Effectiveness of Extreme Risk Protection Orders on Firearm Suicide

true

1 Introduction

Firearm suicide is a major public health crisis in the United States, accounting for more than half of all suicide deaths each year. Men constitute the vast majority of firearm suicide decedents, and the lethality of firearms makes attempts with guns far more likely to result in death than other methods.

Extreme Risk Protection Orders (ERPOs) have emerged as a promising legal mechanism to temporarily restrict firearm access for individuals deemed at imminent risk of harm to themselves or others. These civil orders, enacted in more than 20 states, are designed to interrupt escalating risk—particularly for individuals experiencing suicidal crises. While case reports and early evaluations have suggested that ERPOs may be effective in averting imminent suicide attempts, population-level evidence on their longer-term effects remains limited and contested.

In this study, we use a Bayesian state-year panel model to evaluate the effect of ERPO laws on firearm suicide rates. Our analysis spans over two decades and includes all 50 U.S. states and the District of Columbia. We hypothesize that the implementation of ERPO laws is associated with a measurable reduction in firearm suicide, particularly among men.

2 Methods

The study was determined to be exempt from review and from a requirement for informed consent, because it used no identifiable human participant data, by the RAND institutional review board.

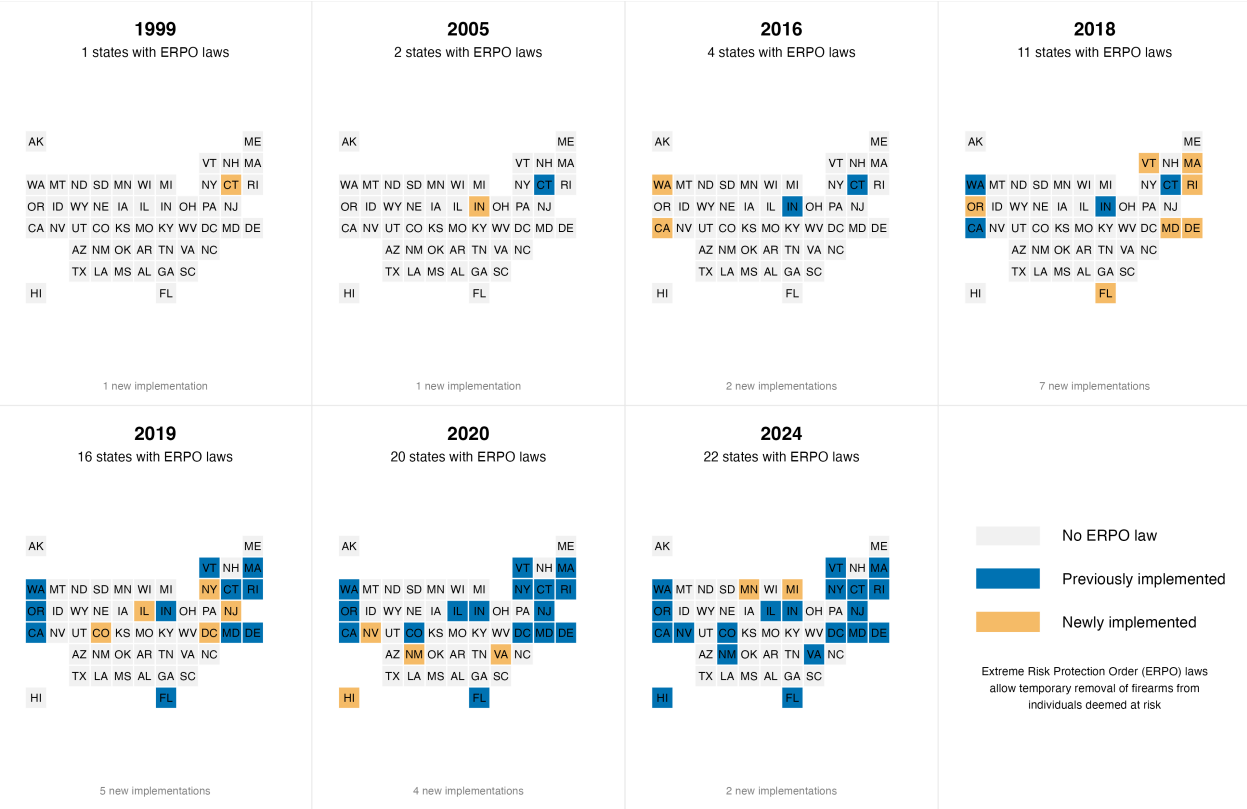

Figure 1: **State Implementation of Extreme Risk Protection Order (ERPO) Laws, 1999–2024.**
This figure shows the annual spread of ERPO laws across U.S. states from 1999 to 2024. States are color-coded by implementation status: orange indicates states that newly implemented an ERPO law in that year, blue indicates states with previously implemented ERPO laws, and gray indicates states without such laws. ERPO laws allow for the temporary removal of firearms from individuals deemed to be at risk of harming themselves or others. By 2024, 22 states had enacted ERPO legislation.

The study follows good research practices for comparative effectiveness research,15 eg, the data sources, modeling methods, primary comparisons, and sensitivity tests were preregistered, and the data and statistical code are available. The eAppendix in Supplement 1 provides a detailed discussion of how the current study extends and improves prior published research by the authors.

2.1 Data

Mortality data from 1999 to 2023 come from the National Vital Statistics System, which provides information on coroners' cause of death determinations for a near-census of deaths in the United States (1), (2). Information on the effective dates of firearm laws come from the RAND State Firearm Law Database.18 The analyses also include state-level demographic, economic, crime, and gun ownership characteristics; sources for these are described in the eAppendix in Supplement 1.

2.2 Appendix

Table 1: Implementation Timeline of Extreme Risk Protection Order Laws by State (as of April 2024)

State	**Effective Date**	**Year**	**Years in Effect (as of 2023)**
Connecticut	October 1, 1999	1999	24
Indiana	July 1, 2005	2005	18
California	January 1, 2016	2016	7
Washington	December 8, 2016	2016	7
Oregon	January 1, 2018	2018	5
Vermont	April 11, 2018	2018	5
Florida	March 9, 2018	2018	5
Rhode Island	June 1, 2018	2018	5
Maryland	October 1, 2018	2018	5
Massachusetts	August 17, 2018	2018	5
Delaware	December 27, 2018	2018	5
Illinois	January 1, 2019	2019	4
Colorado	April 12, 2019	2019	4
District of Columbia	January 30, 2019	2019	4
New York	August 24, 2019	2019	4
New Jersey	September 1, 2019	2019	4
Hawaii	January 1, 2020	2020	3
Nevada	January 1, 2020	2020	3
New Mexico	May 20, 2020	2020	3
Virginia	July 1, 2020	2020	3
U.S. Virgin Islands	February 1, 2023	2023	<1
Michigan	February 13, 2024	2024	0
Minnesota	January 1, 2024	2024	0

Sources: RAND State Firearm Law Database (2024); Johns Hopkins Center for Gun Violence Solutions (2023); Giffords Law Center (2023).

Table 2: Key Policy Features of Extreme Risk Protection Order Laws (as of April 2024)

State	Authorized Petitioners			Ex Parte Provisions		Final Order Duration
	Law Enf.	Family	Other	Available	Duration (days)	
California					21	1-5 years
Colorado					14	364 days
Connecticut					14	Until terminated
Delaware			-		15	Up to 1 year
District of Columbia					14	1 year
Florida		-	-		14	Up to 1 year
Hawaii					14	1 year
Illinois			-		14	6 mo. to 1 yr.
Indiana		-	-		14	Until terminated
Maryland					7	Up to 1 year
Massachusetts					10	Up to 1 year
Michigan					14	1 year
Minnesota					14	6 mo. to 1 yr.
Nevada			-		7	Up to 1 year
New Jersey			-		10	Until terminated
New Mexico		-	-		10	Up to 1 year
New York					6	Up to 1 year
Oregon			-	-	N/A	1 year
Rhode Island		-	-		14	1 year
U.S. Virgin Islands					14	1 year
Vermont			-		14	Up to 6 months
Virginia			-		14	Up to 180 days
Washington			-		14	1 year

Notes: "Other" petitioners may include healthcare professionals, educators, co-workers, or state's attorneys, depending on the state. "Law Enf." refers to law enforcement officers. Michigan and Minnesota laws went into effect in 2024.

Table 3: Classification of ERPO Laws by Policy Feature Categories (as of April 2024)

Policy Feature	States	Count
Petitioner Access		
Law Enforcement Only	Florida, Indiana, New Mexico, Rhode Island	4
Family Members Included	All other ERPO states	19
Healthcare Prof. Included	CA, CO, CT, DC, HI, MD, MA, MI, MN, NY, VI	11
Ex Parte Provisions		
Available	All except Oregon	22
Not Available	Oregon	1
Short Duration ($\leq$10 days)	MD, MA, NJ, NM, NY, NV	6
Standard Duration (>10 days)	All others with ex parte	16
Final Order Duration		
6 months or less	Vermont, Virginia	2
Up to 1 year (standard)	Most states	18
Until terminated	Connecticut, Indiana, New Jersey	3
Implementation Intensity		
High	Florida, Maryland	2
Medium	CA, CO, CT, NY, OR, RI, WA	7
Low	All others	14

Sources: Data compiled from Johns Hopkins Center for Gun Violence Solutions (2023), RAND State Firearm Law Database (2024), and Giffords Law Center (2023). Implementation intensity categories based on estimated ERPOs per 100,000 population.

1. Centers for Disease Control and Prevention, National Center for Health Statistics. National vital statistics system, mortality 1999–2020 on CDC WONDER online database. https://wonder.cdc.gov/ucd-icd10.html; 2021.

2. Centers for Disease Control and Prevention, National Center for Health Statistics. National vital statistics system, mortality 2018–2023 on CDC WONDER online database. https://wonder.cdc.gov/ucd-icd10-expanded.html; 2024.