

## Letter

# Exposure to Mass Shootings and Voting Directly on Gun Policy

G. AGUSTIN MARKARIAN *Loyola University Chicago, United States*

BENJAMIN J. NEWMAN *University of California, Riverside, United States*

**R**ecent scholarship finds that exposure to mass shootings has no effect on Democratic vote shares. While arguably a reasonable proxy for public demand for heightened gun control, this outcome nonetheless reflects myriad issue concerns, with guns being just one issue typically dwarfed in importance by the attention given in electoral campaigns to jobs, the economy, and other social issues. Our research improves the issue-domain correspondence between treatment and outcome by analyzing voting directly on gun policy. We leverage a mass shooting that occurred in Washington state shortly before residents voted on a ballot measure to regulate firearms. Critically, a previous measure on firearms appeared on the ballot in Washington 2 years prior, enabling our analysis to control for pretreatment support for gun control. Across various model specifications, we find that proximity to the shooting was associated with increased support for gun control. We replicate this finding with three additional shootings.


## INTRODUCTION


A growing vein of research explores the effect of local exposure to mass shootings on electoral behavior in the United States (Garcia-Montoya, Arjona, and Lacombe 2022; Hassell, Holbein, and Baldwin 2020; Kantack and Lassi 2023; Marsh 2023; Yousaf 2021). The underlying hypothesis tested in this work is that, by increasing the salience and palpability of gun violence, living near a mass shooting will generate action to reduce the ravages of firearms. This underlying hypothesis is supported by research demonstrating that residing near mass shootings generates emotional distress (Rossin-Slater et al. 2020; Sharkey and Shen 2021), elevates the personal importance of gun policy (Yousaf 2021), and is associated

with heightened support for gun control (Hartman and Newman 2019; Newman and Hartman 2019)<sup>1</sup>. However, the findings from recent research on two-party vote choice in elections suggest that the American public may not translate these feelings and attitudes into voting behavior.

Following an extensive and rigorous analysis of the effect of school shootings on county Democratic party vote shares rendering null results, Hassell, Holbein, and Baldwin (2020) state “Our results help to show... that there are not electoral implications for gun violence” (1383) and that “Simply put, school shootings do not affect elections in the U.S.” (1382). In the midst of competing studies claiming evidence that mass shootings augment Democratic (Garcia-Montoya, Arjona, and Lacombe 2022) and diminish Republican (Yousaf 2021) vote shares, Hassell and Holbein (2024) reanalyze these data and firmly demonstrate that, after accounting for liberal trending in areas experiencing shootings, mass shootings do not generate increases in Democratic vote shares. Hassell and Holbein (2024) conclude “Mass shootings have little substantive consequence for election outcomes” (19). This scholarly exchange leaves us convinced that mass shootings do not affect county-level Democratic vote shares. This null result, however, does not necessarily mean that mass shootings do not influence voting behavior or that the underlying hypothesis is incorrect.

In this letter, we build on this literature by analyzing the effect of local exposure to mass shootings on an alternative outcome: *voting directly on gun policy*. Our motivation for focusing on voting on guns is twofold: first, the occurrence of ballot initiatives on firearms regulations in American states with direct democracy offers a *direct* behavioral measure of voter support for gun control; second, the literature on “focusing events,” which provides an overarching theoretical

G. Agustin Markarian , Assistant Professor, Department of Political Science, Loyola University Chicago, United States, [gmarkarian@luc.edu](mailto:gmarkarian@luc.edu).

Corresponding author: Benjamin J. Newman , Associate Professor, School of Public Policy and Department of Political Science, University of California, Riverside, United States, [bnewman@ucr.edu](mailto:bnewman@ucr.edu).

Received: March 29, 2024; revised: July 18, 2024; accepted: October 21, 2024.

<sup>1</sup> These findings focusing on local exposure to mass shootings are complemented by parallel experimental research documenting increased support for gun control following exposure to a news story about a mass shooting (McGinty, Webster, and Barry 2013) and observational studies leveraging the random timing of mass shootings that uncover significant upticks in the wake of prominent mass shootings in the perceived importance of reducing mass shootings (Kantack and Paschall 2020), support for firearms restrictions (Filindra, Collingwood, and Kaplan 2020; Frey and Kirk 2021), and political action (e.g., petition signing and donations) oriented toward achieving gun control (Reny et al. 2023).



framework used by scholars exploring the political effects of mass shootings, points toward the importance of empirical tests with strong issue-domain correspondence between the treatment and outcome.

We begin with the former motivation. The rationale for the focus of recent research on Democratic vote share is summarized by Garcia-Montoya, Arjona, and Lacombe (2022): “If people living near the location of a school shooting do become more supportive of gun control...they might also become more likely to vote for the Democratic Party...as the parties have become increasingly polarized on gun control...and polarization on gun control has spread to the mass level” (812). In other words, in a political milieu where the Democratic party has claimed “issue ownership” (Petrocik 1996) over gun control (Conley 2019; Holian 2004), voting for a Democratic candidate for elective office can serve as an indicator of voter support for heightened gun control. To this rationale, we offer a modest counterpoint: while key conditions of the American political environment render voting for the Democratic party a reasonable proxy for voter demand for gun control, it is nonetheless an indirect measure of the outcome of theoretical interest.

Indeed, while the Democratic and Republican parties take distinct positions on gun policy (Fleming, McLean, and Tatalovich 2018), their platforms vary on a host of issues (Coffey 2011) and their candidates for elective offices take up positions on half a dozen or more issues in any given race (Sides 2007). Americans’ choice between the two parties is driven by myriad factors, including group identity, perceived candidate traits, and preferences over a range of issues (Aldrich et al. 2023; Lewis-Beck et al. 2009). As the product of an array of factors, Democratic vote share can be seen as a “bundle of sticks” of which voters’ preferences on firearms constitute a single stick in the bundle. Table SI-A1 in the supporting information (SI) presents findings from national and statewide polls asking Americans to report the most important issue to them in deciding who to vote for in federal and state elections. Americans rarely report using guns as the focal issue in deciding their vote for president, senator, house member, or governor; instead, and unsurprisingly, they rely most strongly on issues that are typically the centerpiece of electoral campaigns: jobs, the economy, taxes, and healthcare. While this does not mean that voters exposed to mass shootings will not identify the Democrats as the party “more likely than the other party to protect their communities from future shootings” (Garcia-Montoya, Arjona, and Lacombe 2022, 810), it does suggest value in exploring direct measures of voters’ preferences on gun policy before concluding “there are not electoral implications for gun violence” (Hassell, Holbein, and Baldwin 2020, 1383).

Turning to the latter motivation, the literature on “focusing events” (Birkland 1997) contends that sudden, unexpected, and visible events causing harm can push event-relevant issues to the top of the political agenda and generate demand for change to policies related to the event. Implied within this framework is an issue-domain correspondence between the treatment event and the outcomes under study. In other words, scholars

seeking to test whether an event focused political attention and action should set their sights on an outcome directly related to the treatment event. Examples of research possessing such correspondence include investigations of the effect of an oil spill on attitudes toward oil drilling (Bishop 2014), the effect of wildfires on voting on climate-related ballot measures (Hazlett and Mildemberger 2020), the effect of bank scandals on attitudes toward financial regulation (Culpepper, Jung, and Lee 2024), or the effect of police killings on voting on criminal justice reform (Ang and Tebes 2024). We pose the research question: does exposure to a mass shooting increase voter support for an initiative to restrict access to firearms? The focus on Democratic vote shares in prior work leaves us without an answer to this question and, thus, in want of an empirical test.

## BALLOT INITIATIVE 1491 IN WASHINGTON STATE

Firearms have appeared on the ballot roughly 36 times across 26 states, giving residents the opportunity to vote directly on gun policy. The main challenge, however, lies in identifying a state where a mass shooting occurred prior to an election where guns were on the ballot. Washington state offers an unrivaled opportunity for an empirical test. On September 23, 2016, a 20-year-old male armed with a semiautomatic rifle entered the Cascade Mall in Burlington, WA, and opened fire on shoppers and mall employees, killing five people. Less than 7 weeks later, on November 8, 2016, voters in the state cast a vote on Initiative 1491 (I-1491), a law authorizing courts to issue extreme risk protection orders to remove an individual’s access to firearms—otherwise known as a “red flag law.” This initiative passed with roughly 69.4% of the vote. The Cascade Mall shooting and I-1491 possess several features rendering it a strong test case on theoretical and methodological grounds.

First, this shooting was a *public* mass shooting—it occurred in a crowded shopping center and the perpetrator targeted unacquainted persons in a haphazard manner. Much of the social science research analyzing the impact of mass shootings focuses on those occurring in nonresidential public settings (e.g., shopping center, movie theater, school or college campus, religious institution, or festival) (Hassell and Holbein 2024; Reny et al. 2023; Sharkey and Shen 2021) because they typically involve higher victim counts and generate more media attention (Silva and Capellan 2019) than those occurring in private residences targeting acquainted persons (e.g., family members, romantic partners, and rival gang members). As an instance of a type of mass shooting most likely to evoke the threat of “senseless gun violence” (Whittaker 2024), the Cascade Mall shooting is a strong test case. Second, given suggestive evidence that the effect of mass shootings on electoral behavior dissipates with time (Kantack and Lassi 2023; Marsh 2023), the distinct closeness in time between the Cascade Mall shooting and vote on I-1491 renders it a “most likely” case (Gerring and Cojocaru 2016) for observing an effect. Third, the initiative was



certified for the ballot before the shooting occurred,<sup>2</sup> removing concerns surrounding the shooting influencing the data generating process (e.g., mobilization around the initiative and the success of the petition drive) and the presence of an outcome to observe. Fourth, a previous gun control measure appeared on the ballot (and passed) in Washington state in the 2014 General Election—Initiative 594 (I-594), which proposed universal background checks for gun purchases. I-594 offers a measure of revealed preferences on gun control that is pretreatment and close in time to I-1491 in 2016. Finally, the votes on these ballot measures took place during an era when fine-grained (i.e., precinct-level) state-wide election results data have been regularly gathered and made publicly available.

Aside from Washington, we were unable to identify any other state where (1) a vote on a firearms measure occurred very soon after a public mass shooting, (2) the measure was approved for the ballot before the shooting, (3) a pre-shooting vote on a firearms measure occurred close in time to the post-shooting vote on firearms, and (4) precinct-level election results data were collected and available. SI-B lists other state ballot measures on firearms and documents the grounds for their ineligibility as usable or equivalent test cases.

## DATA AND METHODS

We retrieved state-wide precinct-level election results for all federal general elections between 2010 and 2016 from the Washington Secretary of State's Office (WASOS 2024). Precinct is the smallest level of geographic aggregation available for observing vote choice and the administrative data we retrieved include reported results for  $N = 7,070$  election precincts in 2016. The dependent variable in our analysis is the % Yes of the votes cast on I-1491 in each precinct.

Our use of precinct enables a more spatially granular and precise analysis with respect to measuring the proximity or “exposure” of sets of voters to the treatment than achieved in prior research using county-level election results data (Garcia-Montoya, Arjona, and Lacombe 2022; Hassell and Holbein 2024; Yousaf 2021). Counties can be relatively large, and heterogeneous geographic units and prior work using county-level data have to define an entire county as treated with a mass shooting despite the possibility that shootings may differentially affect county residents depending on their proximity to the location of the shooting. Research exploring the effect of exposure to various types of location-based treatments (e.g., demolished public housing, police killings, wildfires, and drug treatment clinics) demonstrates that treatment effects can dissipate within a few miles distance from treatment sites (Ang and Tebes 2024; de Benedictis-Kessner and Hankinson 2019; Enos 2016; Hazlett and Mildenberger

2020). Using precincts enables us to study smaller and more homogeneous sets of voters and to evaluate changes in support for I-1491 on a more granular scale of distance from the shooting under investigation. To ensure that low-population precincts do not bias our estimates, we weight precincts based on population.<sup>3</sup>

To capture exposure to the Cascade Mall shooting, we measured the distance of the centroid of each precinct to the location of the Cascade Mall. To ensure our findings are not sensitive to different distance cutoffs, we constructed three alternative dichotomous variables that define a precinct as “treated” if its centroid is 5 ( $n = 53$ ; participating voters = 21,871), 10 ( $n = 82$ ; participating voters = 34,753), or 15 ( $n = 122$ ; participating voters = 59,021) miles or less from the Cascade Mall. In our primary analysis, we use regression models to estimate the relationship of proximity to the mall shooting on precinct % Yes on I-1491. We use three separate models to estimate the coefficient for each of the three dichotomous distance-from-shooting variables. We also present results using dichotomous variables measuring mutually exclusive 5-mile intervals of distance from the Cascade Mall in a single model to illustrate distance-decay effects.

Our models control for an exhaustive set of precinct-level covariates. First and foremost, we use % Yes on I-594 in the 2014 General Election to capture precinct voters' pretreatment revealed preferences on gun control, which itself explains 85.5% of the variance in the I-1491 vote. In addition, we control for support for Obama in 2012, a proxy for firearm prevalence (ATF 2024),<sup>4</sup> median income, college education, home ownership, gender and racial composition, age of residents, and population density.<sup>5</sup> Critically, given that mass shootings tend to occur in areas trending liberal (Hassell and Holbein 2024), we control for precinct-level partisan trends using the change in Democratic presidential vote share between 2012 and 2016.<sup>6</sup> This modeling approach is exceptionally rigorous—the estimated coefficients for our distance-from-shooting variables are net of precinct voters' standing preferences on gun control, the prevalence of firearms, an exhaustive set of demographic factors, prior partisan preferences, and trends in partisan preferences.

To complement our primary analysis, we use three alternative analytic strategies and model specifications

<sup>3</sup> Our findings hold when population weights are not included (SI-C).

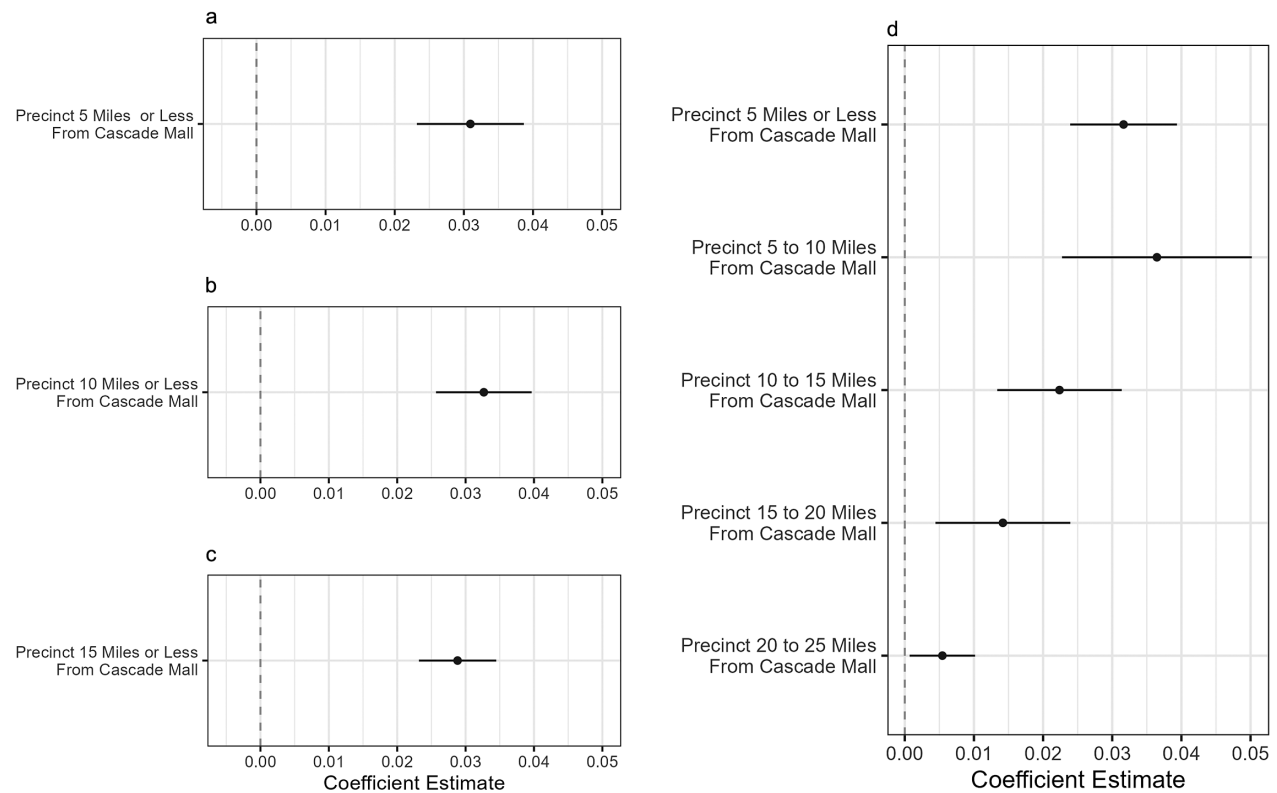
<sup>4</sup> We use the number of licensed firearm dealerships as of September 2014 in precincts' overlapping zip codes.

<sup>5</sup> These data are pretreatment and from the 2010 census and 2010–14 ACS. We use block-level data for variables available in the census and block group-level data with aerial interpolation (using the “areal” R package) to estimate precinct-level demographic variables.

<sup>6</sup> Results are robust when using change in Democratic Senatorial vote share between 2010 and 2016 instead (SI-D). Moreover, covariate balance tests (SI-E) reveal that precincts within 5, 10, and 15 miles of the Cascade Mall shooting were *less* supportive of I-594 in 2014, *less* supportive of Obama in 2012, and trending *less* Democratic between 2012 and 2016. These voting patterns *decrease* the likelihood that support for gun control in 2016 would increase in precincts near the Cascade Mall shooting due to the trends uncovered by Hassell and Holbein (2024).

<sup>2</sup> Certified on July 27, 2016 (see Ballotpedia.com; [https://ballotpedia.org/Washington\\_Individual\\_Gun\\_Access\\_Prevention\\_by\\_Court\\_Order\\_Initiative\\_1491\\_\(2016\)\)](https://ballotpedia.org/Washington_Individual_Gun_Access_Prevention_by_Court_Order_Initiative_1491_(2016))).



**FIGURE 1. Proximity to the Cascade Mall Shooting and Support for I-1491**

Note: All models use heteroskedasticity robust standard errors.

to explore the relationship between precinct proximity to the Cascade Mall shooting and support for I-1491. First, we use gradient-boosted propensity score matching to match “treated” precincts (i.e., those  $\leq 5$ , 10, and 15 miles of the Cascade Mall) to their untreated “nearest neighbor” using the “twang” R package (Ridgeway et al. 2022). Second, to account for the possibility that our results are driven by proximity to a mall versus a mass shooting, we perform an analysis where we subset the data to only precincts within 5, 10, or 15 miles from malls in Washington state and compare “treated” precincts near the Cascade Mall only to precincts near other shopping malls. This helps us to rule out the possibility that our primary findings are due to the characteristics of voters living near malls. Third, we estimate the difference in support for gun control between those close to and further away from the Cascade Mall prior to the shooting (based on I-594 in 2014), the difference in support for I-1491 following the shooting, and the difference between these differences. We estimate a two-stage difference-in-differences (DiD) to illustrate the robustness of findings to different estimation strategies and not to support causal claims.<sup>7</sup>

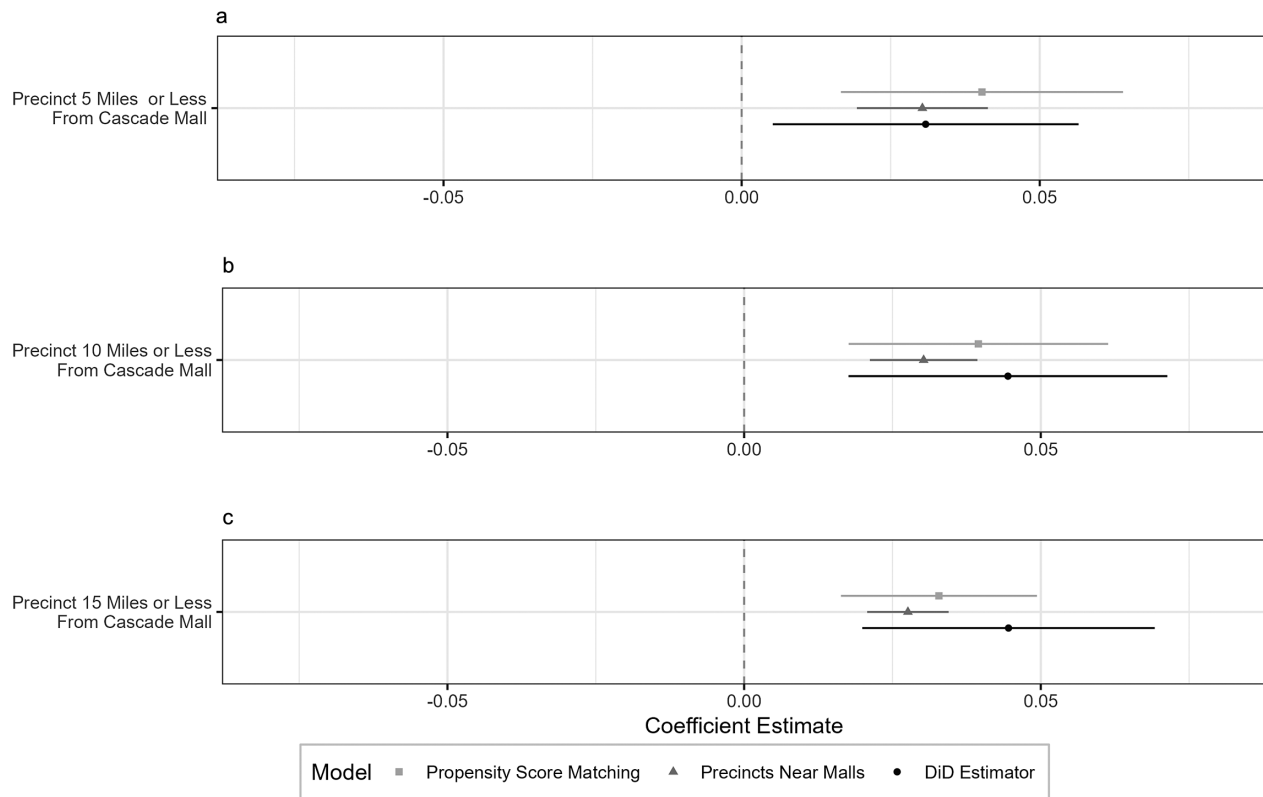
<sup>7</sup> The absence of gun control measures prior to 2014 prevents assessment of parallel trends and the 2014 and 2016 firearms measures in Washington are distinct enough to merit caution in situating them as indicators of the same latent preference.

## FINDINGS

Figure 1 plots the effect of proximity to the Cascade Mall shooting on support for I-1491 for the three models analyzing the different distance-from-shooting measures (left-side graphs) and the 5-mile intervals (right-side graph).<sup>8</sup> The findings strongly suggest that the Cascade Mall shooting increased proximal voters’ support for gun control, that the results are not sensitive to minor differences in distance cutoffs, and that those living closer to the shooting were most affected. Panel a (Figure 1) shows that support for I-1491 was 3.1 percentage points higher in precincts within 5 miles of the shooting compared to those more than 5 miles away. Panels b and c (Figure 1) indicate that support for I-1491 was 3.3 and 2.9 percentage points higher in precincts within 10 and 15 miles of the shooting, respectively, compared to precincts further away. All three distance-from-shooting measures are statistically significant at  $p < 0.001$  and the  $R^2$  is just over 0.93 in these models. Figure 1d illustrates distance-decay effects, with the estimated coefficients for each successive 5-mile distance-from-shooting indicator variable steadily attenuating toward zero. According to this model, support for I-1491 was 3.2 percentage points higher in precincts within 5 miles of the shooting

<sup>8</sup> Full model results are available in SI-F.



**FIGURE 2. Robustness Tests Using Alternative Modeling Specifications**

Note: All models use heteroskedasticity robust standard errors.

compared to precincts more than 25 miles away. On the other hand, support for I-1491 was only 1.4 percentage points higher in precincts 15–20 miles away and 0.5 percentage points higher in precincts 20–25 miles away compared to precincts more than 25 miles away.

Figure 2 plots estimates for the 5-, 10-, and 15-mile distance-from-shooting measures using alternative analytical strategies and model specifications, revealing that the findings reported in Figure 1 are robust. Propensity score matching (i.e., comparing precincts near the Cascade Mall to only the most similar precincts further away from the shooting) suggests that support for I-1491 was 4 percentage points higher in precincts within 5 or 10 miles of the shooting and 3.2 percentage points higher in precincts within 15 miles of the shooting compared to politically and demographically similar precincts further away. Next, we compare support for I-1491 among precincts near the Cascade Mall shooting only to other precincts equally close to malls (e.g., precincts 5 miles or less from the Cascade Mall shooting are only compared to precincts 5 miles or less from another mall in Washington). Our findings do not appear to be driven simply by proximity to a mall: across all three models, support for I-1491 was about 3 percentage points higher in precincts near the Cascade Mall shooting compared to precincts close to other malls. Finally, we turn to the DiD estimates. The models suggest that support for gun control at the ballot

increased between 2014 and 2016 by 3.4 percentage points more among voters 5 miles or less from the shooting compared to those further away ( $p < 0.01$ ) and by about 4.5 percentage points more among voters 10 or 15 miles or less from the shooting ( $p < 0.001$ ). Together, the results in Figure 2 illustrate that our main findings are robust to alternative analytic strategies and model specifications.

## ROBUSTNESS AND REPLICATION

The SI offers additional robustness tests that reinforce and complement the findings in Figures 1 and 2. First, our results hold when using a continuous measure of proximity to the shooting (SI-G). Second, we demonstrate that our results hold when estimating simple models controlling only for pretreatment support for gun control (SI-H). Third, the results from a sensitivity analysis (Cinelli and Hazlett 2020) suggest that the findings in Figure 1 are insulated from omitted variable bias (SI-I). We find that an omitted variable would have to possess over two times (three times) the strength of association of %Yes on I-594 to %Yes on I-1491 to reduce the positive and significant estimate for our 5-mile (10-mile) distance-from-shooting variable to zero. It is theoretically difficult to identify an omitted variable that would explain precinct support for gun



control in 2016 over two-to-three times better than precinct support for gun control in 2014. Fourth, we demonstrate that, while associated with support for I-1491, proximity to the Cascade Mall shooting is not consistently associated with increased support for liberal positions on non-gun-related ballot initiatives such as minimum wages, tough-on-crime policies for cyber-crimes, carbon taxes, and electric vehicle subsidies (SI-J). Fifth, while associated with heightened support for I-1491, proximity to the shooting is not associated with heightened support for Clinton in 2016 (SI-K). Finally, we fail to observe significant heterogeneity in the estimated relationship of proximity to the mall shooting on I-1491 support by prior precinct partisan or gun control preferences (SI-L).

Concerning replication, we were able to identify three additional cases usable as replication tests, though each of these cases is less optimal than the Cascade Mall shooting for theoretical and/or methodological reasons. First, a less deadly mass shooting (three gunshot fatalities) occurred at a small college party held in a private residence in Mukilteo, WA on July 30, 2016. This shooting enables a second test of the effect of proximity to a mass shooting on voter support for I-1491 in Washington in 2016. Similar to the Cascade Mall case, the methodological rigor of this test is boosted by the ability to control for pretreatment precinct support for gun control in 2014. Unlike the Cascade Mall case, however, this shooting occurred in a private residence containing a small crowd of party-goers and the perpetrator targeted acquainted individuals. These event characteristics render the Mukilteo shooting a weaker test on theoretical grounds.

Two additional replication tests emerge if we (1) allow for a longer window of elapsed time between the shooting and subsequent vote on a firearms-related ballot measure and (2) remove the requirement of a recent pretreatment measure of voters' preferences on firearms. Using these relaxed criteria, we analyzed the extremely deadly 2015 San Bernardino mass shooting (14 gunshot fatalities, occurred roughly 11 months prior to the 2016 Election)<sup>9</sup> and the 2014 Isla Vista mass shooting (3 gunshot fatalities; occurred roughly 2.5 years prior to the 2016 Election) on precinct-level support for Proposition 63 in California (proposed background checks on ammunition purchases and bans on possession of large-capacity ammunition magazines) in the 2016 General Election. To address the absence of a recent pretreatment measure of voters' preferences on firearms policy, our analysis of these shootings controls for pretreatment precinct support for a "law and order" ballot measure from the 2012 Election (Proposition 36, reforming California's

"Three Strikes Law") that is highly predictive of precinct support for Proposition 63. When combined with the same set of controls used in our analysis of the Cascade Mall and Mukilteo shootings, inclusion of voter support for Proposition 36 in 2012 renders an  $R^2$  of just over 0.92 in our analysis of both California shootings (see SI-M).

Our primary findings from the Cascade Mall shooting replicate using these three additional cases (SI-M). While smaller in size in all three cases relative to the Cascade Mall case, we observe positive and statistically significant coefficients for our proximity-to-shooting measures on precinct support for firearms restrictions for the Mukilteo, San Bernardino, and Isla Vista shootings. While these additional tests are not equivalent to the Cascade Mall case due to possessing characteristics rendering them theoretically less likely to exert effects (e.g., less deadly, occurred in a private residence targeting acquaintances, more time elapsed between the shooting and the vote) or the analysis being less rigorous (e.g., absence of pretreatment measure of support for gun control), they nonetheless offer initial evidence that our findings with the Cascade Mall shooting replicate with other shootings and another ballot measure on firearms restrictions in a different state. Given the larger windows of time elapsed between the analyzed shootings and vote on Proposition 63 in California, our findings in California even suggest the possibility of *durable effects* of local exposure to mass shootings when focusing on voting directly on guns. On a final note, when analyzing the relationship of proximity to these three additional shootings to support for Clinton in 2016, we find inconsistent estimates in terms of directionality and statistical significance (see SI-K). When combined with the largely insignificant estimates for proximity to the Cascade Mall shooting, the inconsistent results using vote shares for Clinton in 2016 highlight the need for caution when using Democratic vote share to measure support for gun control. Meta-analysis of the four cases suggest that proximity to pre-election mass shootings is associated with increased support for gun control but is not correlated with Democratic Presidential candidate vote share (see SI-N).

## CONCLUSION

This letter offers important new findings to the growing literature on the political consequences of exposure to mass shootings. Our analysis builds on past research in two important ways: we focus on voting directly on firearms and utilize fine-grained precinct-level election results. We present evidence that living in close proximity to a public mass shooting in Washington state was associated with heightened voter support for a gun control initiative appearing on the ballot in an election held less than 2 months after the shooting. Importantly, this finding is robust across different measures of proximity, modeling strategies, and replicates when analyzing three additional mass shootings. While observed effect sizes are relatively modest and hyper-localized

<sup>9</sup> While classifiable as a public mass shooting, the San Bernardino shooting was also a terrorist attack, which distinguishes it from the other shootings and makes it difficult to determine whether an observed effect is due to exposure to gun violence and/or terrorism. We would be concerned if this event were our primary test case; however, as part of ancillary analyses intended to address the replicability of our primary findings, we consider inclusion of this case as useful despite this event involving a "compound treatment."



(e.g., dissipating after 25 miles away from the shooting), our findings suggest that proximity to a mass shooting can shape electoral behavior.

Additionally, while we find that proximity to a mass shooting is consistently related to voting directly on guns, we do not find a consistent relationship to Democratic vote shares. Indeed, among our set of analyzed shootings, we find that some are associated with increased support for a Democratic presidential candidate, while others are associated with lower support (see SI-K and SI-N), reiterating our view that two-party vote choice is a complex bundle of sticks where gun policy is but one issue at stake. The availability of over-time county-level election results data and their amenability to use with a DiD model likely partially account for the use of Democratic vote share as the outcome analyzed in recent studies of the political effects of mass shootings (Garcia-Montoya, Arjona, and Lacombe 2022; Hassell and Holbein 2024; Hassell, Holbein, and Baldwin 2020; Yousaf 2021). Pragmatic concerns like data availability and compatibility with preferred methods, while important, can lead practitioners to overlook important theoretical or issue-domain mismatches between a treatment under study and the chosen outcome.

Our findings build on the recent scholarly exchange over the electoral consequences of exposure to mass shootings (Garcia-Montoya, Arjona, and Lacombe 2022; Hassell and Holbein 2024; Hassell, Holbein, and Baldwin 2020; Yousaf 2021) by illustrating the *possibility* of effects for mass shootings when analyzing *voting directly on guns* and, to a lesser extent, using precinct-level data enabling greater granularity and precision in measuring treatment exposure. As such, in responding to this recent scholarly exchange, our focus was less on the veracity of either set of published studies and more so on the veracity of the underlying theory and hypothesis at stake. Our findings provide support for the application of the focusing events framework to mass shootings and the hypothesis advanced by Newman and Hartman (2019) in their analysis of public opinion on gun control and tested in subsequent work on electoral behavior (Garcia-Montoya, Arjona, and Lacombe 2022; Hassell, Holbein, and Baldwin 2020; Kantack and Lassi 2023; Marsh 2023; Yousaf 2021). Our findings suggest that “having a mass shooting occur in close proximity to one’s community will lead to increased support for gun control” (Newman and Hartman 2019, 1529). This said, in light of the observed null effect of mass shootings on Democratic votes shares reported in recent research (Hassell and Holbein 2024; Hassell, Holbein, and Baldwin 2020), we make sense of our findings by viewing them as suggesting important scope conditions on the applicability of the focusing events framework to mass shootings and gun politics in the United States. Proximity to mass shootings appears to generate political action by Americans to curtail gun violence, but this action is hyper-local, modest in magnitude, and seemingly limited to voting directly on gun control. It does not appear to extend to broader voting decisions, such

as partisan choices in campaigns over elective office. Indeed, while seemingly altering the decisions of nearby residents presented with the opportunity to vote directly on guns, our findings cast doubt on the prospect of mass shootings causing large-scale changes in election outcomes.

With respect to the broader implications of our research, the findings in this letter offer some direction to gun safety advocates aiming to change gun laws. Our findings suggest that following prominent public mass shootings, direct democracy and the initiative process may be a more effective route (than two-party electoral competition) for harnessing the emotional distress (Rossin-Slater et al. 2020; Sharkey and Shen 2021), salience of gun policy (Yousaf 2021), and support for gun control (Hartman and Newman 2019; Newman and Hartman 2019) seemingly generated by mass shootings and translating them into choices by voters on Election Day that augment gun safety. This said, given the limitations we note in the effects we observe for mass shootings (e.g., hyper-local and modest in size), it may be the case that large-scale change in election outcomes—even when voting directly on guns—may require large-scale protest activity and mobilization efforts by gun control activists (e.g., Sato and Haselswerdt 2022). In terms of future research, the findings in this letter warrant replication—especially in the regions of the nation with different political cultures than the West Coast. We replicate our findings with the Cascade Mall shooting using three additional shootings (SI-M); however, these additional cases and ballot measure were in Washington and California, raising the question about whether our findings would materialize in more conservative areas of Eastern Washington, Northeastern California, or in different regions of the nation.

## SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit <https://doi.org/10.1017/S0003055424001291>.

## DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: <https://doi.org/10.7910/DVN/0BSMHG>.

## ACKNOWLEDGEMENTS

The authors thank Hans J. G. Hassell, John B. Holbein, Marcel F. Roman, and the three anonymous reviewers for their insightful feedback on the manuscript. The authors would also like to thank the editors at the *American Political Science Review* for their valuable guidance during the review process.

## CONFLICT OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research.



## ETHICAL STANDARDS

The authors affirm this research did not involve human participants.

## REFERENCES

- Aldrich, John H., Jamie L. Carson, Brad T. Gomez, and Jennifer L. Merolla. 2023. *Change and Continuity in the 2020 and 2022 Elections*. Lanham, MD: Rowman & Littlefield.
- Ang, Desmond, and Jonathan Tebes. 2024. "Civic Responses to Police Violence." *American Political Science Review* 118 (2): 972–87.
- ATF Bureau. 2024. "Federal Firearms Listings 2014." Technical report, Bureau of Alcohol, Tobacco, Firearms and Explosives. <https://www.atf.gov/firearms/listing-federal-firearms-licensees>.
- Birkland, Thomas A. 1997. *After Disaster: Agenda Setting, Public Policy, and Focusing Events*. Washington, DC: Georgetown University Press.
- Bishop, Bradford H. 2014. "Focusing Events and Public Opinion: Evidence from the Deepwater Horizon Disaster." *Political Behavior* 36 (1): 1–22.
- Cinelli, Carlos, and Chad Hazlett. 2020. "Making Sense of Sensitivity: Extending Omitted Variable Bias." *Journal of the Royal Statistical Society Series B: Statistical Methodology* 82 (1): 39–67.
- Coffey, Daniel J. 2011. "More Than a Dime's Worth: Using State Party Platforms to Assess the Degree of American Party Polarization." *PS: Political Science & Politics* 44 (2): 331–7.
- Conley, Mark A. 2019. "Asymmetric Issue Evolution in the American Gun Rights Debate." *Social Science Research* 84: 102317. <https://doi.org/10.1016/j.ssresearch.2019.06.008>
- Culpepper, Pepper D., Jae-Hee Jung, and Taeku Lee. 2024. "Banklash: How Media Coverage of Bank Scandals Moves Mass Preferences on Financial Regulation." *American Journal of Political Science* 68 (2): 427–44.
- de Benedictis-Kessner, Justin, and Michael Hankinson. 2019. "Concentrated Burdens: How Self-Interest and Partisanship Shape Opinion on Opioid Treatment Policy." *American Political Science Review* 113 (4): 1078–84.
- Enos, Ryan D. 2016. "What the Demolition of Public Housing Teaches Us about the Impact of Racial Threat on Political Behavior." *American Journal of Political Science* 60 (1): 123–42.
- Filindra, Alexandra, Loren Collingwood, and Noah J. Kaplan. 2020. "Anxious about Social Violence: The Emotional Underpinnings of Support for Gun Control." *Social Science Quarterly* 101 (5): 2101–20.
- Fleming, Anthony, Dylan S. McLean, and Raymond Tatalovich. 2018. "Debating Gun Control in Canada and the United States: Divergent Policy Frames and Political Cultures." *World Affairs* 181 (4): 348–71.
- Frey, Arun, and David S. Kirk. 2021. "The Impact of Mass Shootings on Attitudes toward Gun Restrictions." *Socius* 7: 23780231211054636. <https://doi.org/10.1177/23780231211054636>
- Garcia-Montoya, Laura, Ana Arjona, and Matthew Lacombe. 2022. "Violence and Voting in the United States: How School Shootings Affect Elections." *American Political Science Review* 116 (3): 807–26.
- Gerring, John, and Lee Cojocaru. 2016. "Selecting Cases for Intensive Analysis: A Diversity of Goals and Methods." *Sociological Methods & Research* 45 (3): 392–423.
- Hartman, Todd K., and Benjamin J. Newman. 2019. "Accounting for Pre-Treatment Exposure in Panel Data: Re-Estimating the Effect of Mass Public Shootings." *British Journal of Political Science* 49 (4): 1567–76.
- Hassell, Hans J. G., and John B. Holbein. 2024. "Navigating Potential Pitfalls in Difference-in-Differences Designs: Reconciling Conflicting Findings on Mass Shootings' Effect on Electoral Outcomes." *American Political Science Review*. <https://doi.org/10.1017/S0003055424000108>
- Hassell, Hans J. G., John B. Holbein, and Matthew Baldwin. 2020. "Mobilize for Our Lives? School Shootings and Democratic Accountability in US Elections." *American Political Science Review* 114 (4): 1375–85.
- Hazlett, Chad, and Matto Mildenberger. 2020. "Wildfire Exposure Increases Pro-Environment Voting within Democratic but not Republican Areas." *American Political Science Review* 114 (4): 1359–65.
- Holian, David B. 2004. "He's Stealing My Issues! Clinton's Crime Rhetoric and the Dynamics of Issue Ownership." *Political Behavior* 26 (2): 95–124.
- Kantack, Benjamin R., and Thomas Lassi. 2023. "Ballots, Bombs, and Bullets: The Effects of Mass Shootings and Terrorist Attacks on Electoral Behavior." *Journal of Elections, Public Opinion and Parties* 33 (3): 419–40.
- Kantack, Benjamin R., and Collin E. Paschall. 2020. "Does 'Politicizing' Gun Violence Increase Support for Gun Control? Experimental Evidence from the Las Vegas Shooting." *Social Science Quarterly* 101 (2): 893–908.
- Lewis-Beck, Michael S., Helmut Norpoth, William G. Jacoby, and Herbert F. Weisberg. 2009. *The American Voter Revisited*. Ann Arbor: University of Michigan Press.
- Markarian, G. Agustin, and Benjamin J. Newman. 2024. "Replication Data for: Exposure to Mass Shootings and Voting Directly on Gun Policy." Harvard Dataverse. Dataset. <https://doi.org/10.7910/DVN/OBSMHG>.
- Marsh, Wayne Z. C. 2023. "Trauma and Turnout: The Political Consequences of Traumatic Events." *American Political Science Review* 117 (3): 1036–52.
- McGinty, Emma E., Daniel W. Webster, and Colleen L. Barry. 2013. "Effects of News Media Messages about Mass Shootings on Attitudes toward Persons with Serious Mental Illness and Public Support for Gun Control Policies." *American Journal of Psychiatry* 170 (5): 494–501.
- Newman, Benjamin J., and Todd K. Hartman. 2019. "Mass Shootings and Public Support for Gun Control." *British Journal of Political Science* 49 (4): 1527–53.
- Petrocik, John R. 1996. "Issue Ownership in Presidential Elections, with a 1980 Case Study." *American Journal of Political Science* 40 (3): 825–50.
- Reny, Tyler T., Benjamin J. Newman, John B. Holbein, and Hans J. G. Hassell. 2023. "Public Mass Shootings Cause Large Surges in Americans' Engagement with Gun Policy." *PNAS Nexus* 2 (12): pgad407. <https://doi.org/10.1093/pnasnexus/pgad407>
- Ridgeway, Greg, Daniel F. McCaffrey, Andrew R. Morral, Matthew Cefalu, Lane F. Burgette, Joseph D. Pane, and Beth Ann Griffin. 2022. *Toolkit for Weighting and Analysis of Nonequivalent Groups: A Tutorial for the R TWANG Package*. Santa Monica, CA: Rand.
- Rossin-Slater, Maya, Molly Schnell, Hannes Schwandt, Sam Trejo, and Lindsey Uniat. 2020. "Local Exposure to School Shootings and Youth Antidepressant Use." *Proceedings of the National Academy of Sciences* 117 (38): 23484–9.
- Sato, Yuko, and Jake Haselswerdt. 2022. "Protest and State Policy Agendas: Marches and Gun Policy after Parkland." *Policy Studies Journal* 50 (4): 877–95.
- Sharkey, Patrick, and Yinzhi Shen. 2021. "The Effect of Mass Shootings on Daily Emotions Is Limited by Time, Geographic Proximity, and Political Affiliation." *Proceedings of the National Academy of Sciences* 118 (23): e2100846118. <https://doi.org/10.1073/pnas.2100846118>
- Sides, John. 2007. "The Origins of Campaign Agendas." *American Politics Research* 35 (4): 465–88.
- Silva, Jason R., and Joel A. Capellan. 2019. "A Comparative Analysis of Media Coverage of Mass Public Shootings: Examining Rampage, Disgruntled Employee, School, and Lone-Wolf Terrorist Shootings in the United States." *Criminal Justice Policy Review* 30 (9): 1312–41.
- WASOS, State of Washington. 2024. "Election Results and Voter's Pamphlets, 2010–2016." Technical report, Secretary of State's Office. <https://www.sos.wa.gov/>.
- Whittaker, Bonnie. 2024. "We Must Continue to Raise Our Voices against Senseless Gun Violence." *Everytown for Gun Safety*, February, 5. <https://everytownsupportfund.org/we-must-continue-to-raise-our-voices-against-senseless-gun-violence/>.
- Yousaf, Hasin. 2021. "Sticking to One's Guns: Mass Shootings and the Political Economy of Gun Control in the United States." *Journal of the European Economic Association* 19 (5): 2765–802.