

UC Office of the President

Student Policy Research Papers

Title

Evaluating the Impact of Proposition 47 on Drug Arrest Rates and Drug Overdose Death Rates In California

Permalink

<https://escholarship.org/uc/item/2h89t1v3>

Author

Azimi, Tara

Publication Date

2025-10-01

Evaluating the Impact of Proposition 47 on Drug Arrest Rates and Drug Overdose Death Rates In California

Drugs. Such a loaded word with a lot of different meanings behind it for each person that hears it. I for one, and someone that correlates the word drug with a negative connotation. It's scary, and some people abuse them. Even though this subject is indeed a touchy one, I chose to explore it because it is a huge problem in our nation and world. Many political figures and policy makers take this issue of overdose and illegal drugs seriously, especially when we started to see American lives taken by the fentanyl outbreak. For these reasons, I chose to research the effects of proposition 47 on drug arrest rates and overdose death rates from 2010-2023 in the nine Bay Area counties. By doing this, I chose to examine the drug arrest rates and overdose death rates per 100,000, for each county from 2010-2023. With these methods, I came to find out that proposition 47 did have a major impact on decreasing the drug arrest rates, while overdose death rates continued to increase over time. I address more about my findings moving forward in this paper.

I. Context and Significance

With such a large, diverse, and growing population it is the perfect state to research. Being from the Bay Area I have been able to experience a variety of different people from different backgrounds, which leads to so many experiences. As a college student I am surrounded by people telling me how impactful the abuse and addiction of drugs can be in this day and age. California has such a large population, and the Bay Area is growing day by day with so many young graduates because of the technology growth in Silicon Valley. I chose to focus on this area of the state, for this reason because I am sure that there are a lot of substance abuse and crime rates as well regarding drugs. As I came across this peaked interest of mine with

the Bay Area, I was able to look into what could potentially be helping the Californian residents regarding this issue of overdose deaths and drug arrest rates.

With time, I came across a proposition numbered 47, and titled “Safe Neighborhoods and Schools Act”. Furthering my understanding of it, I came to the conclusion that it was enacted in 2014 to classify low-level drug and property crimes from a felony to a misdemeanor (Bird et al. 2018). In doing so, the incarceration rates would decrease and the funds that would be going towards prisons would now be going towards programs to help with drug abuse and mental health. The significance of the proposition is very important to me as it is to the people residing in California. Not only does this proposition promise a safer state for all, but it clearly also wants to reduce funds for prisons to go towards something bigger and better. Giving people a second chance, to prove themselves and show that they can be better. Better by not abusing drugs and better by keeping the streets of California a safer place for all. As I mentioned, the fentanyl outbreak really caught everyone’s attention in 2013 and constituents wanted to see rapid change with this horrible issue (“CDPH Launches First Phase of Opioid Prevention and Education Campaign” 2025). Not long after this proposition was implemented in 2014.

As I continued to learn more about everything proposition 47 related I really wanted to test if this proposition was lessening drug arrests, as well as fixing the overdose death rate in California. A lot of different laws and propositions are passed in our state but is it truly bettering the issue and do our people feel safer with these regulations? Is the data proving that these two major problems are now *both* being addressed or not? Essentially all of this information gathering and expanding my knowledge on this topic allowed me to come up with my research question. Broadly my research question is how have political reforms such as Proposition 47 passed in 2014, affected drug related overdose death rates and drug arrest rates in California

between 2010-2023? More specifically, how have the arrest rates and overdose death rates been affected in the nine Bay Area counties before and after the implementation of proposition 47? To answer this question, I will be comparing the years 2010-2014 and 2015-2023 for both the drug arrest rates and overdose death rates in each Bay Area county.

II. Literature Review

As I began my research I came across a ton of data and papers that helped me learn more about what was already happening and out there regarding this topic. I have organized my literature review to give me the most information regarding my topic, but to also have very visible gaps in the research that has been done so that I can go ahead and potentially fill those gaps with my research. I noticed these gaps to be the geographical scope, if the funds are being used as they said they would be, and lastly there is a lack of comparison from before and after proposition 47 was introduced which is a major part of what I am focusing on.

The peer reviewed article, “Impacts of California Proposition 47 on Crime in Santa Monica, California”, really draws on how proposition 47 has caused significant drug arrest decreases (Crodelle et al.). Although, it sticks to southern California, whereas I want to research the Bay Area. The geographical scope of this paper allows me to want to fill that gap it has presented, while also giving me insight into statistics. Similarly, another peer reviewed article I found titled, “Effects of a Voter Initiative on Disparities in Punishment Severity for Drug Offenses across California Counties.” presented me with gaps in their data which is good for my research question. Except for this article I had found gaps on the allocation of the funds that are supposed to go towards drug abuse and mental health programs. Is the state of California truly funding programs with the money that isn’t going towards incarceration. If so, I can find the data proving it, and if not, *why*? This led me into thinking, are there people who simply do not take

advantage of the programs offered? The state of California could very well be allocating the funds as they should be, but are the people committing these crimes taking their offered second chance? That is what the article, “Not Taking Crime Seriously” drew on.

With people given the opportunity to not go to jail for what they did, they may simply just take that response as their second chance, and decide to not change for the better. Drug abuse and mental health aren’t easy topics for people to handle, and it has been proven in this article that there have been court no-shows because of proposition 47 (“Not Taking Crime Seriously”). This leads me into my next supporting article regarding this issue, “Tracing the Effects of Reducing Penalties on Crime and Prosecution” (Groff et al.). There has not been a lot of data recorded stating proposition 47 has bettered the public. Constituents want to implement these propositions in California, to ensure they are voting on laws to do *exactly* that, bettering the public. Now crimes are technically decreasing, but the funds are now not being technically used because no one is attending these programs offered. With people not attending the offered help, overdose death rates continue to exist and so does crime, just at a lower rate.

The last piece of work I want to include is “Crime after Proposition 47 and the Pandemic”. This paper had a different aspect to it, because it included the pandemic years which were really different times, so with that there is potentially so much new data that could come with it. With that being said, after all I looked through and read there was a huge gap I noticed and that was that there is absolutely such a lack of authors concerned about the overdose death rates. As a researcher I was appalled that no one thought that proposition 47 does not only affect crime, it can most certainly affect the use of drugs. With my research, I believe I could connect the dots with the pros and cons of proposition 47 throughout the years for both drug arrest rates

and overdose death rates. These articles have given me great insight into what I hypothesize for this project.

III. Hypothesis, Theory, and Causal Mechanism

To guide me on this project I turned to theories regarding deterrence, criminal justice, and public health intervention. With deterrence theory it suggests that with harsher penalties the less criminal activity, vice versa with reduced penalties this may weaken accountability as well as enforcement. Public health approaches suggest that substance-use should be targeted with treatment-based interventions, and not incarceration. Proposition 47 sits right in between both of these theories. It reduces the severity of the penalties for low-level drug possession but it also decreases the possibility of individuals being required to go through with treatment programs. This creates two competing possibilities, leaving it up to me to use both to figure out what I hypothesize with my research. My conceptual hypothesis is that with larger decreases in drug arrests, there will be an increase in drug overdose death rates because reduced enforcement leads to lessened accountability without sufficient access to treatment. This hypothesis reflects the theoretical framework and patterns that I observed in my prior research. On the other hand my operational hypothesis would be, counties in the Bay Area with larger decreases in drug arrests after 2014 will experience higher rates of overdose death rates in subsequent years. I will be comparing pre and post proposition 47 drug arrest levels and overdose death rates, and examine how these rates adjust throughout time. To explain why I expect this relationship, I have come up with the following causal mechanism. Proposition 47 reclassified low-level drug crimes from felonies to misdemeanors, which then led to reduced arrests. With fewer people entering the criminal justice system, the fewer people went to mandated treatment. The combination of limited accountability, reduced supervision, and inconsistent treatment leaves individuals more at

risk with overdose even if there are reduced arrest rates. All together, my theories, hypotheses, and proposed causal mechanism sets the foundation for my research.

IV. Research Design and Research Methods

This research design outlines how I measure my variable, structure my data, and analyze the effects of Proposition 47 on drug arrest and overdose deaths across the nine Bay Area counties from 2010-2023. The two most important variables in my project are my independent and dependent variables. My Independent variable is going to be the implementation of proposition 47. I measure this variable by classifying it by the years it was and wasn't enacted. 2010-2014, I consider pre-proposition 47 and 2015-2023 I consider post-proposition 47. This is the clearest way to capture the policy change because proposition 47 was enacted in late 2014 which reclassified many drug possession felonies to misdemeanors. Organizing my dependent variable data to surround my independent variable as before and after, cleanly separates these periods. My first dependent variable is the county-level drug arrest rates. To measure this I gather data from the California DOJ website, where the drug related arrest rates are classified by year and county per 100,000 residents. This is because counties, especially in the Bay Area vary widely in population size. My second dependent variable is overdose death rates. I measure this variable by extracting data from the California Department of Public Health, where they have listed counties and years in California, and how many drug related overdose deaths there were per 100,000 residents.

I also have two main control variables that are very important to keep in mind while gathering data and making relationships. My first control variable is population sizes per county. I got this information from the State of California Department of Finance, because it had measured population estimates for the years I was seeking out (2010-2023). This variable must

be controlled for because larger counties naturally experience higher arrests and more overdose deaths simply due to their size, which could falsely inflate the relationship between proposition 47 and my dependent variables. The second control variable is county poverty rates, which I collected from the U.S. Census Bureau. Poverty is a critical control variable because the higher the poverty rate in a county the more it may experience both higher drug-related offenses and the differences in enforcement practices. Without controlling for both of these variables my project could potentially develop misleading results and relationships between by IV and DV's.

My unit of analysis for this project is the county-years, meaning that each observation represents a single Bay Area county in a specific year. This leads me to my geographical scope of my project which includes all nine Bay Area counties: Alameda, Contra Costa, Marin, Napa, San Mateo, San Francisco, Santa Clara, Solano, and Sonoma. My temporary scope is 2010-2023 which will perfectly cover before and after proposition 47, which allows me to have a very clear comparison and meaningful changes. With nine counties observed over fourteen years, the data set will contain a total n-size of 126 county-year observations. The data structure of this project will be panel data. This is the most appropriate design because it allows me to examine both changes within the counties and differences across counties in the same period.

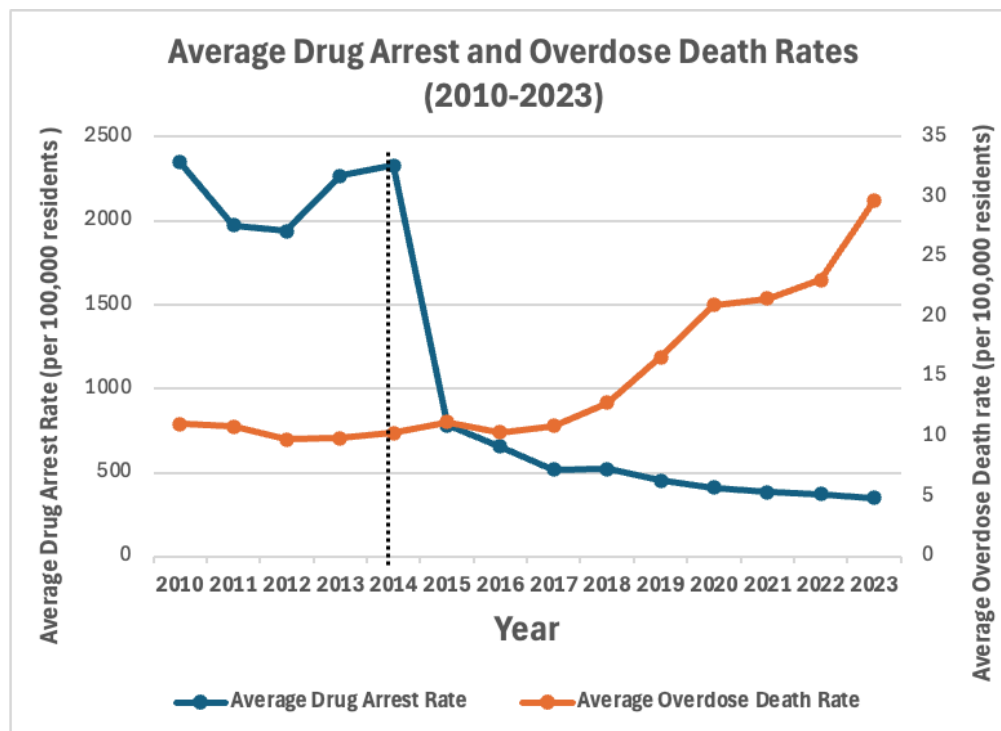
Finally, I will be using quantitative correlational analysis to be able to test the larger declines in arrest rates while controlling for county population and poverty. I will also make sure to observe and examine trends from before and after the proposition was passed to really visualize the comparison between drug arrest rates and overdose death rates. Although this project does present challenges, confounding variables gathering accurate data and using the correct methods will allow me to answer my question. To test the relationship between Proposition 47, drug arrest rates and overdose deaths in all Bay Area counties, I used several

quantitative methods. All of my variables are numeric and measured at the county-year level, correlational analysis is appropriate for a starting point for identifying relationships between the variables. These research models and methods will help test my operational hypothesis, that counties with larger decreases in drug arrests after proposition 47 will have higher opioid overdose rates in subsequent years.

VI. Results

Visualizing the different data points I will be gathering will allow me to show my audience how my findings tie together and how the comparisons can show the effects of proposition 47 on the drug arrest rates and overdose death rates.

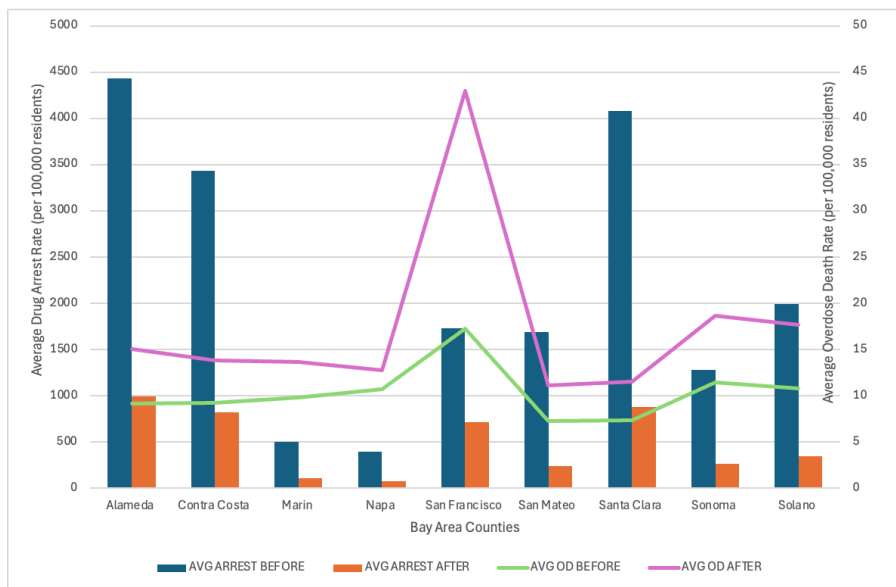
Figure Source: California Department of Justice (2010–2023); California Department of Public Health (2010–2023).



The first figure is a line graph that has both the average drug arrest rates and overdose death rates throughout all years 2010-2023. This graph clearly represents the comparison of how

proposition 47 impacted each variable in such drastic ways. With the overdose death rates steadily increasing in the orange, and the drug arrest rates having sharp decreases post-2014.

Figure Source: California Department of Justice (2010–2023); California Department of Public Health (2010–2023)



For the second visual I chose to do a stacked bar and line graph. This graph showcases the “before and after” aspect of proposition 47 on my two dependent variables. Overdose death rates and drug arrest rates. With this graph I was able to clearly show my findings which is how before the drug arrest rates were high, but overdose death rates were lower and now they are the opposite.

Figure Source: Wikimedia Commons. *California Bay Area County Map (Zoom & Color)*.
(2016).



Lastly, for my third visual, I decided on a geographical map of the nine Bay Area counties in California for viewers to clearly understand where my geographical scope was for my project. This was from a data source, to compliment the background portion of my project.

VII. Discussion and Implications

Overall, my project's findings were correct in terms of my hypothesis. With the implementation of proposition 47, there was a significant decrease in drug arrest rates, yet an increase in overdose death rates. Which means my hypothesis was proven correct, with keeping in mind possible controls I did not draw on in this project. The data I found does go hand in hand with my findings, but it could also be potentially tied in with other aspects. Such as the reason behind how consistent the overdose death rates were across all nine counties. There was even an increase in death rates before the proposition was implemented. This suggests there was an extra factor affecting the data, that wasn't just isolated to one specific demographic or county

structure. With these findings I am able to address California's policy with some changes I would recommend. Since the mental health, and substance abuse programs are optional for people to attend who are charged with these low level property and drug crimes, people are passing up the opportunity for a second chance. California sees this as a punishment, forcing people to attend these programs but I do not see it as that. It is an opportunity for California's neighborhoods to be safer, and healthier for everyone.

VIII. Research Limitations and Research Extensions

Completing this research project has led me to realize that there is so much more I could have added to it, because there are a lot of components to this project. The first thing I want to recognize is the control variables I chose. I think my project could have been stronger if I had controlled for ethnicity/race in my research because that is a very large confound in the Bay Area. The nine counties are very high in population, with a variety of backgrounds that could potentially influence the drug arrest and overdose death rates. One example of having race and ethnicity as a control variable could have been making a graph that helps showcase the effects of ethnicity and background to the overdose death and drug arrest rates. Secondly, I think my project would have been a lot stronger with a statistical significance test to prove my hypothesis is correct with strict evidence aside from just the data I collected. On my poster, I could have included a visual for the audience to see if my data was statistically significant or not, which would have been a clear marker for everyone to know my data and findings does correlate to my hypothesis. With this additional information, I could have backed up my hypothesis leaving a larger impact on my findings and conclusions

IX. Conclusion

In conclusion, this project aims to better understand how a major criminal justice reform, proposition 47 has shaped drug possession arrest rates and overdose deaths across the nine Bay Area counties from 2010-2023. By comparing pre and post reform trends and watching the relationship between the variables, uncovers how the goals of proposition 47 align with some real-world outcomes. Through a variety of analyses, and methods I was able to provide an important step forward towards filling research gaps that Californian residents deserve to have filled. That being, the prison system can hopefully still not have mass incarceration rates, and funds can still be put towards *required* programs for people who are charged with crimes relating to drug abuse and mental health. This way people can be given the extra push they might have not known they needed, to get the help they need. Saving lives day by day and keeping the neighborhoods safer for everyone.

Works Cited

- Crodelle, Jennifer, et al. "Impacts of California Proposition 47 on Crime in Santa Monica, California ." *PLOS ONE*, Public Library of Science, journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0251199. Accessed 23 Oct. 2025.
- Mooney, Alyssa C., et al. "Effects of a Voter Initiative on Disparities in Punishment Severity for Drug Offenses across California Counties." *Social Science & Medicine*, vol. 230, Elsevier BV, Mar. 2019, pp. 9–19, <https://doi.org/10.1016/j.socscimed.2019.03.010>. Accessed 24 Oct. 2025.
- "Not Taking Crime Seriously." *Manhattan Institute*, 2024, manhattan.institute/article/not-taking-crime-seriously-californias-prop-47-exacerbated-crime-and-drug-abuse. Accessed 24 Oct. 2025.
- Groff, Elizabeth R., et al. "Tracing the Effects of Reducing Penalties on Crime and Prosecution." *Journal of Criminal Justice*, vol. 75, Elsevier BV, July 2021, p. 101831, <https://doi.org/10.1016/j.jcrimjus.2021.101831>. Accessed 24 Oct. 2025.
- "Crime after Proposition 47 and the Pandemic." *Public Policy Institute of California*, 11 Sept. 2024, www.ppic.org/publication/crime-after-proposition-47-and-the-pandemic/?utm_source Accessed 25 Oct. 2025.

“File:California Bay Area County Map (Zoom&Color).Svg - Wikimedia Commons.”

Wikimedia.org, 8 Apr. 2016,

commons.wikimedia.org/wiki/File:California_Bay_Area_county_map_%28zoom%26color%29.svg. Accessed 6 Dec. 2025.

Bird, Mia, Magnus Lofstrom, Brandon Martin, Steven Raphael, and Viet Nguyen. 2018.

“The Impact of Proposition 47 on Crime and Recidivism.”

https://www.ppic.org/wp-content/uploads/r_0618mbr.pdf?utm_source

“CDPH Launches First Phase of Opioid Prevention and Education Campaign.” 2025.
Ca.gov. 2025.

<https://www.cdph.ca.gov/Programs/OPA/Pages/NR23-026.aspx#:~:text=The%20Opioid%20Prevention%20and%20Education,%2C%20prescriptions%2C%20and%20substance%20use.>