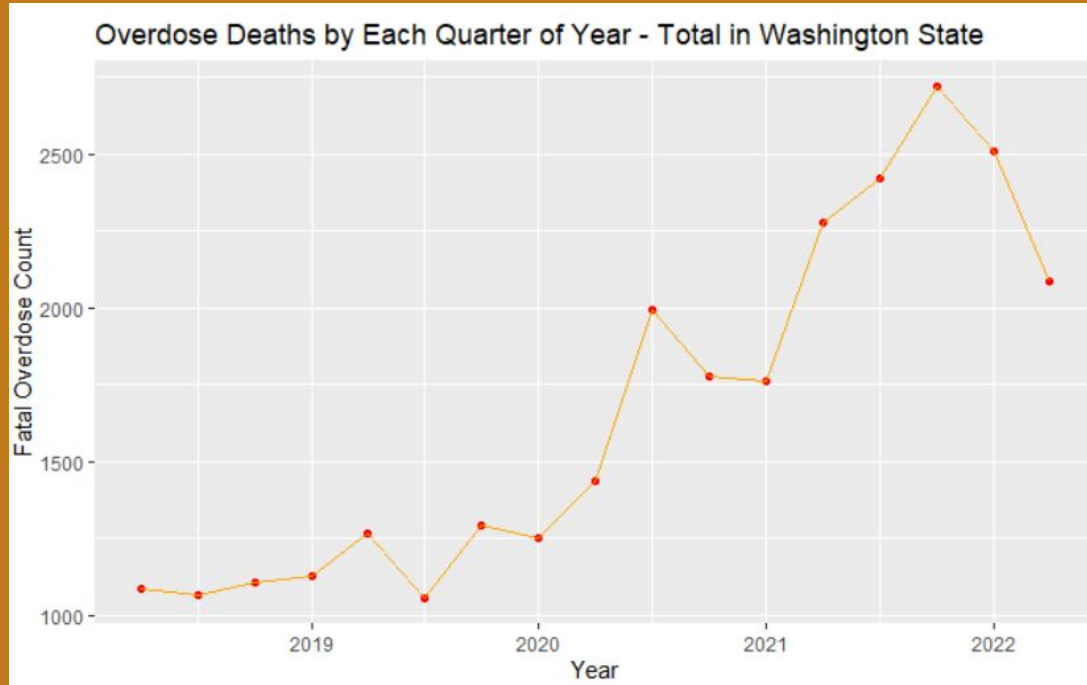
After merging the first dataset, we compare it to the total population proportion of Washington State by race from the 2020 Census Bureau Data.

Race <chr>	Count <dbl>
AIAN	0.01267569
Asian	0.10050670
Black	0.04116807
Hispanic	0.14723220
Other	0.01469399
White	0.68372336

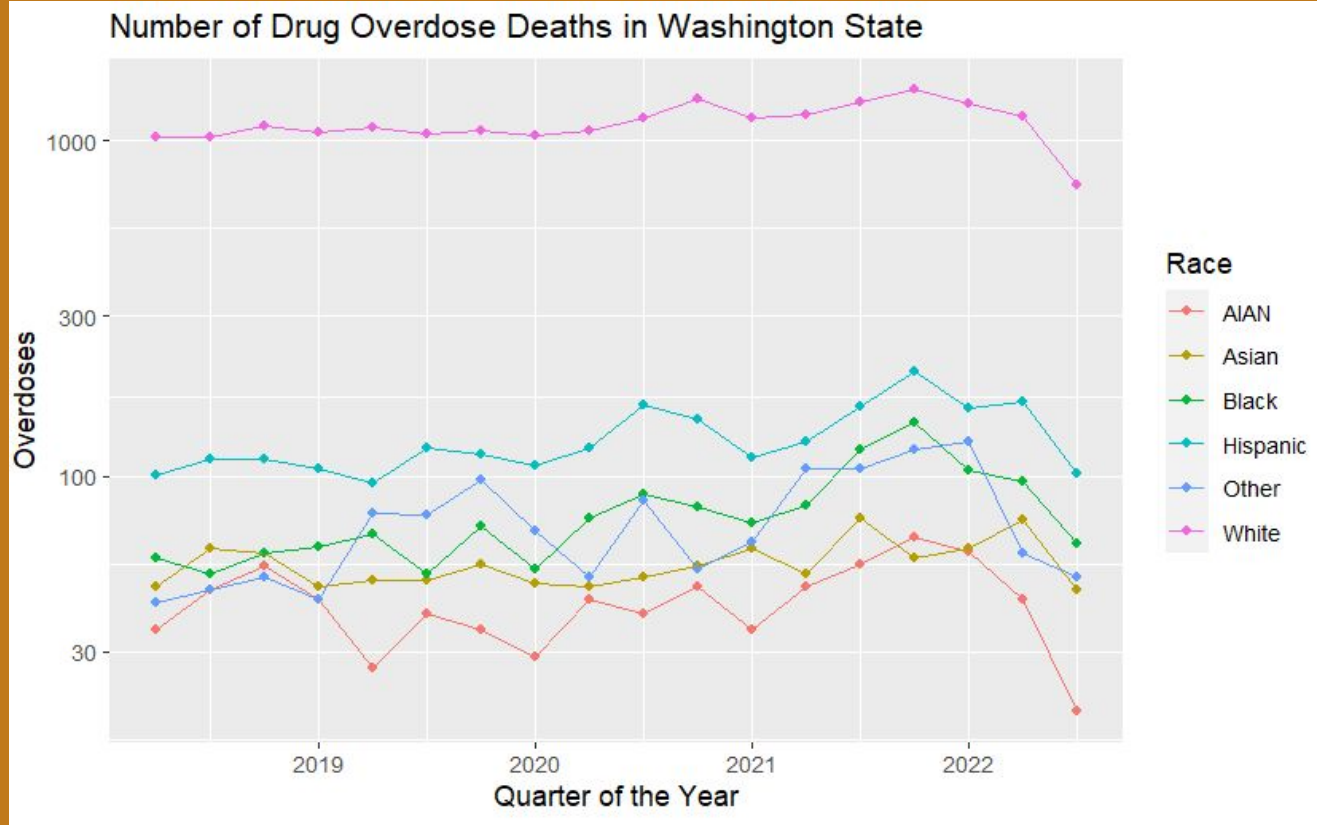
Table on the left shows each race's population proportion from the 2020 Census Bureau data. The table below shows how each population's overdoses compares to their individual population proportion.

Year <int>	Quarter <dbl>	StatewideTotal <dbl>	AIAN <dbl>	Asian <dbl>	Black <dbl>	Hispanic <dbl>	White <dbl>	Other <dbl>
2018	2018.25	1086	-0.019552675	0.05722862	-0.0113181138	0.054230354	-0.25734478	-0.02398005
2018	2018.50	1063	-0.030598068	0.04312194	-0.0068093483	0.041870013	-0.27958803	-0.02857977
2018	2018.75	1109	-0.036016830	0.04730562	-0.0120330080	0.046240311	-0.31537493	-0.03039168
2018	2019.00	1125	-0.025546536	0.05872892	-0.0139430370	0.053009973	-0.25494331	-0.02352823
2019	2019.25	1265	-0.008668188	0.06177152	-0.0117963528	0.071342867	-0.17951775	-0.04696609
2019	2019.50	1056	-0.024256132	0.05410519	-0.0071273805	0.031701892	-0.30775392	-0.05822268
2019	2019.75	1294	-0.014372228	0.05800284	-0.0137005503	0.057587682	-0.14394280	-0.06104017
2019	2020.00	1249	-0.010542889	0.06207596	-0.0012658731	0.060763020	-0.14974342	-0.04055021
2020	2020.25	1435	-0.017289471	0.06775409	-0.0110967343	0.062214774	-0.05983065	-0.02014922
2020	2020.50	1995	-0.006873186	0.07544405	-0.0034434547	0.065527935	0.10076596	-0.02791253

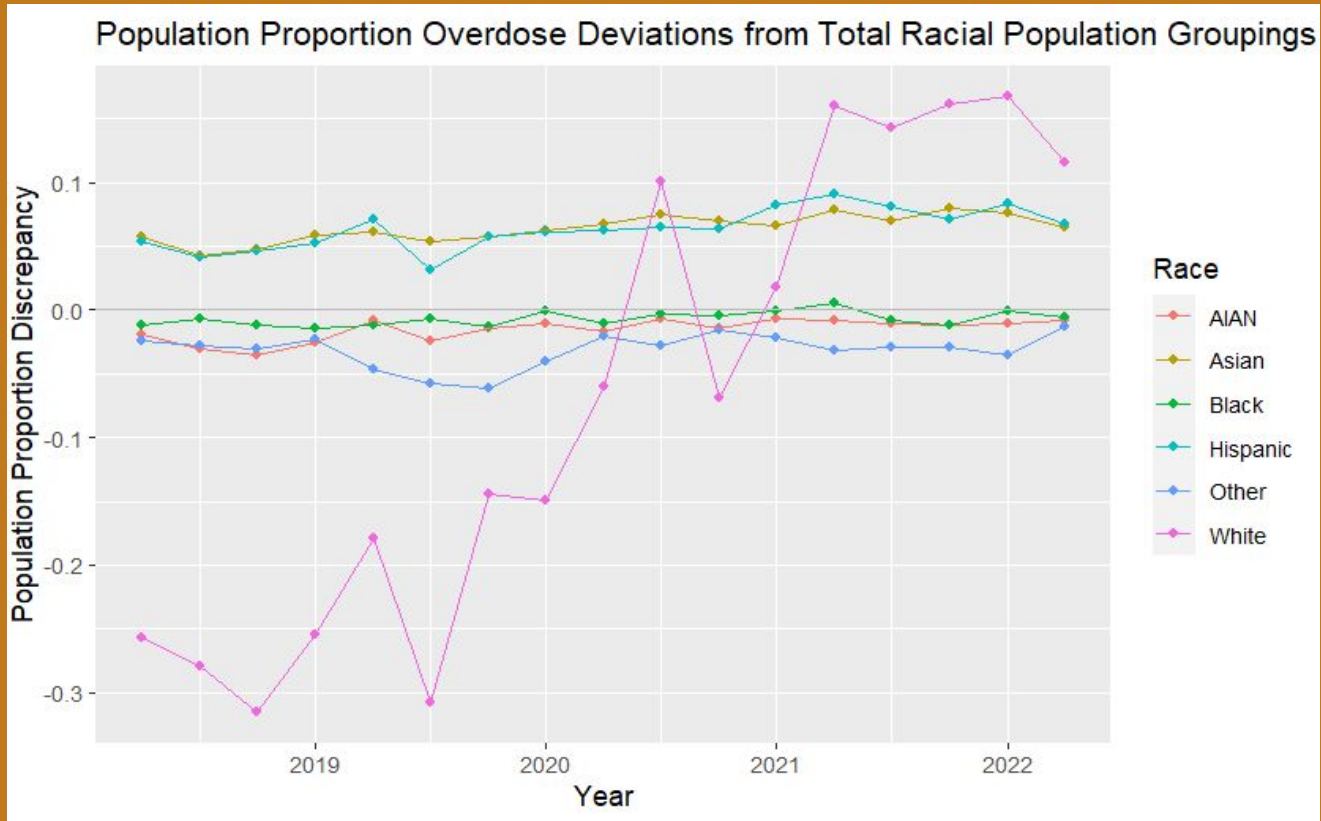
Results



Results



Results





Our findings

Number of Drug Overdoses in WA State

- General increasing trend in overall overdose deaths. From 2018 to late 2021, the number of deaths increased a lot, whereas it went down after 2021.
 - an increase during COVID-19 pandemic
- White population has the largest death counts

Population Proportions & Drug Overdoses

- Disproportionately affected groups: White, Asian, Hispanic
 - Asians are few in overall population, but greater population proportion have experienced drug overdoses than other groups
 - Possible factor: more access to healthcare
- Generally constant trends (except for White racial group), suggesting drug overdoses is a systemic issue between 2018-2022

Ethical Concerns

- We had to move indigenous populations into a larger “other” category, might impact the ratio calculation
- Population proportions were compared to the 2020 census, so there are some misrepresentations in groups, number of overdoses, and total race populations.

Summary

- Washington State is facing a overdose epidemic as is the rest of the U.S.
- Since 2020 overdoses have increased even more rapidly than before
- Our data and analytical findings show that there is a connection between race and drug-related deaths
- White, AIAN (American Indians and Alaska Natives), Asian, Hispanic, and, at times, Black populations had greater overdose death rates when compared to their Washington population percentages
- Other factors can play into overdose deaths including but not limited to: Social class, wealth, and pre-existing health conditions.

How can we solve this problem?

Vote

- Vote for officials on a local, state, federal level who make this issue a priority.
 - Support policy that aims to increase drug treatment and support those dealing with addiction.
 - Support policy that limits the amount of opioids prescribed.
 - Support policy that tries to stop the flow of illicit opioids.

Narcan and Fentanyl Test Strips (FTS)

- Narcan can be used to stop the effects of an overdose. It is available at most pharmacies.
- FTS can be used to detect if opioids contain fentanyl. Providing these in public spaces might be able to help prevent overdoses.



SAMHSA hotline: 1-800-662-4357



Questions?

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