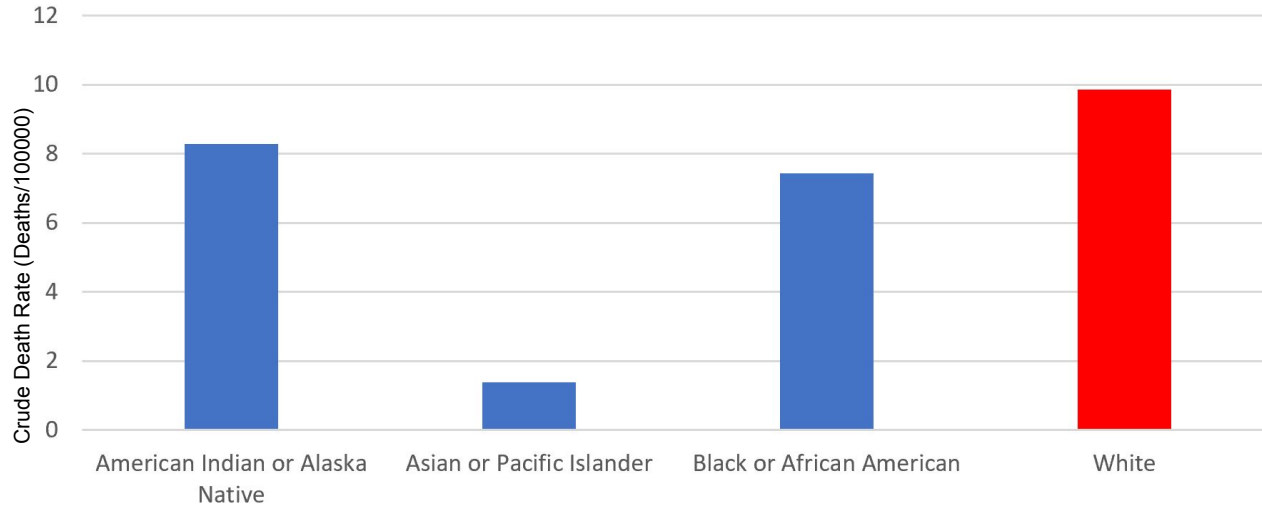


The Opioid Epidemic: Who is at Risk

Crude Death Rate from Accidental Drug Overdose by Race

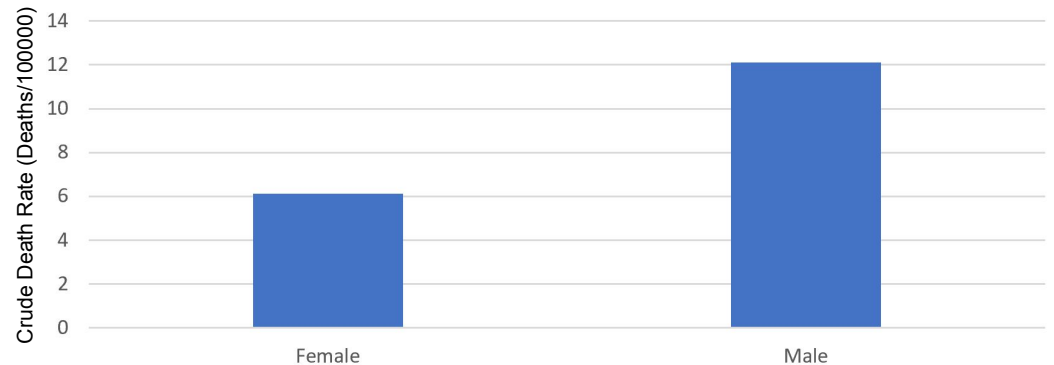
Data from CDC: Multiple Causes of Death



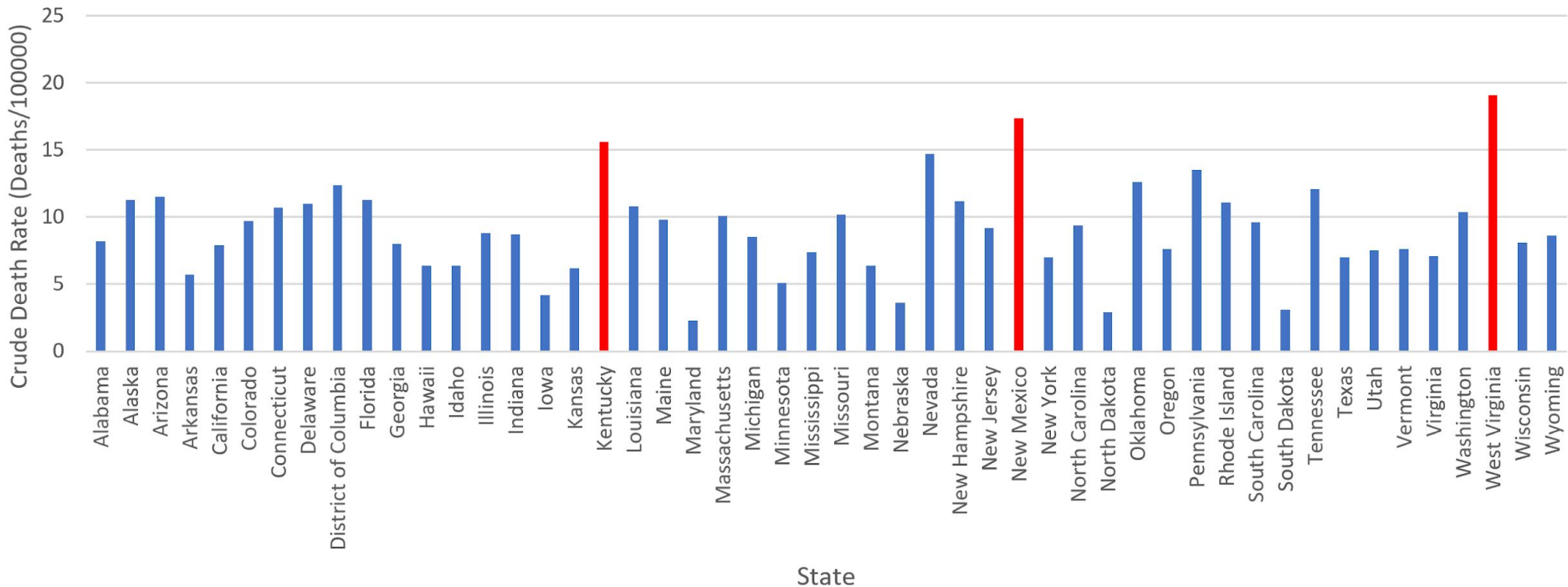
White people, with a CDR of 9.87 deaths/100,000, have the highest CDR.

Men have a CDR of 12.12 deaths/100,000, nearly twice that of women, 6.13.

Crude Death Rate from Accidental Drug Overdose by Area



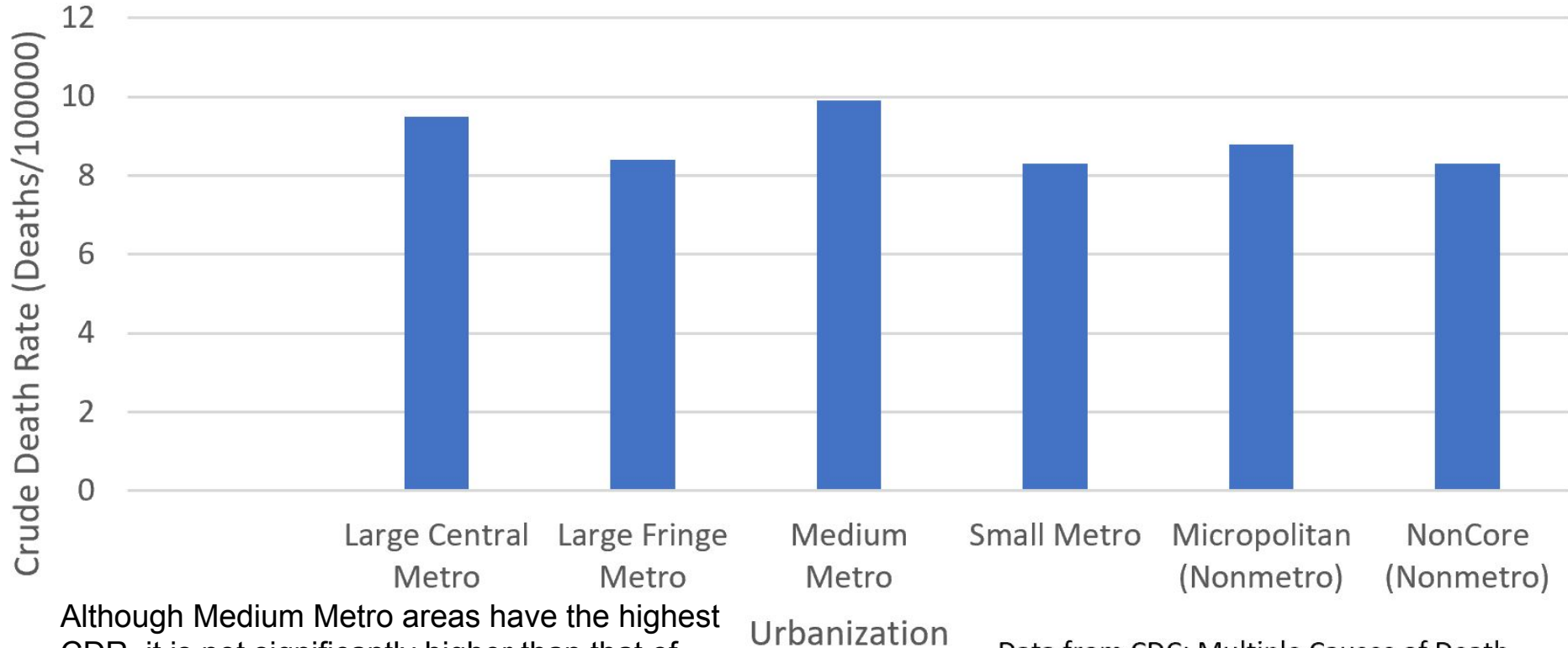
Crude Death Rate from Accidental Drug Overdose by State



West Virginia, New Mexico, and Kentucky have the highest rates of accidental deaths due to drug overdose of 19.1, 17.4 and 15.6 respectively. Kentucky and West Virginia are both in Appalachia.

Data from CDC: Multiple Causes of Death

Crude Death Rate from Drug Overdose by Urbanization



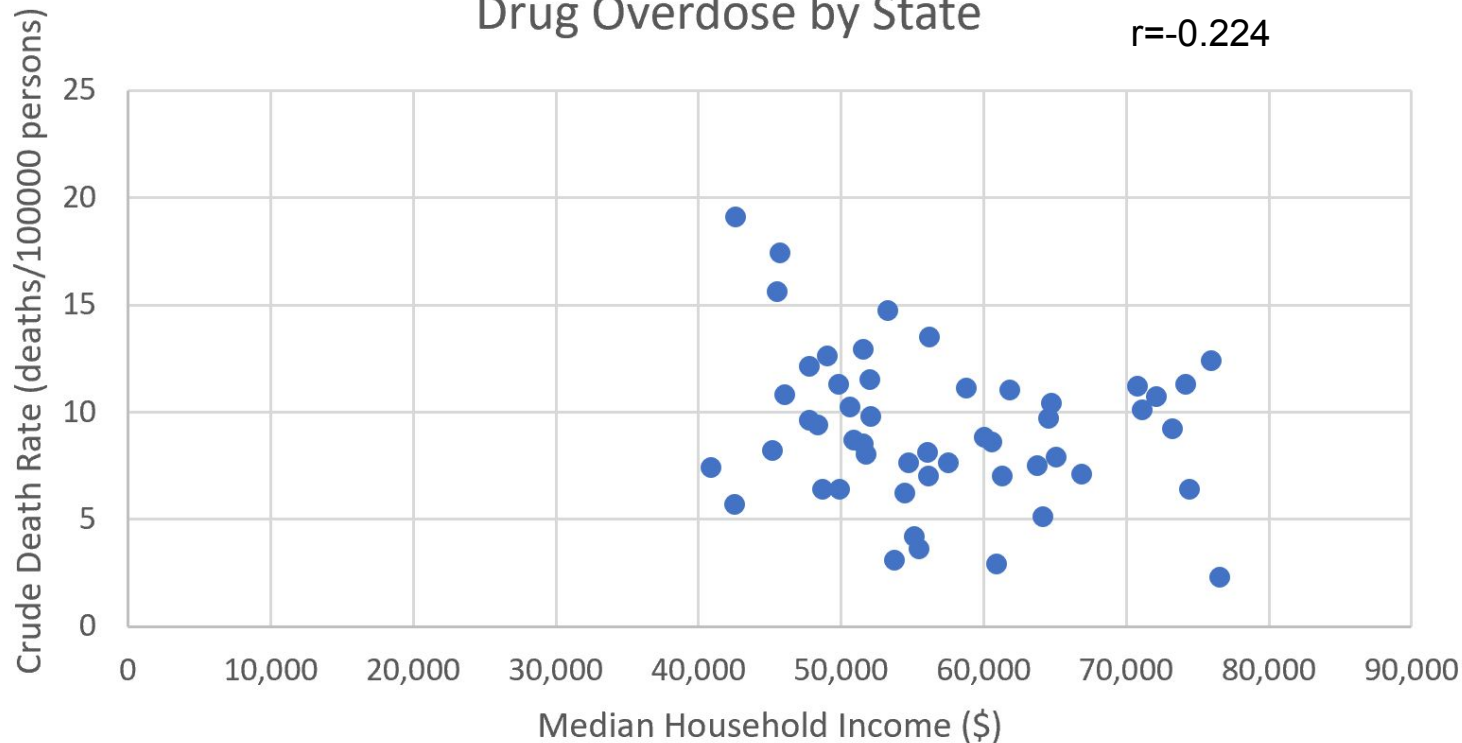
Although Medium Metro areas have the highest CDR, it is not significantly higher than that of any other area. Contrary to popular belief, NonCor (rural) areas have the lowest rate of accidental deaths due to drug overdose.

Data from CDC: Multiple Causes of Death

Median Household Income vs. Crude Death Rate from Drug Overdose by State

Data from 2016 US Census and CDC: Multiple Causes of Death

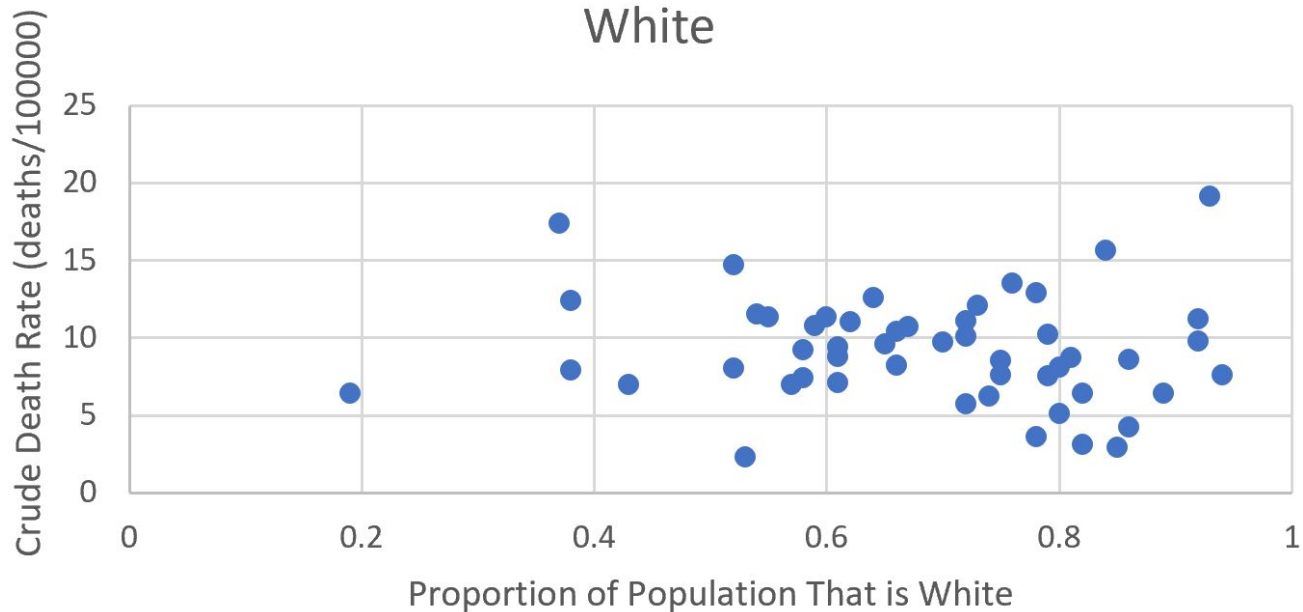
$r=-0.224$



Although Kentucky, New Mexico, and West Virginia all have median household incomes below the US median household income, with an r-value of -0.224 , there is not a strong correlation between median household income and crude death rate due to drug overdose.

Crude Death Rate due to Accidental Drug overdose vs. Proportion of Population that is

Data from CDC: Multiple Causes of Death and the Henry J. Kaiser Family Foundation

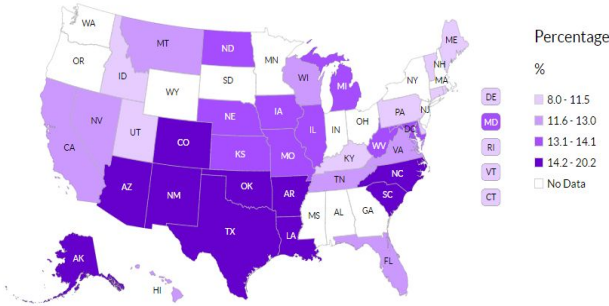


This data was taken by state. With a correlation coefficient of just $-.0872$, there is virtually no correlation between accidental deaths due to drug overdose and proportion of state population that is white.

Male vs. Female

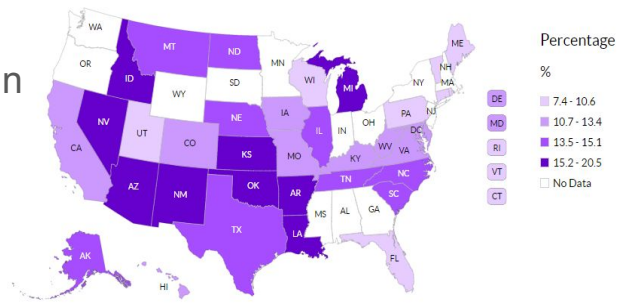
Data from CDC: High School YRBS

Ever Took Prescription Pain Medicine Without A Doctor's Prescription Or Differently Than How A Doctor Told Them To Use It
(counting drugs such as codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet, one or more times during their life)
Among Male Students
High School Youth Risk Behavior Survey, 2017



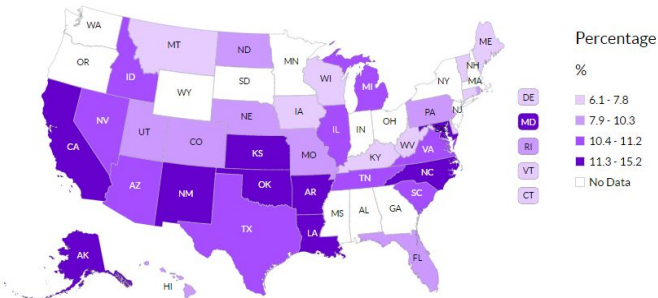
These graphs show the percent of high schoolers that ever took prescription pain medicine without a doctor's approval or correct use of directions.

Ever Took Prescription Pain Medicine Without A Doctor's Prescription Or Differently Than How A Doctor Told Them To Use It
(counting drugs such as codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet, one or more times during their life)
Among Female Students
High School Youth Risk Behavior Survey, 2017

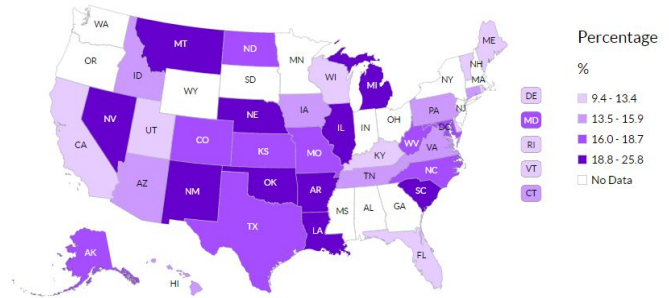


Freshman vs. Seniors

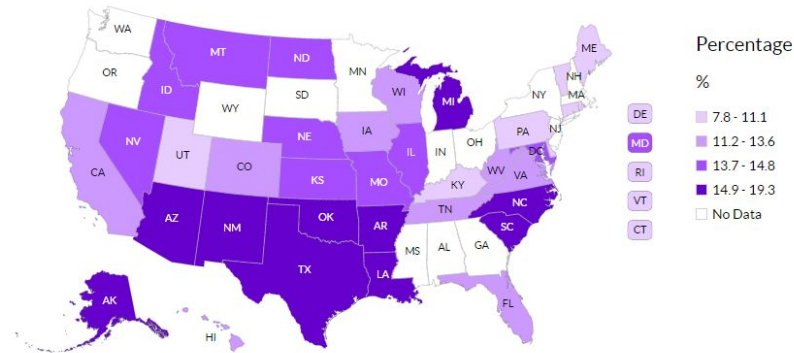
Ever Took Prescription Pain Medicine Without A Doctor's Prescription Or Differently Than How A Doctor Told Them To Use It
(counting drugs such as codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet, one or more times during their life)
Among 9th-Grade Students
High School Youth Risk Behavior Survey, 2017



Ever Took Prescription Pain Medicine Without A Doctor's Prescription Or Differently Than How A Doctor Told Them To Use It
(counting drugs such as codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet, one or more times during their life)
Among 12th-Grade Students
High School Youth Risk Behavior Survey, 2017



Unfiltered Graph:



The graph without filters indicate that states in the south have the highest percentages, specifically Arizona, Texas, Oklahoma, Arkansas, etc. Although these states have the highest percentages for high schoolers, they aren't the same states that had the highest crude death rate from accidental drug overdose. When we filtered the graphs based on gender, the high percentages for females were in Nevada, Idaho, and Michigan, but the high percentages for males remained in the same area before the filtering. When we filtered the graphs based on age, the percent of seniors was much larger than the percent of freshman.

Solutions

- Although this statistical study did not reveal any correlations between income or race and state CDR from accidental drug overdose, the study revealed that white men from Kentucky, West Virginia and New Mexico are the most at risk. Public Health campaigns and addiction treatment centers should be established in these three states. Because the data revealed that, with the exception of New Mexico, states with the largest proportion of high schoolers taking non prescribed prescription medication are not the states with the highest CDR due to accidental drug overdose, educational programs in schools may not be the best way to fight the opioid epidemic.

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[&HT=&LCT=&FS=&FR=&FG=&FA=&FI=&FP=&FSL=&FRL=&FGL=&FAL=&FIL=&FPL=&PV=&TST=&C1=&C2=&](https://nccd.cdc.gov/youthonline/App/Results.aspx?TT=B&OUT=0&SID=HS&QID=H56&LID=LL&YID=RY&LID2=&YID2=&COL=&ROW1=&ROW2=&HT=&LCT=&FS=&FR=&FG=&FA=&FI=&FP=&FSL=&FRL=&FGL=&FAL=&FIL=&FPL=&PV=&TST=&C1=&C2=&)

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[7D](http://www.kff.org/other/state-indicator/distribution-by-raceethnicity/?currentTimeframe=0&sortModel=%7B%22collid%22:%22Location%22,%22sort%22:%22asc%22%7D). Accessed 11 Nov. 2018.

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