TO: Interested Parties
FROM: Rohin Mishra
DATE: 08 April 2025
SUBJECT: Moms Demand CAP Laws: An Analysis of Child-Access Prevention Legislation

Background

Child-access prevention laws are designed to hold adults accountable for negligently or intentionally allowing minors unsupervised access to firearms. In 2020, a sobering milestone was reached: firearm injuries surpassed motor vehicle crashes as the leading cause of death for children aged 1 to 17 years. Furthermore, in 2021, of the 2,590 children under 18 who died from firearms, a significant 31.9 percent, or 827 deaths, were suicides. This underscores the need to identify and implement effective measures to fight youth suicide, particularly those addressing firearm access—something that Moms Demand Action can be at the forefront of.

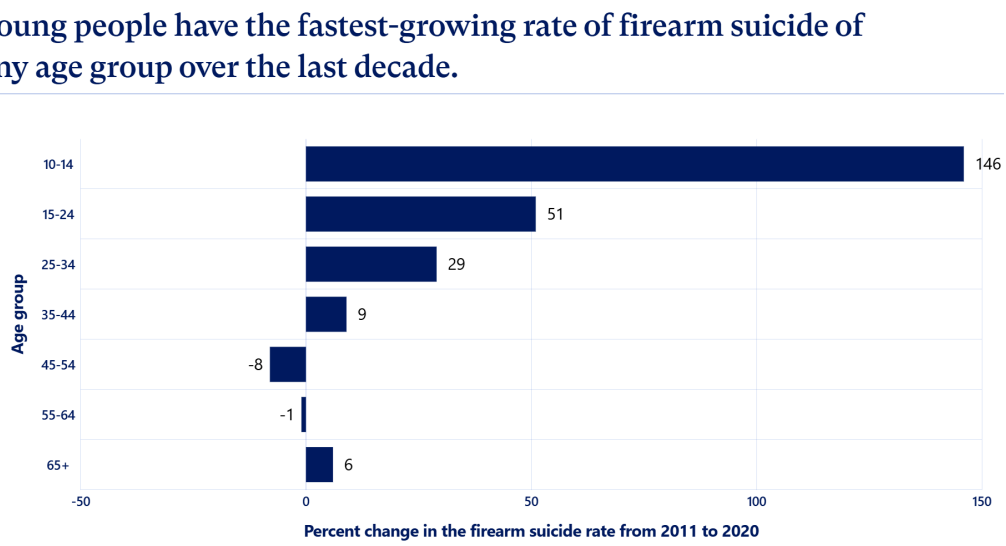

Figure 1: Growing youth suicide rates (Everytown Research)

Research Design/Prior Literature

This project poses the following question: do CAP laws effectively reduce youth firearm suicide rates? The primary hypothesis under investigation is that child-access prevention laws lead to a decrease in youth suicide rates. To provide context for our analysis, it is important to consider prior research in this area. Previous studies have suggested a correlation between firearm access and youth suicide. For instance, Webster's 2004 flagship research indicated that CAP laws were associated with an 8.3% decrease in suicide rates among 14- to 17-year-olds. In contrast, a national-level media campaign promoting safe firearm storage, evaluated by Sidman et al. in 2005, did not find statistically significant effects on improving safe storage practices. This media campaign strategy most closely mirrors Moms Demand Action's Be SMART campaign, which is the organization's current approach to advocating safe storage. This project begs the question: is there an alternative where we can address this problem more effectively with the time and resources we spend on advocacy?

To further investigate the impact of CAP laws, our research project utilized several key data sources. We analyzed youth suicide rates from the CDC WONDER Database for individuals aged 10 to 24 years, spanning from 1999 to 2020. Data on child-access prevention laws were obtained from the State Firearm Law Database, covering the years 1991 to 2019. Demographic data from the Census (2000) and the American Community Survey (ACS-1, 2005-2019), with imputed data for missing years (1999, 2001-2004), were also incorporated.

Methodology/Findings

We employed linear regression and propensity score matching to assess the relationship between CAP laws and youth suicide rates. At a glance, states with CAP laws appeared to have consistently lower rates compared to those without. Through linear regression analysis, states with CAP measures were associated with an estimated 1.14 unit drop in the youth suicide rate relative to states without these measures, after controlling for other relevant variables. **This translates to an estimated 18% reduction in youth suicide rates at a statistically significant level.** To strengthen our analysis and account for potential confounding factors, we utilized propensity score matching, which involves comparing states that are statistically similar in relevant characteristics, except for the presence of CAP laws. After matching, we still observed an estimated **8% reduction** in youth suicide rates attributable to child-access prevention laws. We believe that both of these estimated reductions, 8% and 18%, are likely an undercount of the true effectiveness of CAP laws.

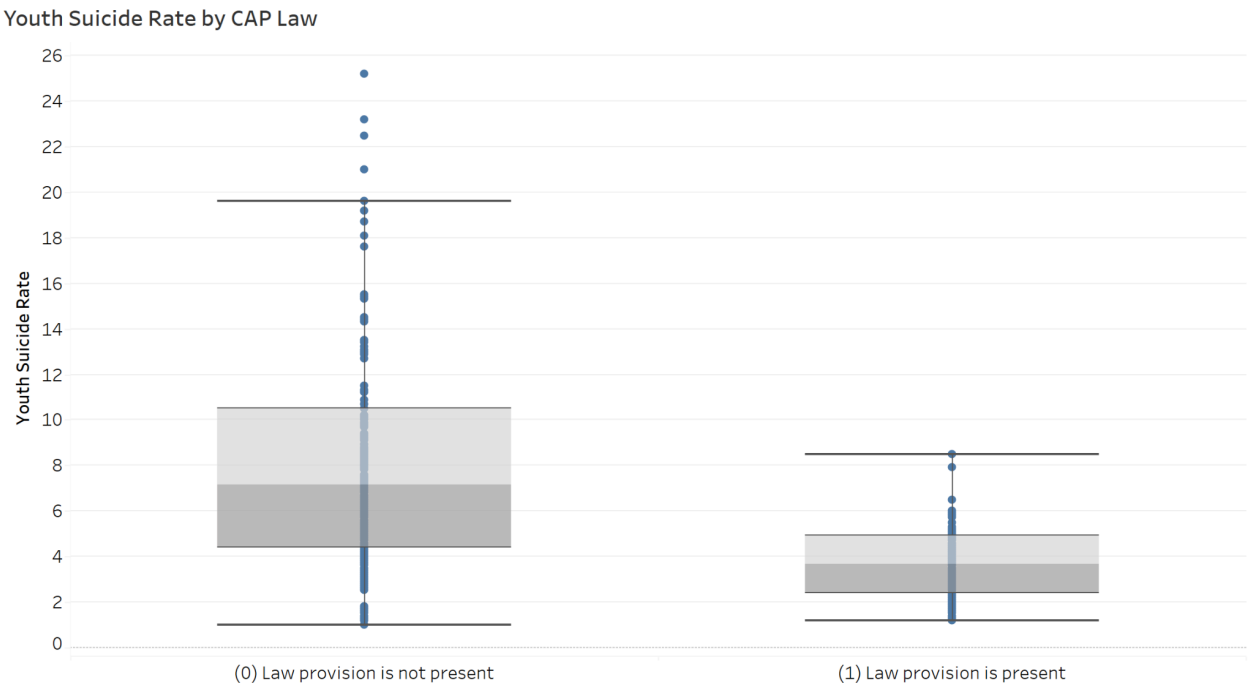

Figure 2: Youth Suicide Rate by CAP Law Presence (1999-2019)

Table 1:

	Dependent variable:
	Crude.Rate
CAP_Law_Present1	−1.148***
	(0.238)
Population	0.00000**
	(0.00000)
Median_Age	−0.105**
	(0.045)
White_Pop	−0.00000**
	(0.00000)
Bachelors_Degree	−0.00000***
	(0.00000)
Median_Income	0.00005**
	(0.00002)
Median_Rent	0.003**
	(0.001)
Constant	6.564***
	(1.807)
Observations	772
R^2	0.351
Adjusted R^2	0.345
Residual Std. Error	2.354 (df = 764)
F Statistic	59.089*** (df = 7; 764)
Note:	*p<0.1; **p<0.05; ***p<0.01

Table 2:

	Dependent variable:
	Crude.Rate
CAP_Law_Present1	−0.953***
	(0.232)
Population	−0.00000
	(0.00000)
Median_Age	−0.260***
	(0.079)
White_Pop	0.00000
	(0.00000)
Bachelors_Degree	−0.00000***
	(0.00000)
Median_Income	0.00003
	(0.00003)
Median_Rent	0.003*
	(0.002)
Constant	12.140***
	(3.220)
Observations	400
R^2	0.328
Adjusted R^2	0.316
Residual Std. Error	2.186 (df = 392)
F Statistic	27.287*** (df = 7; 392)
Note:	*p<0.1; **p<0.05; ***p<0.01

Table 1: Linear Regression Model *(18% reduction in youth suicide rates)*
Table 2: Propensity Score Matched Regression Model *(8% reduction in youth suicide rates)*

Limitations

It is important to acknowledge certain limitations in our analysis. Firstly, the CDC WONDER database suppresses some data points where there were fewer than 10 deaths for privacy reasons, which affected approximately 13% of observations. This data suppression likely underestimated the effectiveness of CAP laws, particularly in smaller-population states with fewer raw deaths but higher suicide rates (Wyoming, Montana, etc.). Secondly, our methodology primarily focused on youth suicide by firearm. We cannot definitively conclude whether CAP laws reduce overall youth suicide rates, as it is possible that individuals might attempt suicide using other methods in states with such laws. Furthermore, we aggregated CAP laws for this analysis, which does not necessarily isolate how individual laws might have worked. More research is worthwhile on these fronts.

Recommendations

Despite these limitations, our research, in conjunction with prior literature, provides compelling evidence for the potential of CAP laws in preventing youth firearm suicide. Therefore, based on our findings of **an 8% to 18% reduction in youth suicide rates** associated with these laws, alongside existing research and the general public support for such measures, we recommend that organizations such as Moms Demand Action **prioritize advocating for the implementation and strengthening of child-access prevention laws.**