The Magnitude and Sources of Disagreement Among Gun Policy Experts

Rosanna Smart, Andrew R. Morral, Terry L. Schell

A PART OF THE RAND
Gun Policy in AMERICA
INITIATIVE
About This Report

Effective gun policies must balance the constitutional right to bear arms and public interest in gun ownership with concerns about public health and safety. However, current efforts to craft legislation related to guns are hampered by a paucity of reliable information about the effects of such policies. To help address this problem, the RAND Corporation launched the Gun Policy in America initiative. The primary goal of the project is to create resources where policymakers and the general public can access unbiased information that facilitates development of fair and effective firearm policies.

In 2018, RAND published a report (Morral, Schell, and Tankard, 2018) that describes results from a 2016 survey of individuals with experience or expertise in evaluating gun policies; with that effort, the researchers sought to identify where access to reliable data would be most useful in resolving policy debates. Using the survey results, RAND also developed the Gun Policy Expert-Opinion Tool, which allows users to explore respondents’ opinions about how different combinations of policies would likely affect a variety of outcomes related to gun ownership.

This report presents findings from an updated version of the survey fielded in 2020. Our respondent sample included academic researchers with an established track record in researching gun policy effects, individuals nominated as experts by staff from gun policy advocacy groups or organizations with a professional interest in gun policy, individuals who have published commentaries on gun policy for research organizations or policy institutes, and staff serving on congressional committees that routinely consider gun legislation. In this report, for simplicity, we refer to these respondents as gun policy experts. By consulting experts with a variety of backgrounds, we intended to capture perspectives that are likely to be especially influential in shaping both public opinion and legislation related to gun policies.

The processes for identifying our sample, designing the survey, and fielding the survey largely followed those used for the 2016 survey. However, in the 2020 survey, we

- solicited expert opinion about five new policies
- added new respondents
- re-surveyed original respondents to ask about additional policies and outcomes
- implemented changes to question presentation to improve clarity.

The findings in this report do not reflect empirical evidence for the effects of the policies considered (for a review of the empirical literature, see Smart, Morral, et al., 2020), and the respondents’ opinions on the likely effects of gun policies should not be taken as a substitute for scientific evidence. Instead, this report’s analysis of the combined results from the 2016 and 2020 surveys is intended to (1) identify distinct classes of experts with different preferences about gun policies; (2) establish the diversity of beliefs among experts about the effects of gun policies; (3) describe where experts are in more or less agreement on those effects;
(4) evaluate potential sources of disagreement across classes of experts; and (5) update our online Gun Policy Expert-Opinion Tool, which allows users to explore what experts with different perspectives believe to be the likely effects of different gun policies.

This work should be of interest to policymakers and other stakeholders considering decisions related to firearm policy. Furthermore, this report may be of interest to the research community and to the general public. All of our resources are publicly available on the project website at www.rand.org/gunpolicy.

Justice Policy Program

RAND Social and Economic Well-Being is a division of the RAND Corporation that seeks to actively improve the health and social and economic well-being of populations and communities throughout the world. This research was conducted in the Justice Policy Program within RAND Social and Economic Well-Being. The program focuses on such topics as access to justice, policing, corrections, drug policy, and court system reform, as well as other policy concerns pertaining to public safety and criminal and civil justice. For more information, email justicepolicy@rand.org.

Funding

Funding for the Gun Policy in America initiative was originally provided through unrestricted philanthropic contributions to RAND and income from operations. Since June 2018, this initiative (including this report) has been supported by a grant from Arnold Ventures.

Acknowledgments

We wish to thank the respondents who took the time to complete the survey described in this report. The survey instrument benefited from critical reviews by staff at Everytown for Gun Safety and the National Shooting Sports Foundation. In addition, we would like to thank Andrew Parker of RAND and Daniel Webster of the Johns Hopkins Bloomberg School of Public Health for their reviews of this report; Reid Dickerson and Robin Beckman for research assistance; Philip Cook, Matt Cefalu, and Robert Lempert for their valuable critiques of the first edition of this report; and Margaret Tankard for her contributions to the first edition of this report. Finally, we thank Danielle Schlang, Melissa Bradley, and members of RAND’s Survey Research Group for their assistance with programming and fielding the surveys.
Summary

The effects of firearm policies, though frequently debated, have historically received less-rigorous scientific evaluation than have the effects of other policies affecting public safety, health, and recreation (RAND Corporation, 2018; Smart, Morral, et al., 2020; Stark and Shah, 2017). In recent years, there has been substantial growth in the volume of research evaluating the effects of various firearm policies (Galea and Vaughan, 2019; Smart, Morral, et al., 2020), but for many types of policies (e.g., banning assault-style weapons and requiring licensed dealers to record firearm sales), there is little or no empirical evidence to support the likely effects of the laws on outcomes of interest to key stakeholders (Lee et al., 2017; Smart, Morral, et al., 2020). For some other types of policies, there may be relatively robust evidence that the law has a beneficial effect on a particular outcome (e.g., it reduces firearm homicides), but there remains little scientific evidence on the law’s potential trade-offs or unintended consequences.1

Without strong scientific evidence of the effects of laws, policymakers and the public rely heavily on what policy advocates or social scientists believe the effects are most likely to be, taking into account their studies of similar laws, their general expertise, and their reputations in the field. Thus, these individuals’ opinions about the likely effects of policies are an important influence on gun policy debates and decisions. Although these opinions should not be viewed as a substitute for rigorous scientific research—or viewed as objective—in the absence of consistent or reliable scientific evidence, these opinions are often a guiding force driving policy decisions (Heazle, 2010).

In this report, we describe the results from two surveys, conducted in 2016 and 2020, in which we asked participants to evaluate the likely effects of various gun policies on several outcomes important to society. The respondents included academic researchers, individuals nominated as experts by staff from advocacy or professional organizations that seek to influence gun policies, individuals who have published commentaries on gun policy for research organizations or policy institutes, and staff serving on one of four congressional committees that routinely consider gun legislation—all people with a professional interest in understanding and communicating the likely effects of gun policies. In this report, for simplicity, we refer to these respondents as gun policy experts. Although the respondents may vary in their overall knowledge and experience, as well as their expertise in specific policies or outcomes, their opinions are likely to be influential in gun policy discussions and decisionmaking.

---

1 Although not all guns are firearms, in this report, we follow conventional use in U.S. policy discussions and treat the terms gun and firearm as interchangeable. In addition, although not all policies are codified in law (e.g., a state’s policy of allowing the concealed carry of a firearm may result from the simple fact that the state has no law forbidding such activity), we generally treat the terms policy and law as interchangeable here.
Combining both surveys, we obtained information from 173 unique participants on the hypothesized effects of 19 policies on ten outcomes. We use these responses to

1. identify distinct classes of experts with different preferences about gun policies
2. establish the diversity of beliefs among experts about the effects of gun policies
3. describe where experts are in more or less agreement on those effects
4. evaluate the extent to which differences in the policies favored by classes of experts result from disagreements about the policies’ true effects or disagreements in experts’ policy objectives or values
5. update the online Gun Policy Expert-Opinion Tool (RAND Corporation, 2021), which allows users to explore what experts with different perspectives believe to be the likely effects of different combinations of gun policies on ten outcomes.

This study builds on earlier and ongoing efforts to identify experts’ views on the effectiveness of gun policies (Berg, Lott, and Mauser, 2019; Bui and Sanger-Katz, 2017; Joyce Foundation, 2019; Sanger-Katz and Bui, 2017). First, in our sampling procedure, we sought competing and alternative views on gun policy so that we could characterize major differences in the views of groups with similar perspectives. We did not attempt to establish a consensus or an average estimate of experts’ views on the likely effects of policies.

Second, we asked respondents to rate how policies affect not just homicides and suicides but also eight other outcomes representing many of the concerns most often raised in debates about gun laws, such as how laws might affect the constitutional right to bear arms and the right to self-defense.

Third, instead of using a one-sided qualitative measure of effectiveness, we asked experts to respond on a two-sided, quantitative, percent-change scale. That is, experts could indicate their belief that a law might improve or worsen an outcome. In other studies, these types of questions have frequently been posed with only the option to indicate an improvement.

Fourth, whereas other surveys have left it to respondents to decide how to rate the effectiveness of policies that they believe could not be enforced, that could be undermined by policies in neighboring states, or that could take many years to achieve their full effects, we provided respondents with explicit instructions on these questions to ensure a more consistent response frame.

Finally, we asked experts to indicate how favorably they regarded each policy. We use this information to characterize different schools of thought about the likely effects of gun policies, as well as to examine whether differing favorability toward policies reflects differing priorities (e.g., prioritizing the protection of the right to bear arms over a reduction in property crime) or differing beliefs about how the gun policies truly affect important outcomes (e.g., whether laws that allow individuals to carry a firearm without a permit increase or decrease property crime). In addition, we used experts’ estimates of the likely effects of gun laws to update our online Gun Policy Expert-Opinion Tool.
The 19 policies that we asked respondents about were

1. universal background checks
2. a ban on sale of “assault weapons” and high capacity magazines
3. a stand your ground law
4. expanded mental health prohibitions
5. required reporting of lost or stolen firearms
6. requiring a license to purchase a firearm or ammunition
7. required reporting and recording of firearm sales
8. a child access prevention law
9. surrender of firearms by prohibited possessors
10. firearm and ammunition taxes
11. minimum age requirements
12. permitless carry
13. requiring a ten-day waiting period to purchase a firearm
14. the elimination of gun-free zones
15. extreme risk protection orders
16. firearm prohibitions for individuals subject to domestic violence restraining orders
17. arming school personnel in kindergarten through grade 12 (K–12) educational settings
18. gun purchase limits
19. state prosecution of prohibited possessors seeking firearms.

The ten outcomes that we asked respondents about were

1. firearm suicides
2. firearm homicides
3. accidental firearm deaths
4. mass shootings
5. property crime (specifically, burglary, theft, and auto theft)
6. participation in hunting and sport shooting
7. legal acts of defensive gun use
8. sales of new firearms
9. the right to bear arms
10. individuals’ privacy.
Key Findings

Classes of Experts
Combining results from the 2016 and 2020 surveys, we identified clusters of experts with similar patterns of favorability ratings (that is, how respondents rated their “overall opinion” of a policy) across the 19 policies we examined. This resulted in two classes of experts who were sharply differentiated not just on their favorability ratings (which were used to identify clusters) but also on their ratings of which advocacy or membership organizations had gun policy positions closest to their own.

The first class of experts preferred such policies as a stand your ground law, permitless carry, the elimination of gun-free zones, and arming school personnel in K–12 educational settings. Members of this group \((n = 26)\) reported that their own views on gun policy were more strongly aligned with those of the National Rifle Association and Gun Owners of America. For ease of reference, we labeled this group the \textit{permissive} class, comprising experts who favor more-permissive regulatory approaches to gun ownership and use.

The second class of experts \((n = 147)\) preferred such policies as universal background checks, requiring a license to purchase a firearm or ammunition, extreme risk protection orders, and surrender of firearms by prohibited possessors. Members of this class of experts had gun policy positions that they indicated were more closely aligned with Everytown for Gun Safety and the Brady Campaign to Prevent Gun Violence. We labeled this group the \textit{restrictive} class, comprising experts who favor more-restrictive regulatory approaches to gun ownership and use. Because this was not a representative survey, the difference in the sizes of these groups provides no information about the relative numbers of experts in the community whose views align with one or the other perspective.

Areas of Disagreement Between Expert Classes
Views on the merits of the policies we studied were strikingly polarized, with almost no overlap in favorability ratings (overall opinions) between these two classes of experts. Because class membership was determined by experts’ favorability ratings of the 19 policies, it is by design that the groups differ in their ratings of these policies. Still, the patterns of favorability ratings highlighted three policies for which the two groups had median ratings on opposite ends of the scale; those three policies were required reporting and recording of firearm sales, requiring a license to purchase a firearm or ammunition, and a ban on sale of “assault weapons” and high capacity magazines. For all three of these policies, the permissive group reported a median rating of 1 (“very bad policy”), while the restrictive group reported a median rating of 5 (“very good policy”) on a five-point scale. These three policies were among those that the restrictive class considered most effective for reducing firearm homicides or mass shootings. In contrast, these policies were generally perceived by the permissive class as having no effect on any firearm mortality outcomes while substantively reducing legal uses and sales of firearms and seriously threatening individuals’ privacy and the right to bear arms.
When we look across results on the outcomes examined, experts in the permissive group generally expected policies to have no or relatively small effects on firearm suicides, firearm homicides, and accidental firearm deaths. This is in contrast to the expectations of experts in the restrictive group, who frequently provided median estimates suggesting that policies would increase or decrease those outcomes by 5 to 10 percent. However, the reverse was true for the qualitative outcomes of individuals’ privacy and the right to bear arms. The restrictive experts were more likely to see policies as posing minimal or no threats to these outcomes, whereas permissive experts believed that many policies would produce moderate or major threats.

The two classes of experts differed most in their expectations of how policies would affect firearm homicides. For three policies (permitless carry, a stand your ground law, and the elimination of gun-free zones), the groups disagreed on even the direction of the policy’s effect on firearm homicides; specifically, the median restrictive class member believed that these policies would increase the firearm homicide rate, and the median permissive class member believed the opposite. The two groups also disagreed about which policies would reduce this outcome the most, as well as how large of an effect any policy would have. Across the 19 policies that we asked about, the median permissive group member expected the largest effect on firearm homicide rates to be a 5-percent reduction, an effect size expected for three policies: a stand your ground law, the elimination of gun-free zones, and state prosecution of prohibited possessors. In contrast, the median restrictive group member thought that policies could result in a 10-percent reduction in firearm homicide rates and viewed a distinct set of policies as capable of producing such effects; those distinct policies were universal background checks, requiring a license to purchase a firearm or ammunition, required reporting of firearm sales, and surrender of firearms by prohibited possessors.

Although both groups agreed that policies targeting the availability of firearms to prohibited possessors could greatly reduce firearm homicides, the experts were more polarized in their beliefs about the role of policies that regulate legal acquisition or use of firearms. In general, the permissive class expected that policies that expand gun owners’ ability to carry and use firearms would reduce firearm homicides, whereas the restrictive class expected these same policies to have no effect on or even increase firearm homicides.

These different expectations may stem from disagreement on more-basic questions regarding the relationship between legal firearm ownership and homicide risk. Indeed, we found opposing perspectives across the expert classes in estimates of the extent to which owning a gun is associated with changes in homicide risk. The permissive group believed that acquiring a firearm would reduce homicide risk for all household members; these experts indicated the largest reduction in risk for the gun owner (median response of a 25-percent reduction in risk), followed by the owner’s spouse or partner (15-percent reduced risk) and a child living in the household (15-percent reduced risk). In contrast, the restrictive group believed that acquiring a firearm would increase homicide risk for all household members; these experts indicated the largest increase in risk for the gun owner’s spouse or partner (median response of a 21-percent increase in risk), followed by a child living in the household.
(15-percent increased risk) and then the gun owner (10-percent increased risk). The inter-quartile ranges from each group did not overlap for any of these questions.

These results are, to a large degree, unsurprising. The question about whether more guns lead to more versus less crime has been a key source of contention in the gun policy literature for decades (Ayres and Donohue, 1999, 2003a, 2003b, 2009a, 2009b; Donohue, Aneja, and Weber, 2019; Lott, 2003, 2010; Lott and Mustard, 1997; Moody and Marvell, 2008, 2009, 2019, 2020). Still, the magnitudes of the discrepancies in beliefs about the relationship of gun ownership and homicide risk are striking: When considering the effect of introducing a gun to a household, one group expected that the probability of any given household member dying by homicide would be nearly 30 percentage points higher than the other group expected.

Areas of Relative Agreement Between Expert Classes
Whereas the two classes of experts strongly disagreed on the merits of most policies, five of the 19 policies generated substantially less disagreement in the overall favorability ratings; those policies were state prosecution of prohibited possessors seeking firearms, expanded mental health prohibitions (i.e., expanded prohibitions on gun ownership that are associated with mental illness), a child access prevention law, surrender of firearms by prohibited possessors, and firearm prohibitions for individuals subject to domestic violence restraining orders. For the last four of these policies, the median favorability rating of the group preferring more-permissive policies was neutral, and the median favorability rating of the group preferring more-restrictive policies was positive. For state prosecution of prohibited possessors seeking firearms, both groups reported a positive median favorability rating. In addition, there was higher-than-average agreement on the direction and magnitude of the expected effects of these five policies on the ten outcomes—both quantitative and qualitative—that we examined.

In fact, despite often diametric favorability ratings and organizational affinities, the two groups often agreed on the likely direction of the policies’ effects on the outcomes examined. Across 190 estimates about the effects of the policies, only six times did the median estimate for each group disagree on the direction of the effect, where, for instance, one group thought that the law would increase homicides, and the other group thought that the law would decrease homicides. Four of these six instances concerned two policies—permitless carry and the elimination of gun-free zones.

There were two policies for which experts exhibited (1) higher-than-average agreement regarding the effects of the policy on quantitative outcomes but (2) highly divergent favorability ratings; those two policies were gun purchase limits and firearm and ammunition taxes. Both classes expected these policies to reduce sales of new firearms, participation in hunting and sport shooting, or both, and median ratings for the expected effects on mortality and crime outcomes were generally small (or zero in the case of the permissive class). However, these two policies generated some of the largest disagreement about their effects on the right to bear arms and individuals’ privacy. The median restrictive group member believed
that these policies had no effect on either of the qualitative outcomes, while the median permissive group member perceived the two policies as creating a “moderate” or “major” threat to both the right to bear arms and individuals’ privacy.

Sources of Disagreement Between Expert Classes

Given the differences in favorability ratings between these two classes of experts across the majority of policies evaluated, we examined whether these nearly diametrical perspectives result from differences in beliefs about the true effects of the policies or from differences of opinion about which outcomes matter most or should be the proper targets of gun policy.

We reasoned that, if differences in the experts’ favorability ratings can be explained by disagreements about the speculated true effects of gun policies and not by disagreements about which outcomes the policies should target, then, in a statistical model predicting favorability ratings, estimates of the empirical effects of policies might explain favorability ratings in comparable ways for both groups of experts. On the other hand, if the permissive and restrictive groups value some outcomes differently (say, homicide rates versus the right to bear arms), then the model would reveal that the two groups place different emphases or weights on outcomes in their favorability ratings.

Our results strongly suggest that the differing favorability ratings evident between the two expert classes are almost exclusively explained by differences in the groups’ estimates of what the true effects of the policies will be, not by differences in which outcomes predict the experts’ favorability ratings. Indeed, both groups’ most strongly preferred policy goals were to reduce firearm suicides and firearm homicides. Secondary priorities appeared to be protecting individuals’ privacy, reducing mass shootings and accidental firearm deaths, and facilitating participation in hunting and sport shooting. Our results suggest that, even though minor differences may exist in the policy goals for these two classes of experts, those differences had negligible associations with the experts’ favorability ratings.

We cannot conclude that differences in experts’ beliefs about the true effects of gun policies cause differences in experts’ favorability toward those policies. Our analyses are equally consistent with the possibility that one or both groups of experts bend their estimates of the likely effects to match their policy preferences (as exhibited by their favorability ratings). Interestingly, however, our findings suggest that gun policy disagreements may not be driven primarily by differences in what each group is hoping to achieve through gun policies. Instead, experts who favor more-permissive policies and those who favor more-restrictive policies appear to have a broadly similar set of policy priorities or objectives that lead them to agree on what policymakers should attempt to achieve through improved gun policy (primarily, reducing firearm suicides and firearm homicides). That is, whether or not the experts truly believe that the laws they favor will have those effects, the effects that each group claims for the policies it favors suggest that both groups agree on what the objectives of gun policy should be and how much to weight each of the outcomes we examined. This may be a sur-
prising finding to those on either side of gun policy debates who suspect that their opponents have badly misplaced priorities, if not deep moral failings.

A practical implication of this finding is that scientific evidence may be useful in resolving disagreements about the merits of various gun policies. We do not believe that long-standing and politically contentious disagreements about the true effects of gun policies will be easily overcome when better scientific evidence on those effects becomes available. Indeed, there is compelling evidence that the public and experts may be motivated to discount evidence that disagrees with their own views or the views of their social groups if accepting the implications of new evidence could damage their professional alliances, their status in the group, or their economic well-being (Kahan, 2016; Kahan et al., 2017; Koehler, 1993). Nevertheless, given that our analyses indicate that both groups share the same understanding of which outcomes are acceptable to prioritize and the relative weight that each outcome should have, collecting more and stronger evidence about the true effects of policies is, we believe, a necessary and possibly promising step toward building greater consensus.

Policy Effect Spillovers to Nonfirearm Deaths

Although not directly explored in our models of effect estimates and favorability ratings, another potential explanation for varying responses across expert classes is that, even if both expert classes believe that a policy reduces firearm suicides or firearm homicides, they might disagree about whether that translates to a reduction in total suicides or total homicides. Across both expert classes, the median group member expected at least some of a policy’s effects on firearm deaths to be offset by an opposing effect on nonfirearm deaths (i.e., the death will still occur by some means other than a firearm), and groups expected larger offsetting effects for suicide than for homicide. However, the expected magnitudes of these offsetting effects were larger among the class of experts favoring more-permissive gun policies than among experts favoring more-restrictive gun policies. When considering a policy that led to 100 fewer firearm homicides, the median permissive group member expected a resulting increase of 25 nonfirearm homicides, whereas the median restrictive group member expected an increase of two nonfirearm homicides. When considering a policy that led to 100 fewer firearm suicides, the median permissive group member expected a resulting increase of 50 nonfirearm suicides, whereas the median restrictive group member expected an increase of four nonfirearm suicides.

Extrapolation of Experts’ Views for Combinations of Policies

The online Gun Policy Expert-Opinion Tool that we developed can be used to explore the effects of combinations of gun laws, based on the expectations of each expert class. For instance, the tool illustrates what each class of experts might expect the combined effects to be of the three policies on which they have the greatest agreement: state prosecution of prohibited possessors seeking firearms, expanded mental health prohibitions, and a child access prevention law. In this case, both groups would expect large reductions in firearm suicides,
firearm homicides, mass shootings, and other outcomes, with relatively moderate infringements on gun owners’ ability to use firearms for self-defense or recreational purposes. Adding a policy favored by experts in the permissive group but disfavored by those in the restrictive group could moderate the few negative effects perceived by the permissive group with the earlier combination of three policies while nevertheless delivering large reductions in firearm suicides, firearm homicides, and mass shootings, as well as other improvements, according to the expectations of both groups. Experts’ expectations about the effects of implementing various laws across the United States can be further investigated through the Gun Policy Expert-Opinion Tool available on the project website (www.rand.org/gunpolicy).

Recommendations

Our findings support the following tentative recommendations:

1. The policies that are most politically feasible to enact might be those for which both the permissive and restrictive classes of experts generally reported neutral or positive favorability ratings. State prosecution of prohibited possessors seeking firearms and surrender of firearms by prohibited possessors both received neutral or positive ratings from 75 percent or more of experts in both groups.

2. Those on each side of the gun policy debate should be aware that, despite some appearances, there is evidence that their opponents may share many of the same policy objectives. Both the permissive and restrictive groups of experts preferred policies that they believed will reduce homicide, suicide, or crime, but they disagreed about which policies will best achieve those aims. Although there are certainly situations, individuals, and objectives for which there is no common ground, it might be useful in gun policy negotiations to focus more clearly on the goals that the two sides share.

3. If the majority of policy disagreements are associated with factual questions about policies’ true effects, this suggests that investment in research to understand the true effects of policies offers a promising and available path for building consensus on gun policy. In 2020, for the first time in nearly 25 years, Congress appropriated funds for this kind of research, which we believe should be continued and broadened into a major line of research supported by the federal government at levels comparable to the support it has provided to efforts to prevent car crash injuries, smoking, and other threats to public safety and health.

4. One factual question that appears to be of key importance concerns the magnitude of firearm policy spillover effects; that is, when a policy succeeds in preventing firearm suicides and homicides, how will this affect the rate of nonfirearm suicides and homicides? Although both classes of experts typically believed that such spillover occurs, estimates of the magnitude of these effects varied dramatically. We believe that better information about this question could have implications for how people on all sides of gun policy debates evaluate the merits of individual policies. Therefore, we rec-
ommend that funders and researchers (1) prioritize investigating whether spillover effects undermine the intended effects of gun policies and, if they do, (2) develop strategies to minimize these spillover effects.

Overall, we believe that, without new, more-rigorous, and more-conclusive scientific research estimating the effects of gun policies on the outcomes considered in this report, policymakers and the public will depend on their own beliefs about what those effects are and the beliefs of the experts they trust. There are considerable differences of opinion about these effects among experts, and there currently is very little solid empirical research that can resolve these differences of opinion (Smart, Morral, et al., 2020). In the absence of reliable objective information on the true effects of many gun policies, policy analysts’ and advocates’ opinions are likely to be a powerful influence in policymaking. Understanding where disagreements on these effects persist provides insight into why groups are likely to support or resist individual policies and provides a roadmap for where new or better research may be most influential in resolving uncertainties that currently fuel policy disagreements.
## Contents

About This Report ........................................................................................................ iii  
Summary ......................................................................................................................... v  
Figures and Tables ........................................................................................................ xvii  

### CHAPTER ONE
Introduction .................................................................................................................. 1  

### CHAPTER TWO
Sample of Policy Experts ............................................................................................ 9  
  Sample Identification .................................................................................................. 9  
  Number of Individuals Directly Invited to Respond ................................................ 14  

### CHAPTER THREE
Survey Design and Analysis Plan ................................................................................. 15  
  Selecting Gun Policies and Outcomes for Analysis .................................................. 15  
  Estimating the Effects of Gun Policies ...................................................................... 18  
  Overall Opinion of Policies ...................................................................................... 21  
  Spillover Effects of Firearm Policies on Nonfirearm Deaths .................................... 21  
  Gun Ownership and Homicide Risk Estimates ........................................................ 22  
  Characterizing Respondent Perspectives on Gun Policy ......................................... 22  
  Analytic Plan ............................................................................................................ 22  

### CHAPTER FOUR
Survey Findings ............................................................................................................ 25  
  Respondent Sample .................................................................................................. 25  
  Class Identification ................................................................................................... 26  
  Estimated Effects of Policies on Outcomes .............................................................. 31  
  Beliefs About Firearm Law Effects on Nonfirearm Deaths ...................................... 39  
  Beliefs About Legal Gun Ownership and Homicide Risk ........................................ 41  

### CHAPTER FIVE
Do Experts in the Two Groups Value or Prioritize Different Outcomes? ................. 43  
  Overview of Methods .............................................................................................. 44  
  Results ...................................................................................................................... 45  
  Conclusions ............................................................................................................. 50  

### CHAPTER SIX
Updating the Gun Policy Expert-Opinion Tool ......................................................... 51  
  Methods, Assumptions, and Limitations .................................................................. 51  
  Using the Gun Policy Expert-Opinion Tool ............................................................ 54
CHAPTER SEVEN
Discussion and Conclusions ................................................................. 57
   Expert Groups’ Assessments of Policies and Their Effects Showed Some Areas of Agreement ................................................................. 58
   Experts’ Estimates of the Probable Effects of Policies Are Broadly Consistent with Scant Available Science .................................................. 61
   Group Differences Concern True Effects of Policies, Not Different Priorities or Policy Objectives ................................................................. 63
   Groups Differ on Fundamental Questions About Guns and Gun Policy ....................... 65
   Recommendations ............................................................................. 67

APPENDIXES
A. RAND Survey of Firearms Experts .................................................. 69
B. Descriptive Statistics by Expert Class, Outcome, and Policy ....................... 81
C. Statistical Modeling of Experts’ Favorability Ratings ................................. 101
D. Data Sources, Calculations, and Additional Assumptions for the Online Gun Policy Expert-Opinion Tool ........................................................... 105

References ............................................................................................... 115
Figures and Tables

Figures
3.1. Sample Quantitative Response Scale .......................................................... 20
3.2. Sample Qualitative Response Scale .......................................................... 21
3.3. Sample Opinion Response Scale ............................................................... 21
4.1. Median Effect Estimate for Each Policy and Outcome, by Expert Class ..... 32
4.2. Survey Question Asking How Policies Affect Nonfirearm Homicides ...... 40
4.3. Association of Legal Gun Ownership with Homicide Risk, by Expert Class 41
5.1. Comparison of Model-Predicted and Actual Mean Favorability Ratings, 
by Policy and Expert Class ............................................................................ 47
6.1. Example of Output from the Gun Policy Expert-Opinion Tool ............... 54

Tables
3.1. Policies and Descriptions Provided to Survey Respondents ....................... 16
3.2. Outcomes Included in the Survey and the Response Scale for Each ....... 18
4.1. Survey Response Rate and Composition of Final Sample ....................... 26
4.2. Favorability Rating for Each Policy, by Expert Class .............................. 27
4.3. Respondent Perceptions of How Similar Their Views Are to Those of 
Stakeholder Organizations, by Expert Class .............................................. 30
4.4. Respondent Relationship to Gun Policy, by Expert Class ......................... 30
4.5. Policies Rated as Most Beneficial and Most Harmful for Each Outcome, 
by Expert Class ............................................................................................ 37
5.1. Polychoric Correlations Between Model-Predicted and Actual Favorability 
Ratings for All Policies ................................................................................. 45
5.2. Exact and Near Matches Between Model-Predicted and Actual Favorability 
Ratings for All Policies ................................................................................ 46
5.3. Final Standardized Model Coefficients Expressed as Odds Ratios from the 
Regression Models Predicting Favorability Ratings ................................... 48
6.1. Example Policy Combination Scores ....................................................... 53
7.1. Experts' Estimated Change in Quantitative Outcomes Nationally After 
Implementing Three Particular Gun Policies, by Expert Class .................... 60
B.1. Differences in Group Medians (Restrictive Minus Permissive) for Estimated 
Policy Effects on the Eight Quantitative Outcomes .................................... 83
B.2. Differences in Group Medians (Restrictive Minus Permissive) for Estimated 
Policy Effects on the Two Qualitative Outcomes ....................................... 86
B.3. Descriptive Statistics, by Expert Class, Outcome, and Policy ................. 88
C.1. Mean and Standard Deviation of Model Parameters ............................... 102
C.2. Final Model Fit Statistics (Akaike Information Criterion Scores) Imposing Different Range Constraints over the Linear Portion of the Effect Estimates … 104
D.1. Presence (1) or Absence (0) of Gun Policy Types, by State, as of January 1, 2021 ............................................................................................................. 109
D.2. State Population and Outcome Values Used in the Gun Policy Expert-Opinion Tool ......................................................................................... 112
Introduction

Debates and decisions about gun policies often center on arguments about the policies’ likely effects, particularly on suicide and homicide rates, violent crime, the constitutional right to bear arms, the gun industry, unintentional firearm injuries, mass shootings, the right to self-defense and to protect families and property, and access to hunting and recreational sport shooting. Often, however, there is no consensus on what the effects of any policy might be, and arguments claiming diametrically opposed effects are common. For instance, gun-free zones are claimed both to elevate the risk of firearm violence (Lott, 2015) and to reduce such risks (Giffords Law Center to Prevent Gun Violence, undated).

It may be true that a law could increase one type of gun violence and decrease another or that the effects of a law implemented in one state might be different from the effects of a similar law in another state. But the average effect of a policy on a given outcome, such as firearm homicides, cannot be both positive and negative. Each policy has a true effect on each outcome (increase, decrease, or no effect), but there is often little agreement on what those effects are. Moreover, compared with evidence supporting the effects of policies in many other areas of health, public safety, and economic activity, rigorous scientific evidence on the effects of different gun policies is relatively rare. Stark and Shah (2017) found, for instance, that the volume of scientific publications on mortality resulting from firearm injuries was just 4.5 percent what would be expected based on the volume of research published on causes of mortality resulting in similar numbers of deaths, such as traffic accidents or sepsis.

In 2020, the RAND Gun Policy in America project team completed a systematic review of studies examining the causal effects of 18 classes of gun policies on a variety of outcomes related to gun ownership—specifically, suicide, violent crime, unintentional injuries and deaths, mass shootings, officer-involved shootings, defensive gun use, hunting and recreation, and the gun industry (Smart, Morral, et al., 2020). In total, the researchers sought scientific evidence on 144 effects (eight outcomes for each of the 18 types of policies). They found that there was no rigorous scientific evidence for more than half of the effects sought, and most of the others had been investigated in just a single study or were

---

1 Although not all guns are firearms, in this report, we follow conventional use in U.S. policy discussions and treat the terms gun and firearm as interchangeable. In addition, although not all policies are codified in law (e.g., a state’s policy of allowing the concealed carry of a firearm may result from the simple fact that the state has no law forbidding such activity), we generally treat the terms policy and law as interchangeable here.
otherwise classified as having inconclusive evidence on what the direction or magnitude of the effect might be.

Without strong scientific evidence of the effects of laws, policymakers and the public rely heavily on what policy advocates or social scientists believe the effects are most likely to be, taking into account their studies of similar laws, their general expertise, and their reputations in the field. Thus, these individuals’ opinions about the likely effects of policies are an important influence on gun policy debates and decisions. But these opinions are not a substitute for scientific evidence (Schünemann, Zhang, and Oxman, 2019); although advocates’ and analysts’ opinions might be shaped by existing science, they are subject to potential biases that shape the interpretation of such science. In policy areas where scientific evidence is absent or where rigorous studies find evidence that points to diametrically opposed conclusions, there is value to synthesizing opinions from people with diverse perspectives to identify areas of agreement, potential sources of disagreement, and promising policy areas that are expected to improve health and social outcomes and that appear politically feasible to implement.

In this report, we describe the combined results from two surveys, conducted in 2016 and 2020, in which we asked participants to evaluate the likely effects of various gun policies on several outcomes important to society. The respondents included academic researchers with an established track record researching gun policy effects, individuals nominated as experts by advocacy groups that seek to influence gun policies or organizations with a professional interest in gun policies (e.g., emergency room physicians or police), individuals who have published commentaries on gun policy for research organizations or policy institutes, and staff serving on one of four congressional committees that routinely consider gun legislation. In this report, for simplicity, we refer to these respondents as gun policy experts. The surveys were designed to quantify differences in these experts’ beliefs about the likely effects of 19 gun policies on ten outcomes. That is, we sought to clarify where experts tend to agree or disagree across policies and outcomes and to clarify how large the differences on factual, knowable matters might be. After grouping experts according to the gun policies they favor, we used their survey responses to update our online Gun Policy Expert-Opinion Tool (RAND Corporation, 2021), which allows users to explore how experts perceived that outcomes would change for the nation, and state by state, if different types of policies were enacted or repealed nationwide. The initial development of that online tool is described in the first edition of this report (Morral, Schell, and Tankard, 2018).2

Gun policy debates are highly polarized in the United States. To the extent that these divisions are driven by differences in values or priorities, the path forward to build consensus may be challenging. Alternatively, to the extent that these divisions rest on different assumptions about the factual effects of laws, there may be a place for more and better

---

2 The full name of the tool is the Gun Policy Expert-Opinion Tool: Comparing Insights on the Potential Effects of Policy Changes. The 2018 version of the tool was called the Gun Policy Outcome Explorer: An Expert Opinion Comparison Tool, but we revised the name to better reflect that it is based on experts’ estimates of gun policies’ effects.
scientific study to clarify what is true and help build consensus on which policies will best achieve shared objectives. Of course, even if different views on gun policy result from different beliefs about the likely effects of various policies rather than what the policy objectives should be, there is no guarantee that improved scientific information will do much to facilitate a consensus on gun policy. As we discuss in Chapter Seven, individuals may be motivated to reject strong scientific evidence because acknowledging its validity could force a break with the views of people and groups they identify with (Kahan, 2017). Nevertheless, if groups differ in their expectations about the true effects of laws and there is not good scientific evidence available to test those expectations, a strong case can be made to improve the evidence base on gun policy as a first step toward building a larger consensus. That is, to the extent that expert and public opinion is malleable, it is plausible that improved scientific information could sway the opinions of the persuadable toward a consensus view of what constitutes good gun policy.

Our approach to establishing experts’ views on the likely effects of gun policies differs in important ways from earlier efforts. Several studies have examined the association between support of gun policies among members of the general public and their estimates of the effectiveness of those policies (Hartnagel, 2002; Kleck, Gertz, and Bratton, 2009; Mauser and Margolis, 1992; Smith, 2000; Sorenson, 2015). These studies frequently demonstrate that support for a gun policy is associated with the belief that it will be effective, but belief in the effectiveness of the law cannot fully explain why members of the public support it. Kleck, Gertz, and Bratton (2009), for instance, concluded that

Support for gun control derives partly from a belief that gun control is an effective method for reducing violence, but this explanation has only limited power to account for positions on the issue. Many people favor control measures even though they think they will not reduce crime, while others oppose controls despite their beliefs that they will reduce crime. (p. 503)

The authors went on to argue that much of the unexplained variance in support of gun policies may not be attributable to perceptions of the effectiveness of gun policies but instead to cultural differences between groups, such as their beliefs and attitudes about gun owners and whether the police can manage crime problems.

Typically, in these surveys, respondents are asked to rate what effects a gun policy would have on a single outcome, such as violent crime. Kleck, Gertz, and Bratton (2009) asked about the effects of handgun bans on two outcomes, homicides and robberies. It is possible, however, that, when judging whether to support gun policies, respondents consider other outcomes as well. For instance, they might consider the effects of the policies on suicides or the harms the laws may do to Second Amendment rights. If so, then the fact that respondents’ effectiveness ratings on one or two crime outcomes do not fully explain whether they support a law may not imply that their judgments are not based on the perceived effects of the laws. Instead, respondents may be taking into account a broader set of potential effects than have previously been considered.
In the present study, we asked about each policy's effects on a variety of outcomes, such as crime and violence, individuals' ability to defend themselves, their participation in hunting and sport shooting, and their rights and freedoms. We selected these outcomes to represent the wide variety of concerns that are frequently raised in gun policy debates. As noted earlier, if differences in policy preferences can be largely explained by individuals' estimates of policies' effects, this suggests that different policy preferences might not reflect different policy objectives or values but instead might simply reflect different beliefs about the true effects of laws. Of course, these different beliefs may still be tied to cultural or ideological differences between individuals that predispose them to certain beliefs about the effects of different gun policies.

As noted by Sorenson (2015), studies in this area have often asked survey respondents whether laws will reduce crime, but the questions have been posed with one-sided response options. That is, respondents could indicate that a law will or will not reduce crime, but they could not indicate when they believed that the law is likely to increase crime. Sorenson surveyed college students on their support for seven gun policies and asked the students to rate the effects of those policies on six outcomes using a qualitative scale that ranged from −100 (“a LOT worse”) to +100 (“a LOT better”), with 0 at the center of the scale and labeled “no change.” Unlike most previous surveys that provided response options that were one-sided (e.g., how much would the policy reduce violence?), this scale allowed respondents to indicate that policies could make outcomes better or worse. This flexibility proved useful. Putting armed officers in school was rated as likely to worsen gun violence, even by those who indicated that they supported the policy.

Sorenson (2015) used college students at an East Coast university whose knowledge of the likely effectiveness of gun policies on each of the studied outcomes likely was comparable to that of the general public and, like the general public's knowledge, was likely shaped by the views of the experts and advocates whom they or their peer groups regarded as credible interpreters of the science of gun policy (Kahan, 2017). However, experts' expectations may be more nuanced than the public's and may be able to better differentiate the likely effects of laws across a variety of related outcomes, such as homicides, mass shootings, and violent crime.

Several surveys of gun policy researchers and other experts have been conducted in recent years (Berg, Lott, and Mauser, 2019; Bui and Sanger-Katz, 2017; Harvard Injury Control Research Center, 2014; Joyce Foundation, 2019; Sanger-Katz and Bui, 2017). In 2017, for instance, the New York Times polled 32 academic researchers described as having published extensively in peer-reviewed journals and asked how effective each of 29 gun policies would be at reducing firearm homicides and mass shootings (Bui and Sanger-Katz, 2017). These questions were asked using a one-sided qualitative scale, so experts could not indicate when they believed that a policy might increase homicides and mass shootings. In parallel, the New York Times conducted the same survey with a representative sample of the U.S. electorate.

The authors used the results to establish what gun policy experts believed were the most-effective gun policies and how that corresponded to public support. For instance, the authors
concluded that this group of experts, on average, believed that universal background checks and prohibitions against the purchase of firearms by those convicted of violent misdemeanors were the two policies of the 29 that would be most effective at reducing firearm homicides. As with other such surveys, a key limitation of this one was that the sample frame was not a representative sample of experts. It is not clear how a representative sample could even be constructed. Given the polarization of views on gun policy, results are likely to be highly sensitive to the ratio of what Bui and Sanger-Katz described as “supporters of gun control” and “opponents of gun control.” In their survey, that ratio was 27 to five, and they acknowledged that the pattern of effectiveness ratings among the five opponents was markedly different from the pattern among the supporters. This begs the question of whether it is meaningful to combine the groups to establish an average effectiveness rating. Just as it would be absurd to suggest that the average resident of the East and West coasts lives somewhere in the middle of the United States, combining often diametrically opposed views into an average “consensus” judgment is misleading—and more so when the sample of experts is not representative.

Other researchers have tried to avoid the problem of identifying a representative sample of experts by instead looking for subgroups of experts whose views are especially coherent or authoritative on the effectiveness of gun policy. Lott and Mauser (2016), for instance, compared views of gun policy experts who were trained as economists with views of criminologist gun policy experts. They found that the 35 economists they surveyed were more likely than the 39 criminologists to expect gun-free zones to increase the risk of crime and to expect increases in the concealed carry of handguns to decrease murder rates. The authors argued that comparison between these disciplines is revealing for two reasons: First, economists have a unified theory of behavior (the “law of demand”) and criminologists do not; second, economists are far more likely to be Republicans than Democrats.

In a 2019 survey, Berg, Lott, and Mauser (2019) compared views of gun policy experts who were trained as economists, criminologists, or public health researchers. They found that the economists \((n = 32)\) and criminologists \((n = 38)\) surveyed had similar rankings for which policies they viewed as most effective for reducing murder rates or mass shootings; both groups tended to rate policies that reduced government restrictions on carrying and using firearms as more effective than policies that heightened restrictions. In contrast, the surveyed public health researchers \((n = 50)\) tended to view policies that imposed greater restrictions on the sales of firearms as the most effective strategies for reducing murder rates and mass shootings. It is not clear what to make of such disciplinary differences, and other surveys have not shown these same disciplinary patterns. For instance, the Harvard Injury Control Research Center (2014) survey of 140 researchers found that 66 percent of experts in public health or medicine \((n = 64)\) and 58 percent of experts from other disciplines \((n = 76)\) disagreed with the statement that changing state-level concealed-carry laws to be more permissive has reduced crime rates.\(^3\) It is unlikely that expert consensus has swung so wildly between views in the

\(^3\) Of the 76 experts with areas of research outside public health or medicine, 59 percent reported expertise in criminology or sociology, 15 percent in public policy, and 26 percent in other fields.
few years over which these studies were conducted. Instead, the most likely explanation is that the samples in each study had quite different ratios of experts who favor more- and less-restrictive policies on gun access and use.

As noted earlier, in the present study, we build on these and other earlier efforts to identify experts’ views on the effectiveness of gun policies. In particular, we combined some new and some previously used methods to arrive at the following approach:

1. We make no effort to establish a consensus or an average estimate of experts’ views on policy effectiveness. Instead, in our sampling procedure, we sought competing and alternative views on gun policy so that we could instead characterize major differences in the views of groups with similar perspectives. In pursuing this strategy, we included not just academic researchers in the sample but also policy analysts associated with advocacy organizations and membership organizations that have taken public positions on gun policies.

2. We asked respondents to rate how policies affect not just homicides and suicides but also eight other outcomes representing many of the concerns most often raised in debates about gun laws, such as how laws might affect the right to bear arms and the use of firearms for self-defense.

3. Instead of using a one-sided qualitative measure of effectiveness, we asked respondents to estimate how much change they would expect in each outcome after a typical state without the law implemented it. These ratings were made on a two-sided, quantitative, percent-change scale.

4. Whereas other surveys have left it to respondents to decide how to rate the effectiveness of policies that they believe could not be enforced, that could be undermined by policies in neighboring states, or that could take many years to achieve their full effects, we provided respondents with explicit instructions on these questions to ensure a more consistent response frame.

5. We asked experts to indicate how favorably they regarded each policy. We use this information to characterize different schools of thought about the likely effects of gun policies, as well as to examine whether differing favorability toward policies reflects differing priorities or differing beliefs about how the gun policies truly affect important outcomes (e.g., whether laws that allow individuals to carry a firearm without a permit actually increase or decrease property crime). In addition, we used experts’ estimates of the likely effects of gun laws to update our online Gun Policy Expert-Opinion Tool.

In the next two chapters, we describe the sample frame and survey instrument. Chapter Four provides descriptive statistics of the results. Chapter Five presents results from a set of statistical models examining whether differences between groups of experts with divergent views are explained by differences in their views of what the laws will do or by differing values or priorities. In Chapter Six, we describe our use of the survey results to update the
Gun Policy Expert-Opinion Tool. We offer summary and concluding comments in Chapter Seven. The 2020 survey instrument appears in Appendix A. Appendix B provides descriptive statistics, and Appendix C provides information on statistical modeling of the favorability ratings. Appendix D details the data sources, calculations, and additional assumptions for the online tool.
Sample of Policy Experts

As explained in Chapter One, we use gun policy experts to refer to a diverse group of people with a professional interest in understanding and communicating the likely effects of gun policies (see next section for details). Although individuals in this group may vary in their overall knowledge and experience, as well as their expertise in specific policies or outcomes, their opinions are likely to be especially influential in shaping both public opinion and legislation related to gun policies, and we designed the survey sample to capture these broad perspectives. Understanding where and why there is agreement and disagreement among these influential commentators on gun policy will, we believe, help identify where disagreements may be resolved with better research and information.

Because there is no sufficiently comprehensive information on the distribution of gun policy expertise to construct a representative sample of policy experts, we make no attempt to construct a sample from which we could estimate the typical or average viewpoint among experts. Instead, we designed our sampling strategy to allow us to characterize some of the diversity of perspectives on gun policies among recognized experts, evaluate the extent of disagreements between clusters of experts with similar viewpoints, and evaluate the nature or sources of those disagreements.

Sample Identification

With the objective of identifying experts with diverse views, our sampling strategy focused on four populations: (1) academic researchers with a strong publication history on gun policy topics, (2) individuals nominated as experts by advocacy or professional organizations that have taken public stances on or have a professional interest in gun policy, (3) individuals who have published commentaries on gun policy for research organizations or policy institutes, and (4) staff serving on one of four congressional committees that routinely consider gun policy legislation. This sampling frame is similar to the one described in the first edition of this report (Morral, Schell, and Tankard, 2018), but we updated the sample to include any newly eligible participants based on the same general approach to sample identification, as described next. All invitees were offered a $50 Amazon gift card for their participation.
Academic Researchers

All academic researchers who were invited to participate in the 2016 survey, who did not indicate refusal to participate in the 2016 survey, and for whom we had a valid email address were re-invited to participate in the 2020 survey. To identify newly eligible academic researchers with expertise in U.S. gun policy and its effects, we conducted a systematic search of the Social Science Citation Index (available through the Thomson Reuters Web of Science database), which indexes articles in most behavioral science, economics, and law review journals. Specifically, we searched for researchers whose publications between January 1996 through August 2019 satisfied either of the following conditions:

- researchers with five or more gun policy publications
- researchers who were the first author of a publication that was cited 30 or more times by August 2019.

To identify gun policy publications, we used the following topic search terms: (violent OR violence OR homicide OR suicide OR crime OR self-defense OR defensive gun use OR murder OR accident OR injury OR hunting) AND (gun OR guns OR firearm OR handgun OR shotgun OR rifle OR long gun OR pistol) AND (policy OR law OR legislation or program).

We conducted this search on all document types tagged as articles, editorial material, reviews, or book chapters. Because our focus is on experts on U.S. gun policy, we eliminated from consideration 25 researchers who met our criteria but whose research focused only on policies or outcomes outside the United States. In addition, we eliminated 12 researchers whose expertise did not concern firearms (e.g., one was an expert on nail gun injury prevention). We also excluded authors whose identified publications were purely descriptive of some phenomenon (e.g., firearm mortality reports from the Centers for Disease Control and Prevention and descriptive studies on the prevalence of suicides among dentists) but did not consider implications for gun policies or the effects of policies on these outcomes.

This procedure resulted in our sample frame of 149 academic researchers, listed in the box on the next page. Of these, 48 (32 percent) were respondents from the original 2016 survey, 61 (41 percent) were invited but did not respond to the 2016 survey, and 40 (27 percent) were new invitees.

Individuals Nominated as Experts by Advocacy and Professional Organizations

The second population from which we sought to identify survey respondents included individuals nominated as experts by advocacy and professional organizations. Here, too, we sought diverse perspectives by selecting large membership organizations that had issued public statements advocating specific gun policies. We did not try to identify every such organization. Instead, we sought a balance of organizations representing the interests of those who favor more-restrictive policies toward gun access or use, those who favor more-permissive
### Sample Frame of Academic Researchers

**Sampled in 2016 and Re-Invited in 2020**

<table>
<thead>
<tr>
<th>Margaret Adamek</th>
<th>Robert Durant</th>
<th>Martin Mahon</th>
<th>Edmond D. Shenassa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mensah Adinkrah</td>
<td>Jeffrey Fagan</td>
<td>Thomas B. Marvell</td>
<td>Thomas Simon</td>
</tr>
<tr>
<td>Michael D. Anestis</td>
<td>Richard Felson</td>
<td>Gary Mauser</td>
<td>Gary Smith</td>
</tr>
<tr>
<td>Joseph L. Annest</td>
<td>Eric W. Fleegler</td>
<td>Andrew McClurg</td>
<td>Susan B. Sorenson</td>
</tr>
<tr>
<td>Paul S. Appelbaum</td>
<td>Shannon Frattaroli</td>
<td>Bentson H. McFarland</td>
<td>Richard Spano</td>
</tr>
<tr>
<td>Ian Ayres</td>
<td>Sandro Galea</td>
<td>Edmund F. Mcgarrell</td>
<td>Kenneth Tariff</td>
</tr>
<tr>
<td>Debra Azrael</td>
<td>Marc Gertz</td>
<td></td>
<td>Amy Thompson</td>
</tr>
<tr>
<td>Susan P. Baker</td>
<td>Madelyn S. Gould</td>
<td>J. Reid Meloy</td>
<td>Michael Tonry</td>
</tr>
<tr>
<td>Catherine Barber</td>
<td>Douglas Graya</td>
<td>James A. Mercy</td>
<td>Melissa Tracy</td>
</tr>
<tr>
<td>Shari Barkin</td>
<td>David Grossman</td>
<td>Darrell A. H. Miller</td>
<td>Marcia Valenstein</td>
</tr>
<tr>
<td>Joseph Blocher</td>
<td>Stephen Hargarten</td>
<td>Matt Miller</td>
<td>Robert Valois</td>
</tr>
<tr>
<td>Alfred Blumstein</td>
<td>Kathleen Heide</td>
<td>Raymond Miltenberger</td>
<td>Elizabeth Vigdor</td>
</tr>
<tr>
<td>Anthony Braga</td>
<td>David Hemenway</td>
<td>Beth Molnar</td>
<td>Katherine A. Vittes</td>
</tr>
<tr>
<td>Charles Branas</td>
<td>Nathalie Huguet</td>
<td>Kenneth J. Mukamal</td>
<td>David Vlahov</td>
</tr>
<tr>
<td>Maria T. Bulzacchelli</td>
<td>John C. Hunsaker</td>
<td>Wade C. Myers</td>
<td>Eugene Volokh³</td>
</tr>
<tr>
<td>Brad J. Bushman</td>
<td>Sean Joe</td>
<td>Michael L. Nance</td>
<td>Maureen A. Walton</td>
</tr>
<tr>
<td>Carlos A. Camargo</td>
<td>Renee M. Johnson</td>
<td>Constance Nathanson</td>
<td>Daniel Webster</td>
</tr>
<tr>
<td>Jacquelyn C. Campbell</td>
<td>Dan M. Kahan</td>
<td>Tina Orwell</td>
<td>William Wells</td>
</tr>
<tr>
<td>Yeates Conwell</td>
<td>Bindu Kalesan</td>
<td>Andrew V. Papachristos</td>
<td>Douglas J. Wiebe</td>
</tr>
<tr>
<td>Philip Cook</td>
<td>Mark Kaplan</td>
<td>Anthony Philippakis</td>
<td>J. Harvie Wilkinson</td>
</tr>
<tr>
<td>Nicholas Corsaro</td>
<td>Ichiro Kawachi</td>
<td>Glenn L. Pierce</td>
<td>Garen Wintemute</td>
</tr>
<tr>
<td>Tamera Coyne-Beasley</td>
<td>Jagdish Khubchandani</td>
<td>James H. Price</td>
<td>Mona Wright</td>
</tr>
<tr>
<td>Peter Cummings</td>
<td>Gary Kleck</td>
<td>Therese S. Richmond</td>
<td>April M. Zeoli</td>
</tr>
<tr>
<td>Rebecca M. Cunningham</td>
<td>Chris Koper</td>
<td>Frederick P. Rivara</td>
<td>Marc A. Zimmerman</td>
</tr>
<tr>
<td>Linda L. Dahlberg</td>
<td>Augustine Kposowa</td>
<td>Richard Rosenfeld</td>
<td>Franklin Zimring</td>
</tr>
<tr>
<td>Joseph Dake</td>
<td>David Lester</td>
<td>Matthew Rosengart</td>
<td></td>
</tr>
<tr>
<td>John Donohue</td>
<td>John R. Lott</td>
<td>Carol W. Runyan</td>
<td></td>
</tr>
<tr>
<td>Mark Duggan</td>
<td>Jens Ludwig</td>
<td>C. William Schwab</td>
<td></td>
</tr>
</tbody>
</table>

(Box continued on next page)
policies, and organizations for which gun policy advocacy is not a primary objective but whose membership has professional interests in gun policies. We included all organizations that were part of our original survey sampling frame and added 13 more organizations for this update (see the box on the next page). We then asked representatives from each organization to nominate individuals (affiliated with the organization or not) whom they believed had gun policy expertise that would be relevant to our survey.

The final sample frame of experts from advocacy and professional organizations included 136 experts (not already identified as academic researchers) whom we invited to participate in the survey. Of these, 37 (27 percent) were respondents from the original 2016 survey, 57 (42 percent) were invited but did not respond to the 2016 survey, and 42 (31 percent) were new invitees.

Individuals Who Have Published Commentaries on Gun Policy
We also sought to identify individuals who had published commentaries on gun policy in the United States for research organizations and policy institutes. We first developed a list of 38 research organizations and policy institutes (e.g., American Enterprise Institute, Brookings Institution, Ethics and Public Policy Center, Heritage Foundation) and then searched the websites of these organizations for articles written about state or federal gun policy. From this search, we identified 20 individuals who had authored relevant commentaries and had not previously been identified through the academic researcher or organizational sampling frames. All 20 of these authors were invited to respond to the 2020 survey.
## Advocacy and Professional Organizations Approached for Nominations of Experts

Sampled in 2016 and Re-Invited in 2020\(^a\)

| American Academy of Emergency Medicine | Major Cities Chiefs Association |
| American Academy of Pediatrics | National African American Gun Association |
| American College of Emergency Physicians | National Alliance on Mental Illness |
| American Foundation for Suicide Prevention | National Association for Gun Rights |
| Association of Prosecuting Attorneys | National Association of Police Organizations |
| Brady Campaign to Prevent Gun Violence | National District Attorneys Association |
| Coalition to Stop Gun Violence | National Rifle Association |
| Everytown for Gun Safety | National Sheriffs' Association |
| Fraternal Order of Police | National Shooting Sports Foundation |
| Gun Owners of America | Sandy Hook Promise |
| International Association of Chiefs of Police | Second Amendment Foundation |
| Law Center to Prevent Gun Violence/Americans for Responsible Solutions | Violence Policy Center |

### Newly Included in 2020

| Action on Armed Violence | National Action Alliance for Suicide Prevention |
| American Association for the Advancement of Science | National Collaborative on Gun Violence Research\(^b\) |
| American Psychological Association | National Conference of State Legislatures |
| Campaign Zero | Police Executive Research Forum |
| Giffords Law Center to Prevent Gun Violence | Safer Homes Collaborative |
| March for Our Lives | Task Force for Global Health |
| Mapping Police Violence | |

\(^a\) In the 2016 survey, organizations could nominate experts or request passwords for the survey so that they could invite experts to participate anonymously.

\(^b\) We and other members of the RAND Gun Policy in America project team who are affiliated with the National Collaborative on Gun Violence Research were not eligible to take this survey.
Congressional Committee Staff

Finally, we invited gun policy staffers for both Democrat and Republican members of Congress who participate in the U.S. House of Representatives and U.S. Senate committees and caucuses that most frequently consider gun policy proposals. These individuals were associated with the following congressional groups:

- House Judiciary Committee
- Senate Judiciary Committee
- House Energy and Commerce Committee
- Commerce, Justice, Science, and Related Agencies Subcommittee of the Appropriations Committee in both the House and Senate
- House Science, Space, and Technology Committee
- House Mental Health Caucus
- House Gun Violence Prevention Task Force.

In total, 20 staffers from Capitol Hill were invited to participate in the survey.

Number of Individuals Directly Invited to Respond

In total, invitations to complete the survey were sent to 325 individuals, comprising 149 academic researchers, 136 nominees or members of selected organizations, 20 researchers or analysts who had published commentaries on gun policy, and 20 congressional committee staff members. All 325 invitations were sent by email.
Survey Design and Analysis Plan

Survey respondents were directed to a password-protected online survey, where they answered questions about their beliefs and opinions on the effects of specific gun policies on a variety of outcomes related to gun access and use. In addition, respondents were asked to indicate their level of agreement with the policy prescriptions of several advocacy or professional organizations (see Appendix A for the full survey). This study was deemed exempt by the Human Subjects Protection Committee, RAND’s institutional review board (Exemption Category 2; IRB00000051), and the study plan was pre-registered on OSF.io (https://osf.io/p6xsa).

Selecting Gun Policies and Outcomes for Analysis

The 2020 survey was an update to our earlier survey fielded in 2016 and described in detail in Morral, Schell, and Tankard (2018). For this update, we retained all but one of the 15 gun policies evaluated in the original survey. The policy that we dropped was a media campaign to prevent child access, which we omitted because, unlike the others we included, it is not commonly implemented or considered as a state law. We also solicited information from experts on five new policies not considered in the 2016 survey. We selected these five new policies using similar procedures to those for our original survey. Briefly, we drew from more than 100 gun policy proposals that had been advocated by diverse organizations, such as the White House, the National Rifle Association, the Brady Campaign to Prevent Gun Violence, and the International Association of Chiefs of Police, among many others. We narrowed the list to five by considering just the policies that had been implemented as state law in some form, so that there could be an evidence base from which to draw scientific or expert conclusions. We gave precedence to policies that were likely to have direct effects on our primary outcomes; had received recent legislative, research, or media attention; and were possible to describe succinctly.

With the one dropped policy and five new policies, we asked experts to provide their opinions on the likely effects of 19 policies. Table 3.1 shows the policy labels and descriptions that were provided to survey respondents (also shown in the survey instrument in Appendix A). These policy descriptions were intended to strike a balance between (1) providing enough detail so that respondents could infer effects without needing to make a large number of assumptions and (2) being short enough to keep the survey respondent burden reasonable.
### TABLE 3.1
Policies and Descriptions Provided to Survey Respondents

<table>
<thead>
<tr>
<th>Policy Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policies Included in Both the 2016 and 2020 Surveys</strong></td>
<td></td>
</tr>
<tr>
<td>1 Universal background checks</td>
<td>People who are prohibited by law from having firearms sometimes obtain them through private sales that do not require background checks. Universal background checks require background checks prior to all transfers of firearms, including private sales over the internet, at gun shows, and between friends (temporary loans and gifts between family members are exempted). Background checks for private sales are conducted by a government agency or by a licensed gun dealer.</td>
</tr>
<tr>
<td>2 A ban on sale of “assault weapons” and high capacity magazines</td>
<td>This law bans certain semi-automatic firearms with detachable magazines and other features, such as pistol grips, folding stocks, or the ability to mount a bayonet. The law also bans magazines that hold more than 15 rounds of ammunition. Owners of these weapons at the time the law is passed may keep them if each weapon is registered with a state authority.</td>
</tr>
<tr>
<td>3 A stand your ground law</td>
<td>This law permits a person to use deadly force without the duty to retreat when confronting a threat that could reasonably result in death or serious injury. Without this law, people outside their homes must try to withdraw from a serious threat, if possible, before using deadly force.</td>
</tr>
<tr>
<td>4 Expanded mental health prohibitions</td>
<td>When a judge has committed someone to an inpatient mental institution or has found them to be unable to manage their own affairs, federal law prohibits that person from having firearms. This law expands the mental health histories leading to prohibition to include people ordered to receive outpatient mental health treatment and those involuntarily confined because a mental health professional determined they present a danger to themselves or others.</td>
</tr>
<tr>
<td>5 Required reporting of lost or stolen firearms</td>
<td>Firearm owners must report lost or stolen firearms to law enforcement authorities within three days of discovering the loss. Penalties for failure to report include civil or criminal liability if the firearm is used in a crime.</td>
</tr>
<tr>
<td>6 Requiring a license to purchase a firearm or ammunition</td>
<td>This law requires a firearms license to purchase or possess a firearm or ammunition. These licenses require successful completion of a safety training course or safety test and a background check, and cost $100. They must be renewed every ten years.</td>
</tr>
<tr>
<td>7 Required reporting and recording of firearms sales</td>
<td>This law requires reporting all firearms sales to a government agency, including information on the firearms and who bought them. This applies to sales by both firearms dealers and private sellers. Law enforcement is permitted to retain the data indefinitely for two purposes: to trace firearms found at crime scenes and to retrieve firearms from individuals who become prohibited possessors.</td>
</tr>
<tr>
<td>8 A child access prevention law</td>
<td>This law imposes criminal penalties on firearm owners when a child accesses a usable weapon that was stored in a location where the owner should have known a child could access it.</td>
</tr>
<tr>
<td>9 Surrender of firearms by prohibited possessors</td>
<td>When a judge’s rulings place an individual in a class that is prohibited by law from possessing or purchasing a firearm, the judge must also determine whether that individual has firearms, and must order their surrender. This includes people convicted of a felony, those convicted of misdemeanor domestic violence, and those subject to a domestic violence protective order.</td>
</tr>
<tr>
<td>10 Firearm and ammunition taxes</td>
<td>This policy imposes a special $25 tax on the sale of firearms and a 25% tax on the sale of ammunition.</td>
</tr>
</tbody>
</table>
Table 3.1—Continued

<table>
<thead>
<tr>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Minimum age requirements</td>
<td>Currently, federal law generally prohibits those younger than 18 from having a handgun, and licensed dealers are prohibited from selling them to anyone younger than 21. Those younger than 18 may have a long gun, but licensed dealers may not sell them to anyone younger than 18. The minimum age requirements policy raises the minimum age for purchase or possession of handguns and long guns to 21.</td>
</tr>
<tr>
<td>12 Permitless carry</td>
<td>This policy allows anyone who is at least 21 years old and not prohibited by law from having a firearm to carry a concealed weapon in public without a permit. For the questions below, assume that before adopting <em>permitless carry</em>, the state required concealed carry permits that were issued to those with good moral character and sufficient reason for a concealed firearm.</td>
</tr>
<tr>
<td>13 Requiring a ten-day waiting period to purchase a firearm</td>
<td>This law imposes a waiting period of ten days between the purchase of a firearm and when the buyer can take possession of it. For this question, assume that the state already has a universal background check requirement.</td>
</tr>
<tr>
<td>14 The elimination of gun-free zones</td>
<td>Federal and some state laws prohibit carrying a firearm near schools and certain other public places. This policy allows firearms in these previously prohibited locations. For this question, assume federal and state laws change in a state that previously prohibited private citizens from carrying firearms into schools, universities, government buildings, and parks.</td>
</tr>
</tbody>
</table>

Policies Newly Included in the 2020 Survey

<table>
<thead>
<tr>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Extreme risk protection orders</td>
<td>This law authorizes police and family to request a court order prohibiting an individual deemed at imminent risk to themselves or others from possessing firearms, requiring him/her to temporarily relinquish all firearms to the police. The court can order the emergency removal of firearms for 14 days without giving the gun owner an opportunity to present evidence. Failure to surrender all firearms results in criminal penalties. Longer removals require a hearing at which the owner may present evidence they are not a high risk.</td>
</tr>
<tr>
<td>16 Firearms prohibitions for individuals subject to domestic violence restraining orders</td>
<td>This state law prohibits gun possession by individuals subject to domestic violence restraining orders. Each restraining order requires the surrender of firearms to police for 14 days without giving the gun owner an opportunity to present evidence. Failure to surrender all firearms results in criminal penalties. Longer removals require a hearing at which the owner may present evidence they are not a domestic violence risk.</td>
</tr>
<tr>
<td>17 Arming school personnel in K–12 educational settings</td>
<td>This policy specifically allows school personnel—other than peace officers—to carry firearms on school property. Staff members authorized to carry firearms are required to undertake at least 40 hours of initial training that covers use of force, weapons proficiency, the law, and first aid.</td>
</tr>
<tr>
<td>18 Gun purchase limits</td>
<td>This state law prohibits individuals who are not licensed firearms dealers from purchasing more than one handgun within a 30-day period. All private and dealer sales are reported to a state agency that flags individuals who have purchased more than one handgun in a 30-day window. It is a crime for both seller and buyer to complete the sale if this check fails. All records of sales are destroyed after 60 days.</td>
</tr>
<tr>
<td>19 State prosecution of prohibited possessors seeking firearms</td>
<td>This state law criminalizes attempted purchase of firearms by individuals prohibited by law from possessing a firearm. It also funds personnel who are tasked exclusively with investigating and prosecuting prohibited possessors who make false statements on state or federal forms when attempting to acquire a firearm.</td>
</tr>
</tbody>
</table>

NOTE: K–12 = kindergarten through grade 12.
In addition, for the 2020 fielding, we removed two outcomes from the 2016 version in order to reduce participant burden. The two outcomes were (1) other violent crime (e.g., non-firearm homicides, robbery, rape, aggravated assault) and (2) satisfaction of gun ownership (includes satisfaction from collecting firearms, feeling safe, or recreational use). Although we believe that these are important outcomes, responses to these items in the original survey were not well differentiated from other response options; so, in the interest of reducing the length of the survey, we omitted these outcomes. As a result, there were ten outcomes evaluated in the updated survey (Table 3.2). We selected these outcomes to represent the variety of concerns that are frequently raised in gun policy debates—for instance, a policy’s possible effects on firearm suicides, mass shootings, participation in hunting and sport shooting, and legal acts of defensive gun use. The survey also asked the experts for their overall opinion about each policy (as we discuss later, we refer to those responses as favorability ratings).

Estimating the Effects of Gun Policies

The survey was designed to collect experts’ opinions on how 19 policies (Table 3.1) affect ten outcomes related to gun access and use (Table 3.2), as well as to collect opinions about the merits of each policy. We believed, however, that a survey asking about all 209 combinations of policies and outcomes or opinions would be too lengthy and would discourage participation. Therefore, we used a planned missingness design in which each respondent was asked

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Response Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Firearm suicides</td>
<td>Proportion scale (&lt; 100% = decrease, 100% = no change, &gt; 100% = increase)</td>
</tr>
<tr>
<td>2 Firearm homicides</td>
<td></td>
</tr>
<tr>
<td>3 Accidental firearm deaths</td>
<td></td>
</tr>
<tr>
<td>4 Mass shootings (incidents in which four or more people are killed, not including the shooter)</td>
<td></td>
</tr>
<tr>
<td>5 Property crime (burglary, theft, and auto theft)</td>
<td></td>
</tr>
<tr>
<td>6 Participation in hunting and sport shooting</td>
<td></td>
</tr>
<tr>
<td>7 Legal acts of defensive gun use (using a firearm to protect oneself or others from imminent death or serious injury)</td>
<td></td>
</tr>
<tr>
<td>8 Sales of new firearms</td>
<td></td>
</tr>
<tr>
<td>9 Right to bear arms</td>
<td>Likert scale (1 = major threat, 7 = major protection)</td>
</tr>
<tr>
<td>10 Individuals’ privacy</td>
<td></td>
</tr>
<tr>
<td>Overall opinion</td>
<td>Likert scale (1 = very bad policy, 5 = very good policy)</td>
</tr>
</tbody>
</table>

TABLE 3.2
Outcomes Included in the Survey and the Response Scale for Each
to estimate the effects of a randomly selected subset of policies and outcomes. The order in which policies were presented to respondents was randomized.

The individuals in our sampling frame who had responded to the 2016 survey were each asked to rate effects on all outcomes for the five newly included policies. They also were asked to rate effects on all outcomes for the subset \((n = 4)\) of the 2016 policies that they were not asked about as part of that survey. Thus, these participants were essentially filling in the planned missing responses from their earlier survey to create a complete data set with no missingness for either old or new policies. (However, no one was asked about the one policy that we eliminated for the 2020 fielding.)

For new respondents (i.e., those who did not respond to the 2016 survey), each individual was asked about a random subset of outcomes on a random subset of policies. For questions about the five newly included policies, respondents were asked to rate a randomized subset of seven outcomes (and to provide their overall opinion on those policies). For a randomized subset \((n = 9)\) of the 14 policies included in the prior survey, new respondents were asked to rate a randomized subset of five outcomes and to provide their overall opinion on those nine policies. The survey used a blocked random design, blocking both within respondents across policies and across respondents to ensure that each respondent provided policy effect ratings on each of the ten outcomes across a random set of policies.

Because we wished to avoid asking respondents who participated in the 2016 survey the same questions that they previously answered, we cannot say whether their opinions about gun laws changed from 2016 to 2020. Instead, we added their earlier responses to those we collected in 2020 and simply assumed that the earlier answers still reflected the respondents’ views.

To focus respondents’ estimates on any generalizable effects attributable to the policy they were rating, we asked that they indicate the effect that they would expect for a “typical U.S. state” that currently has no associated law that goes beyond federal firearm laws. Furthermore, we asked that respondents factor into each answer how well policies like the one being rated are likely to be implemented and enforced, then indicate the maximum effect they would expect after sufficient time passed to observe the full effect of the policy. Finally, the instructions indicated that, if the respondents’ effect estimates for a typical state depended on whether other states also implemented the same law or policy, then they should assume that all states implemented the law together. These instructions were presented prior to rating the first policy and were always accessible to respondents via a link presented on every page where ratings were requested. Although specifying these conditions was important for ensuring that respondents’ expectations about the effects of a given policy were grounded in a similar context, the instructions asked respondents not to consider potential interactive effects of policies within a state or potential moderating effects of other states’ policies. Thus, respondents’ ratings under our specified conditions may differ from the ratings that would have been provided under an alternative scenario.

Eight of the ten effect estimates used a quantitative outcome scale indicating the percentage change in the outcome that would be expected if a typical state that did not have such a
policy were to implement it. For instance, if *universal background checks* was the first policy that a respondent was asked about, the survey provided a definition of universal background checks, and the first quantitative response scale question looked like the sample in Figure 3.1.1 Respondents selected a point on the scale to indicate how the number of firearm suicides in a state that implemented a universal background check law would compare with the number of firearm suicides in the absence of the law. Thus, the response scale was centered at 100 percent (no change), with less than 100 percent indicating a decreased rate compared with before implementation and more than 100 percent indicating an increased rate compared with before implementation. The central portion of the scale ranged from 80 percent to 120 percent, reflecting our belief that respondents would be unlikely to rate the types of policies presented in this survey as changing any of the outcomes by more than 20 percent in either direction. If we are mistaken on this point, the scale we used could have anchored respondents to more-conservative effect estimates than they might otherwise have selected. That said, respondents who believed that the effects would be greater than available on the main scale could select more-extreme values by clicking on “Less than 80%” or “More than 120%.” Participants also had the option to select “No opinion.”

Two outcomes did not lend themselves conceptually to a quantitative scale of effects. Instead, for questions about the right to bear arms and individuals’ privacy, respondents were provided a qualitative seven-point response scale with text descriptions for each response option. As an example, for the effects of universal background checks on the right to bear arms, the question and response options are shown in Figure 3.2.

**FIGURE 3.1**
**Sample Quantitative Response Scale**

If a state implemented *universal background checks*, how much would *firearm suicides* change? This question is only about firearm suicide. You will be asked later about nonfirearm suicides. Mark the suicide rate with the law as a percentage of the rate without the law by clicking on the black line or one of the endpoints.

Example: If you select 93%, you are saying that a state that had 1,000 suicides without this policy would have 930 suicides with this policy. In other words, the policy would reduce suicides by 7%.

---

1 The scale used in the 2020 survey was analogous to that used in the 2016 survey. However, we made minor changes to the scale presentation and question introduction to improve clarity.
Overall Opinion of Policies

In addition to providing quantitative and qualitative effect ratings on each policy, respondents were asked about their “overall opinion” of the policy on a five-point scale, as shown in Figure 3.3. In this report, we often refer to the respondents’ answers to this question as favorability ratings.

Spillover Effects of Firearm Policies on Nonfirearm Deaths

After completing the set of policy effect estimates and overall opinion questions, respondents were asked what effects policies that reduce firearm homicides would have on nonfirearm homicides. Specifically, the question asked how the number of nonfirearm homicides would change if a gun law prevented 100 firearm homicides. Respondents were also asked the same question for firearm and total suicides. Response options ranged from –100 to +100; that is, the range covered (1) the expectation that nonfirearm homicides would decrease by the same amount as firearm homicides to (2) the expectation that nonfirearm homicides would increase so as to fully offset the decrease in firearm homicides. Radio buttons allowed respondents to indicate beliefs outside that range or to indicate no opinion. Chapter Four provides more details about this question and shows how it was presented in the survey.

---

2 The 2016 survey asked a different version of this question. In 2016, the question asked what proportion of firearm homicides (or suicides) prevented by a policy would still result in death by homicide (or suicide) by some means other than firearm injury. Further discussion is provided in Chapter Four.
Gun Ownership and Homicide Risk Estimates

A final set of questions, newly added to the 2020 edition of the survey, asked about the likely effects of legal gun ownership on homicide risk for three different groups: the legal gun owner, the spouse or partner living in the household of the legal gun owner, and a child living in the household of the legal gun owner. Specifically, respondents were asked how much they thought an average person’s risk of being murdered would change if the person legally acquired a handgun or lived in a household with the newly acquired handgun compared with the situation had the gun not been acquired. Response options ranged from 0 percent (i.e., the acquisition eliminates the risk of homicide) to 200 percent (i.e., the acquisition doubles the risk of homicide), and the options were centered at 100 percent (i.e., homicide risk after acquisition is the same as before).

Characterizing Respondent Perspectives on Gun Policy

Participants responded to additional background questions about their beliefs and perceptions regarding gun violence and gun policy. Four items asked respondents to rate how similar their own views on firearm policies are to each of four organizations (scale: 1 = very different, 6 = very similar, N = not sure). The four organizations were selected because they represent diverse perspectives on gun policy and their policy positions would be familiar to many gun policy experts. With the order of presentation randomized for each participant, these organizations were

- Brady Campaign to Prevent Gun Violence
- Everytown for Gun Safety
- Gun Owners of America
- National Rifle Association.

Respondents were then asked to indicate their “relationship to gun policy,” choosing all applicable options among the following: professional researcher/scientist, policy analyst, policy advocate, interested layperson, government official, congressional staff member.

Analytic Plan

For every survey we received that provided at least one estimate of the likely effects of a policy for at least half of the policies on which the respondent was asked to provide such ratings, we included that survey as a usable response. Data-cleaning procedures followed those done for the 2016 survey and are described fully in Morral, Schell, and Tankard (2018).
Class Identification

We sought to identify clusters of experts with similar opinions about the merits of each of the 19 policies considered in the survey. To do so, we used latent class analysis conducted in Mplus. In this model, the means, variances, and covariances across the respondents’ overall opinions, or favorability ratings, on the 19 polices were explained as a function of a categorical latent variable. Consistent with the strategy outlined in first edition of this report (Morral, Schell, and Tankard, 2018), we selected a two-cluster solution. It is possible to improve fit, as indicated by the Bayesian information criterion, by adding complexity to the basic two-cluster solution. Both three- and four-cluster solutions had a lower Bayesian information criterion; however, it was also possible to get the same improvement within a two-factor solution by allowing correlations among some of the policies and allowing policies to have different residual variances. In particular, policies that had strong ceiling and floor effects (i.e., a large number of responses at the maximum and minimum of the scale) are not well fit with a simple two-cluster model that assumes equal residual variances and no residual covariances conditioned on the clusters. However, a more complex two-cluster solution that relaxes those assumptions and gives better fit still results in the same category membership for all participants as the simple two-cluster solution does. For this reason, we used the two-cluster solution for classifying participants in all of the analyses that are split by permissive-restrictive cluster membership (see Chapter Four). All participants in the 2016 survey were classified using the new latent class model; however, the new model did not change the categorization of any of the participants in the prior analysis.

Imputation of Missing Values

As described previously, to reduce response burden, the survey used a planned missingness design in which new respondents saw only a random subset of policies and were asked about only a random subset of outcome dimensions for the policies they did see. Because we combine data across the two survey administrations for this analysis, there is also missingness resulting from attrition for participants in the first survey who did not respond to the second survey and thus did not rate any of the five policies added to the 2020 survey. Finally, there was a very small amount of missing data resulting from items skipped by respondents. To be considered a usable survey, respondents needed to rate at least half of the policies assigned to them, and almost all respondents provided a response to every question.

The missing data were imputed using the MICE (Multiple Imputation by Chained Equations) package in the R statistical language. We used a highly predictive, linear regression model in which each estimate for a given policy (e.g., the effect of a permitless-carry policy on firearm homicide) was predicted by (1) whether the respondent was classified as a permissive or restrictive expert (see Chapter Four), (2) that respondent’s overall opinion of that policy (e.g., the extent to which the respondent believed that permitless carry is a good or bad policy), (3) the respondent’s estimates for how that same policy would affect other outcomes (e.g., how a permitless-carry policy would affect firearm suicide), and (4) the average estimate
for the respondent on that outcome across policies (e.g., the extent to which the respondent believed that policies restricting firearms change the rates of firearm homicide). Imputations were based on predictive mean matching from this model; that is, a donor value was selected at random from another respondent with a similar model-predicted value for the missing item. Subsequent analyses were conducted using these imputed data.

Statistics for Describing Effect Ratings by Members of Expert Classes
When describing the distribution of experts’ estimates and overall opinions, we present medians and interquartile ranges (IQRs) rather than means and standard deviations. We do so for three reasons. First, the median and interquartile range are easier to understand for a lay audience; the median is the response of the “typical” expert, and the IQR is the central range of values that captures half of all expert opinion. Second, the responses on the survey are often non-normally distributed; on several scales, the central tendency is near a limit (e.g., a 5 on a scale of 1 to 5). In such cases, the distribution is highly asymmetric around the mean, and the standard deviation is a misleading measure of dispersion. Finally, using a simple average of responses is highly sensitive to extreme values, allowing outliers to have disproportionate leverage over our description of expert opinion. In contrast, the median is relatively insensitive to such outlier responses.
CHAPTER FOUR

Survey Findings

This chapter describes the respondent sample, how the sample split into classes of experts based on overall opinions (or favorability ratings) of the 19 policies, and how these classes evaluated the likely effects of each policy.

Respondent Sample

As noted in the previous chapter, we treated as usable the surveys in which the respondent answered at least one of the ten questions about the probable effects of policies for at least half of the policies that the respondent was randomized to estimate. Two individuals did not meet this inclusion threshold and were removed from the sample, along with eight others who accessed the survey but did not supply a single survey response. Among our final sample of respondents with usable survey results \( n = 173 \), 75 percent answered all of the policy effect questions that they were randomized to receive, and 91 percent answered at least three-fourths of the questions. The respondent with the highest percentage of policy effect questions skipped or answered as “no opinion” provided effect estimates for 14 percent of the policy effect questions that the expert had been randomized to receive. Table 4.1 provides details on the composition of the final sample with regard to 2016 sample frame versus new sample frame participants, as well as the response rates.

More than two-thirds (71 percent) of the 173 respondents in the final sample were from the 2016 survey sample frame; 51 (29 percent) were newly identified participants who completed at least half of the effect estimates that they were presented with. In our analysis, we include data from only the 2016 survey for 37 participants (21 percent), from only the 2020 survey for 78 participants (45 percent), and from both the 2016 and 2020 surveys for 58 participants (34 percent). For those who responded to both surveys, the 2020 survey was designed to ask only about the policies and outcomes that the respondents were not asked about in 2016; thus, there is no overlap in the information that these respondents provided across the two surveys.
Class Identification

Our latent class analysis of the means, variances, and covariances of experts’ favorability ratings identified a two-class solution with classes of size 26 and 147. The model placed respondents in one of these two classes with almost no ambiguity; all posterior probabilities of class membership in a respondent’s most likely class were greater than 0.99. This high degree of separation is consistent with the fact that the distributions of experts’ favorability ratings of the 19 policies were bimodal, with modes at (or near) the two extremes of the response scale. The 26 respondents in Class 1 favored policies that we interpret as being more permissive in terms of access to and use of firearms (Table 4.2). For instance, this group’s median rating of a ban on sale of “assault weapons” and high capacity magazines was 1 (“very bad policy”), and their median rating of a stand your ground law was 5 (“very good policy”). In contrast, the 147 respondents in Class 2 favored policies that we interpret as being more restrictive in terms of access to and use of firearms. For instance, median ratings by this group on an assault weapon ban and a stand your ground law were at the extreme opposite end of the scale as the Class 1 experts’ ratings. Therefore, for simplicity, we refer to experts in Class 1 as those favoring permissive gun policies and experts in Class 2 as those favoring restrictive gun policies.

Because class membership was determined by experts’ favorability ratings of the 19 policies, it is by design that the groups differ in their ratings of these policies. Nevertheless, the patterns of favorability ratings are informative. In addition to the clear separation in median ratings of policies, interquartile ranges for the two groups overlapped for only five policies: state prosecution of prohibited possessors seeking firearms, expanded mental health prohi-
<table>
<thead>
<tr>
<th>What is your overall opinion of . . .</th>
<th>Permissive Class</th>
<th>Restrictive Class</th>
<th>Difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Opposite Sides&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 State prosecution of prohibited possessors seeking firearms</td>
<td>3 3 5</td>
<td>4 4 5</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>4 Expanded mental health prohibitions</td>
<td>2 3 4</td>
<td>4 4 5</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>8 A child access prevention law</td>
<td>2 3 4</td>
<td>4 4 5</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>9 Surrender of firearms by prohibited possessors</td>
<td>3 3 4</td>
<td>4 5 5</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>16 Firearm prohibitions for individuals subject to domestic violence restraining orders</td>
<td>2 3 4</td>
<td>4 5 5</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>5 Required reporting of lost or stolen firearms</td>
<td>3 3 3</td>
<td>4 5 5</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>14 The elimination of gun-free zones</td>
<td>4 4 5</td>
<td>1 2 2</td>
<td>–2</td>
<td>Yes</td>
</tr>
<tr>
<td>15 Extreme risk protection orders</td>
<td>2 2.5 3</td>
<td>5 5 5</td>
<td>2.5</td>
<td>Yes</td>
</tr>
<tr>
<td>17 Arming school personnel in K–12 educational settings</td>
<td>3 4 5</td>
<td>1 1 2</td>
<td>–3</td>
<td>Yes</td>
</tr>
<tr>
<td>10 Firearm and ammunition taxes</td>
<td>1 1 2</td>
<td>3 4 5</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>11 Minimum age requirements</td>
<td>1 2 3</td>
<td>4 5 5</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>1 Universal background checks</td>
<td>1 2 3</td>
<td>5 5 5</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>12 Permitless carry</td>
<td>4 4 4</td>
<td>1 1 2</td>
<td>–3</td>
<td>Yes</td>
</tr>
<tr>
<td>18 Gun purchase limits</td>
<td>1 1 2</td>
<td>4 4 5</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>3 A stand your ground law</td>
<td>4 4.5 5</td>
<td>1 1 2</td>
<td>–3.5</td>
<td>Yes</td>
</tr>
<tr>
<td>13 Requiring a ten-day waiting period to purchase a firearm</td>
<td>1 1.5 2</td>
<td>4 5 5</td>
<td>3.5</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 4.2—Continued

<table>
<thead>
<tr>
<th>What is your overall opinion of . . .</th>
<th>Permissive Class</th>
<th></th>
<th></th>
<th></th>
<th>Restrictive Class</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Required reporting and recording of firearm sales</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6 Requiring a license to purchase a firearm or ammunition</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>2 A ban on sale of “assault weapons” and high capacity magazines</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTE: We present the 25th percentile (first quartile), 50th percentile (median), and 75th percentile (third quartile) for each group’s favorability rating of each policy. The scale for overall opinion ranged from 1 = very bad policy to 5 = very good policy. These 19 ratings are the basis for determining whether each respondent belonged in the permissive or restrictive class. The policies in this table are ordered from those with the most similarity in favorability ratings between groups to those with the least similarity, as described in the text. Several results presented in this report follow this order (e.g., Figure 4.1).

<sup>a</sup> This column displays the difference in group medians (the median response value for the restrictive class minus the median response value for the permissive class).

<sup>b</sup> This column indicates whether the medians of the two groups are on opposite sides of the response scale’s central point (3).
bitions, a child access prevention law, surrender of firearms by prohibited possessors, and firearm prohibitions for individuals subject to domestic violence restraining orders. For the last four of these, the upper end of the range for experts favoring more-permissive regulations was also the lower-range value for those favoring more-restrictive regulations (at the scale value of 4, “good policy”). For state prosecution of prohibited possessors seeking firearms, there was greater overlap; the interquartile range for the permissive group ranged from 3 (“neutral”) to 5 (“very good policy”), and the interquartile range for the restrictive group ranged from 4 (“good policy”) to 5 (“very good policy”).

For six policies, the two groups were not on opposite sides of the scale’s midpoint value of 3 (the policy is “neither good nor bad”), as depicted in Table 4.2. These policies were state prosecution of prohibited possessors seeking firearms, expanded mental health prohibitions, a child access prevention law, surrender of firearms by prohibited possessors, firearm prohibitions for individuals subject to domestic violence restraining orders, and required reporting of lost or stolen firearms. For all but one of these policies, the median rating of the permissive group was neutral, and the median rating of the restrictive group was positive. For state prosecution of prohibited possessors seeking firearms, both the permissive group and the restrictive group reported a positive median rating (“good policy”). These six policies are the only ones for which the median members of both classes of experts believed that the policy was not bad; thus, these policies may form the basis of consensus proposals to reduce the harmful effects of firearms.

The two groups had median favorability ratings on opposite ends of the scale for three policies: required reporting and recording of firearm sales, requiring a license to purchase a firearm or ammunition, and a ban on sale of “assault weapons” and high capacity magazines. For all three of these policies, the permissive group reported a median opinion of 1 (“very bad policy”) while the restrictive group reported a median opinion of 5 (“very good policy”).

Although class membership was based solely on respondents’ favorability ratings of the 19 policies, the two classes also were sharply distinguished by the questions about how similar their own views were to those of familiar policy advocacy and membership organizations. For instance, as shown in Table 4.3, the median rating of similarity with the policy positions of the National Rifle Association and Gun Owners of America was 5 (“mostly similar”) for those in the permissive group (Class 1) and 1 (“very different”) for those in the restrictive group (Class 2). The converse was true for similarities with Everytown for Gun Safety and the Brady Campaign to Prevent Gun Violence, for which permissive-class respondents indicated that their own views were very different from these organizations’ (median of 1), and restrictive-class respondents closely identified with these organizations’ views (median of 6 or 5). These differences between classes are extremely large. In several cases, they are as large as is mathematically possible on the response scale used for these questions. Respondents from the permissive class generally agreed with the views of gun rights advocacy groups and disagreed with the views of gun control advocacy groups, while those in the restrictive class had the opposite views of these organizations.
One set of questions on the survey asked respondents to indicate their relationship to gun policy. As shown in Table 4.4, experts in the restrictive class were 1.5 times more likely than experts in the permissive class to indicate that they are professional researchers or scientists; experts in the permissive class were more likely than their counterparts to describe themselves as policy analysts or interested laypersons. Approximately one-third of both groups described themselves as policy advocates.

In this report, all analyses that are designed to characterize the distribution of experts’ estimates and ratings are stratified by these two classes of experts. That is, we do not attempt to use this study to identify a single central tendency of expert opinion that characterizes the population of gun policy experts. Rather, we separately describe the distribution of opinion for the two classes of experts: those who prefer more-permissive gun policies versus those who prefer more-restrictive gun policies.

**TABLE 4.3**

**Respondent Perceptions of How Similar Their Views Are to Those of Stakeholder Organizations, by Expert Class**

<table>
<thead>
<tr>
<th>Please indicate how similar your own views on firearms policies are to those of each organization.</th>
<th>Permissive Class</th>
<th>Restrictive Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25th %</td>
<td>50th % (median)</td>
</tr>
<tr>
<td>Brady Campaign to Prevent Gun Violence</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Everytown for Gun Safety</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gun Owners of America</td>
<td>3.5</td>
<td>5</td>
</tr>
<tr>
<td>National Rifle Association</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**NOTE:** We present the 25th percentile (first quartile), 50th percentile (median), and 75th percentile (third quartile) for each response. The scale for similarity ranged from 1 = very different to 6 = very similar; N = not sure.

**TABLE 4.4**

**Respondent Relationship to Gun Policy, by Expert Class**

<table>
<thead>
<tr>
<th>Which of the following best describes your relationship to gun policy?</th>
<th>Permissive Class (%)</th>
<th>Restrictive Class (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional researcher/scientian</td>
<td>46</td>
<td>66</td>
</tr>
<tr>
<td>Policy analyst</td>
<td>62</td>
<td>22</td>
</tr>
<tr>
<td>Policy advocate</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>Interested layperson</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Government official</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Congressional staff member</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**NOTE:** Columns do not sum to 100 percent because respondents could select more than one category. Respondents were classified in a given category if they chose that response in either the 2016 or 2020 survey.
Estimated Effects of Policies on Outcomes

For each expert class, Figure 4.1 presents the distribution of policy effect estimates for the eight quantitatively measured outcomes and the two qualitatively measured outcomes. We present (1) medians as an indicator of what the typical member of each group estimated and (2) interquartile ranges as an indicator of the range of values that capture the central half of the responses for a given class. The quantitative responses are on a scale similar to an incidence rate ratio (commonly used in the empirical literature evaluating the effectiveness of gun policy). On this scale, 100 percent indicates that the policy will have no effect on the outcome. That is, after a policy is implemented, the outcome would be expected to occur at 100 percent the rate it occurred before implementation. Similarly, 110 percent indicates that the policy will increase the rate of the outcome by 10 percent, and 90 percent indicates that the policy will decrease the rate of the outcome by 10 percent. Respondents who selected “Less than 80%” or “More than 120%” were given imputed values of 79 percent and 121 percent, respectively. There were 155 such responses out of 9,125 nonmissing quantitative ratings; in other words, values outside the range of 80 percent to 120 percent were selected in 1.7 percent of all ratings. The two outcomes assessed with qualitative response options were scaled from one to seven, where lower scores indicate that the policy would have a harmful effect and higher scores indicate a beneficial effect. Across all 190 possible effect estimates (each policy with each outcome), an average of 60 respondents provided nonmissing responses; the remainder of estimates were imputed according to the planned missingness design (see Chapter Three). Detailed results are presented in full in Appendix B.

Figure 4.1 shows the 190 median effect estimates for each expert class and the estimates’ interquartile ranges. For 88 of the 190 estimates (46 percent), the medians for the two groups agreed on the direction of the effect on the outcome (17 percent) or agreed that the policy would have no effect (29 percent). For another 96 effect estimates (51 percent), median estimates for one group suggested that the policy would have no effect on the outcome, while the other group believed that it would have a positive or negative effect.

It was fairly rare for groups to disagree on the direction of the effect (i.e., for one group to say that the outcome would increase and the other group to say that it would decrease as a result of implementing a law). This occurred with just six of 190 effect estimates (3 percent). Four of these six instances of disagreement concern two policies: permitless carry and the elimination of gun-free zones. Those favoring more-permissive gun policies expected that these two policies would reduce firearm homicides and mass shootings; in contrast, those favoring more-restrictive gun policies estimated that the policies would increase those outcomes. In the most extreme example of such disagreement on the quantitative scales, the median expert favoring more-restrictive policies estimated that eliminating gun-free zones would increase mass shootings by a factor of 1.03 (i.e., a 3-percent increase), whereas the median expert favoring more-permissive laws estimated that eliminating gun-free zones would reduce mass shootings to 0.90 the rate preceding the policy (i.e., a 10-percent reduction). Thus, the largest disagreement that we observed between the medians for the two
FIGURE 4.1
Median Effect Estimate for Each Policy and Outcome, by Expert Class

NOTE: The circles indicate the group medians (50th percentile), and the lines indicate the interquartile ranges (25th to 75th percentiles). The policies are ordered from those with the most similarity in favorability ratings between groups to those with the least similarity; see Table 4.2.
NOTE: The circles indicate the group medians (50th percentile), and the lines indicate the interquartile ranges (25th to 75th percentiles). The policies are ordered from those with the most consensus in favorability ratings between groups to those with the least consensus; see Table 4.2.
classes of experts on the quantitative effect scale corresponds to one group expecting that eliminating gun-free zones would result in the rate of mass shootings being 13 percent higher than the other group expects.1

Although the two classes of experts rarely had median effect estimates with opposing directions, the magnitude of the expected effects was often substantially different between groups (detailed results are presented in Appendix B). In general, compared with the permissive group, the restrictive group thought that policies had the potential to result in much larger changes in mortality outcomes. Examining median estimates across all 19 policies, the average expected magnitude of change (in absolute value) for the restrictive group was 2.3 percent for accidental firearm deaths, 3.8 percent for firearm suicides, 3.9 percent for mass shootings, and 5.7 percent for firearm homicides. In comparison, for the permissive group, these average expected magnitudes of change were 0.2 percent, 0.5 percent, 1.9 percent, and 1.4 percent, respectively. Overall, experts in the permissive group generally did not expect gun policies to have large effects on gun violence outcomes; for seven of the 19 policies, the median permissive group member expected no change in firearm suicides, firearm homicides, accidental firearm deaths, and mass shootings.

In contrast, relative to the restrictive group, the permissive group thought that policies had the potential to generate larger effects on hunting and sport shooting, the right to bear arms, and individuals’ privacy. For participation in hunting and sport shooting, the median restrictive group member indicated any policy effect for only one policy (firearm and ammunition taxes; a 2-percent reduction). In contrast, the median permissive group member estimated that ten of the 19 policies would reduce participation in hunting and sport shooting, with the largest estimated effects being a 10-percent reduction resulting from firearm and ammunition taxes, minimum age requirements, and requiring a license to purchase a firearm or ammunition. These group differences were even more pronounced for hypothesized effects on the qualitative outcomes. The median restrictive group member estimated that none of the 19 policies would affect the right to bear arms, and only four policies (expanded mental health prohibitions, required reporting and recording of firearm sales, extreme risk protection orders, and firearm prohibitions for individuals subject to domestic violence restraining orders) would be a “minimal threat” to individuals’ privacy. In contrast, the median permissive group member estimated that all but one policy (state prosecution of prohibited possessors seeking firearms) would affect the right to bear arms, and 16 of 19 policies (all except a stand your ground law, the elimination of gun-free zones, and arming school personnel in K–12 educational settings) would affect individuals’ privacy. Furthermore, the permissive group was far

---

1 This was the largest difference in the groups’ median effect estimates where the two groups disagreed on the direction of the effect. When not restricting to policy-outcome pairs with disagreement on directionality, the largest magnitude difference was for the expected effects that arming school personnel in K–12 educational settings would have on mass shootings. The median expert favoring more-permissive laws indicated that arming school personnel would reduce mass shootings to 0.85 the rate preceding the policy (i.e., a 15-percent reduction), while the median expert favoring more-restrictive laws indicated that arming school personnel would have no effect on mass shootings.
more likely than the restrictive group to use the full scale for qualitative effect ratings: Nine policies each received a median rating by the permissive class of a “moderate” to “major” threat for the right to bear arms or for individuals’ privacy, and four policies received a median rating indicating a “moderate” to “major” protective effect for at least one of these two outcomes.²

Interestingly, the policies for which the two classes of experts had the most similar favorability ratings also tended to have higher-than-average levels of agreement on the expected effects of the policies. To assess the level of agreement across the classes for a given policy, we calculated a between-class difference score averaged over the ten effect estimates for each policy. Specifically, we computed the absolute difference between the medians of the two classes on each policy outcome and then averaged these differences over the eight quantitative outcomes (see Table B.1); we then did the same for the two qualitative outcomes (see Table B.2). All six policies for which the two groups were not on opposite sides of the scale’s midpoint exhibited higher-than-average agreement on the expected effects for both quantitative and qualitative outcomes. In particular, state prosecution of prohibited possessors seeking firearms had the lowest disagreement scores for effects on both types of outcomes.

When we look across both the quantitative and qualitative outcomes, the two classes of experts differed sharply in their expected effects for five policies: universal background checks, requiring a license to purchase a firearm or ammunition, permitless carry, minimum age requirements, and a ban on sale of “assault weapons” and high capacity magazines. The two groups also largely disagreed on the favorability ratings for all five of these policies. Thus, in general, the policies for which there was the least agreement in respondents’ favorability ratings of a policy also showed the least agreement in respondents’ expected effects on important outcomes.

However, there were some policies for which the two expert classes largely agreed on the likely effects of the policy but disagreed sharply in their favorability ratings. When looking at the quantitative outcomes, there was a high level of agreement between classes of experts for the likely effects of firearm and ammunition taxes and gun purchase limits, but these policies also showed relatively low agreement in respondents’ favorability ratings. In particular, the restrictive group’s median favorability rating was positive, and the permissive group’s rating was negative, despite both groups expecting the policies to generate no or very small effects on crime and violence and larger reductions for recreational gun use and gun sales. This

² The nine policies with a median rating by the permissive class of 1 (“major threat”) to 2 (“moderate threat”) for the right to bear arms were universal background checks, a ban on sale of “assault weapons” and high capacity magazines, expanded mental health prohibitions, requiring a license to purchase a firearm or ammunition, required reporting and recording of firearm sales, firearm and ammunition taxes, minimum age requirements, requiring a ten-day waiting period to purchase a firearm, and gun purchase limits. These same policies received median ratings of 1 to 2 for effects on individuals’ privacy, with the exception of requiring a ten-day waiting period and with the addition of extreme risk protection orders. The four policies with a median rating by the permissive class of 5 (“minimal protection”) to 6 (“moderate protection”) for the right to bear arms were a stand your ground law, the elimination of gun-free zones, arming school personnel in K–12 educational settings, and permitless carry. Permitless carry was the only policy given a median rating of 5 or 6 for effects on individuals’ privacy.
The divergence of opinion may stem from the stark differences in how respondents in each group believed that these policies would affect the right to bear arms and individuals’ privacy. The median restrictive group member believed that these policies would have no effect on either of the two qualitative outcomes, while the median permissive group member perceived that the two policies would create a “moderate” or “major” threat to both the right to bear arms and individuals’ privacy.

On the qualitative outcomes, there were high levels of agreement between expert groups on state prosecution of prohibited possessors seeking firearms, firearm prohibitions for individuals subject to domestic violence restraining orders, arming school personnel in K–12 educational settings, and a stand your ground law. Two of these policies (state prosecution of prohibited possessors seeking firearms and firearm prohibitions for individuals subject to domestic violence restraining orders) had relatively higher agreement in favorability ratings across groups (i.e., the median member of each group rated these policies as neutral or positive). However, despite relatively consistent beliefs in the policies’ effects on qualitative outcomes, the groups reported highly divergent favorability ratings for arming school personnel in K–12 educational settings and a stand your ground law. The divergence of opinion on these policies may stem from differences in how experts in each group estimated that the policies would affect firearm deaths. The expert classes had opposing estimates for how a stand your ground law would affect firearm homicides: The median permissive group member estimated that the law would decrease the firearm homicide rate by 5 percent, and the median permissive group member estimated that it would increase the rate by 5 percent. The median permissive group member expected that the arming school personnel policy would substantially reduce mass shootings (a 15-percent decrease), while the median restrictive group member expected no effect on mass shootings and a moderate increase in accidental firearm deaths (a 5-percent increase). Potential explanations for differences in expert class preferences are explored further in Chapter Five.

In Table 4.5, we present each group’s perception of the policy (or policies) that would lead to the largest benefits on each outcome and the policy that would lead to the largest harms. In nearly all cases, the two groups disagreed about which policies would lead to the largest effects. Permitless carry emerged as a particularly polarizing policy; the permissive class viewed it as highly beneficial for the right to bear arms and individuals’ privacy, and the restrictive class viewed it as leading to increases in violence and accidental firearm deaths. However, both groups perceived a child access prevention law as leading to the largest reduction in accidental firearm deaths.

There were five policies for which both the permissive and restrictive groups agreed that the policy was likely to reduce firearm deaths (i.e., median ratings for both groups were consistent with at least one mortality outcome [outcomes 1–4] decreasing and none increasing) and would have no more than minimal (i.e., no more than 2 percent) harms on the other quantitative outcomes. These five policies were expanded mental health prohibitions, surrender of firearms by prohibited possessors, extreme risk protection orders, firearm prohibitions for individuals subject to domestic violence restraining orders, and state prosecution of
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Most Beneficial Policy or Policies</th>
<th>Most Harmful Policy or Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permissive Class</td>
<td>Restrictive Class</td>
</tr>
<tr>
<td>Firearm suicides</td>
<td>Expanded mental health prohibitions (5% decrease)</td>
<td>Expanded mental health prohibitions, requiring a ten-day waiting period to purchase a firearm, extreme risk protection orders (10% decrease)</td>
</tr>
<tr>
<td>Firearm homicides</td>
<td>Stand your ground law, the elimination of gun-free zones, state prosecution of prohibited possessors seeking firearms (5% decrease)</td>
<td>Universal background checks, requiring a license to purchase a firearm or ammunition, required reporting and recording of firearm sales, surrender of firearms by prohibited possessors (10% decrease)</td>
</tr>
<tr>
<td>Accidental firearm deaths</td>
<td>A child access prevention law (5.5% decrease)</td>
<td>A child access prevention law (10% decrease)</td>
</tr>
<tr>
<td>Mass shootings</td>
<td>Arming school personnel in K–12 educational settings (15% decrease)</td>
<td>Ban on sale of “assault weapons” and high capacity magazines (15% decrease)</td>
</tr>
<tr>
<td>Property crime</td>
<td>A stand your ground law, the elimination of gun-free zones (4.5% decrease)</td>
<td>None</td>
</tr>
<tr>
<td>Participation in hunting and sport shooting</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

TABLE 4.5
Policies Rated as Most Beneficial and Most Harmful for Each Outcome, by Expert Class
### Table 4.5—Continued

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Most Beneficial Policy or Policies</th>
<th>Most Harmful Policy or Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permissive Class</td>
<td>Restrictive Class</td>
</tr>
<tr>
<td></td>
<td>A stand your ground law, the elimination of gun-free zones, permitless carry (10% increase)</td>
<td>Requiring a license to purchase a firearm or ammunition (8.5% decrease)</td>
</tr>
<tr>
<td>7 Legal acts of defensive gun use</td>
<td>A stand your ground law (10% increase)</td>
<td>None</td>
</tr>
<tr>
<td>8 Sales of new firearms</td>
<td>Permitless carry (5% increase)</td>
<td>A ban on sale of “assault weapons” and high capacity magazines (15% decrease)</td>
</tr>
<tr>
<td></td>
<td>A stand your ground law, permitless carry (5% increase)</td>
<td>A ban on sale of “assault weapons” and high capacity magazines, required reporting and recording of firearm sales, requiring a license to purchase a firearm or ammunition, gun purchase limits (5% decrease)</td>
</tr>
<tr>
<td>9 The right to bear arms</td>
<td>Permitless carry, the elimination of gun-free zones (moderate protection)</td>
<td>A ban on sale of “assault weapons” and high capacity magazines, gun purchase limits, firearm and ammunition taxes (major threat)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>10 Individuals’ privacy</td>
<td>Permitless carry (moderate protection)</td>
<td>A ban on sale of “assault weapons” and high capacity magazines (major threat)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Expanded mental health prohibitions, required reporting and recording of firearm sales, extreme risk protection orders, firearm prohibitions for individuals subject to domestic violence restraining orders (minimal threat)</td>
</tr>
</tbody>
</table>

NOTE: The median expected effect for the listed policies is provided in parentheses. None indicates that no studied policy was seen by the median group member as creating a beneficial (or harmful) effect of more than 2 percent for quantitative items or one-half a scale point for qualitative items. In this analysis, for participation in hunting and sport shooting, legal acts of defensive gun use, and sales of new firearms, an increase was considered beneficial, and a decrease was considered harmful. This is in contrast to the other five quantitative outcomes (e.g., firearm suicides, property crime), for which an increase was viewed as harmful and a decrease was viewed as beneficial.
Survey Findings

prohibited possessors seeking firearms. Of these, three policies were expected by both groups to generate no more than a minimal threat to the right to bear arms and individuals’ privacy; those three policies were surrender of firearms by prohibited possessors, firearm prohibitions for individuals subject to domestic violence restraining orders, and state prosecution of prohibited possessors seeking firearms. These three policies, all of which received positive or neutral median favorability ratings, may be particularly promising strategies to consider in gun policy discussions.

Beliefs About Firearm Law Effects on Nonfirearm Deaths

A striking result from our 2016 survey (Morral, Schell, and Tankard, 2018) concerned the wide disparity between the two expert groups on their beliefs about lethal means substitution. That is, they disagreed about the extent to which prevention of firearm suicides and homicides will be compensated for by individuals replacing firearms with other lethal means to carry out suicides or homicides. The median respondent in the permissive class indicated that, if a policy successfully reduced a state’s firearm suicides, then 90 percent (IQR: 50–100 percent) of the prevented firearm suicides would still end as a suicide by some other means. In contrast, the median respondent in the restrictive class responded that 20 percent (IQR: 10–40 percent) would still end as a suicide. The two groups produced the same differences in expected substitution of means for firearm homicides: The permissive class estimated means substitution of 90 percent (IQR: 60–100 percent), and the restrictive class estimated 20 percent (IQR: 10–30 percent).

In the 2016 survey, these questions asked specifically about lethal means substitution at the individual level. For example, for firearm suicides, the survey asked, “If a policy successfully reduced a state’s firearm suicides, how many of those prevented from killing themselves with a firearm would still kill themselves using another method?” However, individual-level means substitution is just one mechanism whereby gun policies might affect nonfirearm deaths. For instance, if there are suicide contagion effects across a subpopulation, or if prevention of firearm violence breaks cycles of crime that would otherwise lead to additional deaths, then reducing firearm suicide and violence would affect nonfirearm deaths by mechanisms other than means substitution at the individual level (Smart, Schell, et al., 2020). Thus, experts’ expectations about means substitution at the individual level may not directly translate to their expectations about the extent to which policies that reduce firearm deaths may increase nonfirearm deaths at the population level. Relatedly, the means substitution question in the 2016 survey ignored the possibility that respondents might believe that reducing firearm violence could lead to reductions in nonfirearm violence.

In the 2020 survey, therefore, we used an alternative question better designed to assess experts’ beliefs about how policies that decrease firearm violence would be expected to affect nonfirearm violence at the population level. Specifically, the question on firearm homicides was presented as shown in Figure 4.2. A separate version of the question asked about firearm suicides.
Across both expert classes, the median group member expected at least some of the effects of a policy on firearm homicides to be offset by an opposing effect on nonfirearm homicides. However, the expected magnitude of this offsetting effect was larger among experts favoring more-permissive gun policies than among experts favoring more-restrictive gun policies. For a policy that led to 100 fewer firearm homicides, the median permissive group member expected a resulting increase of 25 nonfirearm homicides (IQR: 0–90), whereas the median restrictive group member expected an increase of two nonfirearm homicides (IQR: −8–10).

Both classes expected the offsetting effects for suicides to be slightly larger. For a policy that led to 100 fewer firearm suicides, the median permissive group member expected a resulting increase of 50 nonfirearm suicides (IQR: 0–92), whereas the median restrictive group member expected an increase of four nonfirearm suicides (IQR: 0–15).

As was true for the means substitution question used in the 2016 survey, both expert classes expected reductions in firearm deaths to be compensated for at the population level by increases in nonfirearm deaths, and the permissive class expected a greater compensatory increase in nonfirearm deaths than the restrictive class did. But, unlike the 2016 survey, the median estimate from both groups suggests considerably less compensatory growth in nonfirearm deaths. Unlike for the survey items evaluating overall opinions and specific policy effects on specific outcomes, we did not impute missing responses for this set of questions or the homicide risk questions discussed in the next section. These questions were asked within only one of the two administrations of the survey, so almost all of the missingness was unplanned. There was substantial missingness due to differences in the sample across the two surveys, and there may be regular, nonrandom differences between respondents and nonrespondents for those questions. For that reason, we present descriptive statistics among nonmissing respondents for these items. In contrast, for the questions we imputed, almost all of the missingness was planned and created by randomizing which respondent got which questions in an effort to minimize response burden. Imputation in that case is uncontroversial and rests on assumptions that we know to be generally true.
nonfirearm homicides and suicides when framed in terms of population effects than when framed in terms of individual effects. This could indicate that both groups believed that there will be less substitution of lethal means at the population level than at the individual level, although differences in question wording and the sample of respondents between the 2016 and 2020 surveys do not allow strong conclusions on this point.

Beliefs About Legal Gun Ownership and Homicide Risk

Finally, as noted in Chapter Three, we examined experts’ views on the extent to which legal firearm acquisition is associated with changes in homicide risk. Response options ranged from 0 percent (i.e., the acquisition eliminates the risk of homicide) to 200 percent (i.e., the acquisition doubles the risk of homicide), and the options were centered at 100 percent (i.e., the acquisition has no effect on homicide risk). Respondents were asked separately about the relative change in homicide risk for three types of individuals: the legal gun owner, the spouse or partner living in the household of the legal gun owner, and a child living in the household of the legal gun owner.

As shown in Figure 4.3, there were large differences by expert class in estimates of the extent to which owning a gun is associated with changes in homicide risk for each member of the household. The permissive group believed that acquiring a firearm would reduce homicide risk for all household members; the median expert in this group indicated the largest reduction in risk for the gun owner (25-percent reduced risk), followed by the owner’s spouse

**FIGURE 4.3**
Association of Legal Gun Ownership with Homicide Risk, by Expert Class

![Diagram showing the perceived effect of legal firearm acquisition on homicide risk for the gun owner, spouse, and child, with intervals labeled as eliminate risk, no effect, or doubles risk of homicide.](image-url)

NOTE: The circles indicate the group medians (50th percentile), and the lines indicate the interquartile ranges (25th to 75th percentile). The figure depicts the perceived effect of legal firearm acquisition on homicide risk. Respondents indicated the relative risk of homicide after a legal firearm acquisition compared with the risk before the firearm was acquired. The question was asked separately for the relative risk to the legal gun owner, to the spouse or partner living in the household of the legal gun owner, and to a child living in the household of the legal gun owner.
or partner (15-percent reduced risk) and child (15-percent reduced risk). In contrast, the restrictive group believed that acquiring a firearm would increase homicide risk for all household members; the median expert in this group indicated the largest increases in risk for the gun owner’s spouse or partner (21-percent increase in risk), followed by a child living in the household (15-percent increased risk) and then the gun owner (10-percent increased risk). The middle 50 percent of responses from each group (i.e., between the 25th and 75th percentile) did not overlap for any of these questions.
Do Experts in the Two Groups Value or Prioritize Different Outcomes?

The previous chapter demonstrates that the two classes of experts have widely divergent views about the merits and effects of many gun policies. These disagreements could result from differences in what the goals of gun policies should be. For example, experts in the permissive class might feel that it is most important to protect gun owners’ constitutional rights, while experts in the restrictive class might feel that it is most important to prevent firearm deaths. Alternatively, the two classes of experts could be trying to achieve the same policy goals but disagree on which policies are most likely to achieve those aims. For example, both types of experts might consider preventing homicides the most important goal of firearm regulation but disagree on which policies will produce that effect. This distinction is important. In the first case, where groups do not share the same values or priorities, there may be no factual or scientific analysis that can be conducted to help resolve disagreements on the merits of policies. On the other hand, if there is a shared set of goals for these policies but disagreement on their empirical effects, then scientific research that clarifies the effects of these policies may reduce the disagreement among policy experts.

In the first edition of this report, we found that, in our sample of 95 policy experts, there was little evidence that the two groups of experts valued outcomes differently (Morral, Schell, and Tankard, 2018). Indeed, the same model of favorability ratings (i.e., the ratings for experts’ overall opinion of each policy) worked nearly equally for both groups of experts, suggesting that the goals of both groups were to reduce firearm homicides, firearm suicides, and mass shootings—and in that order. We concluded that most of the differences in favorability ratings exhibited by the two classes of experts reflected that the classes have differing beliefs about the effects that the policies will have on, for instance, firearm homicides, not that one class prefers policies that achieve one set of objectives while the other class seeks to achieve a different set. A weakness of this analysis was that we had few survey respondents favoring permissive policies on which to estimate these relationships (n = 16). Therefore, in this chapter, we reexamine this question with our larger sample of experts and using a simplified model selection procedure.

Again, through our models, we aim to evaluate the extent to which differences in experts’ favorability ratings of gun policies stem from different priorities for the goals of gun policy, different assumptions about how each law affects outcomes (technically a factual matter), or...
some combination of the two. To examine these alternative explanations, we model experts’ favorability ratings as a function of experts’ estimates of the policies’ likely effects on the ten outcomes. If experts share a common set of policy objectives—but perhaps disagree on which policies are most likely to achieve those objectives—we would expect a single model to predict favorability ratings well for both groups of experts. That is, the effects on outcomes (e.g., policies’ effects on property crime) that are most influential in determining how members of the permissive class evaluate a policy (via favorability ratings) will be the same as the effects on outcomes that are most influential in determining how members of the restrictive class evaluate a policy, and these effects will be similar in magnitude and direction. Alternatively, if the groups’ policy objectives are different, we would expect a single model not to perform well, unless group differences in the weighting of some effects on outcomes (the interaction terms, described later) are accounted for in the model.

Overview of Methods

With the statistical modeling, we had three goals. First, we wanted to assess the extent to which favorability ratings could be predicted by the respondents’ estimates of the effects of each policy, without including information about respondents’ class membership or other indicators of their ideologies and policy priorities. We assess the quality of the predictions from this model by comparing them with predictions from a model that allows interactions between class membership and policy effect estimates. Second, we wanted to assess which of the several effects that each policy produces are most associated with experts’ favorability ratings for the policies—and thus may be drivers of their overall opinions of the policies. For example, for predicting experts’ overall opinion of a policy, how important is a 1-percent reduction in firearm homicides versus a 1-percent reduction in participation in hunting and sport shooting? Third, we wanted to assess whether the two classes of experts appear to value the policy effects differently. For example, is the relationship between the favorability rating for a policy and the estimate of the policy’s effect on firearm homicide the same for experts in the permissive class as for experts in the restrictive class? Do experts from the two groups appear to prioritize effects on firearm homicide versus effects on other outcomes differently?

We used ordinal logistic regression models to predict each favorability rating made by respondents as a function of the effects that the respondent estimated the policy to have on each of the ten assessed outcomes (i.e., 2,339 favorability ratings are regressed onto the ten corresponding estimated effects of the policy). We compare this model to another in which we include interactions between the ten effect estimates and the class of expert making the favorability rating (permissive versus restrictive). Including these interactions allows us to estimate separate relationships between the hypothesized policy effects and the favorability ratings for the two groups. If the model with interaction terms performs substantially better than the model without them, this would indicate that the association between effect esti-
mates and favorability ratings is different for the two groups. The models do not contain any individual-level predictors (e.g., an indicator of class of expert or fixed effects for experts) but are designed to explore how well experts’ favorability ratings can be explained solely through the experts’ estimates of how each policy would affect the assessed outcomes. Additional information about the models is available in Appendix C. Data and code used for these analyses are available on a GitHub webpage (see RAND Corporation, undated).

The interaction effects are parameterized such that model main effects represent the average coefficient across all experts. The interaction is computed to be orthogonal to that main effect and represents the difference in the coefficient between the permissive and restrictive classes, as discussed in Appendix C.

Results

Both models fit the data well, although the fit statistics for the model with interactions were significantly better (see Appendix C). The practical effect of this superior fit was minor, however, because both models predicted favorability ratings nearly equivalently. Table 5.1 shows the polychoric correlations ($\rho$), between respondents’ actual favorability ratings and predicted ratings from the two models.

The ten additional interaction terms in the second model increased $\rho$ for the full sample from 0.87 to 0.88, with similarly small improvements for each class of experts. Table 5.2 displays the proportion of ratings for which model-predicted scores exactly matched actual scores or fell within one scale point on the five-point rating scale. The addition of the ten interaction terms improved exact matches by too little to discern with two decimal digits, although it slightly improved the proportion of cases with predicted ratings within one scale point of the actual value.

<table>
<thead>
<tr>
<th>TABLE 5.1</th>
<th>Polychoric Correlations Between Model-Predicted and Actual Favorability Ratings for All Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>All Favorability Ratings ($n = 2,339$)</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Main effects only</td>
<td>0.87</td>
</tr>
<tr>
<td>Main effects and interaction terms</td>
<td>0.88</td>
</tr>
</tbody>
</table>
Figure 5.1 provides a policy-by-policy illustration of this fit by comparing model-based predictions of favorability ratings with the actual favorability ratings provided by members of each group. These policies were rated on a five-point Likert scale (values 1 to 5), with higher scores indicating higher favorability. Across policies and model specifications, the average difference between mean predicted ratings and mean actual ratings for the permissive class was less than 0.75 of a scale point. Thus, these model-based predictions differed from the true values by well less than one standard deviation, which is 1.47 on this scale. The model with interactions had predictions that were, on average, closer to the actual favorability ratings than the predictions from the model without interactions for members of the permissive group (average absolute difference across policies with interactions was 0.26 of a scale point, without was 0.32) and for members of the restrictive group (average absolute difference with interactions was 0.17 of a scale point, without was 0.14).

In short, both models fit the data well, both predict actual favorability ratings with remarkable accuracy, and the differences in accuracy between the models is small. Although there is evidence that the model with interactions has a better overall fit—meaning that experts in the permissive and restrictive classes may differentially value policy effects on various outcomes—the large divergence in favorability ratings between these two classes is well explained even when we ignore those interactions. As a result, it appears that the large differences between the favorability ratings of experts in the restrictive and permissive classes are chiefly attributable to differing expectations about the likely effects of each policy rather than to differences in which outcomes in which outcomes the classes most prioritize as the objectives of gun policy. That is, the different favorability ratings exhibited by each class of experts reflect that the classes have differing beliefs about the effects that these policies will have on, for instance, homicides, not that one class values homicide reductions more than the other class does.

<table>
<thead>
<tr>
<th>Type of Match and Model</th>
<th>All Favorability Ratings (n = 2,339)</th>
<th>Permissive Class Ratings (n = 324)</th>
<th>Restrictive Class Ratings (n = 2,015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exact match</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main effects only</td>
<td>0.60</td>
<td>0.55</td>
<td>0.61</td>
</tr>
<tr>
<td>Main effects and interaction terms</td>
<td>0.60</td>
<td>0.55</td>
<td>0.61</td>
</tr>
<tr>
<td>Match within one scale point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main effects only</td>
<td>0.92</td>
<td>0.87</td>
<td>0.93</td>
</tr>
<tr>
<td>Main effects and interaction terms</td>
<td>0.93</td>
<td>0.91</td>
<td>0.94</td>
</tr>
</tbody>
</table>
Table 5.3 provides coefficients from the models, expressed as standardized odds ratios. For the uninteracted measures (variables 1–10 in the table), these results are interpreted as the odds ratio for giving a more positive favorability rating that is associated with a one-standard-deviation change in the predictor. The model is parameterized using centered variables so that the main effects are for the average respondent, and the interaction terms (variables 11–20) represent the difference in those effects across the restrictive and permissive classes. In general, coefficients for the main effects were quite similar across the two models,
<table>
<thead>
<tr>
<th>Variable</th>
<th>Model With Interaction Terms</th>
<th>Model Without Interaction Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% CI</td>
</tr>
<tr>
<td>1 Firearm suicides</td>
<td>0.56</td>
<td>(0.49–0.63)</td>
</tr>
<tr>
<td>2 Firearm homicides</td>
<td>0.29</td>
<td>(0.25–0.34)</td>
</tr>
<tr>
<td>3 Accidental firearm deaths</td>
<td>0.68</td>
<td>(0.60–0.77)</td>
</tr>
<tr>
<td>4 Mass shootings</td>
<td>0.72</td>
<td>(0.64–0.82)</td>
</tr>
<tr>
<td>5 Property crime</td>
<td>0.88</td>
<td>(0.79–0.98)</td>
</tr>
<tr>
<td>6 Participation in hunting and sport shooting</td>
<td>1.34</td>
<td>(1.21–1.48)</td>
</tr>
<tr>
<td>7 Legal acts of defensive gun use</td>
<td>0.87</td>
<td>(0.77–0.98)</td>
</tr>
<tr>
<td>8 Sales of new firearms</td>
<td>0.82</td>
<td>(0.74–0.91)</td>
</tr>
<tr>
<td>9 Right to bear arms</td>
<td>1.12</td>
<td>(1.00–1.26)</td>
</tr>
<tr>
<td>10 Individuals’ privacy</td>
<td>1.46</td>
<td>(1.30–1.64)</td>
</tr>
<tr>
<td>11 Firearm suicides * class</td>
<td>1.19</td>
<td>(1.07–1.32)</td>
</tr>
<tr>
<td>12 Firearm homicides * class</td>
<td>0.81</td>
<td>(0.72–0.92)</td>
</tr>
<tr>
<td>13 Accidental firearm deaths * class</td>
<td>1.00</td>
<td>(0.90–1.11)</td>
</tr>
<tr>
<td>14 Mass shootings * class</td>
<td>0.89</td>
<td>(0.79–1.00)</td>
</tr>
<tr>
<td>15 Property crime * class</td>
<td>1.05</td>
<td>(0.93–1.18)</td>
</tr>
<tr>
<td>16 Participation in hunting and sport shooting * class</td>
<td>1.02</td>
<td>(0.91–1.14)</td>
</tr>
<tr>
<td>17 Legal acts of defensive gun use * class</td>
<td>0.98</td>
<td>(0.87–1.11)</td>
</tr>
<tr>
<td>18 Sales of new firearms * class</td>
<td>0.90</td>
<td>(0.82–1.00)</td>
</tr>
<tr>
<td>19 Right to bear arms * class</td>
<td>0.65</td>
<td>(0.55–0.76)</td>
</tr>
<tr>
<td>20 Individuals’ privacy * class</td>
<td>0.87</td>
<td>(0.75–1.02)</td>
</tr>
</tbody>
</table>

NOTE: CI = confidence interval. Interaction terms are coded to be orthogonal to main effects, such that “class” has a mean of zero (members of the permissive group have a negative class value; members of the restrictive group have a positive class value).
although the coefficient estimates for three interaction terms were significant at the $p < 0.05$ level after Bonferroni adjustment for ten exploratory tests. These three estimates are for the interactions between expert class and policy effects on the right to bear arms, firearm homicides, and firearm suicides.\(^1\) Those interactions suggest that, compared with the favorability ratings of the permissive group, the ratings of the restrictive group were less associated with these experts’ beliefs about each policy’s effect on the right to bear arms and firearm suicide and were more associated with each policy’s effect on firearm homicide. Because the interactions played such a small role in explaining group preferences, however, we focus our discussion here on what the main effects in the model without interactions reveal about the policy preferences that the two groups have in common.

The standardized coefficients in the table reveal that, of all measured effects on outcomes, reduction in firearm homicides had the greatest association with higher favorability ratings. The standardized odds ratio for this effect in the model without interactions indicates that a policy seen as producing a one-standard-deviation increase in firearm homicides (a 3.3-percentage-point increase in deaths) predicted a change in the odds of receiving a more favorable rating by a factor of 0.27, which represents a substantial decline in the favorability ratings. Conversely, a policy leading to a one-standard-deviation decrease in firearm homicides would suggest that the policy had odds greater than three to one ($1 / 0.27 = 3.70$) of receiving a higher rating.

A policy’s effect on firearm suicides was second-most influential in predicting favorability ratings, and the standardized effect size was roughly half as great as that for firearm homicides. Across all experts, policies associated with a one-standard-deviation increase in firearm suicides (a 2.8-percentage-point increase in deaths) had odds of receiving a higher favorability rating by a factor of 0.55. Equivalently, policies viewed as reducing firearm suicides by one standard deviation were predicted to have higher favorability ratings, with the odds of a more favorable rating increased by a factor of 1.82.

After a policy’s effect on firearm homicide and firearm suicide, a policy’s effect on individuals’ privacy was the next-most influential in predicting favorability ratings. When other effects are held equal, policies that were viewed as harming individuals’ privacy received lower favorability ratings. After a policy’s effects on individuals’ privacy, the effects on mass shootings, accidental firearm deaths, and participation in hunting and sport shooting were the next-most influential: Policies thought to increase mass shootings or accidental deaths and policies expected to reduce participation in hunting and sport shooting received lower favorability ratings by members of both classes of experts.

A policy’s effect on the right to bear arms was only the seventh-most-influential determinant of favorability ratings in the model without interactions. However, this is also the

---

\(^1\) The tests on both the main effects and the interactions were anticonservative tests, meaning the $p$-values were likely to somewhat overstate the statistical significance. This occurs because we used single imputation procedures, and that approach neglects the increase in standard errors caused by imputation relative to a sample in which all predictors were nonmissing.
effect for which there was the strongest evidence of an interaction between classes of experts; specifically, compared with members of the restrictive class, members of the permissive class more strongly favored policies that they believed will strengthen the right to bear arms. The effects of a policy on sales of new firearms and property crime were significantly associated with favorability ratings but comparatively small, and the effects of a policy on legal acts of defensive gun use were not significantly associated with favorability. Given that the role of firearms as a tool for self-defense is a frequent source of contention in gun policy debates, it is somewhat surprising that a policy’s effect on legal acts of defensive gun use appears to be one of the least important factors for determining favorability ratings. However, it may be that experts’ perceived value of defensive gun use operates primarily through a policy’s expected effects on other outcomes, such as reducing firearm homicides, mass shootings, or property crime. Because our models control for expected effects of each policy on these other outcomes, the nonsignificant estimate for the effect on defensive gun use may reflect that policies that were expected to affect defensive gun use without generating a corresponding change in crime or violence did not significantly influence either class of experts’ overall opinion of the policies.

Conclusions

Although there is evidence that members of the permissive and restrictive classes differed in how strongly they weighted a policy’s effect on firearm homicides, firearm suicides, and individuals’ privacy when considering which gun policies are good or bad, these differences appear to play a minor role in explaining differences in the groups’ favorability ratings. Instead, the favorability ratings of both groups are well described by a common set of weights or preferences for the effect that each policy will have, and both groups favored policies that they believed will reduce firearm homicides above all else and, secondarily, policies that will reduce firearm suicides and protect individuals’ privacy.

These findings imply that the large between-group differences in favorability ratings of gun policies are not due to differences in policy objectives or priorities but instead result from differences in assumptions about which effects each policy will have. That is, experts in each group have many differences of opinion about factual matters concerning the true effects of policies. If that is the case, then improved scientific information about the effects of policies might help reduce disagreements about which gun policies to favor.

Of course, differing beliefs about the true effects of laws is just one of several possible influences contributing to policy disagreements between groups. We consider other possible factors in Chapter Seven. Next, we discuss the online tool built on results from the two surveys.
CHAPTER SIX

Updating the Gun Policy Expert-Opinion Tool

One of the goals of fielding an updated survey was to update our web-based Gun Policy Expert-Opinion Tool that allows users to explore experts’ predictions about the impacts of various gun policies or combinations of policies (see RAND Corporation, 2021). In this chapter, we describe the methods, assumptions, and limitations of our approach.

Methods, Assumptions, and Limitations

A key simplification we make to construct estimates of the combined effects of policies or laws is that the expected effect of any policy is independent of the effects of any other policy. That is, if an expert expects a ban on the sale of “assault weapons” and high capacity magazines to result in firearm homicides declining to 0.9 times the level before implementing the ban, this same effect would be expected whether or not any other policies were simultaneously introduced. Thus, the combined effect of multiple policies on firearm homicides (or other outcomes) is simply the multiplicative product of the effects on firearm homicide that the expert predicts separately for each policy. Obviously, a shortcoming of this assumption is that policies may have interaction effects that are ignored in this procedure. For example, requiring universal background checks and requiring a license to purchase a firearm or ammunition may have overlapping effects on sales of new firearms, in which case we might not expect the net effect of these two policies to be as large as the product of their effects if implemented separately. In contrast, other policies might amplify one another’s effects on a given outcome if implemented in tandem. We do not know whether such interaction effects occur in real life or whether the gun policy experts we surveyed would expect such interaction effects.

The second important assumption is that the effect of eliminating a policy is the reciprocal of the expected effect from introducing it. Suppose, for instance, that the expected effect of introducing a law on firearm suicides is 0.9. Thus, after introducing the law, a state with a base rate of 1,000 firearm suicides would expect only 900 after implementation of the law. By assuming that eliminating a law has an effect equal to the reciprocal of the effect of implementing the same law, we are saying that, if a state with a base rate of 900 firearm suicides eliminates this same law, the outcome would go from 900 back to 1,000: 900 / 0.9 = 1,000. This
assumption, too, likely introduces errors into our estimates of the combined effects of policies or laws. For instance, suppose implementation of a permitless-carry policy encouraged more people to purchase handguns and that, as more people owned handguns, the frequency of firearm suicides increased. It is not obvious in this scenario that eliminating the permitless-carry policy would result in a decline in handgun ownership equal to the increases associated with implementing the policy, so it may not be the case that firearm suicides decline as rapidly or as far as they increased when introducing the policy.

Finally, we do not attempt to estimate the combined effects of laws on the qualitative outcomes of the right to bear arms and individuals’ privacy. Because these effects are measured on an ordinal scale—not a ratio scale, as for the quantitative outcomes—we have no good way of estimating, for example, what the combined effects on privacy might be of a law that causes major harms and another that is rated as providing some protections. As a result, the Gun Policy Expert-Opinion Tool provides experts’ qualitative ratings when a single law is selected but does not provide estimates of the combined effects of multiple laws.

In Table 6.1, we provide two examples of policy combinations. First, we identified two of the policies for which the two groups differed least in their favorability ratings—expanded mental health prohibitions (policy 4) and state prosecution of prohibited possessors seeking firearms (policy 19)—and calculated the combined effects of those policies on firearm homicides (outcome 2). Then, we identified two of the policies for which the two groups differed most in their favorability ratings—a ban on sale of “assault weapons” and high capacity magazines (policy 2) and a stand your ground law (policy 3)—and calculated the combined effects of those policies on sales of new firearms (outcome 8); we selected these two policies because one is favored by the restrictive group and one is favored by the permissive group. Combined policy effects on an outcome were calculated at the respondent level by multiplying respondents’ percentage-change estimates for each combined policy on the outcome. For instance, the combined effects of a policy expected to reduce firearm homicides to 95 percent of their prior level and a policy expected to increase firearm homicides by 103 percent would be calculated as $0.95 \times 1.03 = 0.978$, or 97.8 percent of the firearm homicide rate prior to implementing the two policies together. We did not calculate combination scores for qualitative outcomes (effects on the right to bear arms and individuals’ privacy).

In the Gun Policy Expert-Opinion Tool, the median values of such policy combinations across experts are used to construct estimates of the joint effects of laws selected by users to enact or repeal, according to the estimates of our expert classes. Separate such estimates and their interquartile ranges are constructed for each expert class.

This strategy of evaluating sets of policies rather than evaluating individual policies in isolation may be productive for developing solutions that are acceptable to individuals with distinct perspectives in the gun policy debate. Further efforts in this vein should address potential interaction effects among policies that are combined.

The effects of these combined estimates will differ by state, however, because states that already have a law that the user chooses to enact nationally are assumed to experience no changes in outcomes as a result of that change. Similarly, states with no law of a kind turned
Updating the Gun Policy Expert-Opinion Tool

off or repealed by the user are unaffected by that change. By summing the net effects of any combination of laws selected by users across states, taking into account the state-level base rates of each outcome and whether and how the laws selected by users affect each outcome (according to the two expert classes), we calculate the net effects of any combination of laws on national outcomes. Additional details on the data sources used, assumptions made to generate state-level base rates on each outcome, and information on state laws as of January 1, 2021, are provided in Appendix D.

We asked experts about average expected state effects and apply these average effects to all states in the Gun Policy Expert-Opinion Tool, regardless of what might be important differences among states in the likely effectiveness of the laws. A core assumption of the model, therefore, is that experts’ effect estimates can be applied equally to all states in the country. This, too, is a strong assumption that likely affects the validity of results produced by the tool. For instance, experts might make quite different estimates of a law’s effects in more-rural states versus more-urban states.

<table>
<thead>
<tr>
<th>TABLE 6.1</th>
<th>Example Policy Combination Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies with a High Level of Agreement in Favorability Ratings</td>
<td>Policies with a Low Level of Agreement in Favorability Ratings</td>
</tr>
<tr>
<td>Policy 4: Outcome 2 (%)</td>
<td>Policy 19: Outcome 2 (%)</td>
</tr>
<tr>
<td>95.00</td>
<td>100.00</td>
</tr>
<tr>
<td>100.00</td>
<td>98.00</td>
</tr>
<tr>
<td>98.00</td>
<td>90.00</td>
</tr>
</tbody>
</table>

Calculations of combination scores at the respondent level

Descriptive statistics for these scores, by class of expert

<table>
<thead>
<tr>
<th>Permissive-class median</th>
<th>Restrictive-class median</th>
</tr>
</thead>
<tbody>
<tr>
<td>98.00</td>
<td>95.00</td>
</tr>
<tr>
<td>93.58</td>
<td>89.10</td>
</tr>
<tr>
<td>85.00</td>
<td>95.00</td>
</tr>
<tr>
<td>101.00</td>
<td>105.00</td>
</tr>
<tr>
<td>90.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

NOTE: Combination scores were calculated at the respondent level. We then obtained descriptive statistics for each combination score within each expert class. We calculated combination scores by multiplying the respondent’s percentage-change estimates for the effects of each policy in the combination on the outcome.
Using the Gun Policy Expert-Opinion Tool

The online tool allows users to observe the predicted effects of turning a policy on (i.e., implementing a law nationally), turning a policy off (i.e., repealing a law nationally), or leaving the policy unchanged in every state, as would be expected by each of our expert groups. Users are presented with the 19 policies discussed in this report and can turn on, turn off, or leave unchanged as many of those policies as they wish, which offers more than 1 billion policy combinations to explore. After selecting a combination, users select a “see results” button and are taken to a pair of state maps showing state-level estimates of the effects of the policy combination on one of the outcomes examined in the report. (Figure 6.1 shows a sample output from the tool.) One map displays the results expected based on effect estimates by the permissive class, and the other map shows results expected based on estimates by the restrictive class. Users can choose any of the ten outcomes to be displayed on the maps and can see

FIGURE 6.1
Example of Output from the Gun Policy Expert-Opinion Tool

2. Select an outcome
Choose an outcome below to compare how experts think implementing the selected policies could affect state and nationwide outcomes annually. Firearm homicides is selected by default.
detailed state-level information on the effects of the policy combinations by hovering the cursor over individual states.\(^1\)

In addition to state-by-state estimates, the results page shows a national estimate that aggregates the state-level effects of the policies. Therefore, a 1-percent reduction in firearm homicides in a state that accounts for a large percentage of homicides nationally will exert a larger effect on changes in the national rate of firearm homicides than would a 1-percent reduction in firearm homicides in a state with only a small share of total homicides nationally.

With this tool, users can explore which policies or combinations of policies are likely to achieve the effects of greatest interest to them, according to the two classes of experts. By searching for the combinations of policies for which both groups of experts see net benefits on key outcomes, it is possible to examine which combinations might offer the greatest promise of achieving agreement between groups on which policies are beneficial and worth pursing. We illustrate such an analysis in Chapter Seven.

\(^1\) As noted earlier, when more than one policy is selected simultaneously, only the eight quantitative outcomes can be selected. That is because we do not produce combined effect estimates for the qualitative outcomes. See Appendix D for further discussion.
CHAPTER SEVEN

Discussion and Conclusions

Gun policy debates in the United States are polarized and polarizing. We expected, therefore, that our survey of individuals whose work or research focuses on gun policy would identify groups of experts with distinct viewpoints on the merits of different gun policies and laws. After statistically clustering experts’ favorability ratings (i.e., overall opinions of a policy on a five-point scale) for 19 gun policies, we found two distinct classes of experts who differed not just in their overall opinions about the merits of the policies but also strongly in their ratings of which advocacy or membership organizations had gun policy positions closest to their own.

The first class of experts preferred such policies as a stand your ground law, permitless carry, and the elimination of gun-free zones. For ease of reference, we labeled this group the permissive class because experts in this group tend to favor more-permissive policies on gun access and use. The second class of experts preferred such policies as universal background checks, requiring a license to purchase a firearm or ammunition, and surrender of firearms by prohibited possessors. We labeled this group the restrictive class because experts in this group tend to favor more-restrictive policies on gun access and use.

In total, we received 26 usable responses from experts who favor more-permissive gun policies and 147 usable responses from experts who favor more-restrictive policies. However, the difference in the sizes of these groups provides little information about the relative numbers of experts in the community whose views align with one or the other perspective. The smaller number of respondents favoring more-permissive policies could indicate that the sample frame we used to invite experts to participate underrepresented this group; that members of this group were less inclined to participate in our survey when invited; or that there are, in fact, fewer of them than experts who favor more-restrictive policies.

Although we cannot draw valid inferences about the relative sizes of the two classes of experts or advocates, we can compare some of their policy preferences with those of nationally representative samples of adults. For instance, there is recent polling on versions of two of the three policies for which the median favorability ratings were most different between classes of experts (we found no recent polling on required reporting and recording of firearm sales). Various polls conducted in 2019 found that between 47 percent and 64 percent of the public favored an assault weapon ban, while between 39 percent and 51 percent opposed such a ban (Barry et al., 2019; Gallup, undated; Santhanam, 2019). Between 72 percent and 77 percent of adults favored requiring a license to purchase a firearm, and 25 percent were opposed
to such a law (Barry et al., 2019; Santhanam, 2019). Thus, on one of these laws, the public is fairly divided, while, on the other, a large majority favors the policy preferred by experts in the restrictive class.

We sought to sample from a diverse group of experts and advocates likely to influence public discussion and public policy. Whether or not the permissive group is numerically smaller in the general population, its influence seems fairly strong. For instance, several policies favored by the permissive group and disfavored by the restrictive group—including stand your ground laws and shall-issue and permitless-carry versions of concealed-carry laws—have been adopted by statehouses across the country in recent years. Thus, although we cannot say that our sample is representative of all people who are influential in shaping opinions about gun policy, we have captured opinions and estimates from two of the most-influential perspectives on gun policy. This does not imply, however, that the overall opinions and estimates of policy effects in this survey are representative of the opinions and estimates of the general population. We were able to divide our respondents into two highly distinct groups with clearly divergent opinions, but the general public may have a very different distribution across those two groups. In addition, some members of the general population may not fit neatly into these polarized groups, preferring some heterodox mix of restrictive and permissive gun policies. For these reasons, the current study should not be seen as representative of the opinions of the general U.S. population or electorate.

**Expert Groups’ Assessments of Policies and Their Effects Showed Some Areas of Agreement**

Despite the sharp differentiation between expert classes on their favorability ratings and their alignment with the policy positions of gun policy advocacy and membership organizations, the two groups’ estimates of the likely effects of 19 policies on a wide variety of outcomes—though clearly differentiated—often agreed on the likely direction of effects. Indeed, across 190 estimates about the effects of the policies, only six times did the median estimate for each group disagree on the direction of the effect. For instance, one group thought that a policy would increase the rate of firearm homicides, and the other group thought that the policy would decrease the rate of firearm homicides. Four of these six instances concerned two policies: permitless carry and the elimination of gun-free zones. Those in the permissive class expected these policies to reduce firearm homicides and mass shootings, while those in the restrictive class expected the opposite.

In general, experts in the permissive group expected policies to have much smaller effects on firearm deaths than did experts in the restrictive group, who frequently provided estimates suggesting that policies would increase or decrease deaths by between 4 and 10 percentage points more than estimates by experts in the permissive group (see Appendix B, Table B.1). The reverse was true for the qualitative outcomes of the right to bear arms and individuals’ privacy. The restrictive group was more likely to view policies as posing mini-
Discussion and Conclusions

mal risks to these outcomes, whereas the permissive group was more likely to rate policies as harmful to these outcomes (see Table B.2).

There was only one policy—state prosecution of prohibited possessors seeking firearms—for which both the median permissive group member and the median restrictive group member reported a positive favorability rating (i.e., indicated that the policy was “good policy”). This policy also had the highest consistency across expert classes in the estimated effects on important outcomes. Both groups expected the policy to reduce firearm homicides, mass shootings, and property crime and to have no effect on accidental firearm deaths, participation in hunting and sport shooting, legal acts of defensive gun use, and the right to bear arms.

In the 2020 survey, state prosecution of prohibited possessors seeking firearms was described as follows:

This state law criminalizes attempted purchase of firearms by individuals prohibited by law from possessing a firearm. It also funds personnel who are tasked exclusively with investigating and prosecuting prohibited possessors who make false statements on state or federal forms when attempting to acquire a firearm.

Many states currently have laws mirroring federal laws that criminalize possession of a firearm by prohibited possessors, and some of the prohibited possessor categories defined in state laws are not included in federal laws. However, the extent to which states prioritize and allocate resources for prosecuting prohibited possessors who seek to obtain or who hold firearms is not well studied yet but probably varies considerably (Crifasi et al., 2019).

Four additional policies appeared to generate comparatively strong agreement in the favorability ratings for both classes of experts; those policies were expanded mental health prohibitions, a child access prevention law, surrender of firearms by prohibited possessors, and firearm prohibitions for individuals subject to domestic violence restraining orders. For each of these policies, the median rating of the permissive group was neutral, the median rating of the restrictive group was positive, and the two groups’ interquartile ranges of favorability ratings overlapped. There also was higher-than-average agreement on the direction and magnitude of expected effects of these policies on the outcomes examined.

Under the assumptions for combining experts’ effect estimates across multiple policies described in Chapter Six, Table 7.1 reports each expert class’s estimates of how the quantitative outcomes would be affected if three of the policies for which both classes of experts reported neutral or favorable opinions (state prosecution of prohibited possessors seeking firearms, expanded mental health prohibitions, and a child access prevention law) were enacted in every state that does not already have these policies. From the perspective of the restrictive class of experts, this would produce large benefits to society, with dramatic reductions in firearm suicides, firearm homicides, accidental firearm deaths, mass shootings, and property crime and only modest effects on legal acts of defensive gun use, participation in hunting and sport shooting, and sales of new firearms.
The expectations of those in the permissive class were more varied and less uniformly favorable across outcomes, perhaps explaining these respondents’ overall neutral favorability ratings of most of the policies. This group tended to support the view that firearm deaths would be decreased by implementing the policies nationally, although there was less agreement about whether property crime would increase or decrease. This group also estimated that legal acts of defensive gun use would decline substantially, which would be viewed as an unfavorable outcome by many.

If the expectations revealed by our two classes of survey respondents are broadly representative of those held by advocates of more-permissive and more-restrictive policies on access to and use of guns, this would suggest that policies could be implemented across states that would, in the view of most stakeholders, lead to large reductions in many of the social harms associated with gun use, although they would entail some harms to the use of guns for self-defense, sales of new firearms, and participation in hunting and sport shooting. Although we cannot produce a combined estimate of the perceived effect of these laws on the right to bear arms and individuals’ privacy, we can say that the permissive class’s median effect estimates for each of the three policies individually indicated that the policies could harm these outcomes. However, because the two groups’ median favorability ratings of these policies ranged from neutral (neither good nor bad) to highly favorable (very good policy), the modest harms

### TABLE 7.1
Experts’ Estimated Change in Quantitative Outcomes Nationally After Implementing Three Particular Gun Policies, by Expert Class

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Permissive</th>
<th></th>
<th></th>
<th>Restrictive</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25th %</td>
<td>50th %</td>
<td>75th %</td>
<td>25th %</td>
<td>50th %</td>
<td>75th %</td>
</tr>
<tr>
<td>1 Firearm suicides</td>
<td>−16</td>
<td>−10</td>
<td>−4</td>
<td>−26</td>
<td>−15</td>
<td>−10</td>
</tr>
<tr>
<td>2 Firearm homicides</td>
<td>−15</td>
<td>−9</td>
<td>−4</td>
<td>−22</td>
<td>−13</td>
<td>−9</td>
</tr>
<tr>
<td>3 Accidental firearm deaths</td>
<td>−10</td>
<td>−5</td>
<td>0</td>
<td>−21</td>
<td>−12</td>
<td>−5</td>
</tr>
<tr>
<td>4 Mass shootings</td>
<td>−15</td>
<td>−6</td>
<td>−2</td>
<td>−23</td>
<td>−12</td>
<td>−7</td>
</tr>
<tr>
<td>5 Property crime</td>
<td>−5</td>
<td>−1</td>
<td>3</td>
<td>−10</td>
<td>−5</td>
<td>0</td>
</tr>
<tr>
<td>6 Participation in hunting and sport shooting</td>
<td>−10</td>
<td>−2</td>
<td>0</td>
<td>−3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7 Legal acts of defensive gun use</td>
<td>−21</td>
<td>−10</td>
<td>−3</td>
<td>−5</td>
<td>−1</td>
<td>0</td>
</tr>
<tr>
<td>8 Sales of new firearms</td>
<td>−8</td>
<td>−2</td>
<td>0</td>
<td>−8</td>
<td>−3</td>
<td>0</td>
</tr>
</tbody>
</table>

NOTE: Table values show the net change in outcomes at the national level after implementing state prosecution of prohibited possessors seeking firearms, expanded mental health prohibitions, and a child access prevention law in states that do not already have such laws. The 25th and 75th percentiles describe the interquartile range of combined effect estimates for the group. Combined effects are estimated under the assumptions described in Chapter Six.
might be counterbalanced by the perceived benefits—certainly for the restrictive group but also possibly for the permissive group.

Nevertheless, a median neutral rating among experts in the permissive class is not a ringing endorsement, and there may be little motivation within this group to accept the uncertainties, intragroup conflict, and possible unintended consequences of endorsing such a plan. Our findings point to possible concessions that those in the restrictive class might consider to improve the attractiveness of a bargain among stakeholders while still achieving many of the desired social benefits. For instance, according to our Gun Policy Expert-Opinion Tool, if permitless carry was implemented along with the three other policies, both expert groups would still expect large reductions in firearm suicides, firearm homicides, and mass shootings, as well as reductions in property crime and accidental firearm deaths; at the same time, negative effects of just the three policies on legal acts of defensive gun use and sales of new firearms would be moderated.

Good inferences about how opposing parties in gun policy negotiations might view such combinations of policies cannot be drawn from this study. The estimates and ratings of the expert classes may not be representative of the views of those likely to be influential in policy debates, and our approach to combining effect estimates requires strong assumptions that we cannot fully evaluate. We believe, however, that there is merit to considering the net effects of policies on the interests and concerns of all or a wide variety of stakeholders and to exploring tools like the one we developed from the survey results, recognizing that such tools’ chief value may be in generating hypotheses or ideas for compromise packages of laws that might gain the support of stakeholders on both sides of gun policy debates.

Experts’ Estimates of the Probable Effects of Policies Are Broadly Consistent with Scant Available Science

Reviews of gun policy research routinely show that there are few rigorous studies of the effects of various policies, such as those considered in this report; in addition, when rigorous methods have been used to establish the causal effects, results have often been inconclusive because they appear to be highly sensitive to minor adjustments to the statistical modeling approach, have little statistical power (or chance of finding true effects of the policies), or suffer from other methodological limitations (Crifasi et al., 2019; Lee et al., 2017; RAND Corporation, 2018; Smart, Morral, et al., 2020; Yakubovich et al., 2021). The limited scientific evidence base is compounded by the fact that scientific publications on gun violence and other outcomes are far less common than are publications on traffic fatalities, sepsis, or other causes of comparable numbers of deaths, which is itself a consequence of the many years during which the federal government’s investment in research on gun mortality was only about 1.6 percent as much as it was in research on those other causes of death (Stark and Shah, 2017).

After a 2020 comprehensive review of the most-rigorous available studies on the effects of gun policies, the Gun Policy in America project team concurred that available evidence for
the effects of policies on a wide variety of outcomes is weak and that, in many cases, no rigorous studies are yet available (Smart, Morral, et al., 2020). Across the 144 policy and outcome pairs on which the authors searched for rigorous research, the strongest available evidence was for (1) the effects of child access prevention laws on firearm self-injuries (including suicides) and unintentional firearm injuries and deaths among children and (2) the effects of stand your ground laws on firearm homicides.

For child access prevention laws, we identified six studies sufficiently rigorous to meet our inclusion criteria. Across these studies, we extracted six estimates for how child access prevention laws affect firearm suicides or firearm self-injury among young people. The median incidence rate ratio across those estimates was 0.88. The median risk ratio for a permissive class member suggested that child access prevention laws have little effect on overall suicide rates (median risk ratio = 1.0; IQR: 0.95–1.0), while the median risk ratio for a restrictive class member was 0.95 (IQR: 0.90–0.98). However, the survey asked about the policy’s effects on all suicides, while studies in the empirical literature looked exclusively at youth suicides, a subgroup that might be more affected by child access prevention laws.

The authors of the 2020 research review also found relatively strong evidence that child access prevention laws can reduce unintentional firearm injuries and deaths. For this outcome, there were nine effect size estimates for various age ranges of individuals aged 19 or younger. The median of these effects was 0.91, although many of the effects were poorly estimated and relatively imprecise. As with suicides, the empirical literature evaluating these policies has focused on youth injuries and deaths, while the survey focused on firearm deaths in the total population; thus, the findings are not directly comparable. As a result, we regard both the permissive-class estimate of 0.97 (IQR: 0.95–1.0) and the restrictive-class estimate of 0.90 (IQR: 0.85–0.97) as broadly consistent with the scientific literature.

The 2020 review also identified supportive evidence for the effects of stand your ground laws on firearm homicides. Across six studies, all estimated these laws to be associated with increases in firearm homicide rates. The median effect size across all studies was 1.07. Stand your ground laws were one of the few types of policies on which experts estimated effects in opposite directions. Specifically, experts in the restrictive class expected an increase in firearm homicides by a factor of 1.05 (IQR: 1.03–1.10), which is reasonably close to the median effect from the literature, while experts in the permissive class expected a reduction in homicides by a factor of 0.95 (IQR: 0.90–1.05).

Aside from these two of the 19 policies evaluated in the survey, the research review identified no other policies for which the weight of available evidence was strongly supportive of a particular effect. A particularly promising area for empirical research may therefore be to build the scientific evidence base in areas for which groups of experts disagree about even the direction of policy effects on outcomes. Specifically, the two classes of experts held sharply divergent beliefs about the likely effects of the elimination of gun-free zones on firearm homicides and mass shootings, as well as the likely effects of permitless-carry laws on firearm homicides. The 2020 research review (Smart, Morral, et al., 2020) identified no rigorous studies that provided evidence on these effects.
Group Differences Concern True Effects of Policies, Not Different Priorities or Policy Objectives

Experts’ views on the merits of the policies we studied were strikingly polarized, with almost no overlap in favorability ratings between the permissive and restrictive classes. We examined whether these nearly diametrical perspectives result from differences in beliefs about the true effects of the policies or from differences in experts’ preferences concerning what the objectives of gun policies should be.

Prior work has routinely concluded that differences in the expected effects of policies account for only a small or modest portion of the disagreements between opposing parties in gun debates (e.g., Hartnagel, 2002; Kleck, Gertz, and Bratton, 2009; Mauser and Margolis, 1992; Smith, 2000; Sorenson, 2015), leading some to suggest that policy disagreements are rooted not in questions of fact but instead in deep cultural differences that might be harder to resolve (Kleck, Gertz, and Bratton, 2009). But these studies have typically considered a small set of policies and often just a single outcome, such as firearm homicides. These range restrictions may have obscured the underlying similarities of experts’ policy objectives. As is clear in debates over gun policies and in our model results, many other effects of a policy are also important, such as how it might affect suicides, the right to bear arms, the right to defend oneself, unintentional injuries, and gun sales. Similarly, our inclusion of the ability for experts to indicate whether they believed that a policy could worsen or improve an outcome, and our inclusion of a wider variety of policies, may have helped identify those objectives in our statistical models.

To evaluate the role of assumed policy effects versus preferred policy objectives in gun policy differences, we therefore included a much wider set of possible outcomes of policies. We reasoned that, if disagreements about the true effects of policies explain differences in policy favorability ratings, then, in a model predicting favorability ratings, estimates of the empirical effects of policies might explain favorability ratings in comparable ways for both groups of experts. On the other hand, if groups differ on which outcomes they value or prioritize (say, reductions in homicides or protection of the right to bear arms), this would be revealed by interaction terms in the model indicating between-group differences in how the expected effects of a policy predict each expert’s favorability rating for that policy. For example, one might hypothesize that experts in the restrictive class would assign higher favorability ratings to policies that they believe will reduce homicides, while experts in the permissive class would assign higher favorability ratings to policies that they believe will protect the right to bear arms.

However, our results strongly suggest that differing favorability ratings in the permissive and restrictive groups were explained largely, and indeed almost exclusively, by differences in estimates of what the true effects of the policies will be, not by differences in which policy outcomes predict the groups’ favorability ratings. Indeed, both groups’ most strongly preferred policy goals were to reduce firearm suicides and firearm homicides. Secondary priorities appeared to be protecting individuals’ privacy, reducing mass shootings and accidental firearm deaths, and facilitating participation in hunting and sport shooting.
Including interactions by class of expert provided almost no additional explanatory power in the model. When we reran the model without these interaction terms, model performance was barely degraded (explained variance fell from 77 percent to 76 percent). These results suggest that, even though minor differences may exist in the policy goals for these two classes of experts, those differences were not associated with appreciable differences in experts’ favorability ratings.

Our finding that group differences in favorability ratings were almost exclusively explained by differences in the experts’ stated beliefs about the effects of the policies, not by which effects they value the most, might be questioned by those who wonder whether the group favoring more-permissive policies was too small ($n = 26$) for such effects to be detected. Although this concern is reasonable, it was substantially mitigated by the exceptionally good predictive performance of the final model, which explained more than 75 percent of variance in each group’s favorability ratings. Thus, if there were group differences that went undetected in our model, they were necessarily dwarfed in importance compared with the explanatory power of the differences in policy effect estimates.

Moreover, across the policies we considered, differences in experts’ estimates about the policies’ true effects usually concerned the magnitude of likely effects, not their direction. However, even when experts disagreed on the direction of effects, our results suggest that all experts preferred laws that they believed will achieve their shared objectives. Thus, although both groups especially favored policies that they believed will reduce firearm homicides, one group estimated that a permitless-carry policy will achieve that goal (i.e., that lawful citizens carrying guns will deter criminals), while the other group estimated that a permitless-carry policy will do the opposite (i.e., that more people carrying guns will lead to a greater use of guns in interpersonal conflicts). Importantly, what appears to divide the groups is a question of fact that may be knowable: Does a permitless-carry policy increase or decrease firearm homicides?

The modeling shows that, regardless of whether respondents favored making gun laws more restrictive or more permissive, the experts’ favorability ratings were very well predicted by their stated beliefs about (i.e., their estimates of) the true effects of the policies on suicides, homicides, and other outcomes. This finding does not necessarily imply that the respondents’ favorability ratings were caused by those beliefs. Our data are correlational and do not support strong causal inferences. For example, one’s beliefs about the true effects of a policy could have been affected by one’s overall opinion of the policy, or one’s beliefs could be molded by advocacy groups that promote policy positions and particular assumptions about the effects of the policy. Regardless of the causal origins of these beliefs about the effects of various policies, disagreements in those beliefs may be a substantial impediment to improving gun policies. Whatever the origin of the beliefs, once someone believes that a given policy would increase the risk of suicide, homicide, and other harmful societal outcomes, it would be irrational for the individual to support that policy. One does not need to interpret our model as showing a causal effect of beliefs on favorability ratings in order to view those beliefs as critical factors in preventing a consensus on which gun policies to pursue.
The fact that experts’ favorability ratings of policies were associated with differences in their estimates of the true effects of policies rather than differences in policy objectives or priorities suggests an important role for new and improved collection of scientifically valid information about the true effects of gun policies. Nevertheless, we do not believe that such new information will be readily or easily accepted by those whose established views are contradicted by it. Individuals’ views on gun policies—supporting a permissive or restrictive approach—are often important expressions of their identification with various social groups on which they depend psychologically and economically (Kahan, 2017). There is compelling evidence that the public, experts, and politicians selectively discount scientific information if accepting it could threaten ties or status within these important social groups, such as by damaging professional alliances, peer acceptance, or economic well-being (Baekgaard et al., 2019; Kahan, 2016; Kahan et al., 2017; Koehler, 1993).

Therefore, we cannot conclude that differences in experts’ beliefs about the true effects of gun policies cause differences in experts’ favorability toward those policies. Our analyses are equally consistent with the possibility that one or both groups of experts bend their estimates of the likely effects to match their policy preferences. If so, however, our analyses demonstrate that both groups share the same understanding of which outcomes are acceptable to prioritize, as well as the relative weight that each outcome we considered should have. That is, even if experts in one group secretly prioritize an outcome other than reduced mortality, they recognize that the debate on gun policy must be won with appeals about a policy’s mortality-reducing benefits. Again, therefore, clear and persuasive scientific evidence on whether policies achieve the objectives that both groups claim to share may well be influential in shaping public opinion on gun policies. Some experts might continue to deny good science as it mounts, but if the public and experts generally agree on the acceptable policy objectives, the accumulation of evidence that particular policies achieve those objectives would offer promise for shifting public opinion to support those policies.

We do not mean to suggest that experts in one or the other group are, in fact, engaged in motivated reasoning or strategically claiming effects of laws that they do not actually believe. Instead, our analysis shows that even deep skepticism about the sincerity of the experts’ ratings does not undermine our conclusion that building better scientific evidence on the effects of laws appears to be a promising approach to shifting public opinion in favor of policies that lead to the objectives that appear to be the most important to both groups.

Groups Differ on Fundamental Questions About Guns and Gun Policy

The primary focus of the survey was to describe experts’ opinions and estimates of the effects of various firearm policies, but the survey also revealed broader differences in the worldviews of experts in the permissive and restrictive groups that may partially explain how they came to their different policy positions. Specifically, we found that experts favoring more-
permissive gun policies generally believed that a substantial percentage of a gun policy’s possible benefits of reducing firearm suicide or firearm homicide are offset by increases in nonfirearm homicide and suicide. They also believed that acquiring a gun typically reduces the risk of homicide for both the owner and the owner’s family. Experts favoring more-restrictive policies had very different views, believing that policies that reduce gun violence have minimal or no adverse effects on nonfirearm deaths and that acquiring a gun puts both the owner and the owner’s family at increased risk of homicide.

These two groups differed dramatically in their opinions about how guns and gun policies function in the world, with minimal overlap between the two distributions. Such dramatic difference of opinion may be facilitated by a lack of convincing scientific research that estimates these effects. For example, there are few direct estimates of the extent to which the effects of policies on firearm mortality rates are counteracted or enhanced by corresponding effects on nonfirearm mortality, and estimates that do exist for the U.S. context are highly imprecise (Smart, Schell, et al., 2020). Similarly, although both individual-level studies (Anglemyer, Horvath, and Rutherford, 2014) and ecological studies (e.g., Miller, Hemenway, and Azrael, 2007; Siegel, Ross, and King, 2014) have demonstrated an association between firearm ownership and elevated risk of homicide victimization, the causal direction of this relationship is difficult to assess because of limited data on longitudinal patterns of firearm acquisition and methodological challenges with controlling for underlying risk of homicide victimization. However, clever research designs (e.g., Wintemute et al., 2001, 2002; Wright, Wintemute, and Rivara, 1999) or linkage of individual-level firearm purchase data available in some states (e.g., California) with mortality records could make progress toward clarifying causal relationships between gun ownership and homicide risk.

To what extent (if any) are a policy’s reductions in gun violence undermined by the policy’s unintended effects on other forms of violence? Does gun ownership protect the typical owner and the owner’s family from community violence, or does it create additional risk for such violence? In our view, the current scientific literature does not provide a convincing answer to either of these questions, but these answers could be key for achieving any meaningful consensus on appropriate and effective firearm policies. Attempting to answer these questions should be considered a research priority by funders, researchers, and journal editors.

---

1 Although several studies have found evidence of only small and partial lethal means substitution at the individual level for both suicide (Barber and Miller, 2014; Studdert et al., 2020) and homicide (Braga et al., 2021; Cook, 2018; Zimring, 2004), this does not entirely address whether policies that produce population-level reductions in firearm suicides or homicides result in minimal offsetting effects on nonfirearm suicides or homicides. Several studies evaluating the population-level effects of U.S. gun laws on firearm deaths (e.g., firearm homicides or firearm suicides) also include separate analyses of the laws’ effects on nonfirearm deaths, but these evaluations have tended to focus on only the statistical significance of the nonfirearm effects or to provide comparative discussion of the firearm versus nonfirearm point estimates without taking into consideration the uncertainty around those estimates or the relative base rates of the two outcomes. These types of analyses thus do not directly speak to the question of the magnitude of potential spillover effects, which our survey results suggest is a key point of disagreement across the expert classes.
Recommendations

We regard the analyses presented in this report as exploratory. They are based on a relatively small sample of experts and just 19 gun policies, all of which offer only marginal changes to existing U.S. regulations that have been found to be consistent with the Second Amendment. Our focus on ten outcomes substantially improves on earlier such work but may still neglect important effects of gun policies. Because this is an exploratory analysis, we regard our inferences from it as interesting hypotheses that should be further tested and examined in later work designed to confirm or refute them.

Our findings support the following tentative recommendations:

1. The policies that are most politically feasible to enact might be those for which both the permissive and restrictive classes of experts generally reported neutral or positive favorability ratings. State prosecution of prohibited possessors seeking firearms and surrender of firearms by prohibited possessors both received neutral or positive ratings from 75 percent or more of experts in both groups.

2. Those on each side of the gun policy debate should be aware that, despite some appearances, there is evidence that their opponents may share many of the same policy objectives. Both the permissive and restrictive groups of experts preferred policies that they believed will reduce homicide, suicide, or crime, but they disagreed about which policies will best achieve those aims. Although there are certainly situations, individuals, and objectives for which there is no common ground, it might be useful in gun policy negotiations to focus more clearly on the goals that the two sides share.

3. If the majority of policy disagreements are associated with factual questions about policies’ true effects, new and significant investment in the scientific study of gun policies offers a promising available path for building consensus on gun policy. In 2020, for the first time in nearly 25 years, Congress appropriated funds for this kind of research, which we believe should be continued and broadened into a major line of research supported by the federal government at levels comparable to the support it has provided to efforts to prevent car crash injuries, smoking, and other threats to public safety and health. Because beliefs about gun policies are deeply entangled with personal and political identities, the credibility of new scientific information is certain to be challenged by those whose presumptions and group ideologies are contradicted by that evidence. Nevertheless, because there may be general agreement on the objectives of gun policies, efforts to improve the science base on how to achieve those objectives through improved gun policy may help win converts to an expanded consensus view.

4. One factual question that appears to be of key importance concerns the magnitude of firearm policy spillover effects; that is, when a policy succeeds in preventing firearm suicides and homicides, how will this affect the rate of nonfirearm suicides and homicides? Although both classes of experts typically believed that such spillover occurs,
estimates of the magnitude of these effects varied dramatically. We believe that better information about this question could have implications for how people on all sides of gun policy debates evaluate the merits of individual policies. Therefore, we recommend that funders and researchers (1) prioritize investigating whether spillover effects undermine the intended effects of gun policies and, if they do, (2) develop strategies that minimize these spillover effects.

Overall, we believe that, without new, more-rigorous, and more-conclusive scientific research estimating the effects of gun policies on the outcomes considered in this report, policymakers and the public will depend on their own beliefs about those effects and the beliefs of the experts they trust. There are considerable differences of opinion about these effects among experts, and there is very little solid empirical research that can currently resolve these differences of opinion (RAND Corporation, 2018; Smart, Morral, et al., 2020). Thus, for the time being, expert opinion may be the best guidance available for crafting fair and effective firearm policies.
APPENDIX A

RAND Survey of Firearms Experts

This appendix reproduces the text presented to survey respondents. Programmer instructions are listed in brackets and in blue font. Survey respondents saw all text shown in black. Item numbers are in red and were not displayed to respondents.

RAND Survey of Firearms Experts
(Version 4-17-20)

This survey is part of a research project estimating the likely effects of a wide range of gun policies, including both the benefits and harms of each. The results of this survey will provide valuable information on policies most likely to protect individual liberties, safety, and health.

We are reaching out to experts from across the spectrum of views on gun policy. You were selected to participate in this survey because of your work on gun policy topics.

This survey asks for your expert judgments on the effects of different policies, and your policy preferences. We ask how these policies affect many outcomes, including health, crime, safety, individual rights, hunting and recreation.

Your participation is confidential: we will never disclose your responses in a way that identifies you. Participation is voluntary and should pose no risk to you. You may skip questions or discontinue participation at any time, although we hope you choose to complete the survey.

The survey takes about 30 minutes to complete, and you will receive a $50 Amazon gift card as a token of our appreciation.
INSTRUCTIONS

[The following instructions are shown before the next set of questions, but are also accessible to the respondent during the evaluation of policies through an “instructions for completing this survey” link on each page.]

Our first questions ask you to estimate the effect of a policy on outcomes for a typical U.S. state. Some of the outcomes we ask about for each policy are randomized and will differ across policies.

- Unless stated otherwise, assume that before adopting the policy, the state’s firearm laws do not go beyond federal firearms regulations.
- Use your expert judgment on how well the policies are likely to be implemented and enforced.
- When indicating the size of the policy effect, indicate the effect size you would expect after sufficient time has passed for the policy to have its full effect, e.g., five-years after the policy has been enacted.
- If your estimates depend on whether other states adopt the policy, assume that all states adopt the policy.

This survey works best on a full-sized monitor. If you choose to complete the survey on a mobile device, responses are easier to select by turning your device horizontally.

You may return to this survey at any time by clicking the link in the invitation email. When you return later to complete the survey, you will be taken to the last question you answered.

Click the “Next” button to begin.

[The presentation of policies and 10 follow up questions is illustrated here using Policy 1. In an actual survey, each respondent will be asked about a subset of these questions. A list of the questions each respondent is to receive and the order in which those questions are to be presented will be provided.]

[The policy should be bold in a text box and remain at the top of the page for the follow-up questions.]
1. **Q1PX** If a state implemented *universal background checks*, how much would **firearm suicides** change? [The first time this question is asked, add the following sentence: This question is only about *firearms* suicide; you will be asked later about non-firearm suicides. Mark the suicide rate with the law as a percentage of the rate without the law, by clicking on the line or one of the endpoints.]

With the law, the **firearm suicide rate** would be ____% of what it was without the law

 ![Rate DECREASES by 20%](80%) ![No change](90%) ![Rate INCREASES by 20%](120%)

☐ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record −1 for Q]

[For the first presentation of OPX_1 only, print the following text: Example: if you select 93%, you are saying that a state that has 1000 suicides without this policy would have 930 suicides with this policy. In other words, this policy would reduce suicides by 7%.]

2. **Q2PX** If a state implemented *universal background checks*, how would **firearm homicides** change? [The first time this question is asked, add the following sentence: This question is only about *firearms* homicides; you will be asked later about non-firearm homicide.]

With the law, the **firearm homicide rate** would be ____% of what it was without the law

 ![Rate DECREASES by 20%](80%) ![No change](90%) ![Rate INCREASES by 20%](120%)

☐ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]
3. **Q3PX** If a state implemented *universal background checks*, how much would *accidental firearms deaths* change?

With the law, the *accidental firearm death rate* would be ____% of what it was without the law

Less than

80%  80%  85%  90%  95%  100%  105%  110%  115%  120%   

More than

Rate DECREASES by 20%

No change

Rate INCREASES by 20%

☐ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]

4. **Q4PX** If a state implemented *universal background checks*, how would *mass shootings* change? Mass shootings refer to incidents where four or more people are killed, not including the shooter.

With the law, the *mass shooting rate* would be ____% of what it was without the law

Less than

80%  80%  85%  90%  95%  100%  105%  110%  115%  120%   

More than

Rate DECREASES by 20%

No change

Rate INCREASES by 20%

☐ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]

5. **Q5PX** If a state implemented *universal background checks*, how would the rate of *burglary, theft, and auto theft* change?

With the law, the *property crime rate* would be ____% of what it was without the law

Less than

80%  80%  85%  90%  95%  100%  105%  110%  115%  120%   

More than

Rate DECREASES by 20%

No change

Rate INCREASES by 20%

☐ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]
6. **Q6PX** If a state implemented *universal background checks*, how would participation in hunting and sport shooting change?

With the law, the **hunting and sport shooting rate** would be ____% of what it was without the law

- Less than 80%
- 80%
- 85%
- 90%
- 95%
- 100%
- 105%
- 110%
- 115%
- 120%
- More than 120%

- Rate **DECREASES** by 20%
- No change
- Rate **INCREASES** by 20%

○ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]

7. **Q7PX** If a state implemented *universal background checks*, how would legal acts of **defensive gun use** change? This refers to using a firearm to protect oneself or others from imminent death or serious injury.

With the law, the **defensive gun use rate** would be ____% of what it was without the law

- Less than 80%
- 80%
- 85%
- 90%
- 95%
- 100%
- 105%
- 110%
- 115%
- 120%
- More than 120%

- Rate **DECREASES** by 20%
- No change
- Rate **INCREASES** by 20%

○ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]

8. **Q8PX** If a state implemented *universal background checks*, how would sales of new firearms change?

With the law, the **firearm sales rate** would be ____% of what it was without the law

- Less than 80%
- 80%
- 85%
- 90%
- 95%
- 100%
- 105%
- 110%
- 115%
- 120%
- More than 120%

- Rate **DECREASES** by 20%
- No change
- Rate **INCREASES** by 20%

○ No opinion [PROGRAMMER: radio button; selecting this should un-select the slider and record 999 for Q]
9. **Q9PX** How much do *universal background checks* threaten or protect the right to bear arms?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major threat</td>
<td>Moderate threat</td>
<td>Minimal threat</td>
<td>No impact</td>
<td>Minimal protection</td>
<td>Moderate protection</td>
<td>Major protection</td>
</tr>
</tbody>
</table>

10. **Q10PX** How much do *universal background checks* threaten or protect individuals’ privacy?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major threat</td>
<td>Moderate threat</td>
<td>Minimal threat</td>
<td>No impact</td>
<td>Minimal protection</td>
<td>Moderate protection</td>
<td>Major protection</td>
</tr>
</tbody>
</table>

11. **Q11PX** What is your overall opinion of *universal background checks*? Would you say *universal background checks* are . . .

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very bad policy</td>
<td>Bad</td>
<td>Neither bad nor good</td>
<td>Good</td>
<td>Very good policy</td>
</tr>
</tbody>
</table>

[Questions Q1PX–Q11PX are asked for each of the selected policies, substituting the underlined phrase associated with each policy for “universal background checks.”]

**Policy 1. Universal background checks.**

People who are prohibited by law from having firearms sometimes obtain them through private sales that do not require background checks. *Universal background checks* require background checks prior to all transfers of firearms, including private sales over the internet, at gun shows, and between friends (temporary loans and gifts between family members are exempted). Background checks for private sales are conducted by a government agency or by a licensed gun dealer.

**Policy 2. A ban on sale of “assault weapons” and high capacity magazines.**

This law bans certain semi-automatic firearms with detachable magazines and other features such as pistol grips, folding stocks, or the ability to mount a bayonet. The law also bans magazines that hold more than 15 rounds of ammunition. Owners of these weapons at the time the law is passed may keep them if each weapon is registered with a state authority.
Policy 3. A stand your ground law.
This law permits a person to use deadly force without the duty to retreat when confronting a threat that could reasonably result in death or serious injury. Without this law, people outside their homes must try to withdraw from a serious threat, if possible, before using deadly force.

Policy 4. Expanded mental health prohibitions.
When a judge has committed someone to an inpatient mental institution or has found them to be unable to manage their own affairs, federal law prohibits that person from having firearms. This law expands the mental health histories leading to prohibition to include people ordered to receive outpatient mental health treatment, and those involuntarily confined because a mental health professional determined they present a danger to themselves or others.

Policy 5. Required reporting of lost or stolen firearms.
Firearm owners must report lost or stolen firearms to law enforcement authorities within three days of discovering the loss. Penalties for failure to report include civil or criminal liability if the firearm is used in a crime.

Policy 6. Requiring a license to purchase a firearm or ammunition.
This law requires a firearms license to purchase or possess a firearm or ammunition. These licenses require successful completion of a safety training course or safety test and a background check, and cost $100. They must be renewed every ten years.

Policy 7. Required reporting and recording of firearms sales.
This law requires reporting all firearms sales to a government agency, including information on the firearms and who bought them. This applies to sales by both firearms dealers and private sellers. Law enforcement is permitted to retain the data indefinitely for two purposes: to trace firearms found at crime scenes and to retrieve firearms from individuals who become prohibited possessors.

This law imposes criminal penalties on firearm owners when a child accesses a usable weapon that was stored in a location where the owner should have known a child could access it.

Policy 9. Surrender of firearms by prohibited possessors.
When a judge’s rulings place an individual in a class that is prohibited by law from possessing or purchasing a firearm, the judge must also determine whether that individual has firearms, and must order their surrender. This includes people convicted of a felony, those convicted of misdemeanor domestic violence, and those subject to a domestic violence protective order.
Policy 10. *Firearm and ammunition taxes.*
This policy imposes a special $25 tax on the sale of firearms and a 25% tax on the sale of ammunition.

Currently, federal law generally prohibits those younger than 18 from having a handgun, and licensed dealers are prohibited from selling them to anyone younger than 21. Those younger than 18 may have a long gun, but licensed dealers may not sell them to anyone younger than 18. The minimum age requirements policy raises the minimum age for purchase or possession of handguns and long guns to 21.

This policy allows anyone who is at least 21 years old and not prohibited by law from having a firearm to carry a concealed weapon in public without a permit. For the questions below, assume that before adopting *permitless carry,* the state required concealed carry permits that were issued to those with good moral character and sufficient reason for a concealed firearm.

Policy 13. *Requiring a ten-day waiting period to purchase a firearm.*
This law imposes a waiting period of ten days between the purchase of a firearm and when the buyer can take possession of it. For this question, assume that the state already has a universal background check requirement.

Federal and some state laws prohibit carrying a firearm near schools and certain other public places. This policy allows firearms in these previously prohibited locations. For this question, assume federal and state laws change in a state that previously prohibited private citizens from carrying firearms into schools, universities, government buildings and parks.

This law authorizes police and family to request a court order prohibiting an individual deemed at imminent risk to themselves or others from possessing firearms, requiring him/her to temporarily relinquish all firearms to the police. The court can order the emergency removal of firearms for 14 days without giving the gun owner an opportunity to present evidence. Failure to surrender all firearms results in criminal penalties. Longer removals require a hearing at which the owner may present evidence they are not a high risk.

Policy 16. *Firearms prohibitions for individuals subject to domestic violence restraining orders.*
This state law prohibits gun possession by individuals subject to domestic violence restraining orders. Each restraining order requires the surrender of firearms to police for 14 days without giving the gun owner an opportunity to present evidence. Failure to surrender all firearms results in criminal penalties. Longer removals require a hearing at which the owner may present evidence they are not a domestic violence risk.
Policy 17. Arming school personnel in K–12 educational settings.
This policy specifically allows school personnel—other than peace officers—to carry firearms on school property. Staff members authorized to carry firearms are required to undertake at least 40 hours of initial training that covers use of force, weapons proficiency, the law, and first aid.

Policy 18. Gun purchase limits.
This state law prohibits individuals who are not licensed firearms dealers from purchasing more than one handgun within a 30-day period. All private and dealer sales are reported to a state agency that flags individuals who have purchased more than one handgun in a 30-day window. It is a crime for both seller and buyer to complete the sale if this check fails. All records of sales are destroyed after 60 days.

This state law criminalizes attempted purchase of firearms by individuals prohibited by law from possessing a firearm. It also funds personnel who are tasked exclusively with investigating and prosecuting prohibited possessors who make false statements on state or federal forms when attempting to acquire a firearm.

[The next questions each appear on separate pages.]

The next questions ask about some of the indirect effects that firearm policies may have on non-firearm deaths.

12. ME1 Gun laws that successfully prevent firearm homicides may indirectly increase or decrease non-firearm homicides. Preventing firearm homicides could INCREASE non-firearm homicide if some murderers substitute other weapons for firearms. Preventing firearm homicides could DECREASE non-firearm homicides by preventing cycles of violence, or by freeing up police enforcement resources.

If 100 firearm homicides were prevented, how would this change the number of non-firearm homicides?

- Decrease more than 100
- Decrease non-firearm homicides by 100
- No effect on non-firearm homicide
- Increase non-firearm homicides by 100
- Increase more than 100
- No opinion
13. **ME2** Gun laws that successfully prevent firearm suicides may indirectly increase or decrease non-firearm suicides. Preventing firearm suicides could INCREASE non-firearm suicides if some of those individuals switch to other means of suicide. Alternatively, preventing firearm suicides could DECREASE non-firearm suicides if suicides are contagious (i.e., each suicide puts others in the community at increased risk for dying by suicide).

If 100 firearm suicides were prevented, how would this change the number of non-firearm suicides?

- Decrease more than 100
- Increase more than 100
- Decrease non-firearm suicides by 100
- No effect on non-firearm suicides
- Increase non-firearm suicides by 100
- No opinion

[The next questions appear on a separate page.]

The next question asks about the effects of legal firearm ownership on homicide risk for different groups.

14. **Q_RISK** Ownership and homicide risk Compared to not owning a handgun, how much would an average person’s risk of being murdered change if they legally **acquired a handgun**? Having the gun could affect homicide risk through protective effects, escalation of conflict, or the use of the gun itself in a homicide.

**Q_RISKa** Risk of homicide for the legal gun owner would be ____% the risk if they had not acquired the gun

- Eliminates risk of homicide
- No effect on homicide risk
- Doubles risk of homicide
**Q_RISKb** Risk of homicide for the spouse/partner living in the household of the legal gun owner would be ____% the risk if their spouse/partner had not acquired the gun

0% 25% 50% 75% 100% 125% 150% 175% 200%

Eliminates risk of homicide
No effect on homicide risk
Doubles risk of homicide

**Q_RISKc** Risk of homicide for a child living in the household of the legal gun owner would be ____% the risk if the person had not acquired the gun

0% 25% 50% 75% 100% 125% 150% 175% 200%

Eliminates risk of homicide
No effect on homicide risk
Doubles risk of homicide

15. Listed below are organizations selected because they have taken public positions on firearms policies and represent diverse perspectives on those policies. Please indicate how similar your own views on firearms policies are to those of each organization. If you are unfamiliar with an organization’s positions, mark “Not Sure.”

[Present list in randomized order for each participant. Use the following response scale.]

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very different</td>
<td>Mostly different</td>
<td>Slightly different</td>
<td>Slightly similar</td>
<td>Mostly similar</td>
<td>Very similar</td>
<td>Not sure</td>
</tr>
</tbody>
</table>

a. **QOS1** The National Rifle Association
b. **QOS2** Gun Owners of America
c. **QOS3** The Brady Campaign to Prevent Gun Violence
d. **QOS4** Everytown for Gun Safety
16. Which of the following best describes your relationship to gun policy (choose all that apply):

[Present list in randomized order for each participant.]

a. QP1_1 Professional researcher/scientist
b. QP1_2 Policy analyst
c. QP1_3 Policy advocate
d. QP1_4 Interested layperson
e. QP1_5 Government official
f. QP1_6 Congressional staff member

17. Q18 If you have comments or clarifications you would like us to consider, please provide them here.
APPENDIX B

Descriptive Statistics by Expert Class, Outcome, and Policy

This appendix provides detailed descriptive information about the survey responses used in the analysis described in Chapter Four. Tables B.1 and B.2 summarize median differences in effect estimates by the two classes of experts across all policies and outcomes. Table B.3 provides more-granular data on the estimates made by each class of experts. In Table B.3, policies and outcomes are indicated by number, as follows:

Policies

1. universal background checks
2. a ban on sale of “assault weapons” and high capacity magazines
3. a stand your ground law
4. expanded mental health prohibitions
5. required reporting of lost or stolen firearms
6. requiring a license to purchase a firearm or ammunition
7. required reporting and recording of firearm sales
8. a child access prevention law
9. surrender of firearms by prohibited possessors
10. firearm and ammunition taxes
11. minimum age requirements
12. permitless carry
13. requiring a ten-day waiting period to purchase a firearm
14. the elimination of gun-free zones
15. extreme risk protection orders
16. firearm prohibitions for individuals subject to domestic violence restraining orders
17. arming school personnel in K–12 educational settings
18. gun purchase limits
19. state prosecution of prohibited possessors seeking firearms
Outcomes

1. firearm suicides
2. firearm homicides
3. accidental firearm deaths
4. mass shootings
5. property crime
6. participation in hunting and sport shooting
7. legal acts of defensive gun use
8. sales of new firearms
9. right to bear arms
10. individuals’ privacy.


### Table B.1

Differences in Group Medians (Restrictive Minus Permissive) for Estimated Policy Effects on the Eight Quantitative Outcomes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19 State prosecution of prohibited possessors seeking firearms</td>
<td>−2</td>
<td>0</td>
<td>0</td>
<td>0.5</td>
<td>−0.5</td>
<td>0</td>
<td>0</td>
<td>−1</td>
<td>0.5</td>
</tr>
<tr>
<td>4 Expanded mental health prohibitions</td>
<td>−5</td>
<td>−3</td>
<td>−1</td>
<td>−3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
<td>1.8</td>
</tr>
<tr>
<td>8 A child access prevention law</td>
<td>−5</td>
<td>−2</td>
<td>−6.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2.3</td>
</tr>
<tr>
<td>9 Surrender of firearms by prohibited possessors</td>
<td>−4</td>
<td>−8</td>
<td>−2</td>
<td>−4.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.5</td>
<td>2.4</td>
</tr>
<tr>
<td>16 Firearm prohibitions for individuals subject to domestic violence restraining orders</td>
<td>−2</td>
<td>−7</td>
<td>−1</td>
<td>−4</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2.1</td>
</tr>
<tr>
<td>5 Required reporting of lost or stolen firearms</td>
<td>0</td>
<td>−5</td>
<td>0</td>
<td>−1</td>
<td>−1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.9</td>
</tr>
<tr>
<td>14 The elimination of gun-free zones</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4.5</td>
<td>0</td>
<td>−5</td>
<td>0</td>
<td></td>
<td>3.9</td>
</tr>
<tr>
<td>15 Extreme risk protection orders</td>
<td>−8.5</td>
<td>−4</td>
<td>0</td>
<td>−8</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

$^a$ Difference in favorability rating
## Table B.1—Continued

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arming school personnel in K–12 educational settings</td>
<td>0</td>
<td>1.5</td>
<td>5</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2.9 &lt;sup&gt;⇔&lt;/sup&gt; 5.4 &lt;sup&gt;⇔&lt;/sup&gt; 0.5 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt; 1.6 &lt;sup&gt;⇔&lt;/sup&gt; 0.5 &lt;sup&gt;⇔&lt;/sup&gt; 2.8 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firearm and ammunition taxes</td>
<td>0</td>
<td>–2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>1.6 &lt;sup&gt;⇔&lt;/sup&gt; 0.5 &lt;sup&gt;⇔&lt;/sup&gt; 2.8 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum age requirements</td>
<td>–4.5</td>
<td>–5</td>
<td>–4</td>
<td>–3</td>
<td>0</td>
<td>10</td>
<td>2.5</td>
<td>0</td>
<td>3.6 &lt;sup&gt;⇔&lt;/sup&gt; 4.1 &lt;sup&gt;⇔&lt;/sup&gt; 3.1 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal background checks</td>
<td>–8</td>
<td>–10</td>
<td>–3</td>
<td>–5</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>–2</td>
<td>4.1 &lt;sup&gt;⇔&lt;/sup&gt; 6.5 &lt;sup&gt;⇔&lt;/sup&gt; 1.8 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permitless carry</td>
<td>1</td>
<td>9.5&lt;sup&gt;⇔&lt;/sup&gt;</td>
<td>4.5</td>
<td>10&lt;sup&gt;⇔&lt;/sup&gt;</td>
<td>3.5</td>
<td>0</td>
<td>–2</td>
<td>0</td>
<td>3.8 &lt;sup&gt;⇔&lt;/sup&gt; 6.3 &lt;sup&gt;⇔&lt;/sup&gt; 1.4 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gun purchase limits</td>
<td>0</td>
<td>–5</td>
<td>–2</td>
<td>–3</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1.9 &lt;sup&gt;⇔&lt;/sup&gt; 2.5 &lt;sup&gt;⇔&lt;/sup&gt; 1.3 &lt;sup&gt;⇔&lt;/sup&gt; 3 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A stand your ground law</td>
<td>0</td>
<td>10&lt;sup&gt;⇔&lt;/sup&gt;</td>
<td>2</td>
<td>0</td>
<td>4.5</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>3.2 &lt;sup&gt;⇔&lt;/sup&gt; 3.0 &lt;sup&gt;⇔&lt;/sup&gt; 3.4 &lt;sup&gt;⇔&lt;/sup&gt; 3.5 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requiring a ten-day waiting period to purchase a firearm</td>
<td>–9</td>
<td>–5</td>
<td>0</td>
<td>–3</td>
<td>0</td>
<td>1.0</td>
<td>3</td>
<td>3</td>
<td>3.0 &lt;sup&gt;⇔&lt;/sup&gt; 4.3 &lt;sup&gt;⇔&lt;/sup&gt; 1.8 &lt;sup&gt;⇔&lt;/sup&gt; 3.5 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required reporting and recording of firearm sales</td>
<td>–5</td>
<td>–10</td>
<td>–2</td>
<td>–5</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>3.4 &lt;sup&gt;⇔&lt;/sup&gt; 5.5 &lt;sup&gt;⇔&lt;/sup&gt; 1.3 &lt;sup&gt;⇔&lt;/sup&gt; 4 &lt;sup&gt;⇔&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requiring a license to purchase a firearm or ammunition</td>
<td>–8</td>
<td>–10</td>
<td>–5</td>
<td>–5</td>
<td>–4&lt;sup&gt;⇛&lt;/sup&gt;</td>
<td>10</td>
<td>8.5</td>
<td>5</td>
<td>6.9 &lt;sup&gt;⇛&lt;/sup&gt; 7.0 &lt;sup&gt;⇛&lt;/sup&gt; 6.9 &lt;sup&gt;⇛&lt;/sup&gt; 4 &lt;sup&gt;⇛&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>3</sup> Differences indicate statistical significance.
### Table B.1—Continued

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A ban on sale of “assault weapons” and high capacity magazines</td>
<td>0</td>
<td>-5</td>
<td>-1</td>
<td>-15</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

**NOTE:** This table shows the differences in group medians (the median response value for the restrictive class minus the median response value for the permissive class) for estimated policy effects on the eight quantitative outcomes. Colors indicate the magnitude of differences between groups; green indicates that the restrictive group believed that the policy will yield greater reductions than the restrictive group believed it will, and red indicates the reverse. Darker shades indicate a greater magnitude of difference. As noted previously, we imputed responses that were planned to be missing. The policies in this table are ordered from those with the most similarity in effect estimates between groups to those with the least similarity, as described in Chapter Four.

<sup>a</sup> These columns show the mean of the absolute value of the between-class differences in medians across all eight quantitative outcomes (1–8), across death outcomes (1–4), and across other outcomes (5–8). Bold text indicates estimates for which there was higher-than-average agreement.

<sup>b</sup> This column shows the absolute value of the between-class differences in medians across the overall opinion measure.

<sup>⇔</sup> This symbol indicates that the medians of the two groups were on opposite sides of the response scale’s central point (100 for outcomes 1–8, and 3 for the overall opinion measure).
<table>
<thead>
<tr>
<th>Policy</th>
<th>9. Right to Bear Arms</th>
<th>10. Individuals’ Privacy</th>
<th>Average Difference in Estimates for Effects on Qualitative Outcomes $^a$</th>
<th>Difference in Favorability Rating $^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 State prosecution of prohibited possessors seeking firearms</td>
<td>0</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>4 Expanded mental health prohibitions</td>
<td>2</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
</tr>
<tr>
<td>8 A child access prevention law</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>1</td>
</tr>
<tr>
<td>9 Surrender of firearms by prohibited possessors</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>2</td>
</tr>
<tr>
<td>16 Firearm prohibitions for individuals subject to domestic violence</td>
<td>1</td>
<td>0</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>5 Required reporting of lost or stolen firearms</td>
<td>1</td>
<td>1.5</td>
<td>1.3</td>
<td>2</td>
</tr>
<tr>
<td>14 The elimination of gun-free zones</td>
<td>-2</td>
<td>0</td>
<td>1.0</td>
<td>2$^{\dagger}$</td>
</tr>
<tr>
<td>15 Extreme risk protection orders</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>2.5$^{\dagger\dagger}$</td>
</tr>
<tr>
<td>17 Arming school personnel in K–12 educational settings</td>
<td>-1</td>
<td>0</td>
<td>0.5</td>
<td>3$^{\dagger\dagger}$</td>
</tr>
<tr>
<td>10 Firearm and ammunition taxes</td>
<td>3</td>
<td>2</td>
<td>2.5</td>
<td>3$^{\dagger\dagger}$</td>
</tr>
<tr>
<td>11 Minimum age requirements</td>
<td>2.5</td>
<td>2</td>
<td>2.3</td>
<td>3$^{\dagger\dagger}$</td>
</tr>
<tr>
<td>1 Universal background checks</td>
<td>2</td>
<td>2</td>
<td>2.0</td>
<td>3$^{\dagger\dagger}$</td>
</tr>
<tr>
<td>12 Permitless carry</td>
<td>-2</td>
<td>-2</td>
<td>2.0</td>
<td>3$^{\dagger\dagger}$</td>
</tr>
</tbody>
</table>
### Table B.2—Continued

<table>
<thead>
<tr>
<th>Policy</th>
<th>9. Right to Bear Arms</th>
<th>10. Individuals’ Privacy</th>
<th>Average Difference in Estimates for Effects on Qualitative Outcomes(^a)</th>
<th>Difference in Favorability Rating(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Gun purchase limits</td>
<td>3</td>
<td>5</td>
<td>2.8</td>
<td>3(\text{⇒})</td>
</tr>
<tr>
<td>3 A stand your ground law</td>
<td>-1</td>
<td>0</td>
<td>0.5</td>
<td>3.5(\text{⇒})</td>
</tr>
<tr>
<td>13 Requiring a ten-day waiting period to purchase a firearm</td>
<td>2</td>
<td>1.5</td>
<td>1.8</td>
<td>3.5(\text{⇒})</td>
</tr>
<tr>
<td>7 Required reporting and recording of firearm sales</td>
<td>2.5</td>
<td>1.5</td>
<td>2.0</td>
<td>4(\text{⇒})</td>
</tr>
<tr>
<td>6 Requiring a license to purchase a firearm or ammunition</td>
<td>2.5</td>
<td>2</td>
<td>2.3</td>
<td>4(\text{⇒})</td>
</tr>
<tr>
<td>2 A ban on sale of “assault weapons” and high capacity magazines</td>
<td>3</td>
<td>3</td>
<td>3.0</td>
<td>4(\text{⇒})</td>
</tr>
</tbody>
</table>

**NOTE:** This table shows the differences in group medians (the median response value for the restrictive class minus the median response value for the permissive class) for estimated policy effects on the two qualitative outcomes. Colors indicate the magnitude of differences between groups; green indicates that the restrictive group believed that the policy offers more protections than the restrictive group believed it does, and red indicates the reverse. As noted previously, we imputed responses that were planned to be missing. The policies in this table are ordered from those with the most similarity in effect estimates between groups to those with the least similarity, as described in Chapter Four.

\(^a\) These columns show the mean of the absolute value of the between-class differences in medians across the two qualitative measures. Bold text indicates estimates for which there was higher-than-average agreement.

\(^b\) This column shows the absolute value of the between-class differences in medians across the overall opinion measure.

\(\text{⇒}\) This symbol indicates that the medians of the two groups were on opposite sides of the response scale’s central point (4 for outcomes 9–10, and 3 for the overall opinion measure).
### TABLE B.3
Descriptive Statistics, by Expert Class, Outcome, and Policy

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Policy</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>Difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Opposite Sides&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.42</td>
<td>147</td>
<td>89.00</td>
<td>92.00</td>
<td>97.00</td>
<td>91.77</td>
<td>−8.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.96</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.10</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.38</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.63</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>26</td>
<td>88.00</td>
<td>95.00</td>
<td>100.00</td>
<td>93.23</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>90.63</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.38</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.07</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.46</td>
<td>147</td>
<td>85.00</td>
<td>92.00</td>
<td>97.00</td>
<td>91.24</td>
<td>−8.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.12</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>93.99</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.73</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.73</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>26</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>98.65</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>97.00</td>
<td>92.45</td>
<td>−4.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.96</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.56</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>26</td>
<td>97.00</td>
<td>99.50</td>
<td>100.00</td>
<td>98.12</td>
<td>147</td>
<td>93.00</td>
<td>95.00</td>
<td>98.00</td>
<td>94.56</td>
<td>−4.50</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.4</td>
<td>147</td>
<td>100.00</td>
<td>101.00</td>
<td>105.00</td>
<td>103.40</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td>26</td>
<td>98.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.62</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>89.34</td>
<td>−9.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>14</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.85</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>102.04</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>26</td>
<td>95.00</td>
<td>98.50</td>
<td>100.00</td>
<td>97.77</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>94.00</td>
<td>88.99</td>
<td>−8.50</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>26</td>
<td>98.00</td>
<td>99.00</td>
<td>100.00</td>
<td>98.85</td>
<td>147</td>
<td>95.00</td>
<td>97.00</td>
<td>99.00</td>
<td>94.87</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.85</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>102.00</td>
<td>101.95</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference</td>
<td>Opposite Sides</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
<td>----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.77</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.82</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>19</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.77</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>96.33</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.88</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>89.37</td>
<td>−10.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>101.38</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.58</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>105.00</td>
<td>96.42</td>
<td>147</td>
<td>103.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.82</td>
<td>10.00</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>26</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>96.58</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.92</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.38</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.41</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.23</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>89.57</td>
<td>−10.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.31</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>90.53</td>
<td>−10.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.08</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>96.73</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>26</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>98.69</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>95.00</td>
<td>89.87</td>
<td>−8.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>96.98</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.38</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>94.03</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>26</td>
<td>95.00</td>
<td>97.50</td>
<td>100.00</td>
<td>96.08</td>
<td>147</td>
<td>105.00</td>
<td>107.00</td>
<td>112.00</td>
<td>108.14</td>
<td>9.50</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.15</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>97.00</td>
<td>93.46</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>26</td>
<td>85.00</td>
<td>95.00</td>
<td>100.00</td>
<td>92.62</td>
<td>147</td>
<td>100.00</td>
<td>104.00</td>
<td>109.00</td>
<td>104.52</td>
<td>9.00</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>26</td>
<td>96.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.96</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>96.00</td>
<td>92.41</td>
<td>−4.00</td>
<td>No</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference</td>
<td>Opposite Sides</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>---</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>---</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>26</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>98.08</td>
<td>147</td>
<td>85.00</td>
<td>91.00</td>
<td>95.00</td>
<td>89.91</td>
<td>−7.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>26</td>
<td>95.00</td>
<td>98.50</td>
<td>100.00</td>
<td>96.38</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>101.83</td>
<td>1.50</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.96</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.49</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>26</td>
<td>95.00</td>
<td>95.00</td>
<td>98.00</td>
<td>95.38</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>97.00</td>
<td>92.30</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.04</td>
<td>147</td>
<td>95.00</td>
<td>97.00</td>
<td>100.00</td>
<td>95.69</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.12</td>
<td>147</td>
<td>96.00</td>
<td>99.00</td>
<td>100.00</td>
<td>96.84</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>102.00</td>
<td>100.62</td>
<td>147</td>
<td>100.00</td>
<td>102.00</td>
<td>105.00</td>
<td>103.63</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.69</td>
<td>147</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.01</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.15</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.67</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.42</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>99.00</td>
<td>92.76</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.15</td>
<td>147</td>
<td>90.00</td>
<td>98.00</td>
<td>100.00</td>
<td>95.49</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>26</td>
<td>95.00</td>
<td>96.50</td>
<td>100.00</td>
<td>96.27</td>
<td>147</td>
<td>85.00</td>
<td>90.00</td>
<td>97.00</td>
<td>91.05</td>
<td>−6.50</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.31</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>95.73</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.85</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.54</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.38</td>
<td>147</td>
<td>95.00</td>
<td>96.00</td>
<td>100.00</td>
<td>95.00</td>
<td>−4.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>101.23</td>
<td>147</td>
<td>102.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.33</td>
<td>4.50</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.35</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.65</td>
<td>0.00</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table B.3—Continued

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Policy</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>Difference</th>
<th>Opposite Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>14</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.81</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>105.00</td>
<td>103.02</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.15</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.30</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.73</td>
<td>147</td>
<td>97.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.44</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>102.00</td>
<td>101.69</td>
<td>147</td>
<td>102.00</td>
<td>105.00</td>
<td>110.00</td>
<td>105.90</td>
<td>5.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.92</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>96.55</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.46</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.19</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.12</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>92.56</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.23</td>
<td>147</td>
<td>80.00</td>
<td>85.00</td>
<td>92.00</td>
<td>86.94</td>
<td>−15.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>26</td>
<td>90.00</td>
<td>100.00</td>
<td>100.00</td>
<td>95.92</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>101.68</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>26</td>
<td>91.00</td>
<td>98.00</td>
<td>100.00</td>
<td>95.50</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>97.00</td>
<td>92.29</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.08</td>
<td>147</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>96.60</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.46</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>92.67</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.65</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.25</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.92</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.84</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>26</td>
<td>98.00</td>
<td>99.50</td>
<td>100.00</td>
<td>99.54</td>
<td>147</td>
<td>91.00</td>
<td>95.00</td>
<td>98.00</td>
<td>93.90</td>
<td>−4.50</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.50</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.37</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.69</td>
<td>147</td>
<td>95.00</td>
<td>97.00</td>
<td>100.00</td>
<td>95.38</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>93.42</td>
<td>147</td>
<td>100.00</td>
<td>105.00</td>
<td>105.00</td>
<td>104.44</td>
<td>10.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>$N$</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>$N$</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference</td>
<td>Opposite Sides</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
<td>-----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.15</td>
<td>147</td>
<td>90.00</td>
<td>97.00</td>
<td>99.00</td>
<td>94.53</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>26</td>
<td>80.00</td>
<td>90.00</td>
<td>95.00</td>
<td>88.54</td>
<td>147</td>
<td>100.00</td>
<td>103.00</td>
<td>110.00</td>
<td>104.45</td>
<td>13.00</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.54</td>
<td>147</td>
<td>87.00</td>
<td>92.00</td>
<td>97.00</td>
<td>91.36</td>
<td>−8.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.65</td>
<td>147</td>
<td>91.00</td>
<td>96.00</td>
<td>99.00</td>
<td>94.52</td>
<td>−4.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
<td>26</td>
<td>79.00</td>
<td>85.00</td>
<td>90.00</td>
<td>85.69</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.75</td>
<td>15.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.77</td>
<td>147</td>
<td>92.00</td>
<td>97.00</td>
<td>100.00</td>
<td>94.73</td>
<td>−3.00</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td>26</td>
<td>95.00</td>
<td>95.50</td>
<td>100.00</td>
<td>96.42</td>
<td>147</td>
<td>90.00</td>
<td>96.00</td>
<td>99.00</td>
<td>93.81</td>
<td>0.50</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.77</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.06</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>101.62</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.48</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>26</td>
<td>90.00</td>
<td>95.50</td>
<td>100.00</td>
<td>93.62</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.30</td>
<td>4.50</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.12</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.31</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.04</td>
<td>147</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>95.84</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>105.00</td>
<td>147</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>96.14</td>
<td>−4.00</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>101.08</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.66</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>105.00</td>
<td>102.42</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.95</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.42</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.24</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.73</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.26</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.81</td>
<td>147</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.86</td>
<td>0.00</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table B.3—Continued

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Policy</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>Difference</th>
<th>Opposite Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>12</td>
<td>26</td>
<td>90.00</td>
<td>96.50</td>
<td>100.00</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>105.00</td>
<td>103.33</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.54</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>97.97</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>26</td>
<td>95.00</td>
<td>95.50</td>
<td>99.00</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>103.00</td>
<td>102.17</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.46</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>98.81</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>99.77</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.13</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>99.50</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>100.13</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>101.54</td>
<td>147</td>
<td>96.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>97.31</td>
</tr>
<tr>
<td>5</td>
<td>19</td>
<td>26</td>
<td>95.00</td>
<td>98.50</td>
<td>100.00</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>Mean</td>
<td>100.00</td>
<td>95.91</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.31</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>26</td>
<td>80.00</td>
<td>95.00</td>
<td>91.96</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.33</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.31</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>100.07</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>98.12</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.11</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>99.23</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.85</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>26</td>
<td>85.00</td>
<td>90.00</td>
<td>90.42</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>98.65</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>95.04</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>98.95</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>98.00</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.78</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td>26</td>
<td>98.00</td>
<td>100.00</td>
<td>97.35</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>Mean</td>
<td>100.00</td>
<td>99.09</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>26</td>
<td>80.00</td>
<td>90.00</td>
<td>89.88</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>Mean</td>
<td>100.00</td>
<td>96.95</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
<td>----</td>
<td>--------</td>
<td>----------------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>26</td>
<td>84.00</td>
<td>90.00</td>
<td>100.00</td>
<td>90.85</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.51</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>101.73</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.56</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>26</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.46</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.78</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.42</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.52</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>26</td>
<td>98.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.96</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.48</td>
</tr>
<tr>
<td>6</td>
<td>16</td>
<td>26</td>
<td>95.00</td>
<td>99.00</td>
<td>100.00</td>
<td>96.12</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.50</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.12</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>26</td>
<td>92.00</td>
<td>95.00</td>
<td>100.00</td>
<td>94.96</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.65</td>
</tr>
<tr>
<td>6</td>
<td>19</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.62</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.23</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>26</td>
<td>90.00</td>
<td>100.00</td>
<td>100.00</td>
<td>95.12</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.67</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>93.81</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.33</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>26</td>
<td>100.00</td>
<td>105.00</td>
<td>110.00</td>
<td>104.81</td>
<td>147</td>
<td>104.00</td>
<td>115.00</td>
<td>115.00</td>
<td>108.52</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>26</td>
<td>90.00</td>
<td>98.00</td>
<td>100.00</td>
<td>95.46</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.39</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.50</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.73</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
<td>26</td>
<td>88.00</td>
<td>91.50</td>
<td>100.00</td>
<td>92.46</td>
<td>147</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.68</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>26</td>
<td>90.00</td>
<td>100.00</td>
<td>100.00</td>
<td>95.69</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.58</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>26</td>
<td>89.00</td>
<td>95.00</td>
<td>100.00</td>
<td>93.42</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.49</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>96.81</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.31</td>
</tr>
</tbody>
</table>
Table B.3—Continued

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Policy</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>Difference</th>
<th>Opposite Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>10</td>
<td>26</td>
<td>90.00</td>
<td>100.00</td>
<td>100.00</td>
<td>94.81</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.11</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>26</td>
<td>94.00</td>
<td>97.50</td>
<td>100.00</td>
<td>95.96</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.04</td>
<td>2.50</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>26</td>
<td>102.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.58</td>
<td>147</td>
<td>100.00</td>
<td>103.00</td>
<td>105.00</td>
<td>103.58</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>13</td>
<td>26</td>
<td>90.00</td>
<td>97.00</td>
<td>100.00</td>
<td>95.12</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.03</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>14</td>
<td>26</td>
<td>100.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.08</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>102.09</td>
<td>−5.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>26</td>
<td>96.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.73</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.70</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>26</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>97.15</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.48</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>102.00</td>
<td>101.77</td>
<td>147</td>
<td>100.00</td>
<td>101.00</td>
<td>103.00</td>
<td>102.18</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>18</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.31</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.59</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>100.00</td>
<td>97.12</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.59</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>26</td>
<td>95.00</td>
<td>100.00</td>
<td>105.00</td>
<td>99.00</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>97.65</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>26</td>
<td>80.00</td>
<td>85.00</td>
<td>90.00</td>
<td>88.65</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>96.86</td>
<td>10.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>26</td>
<td>100.00</td>
<td>101.00</td>
<td>110.00</td>
<td>103.92</td>
<td>147</td>
<td>100.00</td>
<td>105.00</td>
<td>110.00</td>
<td>105.30</td>
<td>4.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.65</td>
<td>147</td>
<td>98.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.73</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.54</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.22</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>26</td>
<td>80.00</td>
<td>90.00</td>
<td>95.00</td>
<td>88.73</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>99.00</td>
<td>94.36</td>
<td>5.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>94.46</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>100.00</td>
<td>95.98</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.65</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.24</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference</td>
<td>Opposite Sides</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>26</td>
<td>97.00</td>
<td>99.50</td>
<td>100.00</td>
<td>99.54</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.34</td>
<td>0.50</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>26</td>
<td>80.00</td>
<td>93.00</td>
<td>97.00</td>
<td>89.92</td>
<td>147</td>
<td>94.00</td>
<td>96.00</td>
<td>100.00</td>
<td>95.32</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>11</td>
<td>26</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>98.12</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>97.10</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>26</td>
<td>101.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.35</td>
<td>147</td>
<td>101.00</td>
<td>105.00</td>
<td>110.00</td>
<td>106.27</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>13</td>
<td>26</td>
<td>95.00</td>
<td>95.00</td>
<td>99.00</td>
<td>95.35</td>
<td>147</td>
<td>95.00</td>
<td>98.00</td>
<td>100.00</td>
<td>97.41</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>14</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>103.00</td>
<td>101.77</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>104.00</td>
<td>102.36</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.50</td>
<td>147</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.10</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>26</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.92</td>
<td>147</td>
<td>99.00</td>
<td>100.00</td>
<td>100.00</td>
<td>99.55</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>17</td>
<td>26</td>
<td>100.00</td>
<td>100.00</td>
<td>102.00</td>
<td>102.12</td>
<td>147</td>
<td>100.00</td>
<td>101.00</td>
<td>105.00</td>
<td>103.27</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>26</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>94.96</td>
<td>147</td>
<td>90.00</td>
<td>95.00</td>
<td>98.00</td>
<td>94.10</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>19</td>
<td>26</td>
<td>97.00</td>
<td>100.00</td>
<td>100.00</td>
<td>98.23</td>
<td>147</td>
<td>96.00</td>
<td>99.00</td>
<td>100.00</td>
<td>97.37</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.19</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.86</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.19</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.65</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>26</td>
<td>4.00</td>
<td>5.00</td>
<td>7.00</td>
<td>5.31</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>6.00</td>
<td>4.69</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>26</td>
<td>2.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.73</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.47</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>3.04</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.97</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>26</td>
<td>1.00</td>
<td>1.50</td>
<td>2.00</td>
<td>1.77</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.80</td>
<td>2.50</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>26</td>
<td>1.00</td>
<td>1.50</td>
<td>2.00</td>
<td>1.73</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.78</td>
<td>2.50</td>
<td>No</td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference^a</td>
<td>Opposite Sides^b</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>-----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>2.92</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.10</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>2.81</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.84</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.62</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.59</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>26</td>
<td>1.00</td>
<td>1.50</td>
<td>3.00</td>
<td>2.08</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.65</td>
<td>2.50</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>12</td>
<td>26</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>6.04</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>6.00</td>
<td>4.73</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>13</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.19</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.69</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>14</td>
<td>26</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>5.92</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.35</td>
<td>−2.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>3.00</td>
<td>2.65</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.65</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
<td>26</td>
<td>1.00</td>
<td>3.00</td>
<td>3.00</td>
<td>2.31</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.71</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>17</td>
<td>26</td>
<td>4.00</td>
<td>5.00</td>
<td>7.00</td>
<td>5.42</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.13</td>
<td>−1.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>18</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.42</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.52</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>19</td>
<td>26</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.88</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.04</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.23</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.67</td>
<td>2.00</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.73</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.93</td>
<td>3.00</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>26</td>
<td>4.00</td>
<td>4.00</td>
<td>6.00</td>
<td>4.65</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.80</td>
<td>0.00</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>2.00</td>
<td>1.88</td>
<td>147</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>2.99</td>
<td>1.00</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>26</td>
<td>2.00</td>
<td>2.50</td>
<td>3.00</td>
<td>2.46</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.61</td>
<td>1.50</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>1.92</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.51</td>
<td>2.00</td>
<td>No</td>
</tr>
</tbody>
</table>
## Table B.3—Continued

<p>| Outcome | Policy | $N$ | 25th % | 50th % (median) | 75th % | Mean | $N$ | 25th % | 50th % (median) | 75th % | Mean | Difference&lt;sup&gt;a&lt;/sup&gt; | Opposite Sides&lt;sup&gt;b&lt;/sup&gt; |
|---------|--------|-----|--------|-----------------|--------|------|-----|--------|-----------------|--------|------|----------------|----------------|----------------|----------------|----------------|
| 10      | 7      | 26  | 1.00   | 1.50            | 2.00   | 1.69 | 147 | 3.00   | 3.00            | 4.00   | 3.11 | 1.50            | No              |
| 10      | 8      | 26  | 2.00   | 3.00            | 4.00   | 2.85 | 147 | 4.00   | 4.00            | 4.00   | 3.82 | 1.00            | No              |
| 10      | 9      | 26  | 2.00   | 3.00            | 4.00   | 2.62 | 147 | 3.00   | 4.00            | 4.00   | 3.64 | 1.00            | No              |
| 10      | 10     | 26  | 2.00   | 2.00            | 4.00   | 2.42 | 147 | 4.00   | 4.00            | 4.00   | 3.89 | 2.00            | No              |
| 10      | 11     | 26  | 2.00   | 2.00            | 3.00   | 2.58 | 147 | 4.00   | 4.00            | 4.00   | 3.91 | 2.00            | No              |
| 10      | 12     | 26  | 4.00   | 6.00            | 7.00   | 5.65 | 147 | 4.00   | 4.00            | 4.00   | 4.27 | −2.00           | No              |
| 10      | 13     | 26  | 2.00   | 2.50            | 3.00   | 2.35 | 147 | 4.00   | 4.00            | 4.00   | 3.79 | 1.50            | No              |
| 10      | 14     | 26  | 4.00   | 4.00            | 6.00   | 5.04 | 147 | 4.00   | 4.00            | 4.00   | 4.08 | 0.00            | No              |
| 10      | 15     | 26  | 1.00   | 2.00            | 2.00   | 1.69 | 147 | 3.00   | 3.00            | 4.00   | 3.24 | 1.00            | No              |
| 10      | 16     | 26  | 2.00   | 3.00            | 4.00   | 2.85 | 147 | 3.00   | 3.00            | 4.00   | 3.42 | 0.00            | No              |
| 10      | 17     | 26  | 4.00   | 4.00            | 6.00   | 4.35 | 147 | 4.00   | 4.00            | 4.00   | 3.54 | 0.00            | No              |
| 10      | 18     | 26  | 1.00   | 1.50            | 2.00   | 1.69 | 147 | 3.00   | 4.00            | 4.00   | 3.74 | 2.50            | No              |
| 10      | 19     | 26  | 2.00   | 3.00            | 4.00   | 2.92 | 147 | 3.00   | 4.00            | 4.00   | 3.61 | 1.00            | No              |
| Opinion | 1      | 26  | 1.00   | 2.00            | 3.00   | 2.04 | 147 | 5.00   | 5.00            | 5.00   | 4.77 | 3.00            | Yes             |
| Opinion | 2      | 26  | 1.00   | 1.00            | 1.00   | 1.23 | 147 | 4.00   | 5.00            | 5.00   | 4.48 | 4.00            | Yes             |
| Opinion | 3      | 26  | 4.00   | 4.50            | 5.00   | 4.08 | 147 | 1.00   | 1.00            | 2.00   | 1.46 | −3.50           | Yes             |
| Opinion | 4      | 26  | 2.00   | 3.00            | 4.00   | 2.81 | 147 | 4.00   | 4.00            | 5.00   | 4.25 | 1.00            | No              |
| Opinion | 5      | 26  | 3.00   | 3.00            | 3.00   | 2.77 | 147 | 4.00   | 5.00            | 5.00   | 4.44 | 2.00            | No              |</p>
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Policy</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>N</th>
<th>25th %</th>
<th>50th % (median)</th>
<th>75th %</th>
<th>Mean</th>
<th>Difference</th>
<th>Opposite Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinion 6</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.46</td>
<td>147</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.72</td>
<td>4.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 7</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.50</td>
<td>147</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.62</td>
<td>4.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 8</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>2.65</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.41</td>
<td>1.00</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Opinion 9</td>
<td>26</td>
<td>3.00</td>
<td>3.00</td>
<td>4.00</td>
<td>3.04</td>
<td>147</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
<td>3.90</td>
<td>3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 10</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.38</td>
<td>147</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.34</td>
<td>3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 11</td>
<td>26</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.08</td>
<td>147</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.34</td>
<td>3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 12</td>
<td>26</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.04</td>
<td>147</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.37</td>
<td>−3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 13</td>
<td>26</td>
<td>1.00</td>
<td>1.50</td>
<td>2.00</td>
<td>1.58</td>
<td>147</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.55</td>
<td>3.50</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 14</td>
<td>26</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.19</td>
<td>147</td>
<td>1.00</td>
<td>2.00</td>
<td>2.00</td>
<td>1.82</td>
<td>−2.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 15</td>
<td>26</td>
<td>2.00</td>
<td>2.50</td>
<td>3.00</td>
<td>2.42</td>
<td>147</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.71</td>
<td>2.50</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 16</td>
<td>26</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>2.77</td>
<td>147</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.71</td>
<td>2.00</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Opinion 17</td>
<td>26</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
<td>3.88</td>
<td>147</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.44</td>
<td>−3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 18</td>
<td>26</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.42</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.23</td>
<td>3.00</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Opinion 19</td>
<td>26</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
<td>3.65</td>
<td>147</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
<td>4.39</td>
<td>0.00</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Effects on nonfirearm:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicides</td>
<td>15</td>
<td>0.00</td>
<td>25.00</td>
<td>90.00</td>
<td>40.87</td>
<td>110</td>
<td>−8.00</td>
<td>2.50</td>
<td>10.00</td>
<td>0.43</td>
<td>−23.50</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Suicides</td>
<td>15</td>
<td>0.00</td>
<td>50.00</td>
<td>92.00</td>
<td>45.33</td>
<td>113</td>
<td>0.00</td>
<td>4.00</td>
<td>15.00</td>
<td>6.17</td>
<td>−46.00</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td>Policy</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>N</td>
<td>25th %</td>
<td>50th % (median)</td>
<td>75th %</td>
<td>Mean</td>
<td>Difference a</td>
<td>Opposite Sides b</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------</td>
<td>----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>----</td>
<td>--------</td>
<td>-----------------</td>
<td>--------</td>
<td>------</td>
<td>--------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Homicide risk to: c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gun owner</td>
<td></td>
<td>16</td>
<td>50.00</td>
<td>75.00</td>
<td>89.50</td>
<td>67.13</td>
<td>115</td>
<td>100.00</td>
<td>110.00</td>
<td>126.00</td>
<td>117.67</td>
<td>35.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Spouse or partner</td>
<td></td>
<td>16</td>
<td>67.50</td>
<td>84.50</td>
<td>101.00</td>
<td>75.94</td>
<td>116</td>
<td>110.00</td>
<td>121.00</td>
<td>150.00</td>
<td>130.59</td>
<td>36.50</td>
<td>Yes</td>
</tr>
<tr>
<td>Child</td>
<td></td>
<td>16</td>
<td>70.00</td>
<td>85.00</td>
<td>100.00</td>
<td>78.69</td>
<td>114</td>
<td>105.00</td>
<td>114.50</td>
<td>147.00</td>
<td>123.86</td>
<td>29.50</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTE: We present the 25th percentile (first quartile), 50th percentile (median), and 75th percentile (third quartile) for each group on each policy-outcome combination. Unless otherwise noted, we imputed missing responses, as described in Chapter Three.

a This column shows the median response value in the restrictive class minus the median response value in the permissive class.

b This column indicates whether the medians of the two groups were on opposite sides of the response scale’s central point (100 for outcomes 1–8, 4 for outcomes 9–10, and 3 for the overall opinion measure).

c These outcomes were not imputed and used responses from only the 2020 survey.
APPENDIX C

Statistical Modeling of Experts’ Favorability Ratings

In this appendix, we provide details and sensitivity analysis testing of the statistical model used to explain experts’ favorability toward the policies examined. As described in Chapter Five, this model predicts experts’ favorability ratings by using their estimates of the effects of each policy on each of the quantitative and qualitative outcomes.

Regression Model and Selection of Prior Probability Distributions

We implemented the ordinal logistic regression in the R statistical computing language (R Project, undated) using the polyr() function in the MASS library (Ripley et al., 2019); code and data are available on a GitHub webpage (see RAND Corporation, undated). Experts’ 2,339 favorability ratings (a categorical measure with five ordinal levels) were regressed onto ten main effects corresponding to experts’ estimates of each policy’s expected effects (e.g., on firearm homicides, property crime, the right to bear arms).

Because we wanted to compare the importance of policy effects measured on different scales (quantitative and qualitative), we estimated the model using parameters transformed to yield standardized beta coefficients. Specifically, we used $z$-score transformation for each of the ten policy effects and ten interaction terms; each variable was mean-centered and divided by its standard deviation (see Table C.1 for means and standard deviations prior to $z$-score transformation).

Interactions were constructed using a mean-centered class membership variable and mean-centered policy effect variables so that the coefficients on these interactions would be orthogonal to the coefficients for the main effects. The mean-centered class membership variable was -0.8497 for the permissive group and 0.1503 for the restrictive group.

Odds ratios were constructed by exponentiating model coefficients, and their 95-percent confidence intervals were constructed by exponentiating those coefficients plus or minus 1.96 times their standard errors.
The model does not include fixed or random effects for the 167 individual experts.¹ The goal of the model was to see how well we could predict the experts’ favorability ratings from the experts’ estimates of the effects of policies on key outcomes. Including effects for individual experts would allow other unmeasured factors, such as an expert’s policy objectives, to influence the prediction. It would also dramatically complicate the model, making model overfitting much more likely.

¹ Unlike the analysis in Chapter Four, the analysis for Chapter Five examined all policies for which a respondent provided at least six responses to the ten policy effect questions. This had the effect of eliminating six respondents (i.e., six respondents provided at least one policy effect response for more than half of the policies that they were asked about but did not provide more than five policy effect responses for any policy). For these analyses, there were 26 permissive-class respondents and 141 restrictive-class respondents.
Missing Data

The total sample size of 2,339 favorability ratings reflects all nonmissing favorability ratings for which at least six of the ten policy effect estimates were not missing. We use the imputed values of predictors, as long as at least six of the predictors were provided by the respondent on that policy. We also exclude from the sample all effect estimates of polices for which no overall favorability rating was provided by the respondent.

Investigation of Model Fit and Linearity Assumptions

We hypothesized that the relationship between a given quantitative estimate of a policy’s effect on an outcome and the expert’s favorability rating for that policy would be nonlinear. Specifically, we hypothesized that differences in a policy’s effect estimate near an incidence rate ratio of 1 (i.e., no effect) would have a larger effect on an expert’s favorability rating than the same differences elsewhere on the scale. For example, we assumed that a policy estimated to have a 101-percent effect (i.e., a 1-percent increase) on homicide would receive a considerably lower favorability rating than would a policy estimated to have an effect of 99 percent (i.e., a 1-percent reduction); that is, even though the difference in the effect estimate is only 2 percentage points, experts would strongly prefer a policy that prevents approximately 100 deaths per year over a policy that causes 100 deaths. However, we assumed that a difference of similar magnitude elsewhere on the scale would have a smaller impact on the favorability rating. For example, two policies estimated to have a 75-percent and 73-percent effect on homicide, respectively, would likely be equally favored; that is, a policy that saves 2,500 lives per year would receive a favorability rating similar to a policy that saves 2,700 lives per year.

To capture this hypothesized nonlinearity, we investigated four simple transformations of our quantitative predictor variables, and we selected the transformation that resulted in the best overall model fit. Each transformation assumed that the influence of the policy effect estimate on the favorability rating was linear over a constrained range near 100 (no effect) but that the influence asymptotes outside of that range. We investigated transformations in which the effect was linear between values of more than 80 percent and less than 120 percent—which were the minimum and maximum values available on the survey, so they represent no adjustment to the values provided by respondents. In addition, we considered restricting the linear portion of the model to values between 90 and 110, between 95 and 105, and between 99 and 101.

We concluded that, because it achieved the minimum Akaike information criterion (Akaike, 1973; see Table C.2), the 95/105 transformation provided the best overall model fit. We used this transformation for the analyses reported here. Thus, the regression coefficients that we report are scaled as the influence of a 1-standard-deviation change in these predictors between 95 and 105 percent. Values of the predictors above 105 percent or below 95 percent are assumed to have no additional effect on experts’ favorability ratings beyond that produced by effects with values of 105 or 95 percent, respectively.
<table>
<thead>
<tr>
<th>Range of Linear Effect</th>
<th>With Interactions</th>
<th>Without Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>99/101</td>
<td>4,498.0</td>
<td>4,587.5</td>
</tr>
<tr>
<td>95/105</td>
<td>4,452.5</td>
<td>4,539.3</td>
</tr>
<tr>
<td>90/110</td>
<td>4,552.9</td>
<td>4,642.2</td>
</tr>
<tr>
<td>No adjustment (80/120)</td>
<td>4,715.1</td>
<td>4,821.5</td>
</tr>
</tbody>
</table>

NOTE: The range of linear effect refers to the lower and upper bounds of the policy effect estimates assumed to have a linear effect on the log-odds of favorability ratings in the final model.
APPENDIX D

Data Sources, Calculations, and Additional Assumptions for the Online Gun Policy Expert-Opinion Tool

RAND’s online Gun Policy Expert-Opinion Tool estimates the effect of enacting or repealing gun laws at the state level, using estimates of these effects provided by the two classes of experts we surveyed in summer 2016 and summer 2020. The tool generates estimates for ten outcomes in each of 50 states and Washington, D.C. For seven quantitative outcomes, estimates are presented as both changes in percentage and changes in count; for the outcome of defensive gun use, estimates are presented only as changes in percentage because accurate data on the number or rate of defensive gun use in the United States do not exist. For the two qualitative outcomes (the right to bear arms and individuals’ privacy), effect estimates are presented in terms of the median change in Likert-scale ratings associated with the selected policy change.

If a user selects only one policy to enact or repeal in the tool, the expected effects of the policy change are presented separately by expert class (i.e., permissive or restrictive) for all ten outcomes. If multiple policies are selected, the combined expected effects of the policy changes are similarly presented for the eight quantitative outcomes, but effects for the two qualitative outcomes are not shown (see Chapter Six).

Data used in this tool derive from multiple sources and reflect the following assumptions and calculations:

- *State laws.* Information on state laws, current as of January 1, 2021, was drawn from the RAND State Firearm Law Database (Cherney et al., 2020) and ongoing legal research by the Gun Policy in America team. In some cases, we identified states as having laws similar to, but not exactly the same as, the policies described in the survey. Specifically,
  - When indicating which states have a universal background check policy, we included all states that require a permit to purchase a handgun or that require a background check for private sales of handguns.
  - For stand-your-ground laws, we did not include states with castle doctrines or castle doctrines expanded to apply just to the workplace or the car.
- For expanded mental health prohibitions, we included states that have added prohibi-
tors based on a person being determined by police to be mentally disordered, com-
mited to an outpatient mental health facility, voluntarily committed to an inpatient
facility, or diagnosed with a serious mental illness.
- For requiring firearm sales to be reported and recorded, we included all states with a
handgun registration requirement.
- For child-access prevention laws, we included all states with any type of negligent
storage law.
- For surrender of firearms by prohibited possessors, we used laws coded in the RAND
State Firearm Law database as prohibited possessor: convicted of a crime: removal or
prohibited possessor: convicted of a DV crime: removal. (DV stands for domestic vio-
ence.)
- For minimum age requirements, we included all states with a minimum age of 21 for
possession of a handgun.
- For elimination of gun-free zones, we used all states with laws allowing those with a
valid concealed-carry permit to carry weapons on the grounds or in buildings belong-
ing to public or private colleges or universities.
- For extreme risk protection orders, we included all states with extreme risk protection
order laws that allow for ex parte orders.
- For prohibitions associated with domestic violence restraining orders, we included
all states with related laws that allow for ex parte orders and that require either the
surrender of firearms or their removal by law enforcement (i.e., surrender or removal
is not up to the judge's discretion). The resulting matrix of state laws as of January 1,
2021, is shown in Table D.1 at the end of this appendix.
- For arming school personnel in K–12 educational settings, we included state policies
that explicitly authorize school personnel—other than peace officers—to carry fire-
arms on K–12 school property, conditional on a training requirement.
- For state prosecution of prohibited possessors seeking firearms, we included state
laws that criminalize the attempted purchase of firearms by individuals prohibited by
law from possessing a firearm.

- Population data. We used 2018 state population estimates provided by the Centers for
Disease Control and Prevention (CDC)’s WONDER data system (CDC, undated). The
Gun Policy Expert-Opinion Tool assumes that state population remains constant before
and after implementation of laws and that only the laws turned on or off have any effect
on the outcomes. These values are displayed in Table D.2.
- Firearm suicides. State firearm suicide counts were calculated from 2018 firearm suicide
data provided through the CDC WONDER data system (CDC, undated). As a privacy
protection, the CDC replaces state firearm suicide counts fewer than ten with a missing
value. We replaced all such missing values with the value 5. These values are displayed
in Table D.2.
• **Firearm homicides.** State firearm homicide counts were calculated from 2018 firearm homicide data provided through the CDC WONDER data system (CDC, undated). As a privacy protection, the CDC replaces state firearm homicide counts fewer than ten with a missing value. We replaced all such missing values with the value 5. These values are displayed in Table D.2.

• **Unintentional firearm deaths.** State unintentional firearm death counts were calculated from 2018 firearm unintentional death data provided through the CDC WONDER data system (CDC, undated). As a privacy protection, the CDC replaces state firearm unintentional death counts fewer than ten with a missing value. We replaced all such missing values with the value 5. These values are displayed in Table D.2.

• **Mass shootings.** Many definitions have been proposed for what constitutes a mass shooting (for a discussion of these definitions, see RAND Corporation, 2018). We used a definition that is based on fatality counts and that does not restrict based on incident circumstances, such as whether the incident occurred in connection to domestic violence or other criminal activity. Specifically, we used the number of events in which four or more people (including possibly the shooter) were shot and killed in the same general location and time, as determined by the Gun Violence Archive (undated).

  Crude annual state incident rates were calculated for each state from 2014 to 2019. Because mass shooting incidents are relatively rare, the crude rates for small states are poorly estimated compared with rates for large states, and several small states have crude rates of 0, which is a poor index of risk of such incidents in the state.

  To improve the base rate estimates, we used a multi-level model to predict the annual mass shooting incident rate in each state. The predicted numbers of mass shooting incidents, by state, from this model are displayed in Table D.2. Converted to small-area estimates of the risk of mass shooting incidents, the predicted risk ranges from 0.005 incidents per 100,000 population to 0.014 incidents per 100,000 population across states.

• **Property crime.** Data on property crime counts in 2018 were drawn from Table 5 of the *Crime in the United States* tables (Federal Bureau of Investigation, 2019). These values are displayed in Table D.2.

• **Hunting participation.** We used state hunting license numbers for 2018 from the U.S. Fish and Wildlife Service’s historical hunting license data (U.S. Fish and Wildlife Service, undated). Hunting licenses serve in this model as a proxy for the outcome we surveyed experts about, which was “participation in hunting and sport shooting.” These values are displayed in Table D.2.

• **Sales of new firearms.** We are not aware of current, publicly available, state-level data on gun sales. However, the Bureau of Alcohol, Tobacco, Firearms and Explosives publishes annual national-level data on the number of firearms manufactured, imported, and exported (see Bureau of Alcohol, Tobacco, Firearms and Explosives, 2020).

  We used these national data to generate estimates of the numbers of firearms sold in each state, under the following assumptions: (1) the total number of new firearms sold in 2018 is approximately equal to the number manufactured or imported minus
the number exported; (2) firearm sales in states are proportional to the number of adults in the states living in households where there is a firearm (we call this ownership rates); and (3) firearm ownership rates across states in 2018 are well correlated with—though not necessarily equivalent to—firearm ownership rates in 2014–2016. Data on state household firearm ownership rates were averaged over this period using data from Schell et al. (2020).¹

Specifically, we estimated each state’s share of national firearm sales as its fraction of all gun owners nationally, as follows:

\[
\frac{Pop_i \times OR_i}{\sum_i (Pop_i \times OR_i)} \times sales,
\]

where \(Pop_i\) is the state population, \(OR_i\) is the state firearm ownership rate, and \(sales\) is the national 2018 domestic firearm sales estimate, calculated as the sum of manufactured and imported firearms minus the number exported.

The resulting sales estimates are displayed in Table D.2.

¹ Schell et al. (2020) does not produce estimates of household firearm ownership prevalence for Washington, D.C. The estimated ownership rate for Washington D.C. instead used information from the 2004 Behavioral Risk Factor Surveillance System as reported in Cerqueira et al. (2019).
### TABLE D.1
Presence (1) or Absence (0) of Gun Policy Types, by State, as of January 1, 2021

<table>
<thead>
<tr>
<th>State</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ala.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alaska</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ariz.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ark.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Calif.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colo.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Conn.</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Del.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D.C.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fla.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ga.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ida.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ill.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ind.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ia.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kan.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ky.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>State</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>-------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>La.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Me.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Md.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mass.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mich.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Minn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miss.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mo.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mont.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neb.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nev.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.H.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.J.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>N.M.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.Y.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.C.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.D.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ohio</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Okla.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
### Table D.1—Continued

<table>
<thead>
<tr>
<th>State</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oreg.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pa.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>R.I.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S.C.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S.D.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tenn.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tex.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Utah</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Vt.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Va.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Wash.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>W. Va.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wisc.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wyo.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**NOTE:** Policy numbers correspond to those outlined in Table 3.1. See the discussion in this appendix for the ways in which we counted a state as having or not having a particular policy.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ala.</td>
<td>4,887,871</td>
<td>552</td>
<td>468</td>
<td>24</td>
<td>0.464</td>
<td>137,700</td>
<td>579,944</td>
<td>299,869</td>
</tr>
<tr>
<td>Alaska</td>
<td>737,438</td>
<td>107</td>
<td>37</td>
<td>5</td>
<td>0.042</td>
<td>24,339</td>
<td>352,780</td>
<td>51,380</td>
</tr>
<tr>
<td>Ariz.</td>
<td>7,171,646</td>
<td>802</td>
<td>293</td>
<td>11</td>
<td>0.531</td>
<td>191,974</td>
<td>517,747</td>
<td>317,140</td>
</tr>
<tr>
<td>Ark.</td>
<td>3,013,825</td>
<td>345</td>
<td>194</td>
<td>13</td>
<td>0.261</td>
<td>87,793</td>
<td>517,046</td>
<td>177,660</td>
</tr>
<tr>
<td>Calif.</td>
<td>39,557,045</td>
<td>1,629</td>
<td>1,275</td>
<td>34</td>
<td>3.331</td>
<td>941,618</td>
<td>1,030,160</td>
<td>786,773</td>
</tr>
<tr>
<td>Colo.</td>
<td>5,695,564</td>
<td>660</td>
<td>188</td>
<td>5</td>
<td>0.447</td>
<td>152,163</td>
<td>568,764</td>
<td>258,247</td>
</tr>
<tr>
<td>Conn.</td>
<td>3,572,665</td>
<td>127</td>
<td>54</td>
<td>5</td>
<td>0.290</td>
<td>60,055</td>
<td>128,232</td>
<td>82,926</td>
</tr>
<tr>
<td>Del.</td>
<td>967,171</td>
<td>58</td>
<td>46</td>
<td>5</td>
<td>0.076</td>
<td>22,481</td>
<td>59,440</td>
<td>39,015</td>
</tr>
<tr>
<td>D.C.</td>
<td>702,455</td>
<td>5</td>
<td>116</td>
<td>5</td>
<td>0.100</td>
<td>30,724</td>
<td>0</td>
<td>3,542</td>
</tr>
<tr>
<td>Fla.</td>
<td>21,299,325</td>
<td>1,869</td>
<td>977</td>
<td>16</td>
<td>1.801</td>
<td>486,017</td>
<td>331,709</td>
<td>723,674</td>
</tr>
<tr>
<td>Ga.</td>
<td>10,519,475</td>
<td>987</td>
<td>644</td>
<td>15</td>
<td>0.941</td>
<td>270,738</td>
<td>1,463,441</td>
<td>471,500</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1,420,491</td>
<td>30</td>
<td>20</td>
<td>5</td>
<td>0.071</td>
<td>40,772</td>
<td>11,802</td>
<td>12,563</td>
</tr>
<tr>
<td>Ida.</td>
<td>1,754,208</td>
<td>250</td>
<td>31</td>
<td>5</td>
<td>0.085</td>
<td>25,636</td>
<td>1,206,997</td>
<td>113,517</td>
</tr>
<tr>
<td>Ill.</td>
<td>12,741,080</td>
<td>573</td>
<td>784</td>
<td>5</td>
<td>1.355</td>
<td>246,264</td>
<td>1,286,532</td>
<td>357,942</td>
</tr>
<tr>
<td>Ind.</td>
<td>6,691,878</td>
<td>588</td>
<td>364</td>
<td>10</td>
<td>0.592</td>
<td>145,838</td>
<td>404,739</td>
<td>332,613</td>
</tr>
<tr>
<td>Ia.</td>
<td>3,156,145</td>
<td>231</td>
<td>37</td>
<td>5</td>
<td>0.207</td>
<td>53,385</td>
<td>583,884</td>
<td>135,906</td>
</tr>
<tr>
<td>Kan.</td>
<td>2,911,505</td>
<td>292</td>
<td>123</td>
<td>5</td>
<td>0.225</td>
<td>76,686</td>
<td>519,875</td>
<td>142,033</td>
</tr>
<tr>
<td>Ky.</td>
<td>4,468,402</td>
<td>509</td>
<td>207</td>
<td>23</td>
<td>0.372</td>
<td>87,695</td>
<td>614,742</td>
<td>260,365</td>
</tr>
<tr>
<td>La.</td>
<td>4,659,978</td>
<td>467</td>
<td>497</td>
<td>12</td>
<td>0.521</td>
<td>152,661</td>
<td>658,659</td>
<td>272,274</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Me.</td>
<td>1,338,404</td>
<td>147</td>
<td>5</td>
<td>5</td>
<td>0.067</td>
<td>18,173</td>
<td>249,090</td>
<td>70,327</td>
</tr>
<tr>
<td>Md.</td>
<td>6,042,718</td>
<td>266</td>
<td>426</td>
<td>5</td>
<td>0.560</td>
<td>122,864</td>
<td>345,211</td>
<td>141,951</td>
</tr>
<tr>
<td>Mass.</td>
<td>6,902,149</td>
<td>148</td>
<td>104</td>
<td>5</td>
<td>0.511</td>
<td>87,196</td>
<td>261,556</td>
<td>76,789</td>
</tr>
<tr>
<td>Mich.</td>
<td>9,995,915</td>
<td>806</td>
<td>479</td>
<td>5</td>
<td>0.846</td>
<td>165,280</td>
<td>2,224,170</td>
<td>437,632</td>
</tr>
<tr>
<td>Minn.</td>
<td>5,611,179</td>
<td>356</td>
<td>66</td>
<td>5</td>
<td>0.429</td>
<td>111,874</td>
<td>1,421,004</td>
<td>243,643</td>
</tr>
<tr>
<td>Miss.</td>
<td>2,986,530</td>
<td>313</td>
<td>320</td>
<td>28</td>
<td>0.283</td>
<td>71,766</td>
<td>426,726</td>
<td>179,637</td>
</tr>
<tr>
<td>Mo.</td>
<td>6,126,452</td>
<td>726</td>
<td>556</td>
<td>10</td>
<td>0.592</td>
<td>162,173</td>
<td>1,782,319</td>
<td>370,952</td>
</tr>
<tr>
<td>Mont.</td>
<td>1,062,305</td>
<td>160</td>
<td>20</td>
<td>5</td>
<td>0.065</td>
<td>26,518</td>
<td>1,028,981</td>
<td>80,689</td>
</tr>
<tr>
<td>Neb.</td>
<td>1,929,268</td>
<td>145</td>
<td>25</td>
<td>5</td>
<td>0.132</td>
<td>40,126</td>
<td>429,255</td>
<td>86,396</td>
</tr>
<tr>
<td>Nev.</td>
<td>3,034,392</td>
<td>367</td>
<td>158</td>
<td>5</td>
<td>0.244</td>
<td>73,985</td>
<td>150,111</td>
<td>121,556</td>
</tr>
<tr>
<td>N.H.</td>
<td>1,356,458</td>
<td>135</td>
<td>13</td>
<td>5</td>
<td>0.067</td>
<td>16,935</td>
<td>218,342</td>
<td>66,010</td>
</tr>
<tr>
<td>N.J.</td>
<td>8,908,520</td>
<td>193</td>
<td>218</td>
<td>5</td>
<td>0.773</td>
<td>125,156</td>
<td>422,237</td>
<td>95,189</td>
</tr>
<tr>
<td>N.M.</td>
<td>2,095,428</td>
<td>281</td>
<td>136</td>
<td>5</td>
<td>0.174</td>
<td>71,657</td>
<td>441,906</td>
<td>90,985</td>
</tr>
<tr>
<td>N.Y.</td>
<td>19,542,209</td>
<td>445</td>
<td>356</td>
<td>5</td>
<td>1.583</td>
<td>281,507</td>
<td>1,166,349</td>
<td>305,005</td>
</tr>
<tr>
<td>N.C.</td>
<td>10,383,620</td>
<td>873</td>
<td>489</td>
<td>30</td>
<td>0.842</td>
<td>258,979</td>
<td>344,762</td>
<td>424,272</td>
</tr>
<tr>
<td>N.D.</td>
<td>760,077</td>
<td>75</td>
<td>13</td>
<td>5</td>
<td>0.038</td>
<td>15,507</td>
<td>520,355</td>
<td>48,881</td>
</tr>
<tr>
<td>Ohio</td>
<td>11,689,442</td>
<td>962</td>
<td>548</td>
<td>13</td>
<td>0.998</td>
<td>254,496</td>
<td>995,164</td>
<td>548,733</td>
</tr>
<tr>
<td>Okla.</td>
<td>3,943,079</td>
<td>465</td>
<td>185</td>
<td>5</td>
<td>0.318</td>
<td>113,364</td>
<td>400,238</td>
<td>241,275</td>
</tr>
<tr>
<td>Oreg.</td>
<td>4,190,713</td>
<td>427</td>
<td>67</td>
<td>5</td>
<td>0.269</td>
<td>121,278</td>
<td>1,222,670</td>
<td>215,171</td>
</tr>
</tbody>
</table>
### Table D.2—Continued

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pa.</td>
<td>12,807,060</td>
<td>1,025</td>
<td>581</td>
<td>21</td>
<td>1.107</td>
<td>190,816</td>
<td>2,569,930</td>
<td>579,671</td>
</tr>
<tr>
<td>R.I.</td>
<td>1,057,315</td>
<td>23</td>
<td>13</td>
<td>5</td>
<td>0.065</td>
<td>17,561</td>
<td>30,903</td>
<td>16,502</td>
</tr>
<tr>
<td>S.C.</td>
<td>5,084,127</td>
<td>493</td>
<td>373</td>
<td>18</td>
<td>0.456</td>
<td>153,421</td>
<td>814,285</td>
<td>256,974</td>
</tr>
<tr>
<td>S.D.</td>
<td>882,235</td>
<td>91</td>
<td>16</td>
<td>5</td>
<td>0.043</td>
<td>15,251</td>
<td>373,976</td>
<td>54,442</td>
</tr>
<tr>
<td>Tenn.</td>
<td>6,770,010</td>
<td>690</td>
<td>504</td>
<td>11</td>
<td>0.648</td>
<td>191,279</td>
<td>737,173</td>
<td>355,461</td>
</tr>
<tr>
<td>Tex.</td>
<td>28,701,845</td>
<td>2,263</td>
<td>1,145</td>
<td>37</td>
<td>2.247</td>
<td>679,430</td>
<td>1,655,343</td>
<td>1,235,923</td>
</tr>
<tr>
<td>Utah</td>
<td>3,161,105</td>
<td>339</td>
<td>34</td>
<td>5</td>
<td>0.188</td>
<td>75,156</td>
<td>420,841</td>
<td>138,650</td>
</tr>
<tr>
<td>Vt.</td>
<td>626,299</td>
<td>70</td>
<td>10</td>
<td>5</td>
<td>0.031</td>
<td>8,036</td>
<td>169,328</td>
<td>34,338</td>
</tr>
<tr>
<td>Va.</td>
<td>8,517,685</td>
<td>679</td>
<td>334</td>
<td>10</td>
<td>0.712</td>
<td>141,885</td>
<td>860,075</td>
<td>361,324</td>
</tr>
<tr>
<td>Wash.</td>
<td>7,535,591</td>
<td>599</td>
<td>173</td>
<td>5</td>
<td>0.541</td>
<td>222,011</td>
<td>691,732</td>
<td>293,728</td>
</tr>
<tr>
<td>W. Va.</td>
<td>1,805,832</td>
<td>257</td>
<td>66</td>
<td>5</td>
<td>0.099</td>
<td>26,827</td>
<td>677,710</td>
<td>121,699</td>
</tr>
<tr>
<td>Wisc.</td>
<td>5,813,568</td>
<td>420</td>
<td>153</td>
<td>5</td>
<td>0.426</td>
<td>90,686</td>
<td>2,863,676</td>
<td>311,525</td>
</tr>
<tr>
<td>Wyo.</td>
<td>577,737</td>
<td>108</td>
<td>13</td>
<td>5</td>
<td>0.033</td>
<td>10,313</td>
<td>247,914</td>
<td>40,785</td>
</tr>
</tbody>
</table>

**Sources:** See the discussion earlier in this appendix.
References


CDC—See Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention, WONDER data system, undated. As of December 12, 2020: https://wonder.cdc.gov


U.S. Fish and Wildlife Service, “National Hunting License Data, Calculation Year 2018,” undated. As of December 12, 2020:


The effects of firearm policies, though frequently debated, have historically received less-rigorous scientific evaluation than have the effects of other policies affecting public safety, health, and recreation. Despite improvements in recent years, there is still limited evidence of how some gun policies that are frequently proposed or enacted in the United States are likely to affect important outcomes (such as firearm homicides, property crime, and the right to bear arms). In areas without strong scientific evidence, policymakers and the public rely heavily on what policy advocates or social scientists believe the effects are most likely to be. In this report, part of the RAND Gun Policy in America initiative, RAND researchers describe the combined results from two fieldings (2016 and 2020) of a survey of gun policy experts. Respondents were asked to estimate the likely effects of 19 gun policies on ten outcomes. The researchers use these and other responses to establish the diversity of beliefs among gun policy experts, assess where experts are in more or less agreement on the effects of gun laws, and evaluate whether differences in the policies favored by experts result from differences in experts’ assumptions about the policies’ effects or differences in experts’ policy objectives. The analysis suggests that experts on different sides of the gun policy debate share some objectives but disagree on which policies will achieve those objectives. Therefore, collecting stronger evidence about the true effects of policies is, the researchers believe, a necessary step toward building greater consensus on which policies to pursue.

Download a free electronic copy at www.rand.org/t/RRA243-3