Waiting to Act: A Study of the Impact of Mandatory Firearms Purchase Delays on Suicide Rates

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Abstract

The issue of suicide in the United States constitutes an increasingly concerning economic and public health issue, given the observed rise in suicide rates in recent years and the societal costs incurred by suicides. This paper focuses on the incidence of suicides by firearm, given firearms' comparatively high usage and lethality in suicides, and investigates the effects of mandatory waiting periods for firearm purchases on the incidence of suicide. Such purchase delays theoretically provide a "cooling off" period, temporarily denying impulsively suicidal individuals the means to commit suicide. This study employs multivariate regression analysis to isolate the effects of having state-level mandatory waiting periods for firearms purchases, as well as the length of such periods, on state-level suicide mortality rates. Controlling for state-level demographic characteristics, the presence of similar firearms laws, and predominant political leaning, this study finds that having a mandatory waiting period for firearm purchases has no impact on the incidence of suicide.

Introduction

The issue of suicide in the United States constitutes a salient and increasingly concerning public health issue, given its significant contribution to the incidence of death as well as the observed rise in the occurrence of suicides in recent years. Notably, as of 2020, suicide was ranked as the twelfth leading cause of death for all ages, with 45,979 deaths being causally attributed to suicide for the year (Centers for Disease Control and Prevention [CDC], 2023c). Furthermore, Hedegaard et al. (2020) report that suicide mortality rates have increased by approximately 35 percent between 1999 and 2018. In addition to constituting a serious public health issue, however, suicide also represents a serious economic issue. Notably, Shepard et al. (2015) estimated the economic cost of suicide (primarily comprising medical costs arising from treating injuries associated with unsuccessful suicide attempts and lost productivity resulting from successful suicides) to be approximately $93.5 billion in 2013. While a myriad number of policy proposals have been suggested to mitigate the occurrence of suicide, this paper focuses on addressing the incidence of suicide by firearm. Notably, for the period 2010 to 2020, 51 percent of suicides resulted from firearm injury, indicating that firearms represent a frequently utilized method to facilitate suicides (Betz et al., 2022). Moreover, suicide attempts using firearms have a comparatively high success rate, with approximately 82.5 percent of suicide attempts using firearms successfully resulting in death for the period 1989 to 1997 (Spicer & Miller, 2000). For comparison, the second- and third-most lethal methods of drowning or submersion and suffocation or hanging had fatality rates of 65.9 and 61.4 percent, respectively (Spicer & Miller, 2000).

In particular, this paper focuses on a possible policy intervention which may be used to reduce the incidence of overall suicides as well as suicides using firearms, in particular, and is

likely to be relatively uncontroversial, at least in comparison to more restrictive policies impacting access to and ownership of firearms in the United States. Specifically, this paper investigates the effects of mandatory waiting periods for firearm purchases imposed by state-level statutory law on state-level suicide mortality rates. Such purchase delays are intended to address the frequently impulsive nature of suicidal desires and intentions by theoretically providing a "cooling off" period, thereby reducing the incidence of suicides (Lewiecki & Miller, 2013). However, this rationale rests on a number of potentially erroneous presumptions. Notably, these mandatory waiting periods merely delay access to firearms, with the current longest waiting period lasting for fifteen days (Edwards et al., 2018). Consequently, for the policy intervention to effectively reduce the incidence of suicide, the waiting period imposed must be of sufficient length to outlast impulsive suicidal urges. As such, an analysis of the length of the waiting period imposed on the incidence of suicide is merited, in addition to the effect of merely having a waiting period with respect to the incidence of suicide. In addition, this policy intervention only temporarily denies access to one method used to facilitate suicide; consequently, it is possible that suicidal individuals may also respond to purchase delays by switching to another method. Thus, the impact of purchase delay policies on overall suicide rates as well as non-firearm suicide rates must also be investigated.

Empirical studies assessing the impact of firearms policy suggest that limiting suicidal individuals' access to firearms as well as limiting the overall prevalence of firearms causes a reduction in suicide mortality rates. Andres and Hempstead (2011) note that a variety of barriers to firearm ownership imposed by legislation (e.g., permit requirements, age restrictions, restrictions related to previous behavior) significantly reduce male suicide rates. Boor and Bair (1990) as well as Anestis et al. (2017) also corroborate the existence of a generally positive

relationship between the prevalence of firearm ownership and suicide rates indicated by the literature. Similarly, Balestra (2018) finds that substantially reducing the prevalence of firearms by removing or reducing current gun owners' access to firearms (as opposed to establishing barriers to ownership for prospective new firearm owners) significantly reduces suicide mortality rates, though the study assesses Switzerland, rather than the United States. Thus, it is well established in the literature that generally reducing individuals' access to firearms effectively reduces the incidence of suicide. However, the specific impact of mandatory waiting periods, as well as the length of these periods, on the incidence of suicide is somewhat less established in the literature.

Relatively recent studies analyzing mandatory waiting period policies with respect to their impact on the incidence of suicide suggest that having a mandatory purchase delay reduces the incidence of suicides by firearms, though the precise findings of these studies are not entirely consistent on all measures of suicide. Edwards et al. (2018), analyzing the impacts of both enactments of purchase delays as well as repeals, notably find that purchase delays for handguns have a "consistently negative and statistically significant effect on firearm-related suicides," controlling for state and time characteristics (p. 3132). Similarly, Luca et al. (2017) corroborate this state-level negative effect of mandatory waiting period policies on suicide using firearms. Ludwig and Cook (2000), however, only find that this negative effect is statistically significant for individuals aged fifty-five and older. Dunton et al. (2022) evaluate the efficacy of mandatory waiting periods using a different approach by solely analyzing the impact of repealing a mandatory waiting period on the incidence of suicide, rather than the impact of implementing a mandatory waiting period. Specifically, they find that repealing the purchase delay policy resulted in a significant increase in the incidence of suicide using firearms. However, their

analysis is limited to the state of Wisconsin, rather than all states. Thus, while the literature concerning the impact of mandatory waiting periods on firearm-related suicides is not as well established as the research on the relationship between the prevalence of firearms and suicide rates, more recent research indicates that mandatory waiting periods reduce firearm-related suicides.

Conversely, the effect of mandatory waiting periods on the overall incidence of suicide (regardless of cause) and on non-firearm-related suicides appears more controversial. Notably, Edwards et al. (2018) find that purchase delays have only a marginally significant (at a 10% level of significance) negative effect on the incidence of all suicides (regardless of the method used) for one of the four regression models they use. Controlling for various demographic and state-level effects results in a similarly negative, but statistically insignificant, effect on total suicides. In addition, they find that, for three of the models they use, mandatory waiting period policies also have a negative but statistically insignificant effect on the incidence of non-firearm suicides. In contrast, Luca et al. (2017) find that mandatory waiting period policies have a negative statistically significant effect on both total suicides and firearm-related suicides. However, their results regarding changes in non-firearm-related deaths differ depending on the model used. Without controls for state-specific trends, they find that mandatory waiting periods have a negative but statistically insignificant effect on non-firearm suicides, similar to the results of Edward et al. (2018). However, when controlling for state-specific trends, they find that waiting periods have a significant positive effect on non-firearm suicides (though the level at which this effect is significant varies, depending on the presence of other controls in the model specified). Luca et al. (2017) address this by noting that some models "suggest partial substitution" to alternative methods of suicide if mandatory waiting periods are implemented (p.

12164). Balestra (2018) corroborates the existence of this tendency toward substitution, though he notes that alternative methods are not perfect substitutes for firearms. In addition, Balestra's (2018) research assesses the impact of a similar policy that denies individual access to firearms but is nonetheless separate from the mandatory waiting period policy evaluated by this paper. Thus, while the literature has largely reached a consensus regarding the negative relationship between the presence of mandatory waiting periods and the incidence of firearm-related suicides, the relationship between these waiting periods and all suicides (regardless of the method used), as well as non-firearm-related suicides, is somewhat more ambiguous.

To address these ambiguities in the current understanding of the precise impact of state-level mandatory waiting periods on the incidence of overall suicide and specific types of suicide, this paper aims to accurately analyze whether purchase delay policies are effective in reducing the incidence of all suicides. In addition, this paper also analyzes the effect of these purchase delay policies on the occurrence of non-firearm-related suicides, to assess whether (impulsively) suicidal individuals successfully substitute firearms for other methods and tools in response to delays in accessing their newly purchased firearms. The latter relationship is of particular interest, given the lack of a consensus regarding the existence of this substitution tendency. In addition, this paper aims to evaluate whether the particular length of the waiting period mandated affects the incidence of suicide. Edwards et al. (2018) find that periods which are seven days or more do not have a different effect on suicide rates compared to periods of less than seven days, using a binary variable to segregate these types of waiting periods (rather than a continuous variable representing the specific number of days for which the waiting period lasts). Most other studies considered, however, do not explicitly control for waiting period length, indicating that

the literature may be deficient in this area and suggesting a need for further research on this effect.

This paper employs multivariate regression analysis using panel data for the United States from 2000 to 2019 to resolve the aforementioned ambiguities in the relevant literature. The statistical analysis software STATA v. 18.0 was employed to conduct the analysis. This paper evaluates the overall impact of having mandatory waiting periods on the incidence of suicide, the tendency of suicidal individuals to respond to purchase delay policies by substituting firearms for other means, and the relationship between the length of the purchase delay and the incidence of suicide. This paper finds that, when controlling for the influence of state characteristics over time (e.g., demographic characteristics, political composition of state legislatures, the existing prevalence of firearms), there is no significant relationship between either the presence or length of mandatory waiting periods and suicide mortality rates, regardless of cause (i.e., all-cause, firearms-related, or non-firearms-related), suggesting that this policy is ineffective at mitigating the incidence of suicide.

Data

Dependent Variable

To ensure that causal inference is properly utilized to test the existence and direction of the causal impact of mandatory waiting periods for firearms purchases on the incidence of all suicides, firearms-related suicides, and non-firearms-related suicides, it is necessary to properly define the dependent and explanatory variables of primary interest. This paper uses state-level suicide mortality rate data (as measured in the number of suicides per 100,000 persons in the population) for the dependent variable in the models specified. Specifically, this paper uses the

total suicide mortality rates, firearms-related suicide mortality rates, and non-firearms-related suicide mortality rates. Suicide mortality rate data for the period 2000 to 2019 for all fifty states in the United States was taken from underlying cause of death data from the CDC WONDER database (CDC, 2023d; CDC, 2023e). CDC WONDER is a publicly available database which generally hosts a variety of public health information, such as mortality data, the incidence of certain diseases, natality data, and so forth (CDC, 2022). The CDC obtains this population mortality data using all death certificates reported by state-level agencies through the Vital Statistics Cooperative Program (CDC, 2016; CDC, 2023b; Minino et al., 2011).

While the CDC concedes that accuracy errors in recording the number of deaths is a possibility, it estimates that "more than 99 percent of deaths" which occur in the United States are registered; in addition, statistically unreliable results are omitted from data releases (CDC, 2023b; Minino et al., 2011). Mortality rates are marked as "unreliable" when the absolute death count used to calculate them is less than 20 (CDC, 2023b). This nonrandom omission of suicide mortality rates in which the state has a low absolute number of suicides has the potential to bias this paper's results. However, this bias is not likely to be substantial, given that only two of the 1000 observations retrieved for analysis contained unreliable mortality rates. Notably, only the firearms-related suicide mortality rates for Rhode Island in 2003 and 2005 were omitted due to reliability issues. As Rhode Island did have a seven-day mandatory waiting period in effect during these years, however, it is possible that the results may be biased, as the unreliable firearms-related suicide mortality rates for these observations would be extraordinarily low. This bias, if it exists to any substantial degree, would be negative, since there is a positive relationship between being omitted due to a low absolute death count and having a mandatory waiting period

and there is an expected negative relationship between suicide mortality rate and having a mandatory waiting period.

Independent Variables of Interest

Data for the explanatory variables of interest are, in contrast, drawn from several sources for purposes of corroboration. This paper uses the State Firearm Law Database from the Inter-university Consortium for Political and Social Research (ICPSR) to acquire observations on whether a state has adopted a particular firearm law during a particular year for the period 1991 to 2019 (Siegel, 2020). The data set was manually compiled and cross-validated by a Principal Investigator and a team of twenty graduate students using research from Thomson Reuters Westlaw pertaining to statute statutory law and session law (Siegel, 2020). In addition to data on waiting period implementation, this data set also provided observations concerning the implementation of other gun laws, whose presence was potentially correlated with both the presence of purchase delays and suicide mortality rates, namely whether universal background were required for firearm purchases, whether the state conducted its own background checks prior to firearm purchases, and whether permits were required for firearm purchases.

The RAND State Firearm Law Database (Cherney et al., 2022b), as well as data from the research of Edwards et al. (2018), were used to construct a panel data set for the lengths, in days, of the mandatory waiting periods implemented. The RAND database comprised a comprehensive list of changes in all firearms law, both at the federal and state level, for the years 1979 to 2020 and was compiled using a multiplicity of primary sources (e.g., records of bills) and secondary sources (e.g., published research on firearms policy) (Cherner et al., 2022a). Edwards et al. (2018) provide data only for the period from 1990 to 2014. They do not explicitly discuss how

they acquired their data on purchase delay lengths, though their citations suggest that they directly examined records of state statutory law. Information from the Giffords Law Center to Prevent Gun Violence (2020, 2023a, 2023b, 2023c, 2023d) regarding current firearms policies for particular states was used to resolve discrepancies between the data provided by the ICPSR, RAND, and Edwards et al. (2018).

Control Variables

To ensure that all salient confounding factors are controlled for, this paper includes a multiplicity of demographic covariates in its model, primarily utilizing data from IPUMS's American Community Survey (ACS) (Ruggles et al., 2023). The ACS constitutes an annual survey which collects information on a host of demographic characteristics for approximately three million randomly sampled households across the United States for the period 2000 to (currently) 2022, which are subjected to cluster and stratification random sampling techniques (IPUMS, n.d.-a; IPUMS, n.d.-b). Using ACS data, this paper considers, in particular, the racial composition of each state. Notably, Dunton et al. (2022) found that the suicide rates of persons of color were affected by a disproportionately large increase in response to Wisconsin's repeal of its 48-hour mandatory waiting period laws. Consequently, this paper includes covariates for the proportion of each state's population that comprises each racial group. Using similar methods, the composition of each state's population with respect to gender, age, and poverty status are also controlled for using data from the ACS. Data from the Federal Reserve Bank of St. Louis (n.d.) and the United States Bureau of Labor Statistics (n.d.) compliment the demographics data from the ACS and are used to control for real per capita personal income (RPCPI). In addition to standard demographics covariates drawn, this paper also controls for per capita alcohol

consumption using data from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), which the NIAAA estimates using alcohol production and shipments data (NIAAA, n.d.; Slater & Alpert, 2023b).

Political factors are also controlled for, in an effort to mitigate the potential bias presented by the endogenous nature of mandatory waiting periods. In addition to the presence of the other gun laws (using data from the ICPSR), this paper controls for the political composition of each state's legislature using data from the National Conference of State Legislatures (NCSL, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019) and from the United States Census Bureau (Census Bureau, 2012a). This paper also attempts to control for the prevalence of firearms; however, the use of this covariate presents significant issues. Notably, data on the actual prevalence of firearms is not available, necessitating the use of proxies. In addition, the conventional proxy the state-level prevalence of firearms, namely firearms-related suicide as a proportion of all suicides, was also unsuited for use, given that the dependent variable constitutes a measure of the incidence of various types of suicides, including firearms-related suicides (Andres & Hempstead, 2011; Edwards et al., 2018). Thus, this paper replicates the method used by Andres and Hempstead (2011) and controls for the number of hunting license holders per state using data from the United States Fish and Wildlife Service (FWS, n.d.). A summary of the aforementioned dependent, independent, and control variables are provided below in Table 1.

Table 1. Summary Statistics for Observations of All-Cause Suicides

Variable	Obs	Mean	Std. Dev.	Min	Max
All-Cause Crude Suicide Mortality Rate	1000	14.157	4.132	6.000	29.700
Firearms-Related Crude Suicide Mortality Rate	998	7.676	3.225	1.400	20.300

Non-Firearms-Related Crude Suicide Rate	1000	6.493	1.803	2.600	13.800
Gun Purchase Delay Dummy	1000	0.225	0.418	0.000	1.000
Purchase Delay Length (Regardless of Purchase Delay Enactment)	1000	1.370	3.019	0.000	14.000
Purchase Delay Length (If Purchase Delay Is in Effect)	225	6.089	3.432	2.000	14.000
Control Variables					
Fraction Asian/ Pacific Islander	1000	0.037	0.074	0.003	0.568
Fraction White	1000	0.823	0.123	0.258	0.974
Fraction Black	1000	0.079	0.080	0.001	0.363
Fraction American Indian/Alaska Native	1000	0.018	0.040	0.001	0.317
Fraction Other Race	1000	0.080	0.104	0.013	0.727
Fraction Female	1000	0.518	0.011	0.463	0.546
Fraction Male	1000	0.482	0.011	0.454	0.537
Fraction Age 15 to 20 Years	1000	0.083	0.008	0.062	0.125
Fraction Age 20 to 25 Years	1000	0.070	0.008	0.050	0.129
Fraction Age 25 to 30 Years	1000	0.069	0.008	0.046	0.109
Fraction Age 30 to 35 Years	1000	0.072	0.009	0.048	0.101
Fraction Age 35 to 40 Years	1000	0.076	0.011	0.052	0.118
Fraction Age 40 to 45 Years	1000	0.082	0.014	0.053	0.130
Fraction Age 45 to 50 Years	1000	0.088	0.013	0.059	0.126
Fraction Age 50 to 55 Years	1000	0.091	0.008	0.064	0.111
Fraction Age 55 to 60 Years	1000	0.086	0.009	0.055	0.115
Fraction Age 60 to 65 Years	1000	0.076	0.013	0.043	0.110
Fraction Age 65 to 70 Years	1000	0.063	0.013	0.029	0.103
Fraction Age 70 to 75 Years	1000	0.050	0.009	0.023	0.089
Fraction Age 75 to 80 Years	1000	0.039	0.006	0.016	0.060
Fraction Age 80 to 85 Years	1000	0.028	0.005	0.004	0.042

Fraction Age 85+ Years	1000	0.025	0.007	0.004	0.045
Fraction in Poverty	1000	0.104	0.026	0.049	0.195
Per Capita Ethanol Alcohol Consumption	1000	2.390	0.506	1.271	4.759
No. of Paid Hunting License Holders	1000	298241.830	237755.370	6856.000	1162430.000
Real Per Capita Personal Income (RPCPI)	1000	18856.857	3022.500	12812.796	29467.406
Fraction of States that Conduct Own Background Check for Firearm Purchases	1000	0.179	0.384	0.000	1.000
Fraction of States that Conduct Own Background Check for Handgun Purchases	1000	0.299	0.458	0.000	1.000
Fraction of States Requiring Universal Background Checks for Firearm Purchases	1000	0.098	0.297	0.000	1.000
Fraction of States Requiring Universal Background Checks for Handgun Purchases	1000	0.140	0.347	0.000	1.000
Fraction of States Requiring License/Permit for Firearm Purchases	1000	0.111	0.314	0.000	1.000
Fraction of States Requiring License/Permit for Handgun Purchases	1000	0.269	0.444	0.000	1.000
Fraction of Senate Democrat	950	0.468	0.192	0.000	1.000
Fraction of Senate Republican	950	0.508	0.195	0.000	0.914
Fraction of House Democrat	950	0.479	0.179	0.000	0.920
Fraction of House Republican	950	0.497	0.181	0.000	0.871

In addition, preliminary analysis of the data indicates that states with mandatory waiting periods (compared to state without such waiting periods) have significantly lower average all-cause and firearms-related suicide mortality rates, as depicted below in Table 2 (t-test results for all variables are included in Table 2A in Appendix A). The possibility of a tendency for suicidal

individuals to respond by substituting firearms for other methods is also suggested by the higher average non-firearms-related suicide rate for states with mandatory waiting periods, though this difference is not statistically significant.

Table 2. Suicide Mortality Rates by Presence of Purchase Delay Policy

Variables	Mean (No Purchase Delay)	Mean (If Purchase Delay Is in Effect)	Difference	P-Value
All-Cause Crude Suicide Mortality Rate	14.590	12.059	2.530	0.000
Firearms-Related Crude Suicide Mortality Rate	8.505	4.795	3.711	0.000
Non-Firearms-Related Crude Suicide Rate	6.453	6.633	-0.180	0.188

Note. For purposes of brevity, this table has been condensed to include only the dependent variables for the various suicide mortality rates. For a full comparison of all variables used in this study, see Table 2A in Appendix A.

Thus, ostensibly, mandatory waiting periods would appear to constitute an effective means of mitigating the incidence of suicide, such that the overall and firearms-related suicides experience a decline and non-firearms related suicides do not experience a (entirely) commensurate increase. As discussed previously, though, the application of regression analysis to control for the influence other state-level demographic, socioeconomic, and political characteristics reveals that mandatory waiting periods do not significantly impact the incidence of suicide, regardless of the means used to facilitate suicide. Prior to a discussion of these results, however, an overview of the regression techniques and models used is warranted.

Methods

To isolate the impact of state-level firearms purchase delay policies on the incidence of suicide, this paper employs regression model that estimates the relationship between various types of suicide mortality rates and mandatory waiting periods. The general regression model used to estimate the impact of having purchase delay policies on various measures of the incidence of suicides is:

Model (1): $ln(Y_{st}) = \beta_0 + \beta_1 wait_{st} + \beta_2{}'\gamma_{st} + \beta_3{}'\alpha_{st} + \beta_4{}'\epsilon_{st} + \beta_5{}'\eta_s + \beta_6{}'\phi_t + u_{st}$

where Y_{st} is the suicide mortality rate for a given cause (i.e., non-firearms-related suicides, firearms-related suicides, and all suicides) for state s in year t, $wait_{st}$ is a dummy variable representing whether state s has a mandatory waiting period in effect in year t, γ_{st} is a vector of aggregated demographic covariates for state s in year t, α_{st} is a vector of dummy variables representing whether state s has the aforementioned other gun laws year t, ϵ_{st} is a vector of variables controlling for the political composition of state s in year t, η_s is a vector of time-invariant state fixed effects, and ϕ_t is a vector of year fixed effects. The coefficient on $wait_{st}$ (β_1) constitutes the explanatory variable of primary interest, as it represents the change in suicide mortality rates when a state has a mandatory waiting period in effect, compared to when the state does not, holding all else constant.

This paper uses the natural log of Y_{st} to estimate the impact of purchase delay policies on suicide mortality rates, as it is likely that any changes in suicide mortality rates resulting from the implementation or removal of mandatory waiting periods will be proportional to the suicide mortality rate prior to this policy change. In addition, log-linear model specifications generally appear to constitute the preferred specification for evaluating the impact of firearms policies on

aggregate measures (e.g., suicide rates, homicide rates); notably, Edwards et al. (2018), Luca et al. (2017), and Vitt et al. (2018) employ log-linear specifications in their studies.

Prior to a discussion of issues inherent to Model (1) as well as similar model specifications used in this paper, a discussion of the specific covariates comprising the aforementioned vectors used in Model (1) is warranted. γ_{st}, the vector of demographic covariates, specifically controls for the racial composition, age-group composition, gender composition, personal income, the proportion of the population in poverty, per capita alcohol consumption, and the prevalence of firearms for the population of state s in year t, as these demographic characteristics have the salient potential to be correlated with both state-level suicide mortality rates and the presence of mandatory waiting periods. The prevalence of firearms, using the number of hunting license holders as a proxy, is controlled for in addition to the standard or conventional set of demographic variables to account for the existing accessibility of firearms to suicidal individuals. Firearms purchase delay policies are theoretically less effective in areas with greater prevalences of firearms, as suicidal individuals conjecturally have greater access to firearms in areas where firearms are highly prevalent, such that the ability of purchase delay policies to temporarily deny suicidal individuals access to firearms is diminished. Per capita alcohol consumption is similarly controlled for due to the potential role of alcohol in exacerbating suicidal intentions.

The vector of variables controlling for the presence of other gun laws, α_{st}, is intended to separate the effects of mandatory waiting periods and firearms laws which could have a similar effect on suicide mortality rates through their temporary or permanent denial of access to suicidal individuals. In conjunction with the prevalence of firearms, this vector assists in controlling for the general accessibility of firearms. Specifically, the other firearm laws accounted for are

universal background check requirements for all firearm purchases and for handgun purchases (in particular), state policy mandating state background checks for all firearm purchases and for handgun purchases, permit or license requirements for all firearm purchases, and permit or license requirements for all firearm purchases and for handgun purchases.

The vector of variables controlling for each state's political climate and dominant leaning, ϵ_{st}, is intended to mitigate the endogeneity of the mandatory waiting periods. This vector comprises variables which control for the proportion of Democrats in the House and Senate chambers of each state's legislature. While this does not eliminate the issue of endogeneity, since the dichotomous partisan composition of state legislatures is not perfectly representative of their constituents' true political leanings (especially with respect to firearms law, in particular) or the probability that a mandatory waiting period is enacted in state s in year t, this paper argues that this measure sufficiently mitigates it. In addition, state fixed effects (η_s) and year fixed effects (ϕ_t) are included to account for the possibility of unobservable confounding factors. While the zero conditional mean assumption is generally an exceedingly difficult assumption to prove (absent the use of randomly assigned interventions) in a definitive manner, the large host of covariates included in the model which control for a large number of potential cofounding factors and characteristics, in conjunction with the use of state and year fixed effects, mitigates a substantial degree of potential bias in estimations of the relationship between the presence and length of mandatory waiting periods with suicide mortality rates.

The assumption of no perfect collinearity, while somewhat less subjective in nature (insofar as whether this assumption holds can be evaluated more directly), raises some concerns. In particular, the variation in the explanatory variables of interest, namely the dummy variable indicating whether a state has a mandatory waiting period or not and the continuous variable

representing the length (if any) of the waiting period, is quite low, as is observable through the low proportion of states with mandatory waiting periods over the relevant period and the small number of values that waiting period lengths can take on. While the variation does not appear so small as to completely compromise the validity of the model, it is nonetheless a salient concern that must be acknowledged.

In contrast, the standard assumptions that the model's parameters are linear (which is self-evident in the model specification) and that the data used are random are somewhat more easily addressed. With respect to the latter assumption, for the most part, aggregated population panel data are used for the analysis, precluding the need for random sampling for certain variables, as discussed in the "Data" section. All non-population data (notably, ACS data) are collected using random sampling techniques, as discussed in the aforementioned "Data" section. Therefore, while the general model used in this paper does have certain limitations, the conventional assumptions for multivariate regression analysis largely hold.

In addition to issues pertaining to the research design and underlying assumptions, however, the ability for the model to accurately capture the correct type of relationship between mandatory waiting periods and suicide mortality raises also constitutes a salient concern. In consequence, this paper provides alternative model specifications, with the aim of evaluating the sensitivity of this paper's results to alternative specifications and the overall consistency of these results (particularly with respect to the aforementioned type of relationship). In particular, instead of a log-level model, a level-level model is employed. This model is:

Model (2): $Y_{st} = \beta_0 + \beta_1 wait_{st} + \beta_2{}'\gamma_{st} + \beta_3{}'\alpha_{st} + \beta_4{}'\epsilon_{st} + \beta_5{}'\eta_s + \beta_6{}'\phi_t + u_{st}$

The predicted impact of mandatory waiting periods on measures of the incidence of suicide is likely to be less accurate, due to the aforementioned expectation that this effect will be

proportional to the prior observed incidence of suicide or expected incidence absent a mandatory waiting period, rather than a constant effect. Nevertheless, Model (2) retains some utility through its provision of an alternative model specification through which the consistency of this paper's results may be evaluated.

Models (3) and (4), which change the explanatory variable of interest to the length of the mandatory waiting period in state s in year t, are also employed in this paper, with the aim of contributing to a more complete understanding of the linear relationship between waiting period length and the incidence of suicide (rather than the mere effect of having a waiting period on the incidence of suicide). In addition, these alternative model specifications serve as additional robustness checks to evaluate the validity and consistency of this paper's results. Specifically, these models are:

Model (3): $ln(Y_{st}) = \beta_0 + \beta_1 length_{st} + \beta_2{}'\gamma_{st} + \beta_3{}'\alpha_{st} + \beta_4{}'\epsilon_{st} + \beta_5{}'\eta_s + \beta_6{}'\phi_t + u_{st}$

Model (4): $Y_{st} = \beta_0 + \beta_1 length_{st} + \beta_2{}'\gamma_{st} + \beta_3{}'\alpha_{st} + \beta_4{}'\epsilon_{st} + \beta_5{}'\eta_s + \beta_6{}'\phi_t + u_{st}$

where $length_{st}$ is a continuous variable representing the length in days of the effective mandatory waiting period in state s in year t. The vectors used in Models (3) and (4) remain the same as those used in Model (1). While additional robustness tests (e.g., placebo tests) would typically be conducted to further evaluate the robustness of the results, the sensitivity of this paper's results to alternative model specifications is evident in all models. In particular, the results tend to fluctuate substantially with the introduction of state and year fixed effects.

Results

This paper does not find sufficient evidence to suggest that the implementation of mandatory waiting periods for firearm purchases is effective in reducing suicide mortality rates

for all suicides (regardless of cause) or firearms-related suicides. While preliminary regression analyses using both univariate regression models (absent any controls) and models with additional controls (e.g., demographic controls, other firearms laws controls, partisan legislature composition controls) suggest that purchase delays have negative and statistically significant (at the 1% level) effects on suicide mortality rates, the introduction of state and year fixed effects renders these results statistically insignificant. That is, essentially, the results are highly sensitive to alternative model specifications and the introduction of controls.

Notably, as depicted below in Table 3, the coefficient on having mandatory waiting periods varies substantially in both direction and magnitude as fixed effects, in particular, are added. Table 3 reports regression estimates for Model (1) as vectors of covariates are incrementally introduced, corresponding to the enumeration of the vectors in the model specifications provided in the previous section (e.g., the second column of the table corresponds to the introduction of the demographic covariates, the third column corresponds to the introduction of the other firearms laws covariates, and so forth). While the coefficient declines in magnitude as covariates for demographic characteristics, other gun laws, and legislature political composition are introduced, the coefficient nevertheless remains negative and statistically significant at the 1% level. However, with the introduction of state fixed effects, the coefficient loses statistical significance and becomes positive. The final iteration of Model (1), containing all control variables and fixed effects, suggests that, on average, state-level all-cause suicide mortality rates increase by approximately 0.0244 percent when a state has a mandatory waiting period, compared to when it does not, holding all else constant. Similar patterns regarding the statistical significance of the coefficient on having a mandatory waiting period are observable in the other regression estimates for all models, located in Tables 5A through 15A in Appendix A

Table 3. Model (1)—Proportional Effect of Having a Purchase Delay on All-Cause Suicide Mortality Rate

Variables	(1) Log of All-Cause Suicide Rate	(2) Log of All-Cause Suicide Rate	(3) Log of All-Cause Suicide Rate	(4) Log of All-Cause Suicide Rate	(5) Log of All-Cause Suicide Rate	(6) Log of All-Cause Suicide Rate
Purchase Delay Dummy	-0.256***	-0.0959***	-0.0474***	-0.0389***	0.0140	0.0244
	[0.0206]	[0.0124]	[0.0121]	[0.0122]	[0.0229]	[0.0226]
Fraction Asian		-1.126***	-0.602**	-0.516*	-0.507	-1.238**
		[0.314]	[0.295]	[0.292]	[0.569]	[0.569]
Fraction Black		-1.053***	-1.155***	-1.223***	-1.591***	-1.264***
		[0.202]	[0.195]	[0.193]	[0.443]	[0.455]
Fraction Amer. Indian		0.277	0.435	0.522*	-0.960***	-0.644**
		[0.298]	[0.284]	[0.281]	[0.318]	[0.314]
Fraction White		-0.486**	-0.421**	-0.420**	-0.445	-0.239
		[0.224]	[0.209]	[0.206]	[0.281]	[0.282]
Fraction in Poverty		-0.0699	0.328	0.464	0.725**	0.440
		[0.353]	[0.344]	[0.345]	[0.347]	[0.392]
Fraction Female		-10.82***	-7.007***	-5.655***	-1.888***	-1.775**
		[0.841]	[0.835]	[0.861]	[0.691]	[0.709]
Alcohol Consumption		0.00814	-0.00599	0.000896	0.0156	0.0510*
		[0.0116]	[0.0109]	[0.0108]	[0.0269]	[0.0270]
Hunting Licenses		-1.69e-07***	-2.22e-07***	-2.19e-07***	1.56e-07**	5.40e-08
		[2.03e-08]	[1.98e-08]	[1.98e-08]	[6.38e-08]	[6.39e-08]
RPCPI		-3.98e-05***	-2.60e-05***	-2.75e-05***	1.01e-05***	6.98e-06*
		[2.60e-06]	[2.86e-06]	[2.85e-06]	[3.64e-06]	[3.95e-06]
Fraction Senate Dem				-0.0390	-0.0543	-0.0341
				[0.0503]	[0.0419]	[0.0405]
Fraction House Dem				-0.140**	-0.0470	-0.00821
				[0.0561]	[0.0466]	[0.0470]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes

Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	2.667*** [0.00973]	7.774*** [0.936]	7.014*** [0.875]	5.541*** [0.906]	4.068*** [0.780]	4.602*** [0.818]
Observations	998	998	998	998	998	998
R-squared	0.134	0.797	0.836	0.841	0.951	0.956

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

(for organizational purposes, the other eleven iterative regression results for different dependent variables across different models are not detailed here). In particular, for all-cause suicides and firearms-related suicides, the coefficient on the mandatory waiting period variable remains statistically significant at the 1% level until state fixed effects are introduced, which results in the coefficient becoming statistically insignificant. This pattern occurs regardless of whether the dependent variable is expressed in log form or level form or whether the explanatory variable is expressed as a dummy variable or a continuous variable. Regression estimates which use non-firearms-related suicide mortality rates as the dependent variable constitute the exception to this pattern; notably, the results for non-firearms-related suicides lack any pattern with regard to the disappearance of statistical significance that is consistent across all model specifications.

Nevertheless, the use of all covariates and fixed effects invariably results in the coefficient on the mandatory waiting period variable becoming statistically insignificant for all model specifications and alternative forms of the dependent variable and explanatory variable of interest, as depicted below in Table 4 at the conventional 5% level of significance. This generally suggests that either purchase delays have no linear relationship with state-level suicide mortality rates (regardless of cause or method). On average, controlling for confounding factors, the unit change in a state's suicide mortality rate for a unit change in purchase delay length is not statistically different from zero. Moreover, even disregarding the precise length of mandatory waiting periods, even the mere enactment of mandatory periods is ineffective at mitigating the incidence of suicide. That is, on average, holding all else constant, there is no significant difference between the suicide mortality rates of states with mandatory waiting periods and the suicide mortality rates of states without mandatory waiting periods for all-cause suicides,

Table 4A. Summary Regression Results

Variables	Log All-Cause Suicide Rate	Log Firearms Suicide Rate	Log Non-Firearms Suicide Rate	All-Cause Suicide Rate	Firearms Suicide Rate	Non-Firearms Suicide Rate
Purchase Delay Dummy	0.0244 [0.0226]	0.0350 [0.0319]	0.000976 [0.0339]	0.251 [0.358]	0.487* [0.259]	-0.227 [0.236]
Purchase Delay Length	0.0122 [0.0113]	0.0175 [0.0159]	0.000488 [0.0170]	0.125 [0.179]	0.243* [0.129]	-0.114 [0.118]

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Note. All regression estimates of the coefficient on the purchase delay variables employ the full set of vectors for demographic characteristics, other gun law characteristics, and state legislature composition characteristics, as well as state and year fixed effects.

firearms-related suicides, and non-firearms related suicides.

While the sensitivity of these results to the introduction of covariates presents issues regarding the reliability of this study's conclusions on the efficacy of the policy, significant implications for further research and policy analysis may still be derived from patterns in the statistical significance of the coefficients on mandatory waiting periods as control variables are added. As discussed previously, the introduction of state fixed effects abruptly eliminates the statistical significance of the coefficient, despite the fact that previous iterations for nearly all models without state fixed effects produced coefficient estimates which were significant at the 1% level. The relative consistency of the loss of statistical significance with the introduction of fixed effects generally implies the existence of one or more omitted state-level characteristics whose substantial influence on suicide mortality rates was tacitly controlled for through the use of state fixed effects. The intrinsic nature of state fixed effects suggests that the confounding variables underlying the ostensible relationship between mandatory waiting periods and suicide mortality rates are (relatively) time-invariant state-level characteristics. The use of standard demographics covariates, covariates for the presence of other gun laws with a similar effect on the accessibility of firearms for suicidal individuals, and covariates for the partisan composition of state legislatures, which produced statistically significant coefficients before the introduction of fixed effects, indicates that these are not the primary factors responsible for the spurious relationship between purchase delay policies and suicide mortality rates.

Prior to discussing possible unaddressed or unobservable characteristics, this paper discusses its possible failure to control for certain characteristics and issues that it acknowledged as potentially salient. In particular, these are the prevalence of firearms and selection bias associated with each state's ability to enact laws such as mandatory waiting periods. While the

proxy of hunting licenses issued was used to control for the prevalence of firearms, it is possible that this proxy was not sufficiently correlated with the actual prevalence of firearms to effectively control for the latter characteristic. Similarly, this paper attempted to control for factors related to a state's decision to adopt mandatory waiting periods, such as the political composition of the state's legislature as well as the presence of similar laws restricting the accessibility of firearms. It is nonetheless possible that the covariates used to mitigate selection bias were ineffective, such that the endogeneity problem could only be effectively resolved through the use of state fixed effects.

It is also possible, however, that this paper failed to consider and account for the influence of other salient omitted variables. In consideration of the time-invariant nature of state fixed effects, this paper suggests that these omitted variables may have related to other long-standing policies or measures that affect suicide mortality rates (particularly firearms-related suicide rates) and whose presence is correlated, to an extent, with the presence of mandatory waiting periods. While this paper controlled for similar firearms laws that could affect the incidence of suicide, it is possible that other policies impacting mental health and the incidence of suicide were omitted from the list of covariates used prior to the state and year fixed effects. Notably, this paper was unable to acquire reliable data on state mental health expenditures.

It is additionally possible that the models used in this paper are afflicted by severe deficiencies, thereby resulting in inaccurate estimates of the relationship between mandatory waiting periods and the incidence of suicide. For example, the relatively smaller number of observations used (since the data was aggregated at the state level), in conjunction with the large number of covariates applied to the model in the demographic controls and fixed effects, resulted in the sensitivity of these results to alternative specifications. Consequently, the final results of

the models used by this paper may be erroneous, due to limitations inherent in the research design and sample size analyzed.

Conclusion

Due to the aforementioned lack of statistical significance of the coefficients on mandatory waiting periods, this paper arrives at two primary possible conclusions. The most immediate conclusion, assuming that the results of this study are reliable, suggests that mandatory waiting periods have no significant impact on all-cause, firearms-related, and non-firearms-related suicide mortality rates. While the particular coefficient values on mandatory waiting periods fluctuated erratically with the introduction of additional controls and fixed effects, the pattern of statistical significance (or lack thereof) associated with the introduction of controls and fixed effects was somewhat consistent across alternative model specifications as well as different types of suicide. This would imply that mandatory waiting periods do not have any significant effect on the incidence of suicide, with the ostensible relationship between mandatory waiting periods and suicide mortality rates being largely driven by the influence of a salient omitted state-level characteristic or characteristics that are relatively time-invariant (at least for the period from 2000 to 2019). Thus, for the particular purpose of reducing suicide mortality rates, this paper would not consider mandatory waiting periods an effective state-level policy suitable for adoption.

In addition, however, this paper considers the salient possibility that inherent flaws in the nature of its investigation, as well as in its methodology, render the implications of this analysis inconclusive. Thus, this paper provides an autopsy of its methods and approaches, as well as the associated limitations, with the intent of guiding future attempts to research this policy issue. In

particular, it is possible that the low proportion of states with mandatory waiting periods across the twenty-year period examined may have provided insufficient variation in the primary explanatory variable of interest. While this does not explicitly violate the Gauss-Markov assumptions, as discussed previously, it comes dangerously close to violating them. The implementation of the Brady Handgun Violence Prevention Act, conversely, is often underscored for its usefulness in addressing some endogeneity issues and the variation it introduces in the proportion of states with mandatory waiting periods in effect. The Brady Act imposed a short-lived five-day waiting period for thirty-two states without adequate background check regulations under the new legislation, which largely lasted from 1994 to 1998 (Edwards et al., 2018; Ludwig & Cook, 2000). Indeed, more recent studies (Edwards et al., 2018; Luca et al., 2017) which do find that there is a significant relationship between mandatory waiting periods for firearm purchase and the incidence of suicide also include in their analyses the 1994-1998 period in which the Brady Act effectively imposed a purchase delay policy for a number of states. However, as a result the act's transience (at least with respect to mandatory waiting periods), its impact was not especially relevant to this paper, which restricted its analysis to the period after the Brady Act temporarily imposed firearms purchase delays. Consequently, the impact (or lack thereof) of mandatory waiting periods may vary depending on the broader time period examined. While year fixed effects may mitigate this issue, the extent of their utility remains restricted to the years included in the sample considered for analysis.

In addition, changes to the accessibility of firearms to suicidal individuals via public policy may have short-term effects on the incidence of suicide that do not persist over longer periods of time. Consequently, the variation in the adoption of firearms purchase delay policies and the frequency of changes in firearms policy (such as those resulting from the enactment of

the Brady Act in 1994 and the repeal of its national mandatory waiting period in 1998) may substantially affect the actual relationship between mandatory waiting periods. In particular, this paper suggests that the adoption of new firearms policies such as mandatory waiting periods have only a transitory effect on suicidal individuals' access to firearms, impacting suicide mortality rates only across shorter intervals of time but having no long-term implications for the incidence of suicide. Essentially, the adoption of a new policy that targets the accessibility of firearms, rather than the policy itself, causes a decline in suicide mortality rates. The possibility that the adoption of a new policy, rather than the merits or effects of the policy itself, drives changes in suicide mortality rates would be consistent with the observed loss of statistical significance in this paper's results in response to the application of year fixed effects. The loss of statistical significance in response to state fixed effects, however, remains an unresolved issue, due to the wide range of potential omitted (and possibly not feasibly observable) state characteristics correlated with the presence and length of mandatory waiting periods which are actually responsible for the differences in suicide mortality rates ostensibly associated with mandatory waiting periods.

The regulation of the distribution and accessibility of firearms generally constitutes a highly controversial area of policy analysis, given the broad and persistent impact of such policies on various public health outcomes, as well as a multiplicity of other political concerns and issues. In consequence, it is imperative that these policies receive a proper analysis of their effectiveness and marginal contributions to society. This paper aimed to assess the impact of a relatively uncontroversial policy intended to curtail suicidal individuals' access to firearms without substantially impacting any political rights associated with firearm possession. In particular, this paper focuses on resolving ambiguities in the literature concerning the

relationship between the length of the waiting periods and the incidence of suicide, as well as suicidal individuals' tendency to substitute firearms for other methods. Unfortunately, however, this paper finds that mandatory waiting periods do not significantly impact the incidence of suicide, suggesting that this policy is ineffective at denying suicidal individuals' access to firearms for sufficient lengths of time. Notably, for changes in either the presence or length of mandatory waiting periods, there is no significant change in either the all-cause, firearms-related, or non-firearms-related suicide mortality rate.

Nevertheless, the reliability of these findings is limited by flaws inherent in this paper's research design. While the lack of an actual relationship between mandatory waiting periods and suicide rates was identified, the cofounding factor underlying the ostensible relationship between them was not. However, this paper's findings suggest that this cofounding factor or factors is a time-invariant state characteristic outside of the list of standard demographic and political characteristics. In addition to the prevalence and prior accessibility of firearms (which may not have been adequately controlled for in this study), this paper recommends that additional research be conducted concerning the potential effects of similar policies targeted at either reducing the incidence of suicide directly or reducing the prevalence of firearms, whose presence may be correlated with mandatory waiting periods. In addition, this paper recommends an investigation in the relationship between the mere act of enacting a policy targeted at affecting suicide or a similar public health outcome and the incidence of suicide, separate from the effects of the policy itself on suicide or the accessibility of firearms.

Works Cited

Balestra, S. (2018). Gun prevalence and suicide. *Journal of Health Economics, 61*, 163-177. https://doi.org/10.1016/j.jhealeco.2018.08.003

Betz, M. E., Thomas, A. C., & Simonetti, J. A. (2022). Firearms, Suicide, and Approaches for Prevention. *Journal of the American Medical Association, 328*(12), 1179-1180. https://doi.org/10.1001/jama.2022.16663

Centers for Disease Control and Prevention. (2016). Electronic Death Reporting System Online Reference Manual. https://www.cdc.gov/nchs/data/dvs/EDRS-Online-Reference-Manual.pdf

Centers for Disease Control and Prevention. (2022, June 17). "FAQs -- Frequently Asked Questions." https://wonder.cdc.gov/wonder/help/faq.html

Centers for Disease Control and Prevention. (2023a, January 11). *National Center for Health Statistics: Mortality Data on CDC WONDER.* https://wonder.cdc.gov/Deaths-by-Underlying-Cause.html

Centers for Disease Control and Prevention. (2023b, January 11). *Underlying Cause of Death 1999-2020.* https://wonder.cdc.gov/wonder/help/ucd.html

Centers for Disease Control and Prevention. (2023c, November 8). *WISQARS — Web-based Injury Statistics Query and Reporting System.* https://www.cdc.gov/injury/wisqars/index.html

Centers for Disease Control and Prevention. (2023d). *Underlying Cause of Death, 1999-2020* [Data set]. https://wonder.cdc.gov/ucd-icd10.html

Centers for Disease Control and Prevention. (2023e). *Underlying Cause of Death, 2018-2021, Single Race* [Data set]. https://wonder.cdc.gov/ucd-icd10-expanded.html

Cherney, S., Morral, A. R., Schell, T. L., Smucker, S., & Hock, E. (2022a). *Development of the RAND State Firearm Law Database and Supporting Materials*. RAND Corporation. https://www.rand.org/content/dam/rand/pubs/tools/TLA200/TLA243-2-v2/RAND_TLA243-2-v2.pdf

Cherney, S., Morral, A. R., Schell, T. L., Smucker, S., & Hock, E. (2022b). *RAND State Firearm Law Database* [Data set]. RAND Corporation. https://www.rand.org/pubs/tools/TLA243-2-v2.html

Dunton, Z. R., Kohlbeck, S. A., Lasarev, M. R., Vear, C. R., & Hargarten, S. W. (2022). The Association Between Repealing the 48-Hour Mandatory Waiting Period on Handgun Purchases and Suicide Rates in Wisconsin. *Archives of Suicide Research, 26*(3), 1327-1335. https://doi.org/10.1080/13811118.2021.1886209

Edwards, G., Nesson, E., Robinson, J., & Vars, F. (2018). Looking Down the Barrel of a Loaded Gun: The Effect of Mandatory Handgun Purchase Delays on Homicide and Suicide. *The Economic Journal, 128*(616), 3117-3140. https://doi.org/10.1111/ecoj.12567

Federal Reserve Bank of St. Louis. (n.d.). *Per Capita Personal Income by State, Annual* [Data set]. https://fred.stlouisfed.org/release/tables?rid=110&eid=257197

Giffords Law Center to Prevent Gun Violence. (2020, August 11). *Waiting Periods in Washington*. https://web.archive.org/web/20200926202638/https://giffords.org/lawcenter/state-laws/waiting-periods-in-washington/

Giffords Law Center to Prevent Gun Violence. (2023a, January 5). *Waiting Periods in Iowa*. https://giffords.org/lawcenter/state-laws/waiting-periods-in-iowa/

Giffords Law Center to Prevent Gun Violence. (2023b, January 5). *Waiting Periods in Oregon*. https://giffords.org/lawcenter/state-laws/waiting-periods-in-oregon/

Giffords Law Center to Prevent Gun Violence. (2023c, January 5). *Waiting Periods in Pennsylvania*. https://giffords.org/lawcenter/state-laws/waiting-periods-in-pennsylvania/

Giffords Law Center to Prevent Gun Violence. (2023d, January 5). *Waiting Periods in Washington*. https://giffords.org/lawcenter/state-laws/waiting-periods-in-washington/

Hedegaard, H., Curtin, S. C., & Warner, M. (2020). *Increase in suicide mortality in the United States, 1999–2018*. Centers for Disease Control and Prevention. https://stacks.cdc.gov/view/cdc/86670

IPUMS. (n.d.-a). *Frequently Asked Questions (FAQ)*. IPUMS USA. Retrieved November 5, 2023, from https://usa.ipums.org/usa-action/faq

IPUMS. (n.d.-b). *Sample Designs*. IPUMS USA. Retrieved November 5, 2023, from https://usa.ipums.org/usa/chapter2/chapter2.shtml.

IPUMS. (n.d.-c). *Sampling Errors*. IPUMS USA. Retrieved November 5, 2023, from https://usa.ipums.org/usa/chapter3/chapter3.shtml

Kang, M., & Rasich, E. (2023). State-level household gun ownership proxy dataset, 1949–2020. *Data in brief, 50*. https://doi.org/10.1016%2Fj.dib.2023.109548

Kim, J. J., & Wilbur, K. C. (2022). Proxies for legal firearm prevalence. *Quantitative Marketing and Economics, 20*(3), 239-273. https://doi.org/10.1007/s11129-022-09251-8

Lewiecki, E. M., & Miller, S. A. (2013). Suicide, Guns, and Public Policy. *American Journal of Public Health, 103*(1), 27-31. https://doi.org/10.2105/AJPH.2012.300964

Lu, X., & White, H. (2014). Robustness checks and robustness tests in applied economics. *Journal of Economics, 178*(1), 194-206. https://doi.org/10.1016/j.jeconom.2013.08.016

Luca, M., Malhotra, D., & Poliquin, C. (2017). Handgun waiting periods reduce gun deaths. Proceedings of the National Academy of Sciences, 114(46), 12162-12165. https://doi.org/10.1073/pnas.1619896114

Ludwig, J., & Cook, P. J. (2000). Homicide and Suicide Rates Associated With Implementation of the Brady Handgun Violence Prevention Act. *Journal of the American Medical Association, 284*(5), 585-591. https://doi.org/10.1001/jama.284.5.585

Minino, A. M., Murphy, S. L., Xu, J., & Kochanek, K. D. (2011). *Deaths: Final Data for 2008*. Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_10.pdf

National Institute on Alcohol Abuse and Alcoholism. (n.d.). *Mission Statement*. Retrieved December 14, 2023, from https://www.niaaa.nih.gov/our-work/mission-statement

National Conference of State Legislatures. (2009). *2009 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2009.pdf

National Conference of State Legislatures. (2010). *2010 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2010.pdf

National Conference of State Legislatures. (2011). *2011 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2011.pdf

National Conference of State Legislatures. (2012). *2012 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2012.pdf

National Conference of State Legislatures. (2013). *2013 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2013.pdf

National Conference of State Legislatures. (2014). *2014 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/LegisControl_2014.pdf

National Conference of State Legislatures. (2015). *2015 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/Legis_Control_2015.pdf

National Conference of State Legislatures. (2016). *2016 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/Legis_Control_2016.pdf

National Conference of State Legislatures. (2017). *2017 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/Legis_Control_2017_March_1_9%20am.pdf

National Conference of State Legislatures. (2018). *2018 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/Legis_Control_011018_26973.pdf

National Conference of State Legislatures. (2019). *2019 Partisan Composition* [Data set]. https://documents.ncsl.org/wwwncsl/Elections/Legis_Control_2019_February%201st.pdf

Ruggles, S., Flood, S., Sobek, M., Backman, D., Chen, A., Cooper, G., Richards, S., Rogers, R., & Schouweiler, M. (2023). *IPUMS USA: Version 14.0* [Data set]. IPUMS. https://doi.org/10.18128/D010.V14.0

Shepard, D. S., Gurewich, D., Lwin, A. K., Reed, G. A., & Silverman, M. M. (2015). Suicide and Suicidal Attempts in the United States: Costs and Policy Implications. S*uicide and Life-Threatening Behavior, 46(3)*, 352–362. https://doi.org/10.1111/sltb.12225

Siegel, M. (2020). *State Firearm Law Database: State Firearm Laws, 1991-2019 (ICPSR 37363)* [Data set]. ICPSR. https://doi.org/10.3886/ICPSR37363.v1

Siri, M. K., Cork, D. L. (2009). *Vital Statistics: Summary of a Workshop.* National Academies Press.

Spicer, R. S., & Miller, T. R. Suicide acts in 8 states: incidence and case fatality rates by demographics and method. *American Journal of Public Health, 90*(12), 1885-1891. https://doi.org/10.2105%2Fajph.90.12.1885

Slater, M. E., & Alpert, H. R. (2023a, April). *Surveillance Report #120: Apparent Per Capita Alcohol Consumption: National, State, And Regional Trends, 1977–2021*. National Institute on Alcohol Abuse and Alcoholism. https://www.niaaa.nih.gov/publications/surveillance-reports/surveillance120

Slater, M. E., & Alpert, H. R. (2023b, April). *Surveillance Report #120 Apparent Per Capita Alcohol Consumption: National, State, And Regional Trends, 1977–2021* [Data set]. National Institute on Alcohol Abuse and Alcoholism. https://www.niaaa.nih.gov/sites/default/files/pcyr1970-2021.txt

United States Bureau of Labor Statistics. (n.d.). *Consumer Price Index for All Urban Consumers (CPI-U)* [Data set]. https://data.bls.gov/pdq/SurveyOutputServlet

United States Census Bureau. (2012a). *Composition of State Legislatures, by Political Party Affiliation* [Data set]. https://www2.census.gov/library/publications/2011/compendia/statab/131ed/tables/12s0419.xls

United States Census Bureau. (2012b). *Statistical Abstract of the United States*. https://www2.census.gov/library/publications/2011/compendia/statab/131ed/2012-statab.pdf

United States Fish and Wildlife Service. (n.d.). *Table B. License Holders and Related Costs 1959-2023: Inflation Adjusted Costs, ($2022)* [Data set]. https://us-east-1.quicksight.aws.amazon.com/sn/accounts/329180516311/dashboards/48b2aa9c-43a9-4ea6-887e-5465bd70140b/sheets/48b2aa9c-43a9-4ea6-887e-5465bd70140b_5ff879d8-a9a3-4166-81e5-987576e74f76

Vitt, D. C., McQuoid, A. F., Moore, C., & Sawyer, S. (2018). Trigger warning: the causal impact of gun ownership on suicide. *Applied Economics, 50*(53, 5747-5765. https://doi.org/10.1080/00036846.2018.1488064

Appendix A

Table 1A. Summary Statistics for Observations of All-Cause Suicides

Variable	Obs	Mean	Std. Dev.	Min	Max
All-Cause Crude Suicide Mortality Rate	1000	14.157	4.132	6.000	29.700
Firearms-Related Crude Suicide Mortality Rate	998	7.676	3.225	1.400	20.300
Non-Firearms-Related Crude Suicide Rate	1000	6.493	1.803	2.600	13.800
Gun Purchase Delay Dummy	1000	0.225	0.418	0.000	1.000
Purchase Delay Length (Regardless of Purchase Delay Enactment)	1000	1.370	3.019	0.000	14.000
Purchase Delay Length (If Purchase Delay Is in Effect)	225	6.089	3.432	2.000	14.000
Control Variables					
Fraction Asian/Pacific Islander	1000	0.037	0.074	0.003	0.568
Fraction White	1000	0.823	0.123	0.258	0.974
Fraction Black	1000	0.079	0.080	0.001	0.363
Fraction American Indian/Alaska Native	1000	0.018	0.040	0.001	0.317
Fraction Other Race	1000	0.080	0.104	0.013	0.727
Fraction Female	1000	0.518	0.011	0.463	0.546
Fraction Male	1000	0.482	0.011	0.454	0.537
Fraction Age 15 to 20 Years	1000	0.083	0.008	0.062	0.125
Fraction Age 20 to 25 Years	1000	0.070	0.008	0.050	0.129
Fraction Age 25 to 30 Years	1000	0.069	0.008	0.046	0.109
Fraction Age 30 to 35 Years	1000	0.072	0.009	0.048	0.101
Fraction Age 35 to 40 Years	1000	0.076	0.011	0.052	0.118
Fraction Age 40 to 45 Years	1000	0.082	0.014	0.053	0.130
Fraction Age 45 to 50 Years	1000	0.088	0.013	0.059	0.126

Fraction Age 50 to 55 Years	1000	0.091	0.008	0.064	0.111
Fraction Age 55 to 60 Years	1000	0.086	0.009	0.055	0.115
Fraction Age 60 to 65 Years	1000	0.076	0.013	0.043	0.110
Fraction Age 65 to 70 Years	1000	0.063	0.013	0.029	0.103
Fraction Age 70 to 75 Years	1000	0.050	0.009	0.023	0.089
Fraction Age 75 to 80 Years	1000	0.039	0.006	0.016	0.060
Fraction Age 80 to 85 Years	1000	0.028	0.005	0.004	0.042
Fraction Age 85+ Years	1000	0.025	0.007	0.004	0.045
Fraction in Poverty	1000	0.104	0.026	0.049	0.195
Per Capita Ethanol Alcohol Consumption	1000	2.390	0.506	1.271	4.759
No. of Paid Hunting License Holders	1000	298241.830	237755.370	6856.000	1162430.000
Real Per Capita Personal Income (RPCPI)	1000	18856.857	3022.500	12812.796	29467.406
Fraction of States that Conduct Own Background Check for Firearm Purchases	1000	0.179	0.384	0.000	1.000
Fraction of States that Conduct Own Background Check for Handgun Purchases	1000	0.299	0.458	0.000	1.000
Fraction of States Requiring Universal Background Checks for Firearm Purchases	1000	0.098	0.297	0.000	1.000
Fraction of States Requiring Universal Background Checks for Handgun Purchases	1000	0.140	0.347	0.000	1.000
Fraction of States Requiring License/Permit for Firearm Purchases	1000	0.111	0.314	0.000	1.000
Fraction of States Requiring License/Permit for Handgun Purchases	1000	0.269	0.444	0.000	1.000
Fraction of Senate Democrat	950	0.468	0.192	0.000	1.000
Fraction of Senate Republican	950	0.508	0.195	0.000	0.914

Fraction of House Democrat	950	0.479	0.179	0.000	0.920
Fraction of House Republican	950	0.497	0.181	0.000	0.871

Table 2A. Suicide Mortality Rates by Presence of Purchase Delay Policy

Variables	Mean (No Purchase Delay)	Mean (If Purchase Delay Is in Effect)	Difference	P-Value
All-Cause Crude Suicide Mortality Rate	14.590	12.059	2.530	0.000
Firearms-Related Crude Suicide Mortality Rate	8.505	4.795	3.711	0.000
Non-Firearms-Related Crude Suicide Rate	6.453	6.633	-0.180	0.188
Control Variables				
Fraction Asian/Pacific Islander	0.022	0.089	-0.067	0.000
Fraction White	0.837	0.775	0.062	0.000
Fraction Black	0.083	0.069	0.014	0.022
Fraction American Indian/Alaska Native	0.022	0.007	0.015	0.000
Fraction Other Race	0.060	0.150	-0.091	0.000
Fraction Female	0.518	0.518	-0.001	0.682
Fraction Male	0.482	0.481	0.001	0.682
Fraction Age 15 to 20 Years	0.084	0.081	0.003	0.000
Fraction Age 20 to 25 Years	0.071	0.069	0.002	0.013
Fraction Age 25 to 30 Years	0.069	0.069	0.001	0.330
Fraction Age 30 to 35 Years	0.072	0.072	-0.001	0.650
Fraction Age 35 to 40 Years	0.075	0.078	-0.003	0.009
Fraction Age 40 to 45	0.082	0.085	-0.003	0.004

Years				
Fraction Age 45 to 50 Years	0.088	0.090	-0.003	0.008
Fraction Age 50 to 55 Years	0.090	0.091	-0.001	0.210
Fraction Age 55 to 60 Years	0.087	0.085	0.002	0.008
Fraction Age 60 to 65 Years	0.077	0.073	0.004	0.001
Fraction Age 65 to 70 Years	0.064	0.061	0.003	0.002
Fraction Age 70 to 75 Years	0.051	0.050	0.002	0.041
Fraction Age 75 to 80 Years	0.039	0.040	-0.001	0.084
Fraction Age 80 to 85 Years	0.028	0.029	-0.002	0.000
Fraction Age 85+ Years	0.025	0.028	-0.003	0.000
Fraction in Poverty	0.108	0.088	0.021	0.000
Per Capita Ethanol Alcohol Consumption	2.381	2.421	-0.039	0.309
No. of Paid Hunting License Holders	315400.650	239139.230	76261.421	0.000
Real Per Capita Personal Income (RPCPI)	18452.267	20250.444	-1798.177	0.000
Fraction of States that Conduct Own Background Check for Firearm Purchases	0.102	0.445	-0.343	0.000
Fraction of States that Conduct Own Background Check for Handgun Purchases	0.205	0.622	-0.417	0.000
Fraction of States Requiring Universal Background Checks for Firearm Purchases	0.067	0.205	-0.138	0.000

Fraction of States Requiring Universal Background Checks for Handgun Purchases	0.093	0.302	-0.209	0.000
Fraction of States Requiring License/Permit for Firearm Purchases	0.034	0.378	-0.344	0.000
Fraction of States Requiring License/Permit for Handgun Purchases	0.159	0.649	-0.490	0.000
Fraction of Senate Democrat	0.429	0.602	-0.172	0.000
Fraction of Senate Republican	0.540	0.395	0.145	0.000
Fraction of House Democrat	0.449	0.582	-0.134	0.000
Fraction of House Republican	0.520	0.416	0.104	0.000

Table 3A. Model (1)—Proportional Effect of Having a Purchase Delay on All-Cause Suicide Mortality Rate

Variables	(1) Log of All-Cause Suicide Rate	(2) Log of All-Cause Suicide Rate	(3) Log of All-Cause Suicide Rate	(4) Log of All-Cause Suicide Rate	(5) Log of All-Cause Suicide Rate	(6) Log of All-Cause Suicide Rate
Purchase Delay Dummy	-0.256***	-0.0959***	-0.0474***	-0.0389***	0.0140	0.0244
	[0.0206]	[0.0124]	[0.0121]	[0.0122]	[0.0229]	[0.0226]
Fraction Asian		-1.126***	-0.602**	-0.516*	-0.507	-1.238**
		[0.314]	[0.295]	[0.292]	[0.569]	[0.569]
Fraction Black		-1.053***	-1.155***	-1.223***	-1.591***	-1.264***
		[0.202]	[0.195]	[0.193]	[0.443]	[0.455]
Fraction Amer. Indian		0.277	0.435	0.522*	-0.960***	-0.644**
		[0.298]	[0.284]	[0.281]	[0.318]	[0.314]
Fraction White		-0.486**	-0.421**	-0.420**	-0.445	-0.239
		[0.224]	[0.209]	[0.206]	[0.281]	[0.282]
Fraction in Poverty		-0.0699	0.328	0.464	0.725**	0.440
		[0.353]	[0.344]	[0.345]	[0.347]	[0.392]
Fraction Female		-10.82***	-7.007***	-5.655***	-1.888***	-1.775**
		[0.841]	[0.835]	[0.861]	[0.691]	[0.709]
Alcohol Consumption		0.00814	-0.00599	0.000896	0.0156	0.0510*
		[0.0116]	[0.0109]	[0.0108]	[0.0269]	[0.0270]
Hunting Licenses		-1.69e-07***	-2.22e-07***	-2.19e-07***	1.56e-07**	5.40e-08
		[2.03e-08]	[1.98e-08]	[1.98e-08]	[6.38e-08]	[6.39e-08]
RPCPI		-3.98e-05***	-2.60e-05***	-2.75e-05***	1.01e-05***	6.98e-06*
		[2.60e-06]	[2.86e-06]	[2.85e-06]	[3.64e-06]	[3.95e-06]
Fraction Senate Dem				-0.0390	-0.0543	-0.0341
				[0.0503]	[0.0419]	[0.0405]
Fraction House Dem				-0.140**	-0.0470	-0.00821
				[0.0561]	[0.0466]	[0.0470]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes

Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	2.667*** [0.00973]	7.774*** [0.936]	7.014*** [0.875]	5.541*** [0.906]	4.068*** [0.780]	4.602*** [0.818]
Observations	998	998	998	998	998	998
R-squared	0.134	0.797	0.836	0.841	0.951	0.956

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 4A. Summary Regression Results, Including All Covariates

Variables	Log All-Cause Suicide Rate	Log Firearms Suicide Rate	Log Non-Firearms Suicide Rate	All-Cause Suicide Rate	Firearms Suicide Rate	Non-Firearms Suicide Rate
Purchase Delay Dummy	0.0244 [0.0226]	0.0350 [0.0319]	0.000976 [0.0339]	0.251 [0.358]	0.487* [0.259]	-0.227 [0.236]
Purchase Delay Length	0.0122 [0.0113]	0.0175 [0.0159]	0.000488 [0.0170]	0.125 [0.179]	0.243* [0.129]	-0.114 [0.118]

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Note. All regression estimates of the coefficient on the purchase delay variables employ the full set of vectors for demographic characteristics, other gun law characteristics, and state legislature composition characteristics, as well as state and year fixed effects.

Table 5A. Model (1)—Proportional Effect of Having a Purchase Delay on Firearms-Related Suicide Mortality Rate

VARIABLES	(1) Log of Firearms Suicide Rate	(2) Log of Firearms Suicide Rate	(3) Log of Firearms Suicide Rate	(4) Log of Firearms Suicide Rate	(5) Log of Firearms Suicide Rate	(6) Log of Firearms Suicide Rate
Purchase Delay Dummy	-0.589***	-0.175***	-0.0534***	-0.0378**	0.00368	0.0350
	[0.0341]	[0.0213]	[0.0194]	[0.0190]	[0.0322]	[0.0319]
Fraction Asian		-1.787***	-0.693	-0.445	-0.423	-1.070
		[0.541]	[0.473]	[0.456]	[0.799]	[0.804]
Fraction Black		0.729**	0.230	0.0667	-0.411	-0.0463
		[0.347]	[0.312]	[0.301]	[0.622]	[0.643]
Fraction Amer. Indian		0.820	0.960**	1.160***	-0.0256	0.226
		[0.513]	[0.456]	[0.439]	[0.446]	[0.443]
Fraction White		0.280	0.354	0.396	0.609	0.518
		[0.386]	[0.335]	[0.323]	[0.394]	[0.399]
Fraction in Poverty		0.750	1.942***	2.484***	0.661	0.126
		[0.609]	[0.552]	[0.540]	[0.486]	[0.554]
Fraction Female		-23.70***	-14.22***	-10.82***	-2.147**	-3.227***
		[1.450]	[1.339]	[1.346]	[0.970]	[1.002]
Alcohol Consumption		-0.0346*	-0.0540***	-0.0355**	0.0523	0.0393
		[0.0200]	[0.0174]	[0.0169]	[0.0377]	[0.0382]
Hunting Licenses		-1.69e-07***	-3.02e-07***	-2.84e-07***	1.53e-07*	4.78e-08
		[3.50e-08]	[3.17e-08]	[3.09e-08]	[8.95e-08]	[9.03e-08]
RPCPI		-8.02e-05***	-4.80e-05***	-5.09e-05***	5.06e-06	1.16e-05**
		[4.48e-06]	[4.59e-06]	[4.45e-06]	[5.11e-06]	[5.59e-06]
Fraction Senate Dem				0.0715	-0.0750	-0.0785
				[0.0786]	[0.0587]	[0.0573]
Fraction House Dem				-0.527***	-0.0649	-0.00835
				[0.0877]	[0.0653]	[0.0665]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes

State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	2.059***	13.24***	9.537***	5.626***	2.917***	4.412***
	[0.0161]	[1.614]	[1.402]	[1.417]	[1.094]	[1.156]
Observations	998	998	998	998	998	998
R-squared	0.231	0.804	0.863	0.874	0.969	0.971

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 6A. Model (1)—Proportional Effect of Having a Purchase Delay on Non-Firearms-Related Suicide Mortality Rate

Variables	(1) Log of Non-Firearms Suicide Rate	(2) Log of Non-Firearms Suicide Rate	(3) Log of Non-Firearms Suicide Rate	(4) Log of Non-Firearms Suicide Rate	(5) Log of Non-Firearms Suicide Rate	(6) Log of Non-Firearms Suicide Rate
Purchase Delay Dummy	0.0440**	0.00215	0.00902	0.0160	0.0297	0.000976
	[0.0211]	[0.0128]	[0.0136]	[0.0138]	[0.0344]	[0.0339]
Fraction Asian		-2.480***	-2.122***	-2.147***	-0.144	-0.828
		[0.324]	[0.331]	[0.330]	[0.853]	[0.856]
Fraction Black		-3.490***	-3.308***	-3.324***	-1.889***	-2.079***
		[0.208]	[0.218]	[0.218]	[0.664]	[0.684]
Fraction Amer. Indian		-1.271***	-1.013***	-0.982***	-1.324***	-1.079**
		[0.308]	[0.319]	[0.318]	[0.476]	[0.472]
Fraction White		-2.135***	-1.971***	-2.013***	-1.025**	-0.633
		[0.231]	[0.234]	[0.234]	[0.421]	[0.424]
Fraction in Poverty		-2.509***	-2.397***	-2.595***	0.370	-0.0162

		[0.365]	[0.386]	[0.391]	[0.519]	[0.589]
Fraction Female		-2.221**	-1.536	-1.408	-2.102**	-0.596
		[0.868]	[0.936]	[0.975]	[1.036]	[1.066]
Alcohol Consumption		0.0574***	0.0532***	0.0525***	-0.0343	0.0426
		[0.0120]	[0.0122]	[0.0122]	[0.0403]	[0.0407]
Hunting Licenses		-9.51e-08***	-1.08e-07***	-1.20e-07***	1.70e-07*	8.44e-08
		[2.10e-08]	[2.22e-08]	[2.24e-08]	[9.56e-08]	[9.61e-08]
RPCPI		-1.16e-05***	-8.89e-06***	-9.79e-06***	1.10e-05**	-3.70e-06
		[2.68e-06]	[3.21e-06]	[3.22e-06]	[5.46e-06]	[5.94e-06]
Fraction Senate Dem				-0.183***	-0.0850	-0.0455
				[0.0569]	[0.0627]	[0.0609]
Fraction House Dem				0.170***	-0.0665	-0.0474
				[0.0635]	[0.0698]	[0.0707]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	1.823***	3.444***	4.199***	4.270***	3.326***	2.904**
	[0.00996]	[0.967]	[0.981]	[1.026]	[1.168]	[1.230]
Observations	998	998	998	998	998	998
R-squared	0.004	0.762	0.774	0.776	0.879	0.890

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 7A. Model (3)— Proportional Effect of Purchase Delay Length on All-Cause Suicide Mortality Rate

Variables	(1) Log of All-Cause Suicide Rate	(2) Log of All-Cause Suicide Rate	(3) Log of All-Cause Suicide Rate	(4) Log of All-Cause Suicide Rate	(5) Log of All-Cause Suicide Rate	(6) Log of All-Cause Suicide Rate
Purchase Delay Length	-0.0350***	-0.0198***	-0.0142***	-0.0130***	0.00699	0.0122
	[0.00286]	[0.00226]	[0.00224]	[0.00225]	[0.0115]	[0.0113]
Fraction Asian		-0.907***	-0.433	-0.371	-0.507	-1.238**
		[0.310]	[0.290]	[0.287]	[0.569]	[0.569]
Fraction Black		-1.186***	-1.208***	-1.269***	-1.591***	-1.264***
		[0.202]	[0.193]	[0.190]	[0.443]	[0.455]
Fraction Amer. Indian		0.104	0.312	0.395	-0.960***	-0.644**
		[0.298]	[0.282]	[0.279]	[0.318]	[0.314]
Fraction White		-0.617***	-0.508**	-0.502**	-0.445	-0.239
		[0.224]	[0.207]	[0.205]	[0.281]	[0.282]
Fraction in Poverty		-0.106	0.218	0.362	0.725**	0.440
		[0.350]	[0.339]	[0.341]	[0.347]	[0.392]
Fraction Female		-10.57***	-7.337***	-6.084***	-1.888***	-1.775**
		[0.830]	[0.816]	[0.841]	[0.691]	[0.709]
Alcohol Consumption		0.00153	-0.0102	-0.00322	0.0156	0.0510*
		[0.0116]	[0.0108]	[0.0107]	[0.0269]	[0.0270]
Hunting Licenses		-1.79e-07***	-2.29e-07***	-2.25e-07***	1.56e-07**	5.40e-08
		[2.02e-08]	[1.96e-08]	[1.96e-08]	[6.38e-08]	[6.39e-08]
RPCPI		-3.95e-05***	-2.77e-05***	-2.91e-05***	1.01e-05***	6.98e-06*
		[2.58e-06]	[2.84e-06]	[2.82e-06]	[3.64e-06]	[3.95e-06]
Fraction Senate Dem				-0.0192	-0.0543	-0.0341
				[0.0497]	[0.0419]	[0.0405]
Fraction House Dem				-0.152***	-0.0470	-0.00821
				[0.0555]	[0.0466]	[0.0470]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes

Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	2.657*** [0.00943]	8.263*** [0.932]	7.606*** [0.872]	6.155*** [0.905]	4.068*** [0.780]	4.602*** [0.818]
Observations	998	998	998	998	998	998
R-squared	0.131	0.800	0.840	0.845	0.951	0.956

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 8A. Model (3)— Proportional Effect of Purchase Delay Length on Firearms-Related Suicide Mortality Rate

Variables	(1) Log of Firearms Suicide Rate	(2) Log of Firearms Suicide Rate	(3) Log of Firearms Suicide Rate	(4) Log of Firearms Suicide Rate	(5) Log of Firearms Suicide Rate	(6) Log of Firearms Suicide Rate
Purchase Delay Length	-0.0927*** [0.00450]	-0.0302*** [0.00394]	-0.0129*** [0.00364]	-0.0105*** [0.00356]	0.00184 [0.0161]	0.0175 [0.0159]
Fraction Asian		-1.378** [0.541]	-0.514 [0.470]	-0.312 [0.453]	-0.423 [0.799]	-1.070 [0.804]
Fraction Black		0.572 [0.352]	0.185 [0.312]	0.0304 [0.301]	-0.411 [0.622]	-0.0463 [0.643]
Fraction Amer. Indian		0.654 [0.520]	0.877* [0.456]	1.074** [0.439]	-0.0256 [0.446]	0.226 [0.443]
Fraction White		0.167 [0.391]	0.297 [0.335]	0.341 [0.323]	0.609 [0.394]	0.518 [0.399]

Fraction in Poverty		0.839	1.893***	2.428***	0.661	0.126
		[0.610]	[0.549]	[0.537]	[0.486]	[0.554]
Fraction Female		-23.05***	-14.32***	-11.03***	-2.147**	-3.227***
		[1.448]	[1.321]	[1.326]	[0.970]	[1.002]
Alcohol Consumption		-0.0422**	-0.0576***	-0.0386**	0.0523	0.0393
		[0.0203]	[0.0175]	[0.0169]	[0.0377]	[0.0382]
Hunting Licenses		-1.79e-07***	-3.09e-07***	-2.89e-07***	1.53e-07*	4.78e-08
		[3.53e-08]	[3.17e-08]	[3.09e-08]	[8.95e-08]	[9.03e-08]
RPCPI		-7.96e-05***	-4.90e-05***	-5.19e-05***	5.06e-06	1.16e-05**
		[4.50e-06]	[4.60e-06]	[4.45e-06]	[5.11e-06]	[5.59e-06]
Fraction Senate Dem				0.0832	-0.0750	-0.0785
				[0.0784]	[0.0587]	[0.0573]
Fraction House Dem				-0.535***	-0.0649	-0.00835
				[0.0876]	[0.0653]	[0.0665]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	2.054***	13.91***	9.987***	6.059***	2.917***	4.412***
	[0.0149]	[1.626]	[1.412]	[1.427]	[1.094]	[1.156]
Observations	998	998	998	998	998	998
R-squared	0.298	0.802	0.864	0.875	0.969	0.971

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 9A. Model (3)—Proportional Effect of Purchase Delay Length on Non-Firearms-Related Suicide Mortality Rate

Variables	(1) Log of Non-Firearms Suicide Rate	(2) Log of Non-Firearms Suicide Rate	(3) Log of Non-Firearms Suicide Rate	(4) Log of Non-Firearms Suicide Rate	(5) Log of Non-Firearms Suicide Rate	(6) Log of Non-Firearms Suicide Rate
Purchase Delay Length	0.0103***	-0.00705***	-0.00885***	-0.00793***	0.0149	0.000488
	[0.00290]	[0.00234]	[0.00253]	[0.00257]	[0.0172]	[0.0170]
Fraction Asian		-2.496***	-2.114***	-2.157***	-0.144	-0.828
		[0.321]	[0.327]	[0.327]	[0.853]	[0.856]
Fraction Black		-3.593***	-3.355***	-3.358***	-1.889***	-2.079***
		[0.209]	[0.217]	[0.217]	[0.664]	[0.684]
Fraction Amer. Indian		-1.454***	-1.187***	-1.167***	-1.324***	-1.079**
		[0.309]	[0.318]	[0.318]	[0.476]	[0.472]
Fraction White		-2.291***	-2.104***	-2.136***	-1.025**	-0.633
		[0.232]	[0.234]	[0.233]	[0.421]	[0.424]
Fraction in Poverty		-2.701***	-2.648***	-2.822***	0.370	-0.0162
		[0.362]	[0.383]	[0.388]	[0.519]	[0.589]
Fraction Female		-2.472***	-2.481***	-2.515***	-2.102**	-0.596
		[0.860]	[0.921]	[0.958]	[1.036]	[1.066]
Alcohol Consumption		0.0519***	0.0496***	0.0487***	-0.0343	0.0426
		[0.0120]	[0.0122]	[0.0122]	[0.0403]	[0.0407]
Hunting Licenses		-1.03e-07***	-1.14e-07***	-1.23e-07***	1.70e-07*	8.44e-08
		[2.10e-08]	[2.21e-08]	[2.23e-08]	[9.56e-08]	[9.61e-08]
RPCPI		-1.17e-05***	-1.19e-05***	-1.25e-05***	1.10e-05**	-3.70e-06
		[2.67e-06]	[3.20e-06]	[3.22e-06]	[5.46e-06]	[5.94e-06]
Fraction Senate Dem				-0.145**	-0.0850	-0.0455
				[0.0567]	[0.0627]	[0.0609]
Fraction House Dem				0.150**	-0.0665	-0.0474
				[0.0633]	[0.0698]	[0.0707]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes

Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	1.819*** [0.00959]	3.712*** [0.965]	4.871*** [0.984]	5.039*** [1.032]	3.326*** [1.168]	2.904** [1.230]
Observations	998	998	998	998	998	998
R-squared	0.012	0.764	0.777	0.778	0.879	0.890

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 10A. Model (2)— Constant Effect of Having a Purchase Delay on All-Cause Suicide Mortality Rate

Variables	(1) All-Cause Suicide Rate	(2) All-Cause Suicide Rate	(3) All-Cause Suicide Rate	(4) All-Cause Suicide Rate	(5) All-Cause Suicide Rate	(6) All-Cause Suicide Rate
Purchase Delay Dummy	-3.522*** [0.293]	-1.328*** [0.177]	-0.887*** [0.180]	-0.717*** [0.181]	0.354 [0.359]	0.251 [0.358]
Fraction Asian		-13.71*** [4.493]	-8.197* [4.405]	-7.294* [4.355]	-13.15 [8.917]	-21.16** [9.016]
Fraction Black		-15.63*** [2.885]	-16.29*** [2.906]	-17.30*** [2.874]	-17.08** [6.942]	-17.32** [7.208]
Fraction Amer. Indian		12.01*** [4.263]	13.86*** [4.240]	15.25*** [4.192]	0.133 [4.981]	3.269 [4.968]
Fraction White		6.567**	6.587***	6.541***	5.590*	5.840*

		[2.621]	[2.540]	[2.484]	[3.168]	[3.234]
Fraction in Poverty		4.586	8.405	8.451	9.218*	0.861
		[5.054]	[5.135]	[5.153]	[5.429]	[6.205]
Fraction Female		-135.3***	-99.98***	-81.42***	-23.65**	-21.27*
		[12.04]	[12.46]	[12.86]	[10.83]	[11.24]
Alcohol Consumption		0.00616	-0.0911	-0.00741	0.564	0.955**
		[0.166]	[0.162]	[0.161]	[0.421]	[0.428]
Hunting Licenses		-2.70e-06***	-3.21e-06***	-3.28e-06***	1.77e-06*	5.73e-07
		[2.91e-07]	[2.95e-07]	[2.95e-07]	[9.99e-07]	[1.01e-06]
RPCPI		-0.000393***	-0.000272***	-0.000298***	0.000142**	0.000103
		[3.72e-05]	[4.27e-05]	[4.25e-05]	[5.70e-05]	[6.26e-05]
Fraction Senate Dem				-2.084***	-1.796***	-1.461**
				[0.751]	[0.656]	[0.642]
Fraction House Dem				-0.349	-0.248	0.373
				[0.838]	[0.730]	[0.745]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	14.96***	84.91***	83.67***	65.25***	24.55**	33.52***
	[0.139]	[13.40]	[13.05]	[13.53]	[12.21]	[12.96]
Observations	998	998	998	998	998	998
R-squared	0.127	0.792	0.818	0.824	0.940	0.944

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 11A. Model (2)—Constant Effect of Having a Purchase Delay on Firearms-Related Suicide Mortality Rate

Variables	(1) Firearms Suicide Rate	(2) Firearms Suicide Rate	(3) Firearms Suicide Rate	(4) Firearms Suicide Rate	(5) Firearms Suicide Rate	(6) Firearms Suicide Rate
Purchase Delay Dummy	-3.710***	-1.261***	-0.871***	-0.729***	0.418	0.487*
	[0.215]	[0.143]	[0.146]	[0.146]	[0.258]	[0.259]
Fraction Asian		-0.118	2.548	3.811	-4.610	-8.150
		[3.618]	[3.574]	[3.499]	[6.415]	[6.523]
Fraction Black		5.466**	3.306	2.240	-1.606	-0.596
		[2.323]	[2.358]	[2.309]	[4.994]	[5.215]
Fraction Amer. Indian		17.00***	16.67***	18.06***	4.911	6.338*
		[3.433]	[3.440]	[3.368]	[3.584]	[3.594]
Fraction White		7.265***	6.866***	6.802***	5.590*	5.840*
		[2.580]	[2.530]	[2.477]	[3.168]	[3.234]
Fraction in Poverty		19.25***	22.54***	24.23***	5.014	-0.220
		[4.070]	[4.166]	[4.140]	[3.905]	[4.489]
Fraction Female		-128.5***	-98.33***	-77.55***	-15.48**	-22.34***
		[9.694]	[10.11]	[10.33]	[7.789]	[8.129]
Alcohol Consumption		-0.484***	-0.552***	-0.448***	0.545*	0.444
		[0.134]	[0.132]	[0.130]	[0.303]	[0.310]
Hunting Licenses		-1.95e-06***	-2.38e-06***	-2.37e-06***	1.11e-06	4.89e-07
		[2.34e-07]	[2.39e-07]	[2.37e-07]	[7.19e-07]	[7.32e-07]
RPCPI		-0.000293***	-0.000188***	-0.000212***	6.54e-05	0.000121***
		[3.00e-05]	[3.47e-05]	[3.42e-05]	[4.10e-05]	[4.53e-05]
Fraction Senate Dem				-0.938	-1.494***	-1.410***
				[0.603]	[0.472]	[0.465]
Fraction House Dem				-1.812***	-0.382	0.0642
				[0.673]	[0.525]	[0.539]

Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	8.505*** [0.102]	69.89*** [10.79]	63.01*** [10.59]	40.77*** [10.87]	11.73 [8.786]	22.03** [9.374]
Observations	998	998	998	998	998	998
R-squared	0.230	0.780	0.805	0.814	0.949	0.952

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 12A. Model (2)—Constant Effect of Having a Purchase Delay on Non-Firearms-Related Suicide Mortality Rate

Variables	(1) Non-Firearms Suicide Rate	(2) Non-Firearms Suicide Rate	(3) Non-Firearms Suicide Rate	(4) Non-Firearms Suicide Rate	(5) Non-Firearms Suicide Rate	(6) Non-Firearms Suicide Rate
Purchase Delay Dummy	0.188 [0.137]	-0.0711 [0.0855]	-0.0206 [0.0903]	0.00916 [0.0916]	-0.0521 [0.237]	-0.227 [0.236]
Fraction Asian		-13.58*** [2.171]	-10.74*** [2.205]	-11.10*** [2.197]	-8.381 [5.894]	-12.91** [5.941]
Fraction Black		-21.13*** [1.394]	-19.63*** [1.454]	-19.59*** [1.450]	-15.52*** [4.588]	-16.92*** [4.750]
Fraction Amer. Indian		-4.992** [2.060]	-2.833 [2.122]	-2.811 [2.115]	-4.853 [3.292]	-3.136 [3.274]
Fraction White		-12.87*** [1.554]	-11.52*** [1.553]	-11.81*** [1.549]	-6.832** [2.911]	-4.449 [2.946]

Fraction in Poverty		-14.77***	-14.20***	-15.86***	3.915	0.584
		[2.442]	[2.570]	[2.600]	[3.588]	[4.089]
Fraction Female		-6.678	-1.556	-3.615	-8.268	1.099
		[5.818]	[6.236]	[6.486]	[7.156]	[7.404]
Alcohol Consumption		0.492***	0.462***	0.442***	-0.0124	0.475*
		[0.0804]	[0.0813]	[0.0814]	[0.278]	[0.282]
Hunting Licenses		-7.40e-07***	-8.26e-07***	-9.13e-07***	6.49e-07	4.73e-08
		[1.40e-07]	[1.48e-07]	[1.49e-07]	[6.61e-07]	[6.67e-07]
RPCPI		-9.95e-05***	-8.23e-05***	-8.54e-05***	7.66e-05**	-1.95e-05
		[1.80e-05]	[2.14e-05]	[2.14e-05]	[3.77e-05]	[4.13e-05]
Fraction Senate Dem				-1.183***	-0.327	-0.0807
				[0.379]	[0.433]	[0.423]
Fraction House Dem				1.481***	0.124	0.313
				[0.423]	[0.482]	[0.491]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	6.453***	15.11**	20.75***	24.44***	12.84	11.21
	[0.0648]	[6.475]	[6.532]	[6.827]	[8.072]	[8.538]
Observations	998	998	998	998	998	998
R-squared	0.002	0.747	0.762	0.765	0.863	0.874

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 13A. Model (4)—Constant Effect of Purchase Delay Length on All-Cause Suicide Mortality Rate

Variables	(1) All-Cause Suicide Rate	(2) All-Cause Suicide Rate	(3) All-Cause Suicide Rate	(4) All-Cause Suicide Rate	(5) All-Cause Suicide Rate	(6) All-Cause Suicide Rate
Purchase Delay Length	-0.470***	-0.266***	-0.224***	-0.196***	0.177	0.125
	[0.0408]	[0.0324]	[0.0336]	[0.0337]	[0.180]	[0.179]
Fraction Asian		-10.66**	-5.183	-4.779	-13.15	-21.16**
		[4.445]	[4.339]	[4.293]	[8.917]	[9.016]
Fraction Black		-17.35***	-17.08***	-17.98***	-17.08**	-17.32**
		[2.893]	[2.881]	[2.851]	[6.942]	[7.208]
Fraction Amer. Indian		9.819**	12.29***	13.69***	0.133	3.269
		[4.276]	[4.212]	[4.169]	[4.981]	[4.968]
Fraction White		-7.217**	-5.715*	-5.987*	-1.188	1.462
		[3.216]	[3.096]	[3.062]	[4.404]	[4.470]
Fraction in Poverty		[28.28]	[27.47]	[27.38]	[23.07]	[24.17]
		4.296	7.345	7.454	9.218*	0.861
Fraction Female		[5.020]	[5.074]	[5.096]	[5.429]	[6.205]
		-131.7***	-102.4***	-85.13***	-23.65**	-21.27*
Alcohol Consumption		[11.91]	[12.20]	[12.58]	[10.83]	[11.24]
		-0.0793	-0.154	-0.0652	0.564	0.955**
Hunting Licenses		[0.167]	[0.161]	[0.160]	[0.421]	[0.428]
		-2.82e-06***	-3.33e-06***	-3.37e-06***	1.77e-06*	5.73e-07
RPCPI		[2.90e-07]	[2.93e-07]	[2.93e-07]	[9.99e-07]	[1.01e-06]
		-0.000389***	-0.000291***	-0.000317***	0.000142**	0.000103
Fraction Senate Dem		[3.70e-05]	[4.24e-05]	[4.22e-05]	[5.70e-05]	[6.26e-05]
				-1.871**	-1.796***	-1.461**

Fraction House Dem				[0.744]	[0.656]	[0.642]
				-0.489	-0.248	0.373
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	14.81***	91.37***	91.86***	73.23***	24.55**	33.52***
	[0.135]	[13.37]	[13.04]	[13.54]	[12.21]	[12.96]
Observations	998	998	998	998	998	998
R-squared	0.118	0.795	0.822	0.827	0.940	0.944

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 14A. Model (4)—Constant Effect of Purchase Delay Length on Firearms-Related Suicide Mortality Rate

Variables	(1) Firearms Suicide Rate	(2) Firearms Suicide Rate	(3) Firearms Suicide Rate	(4) Firearms Suicide Rate	(5) Firearms Suicide Rate	(6) Firearms Suicide Rate
Purchase Delay Length	-0.537***	-0.212***	-0.159***	-0.135***	0.209	0.243*
	[0.0294]	[0.0264]	[0.0275]	[0.0274]	[0.129]	[0.129]
Fraction Asian		2.836	5.293	6.125*	-4.610	-8.150
		[3.622]	[3.560]	[3.483]	[6.415]	[6.523]
Fraction Black		4.412*	2.823	1.813	-1.606	-0.596

		[2.358]	[2.363]	[2.313]	[4.994]	[5.215]
Fraction Amer. Indian		15.93***	16.18***	17.63***	4.911	6.338*
		[3.485]	[3.456]	[3.382]	[3.584]	[3.594]
Fraction White		6.567**	6.587***	6.541***	5.590*	5.840*
		[2.621]	[2.540]	[2.484]	[3.168]	[3.234]
Fraction in Poverty		20.03***	22.94***	24.53***	5.014	-0.220
		[4.091]	[4.163]	[4.135]	[3.905]	[4.489]
Fraction Female		-123.7***	-95.42***	-75.04***	-15.48**	-22.34***
		[9.703]	[10.01]	[10.21]	[7.789]	[8.129]
Alcohol Consumption		-0.535***	-0.590***	-0.480***	0.545*	0.444
		[0.136]	[0.132]	[0.130]	[0.303]	[0.310]
Hunting Licenses		-2.02e-06***	-2.46e-06***	-2.43e-06***	1.11e-06	4.89e-07
		[2.37e-07]	[2.40e-07]	[2.37e-07]	[7.19e-07]	[7.32e-07]
RPCPI		-0.000288***	-0.000190***	-0.000215***	6.54e-05	0.000121***
		[3.01e-05]	[3.48e-05]	[3.43e-05]	[4.10e-05]	[4.53e-05]
Fraction Senate Dem				-0.951	-1.494***	-1.410***
				[0.603]	[0.472]	[0.465]
Fraction House Dem				-1.835***	-0.382	0.0642
				[0.674]	[0.525]	[0.539]
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	8.406***	74.51***	66.90***	43.88***	11.73	22.03**
	[0.0970]	[10.90]	[10.70]	[10.98]	[8.786]	[9.374]
Observations	998	998	998	998	998	998
R-squared	0.251	0.777	0.804	0.814	0.949	0.952

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 15A. Model (4)—Constant Effect of Purchase Delay Length on Non-Firearms-Related Suicide Mortality Rate

Variables	(1) Non-Firearms Suicide Rate	(2) Non-Firearms Suicide Rate	(3) Non-Firearms Suicide Rate	(4) Non-Firearms Suicide Rate	(5) Non-Firearms Suicide Rate	(6) Non-Firearms Suicide Rate
Purchase Delay Length	0.0675***	-0.0549***	-0.0661***	-0.0624***	-0.0260	-0.114
	[0.0189]	[0.0156]	[0.0168]	[0.0171]	[0.119]	[0.118]
Fraction Asian		-13.48***	-10.46***	-10.89***	-8.381	-12.91**
		[2.147]	[2.177]	[2.171]	[5.894]	[5.941]
Fraction Black		-21.80***	-19.94***	-19.84***	-15.52***	-16.92***
		[1.397]	[1.445]	[1.442]	[4.588]	[4.750]
Fraction Amer. Indian		-6.123***	-3.909*	-3.947*	-4.853	-3.136
		[2.065]	[2.113]	[2.108]	[3.292]	[3.274]
Fraction White		-13.81***	-12.33***	-12.56***	-6.832**	-4.449
		[1.554]	[1.553]	[1.549]	[2.911]	[2.946]
Fraction in Poverty		-15.84***	-15.66***	-17.17***	3.915	0.584
		[2.425]	[2.545]	[2.577]	[3.588]	[4.089]
Fraction Female		-7.813	-6.925	-9.837	-8.268	1.099
		[5.751]	[6.121]	[6.361]	[7.156]	[7.404]
Alcohol Consumption		0.456***	0.437***	0.416***	-0.0124	0.475*
		[0.0804]	[0.0808]	[0.0811]	[0.278]	[0.282]
Hunting Licenses		-7.90e-07***	-8.64e-07***	-9.37e-07***	6.49e-07	4.73e-08
		[1.40e-07]	[1.47e-07]	[1.48e-07]	[6.61e-07]	[6.67e-07]
RPCPI		-0.000100***	-0.000100***	-0.000101***	7.66e-05**	-1.95e-05
		[1.79e-05]	[2.13e-05]	[2.14e-05]	[3.77e-05]	[4.13e-05]

Fraction Senate Dem			[0.148]	[0.149]	[0.195]	[0.191]
Fraction House Dem				-0.957**	-0.327	-0.0807
				[0.376]	[0.433]	[0.423]
				1.363***	0.124	0.313
Age Group Controls	No	Yes	Yes	Yes	Yes	Yes
Other Gun Law Controls	No	No	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	Yes	Yes
Year Fixed Effects	No	No	No	No	No	Yes
Constant	6.403***	16.96***	25.07***	29.33***	12.84	11.21
	[0.0623]	[6.459]	[6.542]	[6.847]	[8.072]	[8.538]
Observations	998	998	998	998	998	998
R-squared	0.013	0.750	0.766	0.769	0.863	0.874

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1